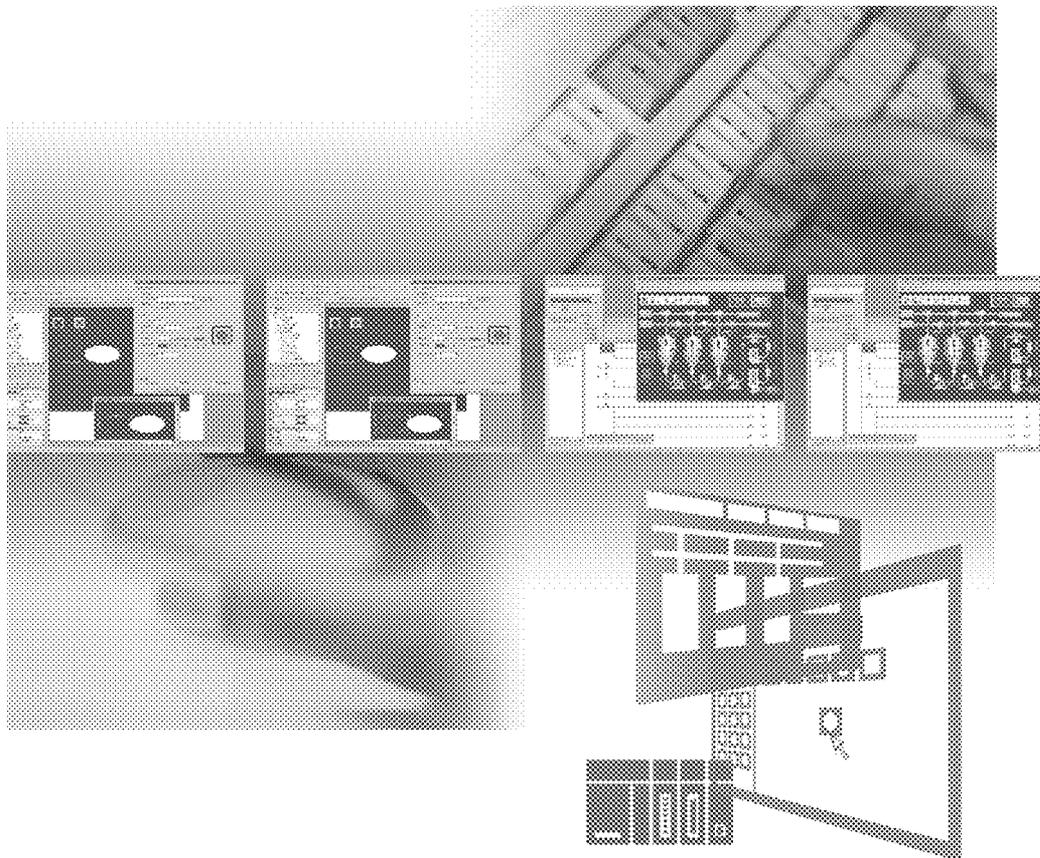


GT Designer2 Version1

Reference Manual

MITSUBISHI



MELSOFT MITSUBISHI TOTAL FA SOLUTION

GT Designer 2

MELSOFT
Integrated FA Software

SW1D5C-GTD2-E

• SAFETY PRECAUTIONS •

(Be sure to read these instructions before using the product)

Before using this product, read this manual and the relevant manuals introduced in this manual carefully and handle the product correctly with full attention to safety.

Note that these precautions apply only to this product.

In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".



Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



CAUTION Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Note that failure to observe the  CAUTION level instructions may also lead to serious results depending on the circumstances.

Be sure to observe the instructions of both levels to ensure personal safety.

Please keep this manual in accessible place and be sure to forward it to the end user.

[Test operation precautions]



- Carefully read this manual and fully understand the operating procedures before testing the system monitor, special module monitor, and circuit monitor (turning bit device ON/OFF, changing current value of word device, changing setting value or current value of timer/counter, and changing current of value buffer memory). When testing, never change the data of the devices that control the operation essential for the system.
Faulty output and malfunction may result in an accident.

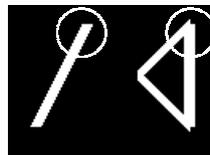
Cautions for using this software

1. Required PC memory
The processing may be terminated by Windows® on a personal computer of which main memory capacity is less than 64M bytes. Make sure to secure the capacity of 64 M bytes or more.
2. Free capacity of hard disk (virtual memory)
At least 50M bytes of free capacity of virtual memory should be secured within hard disk to run this software.
The processing may be terminated by Windows® if 50M bytes or more of free space cannot be secured within hard disk while running GT Designer.
Secure enough free capacity of virtual memory within hard disk space in order to run the software.
When enough free capacity cannot be secured, make sure to save projects frequently.
3. Error messages displayed while starting and editing
"Operation will be terminated because of insufficient memory. Would you like to stop?"
If the above message appears, close other running application software or reboot Windows in order to secure at least 50M bytes of free hard disk space.
4. GT Designer2 and GOT display
 - (a) Cautions for displaying straight line other than full line (dotted line, for example) in bold.
When straight line other than full line is drawn in bold, the line may not be displayed with its actual line width on a personal computer. However, it will be displayed correctly on GOT. This phenomenon does not mean data problem.
 - (b) Display of end points of straight line/line freeform/polygon
As shown below, the end points of straight line/line freeform/polygon are displayed differently between GT Designer2 and GOT.

On GT Designer 2



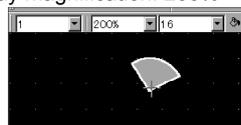
On GOT



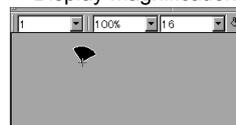
- (c) Start position for filling patterns
Some filling patterns may be differently displayed. For example, the start position may be different between GT Designer2 and GOT.
- (d) Drawing of different type lines
The length of the dots varies in different dotted lines (for example: the chain lines).
- (e) Display of object
 - The display position of the memory data display in graph function is different between GT Designer2 and GOT.
 - Even if the display-start-line of a comment has been set, the comment will be displayed from the first line on GT Designer2.
- (f) Display magnification
When display magnification is changed, the connected lines or figures may be separated or the filled-paint may be out of outline of the figure.
However, if they are displayed correctly on the preview screen, they will appear correctly on GOT as well.

(Example): When filled-paint is out of the outline.

Display magnification: 200%



Display magnification: 100%



Position of Paint mark may be shifted and the filled-paint may exceed the outline of the figure.

5. Restrictions when the color setting is changed to the setting of less colors in the system environment (256 colors→2 colors)
 - The color palette for setting color will be changed according to the new settings.
 - The color on the drawing screen will be kept the same as prior to the change.
If the color setting for a [red] rectangle-figure is changed to the 2 colors (B/W), the [red] color will remain.
 - The colors of the image data (BMP format file) will be reduced when the project is stored, the screen is closed and that image data is double-clicked.

6. Object function and device type
The object (bit lamp or word lamp),for which bit device setting and word device setting are separated, cannot be converted between bit device and word device.

7. When device type is changed
Confirm the device type when the set bit device is changed from bit device into word device.
The device flag may be represented as "??", depending on the settings .
Example) D0. b0→D0 D0.b5 → ??

8. OS setting
Set the font size as "Small Font" when setting OS (Windows®) screen.
The GT designer2 dialog box cannot be displayed correctly if the font size is set as "Large font".

9. When the toolbar icon appears in smaller size after startup of GT Desinger2
The toolbar icon may appear in smaller size right after GT Deseiger2 is started up.
To correctly display the icon, initialize it as instructed below.
(Click on [Project] → [References] from the menu, and select the toolbar tab. Click on Reset All button in that tab.)



10. When using GT Designer2 in the PC in which the OS other than Japanese version
The text may not be displayed correctly depending on the OS versions; some version include the fonts incompatible with GT Designer2 or GOT.

REVISIONS

* The manual number is given on the left bottom of the back cover.

| Print Date | Manual Number | Revision |
|------------|------------------|--|
| Apr., 2003 | SH (NA)-080251-A | First Printing |
| May, 2003 | SH (NA)-080251-B | <p>Partial corrections</p> <p>Section 3.5.2, Section 3.5.3, Section 5.14.2, Section 5.35.3</p> <p>Partial additions</p> <p>Section 4.1.8, Section 4.3.3</p> |
| Aug., 2003 | SH (NA)-080251-C | <p>Partial corrections</p> <p>Section 2.6.3, Section 3.1, Section 3.1.2, Section 3.3, Section 3.3.1, Section 5.5.3, Section 5.8.3, Section 5.11, Section 5.12.3, Section 5.18, Section 5.18.6, Section 5.27.4, Section 5.27.8, Section 5.27.11, Appendix 7</p> <p>Partial additions</p> <p>Section 2.1, Section 2.1.2, Section 2.4.2, Section 2.6.1, Section 2.6.2, Section 3.1.3, Section 3.5.2, Section 3.5.3, Section 4.1.3, Section 5.7, Section 5.8.4, Section 5.13.7, Section 5.14.2, Section 5.21.4, Section 5.22.4, Section 5.27.10, Section 5.27.12</p> <p>Additions</p> <p>Appendix 6</p> |
| Jan., 2004 | SH (NA)-080251-D | <p>Partial corrections</p> <p>Section 2.3.1, Section 2.4.1, Section 2.4.2, Section 2.6.1, Section 2.6.2, Section 2.6.3, Section 3.1.2, Section 5.4, Section 5.8.2, Section 5.8.3, Section 5.13.7, Section 5.18.2, Section 5.27.2, Section 5.27.4, Section 5.27.5, Section 5.32.2, Appendix 7</p> <p>Partial additions</p> <p>Section 5.8.4, Section 5.10.3, Section 5.27.12</p> |
| Jul., 2004 | SH (NA)-080251-E | <p>Partial corrections</p> <p>Section 2.3.1, Section 2.4.1, Section 4.2.8, Section 4.3.2, Section 5.8.3, Section 5.16, Section 5.16.2, Section 5.16.3, Section 5.16.4, Section 5.16.5, Section 5.17, Section 5.17.6, Section 5.27.2, Appendix 2, Appendix 7</p> <p>Partial additions</p> <p>Section 2.2, Section 2.4.2, Section 2.6.1, Section 2.6.2, Section 3.1.2, Section 3.3.4, Section 3.5.2, Section 3.5.4</p> <p>Additions</p> <p>Section 4.3</p> <p>MODEL CODE change</p> <p>Changed from 13JU26 to 1MD204.</p> |
| Sep., 2004 | SH (NA)-080251-F | <p>Partial corrections</p> <p>Section 2.1.3, Section 3.5.2, Section 3.5.3, Section 4.2.8, Section 5.14.4, Section 5.18.3, Appendix 7</p> |

Japanese Manual Version SH-080242-G

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Manual Configuration

The following explains the manual configuration

| | | | |
|------------------|--|---|------------|
| Chapter 1 | Overview | Overview of this manual and the features of GT Designer2 | 1 |
| Chapter 2 | Specifications | Explanation for screen/object specifications and settable devices range | 2 |
| Chapter 3 | Common Settings | Explanation of common setting items for whole project | 3 |
| Chapter 4 | Preparatory Operation for Object Setting | Explanation of necessary setting operation before setting objects | 4 |
| Chapter 5 | Object Setting | Explanation of functions and methods of setting each object | 5 |
| Chapter 6 | Script Function | Detailed explanation of script functions, such as programming method and sampling program | 6 |
| Appendix | Appendix | Drawing sheet for ASCII coding and JIS code | App |

INTRODUCTION

Thank you for purchasing Mitsubishi Graphic Operation Terminal (Mitsubishi GOT).
Prior to use, read this manual to fully understand the functions and performance of the GOT.

CONTENTS

| | |
|--|--------------|
| <u>Safety Precautions</u> | A - 1 |
| <u>Cautions for using this software</u> | A - 2 |
| <u>Revisions</u> | A - 4 |
| <u>Manual Configuration</u> | A - 5 |
| <u>Introduction</u> | A - 6 |
| <u>Contents</u> | A - 6 |
| <u>Function Quick Reference</u> | A-16 |
| <u>Manuals</u> | A-23 |
| <u>Abbreviations and Generic Terms</u> | A-24 |
| <u>How to Use This Manual</u> | A-28 |

Chapter 1 Overview 1-1 to 1-2

| | |
|----------------------------|------------|
| <u>1.1 Overview</u> | 1-1 |
|----------------------------|------------|

Chapter 2 Specifications 2-1 to 2-70

| | |
|--|-------------|
| <u>2.1 Type/Number of Creatable Screen</u> | 2-1 |
| 2.1.1 Base screens specifications..... | 2- 2 |
| 2.1.2 Window screens specifications..... | 2- 2 |
| 2.1.3 Whole screens specifications..... | 2- 6 |
| <u>2.2 Figures and Data Capacity</u> | 2-8 |
| 2.2.1 In the case of GOT-A900 series | 2 - 8 |
| 2.2.2 In the case of GOT-F900 series..... | 2-12 |
| <u>2.3 Specifications of Available Object Functions</u> | 2-14 |
| 2.3.1 In the case of GOT-A900 series | 2-14 |
| 2.3.2 In the case of GOT-F900 series..... | 2-25 |
| <u>2.4 Clock Function</u> | 2-31 |
| 2.4.1 Clock function for monitoring by GOT..... | 2-31 |
| 2.4.2 PLC CPU with clock function (GOT-A900 series only) | 2-33 |
| <u>2.5 Overlap Setting</u> | 2-35 |
| 2.5.1 Overlap between figure and object | 2-35 |
| 2.5.2 Overlap between objects..... | 2-35 |

| | |
|---|-------------|
| 2.6 Supported Device | 2-37 |
| 2.6.1 GOT internal devices of GOT | 2-37 |
| 2.6.2 Device range Available for GOT-A900 Series..... | 2-44 |
| 2.6.3 Device range Available for GOT-F900 Series..... | 2-60 |
| 2.7 Cautions for Object Setting | 2-70 |

Chapter 3 Common Setting 3-1 to 3-45

| | |
|--|-------------|
| 3.1 GOT/PLC Type Setting | 3- 1 |
| 3.1.1 Settings | 3- 1 |
| 3.1.2 Setting items | 3- 2 |
| 3.1.3 Cautions | 3- 3 |
| 3.2 Switching Screen Device Setting | 3- 5 |
| 3.2.1 Settings | 3- 7 |
| 3.2.2 Setting items | 3- 8 |
| 3.2.3 Cautions | 3-10 |
| 3.3 Switching Station No. Device Setting | 3-11 |
| 3.3.1 Methods of switching station No. | 3-11 |
| 3.3.2 Settings | 3-13 |
| 3.3.3 Setting items | 3-14 |
| 3.3.4 Cautions | 3-16 |
| 3.4 Password Setting | 3-17 |
| 3.4.1 Settings | 3-18 |
| 3.4.2 Setting items of password for security function | 3-19 |
| 3.4.3 Setting items of password for data transmission, utility screen start and parameter change screen | 3-21 |
| 3.4.4 Cautions | 3-22 |
| 3.5 System Information Setting | 3-23 |
| 3.5.1 Setting methods..... | 3-25 |
| 3.5.2 Setting items | 3-25 |
| 3.5.3 Application example | 3-33 |
| 3.5.4 Cautions | 3-41 |
| 3.6 Print Format Setting | 3-42 |
| 3.6.1 Settings | 3-42 |
| 3.6.2 Setting items | 3-43 |
| 3.6.3 Cautions | 3-44 |

| | |
|---|-------------|
| 4.1 Comment Registration | 4-1 |
| 4.1.1 Required knowledge for comment registration..... | 4 - 1 |
| 4.1.2 Basic operation for comment registration..... | 4 - 3 |
| 4.1.3 Registering a comment..... | 4 - 5 |
| 4.1.4 Copying the registered comments..... | 4 - 7 |
| 4.1.5 Deleting the registered comments..... | 4 - 8 |
| 4.1.6 Changing the registered comment's settings..... | 4 - 9 |
| 4.1.7 Storing/reading a comment as file..... | 4-10 |
| 4.1.8 Editing the comment as text/csv file..... | 4-13 |
| 4.1.9 Cautions for comment registration..... | 4-16 |
| 4.2 Parts Registration | 4-17 |
| 4.2.1 Required knowledge for parts registration..... | 4-17 |
| 4.2.2 Basic operation for parts registration..... | 4-19 |
| 4.2.3 Registering parts..... | 4-21 |
| 4.2.4 Copying the registered parts..... | 4 -24 |
| 4.2.5 Deleting the registered parts..... | 4 -25 |
| 4.2.6 Changing the registered parts settings..... | 4 -26 |
| 4.2.7 Changing property of the registered parts..... | 4-27 |
| 4.2.8 Cautions..... | 4-28 |
| 4.3 Registrating BMP Files for Parts | 4-29 |
| 4.3.1 Before using the BMP image parts..... | 4-31 |
| 4.3.2 Storing the BMP image parts into the PC card..... | 4-32 |
| 4.3.3 BMP image parts displaying method..... | 4-33 |
| 4.3.4 Cautions..... | 4 -34 |
| 4.4 Registering Gaiji | 4-36 |
| 4.4.1 What are external characters..... | 4-36 |
| 4.4.2 Setting..... | 4-36 |
| 4.4.3 Setting items..... | 4-36 |
| 4.4.4 Cautions..... | 4-38 |
| 4.5 Auxiliary Setting | 4-39 |
| 4.5.1 Settings..... | 4-44 |
| 4.5.2 Setting items..... | 4-45 |
| 4.5.3 Cautions..... | 4-51 |
| 4.6 Key Window | 4-53 |
| 4.6.1 Key window type..... | 4-53 |
| 4.6.2 Keys on default key window and display items..... | 4-54 |
| 4.6.3 How to operate key window..... | 4-55 |
| 4.6.4 How to create user-created key window..... | 4-57 |
| 4.6.5 Cautions..... | 4-63 |

| | |
|---|-------------|
| 5.1 Device Setting | 5-1 |
| 5.1.1 Device setting | 5-1 |
| 5.1.2 Settings | 5-2 |
| 5.1.3 Setting items | 5-3 |
| 5.2 Object Arrangement and Display Image Setting | 5-19 |
| 5.2.1 Object arrangement..... | 5-19 |
| 5.2.2 Object shape setting..... | 5-20 |
| 5.2.3 Object size change | 5-22 |
| 5.3 State Setting | 5-25 |
| 5.3.1 Display priority | 5-26 |
| 5.3.2 Arrangement and settings | 5-26 |
| 5.3.3 Setting items | 5-27 |
| 5.3.4 Example of state setting operation | 5-30 |
| 5.3.5 Cautions | 5-31 |
| 5.4 Trigger Setting | 5-32 |
| 5.4.1 Arrangement and settings | 5-37 |
| 5.4.2 Setting items | 5-37 |
| 5.4.3 Cautions | 5-39 |
| 5.5 Data Operation Function | 5-41 |
| 5.5.1 Arrangement and settings | 5-44 |
| 5.5.2 Setting items | 5-45 |
| 5.5.3 Cautions | 5-47 |
| 5.6 Offset Function | 5-48 |
| 5.6.1 Arrangement and settings | 5-50 |
| 5.6.2 Setting items | 5-50 |
| 5.6.3 Cautions | 5-50 |
| 5.7 Security Function | 5-52 |
| 5.7.1 Security function setting | 5-59 |
| 5.7.2 Cautions | 5-60 |

| |
|--|
| <p>Numerical/ Character Display</p> |
|--|

Display in numeral/characters the device value of PLC.

| | |
|--|-------------|
| 5.8 Numerical Display/Numerical Input | 5-61 |
| 5.8.1 Arrangement and settings | 5-63 |
| 5.8.2 Setting items of numerical display | 5-64 |
| 5.8.3 Setting items of numerical input..... | 5-72 |
| 5.8.4 Cautions | 5-82 |

| | |
|--|--------------|
| 5.9 Data List | 5-85 |
| 5.9.1 Required knowledge for data list setting | 5-86 |
| 5.9.2 Arrangement and settings | 5-88 |
| 5.9.3 Setting items | 5-89 |
| 5.9.4 Cautions | 5-99 |
| 5.10 ASCII Display/Input | 5-100 |
| 5.10.1 Arrangement and settings | 5-103 |
| 5.10.2 Setting items | 5-104 |
| 5.10.3 Cautions | 5-111 |
| 5.11 Clock Display | 5-112 |
| 5.11.1 Arrangement and settings | 5-112 |
| 5.11.2 Setting items | 5-114 |
| 5.11.3 Cautions | 5-117 |
| 5.12 Comment Display | 5-118 |
| 5.12.1 Arrangement and settings | 5-119 |
| 5.12.2 Setting items of bit comment | 5-120 |
| 5.12.3 Setting items of word comment | 5-126 |
| 5.12.4 Cautions | 5-136 |

| |
|--------------|
| Alarm |
|--------------|

Display alarm message.

| | |
|--|--------------|
| 5.13 Alarm List | 5-137 |
| 5.13.1 Required knowledge for user alarm setting | 5-138 |
| 5.13.2 Required knowledge for system alarm setting | 5-143 |
| 5.13.3 Arrangement and settings | 5-146 |
| 5.13.4 Setting items of user alarm | 5-147 |
| 5.13.5 Setting items of system alarm | 5-155 |
| 5.13.6 Touch switches for alarm list (user alarm) | 5-156 |
| 5.13.7 Cautions | 5-157 |
| 5.14 Alarm History | 5-160 |
| 5.14.1 Arrangement and settings | 5-162 |
| 5.14.2 Setting items | 5-164 |
| 5.14.3 Touch switches for alarm history | 5-181 |
| 5.14.4 Cautions | 5-183 |
| 5.15 Floating Alarm | 5-186 |
| 5.15.1 Settings | 5-187 |
| 5.15.2 Setting items of floating alarm | 5-188 |
| 5.15.3 Cautions | 5-190 |

| |
|------------------|
| Animation |
|------------------|

Represent the device status of PLC through lamp, parts and image.

| | |
|---|--------------|
| 5.16 Parts Display | 5-191 |
| 5.16.1 Arrangement and settings | 5-192 |
| 5.16.2 Setting items of bit parts display | 5-193 |
| 5.16.3 Setting items of word parts display | 5-197 |
| 5.16.4 Setting items of fixed parts display | 5-205 |
| 5.16.5 Cautions..... | 5-208 |
| 5.17 Parts Movement | 5-209 |
| 5.17.1 Setting of parts move route(Common setting for each screen)..... | 5-213 |
| 5.17.2 Arrangement and settings | 5-215 |
| 5.17.3 Setting items of bit parts movement | 5-216 |
| 5.17.4 Setting items of word parts movement | 5-222 |
| 5.17.5 Setting items of fixed parts movement | 5-232 |
| 5.17.6 Cautions..... | 5-237 |
| 5.18 Lamp Display | 5-238 |
| 5.18.1 Arrangement and settings | 5-239 |
| 5.18.2 Setting items of bit lamp | 5-240 |
| 5.18.3 Setting items of word lamp (for GOT-A900 series only) | 5-243 |
| 5.18.4 Setting items of bit lamp area (for GOT-F900 series only) | 5-250 |
| 5.18.5 Setting items of screen lamp (for GOT-F900 series only) | 5-250 |
| 5.18.6 Setting items of external lamp (for GOT-F900 series only) | 5-251 |
| 5.18.7 Cautions..... | 5-251 |
| 5.19 Panelmeter | 5-252 |
| 5.19.1 Required knowledge for panelmeter setting..... | 5-252 |
| 5.19.2 Arrangement and settings | 5-253 |
| 5.19.3 Setting items | 5-254 |
| 5.19.4 Cautions..... | 5-263 |
| 5.20 Level | 5-264 |
| 5.20.1 Required knowledge for Level setting | 5-264 |
| 5.20.2 Arrangement and settings | 5-266 |
| 5.20.3 Setting items | 5-268 |
| 5.20.4 Cautions..... | 5-275 |
| 5.21 Trend Graph | 5-276 |
| 5.21.1 Required knowledge for trend graph setting | 5-276 |
| 5.21.2 Arrangement and settings | 5-279 |
| 5.21.3 Setting items | 5-280 |
| 5.21.4 Cautions..... | 5-288 |
| 5.22 Line Graph | 5-289 |
| 5.22.1 Required knowledge for line graph setting | 5-289 |
| 5.22.2 Arrangement and settings | 5-291 |
| 5.22.3 Setting items | 5-292 |
| 5.22.4 Cautions..... | 5-300 |
| 5.23 Bar Graph | 5-301 |
| 5.32.1 Required knowledge for bar graph setting | 5-301 |
| 5.23.2 Arrangement and settings | 5-303 |

| | |
|----------------------------|-------|
| 5.23.3 Setting items | 5-304 |
| 5.23.4 Cautions | 5-312 |

5.24 Statistics Graph **5-313**

| | |
|--|-------|
| 5.24.1 Required knowledge for statistics graph setting | 5-314 |
| 5.24.2 Arrangement and settings | 5-315 |
| 5.24.3 Setting items | 5-316 |
| 5.24.4 Cautions | 5-322 |

5.25 Scatter Graph **5-323**

| | |
|---|-------|
| 5.25.1 Required knowledge for scatter graph setting | 5-324 |
| 5.25.2 Arrangement and settings | 5-329 |
| 5.25.3 Setting items | 5-329 |
| 5.25.4 Cautions | 5-340 |

5.26 Sampling **5-341**

| | |
|----------------------------|-------|
| 5.26.1 Settings | 5-341 |
| 5.26.2 Setting items | 5-342 |
| 5.26.3 Cautions | 5-343 |

Switch

Use touch switch to switch between GOT screens or to write value to PLC.

5.27 Touch Switch **5-344**

| | |
|--|-------|
| 5.27.1 Arrangement and settings | 5-347 |
| 5.27.2 Setting items of bit switch | 5-348 |
| 5.27.3 Setting items of data set switch | 5-364 |
| 5.27.4 Setting items of special function switch | 5-369 |
| 5.27.5 Setting items of Go To screen switching | 5-377 |
| 5.27.6 Setting items of change station No. switching | 5-387 |
| 5.27.7 Setting items of key code switch | 5-393 |
| 5.27.8 Setting items of data change switch | 5-396 |
| 5.27.9 Setting items of recipe transfer switch | 5-399 |
| 5.27.10 Setting items of multi action switch | 5-401 |
| 5.27.11 Keyboard function | 5-406 |
| 5.27.12 Cautions | 5-408 |

Trigger → Actions

Write or play sound files to PLC by certain trigger.

5.28 Status Observation Function **5-412**

| | |
|----------------------------|-------|
| 5.28.1 Settings | 5-413 |
| 5.28.2 Setting items | 5-414 |
| 5.28.3 Cautions | 5-419 |

5.29 Recipe Function **5-421**

| | |
|----------------------------|-------|
| 5.29.1 Settings | 5-422 |
| 5.29.2 Setting items | 5-423 |
| 5.29.3 Cautions | 5-428 |

| | |
|----------------------------------|--------------|
| 5.30 Time Action Function | 5-430 |
| 5.30.1 Settings | 5-431 |
| 5.30.2 Setting items | 5-432 |
| 5.30.3 Cautions..... | 5-435 |

Auxiliary

Used in combination with various objects.

| | |
|---------------------------------------|--------------|
| 5.31 Test Function | 5-437 |
| 5.31.1 Arrangement and settings | 5-438 |
| 5.31.2 Setting items | 5-438 |
| 5.31.3 Cautions..... | 5-439 |

| | |
|---|--------------|
| 5.32 Script Function | 5-440 |
| 5.32.1 Settings | 5-441 |
| 5.32.2 Setting items | 5-442 |
| 5.32.3 Cautions..... | 5-449 |
| 5.32.4 Messages displayed during syntax check | 5-449 |

| | |
|---|--------------|
| 5.33 Set Overlay Screen Function | 5-451 |
| 5.33.1 Arrangement and settings | 5-452 |
| 5.33.2 Check of the settings..... | 5-453 |
| 5.33.3 Cautions..... | 5-454 |

External Input/Output

Connect peripherals like printers to input/output data.

| | |
|--|--------------|
| 5.34 Report Function | 5-459 |
| 5.34.1 Arrangement and settings | 5-461 |
| 5.34.2 Report screen creation (screen properties)..... | 5-463 |
| 5.34.3 Setting common to each report (report setting)..... | 5-466 |
| 5.34.4 Print layout setting | 5-471 |
| 5.34.5 Cautions..... | 5-480 |

| | |
|----------------------------|--------------|
| 5.35 Hard Copy | 5-482 |
| 5.35.1 Settings | 5-483 |
| 5.35.2 Setting items | 5-484 |
| 5.35.3 Cautions..... | 5-486 |

| | |
|--|--------------|
| 5.36 Operation Panel | 5-488 |
| 5.36.1 Required knowledge for operation panel setting..... | 5-489 |
| 5.36.2 Settings | 5-490 |
| 5.36.3 Setting items | 5-491 |
| 5.36.4 Cautions..... | 5-495 |

| | |
|--|--------------|
| 5.37 Bar Code Function | 5-496 |
| 5.37.1 Settings | 5-496 |
| 5.37.2 Setting items of bar code | 5-497 |
| 5.37.3 Cautions..... | 5-498 |

| | |
|-------------------------------------|--------------|
| 5.38 Sound | 5-501 |
| 5.38.1 Settings | 5-501 |
| 5.38.2 Setting items | 5-502 |
| 5.38.3 Cautions | 5-503 |
| 5.39 Video | 5-505 |
| 5.39.1 Settings | 5-518 |
| 5.39.2 Setting items of Video | 5-519 |
| 5.39.3 Cautions | 5-522 |
| 5.40 RGB | 5-523 |
| 5.40.1 Settings | 5-526 |
| 5.40.2 Setting items of RGB | 5-527 |
| 5.40.3 Cautions | 5-528 |

Chapter 6 Script Function **6-1 to 6-33**

| | |
|---|-------------|
| 6.1 Overview | 6-1 |
| 6.1.1 Features | 6 - 1 |
| 6.1.2 Cautions for use | 6 - 3 |
| 6.2 Specifications | 6-6 |
| 6.2.1 Type | 6 - 6 |
| 6.2.2 Control structure | 6 - 7 |
| 6.2.3 Applicable data and representation methods | 6-11 |
| 6.2.4 Script execution | 6-20 |
| 6.3 Settings and Procedure for Execution | 6-23 |
| 6.4 Program Examples | 6-24 |
| 6.4.1 Touch switches with interlock function | 6-24 |
| 6.4.2 Lamps which change the display attributes under multiple conditions | 6-25 |
| 6.4.3 Password input screen with time limit function | 6-27 |
| 6.5 Troubleshooting | 6-29 |
| 6.5.1 Simulation using general C language compiler or debugger | 6-29 |
| 6.5.2 Errors and corrective actions for script execution on GOT | 6-31 |

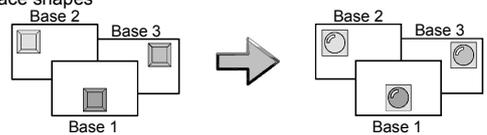
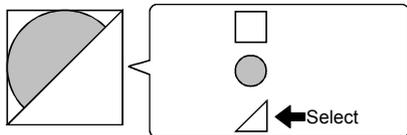
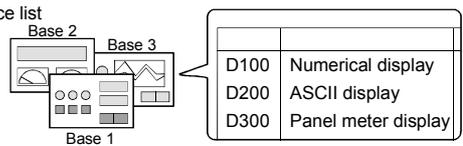
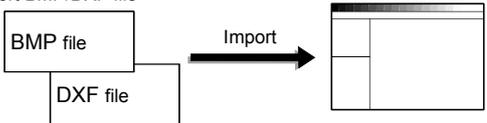
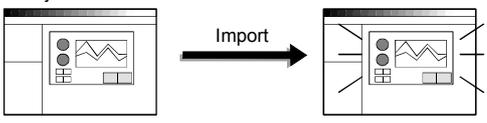
APPENDICES**App-1 to App-19**

| | |
|---|----------------|
| <u>Appendix 1 Object Display Speed (Reference Value)</u> | <u>App - 1</u> |
| <u>Appendix 2 Key Code List</u> | <u>App - 3</u> |
| <u>Appendix 3 Drawing Sheet</u> | <u>App - 6</u> |
| <u>Appendix 4 Printing Time of Hard Copy Function (Reference Value)</u> | <u>App- 9</u> |
| <u>Appendix 5 Synthesized Colors Available for XOR</u> | <u>App-10</u> |
| <u>Appendix 6 Comparison between GT Designer terms and GT Designer2 terms</u> | <u>App-13</u> |
| <u>Appendix 7 Functions Added with Upgrade from GT Designer to GT Designer2</u> | <u>App-14</u> |

INDEX**Ind- 1 to Ind- 2**

Function Quick Reference

Edit Operation (GT Designer2 Version1 Operating Manual)

| Image | Function | Page |
|--|---|-----------|
| <p>Align</p>  | Aligns objects or images | Page 8-18 |
| <p>Property sheet</p>  | Sets same attributes to objects or images in the same screen | Page 9-1 |
| <p>Replace colors</p>  | Changes the color(s) of the objects and figures arranged on plural screens at the same time | Page9-10 |
| <p>Replace shapes</p>  | Changes the switch/lamp figures at the same time | Page9-10 |
| <p>Replace devices</p>  | Changes the preset devices at the same time | Page9-10 |
| <p>Data View</p>  | Overlapping images or objects | Page 9-14 |
| <p>Device list</p>  | Display the set device in list | Page 9-15 |
| <p>Multiple language input</p>  | Input characters or comments in other language. | Page9-21 |
| <p>Import BMP/DXF file</p>  | Imports BMP/DXF files | Page8-10 |
| <p>Import Project</p>  | Utilizes other project data | Page9-28 |

Object Functions (GT Designer2 Version1 Reference Manual)

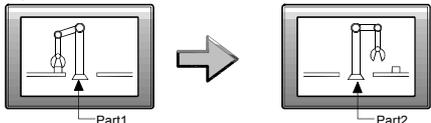
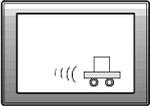
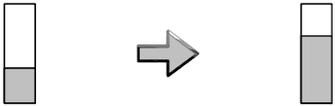
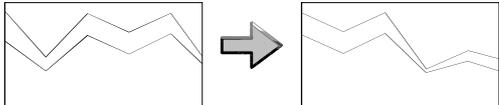
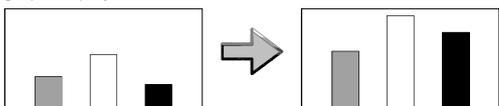
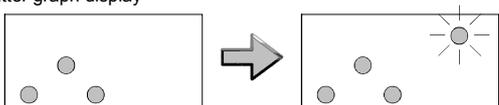
1 Digit/font display

| Image | Function | Page |
|--------------------------|--|------------|
| <p>Numerical display</p> | Displays device value in numerical value | Page 5-61 |
| <p>Numerical input</p> | Write value on device | Page 5-61 |
| <p>Data list</p> | Display multiple device value in list | Page 5-85 |
| <p>ASCII display</p> | Displays device value in text | Page 5-100 |
| <p>ASCII input</p> | Inputs text code device | Page 5-100 |
| <p>Clock display</p> | Displays hour/minutes, year/month/date | Page 5-112 |
| <p>Comment display</p> | Displays command | Page 5-118 |

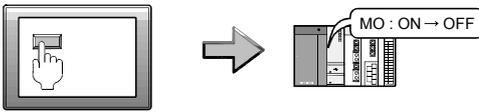
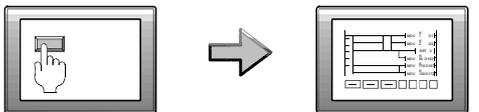
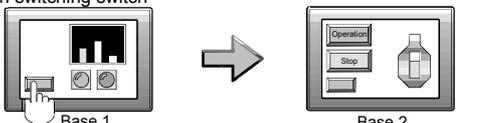
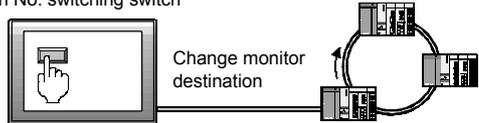
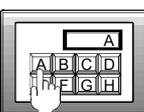
2 Alarm

| Image | Function | Page |
|------------------------------|--------------------------------------|------------|
| <p>Alarm list</p> | Displays message at alarm occurrence | Page 5-137 |
| <p>Alarm history display</p> | Displays alarm history | Page 5-160 |
| <p>Alarm flow</p> | Displays alarm in floating | Page 5-186 |

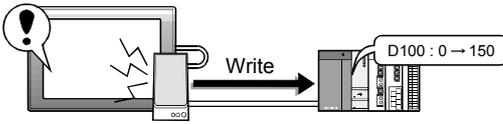
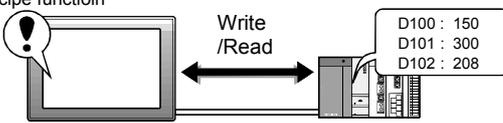
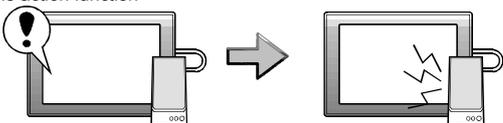
3 Animation

| Image | Function | Page |
|---|---|-------------------|
| <p>Parts display</p>  | <p>Display entered device</p> | <p>Page 5-191</p> |
| <p>Parts movement display</p>  | <p>Displays moving parts</p> | <p>Page 5-209</p> |
| <p>Lamp display</p>  | <p>Displays device value via lamp color changing</p> | <p>Page 5-238</p> |
| <p>Panel meter display</p>  | <p>Displays device data on panel meter</p> | <p>Page 5-252</p> |
| <p>Level display</p>  | <p>Displays device data in proportional level</p> | <p>Page 5-264</p> |
| <p>Trend graph display</p>  | <p>Displays device data in trend graph</p> | <p>Page 5-276</p> |
| <p>Line graph display</p>  | <p>Displays device data in line graph</p> | <p>Page 5-289</p> |
| <p>Bar graph display</p>  | <p>Displays device data in bar graph</p> | <p>Page 5-301</p> |
| <p>Statistics graph display</p>  | <p>Displays device data in statistics graph</p> | <p>Page 5-313</p> |
| <p>Scatter graph display</p>  | <p>Displays device data in scatter graph</p> | <p>Page 5-323</p> |
| <p>Sampling</p>  | <p>Collect the device value and edit collected data on PC</p> | <p>Page 5-341</p> |

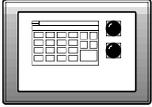
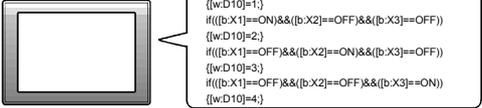
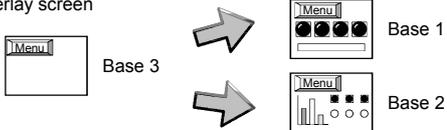
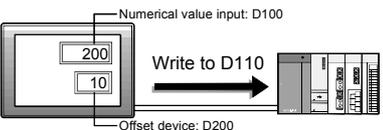
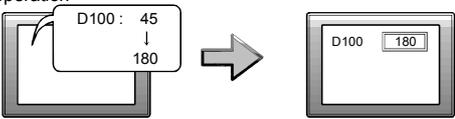
4 Touch switch

| Image | Function | Page |
|--|---|------------|
| <p>Bit switch</p>  | Touch it to switch device ON/OFF | Page 5-348 |
| <p>Data write switch</p>  | Touch it to change bit device value | Page 5-364 |
| <p>Extended function switch</p>  | Touch it to switch to the extended function screen | Page 5-369 |
| <p>Screen switching switch</p>  | Touchitto switch between the base and window screen | Page 5-377 |
| <p>Station No. switching switch</p>  | Touch it to switch the monitored PLC station No. | Page 5-387 |
| <p>Key code switch</p>  | Used as the key for inputting numerical value/ASCII | Page 5-393 |

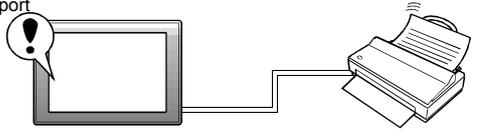
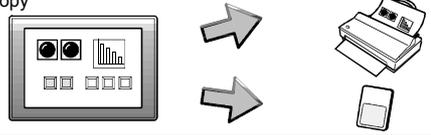
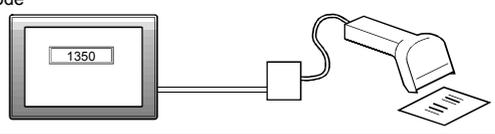
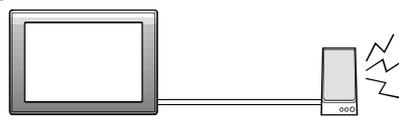
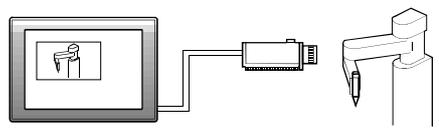
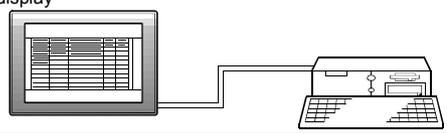
5 Trigger → action

| Image | Function | Page |
|--|--|------------|
| <p>Status observation function</p>  | Monitors status of device and write value to device or operates GOT when condition meets | Page 5-412 |
| <p>Recipe function</p>  | Monitors status of device and write/read device data when condition meets | Page 5-421 |
| <p>Time action function</p>  | Outputs the device writing and sound at specified time. | Page 5-430 |

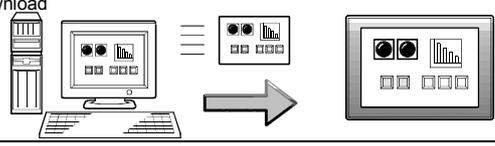
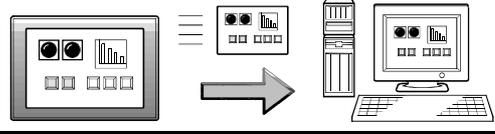
6 Auxiliary

| Image | Function | Page |
|---|--|-------------------|
| <p>Test</p>  | <p>Changes device value via test window in monitor screen</p> | <p>Page 5-437</p> |
| <p>Script</p>  <pre> if((b:X1==OFF)&&(b:X2==OFF)&&(b:X3==OFF)) {w:D10=1;} if((b:X1==ON)&&(b:X2==OFF)&&(b:X3==OFF)) {w:D10=2;} if((b:X1==OFF)&&(b:X2==ON)&&(b:X3==OFF)) {w:D10=3;} if((b:X1==OFF)&&(b:X2==OFF)&&(b:X3==ON)) {w:D10=4;} </pre> | <p>Controls GOT display by scripts</p> | <p>Page 5-440</p> |
| <p>Set overlay screen</p>  | <p>Set overlay screen from other screens</p> | <p>Page 5-451</p> |
| <p>Security</p>  | <p>Restricts the password users</p> | <p>Page 5-52</p> |
| <p>Offset</p>  | <p>Accumulates the offset device value in monitor device address and monitor.</p> | <p>Page 5-48</p> |
| <p>Data operation</p>  | <p>Operates device values by expression and enables objects using the operated value</p> | <p>Page 5-41</p> |

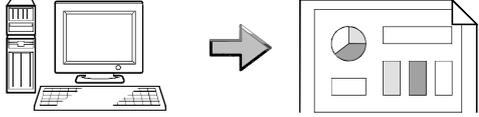
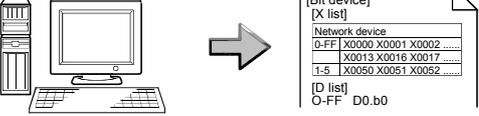
7 External input/output

| Image | Function | Page |
|--|--|------------|
| <p>Report</p>  | Collects numerical data when condition meets and prints the numerical data and corresponding code. | Page 5-459 |
| <p>Hardcopy</p>  | Outputs the GOT monitor screen to printer or PC card | Page 5-482 |
| <p>Operation panel</p>  | Uses operation panel to execute device writing | Page 5-488 |
| <p>Bar code</p>  | Writes data read by barcode reader to device | Page 5-496 |
| <p>Sound</p>  | Outputs sounds | Page 5-501 |
| <p>Video</p>  | Displays video | Page 5-505 |
| <p>RGB display</p>  | Displays PC screens | Page 5-523 |

Data Transmission (GT Designer2 Version1 Operating Manual)

| Image | Function | Page |
|---|--|-----------|
| <p>Download</p>  | Transmits monitor screen data from PC to GOT | Page 5-1 |
| <p>Upload</p>  | Transmits monitor screen data from GOT to PC | Page 5-17 |

Print (GT Designer2 Version1 Operating Manual)

| Image | Function | Page |
|--|--|-----------------|
| <p>Print screen</p>  | <p>Print base/window/report screen</p> | <p>Page 6-1</p> |
| <p>Print screen list</p>  | <p>Print base/window/report screen</p> | <p>Page 6-1</p> |
| <p>Print device list</p>  | <p>Prints list of the device used</p> | <p>Page 6-1</p> |

Manuals

The following table lists the manual relevant to this product.
You can order it as necessary.

Related Manuals

| Manual Name | Manual Number (Type code) |
|---|------------------------------|
| GT Works2 Version1/GT Designer2 Version1 Operating Manual (Startup · Introductory Manual) Describes methods of installing GT Designer2 and introductory drawing methods (Sold separately) (Sold separately) | SH-080250 (1DM203) |
| GT Designer2 Version1 Operating Manual Describes methods of operating GT Designer2 and transmitting data to GOT (Sold separately) | SH-080278E (1DM205) |
| GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended · Option Functions Manual) Describes the following extended functions and optional functions applicable to GOT Extended and optional function of GOT are as follows: <ul style="list-style-type: none"> ● Utility ● Ladder monitor ● System monitor ● Special module monitor ● Network monitor ● List editing ● Module monitor ● Servo amplifier monitor ● CNC monitor ● Font change (Sold separately) | SH-080253 (1DM206) |
| GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual) Describes the system configuration of which connection method is compatible with GOT-A900 series as well as processing cables (Sold separately) | SH-080255 (1DM207) |
| GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Gateway Functions Manual) Describes the gateway function specifications, system configuration and methods of setting GOT-A900 series (Sold separately) | SH-080398E (1DM208) |
| A985GOT/A975GOT/A970GOT/A960GOT User's Manual Provides performance specification, setting method, and communication board/communication module installation method of each GOT (Sold separately) | SH-4005 (1DM099) |
| A950GOT/A951GOT/A953GOT/A956GOT User's Manual Provides performance specification, setting method, and communication board/communication module installation method of each GOT (Sold separately) | SH-080018 (1DM103) |
| GOT-F900 Series HARDWARE Manual [CONNECTION] Explains the specifications, system configuration and connection diagram of each connection form available for the GOT-F900 series. (Sold separately) | JY992D94801 (09R805) |
| GOT-F900 Series OPERATION Manual [GT Designer2 Version] Explains the drawing specifications, utility function/HPP mode/special function unit monitoring function specifications, and dedicated monitor screen operation methods available for the GOT-F900 series. (Sold separately) | JY997D09101 (09R813) |

Abbreviations and Generic Terms

Abbreviations and generic terms used in this manual are as follows:

■ GOT

| Abbreviations and generic terms | | Description | | | |
|---------------------------------|-------------------|-------------------|-------------------|-----------------|--|
| GOT-A900 series | A985GOT-V | A985GOT-TBA-V, | A985GOT-TBD-V | | |
| | A985GOT | A985GOT-TBA, | A985GOT-TBD, | A985GOT-TBA-EU | |
| | A975GOT | A975GOT-TBA-B, | A975GOT-TBD-B, | A975GOT-TBA, | |
| | | A975GOT-TBD, | A975GOT-TBA-EU | | |
| | A970GOT | A970GOT-TBA-B, | A970GOT-TBD-B, | A970GOT-TBA, | |
| | | A970GOT-TBD, | A970GOT-SBA, | A970GOT-SBD, | |
| | | A970GOT-LBA, | A970GOT-LBD, | A970GOT-TBA-EU, | |
| | | A970GOT-SBA-EU, | A970GOT-LBA-EU | | |
| | A97* GOT | A975GOT, | A970GOT | | |
| | A960GOT | A960GOT-EBA, | A960GOT-EBD, | A960GOT-EBA-EU | |
| | A956WGOT | A956WGOT-TBD | | | |
| | A956GOT | A956GOT-TBD, | A956GOT-SBD, | A956GOT-LBD, | |
| | | A956GOT-TBD-M3, | A956GOT-SBD-M3, | A956GOT-LBD-M3 | |
| | A956GOT-SBD-B, | A956GOT-SBD-M3-B | | | |
| A953GOT | A953GOT-TBD, | A953GOT-SBD, | A953GOT-LBD, | | |
| | A953GOT-TBD-M3, | A953GOT-SBD-M3, | A953GOT-LBD-M3 | | |
| | A953GOT-SBD-B, | A953GOT-SBD-M3-B | | | |
| A951GOT | A951GOT-TBD, | A951GOT-SBD, | A951GOT-LBD, | | |
| | A951GOT-TBD-M3, | A951GOT-SBD-M3, | A951GOT-LBD-M3 | | |
| | A951GOT-SBD-B, | A951GOT-SBD-M3-B | | | |
| A951GOT-Q | A951GOT-QTBD, | A951GOT-QSBD, | A951GOT-QLBD, | | |
| | A951GOT-QTBD-M3, | A951GOT-QSBD-M3, | A951GOT-QLBD-M3 | | |
| | A951GOT-QSBD-B, | A951GOT-QSBD-M3-B | | | |
| A950GOT | A950GOT-TBD, | A950GOT-SBD, | A950GOT-LBD, | | |
| | A950GOT-TBD-M3, | A950GOT-SBD-M3, | A950GOT-LBD-M3 | | |
| | A950GOT-SBD-B, | A950GOT-SBD-M3-B | | | |
| A95* handy GOT | A950GOT-SBD-M3-H, | A950GOT-LBD-M3-H, | A953GOT-SBD-M3-H, | | |
| | A953GOT-LBD-M3-H | | | | |
| A95* GOT | A956GOT, | A953GOT, | A951GOT, | A951GOT-Q, | |
| | A950GOT | | | | |
| GOT-F900 series | F940GOT | F940GOT-SWD, | F940GOT-LWD, | ET-940BH(-L), | |
| | | ET-940PH(-L) | | | |
| | F930GOT-K | F930GOT-BBD-K | | | |
| | F930GOT | F930GOT-BWD, | F933GOT-BWD, | | |
| | F920GOT-K | F920GOT-BBD5-K, | F920GOT-BBD-K | | |
| | F940 handy GOT | F940GOT-SBD-H, | F940GOT-LBD-H, | F940GOT-SBD-RH, | |
| | F940GOT-LBD-RH, | F943GOT-SBD-H, | F943GOT-LBD-H, | | |
| | F943GOT-SBD-RH, | F943GOT-LBD-RH | | | |
| F940WGOT | F940WGOT-TWD | | | | |

■ Communication board/communication module

| Abbreviations and generic terms | | Description | | | |
|---------------------------------|-------------------------------|----------------|----------------|---------------|------------|
| Communication board | Bus connection board | A9GT-QBUSS, | A9GT-QBUS2S, | A9GT-BUSS, | |
| | | A9GT-BUS2S, | A9GT-50WQBUSS, | A9GT-50WBUSS | |
| | Serial communication board | A9GT-RS4, | A9GT-RS2, | A9GT-RS2T, | |
| | | A9GT-50WRS2, | A9GT-50WRS4 | | |
| Communication module | Bus connection module | A9GT-QBUS2SU, | A9GT-BUSSU, | A9GT-BUS2SU, | A7GT-BUSS, |
| | | A7GT-BUS2S | | | |
| | Data link module | A7GT-J71AP23, | A7GT-J71AR23, | A7GT-J71AT23B | |
| | Network module | A9GT-QJ71LP23, | A9GT-QJ71BR13, | A7GT-J71LP23, | |
| | | A7GT-J71BR13 | | | |
| | CC-Link communication module | A8GT-J61BT13, | A8GT-J61BT15 | | |
| | Ethernet communication module | A9GT-J71E71-T | | | |

■ Option Module

| Abbreviations and generic terms | | Description | |
|---------------------------------|--|-----------------|------------|
| Option Module | External I/O module | A9GT-70KBF, | A8GT-50KBF |
| | Printer interface module | A9GT-50PRF type | |
| | Memory card interface module | A1SD59J-MIF | |
| | Video/RGB mixed input interface module | A9GT-80V4R1 | |
| | Video input interface module | A9GT-80V4 | |
| | RGB input interface module | A9GT-80R1 | |

■ Option

| Abbreviations and generic terms | | Description | | |
|---------------------------------|---|---------------|---------------|----------------|
| Option | Backlight | A9GT-80LTT, | A9GT-70LTTB, | A9GT-70LTT, |
| | | A9GT-50LT, | A9GT-70LTS, | F9GT-30LTB |
| | Debug stand | A9GT-80STAND, | A9GT-70STAND, | A9GT-50WSTAND, |
| | | A9GT-50STAND | | |
| | Memory board | A9GT-FNB, | A9GT-FNB1M, | A9GT-FNB2M, |
| | | A9GT-FNB8M, | A9GT-FNB4M, | A9GT-QFNB4M, |
| | | F9GT-40FMB, | A9GT-QFNB8M, | F9GT-40UMB |
| | Ten-key panel | A8GT-TK | | |
| | Bus connector conversion box | A7GT-CNB | | |
| | Bus distance connector box | A9GT-QCNB | | |
| | Protective sheet | A9GT-80PSC, | A9GT-70PSC, | A9GT-60PSC, |
| | | A9GT-50PSC, | A9GT-50WPSC, | F9GT-40PSC, |
| | | | F9WGT-40PSC, | F9GT-30PSC |
| Attachment | A77GT-96ATT, | A85GT-95ATT, | A87GT-96ATT, | |
| | | A87GT-97ATT | | |
| PC card (memory card) | Flash PC card, commercially- available flash PC card and SRM type PC card | | | |
| Flash PC card | A9GTMEM-10MF, | A9GTMEM-20MF, | A9GTMEM-40MF | |
| Compact Flash PC card | Abbreviations of commercially- available compact flash PC card | | | |
| Connector conversion box | Abbreviation of F9GT-HCNB | | | |

■ Software

| Abbreviations and generic terms | | Description |
|---------------------------------|-----------------------|--|
| Software | GT Works2 Version1 | Abbreviation of monitoring software-GT SoftGOT2 |
| | GT Designer2 Version1 | Abbreviation of GOT900 series data conversion software-GT Converter |
| | GT Designer2 | Abbreviation of SW D5C-GPPW(-V)/SW D5F-GPPW(-V) type software package |
| | GT Simulator2 | Abbreviation of SW D5C-LLT(-V) type download test tool function software package (SW5D5C-LLT(-V) or later) |
| | GT SoftGOT2 | Abbreviation of monitoring software-GT SoftGOT2 |
| | GT Converter | Abbreviation of GOT900 series data conversion software-GT Converter |
| | GX Developer | Abbreviation of SW D5C-GPPW(-V)/SW D5F-GPPW(-V) type software package |
| | GX Simulator | Abbreviation of SW D5C-LLT(-V) type download test tool function software package (SW5D5C-LLT(-V) or later) |

■ License (for GT SoftGOT, GT SoftGOT2)

| Abbreviations and generic terms | Description |
|---------------------------------|-------------------------------------|
| License | A9GTSOFT-LKEY-P (for DOS/VPC) |
| License FD | SW5D5F-SGLKEY-J (for PC CPU module) |

■ CPU

| Abbreviations and generic terms | | Description | | | |
|---------------------------------|----------------------------------|--|---|--|--|
| QCPU | QCPU (Q Mode) | Q00JCPU, Q02HCPU, Q12PHCPU, | Q00CPU, Q06HCPU, Q25PHCPU | Q01CPU, Q12HCPU, | Q02CPU, Q25HCPU, |
| | QCPU (A Mode) | Q02CPU-A, | Q02HCPU-A, | Q06HCPU-A | |
| | Remote I/O station | Network module for MELSECNET/H network system remote I/O station (QJ72LP25-25, QJ72LP25G, QJ72BR15) | | | |
| QnACPU | QnACPU type | Q2ACPU, Q3ACPU, | Q2ACPU-S1, Q4ACPU, | Q2AHCPU, Q4ARCPU | Q2AHCPU-S1, |
| | QnASCPU type | Q2ASCPU, Q2ASHCPU-S1 | Q2ASCPU-S1, | Q2ASHCPU, | |
| ACPU | AnUCPU | A2UCPU, | A2UCPU-S1, | A3UCPU, | A4UCPU |
| | AnACPU | A2ACPU, | A2ACPU-S1, | A3ACPU | |
| | AnNCPU | A1NCPU, | A2NCPU, | A2NCPU-S1, | A3NCPU |
| | AnCPU type | AnUCPU, | AnACPU, | AnNCPU | |
| | AnUS (H) CPU | A2USCPU, | A2USCPU-S1, | A2USHCPU-S1, | A3USCPU |
| | AnS (H) CPU | A1SCPU, A1SHCPU, | A1SCPUC24-R2, A2SHCPU, | A2SCPU, A2SHCPU-S1 | A2SCPU-S1, |
| | A1SJ (H) CPU | A1SJCPU, | A1SJCPU-S3, | A1SJHCPU | |
| | AnSCPU type | AnUS(H)CPU, | AnS(H)CPU, | A1SJ(H)CPU | |
| A1FXCPU | A1FXCPU | | | | |
| FXCPU | | A0J2HCPU, | A2CCPU, | A2CCPUC24, | A2CJCPU |
| | | FX ₀ series, FX _{1N} series, FX _{2C} series, FX _{(2N)-10GM/20GM} series | FX _{0N} series, FX _{1NC} series, FX _{2N} series, | FX _{0S} series, FX _{1S} series, FX _{2NC} series, FX _{3UC} series, | FX ₁ series, FX ₂ series, |
| | Motion controller CPU (Q series) | Q172CPU, | Q173CPU | | |
| | Motion controller CPU (A series) | A273UCPU, A373CPU, A171SCPU, A171SHCPU, A172SHCPUN, | A273UHCPU, A373UCPU, A171SCPU-S3, A171SHCPUN, A173UHCPU, | A273UHCPU-S3, A373UCPU-S3, A171SCPU-S3N, A172SHCPU, A173UHCPU-S1 | |
| FA controller | LM610, | LM7600, | LM8000 | | |
| MELDAS C6/C64 | FCA C6, | FCA C64 | | | |

■ Inverter

| Abbreviations and generic terms | Description | | |
|---------------------------------|--------------|--------------|-------------|
| FREQROL series | A500 series, | E500 series, | F500 series |

■ Other PLC

| Abbreviations and generic terms | | Description | | | |
|---------------------------------|-----------------------|---|--|---|-------------------------------|
| Omron PLC | | C200HS, C200HE), CV500, CVM1-CPU01, CS1D, CPM1, CQM1H | C200H, CQM1, CV1000, CVM1-CPU11, CJ1H, CPM1A, | C200Ha series (C200HX, C200HG, C1000H, C2000H, CV2000, CVM1-CPU21, CJ1G, CPM2A, | CS1, CJ1M, CPM2C, |
| Yaskawa PLC | | GL60S, GL130, MP-930, | GL60H, CP-9200SH, MP-940, | GL70H, CP-9300MS, MP-9200(H), | GL120, MP-920, PROGIC-8 |
| Allen-Bradley PLC | SLC500 series | SLC500-20, SLC5/02, | SLC500-30, SLC5/03, | SLC500-40, SLC5/04, | SLC5/01, SLC5/05 |
| | MicroLogix1000 series | 1761-L10BWA, 1761-L16BWA, 1761-L32AWA, 1761-L32BBB, 1761-L20BWA-5A, | 1761-L10BWB, 1761-L16BWB, 1761-L32BWA, 1761-L32AAA, 1761-L20BWB-5A | 1761-L16AWA, 1761-L16BBB, 1761-L32BWB, 1761-L20AWA-5A, | |
| | MicroLogix1500 series | 1764-LSP | | | |
| Sharp PLC | | JW-21CU, JW-33CUH, JW-100CUH, | JW-22CU, JW-50CUH, Z-512J | JW-31CUH, JW-70CUH, | JW-32CUH, JW-100CU, |
| Toshiba PLC | PROSEC T series | T3, | T3H, | T2E, | T2N |
| | PROSEC V series | Model3000, | S2T | | |
| SIEMENS PLC | | SIMATIC S7-200 series, SIMATIC S7-400 series | | SIMATIC S7-300series, | |
| HITACHI PLC (HIDEC H series) | Large-sized H series | H-302(CPU2-03H), H-2002(CPU2-20H), H-700(CPU-07Ha), | H-702(CPU2-07H), H-4010(CPU3-40H), H-2000(CPU-20Ha) | H-1002(CPU2-10H), H-300(CPU-03Ha), | |
| | H-200 252 series | H-200(CPU-02H,CPE-02H), H-252(CPU22-02H), H-252C(CPU22-02HC, CPE22-02HC) | | H-250(CPU21-02H), H-252B(CPU22-02HB), | |
| | H series board type | H-20DR, H-20DT, HL-40DR, | H-28DR, H-28DT, HL-64DR | H-40DR, H-40DT, | H-64DR, H-64DT, |
| | EH-150 series | EH-CPU104, | EH-CPU208, | EH-CPU308, | EH-CPU316 |
| Matsushita Electric Works PLC | | FP0-C16CT, FP2, FP5, FP-M(C20TC), | FP0-C32CT, FP2SH, FP10 (S), FP-M (C32TC) | FP1-C24C, FP2-CCU, FP10SH, | FP1-C40C, FP3, |

How to Use This Manual

Following symbols are used in this manual

5.38 Sound

This section explains the function to output sound from the speaker connected to GOT. Sound output is available for the following functions

- Touch switch function
- Status observation function
- Time action function

To output sounds from GOT it is required to specify the output sound file in the setting.

Example

If the set conditions are satisfied, sounds are output.

Set with status observation function

stop operation

If the set conditions are enabled, (MO change) from OFF to ON, output the specified sound file.

5.38.1 Settings

- 1 Select [Common Settings] → [Sound] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.

Remark When making the settings in the project workplace
The setting dialog box can be displayed by double-clicking on [] in the project workplace.

5.38.2 Setting items

Set the sound files to be output from GOT



| Items | Description | A | F |
|-------------|--|---|---|
| Sound Files | Click on the column of file names to select a sound file to be output. Up to 100 sound files can be set. | ○ | × |
| Delete | Deletes the selected sound file. | ○ | × |

5 - 491

Shows functions applicable to GOT-A900 series (GOT-A900), GOT-F900 series (GOT-F900).

"○", Applicable
"×", N/A

Shows the items including detailed explanation (manual and its chapter, section, item).

1 → 2 → 3

Indicates the operation steps.

Brackets used for the menu and items differ.

[] : refers to menu in menu bar, refers, dialog box item or GOT utility menu.

□ : refers to dialog box buttons or PC keyboard.

Point! Refers to information required for operation.

Hint! Refers to information useful for operation.

REMARK Refers to supplementary explanations.

Shows functions applicable/inapplicable for GOT-A900 series (A), GOT-F900 Series (F).

"○", Applicable
"×", N/A

* The above is user for explanation only and differs from the actual page.

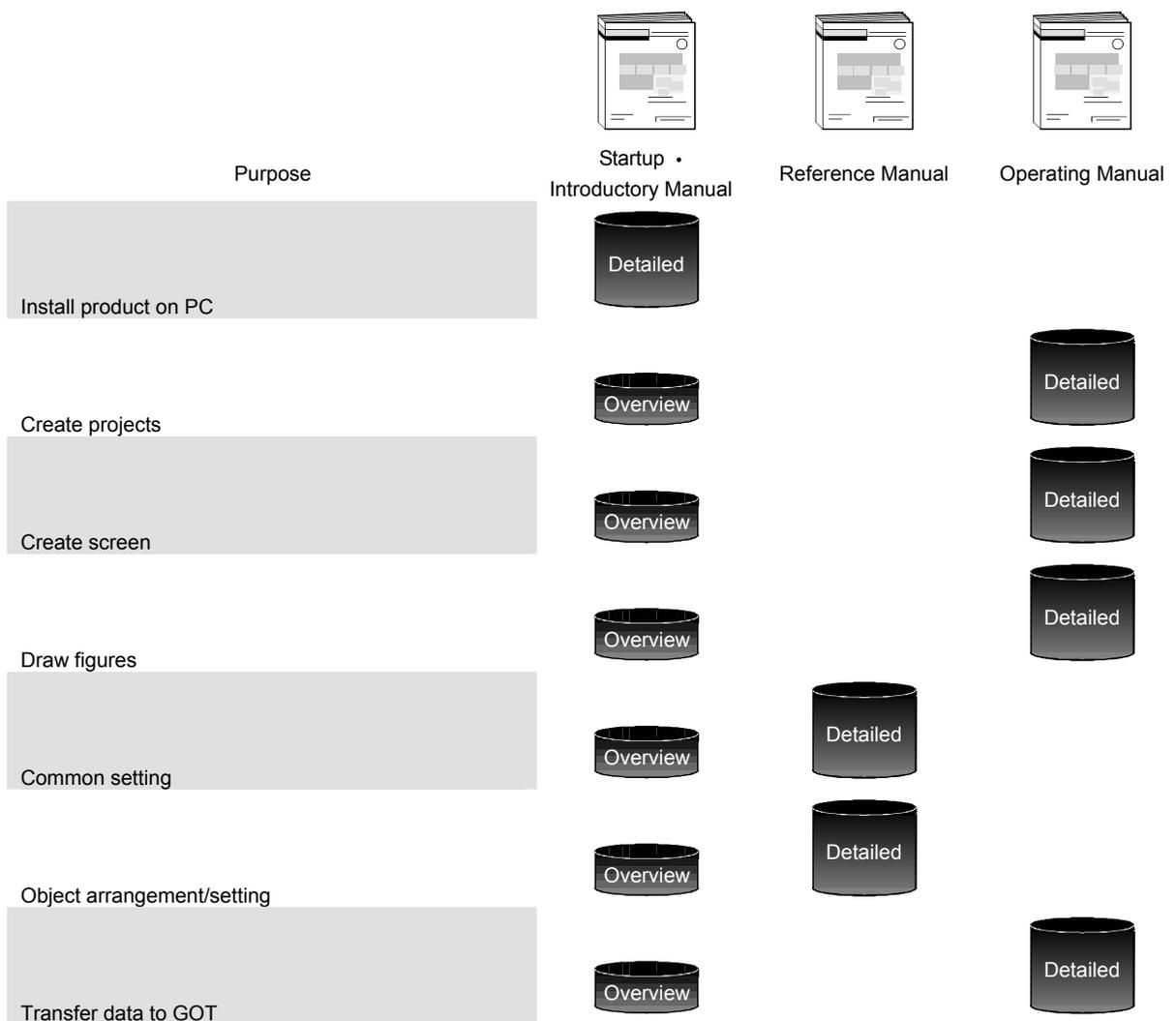
1. Overview

1.1 Overview

This manual explains the GT Designer2 common setting, object function specifications, object setting/arrangement.

1 GT Designer2-relevant manuals

There are three GT Designer2-relevant manuals (including this one). Refer to the corresponding manual according to needs.



■ **Startup and Introduction**

Describes the installation methods of the product, and explains the series of operations from creating simple screens to using them on GOT with example.

■ **Reference manual**

Provides specifications of object/figure/screen and setting methods of object

■ **Operating manual**

Describes GT Designer2 screen configuration, screen customizing methods and the series of operations from object creation to data transfer.

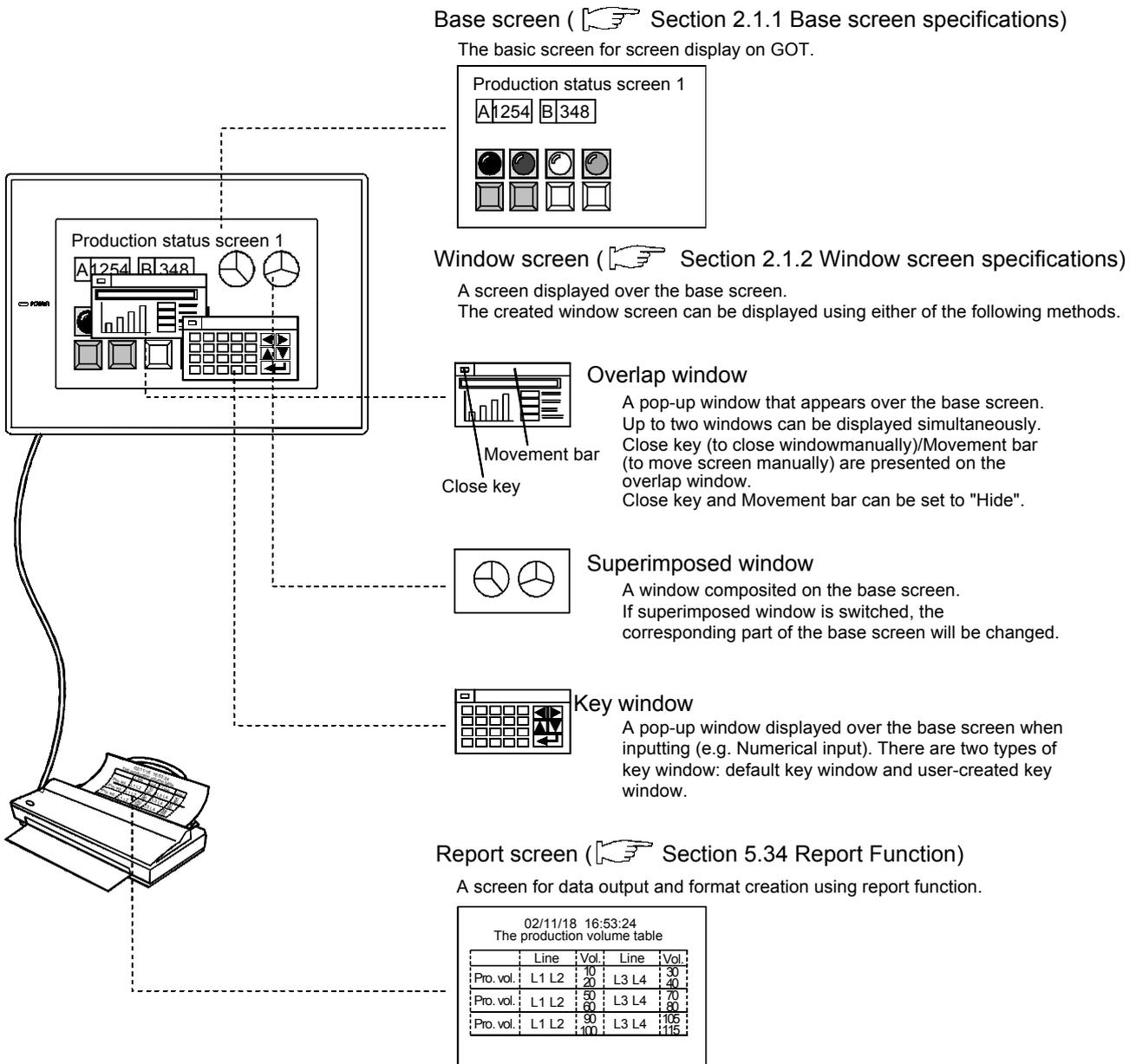
2. Specifications

2.1 Type/Number of Creatable Screens

Type and number of creatable screens differ in GOT-A900 series and GOT-F900 series.

GOT-A900 series ... Base screen, window screen (overlap window, superimpose window, key window), and report screen.

GOT-F900 series ... Base screen, key window screen (the displaying method is overlap window).



2.1.1 Base screen specifications

The following table describes the base screen specifications.

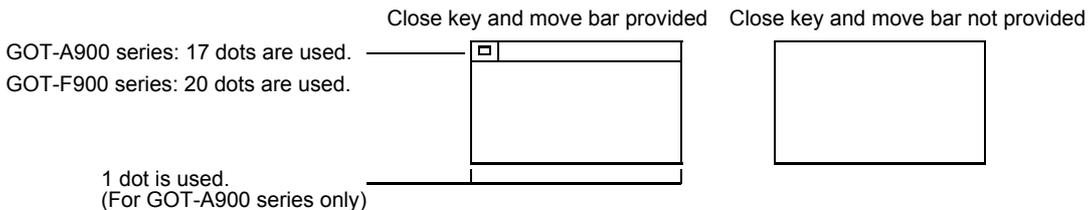
| GOT type | Screen size (W × L dots) | Number of screens can be set | Number of screens can be registered |
|---------------------------|--------------------------|------------------------------|-------------------------------------|
| GT SoftGOT | 1280 × 1024, 1024 × 768 | 4096 | 1 to 32767 |
| A985GOT/GT SoftGOT | 800 × 600 | | |
| A97*GOT/GT SoftGOT | 640 × 480 | | |
| A960GOT | 640 × 480 | | |
| A956WGOT | 480 × 234 | | |
| A95*GOT | 320 × 240 | | |
| F940WGOT | 480 × 234 | 500 | 1 to 500 |
| F94*GOT F94* handy GOT | 320 × 240 | | |
| F93*GOT (-K) | 240 × 80 | | |
| F920GOT-K | 128 × 64 | | |

2.1.2 Window screen specifications

The following table describes the window screen specifications.

| GOT type | Screen size (W × L dots) | | Number of screens can be set | Number of screens can be registered | Initial value (W × L dots) |
|------------------------------|--------------------------|---------|------------------------------|-------------------------------------|----------------------------|
| | Maximum | Minimum | | | |
| GT SoftGOT | 800 × 480 "798 × 463" | 94 × 81 | 1024 | 1 to 32767 | 318 × 176 |
| A985GOT/GT SoftGOT | | | | | |
| A97 * GOT/GT SoftGOT | | | | | |
| A960GOT | 480 × 234 "478 × 217" | | | | 190 × 126 |
| A956WGOT | | | | | |
| A95 * GOT | 320 × 240 "318 × 223" | | | | 182 × 120 |
| F940WGOT | "480 × 214" | 3 | 1 to 500 | | |
| F94 * GOT F94 * handy GOT | "318 × 220" | | | | |
| F93 * GOT (-K) | "240 × 80" | 16 × 20 | | | 182 × 80 |
| F920GOT-K | — | — | — | — | — |

- * The values in " " (quotation marks) in the above table indicates the screen sizes when a close key and a movement bar are displayed on the overlap window.
 For F94WGOT and F94*GOT, the close key and movement bar are additionally displayed on GOT side.
 (See below)
 The close key and movement bar are not displayed on F93*GOT(-K).



1 Methods of displaying window screen

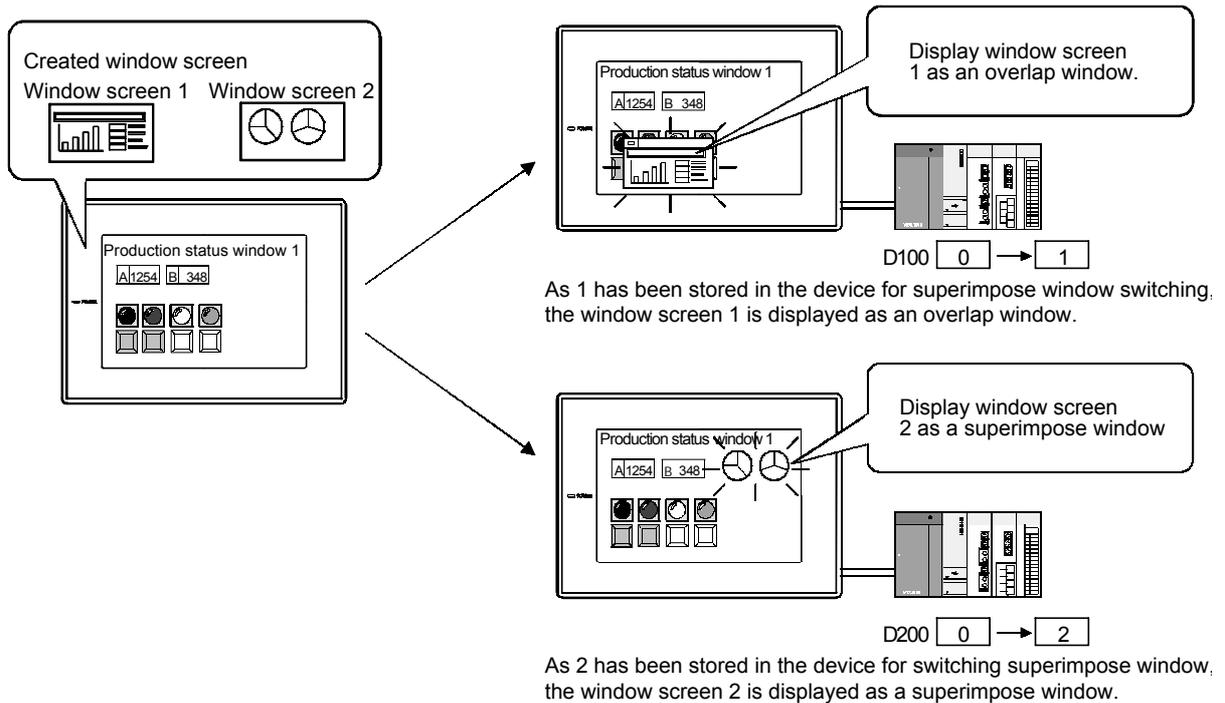
(1) Methods of displaying window screens and superimpose screens

The created window screens will be displayed when the corresponding window screen No. is stored in the screen switching device for the window screen (overlap window, superimposed window).

(Example) Relation between created window screen and device for switching window screen.

Screen switching device for overlap window : D100

Screen switching device for superimposed window : D200



When erasing a window screen, store 0 to the device for screen switching. An overlap window can be erased by touching the close key, if it is displayed there. (0 will be stored to the device for screen switching.)

☞ Section 3.2 Switching Screen Device Setting

(2) Methods of displaying key window

A key window is displayed by touching the numerical/ASCII input function objects.

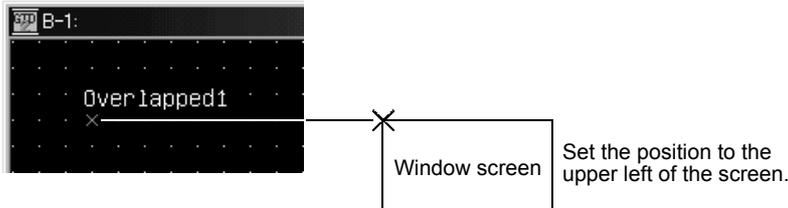
☞ Section 4.6 Key Window

2 Display position of window screen

Set the display position using GT Designer2.

A window screen is displayed in the center of a base screen if its display position has not been set. Set the display position of each window screen as follows.

- 1 Select [Object] → [Window Position] → [Overlap Window 1]/[Overlap Window 2]/[Superimposed window]/[Key Window] from the menu.
- 2 Click the display position of each window.



Display position of overlap window

The display position of an overlap window can be controlled using device.



Section 3.2 Switching Screen Device Setting

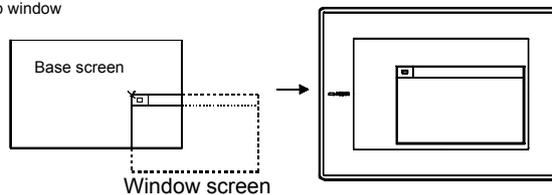


When a window screen has been set to be out of the base screen

The window screen size will not be checked when setting its display position.

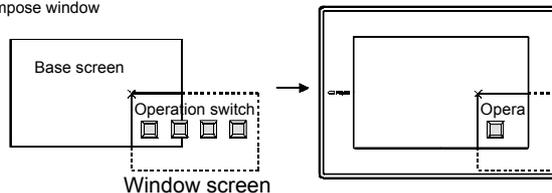
Make sure to set the display position of a window screen while considering its screen size.

Overlap window



When the window screen is out of the base screen, GOT will automatically move the window screen to inside of the base screen.

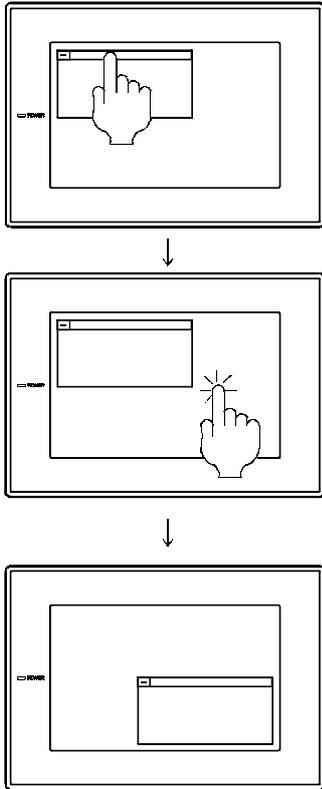
Superimpose window



The part outside the base screen will not be displayed. The object will not be displayed.

3 Methods of moving window screen

The window screens that can be moved are window 1, 2 and key windows only.
Move the window screen as explained below.



- 1 Touch the top of the window.
The window will be ready to move, i.e., move mode.
- 2 Within three seconds, touch the position where the window is to be moved.
Failure to do so releases the move mode.
If the position where another object locates is specified within three seconds, that object will not operate.
- 3 The window will move to the specified position.



Hint!

Methods of checking window move mode (for GOT-A900 series only)

When setting up GOT security function, set the alarm sound to [LONG] or [Short].
With this setting, the alarm will activate while the window is in move mode.

This function is not available if the alarm sound has been set to [None].



GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended ● Option Function Manual



Remark

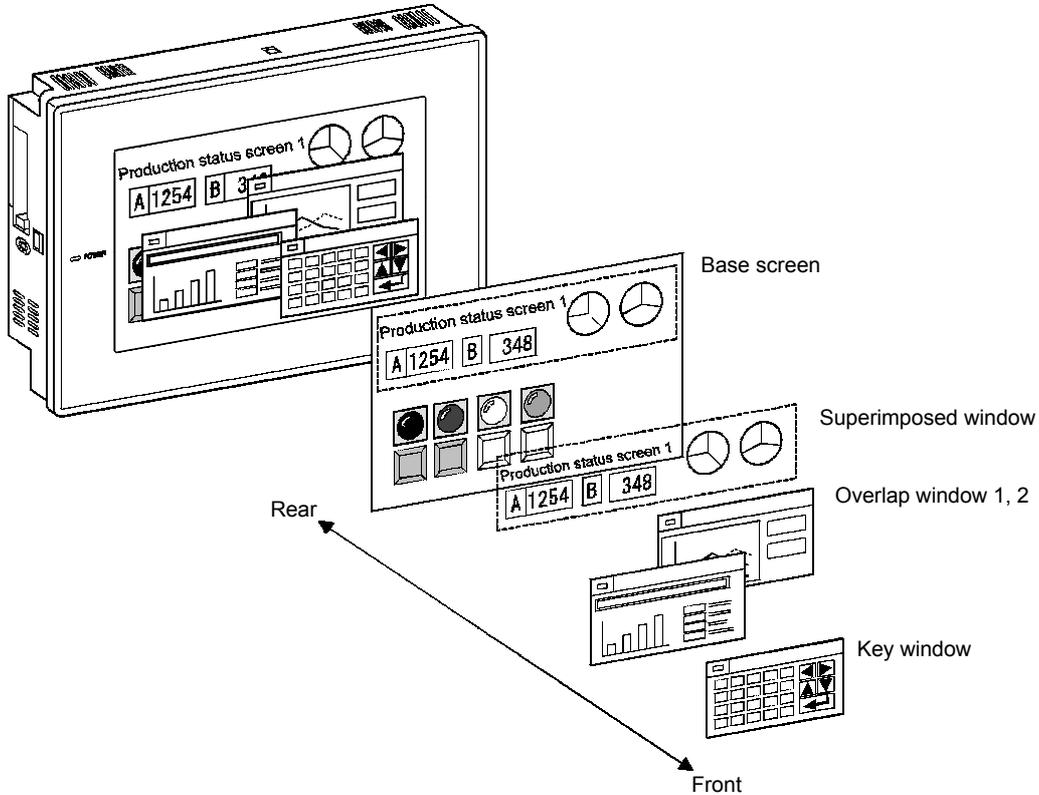
Closing the window after movement.

If a window has been moved and then closed, it will appear at the new position when opened again.

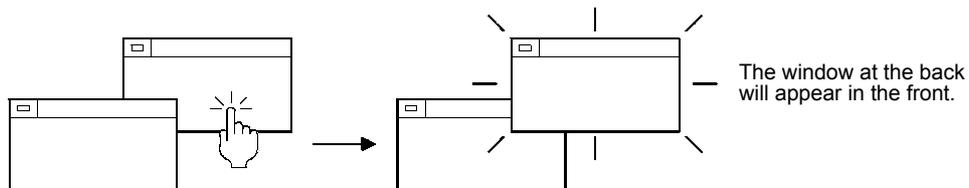
2.1.3 Whole screen specifications

1 Screen laying

The screens are layered by type and displayed as shown below.



- (1) Base screen
Located at the back.
- (2) Superimposed window (for GOT-A900 only)
Located in front of the base screen.
If no figures or objects are drawn, the corresponding part of base screen is shown.
- (3) Overlap window 1, 2 (for GOT-A900 only)
Located in front of the superimposed window.
When displaying two overlapped windows, the most recent window appears in the front.
The object behind the overlap window will not show through (transparent).
To check or operate the hidden project, move or close the overlapping window located in front of that project.
The hidden overlap window can be brought forward by touching it.



* In case of GOT-F900 series, overlap window 1, 2 can be displayed overlapping each other on the base screen.

- (4) Key window
Located in the front.

2 Overlap-display of figures and objects

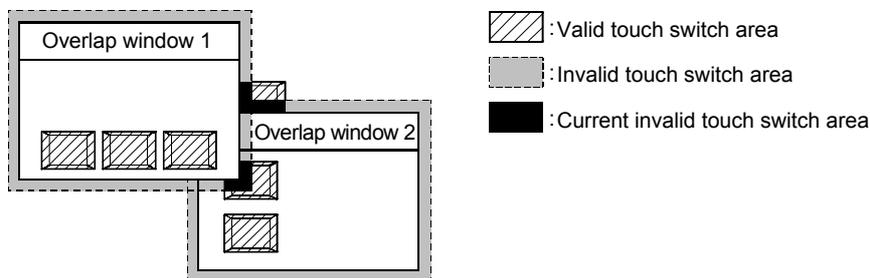
Overlapping figures and objects are displayed according to the order of layer.
On the base screen and superimposed window, the object being changed is brought to the front.

3 Touch switch operation

(1) In case of GOT-A900 series

The touch switch at the back of the superimposed window can be used.
If touch switches of the superimposed window and base window overlap, both switches can be used.
(If the touch time is not long enough, only touch switch of the superimposed window may operate.)

Touch switch at the back of an overlapped window will not operate.
The 16 dot-area around an overlap window is the invalid area of the touch switch half-hidden under that



(2) In the case of GOT-F900 series

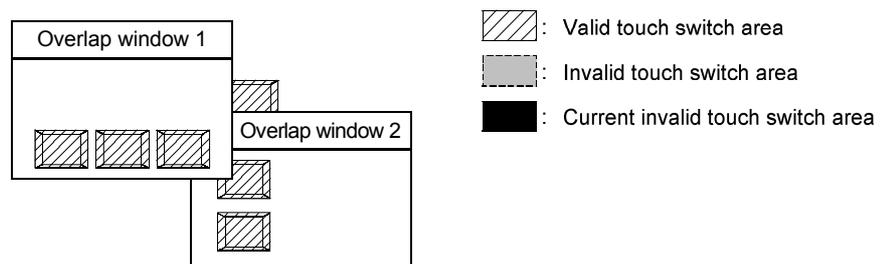
The touch switch at the back of overlap window is operable.(screen overlaying).



To hide the invalid touch switch area of overlap window

To hide the invalid touch switch area of overlap window, set close key and move bar as "Hide" and the size of the window to multiples of 16 dots.

The invalid touch switch area can be hidden by making the above settings, as shown below.



*1 In the case of GOT-F900 series, the length and height should be multiples of 16 and 20 respectively due to the mesh of L16 x H20 dots (side by side arrangement).

The mesh setting is recommended for setting the touch switch size.

To make the above setting, click [Project] → [Drawing Environment] display tabs.

4 Overlapping the quota* objects

Make sure to set in order that more than two system alarms (alarm list display) in one screen by using overlap window or superimposed window.

* In one screen, only one of this type object can be set.

2.2 Figures and Data Capacity

2.2.1 In the case of GOT-A900 series

The following table shows figures, text type, attributes and data capacity of GOT-A900 series.
The data capacity is defined by the shape. The attributes and size are not relevant.

| Figure | Drawing examples | Attributes | Data capacity (byte) |
|---------------|------------------|---|--|
| Line | | Width, | 20 |
| Line Freeform | | Style, Color | $16 + 4 \times \text{number of vertexes}$ |
| Rectangle | | | 24 |
| Polygon | | Style, Color, Pattern color, | $16 + 4 \times \text{number of vertexes}$ (Start point and end point counted as one vertex) |
| Circle | | Width, Pattern, Background | 24 |
| Arc | | Style, Color | 32 |
| Sector | | Style, Color, Foreground, | 36 |
| Paint | | Boundary, Foreground | 16 |
| Import Bitmap | | --- | 20 + data capacity of bit map file |
| Text | | Style, Solid color, Interval, Alignment, font (High quality font is used when the zoom rate of fonts are 2, 4, 6, and 8) | Text color, Size, Direction, High quality $28 + 2 \text{ (No. of characters + 1)}$ $128 \times \text{number. of characters}$ |
| Scale | | Scale points, Center line, Width, | Direction, Style, Color 24 |
| Report Line | | | 64 (For 32×32 dot lines) |
| Report Text | | --- | $16 + 4 \times \text{(Number of characters/2)}$ |

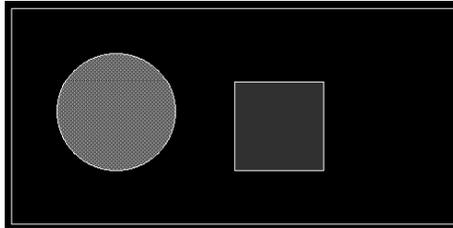


When using A956WGOT

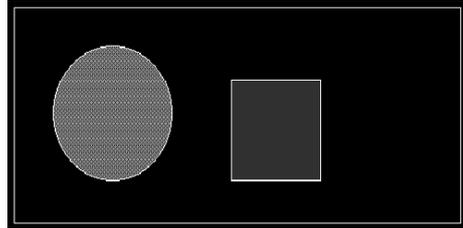
In wide display, the length of the actual screen display is 1.15 × longer compared to the screen drawn with GT Designer2.

The actual screen display can be checked using the Preview of GT Designer2.

GT Designer2 screen



A956WGOT screen

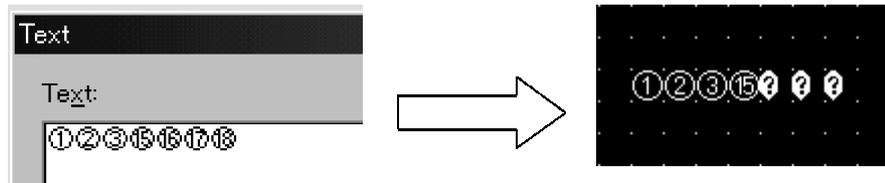


Remark

(1) GOT-compatible text

Text supported by the GT Designer2 is also supported by GOT.

However, those texts that would be changed into [?] or its size would be changed on the drawing screen after being input and defined, will not be displayed in GOT.



(2) About 1) to 15)

In the DATE area of the rated plate, the rounding frame of 1 to 15 will be displayed almost like round circle if using GOT units later than [0212*T]. (The use of [*] is different with the GOT versions.)

2 Bitmap figure

Displaying the figure (bitmap file format) for display on the GOT-A900 series is selectable from following three types: 256 colors, 16 colors and 2 colors (monochrome).

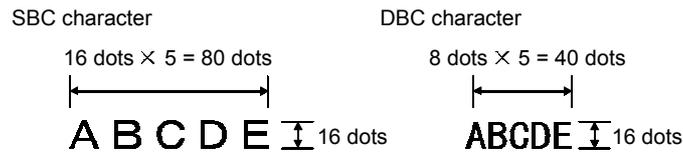
24-bit, full-color BMP image are also available to display BMP images stored on PC card for parts display and parts movement. (☞ Section 4.3 Registration of BMP Files for Parts)

However, the GOT will choose the nearest color match when an incompatible color is specified.

3 Character size by magnification

The character size is 16 dots (length) × 8 dots (width) when magnified by 1.

(Example) When five fonts (magnified by 1) are displayed.



Character size (dots) changes according to the magnification as follows.

Length × Width (dots)

| Length magnification \ Width magnification | 0.5 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| 0.5 | 8 × 8 | 8 × 16 | 8 × 32 | 8 × 48 | 8 × 64 | 8 × 80 | 8 × 96 | 8 × 112 | 8 × 128 |
| 1 | 16 × 8 | 16 × 16 | 16 × 32 | 16 × 48 | 16 × 64 | 16 × 80 | 16 × 96 | 16 × 112 | 16 × 128 |
| 2 | 32 × 8 | 32 × 16 | 32 × 32 | 32 × 48 | 32 × 64 | 32 × 80 | 32 × 96 | 32 × 112 | 32 × 128 |
| 3 | 48 × 8 | 48 × 16 | 48 × 32 | 48 × 48 | 48 × 64 | 48 × 80 | 48 × 96 | 48 × 112 | 48 × 128 |
| 4 | 64 × 8 | 64 × 16 | 64 × 32 | 64 × 48 | 64 × 64 | 64 × 80 | 64 × 96 | 64 × 112 | 64 × 128 |
| 5 | 80 × 8 | 80 × 16 | 80 × 32 | 80 × 48 | 80 × 64 | 80 × 80 | 80 × 96 | 80 × 112 | 80 × 128 |
| 6 | 96 × 8 | 96 × 16 | 96 × 32 | 96 × 48 | 96 × 64 | 96 × 80 | 96 × 96 | 96 × 112 | 96 × 128 |
| 7 | 112 × 8 | 112 × 16 | 112 × 32 | 112 × 48 | 112 × 64 | 112 × 80 | 112 × 96 | 112 × 112 | 112 × 128 |
| 8 | 128 × 8 | 128 × 16 | 128 × 32 | 128 × 48 | 128 × 64 | 128 × 80 | 128 × 96 | 128 × 112 | 128 × 128 |

2.2.2 In the case of GOT-F900 series

The following table shows figures, text type, attributes and data capacity in GOT-F900 series. The data capacity is defined by the shape. The attributes and size are not relevant.

| Figure | Drawing examples | Attributes | Data capacity (byte) |
|-----------------------|------------------|--------------------------------|-----------------------------------|
| Line | | Style, Color | 20 |
| Rectangle | | Style, Pattern, Pattern color: | 24 |
| Circle | | | |
| Import BMP/DXF format | | | 20 + data capacity of bitmap file |
| Text | | Text color, Size, Alignment | 34 + number of fonts |

1 Selectable attributes

| Attribute | Drawing examples |
|-------------------------------------|--|
| Line style | Full line —————, broken line - - - - - , dotted line ··········, one dot chain line, ··········, two dots chain line - - - - - |
| Line width | 1 Dot ————— |
| Display color | Maximum 256 colors (The GOT will choose the nearest color when an incompatible color is specified.) |
| Pattern | |
| Pattern color Pattern background | Maximum 256 colors (The GOT will choose the nearest color when an incompatible color is specified.) |

2 Bitmap figure

The figure (in bitmap file format) for display on the GOT-F900 series is selectable from following the three types: 256 colors, 16 colors and 2 colors (monochrome).

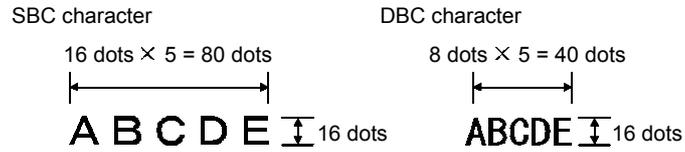
However, the GOT will choose the nearest color when an incompatible color is specified.

| GOT types | Drawing example |
|------------------------------|---|
| F920GOT (-K) F930GOT (-K) | Bitmap figure of 2 colors (monochrome) or more will be displayed in black and white. (The colors other than black are displayed as white.) |
| F940GOT | 16 colors type : Bitmap figure of 16 colors or more will be displayed in 8 colors. Monochrome type : Bitmap figure of 2 colors (monochrome) or more will be displayed in 2 colors. |
| F940 handy GOT | |
| F940WGOT | Bitmap figure of 256 colors or less will be displayed in similar 256 colors. |

3 Character size magnification

The character size is 16 dots (length) × 8 dots (width) when magnified by 1.

(Example) When five fonts (magnified by 1) are displayed.



Character size (dots) changes according to magnification as follows:

The character (switch, numeric value and ASCII) in objects can be set to 6×8 dots.

Length × Width (dots)

| Length magnification \ Width magnification | 1 | 2 | 3 | 4 |
|--|---------|---------|---------|---------|
| 0.5 | 8 × 16 | 8 × 32 | 8 × 48 | 8 × 64 |
| 1 | 16 × 16 | 16 × 32 | 16 × 48 | 16 × 64 |
| 2 | 32 × 16 | 32 × 32 | 32 × 48 | 32 × 64 |
| 3 | 48 × 16 | 48 × 32 | 48 × 48 | 48 × 64 |
| 4 | 64 × 16 | 64 × 32 | 64 × 48 | 64 × 64 |

The width size is half of length size

2.3 Specifications of Available Object Functions

2.3.1 In the case of GOT-A900 series

1 Object specifications

This section explains the main object specifications in table.

For details of the specifications and cautions, refer to the corresponding item of each object function. Note that max. number of setting objects and memory capacity in the table are based on default value settings.

When the memory capacity is increased by data operation, display methods and other settings, the number of objects may be reduced.

Point

- (1) Max number of objects can be set.

Up to 512 objects can be set in one screen.

513th object or later is invalid. (The object will not operate.)

- (2) Max number of objects in which "Trigger" has been set to "Sampling".

Up to 100 objects can be set in one screen.

101st object or later is invalid. (The object will not operate.)

Numeric value, character display

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|--|--|---|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------|----------------------|--------------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | Data Operation | | |
|  Numerical Display | 512 | Figure Plate Color Blink Frame Color Reverse | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.8 |
| | 24 | | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | | |
|  Numerical Input | 256 | Figure Plate Color Blink Frame Color Reverse | ○ | × | ○ | × | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.8 |
| | 32 | | ○ | × | ○ | × | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | | |
|  Data List | 1 | Figure Plate Color Blink Frame Color Reverse | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.9 |
| | Refer to (1) below | | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | | |
|  ASCII Display | 256 | Figure Plate Color Blink Frame Color Reverse | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | × | — | Section 5.10 |
| | 8 + No of characters | | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | × | | |
|  ASCII Input | 256 | Figure Plate Color Blink Frame Color Reverse | ○ | × | ○ | × | ○ | ○ | × | × | ○ | ○ | ○ | ○ | × | — | Section 5.10 |
| | 8 + No of characters | | ○ | × | ○ | × | ○ | ○ | × | × | ○ | ○ | ○ | ○ | × | | |
|  Clock Display | 2 | Figure Plate Display Frame Color Color | ○ | × | × | × | × | × | × | × | × | × | × | ○ | × | — | Section 5.11 |
| | 8 | | ○ | × | × | × | × | × | × | × | × | × | × | ○ | × | | |
|  Comment Display | 256 | Figure Display Size Frame Blink | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | ○ | — | Section 5.1 |
| | 24 | | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | ○ | | |
| Comment | — | Style Solid Color Blink Text Reverse High Quality Font | × | × | × | × | × | × | × | × | × | × | × | × | × | — | Section 4.1 |
| | Refer to (2) below | | × | × | × | × | × | × | × | × | × | × | × | × | × | | |

(1) Memory capacity for data list display function

$$32 + 12 \times (\text{CN} + 1) 6 \times \text{DN}$$

CN: Number of columns DN: Number of devices

(2) Memory capacity of comment

$$16 + (14 \times \text{RC}) + (2 \times \text{AT})$$

(Value within a parenthesis will be converted into multiples of 4.)

RC: Number of registered comments AT: Number of all characters

Alarm

| Function | Max. No. of setting objects in one screen ----- Memory capacity applicable for one object (byte) | Display attribute | | Trigger | | | | | Device | | | | Others | | Hardware restriction | Reference | | |
|---|--|-----------------------|------------------------------|----------|----------|-------|-----------|-----------------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------------------|-----------|-------------------|----------------|
| | | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | | | Security | Data Operation |
|  Alarm List (System Alarm) | 1 ----- 184 | Figure Plate Color | Frame Display Size | ○ | × | × | × | × | × | × | × | × | × | × | ○ | × | Refer to 2 | Section 5.13 |
|  Alarm List (User Alarm) | 24* ¹ ----- 160 + device points × 24 | Figure Plate Color | Frame Display Size | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | × | × | ○ _{*2} | ○ | × | Refer to 2 | Section 5.13 |
|  Alarm History | 1 ----- Refer to (1) below | Figure Plate Color | Frame Title Ruled Line | × | × | × | × | × | × | × | ○ | ○ | × | × | ○ | × | Refer to 2 | Section 5.14 |
|  Floating Alarm | 1 | Text | Size | × | × | × | × | ○ _{*3} | × | × | ○ | × | × | × | × | × | — | Section 5.15 |

*1 Up to 16 objects with "Store Memory" setting can be set.

*2 Objects with "Store Memory" setting is unusable.

*3 Operable only during ON.

(1) Memory capacity for alarm history display

$$80 + (2 \times TT + 4) \times DI + 16 \times DN$$

TT: Number of title characters DI: Number of display items DN: Number of devices

Animation

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|---|--|---|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------|----------------------|--------------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | Data Operation | | |
|  Parts Display | 256 | Display Mode Positioning Point Part Color Blink | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | ○ | — | Section 5.16 |
| | 44 | | | | | | | | | | | | | | | | |
|  Part Movement | 256 | Movement Type Display Mode Positioning Point Part Color Blink | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | ○ | — | Section 5.17 |
| | 60 | | | | | | | | | | | | | | | | |
|  Lamp | 256 | Figure High Quality Font Frame Lamp Back Ground Pattern Blink Text Style Text Color Solix Color L × W | ○ | × | × | × | × | × | × | ○ | ○ | ○ | ○ | ○ | ○ | — | Section 5.18 |
| | 24 | | | | | | | | | | | | | | | | |
|  Panel meter | 256 | Figure Frame Plate Color Needle Color Meter Panel Color Text Display Size Text Color High Quality Font Scale Display Scale Points | ○ | × | × | × | × | × | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.19 |
| | 40 | | | | | | | | | | | | | | | | |
|  Level | 256 | Boundary Color Level Color Pattern Background Graph Color Pattern | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.20 |
| | 40 | | | | | | | | | | | | | | | | |
|  Trend graph | 24*1 | Figure Frame Plate Color Scale Display Scale Points Graph Color Style Width | × | ○ | × | ○ | × | × | ○ | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.21 |
| | 76 + device points × 2 | | | | | | | | | | | | | | | | |
|  Line graph | 32*2 | Figure Frame Plate color Scale Display Scale Points Graph Color Style Width | × | ○ | × | ○ | × | × | ○ | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.22 |
| | 76 + device points × 2 | | | | | | | | | | | | | | | | |
|  Bar graph | 256 | Figure Frame Plate color Graph color Pattern Background | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — | Section 5.23 |
| | 220 | | | | | | | | | | | | | | | | |

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference |
|---|--|---|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | |
|  Statistics Graph | 32 | Figure Frame Plate Color Division Number | | | | | | | | | | | | | | |
| | 444 | Direction Scale Display Scale Points Graph Color Pattern BackGround | ○ | ○ | ○ | ○ | ○ | ○ | × | × | ○ | ○ | ○ | ○ | ○ | — |
|  Scatter Graph | 24 | Figure Frame Plate Color | | | | | | | | | | | | | | |
| | Refer to (1) below | Display mode Graph frame display Graph display format | × | ○ | × | ○ | × | × | ○ | × | ○ | ○ ^{*3} | ○ ^{*3} | ○ | ○ | — |

*1 Up to 16 objects with "Store Memory" settings can be set.

*2 Only one object with "Locus mode" settings can be set to one project.

*3 Objects with "Store Memory" settings is unusable.

*4 Objects with "Locus" settings is unusable.

(1) Memory capacity for scatter graph

$$128 + 4 \times SN \times (PN + 1)$$

SN: Number of stored graphs PN: Number of points

Touch switch

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference |
|---|--|---|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | |
|  Touch switch | 256 ^{*1*2} | Figure Frame Switch Pattern BackGround | | | | | | | | | | | | | | |
| | 48 | Style Text Color Solid Color L × W Text High Quality Font | ○ | × | ○ | × | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | × | — |

*1 Up to 10 touch switches with its max. number of times for operation set can be set in one screen.

*2 Up to 100 touch switches with "ON/OFF delay" settings can be set.

Trigger → Action

| Function | Max. No of setting objects in one screen Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | Device | | | Others | | Hardware restriction | Reference | | |
|---|--|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|-----------------|-------------------|----------------------|-----------|-------------------|----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF Sampling | Bit device | Word device | Offset function | Switch Station No | | | Security | Data operation |
|  Status Observation | 512 | — | × | × | ○ | × | ○ | × | × | ○ | ○ | ○ | ○ | × | × | — | Section 5.28 |
| | Refer to (1) below | | × | × | ○ | × | ○ | × | × | ○ | ○ | × | ○ | × | × | | |
|  Recipe | 256 | — | × | × | × | ○ | × | × | × | ○ | ○ | × | ○ | × | × | Refer to 2 | Section 5.29 |
| | Refer to (2) below | | × | × | × | ○ | × | × | × | ○ | ○ | × | ○ | × | × | | |
|  Time action | 32 | — | × | × | × | × | × | × | × | ○ | ○ | × | × | × | × | — | Section 5.30 |
| | 1592 | | × | × | × | × | × | × | × | ○ | ○ | × | × | × | × | | |

(1) Memory capacity for status observation

$$64 + 36 \times TS + 16 \times AI + 16 \times AW + 20 \times WT$$

TS: Number of set triggers

AI: Number of indirect devices and bit ALT devices under all conditions

AW: Total number of write devices under all conditions

WT: Number of conditions of word range

(2) Memory capacity for recipe function

Stored in built-in memory: $8 + (4 \times RD) + (108 \times RF)$

RD: Total number of devices for each recipe

RF: Number of recipe files

Saved in PC card: Refer to item **4**

Auxiliary

| Function | Max. No. of setting objects in one screen Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference | |
|---|---|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|---|----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | | Data Operation |
| Test | — | — | × | × | × | × | × | × | × | × | × | × | × | × | × | <ul style="list-style-type: none"> ● Not available in A950 Handy GOT, A95⁺GOT, A956WGOT, GT SoftGOT ● Refer to 2 | Section 5.31 |
|  Script | 256 ----- Refer to (1) below | — | ○ | ○ | × | ○ | ○ | × | ○ | ○ | ○ | ○ | ○ | × | × | — | Section 5.32 |
|  Set Overlay Screen | 2047 ----- Depending on the object | — | × | × | × | × | × | × | × | × | × | × | ○ | ○ | × | — | Section 5.33 |

(1) Memory capacity for script function (The memory capacity for script function set in each window will be 0 if the window screen is not displayed.)

$$36 + (40 \times PS) + (36 \times BC) + (40 \times BS) + (36 \times WC1) + (40 \times WS1) + (36 \times WC2) + (40 \times WS2) + (36 \times SC) + (40 \times SS)$$

PS : Number of settings for project scripts

BC : Number of settings for overlaying base screen currently displayed

BS : Number of settings for scripts of base screen currently displayed

WC1: Number of settings for window screen 1 currently displayed

WS1: Number of settings for scripts of window screen 1 currently displayed

WC2: Number of settings for overlaying window screen 2 currently displayed

WS2: Number of settings for scripts of window screen 2 currently displayed

SC : Number of settings for overlaying of superimposed window currently displayed

SS : Number of settings for scripts of superimposed window currently displayed

External input and output

| Function | | Max. No. of setting objects in one screen | Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|-----------------|---------------|---|--|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|---|--|----------------------|-----------|
| | | | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | Data Operation | | | |
| Report | Numeric value | 256 | Print Format | | | | | | | | | | | | | | | ● Not available in A950 handy GOT ● Refer to 2 | Section 5.34 | |
| | | 44 | Print Digits Decimal Point | × | ○ | × | ○ | × | × | × | × | ○ | ○ | × | × | × | ○ | | | |
| | Comment | 256 | Print Digits | × | ○ | × | ○ | × | × | × | ○ | ○ | × | × | × | ○ | | | | |
| | | 48 | Print Digits | × | ○ | × | ○ | × | × | × | ○ | ○ | × | × | × | ○ | | | | |
| Hard copy | | 1 | | | | | | | | | | | | | | | ● Not available in A950 handy GOT ● Refer to 2 | Section 5.35 | | |
| | | 4 | — | × | × | × | × | × | × | × | ○ | × | × | × | × | × | | | | |
| Operation Panel | | 1 | | | | | | | | | | | | | | | ● Not available in A950 handy GOT, GT SoftGOT2 ● Refer to 2 | Section 5.36 | | |
| | | 128 | — | ○ | × | ○ | × | ○ | × | × | ○ | ○ | × | ○ | ○ | × | | | | |
| Bar code | | 32 | | | | | | | | | | | | | | | ● Not available in A950 handy GOT, GT SoftGOT2 | Section 5.37 | | |
| | | — | Text size | × | × | × | × | × | × | × | × | ○ | × | ○ | × | × | | | | |
| Sound | | 100 | | | | | | | | | | | | | | | ● Not available in A950 handy GOT, A950WGOT, A95*GOT | Section 5.38 | | |
| | | 128 | — | × | × | × | × | × | × | × | × | × | × | × | × | × | | | | |
| Video | | 4 | | | | | | | | | | | | | | | ● Available in A985GOT-V ● Refer to 2 | Section 5.39 | | |
| | | — | — | × | × | × | × | × | × | × | × | ○ | × | × | × | × | | | | |
| RGB | | — | | | | | | | | | | | | | | | ● Available in A985GOT-V ● Refer to 2 | Section 5.40 | | |
| | | — | — | × | × | × | × | × | × | × | × | ○ | × | × | × | × | | | | |

2 Required device

Each object function may require optional modules depending on the GOT used.

(1) In the case of A985GOT (-V)/A97*GOT/A960GOT

| Function name | Required device |
|-----------------|---|
| Recipe | Memory board |
| Sound output | Memory board and external speaker |
| Operation panel | External I/O interface module |
| Video display | Video input interface module Video/RGB hybrid interface module |
| RGB display | RGB input interface module Video/RGB hybrid interface module |

(2) In the case of A956WGOT

| Function name | Required device |
|-----------------------|--|
| Alarm history display | When using PC card SRAM card: Memory card interface module Compact flash PC card: Optional module not required |
| | When printing historical data Printer interface module |
| Hard copy | When using PC card SRAM card: Memory card interface module Compact flash PC card: Optional module not required |
| | When printing Printer interface module |
| Report | Printer interface module |
| | When using PC card SRAM card: Not available Compact flash PC card: Optional module not required |
| Recipe | Memory board |
| | Use PC card SRAM card: Memory card interface module Compact flash PC card: Optional module not required |
| Operation panel | External I/O interface module |

(3) In the case of A95*GOT

| Function name | Required device |
|-----------------------|---|
| Alarm history display | When using PC card SRAM card: Memory card interface module Compact flash PC card: N/A |
| | When printing alarm history Printer interface module |
| Hard copy | When using PC card Printer interface module |
| | When printing Memory extension type GOT (A95*GOT-*BD-M3) Printer interface module |
| Report | Memory extension type GOT (A95*GOT-*BD-M3) |
| Recipe | When using PC card SRAM card: Memory card interface module Compact flash PC card: N/A |
| Operation panel | External I/O interface module |



When using an optional module with A956WGOT and A95*GOT

The external I/O interface module, printer interface module and memory board interface module cannot be used simultaneously for A956WGOT and A95*GOT (External input/output, printing and storing data to PC card cannot be executed simultaneously).

Therefore, when using a function such as the alarm history display function by which printing and storing to PC card are simultaneously executed, some function can not be used.

(When using compact flash PC card for A956WGOT, printing and storing to PC card can be performed simultaneously because no interface is required.)

3 Data capacity available for storage on PC card/hard disk

(1) Data capacity available for storage on PC card (In the case of A985GOT/A97*GOT/A960GOT/A956WGOT/ A95*GOT)

Some objects have a function that allows storing data into a PC card.

The data capacity available for a PC card is shown as follows.

| Object name | Data capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|------------------------------|-------------|-------------|-----------|------------------------------|-------|---------|-------|-------|---------|-------|------|-------------|-------|------|-------------|-------|------|-------------|------|-----|---------|------|-----|----------|-------|------|-------------|------|------|-------------|------|------|-------------|-----|------|
| Report function (byte) | $DN \times 8 + 36 + ((DN \times 8 + 8) \times CT)$ DN: Number of devices CT: Number of times for collecting (sampling) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alarm history function | When saving 3072 alarm historical data Cumulation mode (when saved in CSV format) : Approx. 97 K bytes (Approx. 400K bytes) History mode (when saved in CSV format) : Approx. 72 K bytes (Approx. 360K bytes) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard copy function | Data capacity per screen (The following are reference values.) \times Number of screens to be stored | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Data capacity per screen (KB) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%;"> <thead> <tr> <th>Model</th> <th>BMP format</th> <th>JPEG format</th> </tr> </thead> <tbody> <tr> <td>A985GOT-V</td> <td>470.0 (Video window: 1406.3)</td> <td>133.4</td> </tr> <tr> <td>A985GOT</td> <td>470.0</td> <td>113.9</td> </tr> <tr> <td>A975GOT</td> <td>301.0</td> <td>86.6</td> </tr> <tr> <td>A970GOT-TB*</td> <td>150.0</td> <td>86.6</td> </tr> <tr> <td>A970GOT-SB*</td> <td>150.0</td> <td>84.5</td> </tr> <tr> <td>A970GOT-LB*</td> <td>37.6</td> <td>N/A</td> </tr> <tr> <td>A960GOT</td> <td>37.6</td> <td>N/A</td> </tr> <tr> <td>A956WGOT</td> <td>110.0</td> <td>33.2</td> </tr> <tr> <td>A95*GOT-TBD</td> <td>76.1</td> <td>26.8</td> </tr> <tr> <td>A95*GOT-SBD</td> <td>37.6</td> <td>27.6</td> </tr> <tr> <td>A95*GOT-LBD</td> <td>9.4</td> <td>N/Ae</td> </tr> </tbody> </table> | Model | BMP format | JPEG format | A985GOT-V | 470.0 (Video window: 1406.3) | 133.4 | A985GOT | 470.0 | 113.9 | A975GOT | 301.0 | 86.6 | A970GOT-TB* | 150.0 | 86.6 | A970GOT-SB* | 150.0 | 84.5 | A970GOT-LB* | 37.6 | N/A | A960GOT | 37.6 | N/A | A956WGOT | 110.0 | 33.2 | A95*GOT-TBD | 76.1 | 26.8 | A95*GOT-SBD | 37.6 | 27.6 | A95*GOT-LBD | 9.4 | N/Ae |
| | Model | BMP format | JPEG format | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A985GOT-V | 470.0 (Video window: 1406.3) | 133.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A985GOT | 470.0 | 113.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A975GOT | 301.0 | 86.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A970GOT-TB* | 150.0 | 86.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A970GOT-SB* | 150.0 | 84.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A970GOT-LB* | 37.6 | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A960GOT | 37.6 | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A956WGOT | 110.0 | 33.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A95*GOT-TBD | 76.1 | 26.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A95*GOT-SBD | 37.6 | 27.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A95*GOT-LBD | 9.4 | N/Ae | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recipe function (byte) | $149 \times F + 9 \times 16 + 14 \times 2$ RF : Number of recipe files R16 : Total number of 16-bit devices in each recipe file R32 : R16: Total number of 32-bit devices in each recipe file | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

(2) Data capacity available for storage on hard disk (When using GT Designer2)

Some objects have a function that allows storing data into a hard disk.

The data capacity available for storage on the hard disk is shown as follows.

| Object name | Data capacity (byte) | | | | | | | | | | | | | | | | | | |
|--|--|-------------------------------|----------------------|--------------|-------|-------------------------------|-------------|--|--------|--|---------------------|-------|------|--------------------|-------|------|--------------------|-------|------|
| Report function (byte) | $\frac{CT+(PCT-1)}{PCT} \times (HR+1) \times RD + CT \times RR \times RD$ <p>PCT: Sampling number available for 1 printed page CT: Number of times for collecting (sampling) RD: Data size of 1 line RR: Repeated line HR: Number of header lines</p> | | | | | | | | | | | | | | | | | | |
| Alarm history function | <p>Data size per line (See below) × (Number of print (Number of occurrences, restorations, confirmations) + 1)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mode</th> <th style="text-align: center;">Data capacity (byte)</th> </tr> </thead> <tbody> <tr> <td>History mode</td> <td style="text-align: center;">80</td> </tr> <tr> <td>Cumulation mode (Status only)</td> <td style="text-align: center;">79</td> </tr> <tr> <td>Cumulation mode (Cumulation time or occurrence time, status)</td> <td style="text-align: center;">88</td> </tr> <tr> <td>Cumulation mode (Cumulation time, occurrence time, status)</td> <td style="text-align: center;">97</td> </tr> </tbody> </table> | Mode | Data capacity (byte) | History mode | 80 | Cumulation mode (Status only) | 79 | Cumulation mode (Cumulation time or occurrence time, status) | 88 | Cumulation mode (Cumulation time, occurrence time, status) | 97 | | | | | | | | |
| Mode | Data capacity (byte) | | | | | | | | | | | | | | | | | | |
| History mode | 80 | | | | | | | | | | | | | | | | | | |
| Cumulation mode (Status only) | 79 | | | | | | | | | | | | | | | | | | |
| Cumulation mode (Cumulation time or occurrence time, status) | 88 | | | | | | | | | | | | | | | | | | |
| Cumulation mode (Cumulation time, occurrence time, status) | 97 | | | | | | | | | | | | | | | | | | |
| Hard copy function | <p>Data capacity per screen (The following are reference values.) × Number of screens to be stored</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Data capacity per screen (KB)</th> </tr> <tr> <th style="text-align: center;">Model</th> <th style="text-align: center;">BMP format</th> <th style="text-align: center;">JPEG format</th> </tr> </thead> <tbody> <tr> <td>SoftGOT2 (1280 × 24)</td> <td style="text-align: center;">1281.0</td> <td style="text-align: center;">107.0</td> </tr> <tr> <td>SoftGOT2 (1024 × 8)</td> <td style="text-align: center;">767.0</td> <td style="text-align: center;">93.6</td> </tr> <tr> <td>SoftGOT2 (800 × 0)</td> <td style="text-align: center;">469.8</td> <td style="text-align: center;">84.6</td> </tr> <tr> <td>SoftGOT2 (640 × 0)</td> <td style="text-align: center;">301.0</td> <td style="text-align: center;">64.8</td> </tr> </tbody> </table> | Data capacity per screen (KB) | | | Model | BMP format | JPEG format | SoftGOT2 (1280 × 24) | 1281.0 | 107.0 | SoftGOT2 (1024 × 8) | 767.0 | 93.6 | SoftGOT2 (800 × 0) | 469.8 | 84.6 | SoftGOT2 (640 × 0) | 301.0 | 64.8 |
| Data capacity per screen (KB) | | | | | | | | | | | | | | | | | | | |
| Model | BMP format | JPEG format | | | | | | | | | | | | | | | | | |
| SoftGOT2 (1280 × 24) | 1281.0 | 107.0 | | | | | | | | | | | | | | | | | |
| SoftGOT2 (1024 × 8) | 767.0 | 93.6 | | | | | | | | | | | | | | | | | |
| SoftGOT2 (800 × 0) | 469.8 | 84.6 | | | | | | | | | | | | | | | | | |
| SoftGOT2 (640 × 0) | 301.0 | 64.8 | | | | | | | | | | | | | | | | | |
| Recipe function (byte) | $149 \times F + 9 \times 16 + 14 \times 32$ <p>RF : Number of recipe files R16 : Total number of 16-bit devices in each recipe file R32 : R16: Total number of 32-bit devices in each recipe file</p> | | | | | | | | | | | | | | | | | | |

2.3.2 In the case of GOT-F900 series

1 Specifications of individual objects

Specifications for object functions are listed as follows.

For details of the specifications and precautions, refer to the section of the relevant object function.

Maximum number of setting objects and memory capacity in the table are determined assuming all of the setting items are set to the default values.

When the memory capacity is increased by setting data operation or display methods, the number of objects may be reduced.



(1) The maximum number of setting objects

The maximum number of setting objects per screen may differ depending on the parts.

Refer to the GOT-F900 Operating Manual for the maximum setting number.

(2) Number of parts that can be actually displayed

The number of parts that can be actually displayed is shown as follows.

[Max. No. of settings in table]=[Base screen]+[Set overlay screen]

(3) Memory capacity

The memory size may increase or decrease depending on the conditions such as presence or absence of frames.

The memory size shown in the table is the minimum unit of each part.

Numerical or character display

| Function | Max. No. of setting objects in one screen Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | Device | | | | Others | | Hardware restriction | Reference | |
|--|---|---|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------|----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | | Data Operation |
|  Numerical display | 50 ----- 32 | Shape Plate color Frame Number | × | × | × | × | × | × | × | × | ○ | × | × | × | ○ | — | Section 5.8 |
|  Numerical input | 50 ----- 48 | Shape Plate color Frame Number | ○ | × | × | × | ○ | × | × | × | ○ | × | × | × | ○ | — | Section 5.8 |
|  ASCII display | 10 ----- 32 | Shape Plate Frame Text color | × | × | × | × | × | × | × | × | ○ | × | × | × | × | — | Section 5.10 |
|  ASCII input | 10 ----- 32 | Shape Plate Frame Text color | ○ | × | × | × | ○ | × | × | × | ○ | × | × | × | × | — | Section 5.10 |
| Clock display  | 10 ----- 28 | Shape Plate color Frame Display | × | × | × | × | × | × | × | × | × | × | × | × | × | — | Section 5.11 |
| Comment display  | 50 ----- Word: 36 Bit: 44 | Shape Display size Frame | × | × | × | × | × | × | × | × | ○ | ○ | ○ | × | × | × | Section 5.12 |

Alarm

| Function | Max. No. of setting objects in one screen ----- Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference | |
|--|--|--|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------|-----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | | Data Operation |
|  Alarm list (user alarm) | 1 ----- 32 | Shape Frame, Plate Display size | × | × | × | × | × | × | × | ○ | × | × | × | × | × | — | Section 5.13 |
|  Alarm history display | 1 ----- 48 | Shape Frame Plate Title color | × | × | × | × | × | × | × | ○ | × | × | × | × | × | — | Section 5.14 |
|  Floating alarm | 1 ----- 80 | Text size | × | × | × | × | ○ | × | × | ○ | × | × | × | × | × | — | Section 5.15 |

Motion

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|--|--|-------------------------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|---|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | |
|  Parts display | 50 | Display mode | | | | | | | | | | | | | | |
| | Word: 32 Bit: 36 | Positioning point Parts color | × | × | × | × | × | × | × | ○ | ○ | × | × | × | ○ | — |
|  Lamp display | 50 | Frame color Lamp | | | | | | | | | | | | | | |
| | 32 | Text Text color, X × Y | × | × | × | × | × | × | × | ○ | × | × | × | × | × | — |
|  Panel meter display | 50 | Shape Plate Needle | | | | | | | | | | | | | | |
| | 40 | color Meter panel color Scale | × | × | × | × | × | × | × | × | ○ | × | × | × | × | — |
|  Trend graph display | 1 | Shape Plate Graph | | | | | | | | | | | | | | |
| | 40+2 × No of graphs | color Line style Scale | × | ○ | × | × | × | × | × | × | ○ | × | × | × | × | Not available for F920GOT-K |
|  Line graph display | 1 | Shape Plate Graph | | | | | | | | | | | | | | |
| | 36+2 × No of graphs | color Line style Scale | × | × | × | × | × | × | × | × | ○ | × | × | × | × | Not available for F920GOT-K |
|  Bar graph display | 50 | Shape Plate Graph | | | | | | | | | | | | | | |
| | 44 | color Scale | × | × | × | × | × | × | × | × | ○ | × | × | × | × | — |
|  Statistics graph display | 1 | Shape Plate Division number | | | | | | | | | | | | | | |
| | 28+No of devices | Direction Graph color, Scale | × | × | × | × | × | × | × | × | ○ | × | × | × | × | Not available for F920GOT-K |
|  Sampling | 4 | — | | | | | | | | | | | | | | |
| | — | — | × | ○ | × | ○ | × | ○ | × | ○ | ○ | × | × | × | × | Not available for F920GOT-K, F930GOT (-K) |

Touch switch

| Function | Max. No. of setting objects in one screen Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference | |
|---|---|--|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------------------------|----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | | Data Operation |
|  Touch switch | 50 ----- 28 | Shape Frame Switch Text color X × Y Text | ○ | × | × | × | ○ | × | × | ○ | ○ | × | × | × | × | Not available for F920GOT-K | Section 5.27 |

Trigger → Action

| Function | Max. No. of setting objects in one screen Memory capacity applicable for one object (byte) | Display attribute | Trigger | | | | | | | Device | | | Others | | Hardware restriction | Reference | |
|---|---|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------------|-----------|----------------|
| | | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | | | Data Operation |
|  Status observation | 40 ----- 8+28 × No of set points | — | × | × | × | × | ○ | × | × | ○ | ○ | × | × | × | × | — | Section 5.28 |
|  Recipe | 256* ¹ ----- — | — | × | × | × | ○ | × | × | × | × | ○ | × | × | × | × | — | Section 5.29 |
|  Time action | 8* ¹ ----- — | — | × | × | × | × | × | × | × | ○ | × | × | × | × | × | — | Section 5.30 |

*1 The maximum number of objects set for each project.

Auxiliary

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|---|--|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------|----------------------|-----------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | Data Operation | | |
|  Set overlay screen | 4 | — | × | × | × | × | × | × | × | × | × | × | × | × | — | Section 5.33 | |
| | Depending on the object | | × | × | × | × | × | × | × | × | × | × | × | × | × | | |

External input/output

| Function | Max. No. of setting objects in one screen | Display attribute | Trigger | | | | | | | Device | | | | Others | | Hardware restriction | Reference |
|--|--|-------------------|----------|----------|-------|-----------|--------|-------------|--------------------------|------------|-------------|----------------------|----------------------|----------|----------------|---|--------------|
| | Memory capacity applicable for one object (byte) | | Ordinary | Sampling | Range | Rise/Fall | ON/OFF | Bit Trigger | ON Sampling/OFF sampling | Bit device | Word device | Offset specification | Switching Station No | Security | Data Operation | | |
|  Hard copy | 1 | — | × | × | × | × | × | × | × | × | ○ | × | × | × | × | Not available for F930GOT (-K), F920GOT-K | Section 5.35 |
| | 24 | | × | × | × | × | × | × | × | × | ○ | × | × | × | × | | |
|  Operation panel | 256*1 | — | × | × | × | × | × | × | × | ○ | ○ | × | × | × | × | — | Section 5.36 |
| | — | | × | × | × | × | × | × | × | ○ | ○ | × | × | × | × | | |
|  Bar code | 32*1 | Text size | × | × | × | × | × | × | × | × | ○ | × | ○ | × | × | Not available for F940 Handy GOT, F920GOT-K | Section 5.37 |
| | — | | × | × | × | × | × | × | × | × | ○ | × | ○ | × | × | | |

*1 The maximum number of objects set for each project.

2.4 Clock Function

2.4.1 Clock function for monitoring by GOT

The clock function differs depending on the GOT.
This section explains the clock function used by various GOTs.

1 GOT-A900 series

Using the clock function of the PLC CPU (GOT does not have clock data.), the GOT verifies the clock data of the PLC CPU every hour.

The monitoring target depends on the connection type.

| Connection type | | Location from which time data are read |
|----------------------------|----------------------------|---|
| Bus connection | | Connected PLC CPU |
| CPU direction connection | | Connected PLC CPU *1 |
| Computer link connection | | |
| MELSECNET connection | MELSECNET (II) | PLC CPU of master station |
| | MELSECNET/B | |
| | MELSECNET/10 | When using A9GT-QJ71LP23 or A9GT-QJ71BR13 PLC CPU of control station |
| | | When using A7GT-J71LP23 or A7GT-J71BR13 PLC CPU of control station (When QCPU is used, monitoring is available by making the settings in "Hint (1)") |
| CC-Link connection | Intelligent device station | PLC CPU of master station |
| | Remote device station | Clock function not available |
| Ethernet connection | | PLC CPU set as host in GT Designer2 |
| Microcomputer connection | | Clock function not available |
| Third party PLC connection | | Connected PLC CPU |

When connecting GOT to a remote I/O station, make sure that the master station is connected to MELSECNET/H network system and powered ON.



- (1) Adjusting GOT date/time and PLC CPU date/time.
 - (a) When adjusting GOT date/time to PLC CPU date/time
When adjusting GOT date/time to PLC CPU date/time
GOT reads clock data of PLC CPU once every hour.
Therefore, if the clock data of PLC CPU has been changed, the time delay of
GOT will remain unchanged for up to one hour. However, by turning the
GOT ready signal (system signal 2 "b1") OFF, GOT can read the clock data
at any timing.
(The GOT ready signal (system signal 2 "b1") returns to ON immediately after
turned OFF)
Section 3.5 System Information Setting
 - (b) When adjusting PLC CPU date/time to GOT date/time
Set the date/time using "TIME SET" utility.
GOT-A900 Series Operating Manual
(GT Works2 Version1/GT Designer2 Version1 compatible Extended-Option
Functions Manual)
- (2) Using the clock function when connected to QCPU via MELSECNET/10
connection
Place a check-mark to [Use special relay/special register of SM1000/SD1000 or
later] in the [PC system setting] of [PC parameter setting] in GX Developer to use
the clock function. (Not available for Q00JCPU, Q00CPU, and Q01CPU.)
- (3) Using the clock function when connecting with micorcomputer
 - (a) Install the A9GT-RS2T (clock function built-in communication board)to GOT.
(It is not available for the A95*GOT/A956WGOT because the communication
board can not be installed to them.)
For specifications of the A9GT-RS2T, refer to the following manual.
 A9GT-RS2T Type Clock Function Built-in Serial Communication
Board Users Manual.
 - (b) Clock function of the A9GT-RS2T can be used in microcomputer connection
only
Clock function of the A9GT-RS2T is not available in any other connection
types.



- Time/Date setting in remote I/O connection
- Time/Date setting cannot be performed using "TIME SET" utility when GOT is
connected to a remote I/O station.
In this case, make the time/date setting of the PLC CPU in the master station in the
time/date setting of GX Developer.

2 GT SoftGOT

This GOT displays PC clock data.

3 GOT-F900 series

GOT other than F920GOT-K displays the clock data stored in the GOT.
The F920GOT-K reads the clock data of only FXCPU (the model with clock function) among PLC
CPU models.

2.4.2 PLC CPU with clock function (GOT-A900 series only)

The following functions require the clock function of the PLC CPU.

These functions are not applicable if the PLC CPU has no clock function.

- Clock display function
- Alarm list display function
- Alarm history display function
- Time action function

1 PLC CPU with clock function

(1) PLC manufactured by Mitsubishi Electric Corporation

| Abbreviations/Generic terms | | Description | | | |
|-----------------------------|----------------------------------|---|---|--|----------------------------------|
| QCPU | QCPU (Q Mode) | Q00JCPU, Q02HCPU, Q12PHCPU, | Q00CPU, Q06HCPU, Q25PHCPU, | Q01COU, Q12HCPU, Q12PRHCPU, | Q02CPU, Q25HCPU, Q25PRHCPU |
| | QCPU (A Mode) | Q02CPU-A, | Q02HCPU-A, | Q06HCPU-A | |
| QnACPU | QnACPU Type | Q2ACPU, Q4ACPU, | Q2AHCPU, Q4ARCPU | Q2ASCPU-S1, | Q3ACPU, |
| | QnASCPU Type | Q2ASCPU, | Q2ASCPU-S1, | Q2ASHCPU, | Q2aSHCPU-S1 |
| ACPU | AnUCPU | A2UCPU, | A2UCPU-S1, | A3UCPU, | A4UCPU |
| | AnACPU | A2ACPU, | A2ACPU-S1, | A3ACPU | |
| | AnNCPu | A1NCPu, | A2NCPu, | A2NCPu-S1, | A3NCPu |
| | A2US (H) CPU | A2USHCPU-S1 | | | |
| | AnS (H) CPU | A1SCPU, A2SHCPU, | A1SHCPU, A2SHCPU-S1, | A2SCPU, A1SCPUC24-R2 | A2SCPU-S1, |
| | A1S (H) CPU | A1SJCPU, | A1SJCPU-S3, | A1SJHCPU | |
| | A2C | A2CJCPU, | A2CCPU, | A2CCPUC24 | |
| A1FXCPU | A1FXCPU | | | | |
| FXCPU | | FX _{1N} series, FX ₂ series *1, FX _{2NC} series *1 | FX _{1NC} series, FX _{2C} series *1, FX _{3UC} series *1 | FX _{1S} series, FX _{2N} series, | |
| Motion controller CPU | Motion controller CPU (Q Series) | Q172CPU, | Q173CPU, | Q172CPUN, | Q173CPUN |
| | Motion controller CPU (A Series) | A373CPU, A273UCPU, A171SCPU, A171SHCPU, A173UHCPU, | A373UCPU, A273UHCPU, A171SCPU-S3, A171SHCPUN, A173UHCPU-S1 | A373UCPU-S3, A273UHCPU-S3, A171SCPU-S3N, A172SHCPU, | A172SHCPUN, |
| MELDAS C6/C64 | | FCA C6, | FCA C64 | | |

*1 The clock function is available only when a real-time clock cassette is used.

(2) PLC manufactured by other companies

| Abbreviations/Generic terms | | Description | | | |
|-------------------------------------|------------------------|--|--|--|---------------------------------|
| Omron PLC | | C200HS, C200HE * ²), CV2000, CS1, CPM2A, | C200H * ¹ , CQM1 * ³ , CVM1-CPU01, CJ1, CPM2C * ⁹ , | C200Hα series (C200HX, C200HG, CV500, CVM1-CPU11, CS1D, CQM1H* ³⁺¹⁰ | CV1000, CVM1-CPU21, CJ1M, |
| Yaskawa PLC | | GL120 * ⁴ , | GL130 * ⁴ | | |
| Allen-Bradley PLC | | SLC5/03 * ⁵ , | SLC5/04 * ⁵ , | SLC5/05* ⁵ | |
| Sharp PLC | | JW-22CU, JW-100CU, | JW-32CUH, JW-100CUH * ⁶ , | JW-33CUH, Z-512J | JW-70CUH* ⁶ , |
| Toshiba PLC | PROSEC T series | T3 * ⁵ , | T3H * ⁵ , | T2E * ⁵ , | T2N * ⁵ |
| | PROSEC V series | Model3000(S3) * ⁵ , S2T * ⁵ | | | |
| Siemens PLC | | SIMATIC S7-300 series, | | SIMATIC S7-400 series | |
| Hitachi PLC (HIDEC HX series) | Large-scale H series | H-302 (CPU2-03H), H-2002 (CPU2-20H), | H-702 (CPU2-07H), H-4010 (CPU3-40H) | H-1002 (CPU2-10H), | |
| | H-200 to 252 series | H-200 (CPU-02H, CPE-02H), H-252 (CPU22-02H), H-252C (CPU22-02HC, CPE22-02HC) | | H-250 (CPU21-02H), H-252B (CPU22-02HB), | |
| | H series board type | H-20DR, H-20DT, HL-40DR, | H-28DR, H-28DT, HL-64DR | H-40DR, H-40DT, | H-64DR, H-64DT, |
| | EH-150 series | EH-CPU104, | EH-CPU208, | EH-CPU308, | EH-CPU316 |
| Matsushita Electric Works PLC | | P1-C24C, FP2-CCU * ⁷ , FP10SH, | FP1-C40C, FP3 * ⁸ , FP-M (C20TC), | FP2 * ⁷ , FP5, FP-M (C32TC) | FP2SH, FP10 (S), |

*1 Memory cassette with built-in clock is required when used with C200H-CPU21/CPU22/CPU23.

C200H-CPU01/CPU02/CPU023 does not support the clock function.

*2 C200H-CPU11 does not support the clock function.

*3 Memory cassette with built-in clock is required.

*4 Use the default value (409988 to 409995) for the device where the clock data are stored.

*5 Day-of-the-week data are not provided.

*6 The clock function is not available if link module (ZW-10CM) is used in the JW-70CUH/100CUH.

*7 Any of the extension memory module, FP2-EM1, FP2-EM2 or FP2-EM3 is required.

*8 Only AFP3210C-F/AFP3211C-F/AFP3212C-F/AFP3220C-F supports the clock function.

*9 Some models do not include the clock function.

*10 The COM-CPU61 FM device cannot be monitored.

2.5 Overlap Setting

2.5.1 Overlap between figure and object

When a figure and an object are overlapped, the object will be always displayed over the figure.

2.5.2 Overlap between objects



Overlap between objects

Make sure to set in order objects will not overlap each other.

Failure to observe this instruction will cause the overlapping part to appear incorrectly when displayed on GOT.

However, the objects can be set to overlap with each other in the following cases

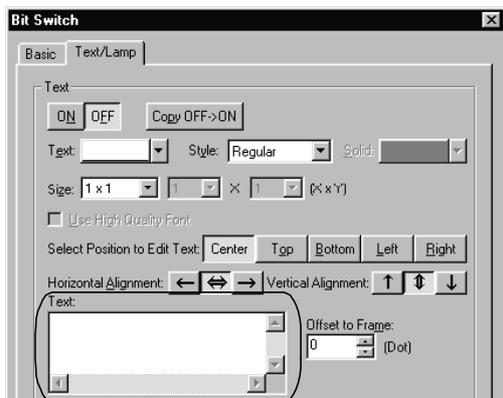
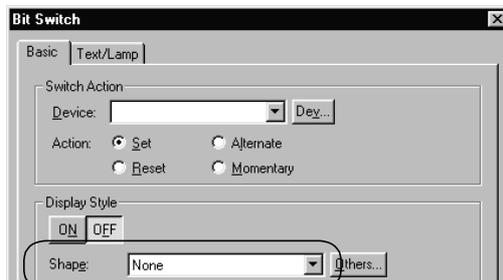
1 and 2.

1 When using combined with touch switch (GOT-A900 series only)

Touch switch can be set to overlap with objects other than touch switch, numerical input and ASCII input.

Always make sure not to set [Shape] to [None] in touch switch setting, in order to make the touch switch overlap with other object.

In this case, [Text] is not allowed to be set.



2 When using combined with level display

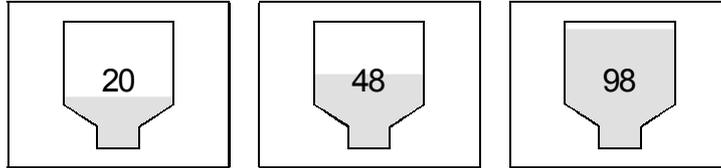
Level display can be set to with Numerical display and Comment display.

(One numerical display or comment display can be set to overlap with one level display.)

(Example 1) When "Display mode" is set to "Transparent"

The original color of the numeric or the text can be displayed.

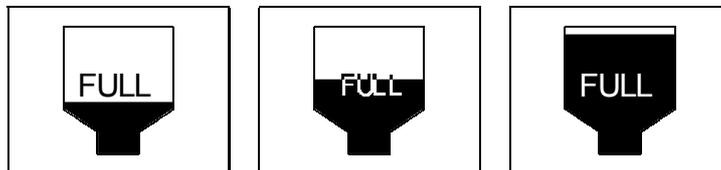
This setting is effective for use of the color-display GOT.



(Example 2) When "Display mode" is set to "XOR"

This setting enables the object overlapping with the filled part of Level display to be inverted, which cannot be done in "Transparent" mode.

This setting is effective for use of the monochrome-display GOT.



Make sure to refer to the instructions on Level display when setting overlapping with Level display, Numerical display and Comment display.

 Section 5.20 Level Display

2.6 Supported Devices

2.6.1 GOT internal devices

They are devices kept in the internal of GOT.

The internal devices of GOT are classified into the following types.

- GOT bit register (GB) : Bit register located inside the GOT and used as bit devices.
 GOT data register (GD) : Data register located inside the GOT and used as word devices.
 GOT special register (GS) : Special register located inside the GOT, which stores internal information, communication statuses, error information, etc.
 By monitoring GS with the object function, various information of the GOT can be checked.

The usage of GB, GD, and GS has no relation with GOT connection types. (However, they cannot be controlled in sequence programs.)

Valid setting ranges of the devices are as follows.

| Device name | Valid setting range | Notation for device number |
|---------------------------|---|----------------------------|
| GOT bit register (GB) | GOT-A900 : GB64 to GB16383 GOT-F900 : GB132 to GB255 (For F920GOT-K) : GB132 to GB1023 (For other than F920GOT-K) | Decimal |
| GOT data register (GD) | GOT-A900 : GD64 to GD16383 GOT-F900 : GD100 to GD127 (For F920GOT-K) : GD100 to GD1023 (For other than F920GOT-K) | Decimal |
| GOT special register (GS) | GOT-A900 : GS0 to GS511 GOT-F900 : N/A | |



Value in GOT internal device

When the GOT is powered off or reset, "0" is stored in the GOT internal device.
 When monitor data is downloaded, the value is held.



Application of GB and GD

GB and GD are useful for processing in the areas where the devices do not have to be used in the PLC CPU.

- Device for screen switching
- Work area for the script function
- Storage area for barcode read values

etc

1

GOT bit register

GB devices are listed as follows.

| GOT-A900 series | |
|-------------------|-------------------------------------|
| Device | Function |
| GB0 | Must not be used |
| GB1 ^{*1} | OUTPUT terminal for external output |
| GB2 to GB9 | Must not be used |
| GB10 | External output Y0 OUT output |
| GB11 | External output Y1 OUT output |
| GB12 | External output Y2 OUT output |
| GB13 | External output Y3 OUT output |
| GB14 | External output Y4 OUT output |
| GB15 | External output Y5 OUT output |
| GB16 | External output Y6 OUT output |
| GB17 | External output Y7 OUT output |
| GB18 | External output Y8 OUT output |
| GB19 | External output Y9 OUT output |
| GB20 | External output YA OUT output |
| GB21 | External output YB OUT output |
| GB22 | External output YC OUT output |
| GB23 | External output YD OUT output |
| GB24 | External output YE OUT output |
| GB25 | External output YF OUT output |
| GB26 to GB29 | Must not be used |
| GB30 | External input X0 Input |
| GB31 | External input X1 Input |
| GB32 | Allowed for external input X2 Input |
| GB33 | Allowed for external input X3 Input |
| GB34 | Allowed for external input X4 Input |
| GB35 | External input X5 Input |
| GB36 | External input X6 Input |
| GB37 | External input X7 Input |
| GB38 | External input Fuse blown |
| GB39 to GB63 | Must not be used |
| GB64 to GB16383 | User area |

| GOT-F900 series | |
|-----------------|---|
| Device | Function |
| GB0 to GB12 | Must not be used |
| GB13 | Communication error |
| GB14, GB15 | Must not be used |
| GB16 | Buzzer (1 beep) ^{*2} |
| GB17 | Buzzer (3 beeps) ^{*2} |
| GB18 | Buzzer (continuous beeps) ^{*2} |
| GB19 to GB131 | Must not be used |
| GB132 to 1023 | User area |

* 1 Turning it ON enables output (Lamp lit, buzzer sounds) from the OUTPUT terminal block of the GOT power supply.

* 2 Buzzer is available for the following versions.

| GOT-F900 | Version |
|----------------|--|
| F940WGOT | Ver.1.40 or later |
| F940GOT | Ver.6.40 or later |
| F930GOT | Ver.4.40 or later |
| F930GOT-K | Ver.4.60 (the first version) or later |
| F920GOT-K | Ver.1.00 (the first version) and later |
| F94* Handy GOT | Ver.6.40 and later |
| ET-900 | Ver.6.40 and later |

2 GOT data register

GD devices are listed as follows.

GOT-A900 series

| Device | Function |
|-----------------|------------------|
| GD0 to GD63 | Must not be used |
| GD64 to GD16383 | User area |

GOT-F900 series

| Device | Function |
|----------------|--|
| GD0 | Current time (Second) |
| GD1 | Current time (Minute) |
| GD2 | Current time (Hour) |
| GD3 | Current time (Day) |
| GD4 | Current time (Month) |
| GD5 | Current time (Year) |
| GD6 | Current time (Day of the week) |
| GD7 | Must not be used |
| GD8, GD9 | Upper limit of numerical input value (32 bits) |
| GD10, GD11 | Lower limit of numerical input value (32 bits) |
| GD12 | Echo display of numerical and ASCII input |
| GD13 to GD99 | Must not be used |
| Gd1000 to 1023 | User area |

3 GOT special register

The GS list and device functions are as follows.

(1) Read device

| Device | Function | Reference |
|---------------|------------------------------------|--|
| GS0 | Common information 1 | See (a) below |
| GS1 | Base screen information | See (b) below |
| GS2 to GS5 | Must not be used | — |
| GS6 | CC-Link G4 station No. | See (c) below |
| GS7 | 1 second binary counter | See (d) below |
| GS8 | Scan time of monitor | See (e) below |
| GS9 | Must not be used | — |
| GS10 | Scan counter of monitor | See (f) below |
| GS11 to GS 13 | Must not be used | — |
| GS14 | Script common information |  Section 6.5.2 Corrective actions of errors of script execution in GOT |
| GS15 | Script error pointer | |
| GS16 | Script No. | |
| GS17 | Error code | |
| . | . | |
| . | . | |
| . | . | |
| GS46 | Script No. | |
| GS47 | Error code | |
| GS48 | Script execute pointer | |
| GS49 to 79 | Script execute No. | — |
| GS80 to 199 | Must not be used | — |
| GS200 to 229 | Gateway information |  GOT-A900 Series Operating Manual (GT Works2 Version/GT Designer2 Version1 compatible Gateway Function Manual) |
| GS230 | Number of error stations | See (g) below |
| GS231 to 238 | Error station | See (h) below |
| GS239 to 251 | Must not be used | — |
| GS252 | Error detection common information | See (i) below |
| GS253 to 259 | Must not be used | — |
| GS260 | status |  Section 6.2.3  Integer ↔ Real number conversion function |
| GS261 | Error code | |
| GS262 to 383 | Must not be used | |

(a) Common information1 (GS0)

| | | | | | | |
|-----------|----|----|----|----|----|----|
| b15 to b6 | b5 | b4 | b3 | b2 | b1 | b0 |
|-----------|----|----|----|----|----|----|

- b0 : Repeats turning ON and OFF for every communication cycle^{*1}.
- b1 : Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen setting processing is complete. (It functions in the same way for the station No. switching and security level switching.)
It is used to check (debug) the screen switch settings.
- b2 : Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen object processing of the status observation is complete. (It functions in the same way for the station No. switching and security level switching.)
It is used to activate the status observation for once when switching the screen.
- b3 : Turns ON while the initial screen is displayed at power-on.
It turns off when the base screen is switched over.
- b4 : Always ON.
- b5 : Always OFF
- b6 to b15 : Must not be used

*1 A cycle is the elapsed time for GOT to read the objects on the current screen display and the data set in the common settings.

(b) Base screen information (GS1)

| | | | | | | |
|-----------|----|----|----|----|----|----|
| b15 to b6 | b5 | b4 | b3 | b2 | b1 | b0 |
|-----------|----|----|----|----|----|----|

- b0 : Repeats turning ON and OFF for every communication cycle*¹ while the base screen is displayed.
- b1 : Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen setting processing is complete. (It functions in the same way for the station No. switching and security level switching.) It is used to check (debug) the screen switch settings.
- b2 : Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen object processing of the status observation is complete. (It functions in the same way for the station No. switching and security level switching.) It is used to activate the status observation for once when the screen is switched over.

b3 to b15 : Must not be used.

(c) CC-Link G4 station No. (GS6)

Stores AJ65BT-G4-S3's station No. when the GOT is connected to the CC-Link network via AJ65BT-G4-S3 and the GOT is powered ON.

(d) 1 second binary counter (GS7)

Starts counting every second immediately after the power is switched on. Any given value can be written to this counter to start the count from the written value. The obtained data are stored as binary data. This is used to check how long the time has elapsed from specific timing (operation, etc.).

(e) Scan time of monitor (GS8)

Stores the time (ms) of a complete processing cycle set on the display screen as binary data. Data will be updated when all of the processing set on the display screen is complete. An error of ± 10 ms may be produced depending on the processing settings. Also, this does not apply to the objects that have not been processed by the security function. It is useful for load checking (debugging) of the monitor processing.

(f) Scan time counter of monitor

Counts up the number of cycles every time the processing cycle set on the display screen is complete. Used to check (debug) the number of scan of monitor.

(g) Number of error stations (GS230)

Used to detect the stations in which an error has occurred. For details of the Number of error stations (GS230), refer to the following manual.

 GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual)

(h) Error station (GS231 to 238)

Turns ON when an error/communication timeout has occurred in the corresponding station.

Turns OFF when the error is cleared.

For details of the Error station (GS231 to 238), refer to the following manual.

 GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual)

(i) Error detection common information (GS252)

| | |
|-----------|----|
| b15 to b1 | b0 |
|-----------|----|

- b0 : Turns ON if an error is detected in the alarm information file to be stored when executing PC card storage function by alarm history display function. The alarm information file is not stored into a PC card while this bit is ON. Turns OFF when the error detection common control (GS452.b0) is turned ON.
Useful for error detection during file storage.
- b1 to b15 : Must not be used.

(2) Write device

| Device | Function | Reference |
|----------------|--|--|
| GS384 | Script common information |  Section 6.5.2 Errors and corrective actions for script execution on GOT |
| GS385 | Script monitoring time | |
| GS386 | Screen script initial operation | |
| GS387 to 399 | Must not be used | — |
| GS400 | Gateway common control |  GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Gateway Function Manual) |
| GS401 to 449 | Must not be used | — |
| GS450 | Monitor common control | See (a) below |
| GS451 | Auto screen save time | Below (b) |
| GS452 | Error detection common control | See (c) below |
| GS453 | Font change device |  GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended Option Functions Manual) |
| GS454 to 459 | Disabled | — |
| GS460 | Conversion start indication |  Section 6.2.3  Integer ↔ Real number conversion function |
| GS461 | Devices | |
| GS462 | Conversion source head device No. | |
| GS463 | Conversion destination head device No. | |
| GS464 | Store error value | — |
| GS465 to GS499 | Disabled | — |
| GS500 | GT SoftGOT2 common information | See (d) below |
| GS501 to 511 | Must not be used | — |

(a) Monitor common control (GS450)

| | | | | | | | | | | |
|-----|-----|-----|-----|-----------|----|----------|----|----|----|----|
| b15 | b14 | b13 | b12 | b11 to b9 | b8 | b7 to b4 | b3 | b2 | b1 | b0 |
|-----|-----|-----|-----|-----------|----|----------|----|----|----|----|

- b0 : When it is on, displays a confirm message after numerical/ASCII data are input.
- b1 : Controls the displaying methods of the message displayed when an numerical value exceeding the valid range is input.
Turning ON displays a message during input of the numerical value.
Turning OFF displays a message after the numerical value is entered.
- b2 : Turns ON to activate "Numeric Value Input Number", "Cursor Position's Numeric Value Input" and "Numeric Value Input Signal" of the system information function during ASCII input as well.
- b3 : Turns ON to store "0" in the following devices set by system information function, "Cursor Position's Numeric Value Input", "Current Cursor Position" and "Previous Cursor Position" when a cursor is erased.
- b4 to b7 : Must not be used.
- b8 : When it turns ON, BMP files in a PC card can be used as parts in parts display/parts movement.
- b9 to b11 : Must not be used
- b12 : Controls the timing when the screen/station No. changes by touch switch operation.
This applies when multiple actions including either of the bit Set/Reset/Alternate and either of screen switching/station No. switching have been set for a touch switch.
For details, refer to the following.
 Section 5.27.12 Cautions
- b13 : Storing historical information of the previous touch switch to PC card is enabled when it is turned ON.
- b14 : Set the action of the previous touch switch as history mode when it is turned ON.
- b15 : Disabled

(b) Auto screen save time (GS451)

Store the time before close (OFF) the monitor screen in screen save function.

Store the value by 1 to 60 (Min).

(To store value higher than 60, store it as 60)

The changed value is validated after canceling screen save when changing value in screen save.



Relationship between GS451 and GOT utility (screen save time)

If value other than 0 is stored in GS451, the screen save time set in GOT utility will be invalidated.

To validate the screen save time of utility, store 0 in GS451.

(c) Error detection common control (GS452)

| | |
|-----------|----|
| b15 to b1 | b0 |
|-----------|----|

- b0 : Turns ON to turn the error detection common information (GS252.b0) OFF.
- b1 to b15 : Must not be used.

(d) GT SoftGOT2 common information (GS500)

| | |
|-----------|----|
| b15 to b1 | b0 |
|-----------|----|

- b0 : Used for GT SoftGOT2.
Displays the dialog box for exiting GT SoftGOT2 when it turns ON.
Turns OFF when the exit instruction is canceled in the dialog box.

2.6.2 Device range available for GOT-A900 series

The device ranges of PLC CPUs that can be used for GOT are as follows.

Note that the device ranges in the following tables are the maximum values that can be set in GT Designer2.

Since the device specifications may be different depending on the models even though they belongs to the same series of the PLC CPU,

Please make setting according to the specifications of the PLC CPU actually used.

When a non-existent device or device No. outside the range is specified, other objects may not be monitored.

For the device setting methods, see the following section.

 Section 5.1 Device Settings

1 Mitsubishi Electric PLC (Including motion controllers)

(1) MELSEC-QnA, Q, MELDAS C6/C64

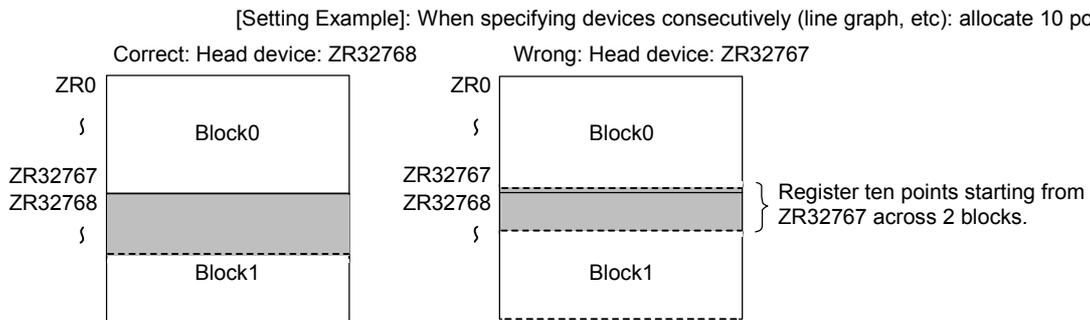
| Device name | | Setting range | | Device No. Notation Representation | |
|-------------|--|--|------------------------------|---------------------------------------|-----------|
| Bit device | Input (X) | X0 | to X1FFF | Hexadecimal | |
| | Output (Y) | Y0 | to Y1FFF | | |
| | Internal relay (M) | M0 | to M32767 | Decimal | |
| | Latch relay (L) | L0 | to L32767 | | |
| | Annunciator (F) | F0 | to F32767 | | |
| | Link relay (B) | B0 | to B7FFF | Hexadecimal | |
| | Timer | Contact (TT) | TT0 | to TT32767 | Decimal |
| | | Coil (TC) | TC0 | to TC32767 | |
| | Counter | Contact (CT) | CT0 | to CT32767 | |
| | | Coil (CC) | CC0 | to CC32767 | |
| | Special relay (SM) | SM0 | to SM2047 | | |
| | Retentive timer | Contact (SS) | SS0 | to SS32767 | |
| | | Coil (SC) | SC0 | to SC32767 | |
| | Step relay (S) | S0 | to S32767 | | |
| | Link special relay (SB) | SB0 | to SB7FF | Hexadecimal | |
| | Word device bit | Specified bit of the following word devices (Except Index register and Buffer memory) | | — | |
| Word device | Data register (D) | D0 | to D32767 | Decimal | |
| | Special data register (SD) | SD0 | to SD2047 | | |
| | Link register (W) | W0 | to W7FFF | Hexadecimal | |
| | Timer (current value) (TN) | TN0 | to TN32767 | Decimal | |
| | Counter (current value) (CN) | CN0 | to CN32767 | | |
| | Retentive timer (current value) (SN) | SN0 | to SN32767 | | |
| | Link special register (SW) | SW0 | to SW7FF | Hexadecimal | |
| | File register (R) | R0 | to R32767* ¹ | Decimal | |
| | Extension fill register (ER) | Block | 0 | | to 255 |
| | | Device | R0 | | to R32767 |
| | Extension file register (ZR) | ZR0 | to ZR1042431* ^{2*3} | | |
| | Index register (Z) | Z0 | to Z15 | | |
| | Buffer memory (special function module) (BM) | BM0 | to BM32767* ⁴ | | |
| | Ww | Ww0 | to WwFF | Hexadecimal | |
| | Wr | Wr0 | to WrFF | | |
| | Bit device word * ⁵ | Converting the above bit devices to words | | — | |

- *1 Available for file register of block No. switched with the RSET instruction.
- *2 Available for file register of block No. of file name switched with the QDRSET instruction.
- *3 GOT treats them in units of 32k (32767 points).

Make the setting not to break up the 32k-unit block when specifying the extension file register (ZR) in the object settings.

In the case of incorrect setting, the error message "The specified device is outside the valid range" will be displayed in the system alarm.

There is no range limit for the read/write by specifying the file register name with the recipe function.



- *4 Only the special function module on the station connected to GOT can be specified.
Set within the address range of the buffer memory existing in the special function module.
- *5 The device No. must be set in multiples of 16.
- *6 If a word device out of the range is set while monitoring MELDAS C6/C64, this will result in an inconsistent value.
If a bit device out of the range is set, the relevant object may not be displayed, or preset functions may not operate.
Therefore, make sure to check the set device by reference to the GT Designer2 Device List.
- *7 The devices used for C6/C64 system are not usable.

(2) MELSEC-Q (Multi)/Q Motion

| Device name | | Setting range | | Device No. Notation | | |
|----------------------|--|---------------|-------|---------------------|-------------|---------|
| Bit device | Input (X) | X0 | to | X1FFF | Hexadecimal | |
| | Output (Y) | Y0 | to | Y1FFF | | |
| | Internal relay (M) | M0 | to | M32767 | Decimal | |
| | Latch relay (L) | L0 | to | L32767 | | |
| | Annunciator (F) | F0 | to | F32767 | | |
| | Link relay (B) | B0 | to | B7FFF | Hexadecimal | |
| | Timer | Contact (TT) | TT0 | to | TT32767 | Decimal |
| | | Coil (TC) | TC0 | to | TC32767 | |
| | Counter | Contact (CT) | CT0 | to | CT32767 | |
| | | Coil (CC) | CC0 | to | CC32767 | |
| | Special relay (SM) *6 | SM0 | to | SM2047 | | |
| | Retentive timer | Contact (SS) | SS0 | to | SS32767 | |
| | | Coil (SC) | SC0 | to | SC32767 | |
| | Step relay (S) | S0 | to | S32767 | | |
| | Link special relay (SB) | SB0 | to | SB7FF | Hexadecimal | |
| Word device bit | Specified bit of the following word devices (Except Index register and Buffer memory) | | | — | | |
| Word device | Data register (D) *7 *8 | D0 | to | D32767 | Decimal | |
| | Special data register (SD) | SD0 | to | SD2047 | | |
| | Link register (W) | W0 | to | W7FFF | Hexadecimal | |
| | Timer (current value) (TN) | TN0 | to | TN32767 | Decimal | |
| | Counter (current value) (CN) | CN0 | to | CN32767 | | |
| | Retentive timer (current value) (SN) | SN0 | to | SN32767 | | |
| | Link special register (SW) | SW0 | to | SW7FF | Hexadecimal | |
| | File register (R) *1 | R0 | to | R32767*1 | Decimal | |
| | Extension file register (ER) | Block | 0 | to | | 255 |
| | | Device | R0 | to | | R32767 |
| | Extension file register (ZR) *2 *3 | ZR0 | to | ZR1042431*2*3 | | |
| | Index register (Z) | Z0 | to | Z15 | | |
| | Buffer memory (special function module) (BM) *4 | BM0 | to | BM32767*4 | | |
| | Ww | Ww0 | to | WwFF | Hexadecimal | |
| | Wr | Wr0 | to | WrFF | | |
| Motion device (#) *9 | #0 | to | #8191 | Decimal | | |
| Bit device word *5 | Converting the above bit devices into words | | | — | | |

*1 to *5(1) Refer to the MELSEC-QnA/Q.

Q Motion

*6 When setting special internal relay M9000 to M9255, use SM for the device name and set the value subtracted 9000 for the device number (0 to 255).

*7 The setting range is D9000 to D9255 when setting the special data register.

*8 D8192 to D8999 and D9256 to D9999 are out of the valid setting range.

*9 Monitoring is not available with GT SoftGOT2.

(3) MELSEC-A

| Device name | | Setting range | | Device No. Representation | | |
|-----------------------|--|---------------|-----|---------------------------|-------------|---------|
| Bit device | Input (X) | X0 | to | X1FFF | Hexadecimal | |
| | Output (Y) | Y0 | to | Y1FFF | | |
| | Internal relay/Special internal relay (M) | M0 | to | M32767 | Decimal | |
| | Latch relay (L) | L0 | to | L32767 | | |
| | Annunciator (F) | F0 | to | F32767 | | |
| | Link relay (B) | B0 | to | B7FFF | Hexadecimal | |
| | Timer | Contact (TT) | TT0 | to | TT32767 | Decimal |
| | | Coil (TC) | TC0 | to | TC32767 | |
| | Counter | Contact (CT) | CT0 | to | CT32767 | |
| | | Coil (CC) | CC0 | to | CC32767 | |
| | Link special relay (SB) | SB0 | to | SB7FF | Hexadecimal | |
| Word device bit | Specified bit of the following word devices (Except Index register and Buffer memory) | | | — | | |
| Word device | Data register/Special data register (D) | D0 | to | D32767 | Decimal | |
| | Link register (W) | W0 | to | W7FFF | Hexadecimal | |
| | Timer (current value) (TN) | TN0 | to | TN32767 | Decimal | |
| | Counter (current value) (CN) | CN0 | to | CN32767 | | |
| | Link special register (SW) | SW0 | to | SW7FF | Hexadecimal | |
| | File register (R) *1 | R0 | to | R32767*1 | Decimal | |
| | Extension file register (ER) | Block | 1 | to | | 255 |
| | | Device | R0 | to | | R32767 |
| | Index register *1 | (Z) | Z0 | to | | Z15 |
| | | (V) | V0 | to | | V6 |
| | Annunciator (A) | A0 | to | A1 | | |
| | Buffer memory (special function module) (BM) *2 | BM0 | to | BM32767 | Decimal | |
| | ZR | ZR0 | to | ZR1042431 | Hexadecimal | |
| | Ww | Ww0 | to | WwFF | | |
| | Wr | Wr0 | to | WrFF | | |
| Bit device word *3 *4 | Converting the above bit devices to words (Except Timer and Counter) | | | — | | |

*1 In the computer link connection, writing to the index register (e.g., the touch switch function, numerical input function) is not available.

*2 Only the special function module on the station connected to GOT can be specified.
Set within the address range of the buffer memory existing in the special function module.

*3 The device No. must be set in multiples of 16.

*4 If the special internal relay (M) is converted to the word device, treat 9000 of the device No. as 0 and set in multiples of 16.

(Example) M9000, M9016, M9240

(4) MELSEC-FX

| | Device name | Setting range | Device No. Notation |
|-------------|-----------------------------|---|---------------------|
| Bit device | Input (X) | X0 to X377 | Octal |
| | Output (Y) | Y0 to Y377 | |
| | Auxiliary relay (M) | M0 to M3071 | Decimal |
| | Special auxiliary relay (M) | M8000 to M8255 | |
| | State (S) | S0 to S999 | |
| | Timer contact (T) | T0 to T255 | |
| | Counter contact (C) | C0 to C255 | |
| | Word device bit *1 | Specified bit of the following word devices | |
| Word device | Data register (D) | D0 to D0999 | Decimal |
| | RAM file register (D) | D1000 to D7999 | |
| | Special data register (D) | D8000 to D8255 | |
| | Timer (current value) (T) | T0 to T255 | |
| | Counter (current value) (C) | C0 to C255 | |
| | Bit device word *2 | Converting the above bit devices to words (Except Timer contact and Counter contact) | |

*1 When executing the touch switch function that has been set during the bit specification of the word device, do not write any data to the word device through the sequence program.

*2 The device No. must be set in multiples of 16.

*3 For FX3UC series, device setting cannot be made exceeding the above range by using GT Designer2.

| Device name | | Setting range | | Device No. Notation |
|-------------|--|--|-----------------------|-----------------------|
| Bit device | I/O relay/internal auxiliary relay | 0000 | to 614315 | Decimal + hexadecimal |
| | Data link relay (LR) | LR00000 | to LR19915 | |
| | Auxiliary memory relay (AR) | AR00000 | to AR95915 | |
| | Holding relay (HR) | HR00000 | to HR51115 | |
| | Internal holding relay (W) | WR00000 | to WR51115 | |
| | Timer contact ^{*1} /Timer (current value) (TIM) ^{*2} | TIM0000 | to TIM2047 | Decimal |
| | Counter contact ^{*1} /Counter (current value) (CNT) ^{*2} | CNT0000 | to CNT2047 | |
| | Data memory (DM) ^{*2} | DM0000 | to DM9999 | |
| | (TIM) ^{*2} | TIM0000 | to TIM2047 | |
| | Counter (current value) (CNT) ^{*2} | CNT0000 | to CNT2047 | |
| | Word device bit | Specified bit of the following word devices | | — |
| Word device | I/O relay | 0000 | to 6143 | Decimal |
| | Data link relay (LR) | LR000 | to LR199 | |
| | Auxiliary memory relay (AR) | AR000 | to AR959 | |
| | Holding relay (HR) | HR000 | to HR511 | |
| | Internal holding relay (W) | WR000 | to WR511 | |
| | Data memory (DM) | DM0000 | to DM9999 | |
| | Timer (current value) (TIM) ^{*5} | TIM0000 | to TIM2047 | |
| | Counter (current value) (CNT) ^{*5} | CNT0000 | to CNT2047 | |
| | Extension data memory (EM current bank) ^{*3*6} | EM0000 | to EM9999 | |
| | Extension data memory (E0 to EC: 13 banks) ^{*3*4*6} | E00000 : EC0000 | E09999 : EC9999 | |
| | Bit device word | Converting the above bit devices to word devices (Except coil and input relay) | | — |

*1 Writing is not allowed when using CV1000, CS1, and CJ1.

*2 When executing the touch switch function that has been set during the bit specification of the word device, do not write to word device through the sequence program.

*3 Writing or reading the extension data memory using multiple banks is not allowed.

*4 The range from E0 to 2 is available when CJ1 is used.

*5 Timer (current value) and counter (current value) are valid within the range of 0 to 999. (This applies to the 16 bit/32 bit device data.)

*6 COM1H-CPU61 cannot read from or write to this device.

(1) Yaskawa GL/PROG1C8

| Device name | | Setting range | | Device No. Notation | |
|--------------------------|---|--------------------|------------|---------------------|------------------|
| Bit device | Coil (O) *1 | 001 | to 063424 | Decimal | |
| | Input relay (I) | I1 | to I63424 | | |
| | Link coil (D) | D1 | to D2048 | | |
| | | D10001 D20001 | to to | | D12048 D22048 |
| Word device bit | Specified bit of the following word devices | | — | | |
| Word device | Input register (Z) *1 | Z1 | to Z31840 | Decimal | |
| | Holding register (W) *2 *4 | W1 | to W28291 | | |
| | | SW1 | to SW28291 | | |
| | Link register (R) *4 | R1 | to R2048 | | |
| | | R10001 D20001 | to to | | R12048 R22048 |
| | | SR1 | to SR12048 | | |
| | | SR10001 SR20001 | to to | SR12048 SR22048 | |
| Constant register (K) *3 | K1 | to K4096 | | | |
| Bit device word | Converting the above bit devices to word devices (Except Coil and Input relay) | | — | | |

*1 Change the input register "30001 to 30512" to "Z1 to Z512" for setting. (When set in default)

*2 Change the holding register "40001 to 49999" to "W1 to W9999" for setting. (When set in default)

*3 Change the constant register "31001 to 35096" to "K1 to K4096" for setting. (When set in default)

*4 SR and SW indicate registers (virtual register) compatible to the data format where internal data of PLC is displayed using R or W.

The following shows the difference between the display values of SR, SW and those of R, W corresponding to the values of PLC internal data.

| PLC internal data (16 bit) | SR, SW | R, W |
|----------------------------|--------|-------|
| 9999 | 9999 | 9999 |
| 1001 | 1001 | 1001 |
| 1000 | 1000 | 1000 |
| 999 | 999 | 999 |
| 0 | 0 | 0 |
| -1 | -1 | 32767 |
| -999 | -999 | 33767 |
| -1000 | -1000 | 33768 |
| -1001 | -1001 | 33769 |
| -9999 | -9999 | 42767 |

*5 The internal coil N1 to N1536 can be set as o513 to o2048.

However, setting must not exceed o1 to o512 and o513 to o2048.

(2) Yaskawa CP-9200SH/MP-900 series

| Device name | | Setting range | | Device No. Notation |
|-------------|-----------------------|--|-------------|-----------------------|
| Bit device | Coil (MB) *1 | MB0 | to MB32767F | Decimal + hexadecimal |
| | Input relay (IB) | IB0000 | to IBFFFF | Hexadecimal |
| | Bit of word device | Specified bit of the following bit device | | — |
| Word device | Input register (IW) | IW0 | to IW7FFF | Hexadecimal |
| | Holding register (MW) | MW0 | to MW32767 | Decimal |
| | IB | IB0 | to IBFFF | Hexadecimal |
| | MB | MB0 | to MB32767 | Decimal |
| | Word device bit | Converting the above bit devices to word devices | | — |

*1 MB40960 to MB32767F is available for MP-940 only.

(3) Yaskawa CP-9200 (H)

| Device name | | Available setting range | | Device No. Notation |
|-----------------|--|---|-----------|---------------------|
| Bit device | Coil (OB) *1 | OB0 | to OB7FF | Hexadecimal |
| | Input relay (IB) | IB0 | to IBFFFF | |
| | Word device bit | Specified bit of the following word devices | | — |
| Word device | Input register (IW) | W0 | to IW7F | Hexadecimal |
| | Output register (OW) | OW0 | to OW7F | |
| | Data register (DW, ZD) *1 | DW0 | to DW2047 | Decimal |
| | | ZD0 | to ZD2047 | |
| | Common register (MW) | MW0 | to MW7694 | |
| Bit device word | Converting the above bit devices to word devices | | — | |

*1 Setting is available only when CP-9200 is used.

(4) Yaskawa CP-9300MS (MC compatible)

| Device name | | Available setting range | | Device No. Notation |
|-----------------|--|---|-----------|---------------------|
| Bit device | Coil (OB) *1 | OB0 | to OB7FF | Hexadecimal |
| | Input relay (IB) | IB0 | to IBFFFF | |
| | Word device bit | Specified bit of the following word devices | | — |
| Word device | Input register (IW) | W0 | to IW7F | Hexadecimal |
| | Output register (OW) | OW0 | to OW7F | |
| | Data register (DW, ZD) *1 | DW0 | to DW2047 | Decimal |
| | | ZD0 | to ZD2047 | |
| | Common register (MW) | MW0 | to MW7694 | |
| Bit device word | Converting the above bit devices to word devices | | — | |

4

Allen-Bradley PLC

(1) AB SLC500 series

| Device name | | Setting range | | Device No. Notation | |
|-----------------|---|--|----|---------------------|---------|
| Bit device | Bit (B) | B3:0/0 | to | B255:255/15 | Decimal |
| | Timer (Timing bit) (TT) | T3:0/14 (TT) | to | T255:255/14 (TT) | |
| | Timer (Completion bit) (TN) | T3:0/13 (DN) | to | T255:255/13 (DN) | |
| | Counter (Up counter) (CU) | C3:0/15 (CU) | to | C255:255/15 (CU) | |
| | Counter (Down counter) (CD) | C3:0/14 (CD) | to | C255:255/14 (CD) | |
| | Counter (Completion bit) (CN) | C3:0/13 (DN) | to | C255:255/13 (DN) | |
| | Integer (N) | N3:0 | to | N255:255 | |
| Word device bit | | Specified bit of the following word devices | | — | |
| Word device | Bit (B) | B3:0/0 | to | B255:255 | Decimal |
| | Timer (Set value) (TP) * ¹ | T3:0.1 (PRE) | to | T255:255.1 (PRE) | |
| | Timer (Current value) (TA) * ¹ | T3:0.2 (ACC) | to | T255:255.2 (ACC) | |
| | Counter (Set value) (CP) * ¹ | C3:0.1 (PRE) | to | C255:255.1 (PRE) | |
| | Counter (Current value) (CP) * ¹ | C3:0.2 (ACC) | to | C255:255.2 (ACC) | |
| | Integer (N) * ¹ | N3:0 | to | N255:255 | |
| Bit device word | | Converting the above bit devices to words (Except Timers (TT, DN) and Counters (CU, CD, CN)) | | — | |

*1 Writing on the device is not allowed for 32-bit data.

*2 Do not set the device outside the range.

If the set device is outside the range, the object set by the device within the range cannot be displayed.

(2) AB Micrologix1000/1500 series

| Device name | | Setting range | | Device No. Notation | |
|-------------|---------------------------------|---|----|---------------------|---------|
| Bit device | Bit (B) | B3:0/0 | to | B255:255/15 | Decimal |
| | Timer (Timing bit) (TT) | T3:0/14 (TT) | to | T255:255/14 (TT) | |
| | Timer (Completion bit) (TN) | T3:0/13 (DN) | to | T255:255/13 (DN) | |
| | Counter (Up counter) (CU) | C3:0/15 (CU) | to | C255:255/15 (CU) | |
| | Counter (Down counter) (CD) | C3:0/14 (CD) | to | C255:255/14 (CD) | |
| | Counter (Completion bit) (CN) | C3:0/13 (DN) | to | C255:255/13 (DN) | |
| | Integer (N) | N3:0 | to | N255:255 | |
| | Word device bit | Specified bit of the following word devices | | | — |
| Word device | Bit (B) | B3:0/0 | to | B255:255 | Decimal |
| | Timer (Set value) (TP) *1 | T3:0.1 (PRE) | to | T255:255.1 (PRE) | |
| | Timer (Current value) (TA) *1 | T3:0.2 (ACC) | to | T255:255.2 (ACC) | |
| | Counter (Set value) (CP) *1 | C3:0.1 (PRE) | to | C255:255.1 (PRE) | |
| | Counter (Current value) (CA) *1 | C3:0.2 (ACC) | to | C255:255.2 (ACC) | |
| | Integer (N) *1 | N3:0 | to | N255:255 | |
| | Bit device word | Converting the above bit devices to words (Except Timers (TT, DN), Counters (CU, CD, CN)) | | | — |

*1 Writing on the device is not allowed for 32 bit data.

*2 Do not set device outside the range.

If the set device is outside the range, the object set by the device within the range cannot be displayed.

5 Sharp PLC (Sharp JW)

| Device name | | Setting range | | | Device No. Notation | |
|------------------------|---|---|--|---|---------------------|--------|
| Bit device | I/O relay | 0 20000 | to to | 15777 75777 | Octal | |
| | Timer (Contact)/Timer (Current value) (T) | T0000 | to | T1777 | | |
| | Counter (Contact)/Counter (Current value) (C) | C0000 | to | C1777 | | |
| Word device | Timer (Contact)/Timer (Current value) (T) | T0000 | to | T1777 | Octal | |
| | Counter (Contact)/Counter (Current value) (C) | C0000 | to | C1777 | | |
| | Register (09 to E7) | | T0000 | to | | T1777 |
| | | | 09000 | to | | 09776 |
| | | | 19000 | to | | 19776 |
| | | | 29000 | to | | 29776 |
| | | | 39000 | to | | 39776 |
| | | | 49000 | o | | 49776 |
| | | | 59000 | to | | 519776 |
| | | | 69000 | to | | 69776 |
| | | | 79000 | to | | 79776 |
| | | | 89000 | to | | 89776 |
| | | | 99000 | to | | 99776 |
| | | | E0000 | to | | E0776 |
| | | | E1000 | to | | E1776 |
| | | | E2000 | to | | E2776 |
| | | | E3000 | to | | E3776 |
| | | | E4000 | to | | E4776 |
| | | | E5000 | to | | E5776 |
| | | E6000 | to | E6776 | | |
| File register (1 to 7) | | 1000000 2000000 3000000 4000000 5000000 6000000 7000000 | to to to to to to to | 1177776 2177776 3177776 4177776 5177776 6177776 7177776 | | |

7 Toshiba PLC (Toshiba PROCES T, V series)

| Device name | | Setting range | | Device No. Notation | |
|-------------|--|--|----|---------------------|-------------|
| Bit device | External input (X) | X0000 | to | X511F | Hexadecimal |
| | External output (Y) | Y0000 | to | Y511F | |
| | Internal relay (R) * ¹ | R0000 | to | R4095F | |
| | Special relay (S) * ⁷ | S0000 | to | S511F | |
| | Link register relay (Z) | Z0000 | to | Z999F | |
| | Link relay (L) | L0000 | to | L255F | |
| | Timer (Contact) (T) * ¹ | T000 | to | T999 | Decimal |
| | Counter (Contact) (C) * ¹ | C000 | to | C511 | |
| | Word device bit * ² * ⁷ | Specified bit of the following word devices (except Timer (Current value) and Counter (Current value)) | | | — |
| Word device | External input (XW) | XW000 | to | XW511 | Decimal |
| | External output (YW) | YW000 | to | YW511 | |
| | Internal relay (RW) * ⁶ * ⁸ | RW000 | to | RW4095 | |
| | Special relay (SW) * ⁸ | SW000 | to | SW511 | |
| | Link register relay (Z) * ³ | — | | | — |
| | Link relay (LW) | LW000 | to | LW255 | Decimal |
| | Timer (Current value) (T) * ¹ | T000 | to | T999 | |
| | Counter (Current value) (C) * ¹ | C000 | to | C511 | |
| | Data register (D) * ⁴ * ⁶ * ⁸ | D0000 | to | D8191 | |
| | Link register (W) * | W0000 | to | W2047 | |
| | File register (F) * ⁵ | F0000 | to | F32467 | |
| | Bit device word | Converting the above bit devices to words (except Link register relay (Contact), Time (Contact) and Counter (Contact)) | | | |

PROSEC T series

- * 1 Write of the timer (contact)/(current value), counter (contact)/(current value) is executed after having been read by GOT. Therefore, do not edit it in the sequence program during this period.
- * 2 The bit specification of word device is executed after having been read by GOT. Therefore, please do not change it in the sequence program during this period.
- * 3 Link register relay (Z) occupies 1 link register (W) bit out of the 1000 bits ranging 0 to 999.
- * 4 When the mode switch on the CPU module has been set to "P-RUN", writing to D0000 through D4095 is disabled.
- * 5 Extension file register is not supported.

PROSEC V series

- * 2 The bit specification of word device is executed after having been read by GOT. Therefore, do not change it in the sequence program during this period.
- * 6 RW0000 and D0000 indicate the same data register in the same region although they are shown in different notations.
- * 7 For bit data, the conversion from Toshiba's address notation to address notation of GOT is shown as follows.

Toshiba's address notation ÷ 16 = Word address (Quotient)...Bit address (Remainder)

| Toshiba's address notation | Address notation used by GOT | Conversion |
|----------------------------|-----------------------------------|------------------------|
| S8191 | S511F (Decimal) (Hexadecimal) | 8191 ÷ 16 = 511...15 |
| R65535 | R4095F (Decimal) (Hexadecimal) | 65535 ÷ 16 = 4095...15 |

- * 8 For word data, the conversion from Toshiba's address notation to address notation of GOT is shown as follows.

| Data format | Toshiba's address notation | Address notation of GOT |
|-------------|--|-------------------------|
| 16 bit data | DW10 | D10 |
| 32 bit data | (Integer) DD10 (Calculate the device No. in 32-bit unit) | D20 |
| | (Real number) DF10 (Calculate the device No. in 32-bit unit) | D20 |

SIEMENS PLC (SIEMENS S7-300/400 series)

| Device name | | Setting range | | Device No. Notation | |
|-----------------|---|---|------------|---------------------|---------|
| Bit device | Input relay (I) | I0000 | to | I5117 | Decimal |
| | Output relay (Q) | Q0000 | to | Q5117 | |
| | Bit memory (M) | M00000 | to | M20477 | |
| | Word device bit | Specified bit of the following word devices (except Timer and Counter) | | — | |
| Word device | Input relay (IW) | IW000 | to | IW510 | Decimal |
| | Output relay (QW) | QW000 | to | QW510 | |
| | Bit memory (MW) | MW0000 | to | MW2046 | |
| | Timer (Current value) (T) | T000 | to | T511 | |
| | Counter (Current value) (C) | C000 | to | C511 | |
| | Data register (D) | D000100000 | to | D000165534 | |
| | | D000200000 | to | D000265534 | |
| | | D000300000 | to | D000365534 | |
| | | . | . | . | |
| | | D409400000 | to | D409465534 | |
| D409500000 | | to | D409565534 | | |
| Bit device word | Converting the above bit devices to words | | — | | |

HITACHI PLC (HITACHI HIDIC H series)

| Device name | | Setting range | | Device No. Notation | |
|--|--|--|--------|---------------------|-----------------------|
| Bit device | External input (X) | X00000 | to | X05A95 | Hexadecimal + Decimal |
| | External output (Y) | Y00000 | to | Y05A95 | |
| | Remote external input (X) | X10000 | to | X49995 | Decimal |
| | Remote external output (Y) | Y10000 | to | Y49995 | |
| | 1st CPU link (L) | L0000 | to | L3FFF | Hexadecimal |
| | 2nd CPU link (L) | L10000 | to | L13FFF | |
| | Data area (M) | M0000 | to | M3FFF | |
| | On-delay timer (TD)* ¹ | TD000 | to | TD255 | Decimal |
| | Single-shot timer (SS)* ¹ | SS000 | to | SS255 | |
| | Watchdog timer (WDT)* ¹ | WDT000 | to | WDT255 | |
| | Monostable timer (MS)* ¹ | MS000 | to | MS255 | |
| | Retentive timer (TMR)* ¹ | TMR000 | to | TMR255 | |
| | Up counter (CU)* ¹ | CU000 | to | CU511 | |
| | Ring counter (RCU)* ¹ | RCU000 | to | RCU511 | |
| | Up/Down counter (CT)* ¹ | CT000 | to | CT511 | |
| | Bit internal output (R) | R000 | to | R7BF | Hexadecimal |
| | DIF (Rising edge detection)* ¹ | DIF000 | to | DIF511 | Decimal |
| | DIF (Falling edge detection)* ¹ | DFN000 | to | DFN511 | |
| | Word device bit | Specified bit of the following word devices | | | — |
| | Word device | External input (WX) | WX0000 | to | WX05A7 |
| External output (WY) | | WY0000 | to | WY05A7 | |
| Remote external input (WX) | | WX1000 | to | WX4997 | Decimal |
| Remote external output (WY) | | WY1000 | to | WY4997 | |
| First CPU link (WL) | | WL000 | to | WL3FF | Hexadecimal |
| Second CPU link (WL) | | WL1000 | to | WL13FF | |
| Data area (WM) | | WM000 | to | WM3FF | |
| Timer/Counter (Elapsed value) (TC)* ¹ | | TC000 | to | TC511 | Decimal |
| Word internal output (WR) | | WR000 | to | WR3FF | Hexadecimal |
| Bit device word | | Converting the above bit devices to words (Except for Timer, Counter, Bit internal output, DIF and DEN) | | | — |

* 1 The same number cannot be used repeatedly.

* 2 Do not set device outside the range.

If the set device is outside the range, the object set by the device within the range cannot be displayed.

Matsushita PLC (Matsushita MEWNET-FP series)*¹

| Device name | | Setting range | | Device No. Notation | |
|-------------|---|---|----|---------------------|-----------------------|
| Bit device | Input relay (X) * ² , * ³ | X0000 | to | X511F | Hexadecimal + Decimal |
| | Output relay (Y) * ³ | Y0000 | to | Y511F | |
| | Internal relay (R) | R0000 | to | R886F | |
| | Special relay (R) * ² | R9000 | to | R910F | |
| | Link relay (L) * ⁵ | L0000 | to | L639F | |
| | Timer contact (T) * ² , * ⁴ | T0000 | to | T3071 | Decimal |
| | Counter contact (C) * ² , * ⁴ | C0000 | to | C3071 | |
| | Bit device word | Specified bit of the following word devices | | — | |
| Word device | Input relay (WX) * ² | WX000 | to | WX511 | Decimal |
| | Output relay (WY) | WY000 | to | WY511 | |
| | Internal replay (WR) | WR000 | to | WR886 | |
| | Special relay (WR) | WR900 | to | WR910 | |
| | Link relay (WL) | WL000 | to | WL639 | |
| | Timer/Counter (Elapsed value) (EV) * ⁴ | EV0000 | to | EV3071 | |
| | Timer/Counter (Set value) (SV) * ⁴ | SV0000 | to | SV3071 | |
| | Data register (DT) | DT00000 | to | DT10233 | |
| | Special data register | DT90000 | to | DT90511 | |
| | Link register (LD) * ⁵ | LD0000 | to | LD8447 | |
| | File register (FL) * ⁵ * ⁶ | FL00000 | to | FL32764 | |
| | Bit device word | Converting the above bit devices to words (Except for Timer contact and Counter contact) | | — | |

* 1 The above device range is for the case where FP10SH is used.

For Fp0, FP1, FP2, FP3, FP5, FP-10(S), or FP-M, device ranges are different in individual CPUs.

* 2 Writing to device is not allowed.

* 3 Only those devices that have been assigned to I/O contacts by peripheral software can be used.

* 4 The device points of the timer and counter differs depending on the head numbers of the counter set by the value of the system register (No. 5).

* 5 This device does not exist in FP0, FP1, and FP-M.

* 6 When FP2SH is used, one bank of "32765 × 3 banks" can be monitored.

Microcomputer connection

| Device name | | Setting range | | Device No. Notation |
|-------------|--|------------------------------------|--|---------------------|
| Bit device | Bit specification of data register (D) | Specified bit of data register (D) | | — |
| Word device | Data register (D) | D0 to D2047 | | Decima |

* 1 Read from/write to the host by GB and GD devices cannot be executed.

2.6.3 Device range available for GOT-F900 series

The device range of the PLC CPU that can be used in GOT is shown as follows.

Note that the device range in the table below is the maximum value that can be set in GT Designer2.

The specifications of devices may differ depending on the models even though they belong to the same PLC CPU series.

Make setting in accordance with the specifications of actual PLC CPUs used.

When non-existent devices or device numbers outside of the range has been set, some of the correctly set objects may not be monitored.

For the setting method, see the following section.

 Section 5.1 Device Setting

1 Mitsubishi Electric PLC

(1) MELSEC-QnA, Q (Multiple CPUs)

| Device name | | Setting range | | Device No. Representation | | |
|-------------------------|--------------------------------------|---------------|-------|---------------------------|-------------|---|
| Bit device | Input (X) | X0 | to | X1FFF | Hexadecimal | |
| | Output (Y) | Y0 | to | Y1FFF | | |
| | Internal relay (M) | M0 | to | M32767 | Decimal | |
| | Latch relay (L) | L0 | to | L32767 | | |
| | Annunciator (F) | F0 | to | F32767 | | |
| | Link relay (B) | B0 | to | B7FFF | Hexadecimal | |
| | Timer | Contact (TT) | TT0 | to | TT32767 | — |
| | | Coil (TC) | TC0 | to | TC32767 | |
| | Counter | Contact (CT) | CT0 | to | CT32767 | |
| | | Coil (CC) | CC0 | to | CC32767 | |
| | Special relay (SM) | SM0 | to | SM2047 | | |
| | Retentive timer | Contact (SS) | SS0 | to | SS32767 | |
| | | Coil (SC) | SC0 | to | SC32767 | |
| | Step relay (S) | S0 | to | S32767 | | |
| Link special relay (SB) | SB0 | to | SB7FF | Hexadecimal | | |
| Word device | Data register (D) | D0 | to | D32767 | Decimal | |
| | Special data register (SD) | SD0 | to | SD2047 | | |
| | Link register (W) | W0 | to | W7FFF | Hexadecimal | |
| | Timer (current value) (TN) | TN0 | to | TN32767 | Decimal | |
| | Counter (current value) (CN) | CN0 | to | CN32767 | | |
| | Retentive timer (current value) (SN) | SN0 | to | SN32767 | | |
| | Link special register (SW) | SW0 | to | SW7FF | Hexadecimal | |
| | File register (R) | R0 | to | R32767 *1 | Decimal | |
| | Index register (Z) | Z0 | to | Z15 | | |

* 1 Available for file register of the block No. switched with the RSET instruction.

- (a) Restrictions on setting monitor of A series computer link
When the GOT-F900 has been connected to the QnACPU with A series computer link module installed, monitoring range of QnACPU is applied. The restrictions are shown as follows: (depending on restrictions of the computer link).

| Device name | | Setting range | | | Device No. Notation | |
|-------------|-------------------|--------------------|-----|----|---------------------|---------|
| Word device | Timer | Current value (TN) | TN0 | to | TN255 | Decimal |
| | | Set value (TS) | — | | | — |
| | Counter | Current value (CN) | CN0 | to | CN255 | Decimal |
| | | Set value (CS) | — | | | — |
| | File register (R) | | — | | | — |

- (b) PLC No. specification in multiple CPU system
Add a PLC number when specifying a device.
0 : CPU connected (Control CPU for link connection.)
1 to 4 : CPU of station number specified

(2) MELSEC-A, motion controller CPU (A series)

| Device name | | Setting range | | | Device No. Notation | |
|---------------------------|----------------------------|---------------|--------------|-------|---------------------|-------------|
| Bit device | Input (X) | | X0 | to | X1FFF | Hexadecimal |
| | Output (Y) | | Y0 | to | Y1FFF | |
| | Internal relay (M) | | M0 | to | M8191 | Decimal |
| | Special internal relay (M) | | M9000 | to | M9255 | |
| | Latch relay (L) *1 | | L0 | to | L8191 | |
| | Annunciator (F) | | F0 | to | F2047 | |
| | Link relay (B) | | B0 | to | B1FFF | Hexadecimal |
| | Timer | Contact (TT) | TT0 | to | TT2047 | Decimal |
| | | | Coil (TC) | TC0 | to | |
| | | Counter | Contact (CT) | CT0 | to | |
| Coil (CC) | | | CC0 | to | CC1023 | |
| Data register (D) | | D0 | to | D8191 | Decimal | |
| Special data register (D) | | D9000 | to | D9255 | | |
| Link register (W) | | W0 | to | W1FFF | Hexadecimal | |
| Word device | Timer | Contact (TN) | TN0 | to | TN2047 | Decimal |
| | | Coil (TS) | TS0 | to | TS2047 | |
| | Counter | Contact (CN) | CN0 | to | CN1023 | |
| | | Coil (CS) | CS0 | to | CS1023 | |
| | File register (R) | | R0 | to | R8191 | |
| | Index register *2 | (Z) | Z0 | to | Z6 | |
| | | (V) | V0 | to | V6 | |
| | Accumulator (A) | | A0 | to | A1 | |

* 1 Latch relay (L) is treated as internal relay (M) in GOT-F900.

* 2 When connected to computer link, writing to the index register (the touch switch function, numerical input function, etc) is not allowed.

Condition enabling data changes

While the GOT is connected to the A Series CPU or A Series computer link unit, data cannot be changed in set values (specified directly) of timers and counters and file registers in the following condition.

| PLC status | | While PLC is stopped | | While PLC is running | |
|-------------|-------------|----------------------|--------------------|----------------------|--------------------|
| Memory type | | Operation with RAM | Operation with ROM | Operation with RAM | Operation with ROM |
| Keyword | Not present | ○ | ×*1 | ○ | ×*1 |
| | Present | ×*2 | | ×*2 | |

The following error messages are displayed on the screen only when a timer, counter or file register is accessed through a Numeric Input or ASCII input.

*1 When data of a set value (specified directly) of a timer or counter is tried to be changed, the error message "CAN NOT WRITE." is displayed.

(Set values of timers and counters can be changed if they are specified indirectly using data registers.)

When data of a file register is tried to be changed, the error message "CAN NOT WRITE." is displayed.

*2 The error message "CAN NOT USE THE FUNCTION WHILE PROTECTED." is displayed.

(3) MELSEC-FX

| Device name | | Setting range | | Device No. Notation | | | |
|-------------|---|-------------------|----------------------|---------------------|---------|---------|-------|
| Bit device | Input (X) | X0 | to | X377 | Octal | | |
| | Output (Y) | Y0 | to | Y377 | | | |
| | Auxiliary relay (M) | M0 | to | M3071 | Decimal | | |
| | Special auxiliary relay (M) | M8000 | to | M8255 | | | |
| | State (S) | S0 | to | S999 | | | |
| | Timer contact (T) | T0 | to | T255 | | | |
| | Counter contact (C) | C0 | to | C255 | | | |
| Word device | Data register (D) (Including file register) | | D0 | to | D7999 | Decimal | |
| | Special data register (D) | | D8000 | to | D8255 | | |
| | Timer (T) | Current value (T) | T0 | to | T255 | | |
| | | Set value (TS) *2 | TS0 | to | TS255 | | |
| | Counter (C) | 16bit | Current value (C) | C0 | to | | C199 |
| | | | Set value (CS) | CS0 | to | | CS199 |
| | | 32bit | Current value (C) *2 | C200 | to | | C255 |
| | | | Set value (CS) *2 | CS200 | to | | CS255 |
| | Index register (Z) | | Z | | | | |
| | Index register (V) | | V (16 bits) | | | | |

*1 For FX3UC series, device setting cannot be made exceeding the above range by using GT Designer2.

*2 Bar code reader cannot be specified as word device.

Condition enabling data changes

While the GOT is connected to the A Series CPU or A Series computer link unit, data cannot be changed in set values (specified directly) of timers and counters and file registers in the following condition.

| PLC status | | While PLC is stopped | | | | While PLC is running | | | |
|---------------------------------|-------------|-----------------------------|-------|--------|----|----------------------|-------|--------|-----|
| Memory cassette attached to PLC | Memory type | RAM | EPROM | EEPROM | | RAM | EPROM | EEPROM | |
| | | Write protect switch status | — | — | ON | OFF | — | — | ON |
| Keyword | Not present | ○ | ×*1 | ×*1 | ○ | ○ | ×*1 | ×*1 | ×*3 |
| | Present | ×*2 | | | | ×*2 | | | |

The following error messages are displayed on the screen only when a timer, counter or file register is accessed through a Numeric Input or ASCII input.

*1 When data of a set value (specified directly) of a timer or counter is tried to be changed, the error message "CAN NOT WRITE." is displayed.

(Set values of timers and counters can be changed if they are specified indirectly using data registers.)

When data of a file register is tried to be changed, the error message "CAN NOT WRITE." is displayed.

*2 The error message "CAN NOT USE THE FUNCTION WHILE PROTECTED." is displayed.

*3 The error message "PLC IS RUNNING." is displayed.

(4) FX series GM positioning

| Device name | | Setting range | | Device No. Notation | |
|-------------|-----------------------------|---------------|----|---------------------|---------|
| Bit device | Input (X) *1 | X0 | to | X377 | Octal |
| | Output (Y) | Y0 | to | Y67 | |
| | Auxiliary relay (M) | M0 | to | M511 | Decimal |
| | Special auxiliary relay (M) | M0 | to | M9175 | |
| Word device | Data register (D) | D0 | to | D3999 | Decimal |
| | Special data register (D) | D9000 | to | D9313 | |
| | File register (D) | D4000 | to | D6999 | |
| | Index register (Z) | Z0 | to | Z6 (16 bits) | |
| | Index register (V) | V0 | to | V6 (32 bits) | |

*1 Writing to device is not executable.

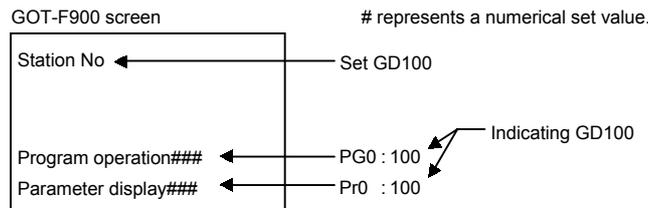
(5) FREQROL series inverter

| Device name | | Setting range | | Device No. Notation | |
|-------------|------------------------|---------------------------------|----|---------------------------------|---------|
| Bit device | Control status (S) | S0: <input type="checkbox"/> | to | S7: <input type="checkbox"/> | Decimal |
| Word device | Alarm code (A) | A0: <input type="checkbox"/> | to | A7: <input type="checkbox"/> | Decimal |
| | Parameter (Pr) | Pr0: <input type="checkbox"/> | to | Pr993: <input type="checkbox"/> | |
| | Program operation (PG) | PG0: <input type="checkbox"/> | to | PG89: <input type="checkbox"/> | |
| | Special parameter (SP) | SP108: <input type="checkbox"/> | to | SP127: <input type="checkbox"/> | |

Set the station No. in for the inverter to be monitored.

There are 2 ways to specify the station No.:

- Direct specification : Specifies the station No. of the inverter when setting device. [Valid range: 0 to 31]
- Indirect specification : Indirectly specifies the station No. of the inverter using the 16-bit GOT internal register (GD100 to GD115) when setting device, allowing changing more than one station No. per screen. [Valid range: 100 to 115] * Corresponding to GD100 to GD115 respectively.



2 OMRON PLC (OMRON SYSMAC)

| Device name | | Setting range | | Device No. Notation | |
|-------------|--|-----------------------|----|-----------------------|---------|
| Bit device | I/O relay | 000000 | to | 614315 | Decimal |
| | Internal auxiliary relay | WR00000 | to | WR51115 | |
| | Data link relay (LR) | LR00000 | to | LR19915 | |
| | Auxiliary memory relay (AR) *1 | AR00000 | to | AR95915 | |
| | Holding relay (HR) | HR00000 | to | HR51115 | |
| | Timer contact (TIM) | TIM0000 | to | TIM2047 | |
| | Counter contact (CNT) | CNT0000 | to | CNT2047 | |
| Word device | Data memory (DM) | DM0000 | to | DM9999 | Decimal |
| | Timer (current value) (TIM)*2 | TIM0000 | to | TIM2047 | |
| | Counter (current value) (CNT)*2 | CNT0000 | to | CNT2047 | |
| | Extension data memory (EM current bank) | EM0000 | to | EM9999 | |
| | Extension data memory (E0 to EC: 13 banks) | E00000 : EC0000 | to | E09999 : EC9999 | |

*1 ON/OFF operation of the Auxiliary memory relay (AR) is not available when the SYSMAC α , CPM1A/2A/2C, CS1, CS1J series is connected.

Do not use the key operation setting (bit).

*2 Set values cannot be read.

3 Yaskawa PLC (CP-9200SH/MP-900 series)

| Device name | | Setting range | | Device No. Notation | |
|-------------|---------------------|---------------|----|---------------------|-----------------------|
| Bit device | Coil (MB) | MB0 | to | MB4095F | Decimal + hexadecimal |
| | Input relay (IB) | IB0000 | to | IBFFFF | Hexadecimal |
| Word device | Input register (IW) | IW0 | to | IW7FFF | Hexadecimal |
| | Holding relay (MW) | MW0 | to | MW32767 | Decimal |

(1) AB SLC500

| Device name | | Setting range | | Device No. Notation | |
|-------------|---------------------------------|------------------------------|----------|----------------------------------|---------|
| Bit device | Bit (B) | B3:0/0 B10:0/0 | to to | B3:255/15 B255:255/15 | Decimal |
| | Timer (Timing bit) (TT) | T4:0/14(TT) T10:0/14(TT) | to to | T4:255/14(TT) T255:255/14(TT) | |
| | Timer (Timing bit) (TN) | T4:0/13(TN) T10:0/13(TN) | to to | T4:255/13(TN) T255:255/13(TN) | |
| | Counter (Up-counter) (CU) | C5:0/15(CU) C10:10/15(CU) | to to | C5:255/15(CU) C255:255/15(CU) | |
| | Counter (Down-counter) (CD) | C5:0/14(CD) C10:0/14(CD) | to to | C5:255/14(CD) C255:255/14(CD) | |
| | Counter (Completion bit) (CN) | C5:0/13(DN) C10:0/13(DN) | to to | C5:255/13(DN) C255:255/13(DN) | |
| Word device | Timer (Set value) (TP) *1 | T4:0/.1(PRE) T10:0.1(PRE) | to to | T4:255.1(PRE) T255:255.1(PRE) | Decimal |
| | Timer (Current value) (TA) *1 | T4:0/.2(ACC) T10:0.2(ACC) | to to | T4:255.2(ACC) T255:255.2(ACC) | |
| | Counter (Set value) (TCP) *1 | C5:0.1(PRE) C10:0.1(PRE) | to to | C5:255.1(PRE) C255:255.1(PRE) | |
| | Counter (Current value) (CA) *1 | C5:0.2(ACC) C10:0.2(ACC) | to to | C5:255.2(ACC) C255:255.2(ACC) | |
| | Integer (N) | N7:0 N10:0 | to to | N7:255 N255:255 | |

*1 32-bit specification is not available.

*2 Do not set the device outside the valid range.

A communication error may occur if a device outside the valid range has been set.

(2) AB Micrologix1000/1200/1500 series

| Device name | | Setting range | | Device No. Notation | |
|-------------|---------------------------------|---------------|----|---------------------|---------|
| Bit device | Bit (B) | B3:0/0 | to | B255:255/15 | Decimal |
| | Timer (Timing bit) (TT) | T3:0/14(TT) | to | T255:255/14(TT) | |
| | Timer (Completion bit) (TN) | T3:0/13(TN) | to | T255:255/13(TN) | |
| | Counter (Up-counter) (CU) | C3:0/15(CU) | to | C255:255/15(CU) | |
| | Counter (Down-counter) (CD) | C3:0/14(CD) | to | C255:255/14(CD) | |
| | Counter (Completion bit) (CN) | C3:0/13(DN) | to | C255:255/13(DN) | |
| Word device | Timer (Set value) (TP) *1 | T3:0/.1(PRE) | to | T255:255.1(PRE) | Decimal |
| | Timer (Current value) (TA) *1 | T3:0/.2(ACC) | to | T255:255.2(ACC) | |
| | Counter (Set value) (TCP) *1 | C3:0.1(PRE) | to | C255:255.1(PRE) | |
| | Counter (Current value) (CA) *1 | C3:0.2(ACC) | to | C255:255.2(ACC) | |
| | Integer (N) *1 | N3:0 | to | N255:255 | |

*1 32-bit specification is not available.

5 FUJITSU PLC (FUJITSU FLEX-PC N series)

| Device name | | Setting range | | Device name | |
|-------------|-----------------------------|---------------|----|-------------|-------------|
| Bit device | Input (X) | X000 | to | X7FF | Hexadecimal |
| | Output (Y) | Y000 | to | Y7FF | |
| | Internal relay (M) | M0000 | to | M1FFF | |
| | Latch relay (L) | L0000 | to | L1FFF | |
| | State (S) | S000 | to | S7FF | |
| | Special internal relay (M) | M0800 | to | M81FF | |
| Word device | Timer (current value) (T) | T000 | to | T3FF | Hexadecimal |
| | Counter (setting value) (C) | C000 | to | C1FF | |
| | Data register (D) | D0000 | to | D2FFF | |
| | Special data register (D) | D8000 | to | D81FF | |
| | Link register (W) | W0000 | to | W3FFF | |
| | File register (R) | R0000 | to | R7FFF | |

(1) SIEMENS S7-200 series

| Device name | | Setting range | | Device name | |
|-------------|-------------------------------------|---------------|----|-------------|---------|
| Bit device | Variable Memory (V) | V00 | to | V51197 | Decimal |
| | Input (I) | I00 | to | I77 | |
| | Output (Q) | Q00 | to | Q77 | |
| | Bit memory (M) | M00 | to | M317 | |
| | Special Memory (SM) | SM00 | to | SM1947 | |
| | Timer (T) *1 | T0 | to | T255 | |
| | Counter (C) *1 | C0 | to | C255 | |
| | Sequence Control Relay (S) | S00 | to | S317 | |
| Word device | Variable Memory (V) *6 | VW0 | to | VW5118 | Decimal |
| | Input (I) *6 | IW0 | to | IW6 | |
| | Output (Q) *6 | QW0 | to | QW6 | |
| | Analog Input (AI) *2, *6 | AIW0 | to | AIW30 | |
| | Analog Output (AQ) *6 | AQW0 | to | AQW30 | |
| | Bit memory (M) *6 | MW0 | to | MW30 | |
| | Special Memory (SM) *3, *6 | SMW0 | to | SMW192 | |
| | Timer (T) (16-bit) *4 | T0 | to | T255 | |
| | Counter (C) (16-bit) *4 | C0 | to | C255 | |
| | High Speed Counter (HC) (32-bit) *5 | HC0 | to | HC2 | |
| | Sequence Control Relay (S) *6 | SW0 | to | SW30 | |

*1 Writing to the bit device, T and C is not allowed.

*2 Writing to the word device, HC and AL is not allowed.

*3 The word device SM cannot be monitored.

*4 The word device T and C are 16-bit devices.

*5 The word device HC is a 32-bit device.

*6 The byte address is numbered using even numbers only.

(2) SIEMENS S7-300 series

| Device name | | Setting range | | Device name | |
|-------------|---|---------------------|----------|---------------------|---------|
| Bit device | Input relay (I) | I0000 | to | I5117 | Decimal |
| | Output relay (Q) | Q0000 | to | Q5117 | |
| | Bit memory (M) | M00000 | to | M20477 | |
| Word device | Timer (Current value) (T) | T000 | to | T511 | Decimal |
| | Counter (Current value) (C) | C000 | to | C511 | |
| | Data register (D) Setting range Input relay (I) | D000100000 | to | D000165534 | |
| | | D000200000 | to | D000265534 | |
| | | D000300000 | to | D00365534 | |
| | | D102300000 I0000 | to to | D102365534 I5117 | |

7 Matsushita Electric Works PLC (Matsushita MEWNET-FP series) *1

| Device name | | Setting range | | Device No. Notation | |
|-------------|------------------------------------|---------------|----|---------------------|-----------------------------|
| Bit device | Input replay (X) *3 | X0000 | to | X511F | Decimal + Hexadecimal *6 |
| | Output relay (Y) | Y0000 | to | Y511F | |
| | Internal relay (R) *4 | R0000 | to | R886F | |
| | Special relay (R) *4 | R9000 | to | R910F | |
| | Link relay (L) *1 | L0000 | to | L639F | |
| | Error alarm relay (E) *2*3 | E0000 | to | E2047 | Decimal |
| | Timer contact (T) *3 | T0000 | to | T3071 | |
| | Counter contact (C) *3 | C0000 | to | C3071 | |
| Word device | Timer/Counter (Elapsed value) (EV) | EV0000 | to | EV3071 | Decimal |
| | Timer/Counter (Set value) (SV) | SV0000 | to | SV3071 | |
| | Data register (DT) *4 | DT00000 | to | DT16383 | |
| | Link register (LD) *1 | LD0000 | to | LD8447 | |
| | File register (FL) *1 *5 | FL00000 | to | FL32764 | |

Pulse relay (P) and Index register (IX, IY) are not supported.

*1 This device is not provided in FP0, FPΣ

*2 Applicable for FP2SH only.

*3 Writing to the device is not allowed.

*4 Includes Special register (R9000 to R910F) and Special data register (DT9000 to DT9255).

However, access is not possible for the FP series when Special data register starts from D90000.

*5 Accessible to Bank 0 only.

*6 Bit device No. (3-digit decimal) + Bit position (1-digit hexadecimal)

8 Microcomputer connection

| Device name | | Setting range | | Device name | |
|-------------|-----------------------|---------------|----|-------------|---------|
| Bit device | Bit data (M) *1 | M0 | to | M2047 | Decimal |
| | Special memory (M) *2 | M8000 | to | M8063 | |
| Word device | Word data (D) | D0 | to | D4095*3 | Decimal |
| | Special memory (M) *2 | D8000 | to | D8015 | |

*1 Bit data (M) are provided in GT Designer Version SW1 E or later.

*2 Special memory is a device for special applications of GOT (Interrupt output, communication error information, etc.).

*3 In the F920GOT-K, D0 to D1023 are available.

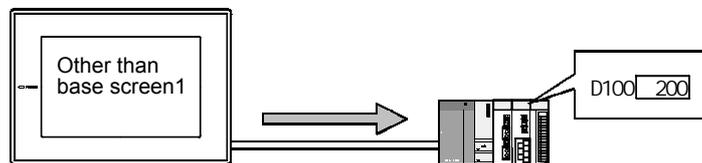
2.7 Cautions for Object Setting

When executing multiple write actions to one device
 Do not write from multiple objects to one device with the same trigger.
 GOT and PLC may execute the operation that is unnecessary for users.

Example) Status monitor function

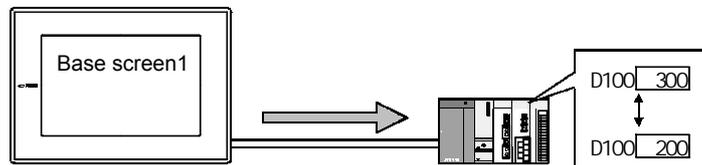
| Items | Condition | Action |
|-------------|---------------------------------------|-------------------|
| Screen tab | X0 in ON status (object base screen1) | Data SET D100 300 |
| Project tab | X0 in ON status | Data SET D100 200 |

- (1) The trigger is enabled when monitoring the screen other than base screen1 (X0 OFF → ON)
 <no problem>
 Write 200 to D100 of PLC CPU.



The status monitor of project unit (save 200 to D100)

- (2) The trigger is enabled when monitoring base screen1 (X0 OFF → ON) <with problem>
 Write 300 and 200 to D100 of PLC CPU.
 (When displaying numeric value on GOT, display 200 and 300 in turn.)



The status monitor of screen unit (save 300 to D100)
 The status monitor of project unit (save 200 to D100)

3. Common Setting

This section explains how to set devices commonly used in all projects.

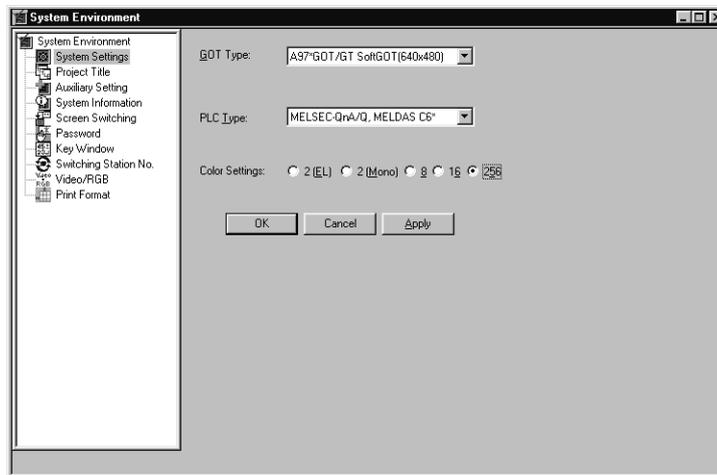
3.1 GOT/ PLC Type Setting

3

After starting GT Designer2, select [New] from the menu bar. Then "System Environment" dialog box will appear.

In [System Settings] within the dialog box, set the GOT type that uses the project to be created and the PLC CPU type connected to that GOT.

These settings can be changed after the project is created.



3.1.1 Settings

1 Follow (1) or (2) below:

(1) Creating a new project

- Click on  (New)
- Select [Project] → [New] from the menu.

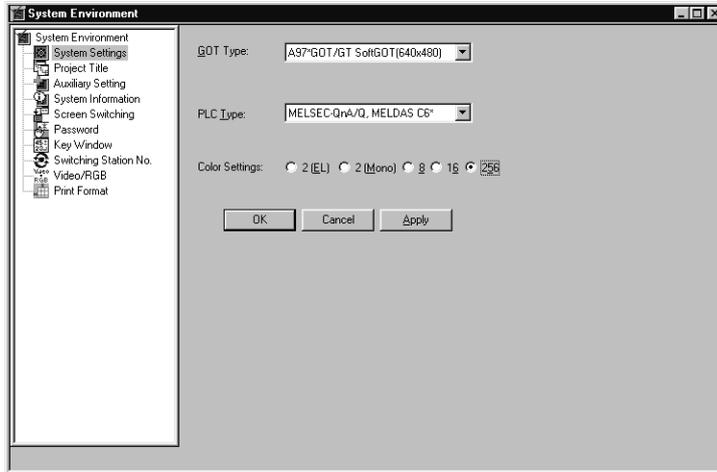
(2) Changing the GOT and PLC settings during project setting

- Select [Common] → [System Environment] from the menu.

2 After the "System Environments" dialog box appears, make the settings with reference to the following explanation.

3.1.2 Setting items

This section explains the setting items for GOT type and PLC type.



| Item | Description | A | F |
|----------------|---|-----------------------|-----------------------|
| GOT Type | Select the GOT type to be used. | <input type="radio"/> | <input type="radio"/> |
| PLC Type | Select the PLC CPU type to be connected to GOT while considering the available device range, as the device setting will be made within the device range of the selected PLC CPU. When accessing multiple PLC CPUs, select the PLC CPU type of the largest device range. | <input type="radio"/> | <input type="radio"/> |
| Color Settings | Select the color setting for the screen displayed in GOT Select the color setting in accordance with the GOT display color. The color setting applicable for GT Designer2 will be set. | <input type="radio"/> | <input type="radio"/> |



- (1) When Multiple CPU system is used

To monitor the multiple CPU system of other station by GOT, select [MELSEC-Q(Multi)/Q-Motion]. The PLC CPU type of host station (QCPU, QnACPU or ACPU) is not relevant.

PLC No. setting is disabled if other PLC type has been selected.

- (2) When connecting GOT to remote I/O station

When connecting GOT to a remote I/O station in MELSECNET/H network system, set "MELSEC-QnA/Q, MELDAS C6*" as PLC type.

3.1.3 Cautions

This section provides the cautions for setting GOT type and PLC type .

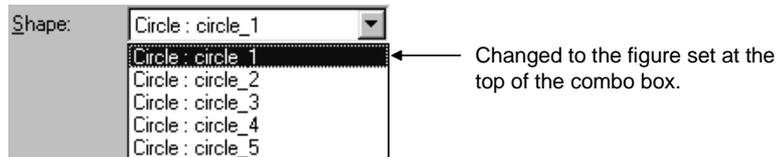
1 Cautions for setting GOT type

If GOT type is changed, this may change or delete the some function settings or affect the figure/frame settings.

Therefore, change GOT type while paying full attention to followings. (Also, make sure to check other settings.)

- (1) After GOT type is changed, some settings, figures and objects may be deleted, if they are not supported by the GOT currently set.
Even if GOT type is changed to the previous one, the deleted settings will not be restored.
- (2) "Undo", "Redo" settings will be reset when GOT type is changed.
- (3) Some setting items must be set after GOT type change is completed, as they are not included in the previous GOT type. Note that default values are set for these setting items.
- (4) Object shape settings after GOT type change
 - (a) If an object shape has been set to "None", this setting will be changed to "None".
 - (b) A basic figure will be changed to the same figure, if it is included in the currently set GOT. However, it will be changed to the first basic figure, i.e., figure set at the top of the combo box, if not included.
 - (c) A library will be changed to the first basic figure, i.e., figure set at the top of the combo box.

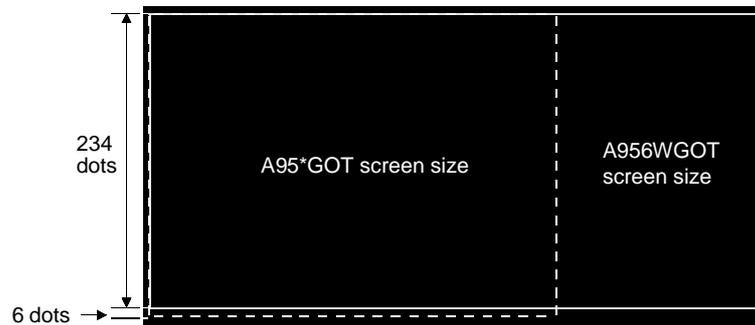
(Example) Circular basic figure



- (5) The applicable device range/type differs with the GOT type. GT Designer2 displays the device out of the range as "??". In this case, make device settings again. Some device types (BCD, real number) may be deleted, as they are not supported by the GOT.
- (6) User defined libraries will not be changed.
The data within user defined libraries are usable even after GOT type is changed. However, if they include figures or objects that are not supported by the GOT, the libraries cannot be used.
- (7) If changed to the GOT of which screen size is smaller, the preset objects and figures may extend off the display range.
In this case, modify the layout.

- (8) When changing from A95*GOT to A956WGOT, the 6-dot area at the bottom of the A95*GOT is not displayed on A956WGOT.

Adjust the set point of figures and object positions when utilizing A95*GOT screen data.



2 Cautions for setting PLC

- (1) If the PLC type is changed, the device will also be changed.
When the PLC type is changed, GT Designer2 displays the device cannot be converted (no corresponding device type, or setting available range is exceeded) as "??". In this case, set the device again.
- (2) If the changed PLC type does not correspond to the network, the network will be set to host station.



When changing GOT/PLC type

When changing GOT/PLC type, make backup for the project in advance in order to prevent the settings to be deleted by mistake.

3.2 Switching Screen Device Setting



For GOT, set the device for screen switching in order to switch base screens and display window screen.

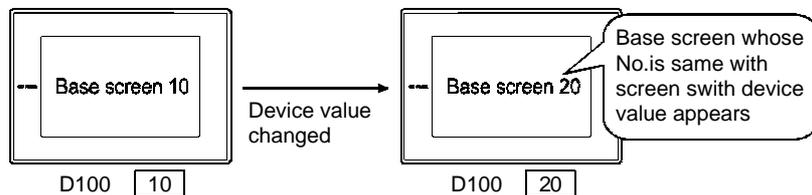
Device types for screen switching are as follows:

- Device for base screen switching
- Device for overlap window 1 switching (For base screen in the case of GOT-F900 series)
- Device for overlap window 2 switching (For base screen in the case of GOT-F900 series)
- Device for superimposed window switching (For GOT-A900 series only)

1 Switching base screens

Switch base screens by setting a base screen No. to the device for base screen switching.

(Example) In the case of device for base screen switching: D100

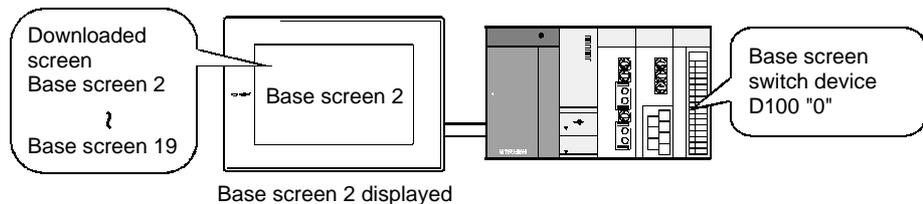


Remark

The value of the device for base screen switching when GOT is powered on

(1) In the case of GOT-A900 series

When the value of device for base screen switching is 0 or the screen No. that has not been downloaded is stored, GOT will display the base screen with the lowest screen among those screens already downloaded. Errors will not be displayed (system alarm).



(2) In the case of GOT-F900 series

When the value of device for base screen switching is 0, or the value of screen No. that has not been downloaded is stored, GOT will display the corresponding error message (The corresponding screen No. is displayed.)

The No. 1 base screen will be always displayed when GOT is powered on. (Base screen No.1 must have been created.)

(a) Initialization of the device for base screen switching

As the user screen No. is always bigger than 1, an error message appears on the monitoring screen to warn that no corresponding screen is provided when the current value of the word device that specifies a base screen is 0.

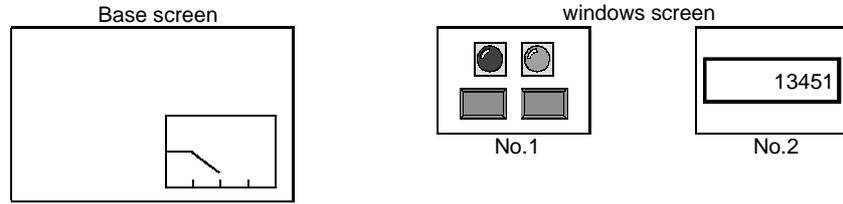
In the switching setting of GT Designer2 (☞ Section 3.2.2 Setting items), it is recommended to make the settings in order that the device for base screen switching will be initialized when GOT is powered on, depending on the situation.

(This setting is available in the system screen of GOT.)

2 Displaying or erasing window screen (for GOT-A900 only)

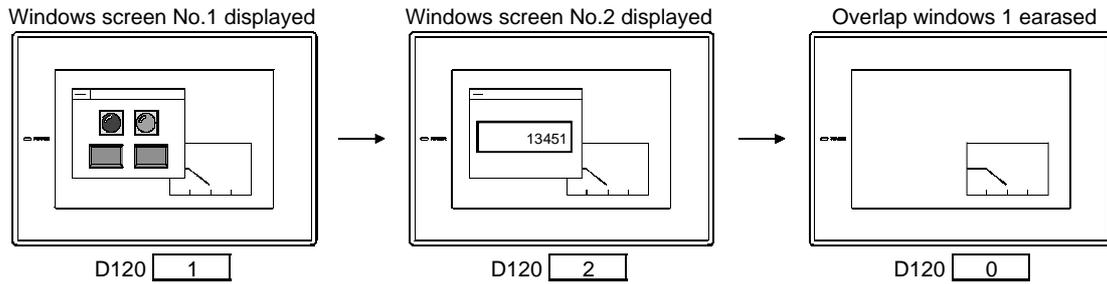
The device for window screen switching stores the window screen No. to switch window screens; and stores 0 to erase the window screens.

<Downloaded window screen>



<Example of GOT Display>

Device for overlap window 1 switching: D120



Remark

- (1) Methods of erasing window screen by touch operation

When close key is displayed on an overlap window, touch it to erase the window.



2.1.2 Window screen specifications

- (2) Position of window screen display

Set the position of window screen display using GT Designer2.



2.1.2 Window screen specifications

Specify the display position based on the device value.



3.2.2 Setting items

Hint!

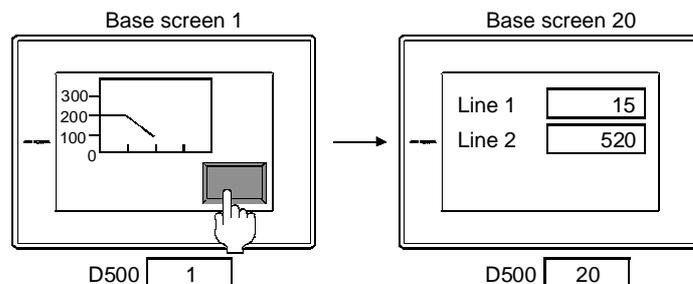
Methods of switching screens by touch switch

Use touch switch (screen select switch) to switch base screens and display window screen.



Section 5.27 Touch Switch.)

(Example) Base screen switching device: D500



When touch switch is detected, screen can be switched if "20" is written to screen switch device on base screen.

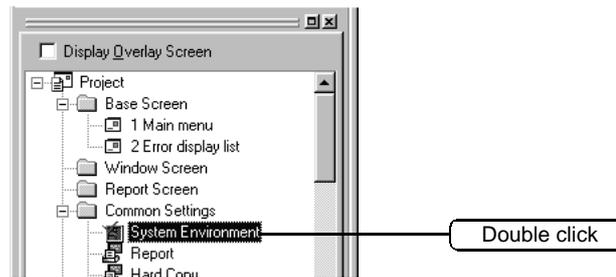
3.2.1 Settings

- 1 Select [Common Settings] → [System Environments] from the menu.
- 2 Double-click on [Screen Switching] in [System Environments] .
- 3 As the setting dialog box appears, make the settings with reference to the following explanation:

Remark

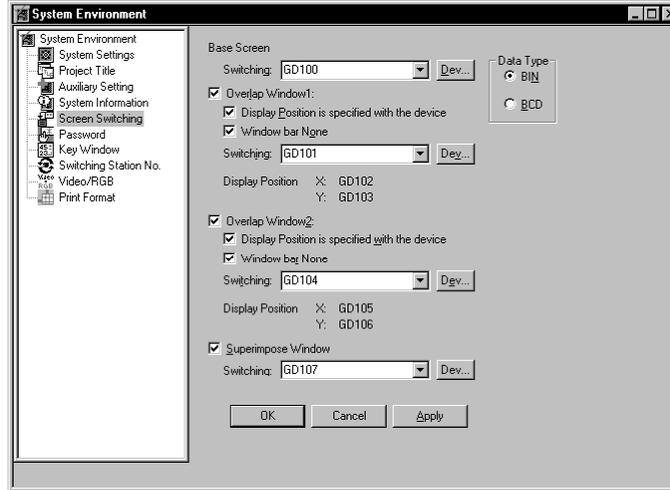
When setting in project workspace

Double-click on [System Environments] and "System Environment" dialog box appears, then double-click on [Screen Switching].

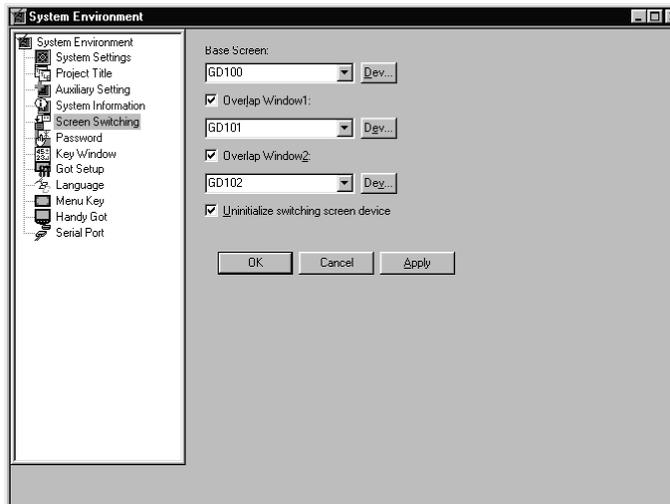


3.2.2 Setting items

Set a screen switching device for each screen type (base screen, overlap screen 1, overlap screen 2 and superimposed screen).

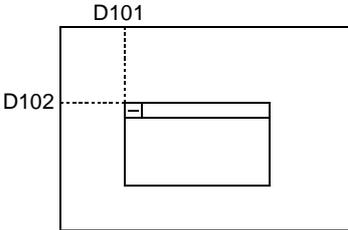
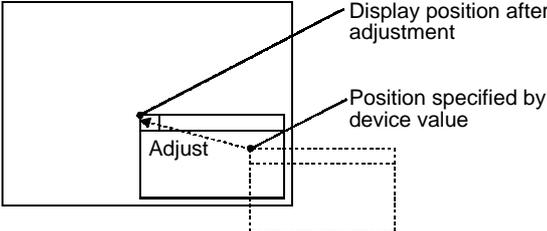
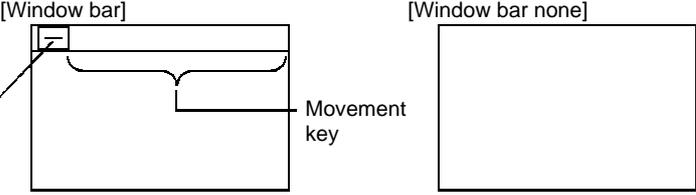


(When setting GOT-A900 series)



(When setting GOT-F900 series)

| Items | Description | A | F |
|-----------------------|--|---|---|
| Data Type | <p>Select the data format to process screen switching device value.</p> <p>BIN : Processes the screen switching device value as binary value. BCD : Processes the screen switching device value as BCD value.</p> <p>The range of the screen (screen No.) can be switched will depend on the set data format.</p> <p>BIN : 1 to 32767 BCD : 1 to 9999</p> <p>GOT-F900 series processes it as binary value.</p> | ○ | × |
| Base Screen switching | Set the screen switching device for base screen. (☞ Section 5.1 Device Setting) | ○ | ○ |

| Item | Description | A | F |
|---|--|---|---|
| Overlap Window 1 Overlap Window 2 | <p>Check this item to display Overlap Window 1 or Overlap Window 2 Then set the switching screen device for each window. (☞ Section 5.1 Device Setting)</p> <p>The overlap windows will not be displayed without setting the switching screen devices. (In the case of GOT-F900 series, the overlap window will overlap with the base screen and the specified base screen. Check this item to display the base screens to be overlapped.)</p> | ○ | ○ |
| Display Position is specified with the device | <p>Check this item to specify the display position of the window based on the device value. The devices that store display positions will be set consecutively starting from the device set in [Screens Switching] . (Example) In the case that switching screen device is set to D100. Display position X: D101 Y: D102</p> <p>The window screen will be displayed as follows:</p>  <p>If the device value exceeding the range for display in GOT is stored as the device value that stores display position, the GOT will automatically adjust the display position and then display the window screen. The device value will not be updated with the above adjustment.</p>  | ○ | × |
| Window bar none | <p>Check this item to display the overlap window without window bar.</p>  <p>Users can move and close this window.</p> <p>Users cannot move the window To close it, please set the screen switching device value as "0".</p> | ○ | × |
| Superimposed Window | <p>Check this item to display superimposed window. Then set the switching screen device for the superimposed window (☞ Section 5.1 Device Setting)</p> <p>The superimposed windows will not be displayed without setting the switching screen devices.</p> | ○ | × |
| Uninitialize switching screen device | <p>Uncheck this item to write 1 into the device with the base screen switching settings when GOT is powered on. This setting prevents the device value from being reset; a screen error from appearing on GOT screen when GOT is powered on.</p> | × | ○ |

3.2.3 Cautions

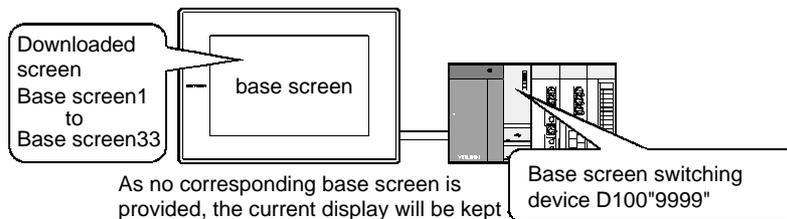
This section provides the cautions for setting the switching screen device.

1 Cautions for drawing

- (1) Switching screen device for screen switching
Use the switching screen device only when switching GOT screens.
- (2) Switching base screen device
The default value of switching base screen device is set to "GD100".
Change the switching base screen device when "GD100" is used in other objects. (The default value in GT Designer2 is different. (GT Designer: D0))
- (3) Display restrictions of used set objects
If the line graph with locus display on the base screen has been set, the overlap window2 cannot be displayed.

2 Cautions for use

- (1) If the value that cannot be displayed is stored into the switching screen device during GOT monitoring.
 - (a) In the case of GOT-A900 series
If the screen No. that is not downloaded is saved as the value of the switching screen device, the screen currently displayed will be kept.
This action is common in all types of screens (base screen, overlap window1, overlap window2, and superimposed window).
(Example) In case of base screen



- (b) In the case of GOT-F900 series
An error message will appear on GOT.
- (2) Word device for base screen switching (for GOT-F900 only)
If the word device that specifies a base screen is not located in the backup battery area (keep area, latch area), the current value of the word device will be 0 when the PLC CPU is powered off or is changed to "Stop" status.
As the base screen No. is always 1 or bigger, an error message appears on GOT to warn that the next screen is not provided. (No.**).
It is recommended to specify the keep area of the switching base screen device.

3.3 Switching Station No. Device Setting



Switching station No. is a function designated to switch the device set in the object to the same device of other station No. and monitor it.

This function can monitor multiple station Nos. using one object if the similar systems that use the same devices or operate in the same way are presented.

As the number of projects to be set can be reduced, the built-in memory of GOT can be saved.

Switching station No. can be carried out for the station No. that can be monitored by GOT.

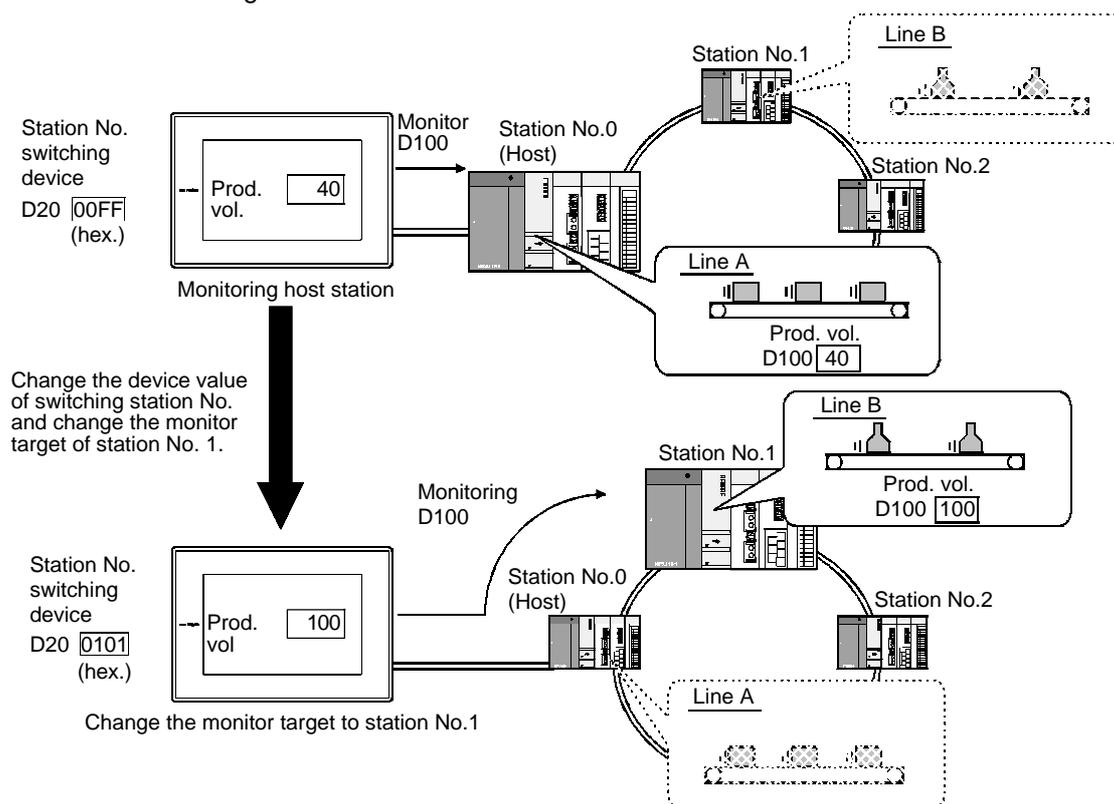
For more information on station No. that can be monitored by GOT (accessible range), refer to the following manual.

 GOT-A900 series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual)

3.3.1 Methods of switching station No.

The device dedicated to switching station No. is used to switch the station No.

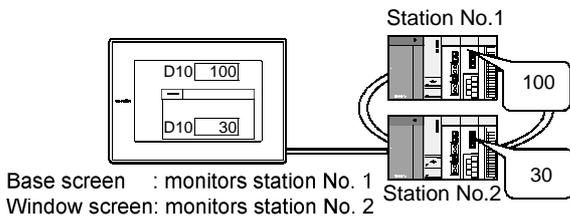
The monitor target can be switched to the station No. corresponding the value stored in the device value for station No. switching.



Application example

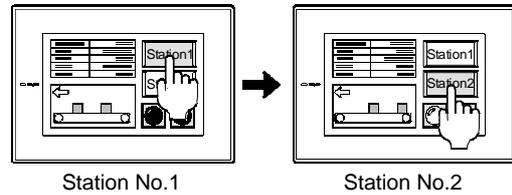
Monitor different station Nos. on base screen and window screen.

☞ Set on "Station No. switching device" dialog box



Use Touch switch to change monitor target.

☞ Set using the Touch switch



Methods of switching station No.

Use either of the followings to carry out switching station No. as shown below :

(1) Store a value in the device for switching station No.

Station No. can be switched if a value is stored in the device for switching station No. as follows:.

- When GOT has been incorporated into the data link system or CC-Link system

| Switching target | Storage value (hexadecimal) |
|--|-----------------------------|
| Master station | 0000H |
| Local station (1 to 64) | 0001H to 0040H |
| Station No. set for each object (The same monitor target is set if "Switching station No." has not been set.) | 00FEH |
| Host (connection target) monitor | 00FFH |

- When GOT has been incorporated into the network system

| Switching target | Storage value (hexadecimal) |
|--|---|
| Network No. (1 to 255) | Relation between change target and storage value is as follows: When monitoring PLC station No: 18, network No.: 1 <u>0112H</u> └──┬── PLC station No. └──┬── Network No. |
| PLC station No. (1 to 64) | |
| Station No. set for each object (The same monitor target is set if "Switching station No." has not been set.) | 00FEH |
| Host station (connection target) monitor | 00FFH |

(2) Use touch switch to switch station No.

Touch the touch switch dedicated to switching station No. to switch the station No.

☞ Section 5.27 Touch Switch function

3.3.2 Settings

- 1 Select [Common Settings]→ [System Environment] from the menu.
- 2 As "System Environment" dialog box appears, double-click on [Switching Station No.] in the dialog box.
- 3 As the setting dialog box appears, make the settings with reference to the following explanation.

Point

Before setting switching station No.

When switching station No., set the function available or unavailable for each screen.

To use the function, make it available in the auxiliary setting for each screen.

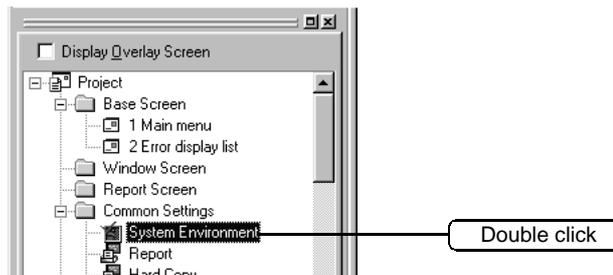


Section 4.3 Auxiliary Setting

Remark

When making the settings in project workspace

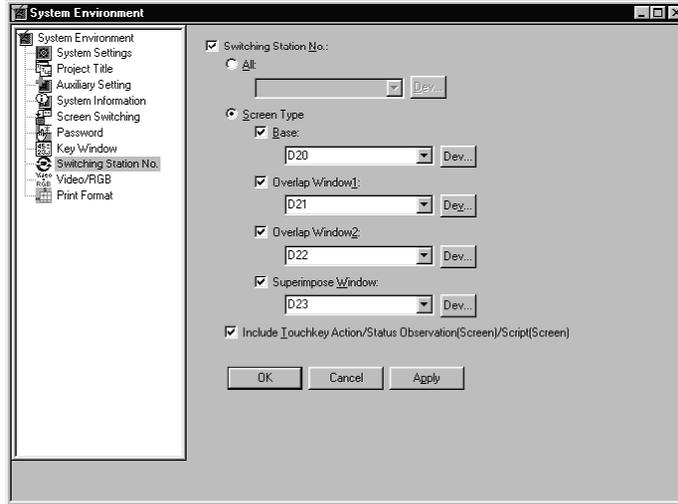
Click on [System Environment] to display "System Environment" dialog box, and then double click on [Switching Station No.] there.



3.3.3 Setting items

Set a switching station No. device.

Use the device common to all screens or the different device for each screen.



| Items | Description | A | F |
|--|---|-----------------------|-------------------------------------|
| Switching station No. | Check this item to use "Switching station No." | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Project common setting | Check this item to make "Switching station No." available for all screens. Then set the switching station No. device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Screen Type | Check this item to specify the target station No. by screen type. Then check the screen type to carry out "Switching station No." | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Base screen | Check the screen type(s) that will perform "Switching station No." (base screen/overlap window1/overlap window2/superimposed window). Then set the switching station No. device for each screen type. "Switching station No." will not be performed without this setting. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Overlap window1 | (Example) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Overlap window2 | | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Superimposed window | Switching station No. device (hexadecimal) <ul style="list-style-type: none"> ● Base screen : 00FFH → : 0101H ● Overlap window1 : 00FFH → : 0103H | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Include Touchkey action/Status Observation(Screen)/Script (Screen) | Check this item to make touch switch action/status observation/script object functions the targets for switching station No. | <input type="radio"/> | <input checked="" type="checkbox"/> |



Action of touch switch/status observation/script function

When using the device of which station No. has been switched to perform all actions of switch function, status observation function, and script function, check [Include Touchkey action/Status Observation(Screen)/Script(Screen)].

If it is not checked, each object operates as shown below:

| Object | Function | Monitor/action object |
|--------------------------------------|---------------------------------|--|
| Touch switch function | ON/OFF figure to display status | Device of which station No. has been switched. |
| | Device for indirect comment | |
| | Action at touch | Device of which station No. set in the object |
| Status observation function (screen) | Trigger device | Device of which station No. has been switched. |
| | Action when condition success | Device of which station No. set in the object |
| Script function (screen) | Script function (screen) | Device of which station No. has been switched. |
| | Script (refer to device) | |
| | Script (write to device) | Device of which station No. set in the object |

3.3.4 Cautions

This section provides the cautions for switching station No.

1 PLC CPU compatible with "Switching station No."

"Switching station No." is available only when MELSEC-A, MELSELQ-QnA, MELSELQ-Q series are monitored.

2 Objects incompatible with "Switching station No."

The following object devices are not compatible with "Switching station No."

GOT monitors the device of the station No. set in each object.

Note that if the object compatible with "Switching station No." has been set in the same screen, GOT will monitor the different station No. depending on the object when carrying out "Switching station No."

- Screen switching function
- System information function
- Alarm history display function
- Recipe function
- Hardcopy function
- Alarm list display function*¹
- Line graph display function*²
- Status observation function*³
- Gateway function
- Switching station No. function
- Clock display function
- Floating alarm function
- Report function
- Trend graph display function*¹
- Scatter graph display function*¹
- Script function*³

*1 Only when the [memory storage] has been set, GOT monitors the device of the station No. set in the object.

GOT monitors the device of the station No. set as the switching target when the [memory storage] is not set.

*2 Only when the [Locus] has been set, GOT monitors the device of the station No. set in the object.

GOT monitors the device of the station No. set as the switching target when the [Locus] is not set.

*3 Only when the settings have been made for each project, GOT monitors the device of the station No. set in the object.

GOT monitors the device of the station No. set as the switching target when the settings have been made for each screen.

3.4 Password Setting



Set password to restrict the users.

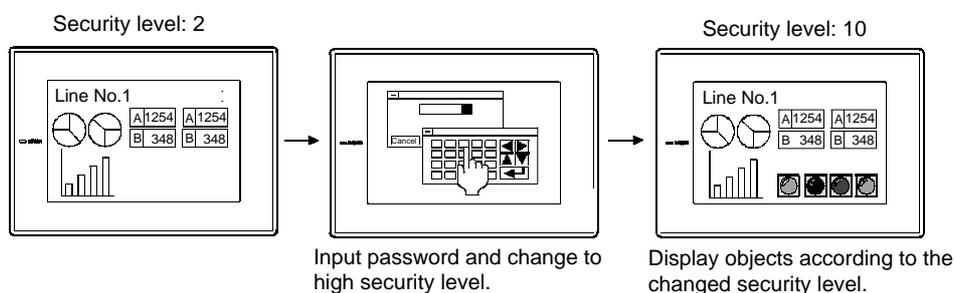
1 Safety function (☞ Section 3.4.2 Setting items of password for security function)

The screen display can be changed according to the user's security level by setting the security level (0 to 15) for each object and screen.

(In the case of GOT-F900 series, security level can be set for the base screen and utility.)

The security level can be changed by entering the password corresponding to each security level has.

☞ Section 5.7 Security Function

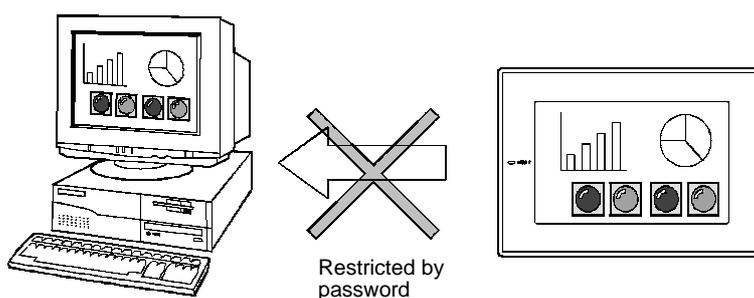


2 Data transmission operation (☞ Section 3.4.3 Setting items of password for data transmission, utility screen start and parameter change screen)

When uploading the GOT screen data to GT Designer2, enter the preset password to prevent the unnecessary upload operation.

For details of data transmission operation, refer to the following manual.

☞ GT Designer2 Version1 Operating Manual

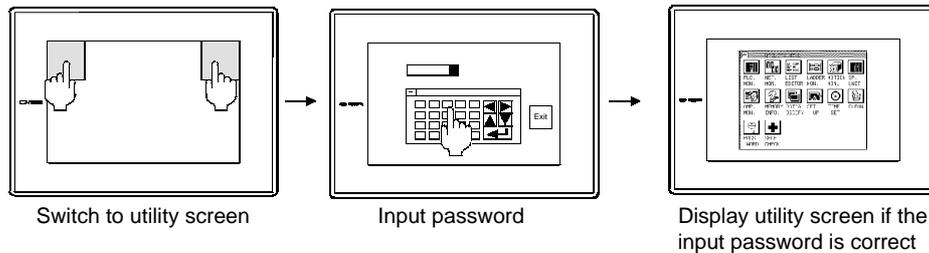


3 Starting utility screen (☞ Section 3.4.3 Setting items of password for data transmission, utility screen start and parameter change screen)

When starting utility screen, enter the preset password to prevent the unnecessary utility operation. For details of utility operation, refer to the following manual.

☞ GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 Compatible Extended · Option Functions Manual)

☞ GOT-F900 Series OPERATION Manual [GT Designer2]



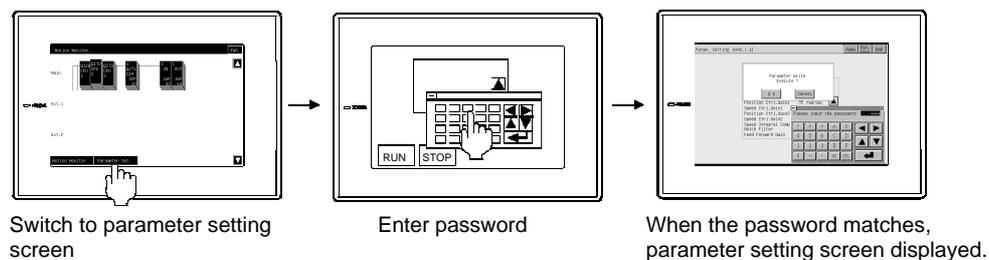
4 Parameter change screen (for GOT-A900 series only) (☞ section 3.4.3 Setting items of password for data transmission, utility screen start and parameter change screen)

When displaying the parameter setting screen of motion monitor function or servo amplifier monitor function, enter the preset password to prevent the unnecessary change of the parameter settings for motion controller QCPU (Q172CPU/Q173CPU)/servo amplifier to be connected.

For details of servo amplifier monitor function and motion monitor function, refer to the following manual.

☞ GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended · Option Functions Manual)

☞ GOT-F900 Series OPERATION Manual [GT Designer2]

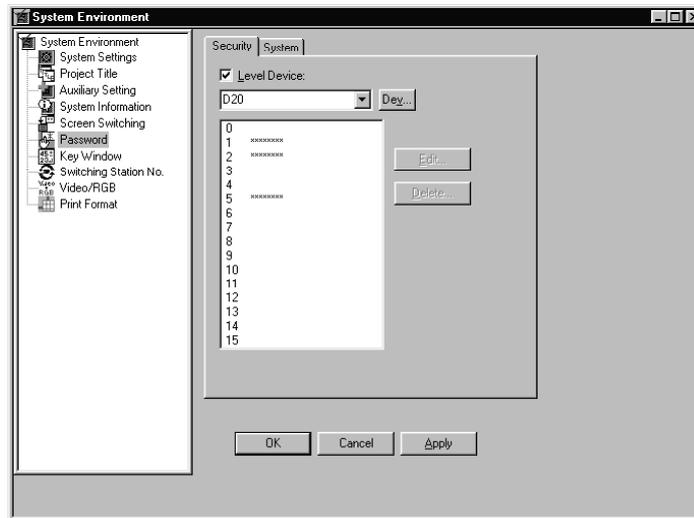


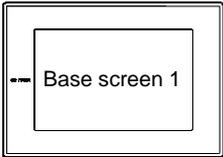
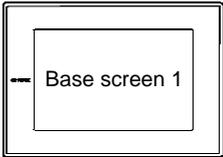
3.4.1 Settings

- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 Double click on [Password] in "System Environment" dialog box.
- 3 As the "Password" dialog box appears, select the tab for setting the password.

3.4.2 Setting items of password for security function

Set the password according to each security level.

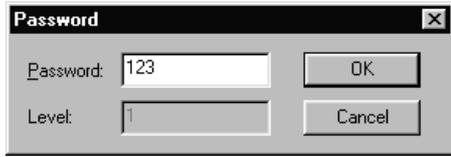


| Item | Description | A | F |
|---------------|--|---|---|
| Level device | <p>Check this item to use security function. Then, set the device (level device) that stores the security level value of GOT display screen.</p> <p>In case of GOT-A900 series The password can be set for security level from 0 to 15. Security level 0 : Security function is not set Security level 1 : Low ↓ Security level 15 : High</p> <p>If the level device is not controlled by PLC CPU, set GOT internal device (GD) . The security level can be changed by changing the level device value from the PLC CPU. (Example) Level device: D10</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>D10: 3 ↓ Set to security level 3</p> </div> <div style="text-align: center;">  <p>D10: 8 ↓ Set to security level 8</p> </div> </div> <p>When using numerical input function to change the device value set in the level device, the key window (where the value is entered) is erased after the input value is updated. Therefore, the operation settings (auxiliary setting of project) made for the key window are irrelevant.</p> <p>In the case of GOT-F900 series ● The level device value can be checked from PLC CPU</p> | ○ | ○ |
| Password list | <p>Passwords for changing the security level are listed. Select the security level No. (0 to 15) for which the password to be registered from the password list.</p> | ○ | ○ |
| Edit*1*2 | <p>This setting is available for setting a new password or changing the preset password.</p> | ○ | ○ |
| Delete*3 | <p>Deletes the registered password.</p> | ○ | ○ |

For details of *1, *2, and *3, refer to the next page.

***1 Registering new password**

Enter numeric characters in 1 to 8 digits as new password and then click on **OK** button.



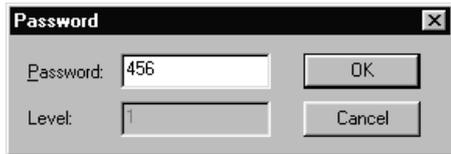
***2 Changing password**

Before changing password, enter the current password and then verify the password.

- 1 In "Password Verify" dialog box, enter the current password, and then click on **OK** button.



- 2 As "Password" dialog box appears, enter numerical characters in 1 to 8 digits as new password, and then click on **OK** button.



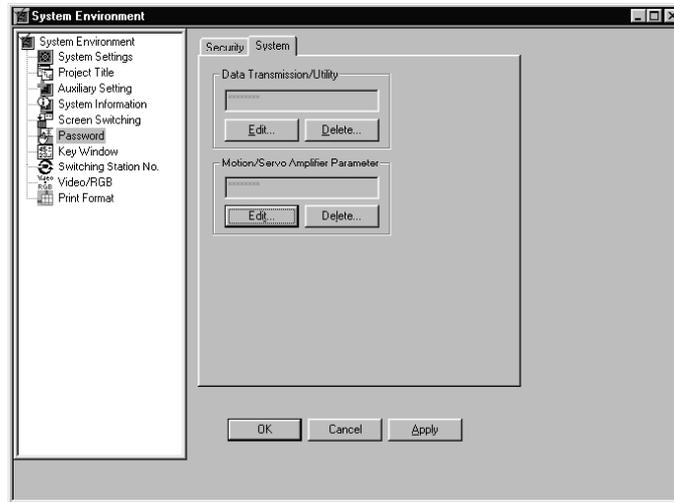
***3 Deleting password**

In "Password Verify" dialog box, enter the current password, and then click on **OK** button.



3.4.3 Setting items of password for data transmission, utility screen start and parameter change screen

Set the password to restrict screen data upload, utility screen start, display of parameter change screen for motion monitor function/servo amplifier monitor function from the GOT .

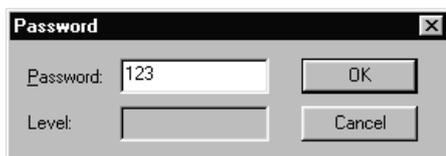


| Item | | Description | A | F |
|----------------------------------|-----------|---|-----------------------|----------------------------------|
| Data transmission/utility start | Edit*1*2 | For GOT-A900 series Registers or changes the password that restricts GOT screen data upload and utility screen display. For GOT-F900 series Registers or changes the password that restricts GOT screen data upload. | <input type="radio"/> | <input type="radio"/> |
| | Delete*3 | Deletes the registered password. | <input type="radio"/> | <input type="radio"/> |
| Motion/Servo amplifier parameter | Edit*1*2 | Registers or changes the password that displays parameter change screen for motion monitor unction/servo amplifier monitor function. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Delete *3 | Deletes the registered password. | <input type="radio"/> | <input checked="" type="radio"/> |

For details of *1, *2, and *3, refer to the following.

*1 Registering new password

In "Password" dialog box, enter alphanumeric characters (0 to 9, A to F) in 1 to 8 digits as new password and then click on button.



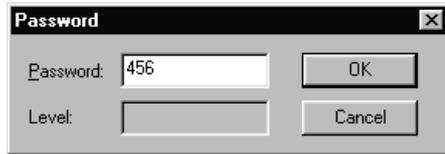
*2 Changing password

Before changing password, enter the current password and then verify the password.

1 In "Password Verify" dialog box, enter the current password, and then click on button.



- As "Password" dialog box appears, enter alphanumeric characters (0 to 9, A to F) as new password, and then click on button.



*3 Deleting password

In "Password Verify" dialog box, enter the current password, and then click on button.



3.4.4 Cautions

This section provides cautions for using security function.

1 Making a note of the password

Make sure to write the registered passwords down.

If the password has been forgotten, change of security level, change/delete of security level password cannot be performed.

3.5 System Information Setting



According to the data written to device, GOT operations (screen erasing, invalidating key input, etc) will be controlled via PLC CPU and GOT status will be notified to PLC CPU.

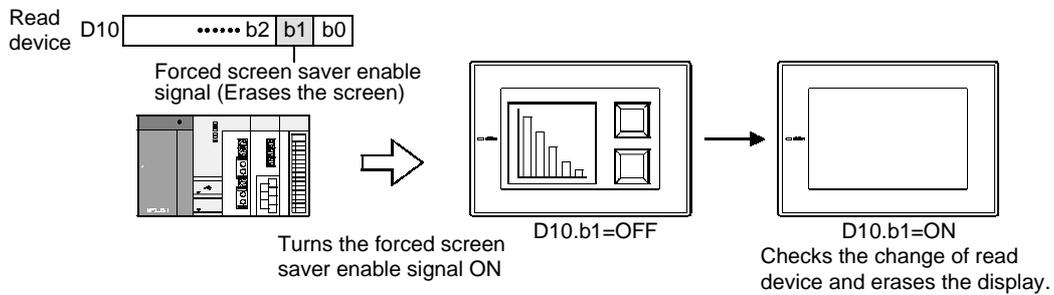
The following two types of devices are provided for setting the system information.

- Read device: controls GOT operation via PLC CPU
- Write device: notifies PLC CPU of GOT operation status

1 Controlling GOT operation (read device)

PLC CPU writes the value to the read device specified for GOT operation and controls GOT operation.

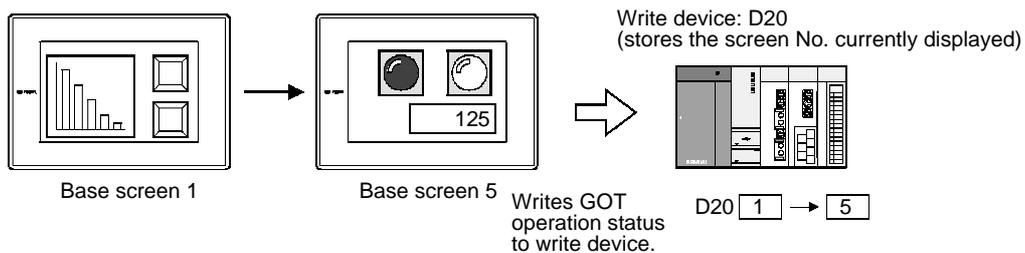
(Example) Turning the GOT to screen save mode forcibly by PLC CPU.



2 Writing GOT status (write device)

GOT writes action status to write device to notify PLC CPU.

(Example) Write the base screen No. currently displayed to the device.



Monitoring system information data/update timing

The following explains monitoring the read device set in the system information and deciding the timing to update the write device.

- Read device: monitored at intervals of GOT monitor period.
The read device value needs to be longer compared to the interval of GOT monitor period.
The monitor period value is stored in the GOT internal device (GS8). (For GOT-A900 only)
 Section 2.6.1 GOT internal device
- Write device: updated when the GOT operation status has changed.

3 Function overview (In the case of GOT-A900 series)

The following operations can be confirmed and controlled in the system information.

| Item | Function description | | | |
|-----------------|---|---|---|---|
| | Control of GOT operation (read device) | | Notification of GOT operation status (write device) | |
| | | Device name/signal name | | Device name/signal name |
| Screen | Disables screen save function. (Turns backlight off in the case of GOT-F900 series) | System signal 1 b0 | Notifies the base screen No. currently displayed | On-screen base screen No. |
| | Forcibly executes screen save | System signal 1 b1 | Notifies the window screen No. currently displayed | On-screen window screen No. |
| Buzzer | Outputs buzzer | System signal 1 b14 | — | — |
| | Outputs buzzer once | System signal 1 b15 | | |
| Human sensor | — | — | Detects human movement and notifies it | System signal 2 b5 |
| Error | Resets the error occurred in GOT | System signal 1 b13 | Notifies the GOT status (normal/abnormal) at power on | System signal 2 b1 |
| | | | Notifies the status of GOT error occurrence and error code | System signal 2 b13 GOT error code |
| | | | Notifies the PC card battery error | System signal 2 b2 |
| | | | Notifies printer error | System signal 2 b15 |
| Handy GOT | Turns operation switch lamp of handy GOT ON/OFF | External I/O function Output information | Notifies GOT grip switch ON/OFF status | System signal 2 b9 |
| Numerical input | — | — | Notifies input range over when values beyond the input range are stored in the device of write target | System signal 2 b14 |
| | | | Notifies the timing to update the input data | System signal 2 b4 Numerical input NO. |
| | | | Notifies value before numerical input and after the input is updated | Value before numerical input change Value after numerical input change |
| Bar code | Disables bar code function | System signal 1 b5 | Notifies that data is read after it is complete | System signal 2 b6 |
| Hard copy | Changes output setting (Black-White print) | System signal 1 b10 | Notifies that hard copy is in printing | System signal 2 b7 |
| | Changes output setting (Color print) | System signal 1 b11 | Notifies when the number of files in PC card approaches the upper limit of memory | System signal 2 b12 |
| | Changes output setting (Black-White Inversion Print) | System signal 1 b12 | | |
| Report | — | — | Notifies that report function is in printing | System signal b8 Report screen in printing |
| Recipe | — | — | Notifies that recipe function is in processing | System signal 2 b10 |
| Key window | — | — | Notifies the display of key window | System signal 2 b11 |
| Cursor | — | — | Notifies the position of the previous or current input cursor | Cursor position Previous cursor position Numerical input of cursor position |
| Key input | Disables all Key input | System signal 1 b9 | Notifies key input | System signal 2 b3 |
| | | | Notifies the input key code | Input key code |
| External I/O | Stores the output signal of external I/O function | External I/O function Output information | Stores the input signal of external I/O function | External I/O function Input information |

* Note that some functions cannot be confirmed or controlled depending on the GOT.

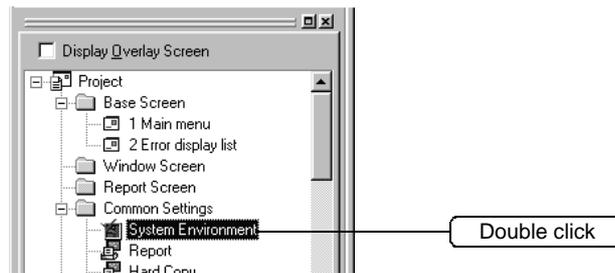
3.5.1 Setting methods

- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 Double click on [System Information] in "System Environment" dialog box.
- 3 As the setting dialog box appears, make the settings according to the following explanation.

Remark

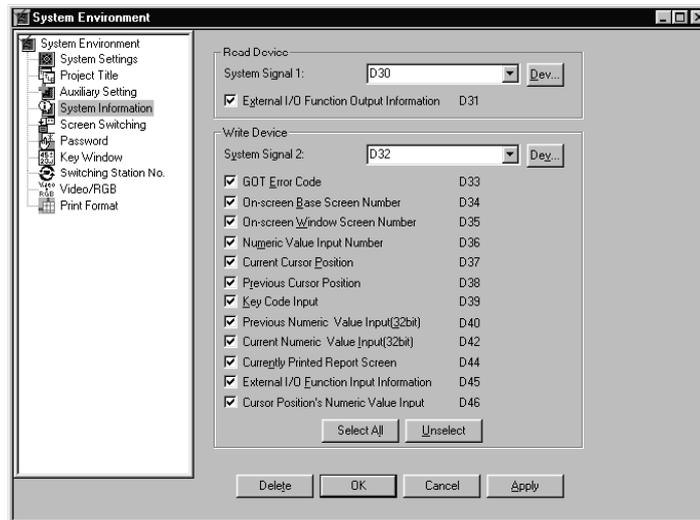
When making the settings in project work space

Double click on [System Environment] to display "System Environment" dialog box, and then double click on [System Information] there.

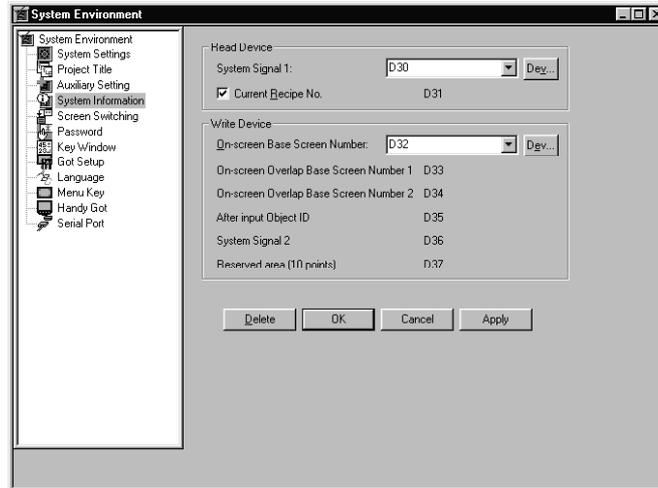


3.5.2 Setting items

Set devices and functions to be used in the system information.



In the case of GOT-A900 series



In the case of GOT-F900 series

| Item | Description | A | F | | | | | | | | | | | | | | |
|---|--|---|--|--|-----|-----|---|----|---|-------------------------|---|--|---------------------------------|-----------|----------|-----------------------|-------------------------------------|
| Read device | Set this item to control GOT operations with the device of PLC CPU. If a device No. is assigned to the system signal 1, the devices of the following Nos. will be consecutively assigned to the items following to the system signal 1 automatically. (The unchecked items will not be set.) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| System signal 1*1 | Set the device that stores the data that triggers GOT action. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| External I/O Function Output information*3 | Check this item to externally output by turning the bit of the specified device ON when the external I/O function is used. | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| Current Recipe No. | Check this item to use recipe function to specify the recipe No. for writing to PLC CPU. The recipe No. assigned is less than one of the actual recipe No. to be read/written. For example: to read/write from/to recipe No. 5, Set the current recipe No. to 4. | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| Write device | Set this item to write GOT operations to PLC CPU. If the device No. is assigned to the system signal 2 or the base screen currently displayed is set, the devices of the following Nos. will be consecutively assigned to the items following to the system signal 2. (The device of unchecked items will not be set in GOT-A900 series.) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| System signal 2*2 | Set the write device of GOT operation status. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| GOT Error Code | Check this item to store the GOT error. (☞ Section 3.5.4 Item 7) | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| On-screen Base Screen Number | <p>In case of GOT-A900 series</p> <ul style="list-style-type: none"> ● Check this item to store the screen No. currently displayed. The screen No. stored is as follows. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Display screen</th> <th colspan="2">Data format of screen switching device</th> </tr> <tr> <th>BIN</th> <th>BCD</th> </tr> </thead> <tbody> <tr> <td>The screen other than user- created screen (utility, RGB etc)</td> <td style="text-align: center;">-1</td> <td>Hold user-created base screen No. right before being displayed.</td> </tr> <tr> <td>During screen switching</td> <td colspan="2" style="text-align: center;">0</td> </tr> <tr> <td>Currently displayed base screen</td> <td style="text-align: center;">1to 32767</td> <td style="text-align: center;">1to 9999</td> </tr> </tbody> </table> <p>In case of GOT-F900 series The following 15 points will be occupied after device setting. D+0 : On-screen base screen No. D+1 : On-screen overlay screen No. 1 D+2 : On-screen overlay screen No. 2 D+3 : Object ID after input is complete (after input value is updated, the user ID number of numerical input function is stored.) D+4 : System signal 2*2 D+5 to D+14 : Others D+5 and D+6 output the information on keys pressed on the keypad in the F920GOT-K and F930GOT-K. (The system signal 1 of the read device should be set.) For the details, refer to the GOT-F900 SERIES OPERATION MANUAL [GT Designer2 Version].</p> | Display screen | Data format of screen switching device | | BIN | BCD | The screen other than user- created screen (utility, RGB etc) | -1 | Hold user-created base screen No. right before being displayed. | During screen switching | 0 | | Currently displayed base screen | 1to 32767 | 1to 9999 | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Display screen | Data format of screen switching device | | | | | | | | | | | | | | | | |
| | BIN | BCD | | | | | | | | | | | | | | | |
| The screen other than user- created screen (utility, RGB etc) | -1 | Hold user-created base screen No. right before being displayed. | | | | | | | | | | | | | | | |
| During screen switching | 0 | | | | | | | | | | | | | | | | |
| Currently displayed base screen | 1to 32767 | 1to 9999 | | | | | | | | | | | | | | | |
| | | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | |

| Item | Description | A | F | | | | | | | | | | | |
|--|---|----------------|--|--|-----|-----|---|---|--|--|-----------|----------|---|---|
| Write device | <p>Check this item to store the currently displayed window screen (overlap window 1). The screen No. stored is as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Display screen</th> <th colspan="2">Data format of the screen switching device</th> </tr> <tr> <th>BIN</th> <th>BCD</th> </tr> </thead> <tbody> <tr> <td>No screen is displayed or , during screen switching</td> <td colspan="2" style="text-align: center;">0</td> </tr> <tr> <td>The screen No. of the currently displayed overlap window 1</td> <td style="text-align: center;">1to 32767</td> <td style="text-align: center;">1to 9999</td> </tr> </tbody> </table> <p>The status of screens other than overlap window 1 is confirmed by using switching screen device. (☞ Section 3.2 Switching Screen Device Setting)</p> | Display screen | Data format of the screen switching device | | BIN | BCD | No screen is displayed or , during screen switching | 0 | | The screen No. of the currently displayed overlap window 1 | 1to 32767 | 1to 9999 | ○ | ○ |
| Display screen | Data format of the screen switching device | | | | | | | | | | | | | |
| | BIN | BCD | | | | | | | | | | | | |
| No screen is displayed or , during screen switching | 0 | | | | | | | | | | | | | |
| The screen No. of the currently displayed overlap window 1 | 1to 32767 | 1to 9999 | | | | | | | | | | | | |
| Numeric Value Input Number | <p>Check this item to store the user ID No. for numerical input function after the input value is updated. (☞ Section 5.8 Numerical Display/Numerical Input) * This can be applied to ASCII input function by turning ON the GOT internal device GS450.b2.</p> | ○ | × | | | | | | | | | | | |
| Current Cursor position | <p>Check this item to store the object ID No. of the object in which the cursor is currently located. (☞ Section 3.5.4 Item 3)</p> | ○ | × | | | | | | | | | | | |
| Previous Cursor position | <p>Check this item to store the object ID No. of the object in which the cursor was previously located. (☞ Section 3.5.4 Item 3)</p> | ○ | × | | | | | | | | | | | |
| Key Code Input | <p>Check this item to store the set key code when input keys (numerical input, ASCII input, touch switch, and operating panel) are used for input. (☞ Section 3.5.4 Item 2)</p> | ○ | × | | | | | | | | | | | |
| Previous Numeric Value Input (32 bit) | <p>Check this item to store the value (32 bit) before being changed by numerical input function. (☞ Section 5.8 Numerical Display/Numerical Input)</p> | ○ | × | | | | | | | | | | | |
| Current Numeric Value Input (32 bit) | <p>Check this item to store the value (32 bit) changed by numerical input function. (☞ Section 5.8 Numerical Display/Numerical Input)</p> | ○ | × | | | | | | | | | | | |
| Currently Printed Report Screen | <p>Check this item to store the report screen No. being printed. (☞ Section 5.34 Report Function)</p> | ○ | × | | | | | | | | | | | |
| External I/O function · Input Information*3 | <p>Check this item to store the information externally input to the specified word device when external I/O function is used.</p> | ○ | × | | | | | | | | | | | |
| Cursor Position's Numeric Value Input | <p>Stores the user ID No. of the numerical input function currently displayed with input cursor. (☞ Section 3.5.4 Item 3)</p> | ○ | × | | | | | | | | | | | |
| Select All/Deselect | Selects/Deselects all the items selected in [Write Device]. | ○ | × | | | | | | | | | | | |
| Delete | Deletes the set read and write devices. | ○ | ○ | | | | | | | | | | | |

For details of *1, *2, and *3, refer to the next and the following page.

In the case of GOT-A900 series

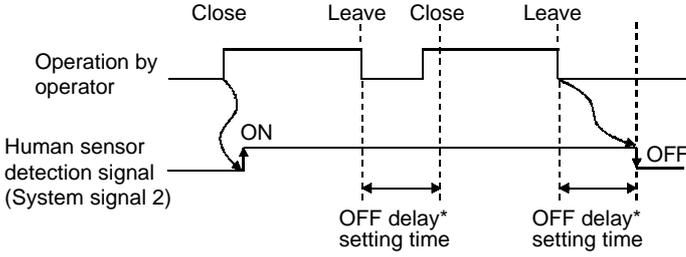
* 1. System Signal 1

Controls the GOT operation by turning the bit of word device set as system signal 1 ON/OFF

| Signal Name | Description |
|---|--|
| Automatic Screen Saver Disable Signal (b0) | ON : Disables screen saver function (that turns monitor screen display OFF) . OFF : Enables screen saver function. ( Section 3.5.4 4) |
| Forced Screen Saver Enable Signal (b1) | ON : Forcibly turns the GOT into screen saver mode. OFF : Common status (Displays screen again) ( Section 3.5.4 4) |
| Key Code Read Complete Signal (b3) | ON : Clears the following signal. ● Turns [Key input signal (System signal 2)] OFF OFF : Does not clear the above signal. ( Section 3.5.4 2) |
| Numeric Value Input Read Complete Signal (b4) | ON : Turns [Numeric value input signal (System signal 2)] OFF. OFF : Does not turn the above signal OFF. ( Section 5.8 Numeric Value Display/ Numeric Value Input) |
| Barcode Input Disable Signal (b5) | ON : Disables barcode function. OFF : Enables barcode function. |
| Barcode Input Read Complete Signal (b6) | ON : Turns [Barcode input signal (System signal 2)] OFF. OFF : Does not turn the above signal OFF. ( Section 5.37 Bar Code Function) |
| Key-In Disable Signal (b9) | ON : Disables all key-input . OFF : Enables key-input . |
| Hard Copy Setting Enable Signal (b10) | ON : Makes hard copy output setting changeable according to bit ON/OFF status of [Hard copy black-white print signal (b11)] and [Hard copy black-white inversion signal (b12)] for system signal 1. OFF : Carries out hard copy output according to the settings made by GT Designer2) ( Section 5.35 Hard Copy) |
| Hard Copy Black-White Print Signal (b11) | ON : Changes the hard copy printing mode to [Black-White] . OFF : Changes the hard copy printing mode to [Color (256 Colors/ 16 Colors)] . ( Section 5.35 Hard Copy) |
| Hard Copy Black-White Inversion Signal (b12) | ON : Inverses the black-white portion of monitor screen and output. OFF : Outputs the black-white portion of monitor screen without making any changes. ( Section 5.35 Hard Copy) |
| GOT Error Reset Signal (b13) | ON : Clears the following signal. ● Stores "0" to [GOT error code storage area (Write Device)] ● Turns [GOT error detection signal (System signal 2)] OFF. OFF : Does not clear the above signal. ( Section 3.5.4 7) |
| Buzzer Output Signal (b14) | ON : Outputs buzzer . OFF : Does not output buzzer. Even if [Buzzer Volume] of GOT utility screen (Setup) is set as [None] , buzzer volume will be output when the bit is ON. |
| Buzzer One-shot Output Signal (b15) | ON : Outputs buzzer once. OFF : Does not output buzzer. The length of buzzer volume is same with the settings (Long, Short) made in [Buzzer Volume] of GOT utility. (When set as [None], buzzer volume is same as the setting of [Long].) |

*** 2 System Signal 2**

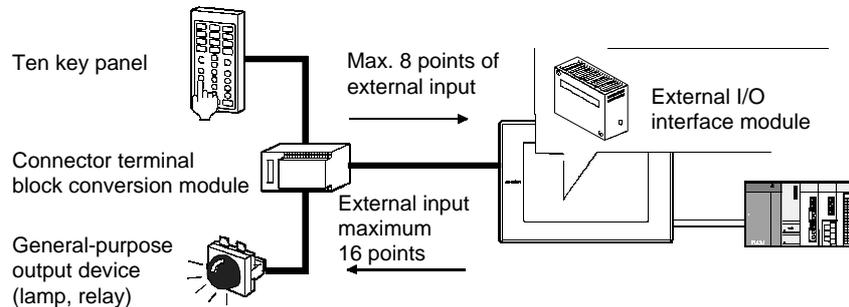
Writes the GOT operation status to PLC CPU according to the bit ON/OFF status of the word device set in system signal 2.

| Signal Name | Description |
|--|---|
| Screen saving signal(b0) | ON : GOT is in screen saver mode. OFF : GOT is not in screen saver mode. |
| GOT Ready Signal (b1) | ON : GOT status normal at power-on OFF : GOT status abnormal at power-on If the signal will not be ON by resetting the GOT again, its possible cause is hardware error of GOT. Consult your local Mitsubishi service center or representative. |
| PC Card Battery Error Detection Signal (b2) | ON : Battery error detected OFF : Battery normal |
| Key Input Signal (b3) | ON : Key input done OFF : No key input ( Section 3.5.4 ) |
| Numeric Value Input Signal (b4) | ON : The value input by value input function has been updated. OFF : The value input by value input function has not been updated. ( Section 5.8 Numeric Display/Numerical Input) * This can be applied to ASCII input function by turning ON the GOT internal device GS450.b2. |
| Human Sensor Detection Signal (valid in A985GOT only) (b5) | <p>ON : Human movement is detected by human sensor OFF : Human movement has not been detected by human sensor (In the case that the human movement can not be detected during the time specified within the GOT utility)</p> <p>( Section 3.5.3 )</p> <p>* From a characteristic viewpoint, the signal is output to ON status for 60 seconds after starting GOT. According to human sensor settings of GOT (utility), the ON status may be kept without operator.</p>  <p>* : If the GOT is not used during the time set in the OFF delay setting time, human sensor detection signal will turn OFF.</p> <p>For the details of human sensor setting, refer to the following manual:  GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended ● Option Functions Manual)</p> |
| Barcode Input Signal (b6) | ON : The data read by barcode reader has been stored into the specified device. OFF : No data has been read by barcode reader. ( Section 5.37 Bar Code Function) |
| Hard Copy Output Signal (b7) | ON : Hard copy function being executed. OFF : Hard copy function execution completed, or interrupted. ( Section 5.35 Hard Copy) |
| Report Output Signal (b8) | ON : Printing by report function OFF : Printing by report function completed, or interrupted. ( Section 5.34 Report Function) |
| A950 Handy GOT's Grip Switch Pressing Signal (b9) | ON : A950 Handy GOT's Grip Switch being pressed. OFF : A950 Handy GOT's Grip Switch is released. |
| Recipe Processing Signal (b10) | ON : Recipe being processed (Write/Read operation) OFF : Recipe process completed, or interrupted. ( Section 5.29 Recipe Function) |

| Signal Name | Description |
|--|---|
| Key window Output Signal (b11) | ON : Key window being displayed OFF : Key window not displayed |
| Hardcopy Sub-signal (b12) | ON : The number of files (file No.) for screen data stored in PC card by hard copy function exceeds 9900 OFF : The number of files (file No.) of screen data stored in PC card by hard copy function is less than 9900 ( Section 5.35 Hard Copy) |
| GOT Error Detection Signal (b13) | ON : GOT error has occurred. OFF : Normal ( Section 3.5.4 ) |
| Numeric Value Error Detection Signal (b14) | ON : The value exceeding the input range has been stored into the write target device of numeric value input function (Check this item on screen switching) OFF : The value within the input range has been stored into the write target device of numeric value input function. ( Section 5.8 Numeric Display/ Numerical Input) |
| Printer Error Detection Signal (b15) | ON : Printer error (power OFF, cable disconnected, No paper provided/ paper jammed, etc) has occurred. (The signal turns OFF when printer problem is resolved.) OFF : Normal |

*** 3 External I/O Function (Input information/ Output information)**

External I/O function enables data to be input from the outside of GOT (Operation panel); to be output to the outside of GOT (Lamp or relay), according to the device set in system information.



| Bit No. | Output signal storage area of external I/O function (Read Device) | Input signal storage area of external I/O function (Write Device) |
|---------|---|---|
| b0 | Output Y0 | Input X0 |
| b1 | Output Y1 | Input X1 |
| b2 | Output Y2 | Input X2 |
| b3 | Output Y3 | Input X3 |
| b4 | Output Y4 | Input X4 |
| b5 | Output Y5 | Input X5 |
| b6 | Output Y6 | Input X6 |
| b7 | Output Y7 | Input X7 |
| b8 | Output Y8 | Fuse blown |
| b9 | Output Y9 | Use prohibited |
| b10 | Output YA | |
| b11 | Output YB | |
| b12 | Output YC | |
| b13 | Output YD | |
| b14 | Output YE | |
| b15 | Output YF | |

Remark

- (1) When A950 handy GOT is used
 When A950 handy GOT is used, b0 to b3 within the storage area of external output function (read device) controls the LED status of operation switch.
 b0: LED of operation switch (SW1) for A950 handy GOT
 b1: LED of operation switch (SW2) for A950 handy GOT
 b2: LED of operation switch (SW3) for A950 handy GOT
 b3: LED of operation switch (SW4) for A950 handy GOT

- (2) When external I/O function is used without system information
 Data can be input to/output from the outside of GOT by using GOT internal device (GB).

Section 2.6.1 GOT internal device

In the case of GOT-F900 series

*1 System Signal 1

Controls the GOT operation by turning the bit of word device set as system signal 1 ON/OFF.

| Signal Name | Description |
|---|--|
| Alarm History Clear Signal (b0) | ON : Clears the history data of alarm history function. OFF : Does not clear alarm history data. |
| Back Light OFF Signal (b1) | ON : Turns the backlight OFF after the backlight OFF setting time has passed. OFF : Keeps the backlight always ON. |
| Sampling Data Clear Signal (b2) | ON : Clears the sampling data of sampling function. OFF : Does not clear sampling data. |
| Unused Signal (b3 to b4) | Not used |
| Barcode Input Disable Signal (b5) | ON : Disables barcode function and clears the data. OFF : Enables barcode function. |
| Barcode Input Read Complete OFF Signal (b6) | ON : Turns [Barcode input signal (System signal 2)] OFF. OFF : Does not turn the above signal OFF. Turn OFF b5 of write device +4 (System signal 2) to which input data of barcode reader has been written. |
| Unused Signal (b7) | Not used |
| Password Input Request Signal (b8) | ON : Automatically displays the window for password input when switching to a higher lever security. OFF : Does not automatically display the window for password input. |
| Unused Signal (b9) | Not used |
| Keypad information valid signal 1 (b10) | [Only in the F920GOT-K and F930GOT-K] ON : Writes the information on pressing of the keypad to the write devices Do +6 and Do +7. OFF : Does not write such information. |
| Keypad information valid signal 2 (b11) | ON : Writes information to the write devices D□+5 and D□+6 when the key pad status is changed or when a scan processing is executed inside the GOT. (Only in the F920GOT-K) ON : Writes the information to the write devices D□+5 and D□+6 when the key pad status is changed and in a constant cycle (1 sec). (Only in the F930GOT-K) OFF : Writes information to the write devices Do +5 and Do +6 when the key pad status is changed. |
| Unused signal (b12 to b15) | Not used |

*2 System Signal 2

Writes the GOT operation status to PLC CPU according to the bit ON/OFF status of the word device set in system signal 2.

| Signal Name | Description |
|--|---|
| Alarm Device ON Confirmation Signal (b0) | ON : Turns ON when any of the devices assigned by alarm function turns ON. OFF : Turns OFF when all of the devices assigned by alarm function turn OFF. |
| Sampling Function Execution ON Signal (b1) | ON : Turns ON while the device value of sampling function is being sampled. OFF : Turns OFF when the device value of sampling function is not sampled. |
| Numeric Value Input Signal (b2) | ON : The value input by numeric value input function has been updated. OFF : The value input by in numeric value input function has not been updated. ( Section 5.8 Numerical Display/ Numerical Input) |
| Battery Voltage Drop Detection Signal (b3) | ON : GOT battery voltage low (It is recommend to replace it within a month after turning ON.) OFF : Normal |
| Handy GOT's Grip Switch Pressing Signal (b4) | ON : F94* Handy GOT's (except RH type) grip switch is being pressed. OFF : F94* Handy GOT's grip switch is released. |
| Barcode Input Signal (b5) | ON : The data read by barcode reader has been stored into the specified device. OFF : No data has been read by barcode reader. ( Section 5.37 Bar Code Function) |
| Unused signal (b6 to b7) | Not used. |

| Signal Name | Description |
|---|--|
| Confirmation Signal during data change (b8) | ON : Turns ON when the data is changed by numeric value input and ASCII input function. OFF : Turns OFF when the data is not changed by numeric value input and ASCII input function. (☞ Section 5.8 Numerical Display/ Numerical Input) |
| Keypad information signal 1 (b9) | [Only in the F920GOT-K and F930GOT-K] ON : Indicates that the cursor is displayed in the Alarm List Display or Alarm History Display. OFF : Indicates that the cursor is not displayed in the Alarm List Display or Alarm History Display. |
| Keypad information signal 2 (b10) | [Only in the F920GOT-K and F930GOT-K] ON : Indicates that the backlight is ON. OFF : Indicates that the backlight is OFF. |
| Unused Signal (b9 to b15) | Not used. |

3.5.3 Application example

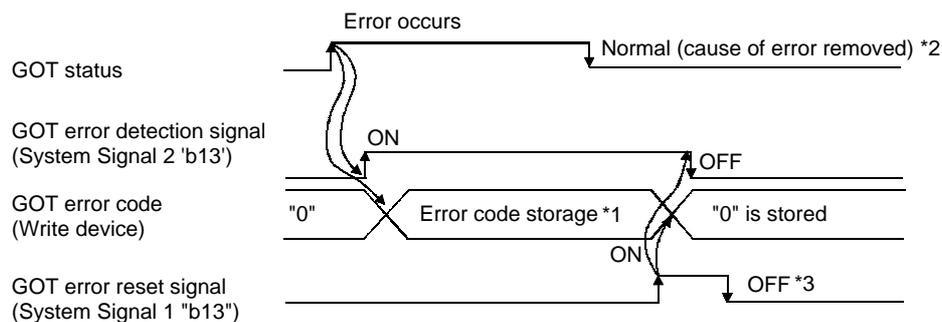
1 Confirm the error occurred in GOT (for GOT-A900 Series only)

The code of the error occurred in GOT can be confirmed.

The error codes within the range of error code 300 to 499 are displayed.

For the details of error code, refer to the following manuals.

☞ GOT-A900 Series User's Manual



*1. When multiple errors occur simultaneously, the latest error code will be stored.

*2. Error code will not be cleared automatically even after the cause of error is removed.

Clear the error code by using the GOT error reset signal.

*3. Turn the GOT error reset signal OFF after error reset is completed.

If the GOT error reset signal is kept ON, error code will be reset when error occurs next time.

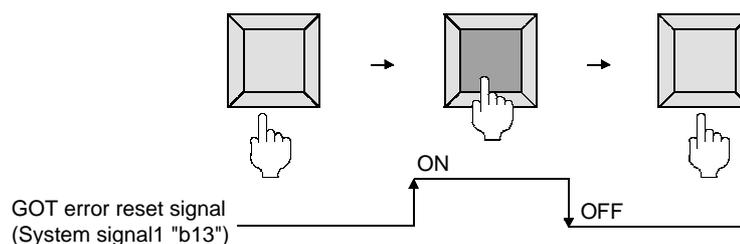


Error Reset Method

An error can be reset by using GOT as explained below.

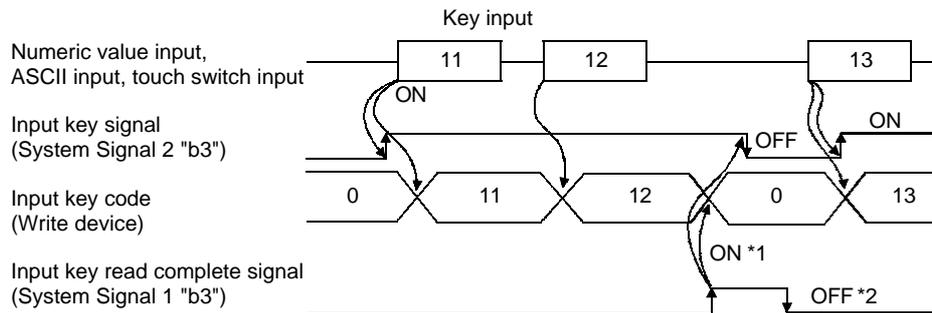
When the cause of error is removed, error can be reset by touching the touch switch.

Example: Create the touch switch that keeps GOT error reset signal ON only while being touched.



2 Confirm the input key code by input key (for GOT-A900 series only)

The input key code can be confirmed by input key (Numeric value input, ASCII input, touch switch).



*1. When key input is completed, the stored key code is held.

When [Input key read complete signal] turns ON, the input key code signal will be cleared.

*2. Signal turns OFF after input key is reset.

If [Input key read complete signal] keeps ON, the stored key code will be reset when key input is performed next time.

3 Confirm cursor's display position (for GOT-A900 Series only)

The cursor's display position can be confirmed by writing the data of the object (numeric value input function, ASCII input function) in which cursor is located into the device.

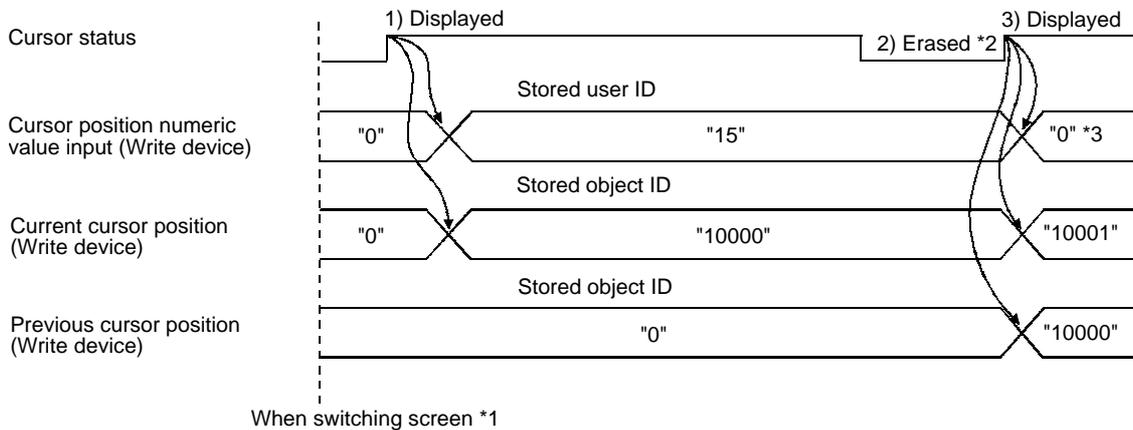
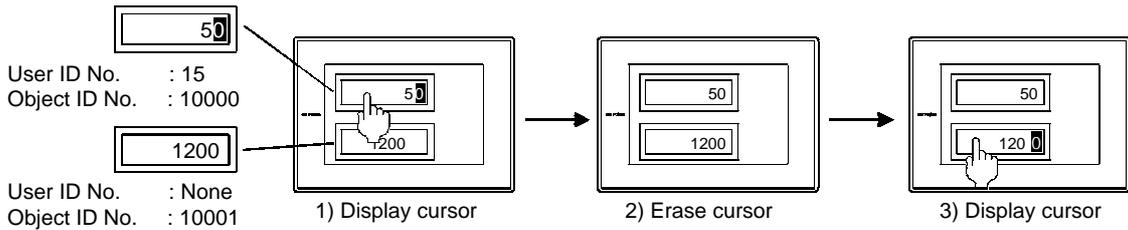
The object information to be written are classified into the following types:

User ID : Can be set to any object.

Set user ID on setting dialog box of each object.

Object ID : Automatically set when setting an object with GT Designer2.

Example: Operation example of cursor display



*1. If a cursor is not displayed when switching screens, "0" will be stored.

*2. The stored user ID and object ID can be held even if a cursor is erased.

*3. If a cursor is displayed at the object (numeric input function, ASCII input function) with a user ID unset, the cursor position numeric value input will be "0".



Deleting the stored user ID and object ID when a cursor is deleted.

Turn ON the GOT internal device (monitor common control: (GS450.b3) to store "0" when a cursor is deleted.

For details of GOT internal devices, refer to the following.

Section 2.6.1 GOT internal devices

Remark

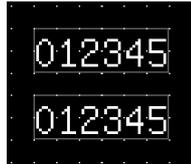
Object ID

Object ID will be set automatically when object is set.
The object ID cannot be changed by user.

(1) Method of confirming object ID

Object ID can be confirmed on the GT Designer2 screen.

Select [Display] → [Option] from the menu to display the object ID on "Preferences" dialog box.



Object ID not displayed



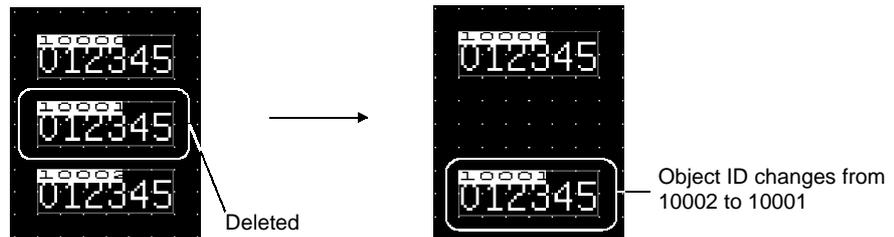
Object ID displayed

For details of the above operation, refer to the following manual.

 GT Designer2 Version1 Operating Manual

(2) Methods of changing object ID

If the arranged object is deleted, the object ID will change automatically.



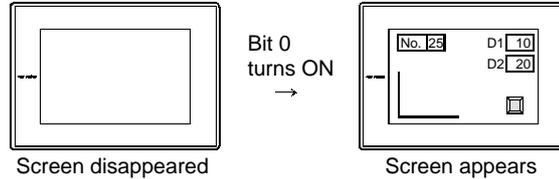
4

Control of Screen Display (for GOT-A900 series only)

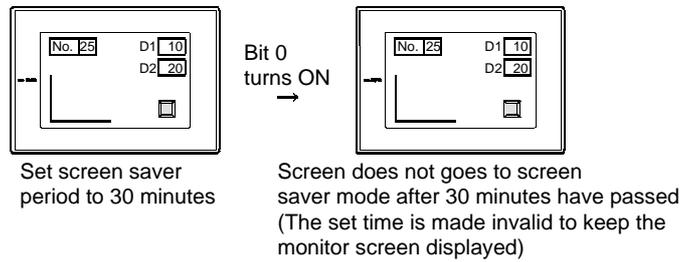
(1) Disable screen saver function

The screen saver function, which is set within the GOT utility, is designed to turn off the screen display if the GOT is not touched within a specified time. This function prevents the screen performance from deteriorating over its operable life. By turning [Automatic screen saver disable signal] ON in the system information, the function that is set within the GOT utility (Setup) is disabled

Example 1) Display the monitor screen erased by automatic screen saver function



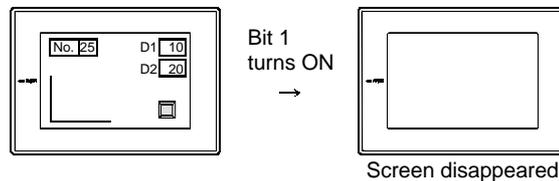
Example 2) Disables screen saver function to start even after the specified period has passed.



(2) Erase screen

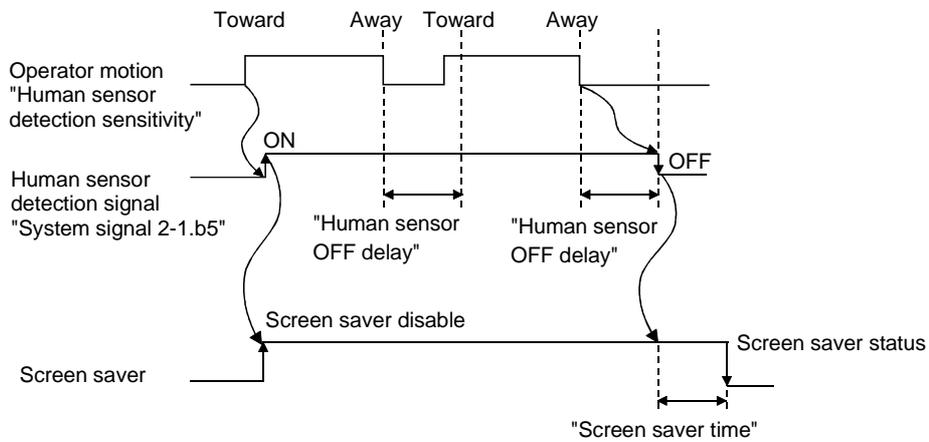
By turning [Forced screen saver enable signal] ON, the displayed monitor screen can be erased. While the bit is ON, monitor screen will not appear even when the GOT screen is touched.

Example: Erase displayed monitor screen



(3) Display control by human sensor (A985GOT only)

The human sensor is a function that disables the screen saver without touching the GOT.
An approach of an operator to the GOT disables the screen saver.



Use the GOT utility to set the human sensor ("Human sensor detection sensitivity", "Human sensor OFF delay", etc.)

Refer to the following manual for the GOT utility.

 GOT-A900 Series Operating Manual (Extended Functions/Option Functions)
(Chapter 4 Operation of Utility Function).

(4) Relationships between various screen saver functions and key input disable signal

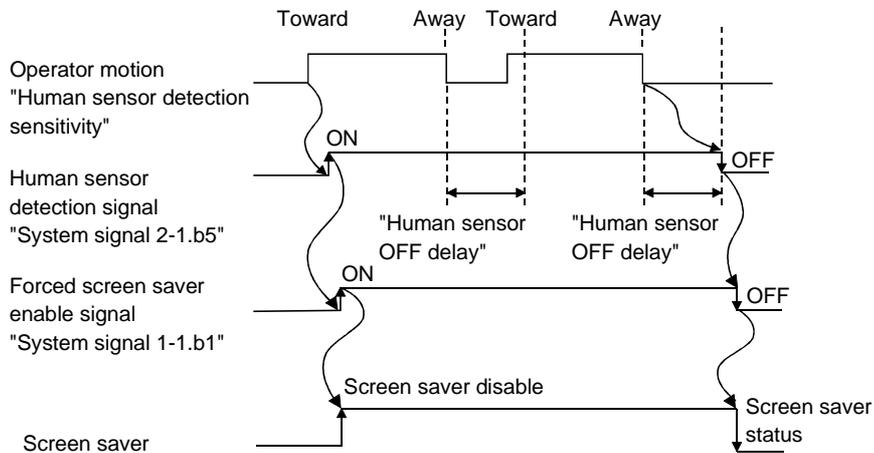
The following table indicates the relationships between various screen saver functions and key input disable signal.

| Forced screen saver signal | Screen saver function | Key input disable signal | Screen status |
|----------------------------|-----------------------|--------------------------|-----------------------------|
| ON | ON/OFF | ON/OFF | Screen being forcibly saved |
| OFF | ON | ON | Key input disabled |
| OFF | OFF | ON | Key input disabled |
| OFF | ON | OFF | Screen being saved |
| OFF | OFF | OFF | Normal display |



To disable the screen saver only when a man's motion is detected.

Screen saver disable by a touch or from outside can be invalidated to disable the screen saver only when a man's motion is detected.



This setting forcibly puts the GOT in a screen saver status after the human sensor OFF delay time has elapsed, independently of the screen saver time.



GOT Screen Control

The following shows the priority among functions that control the screen status (Displayed/ Not displayed):

| Priority | | | |
|----------------|--------------------------------------|---|-----------------------------------|
| Low | | High | |
| Display Screen | Screen Saver Function (Utility) | Screen Saver Disable Signal | Forced Screen Saver Enable Signal |
| | <p>With screen saver function</p> | <p>ON</p> | <p>ON</p> |
| | <p>Without screen saver function</p> | <p>Screen save function of utility is disabled.</p> | |



DANGER

- If the GOT backlight has reached its maximum lifespan, this may cause the mis-operation of touch switch and result in an accident.

When the GOT backlight goes out, the display turns black and causes the monitor screen to appear blank, while the input of touch switches still remain active.

This may confuse an operator in thinking that display is in screen saver mode, who then tries to release the GOT display from this mode by touching the display screen, which may cause a touch switch to operate.

Note that the following occurs on the GOT when the backlight goes out.

- The monitor screen disappears even when the screen saver mode is not set.
- The monitor screen will not come back on by touching the display, even if the GOT is in screen saver mode.

3.5.4 Cautions

This section provides the cautions for using system information

1 Cautions for drawing

Do not use a special register as a read device or write device, as it is an internal device of which specifications are defined within PLC CPU, and cannot be used as a normal internal device for system information.

If a special registered is used as described above, GOT may not operate correctly.

2 Cautions for using system information

Do not write to the device set as a read device directly from PLC CPU.

The data of the write device held within the GOT inside will be overwritten.

However, the GOT ready signal (system signal 2 "b1") can be OFF only when clock data of GOT is updated.

Section 2.4.1 Clock function for monitoring by GOT.

3 Cautions for using external I/O function (for GOT-A900 series only)

(1) Extended Function OS

When using external I/O function, make sure to install the extended function OS (with key input) into GOT.

(2) Required optional device

The following device is required when using the external I/O function:

| GOT | Required device |
|---|-------------------------------|
| A985GOT, A97*GOT, A960GOT, A956WGOT, A95*GOT | External I/O interface module |

For details of external I/O interface module, refer to the following:

- For specification and performance of external I/O interface module

 External I/O Interface Module User's Manual

- For connection of external I/O interface module

 GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual)

3.6 Print Format Setting



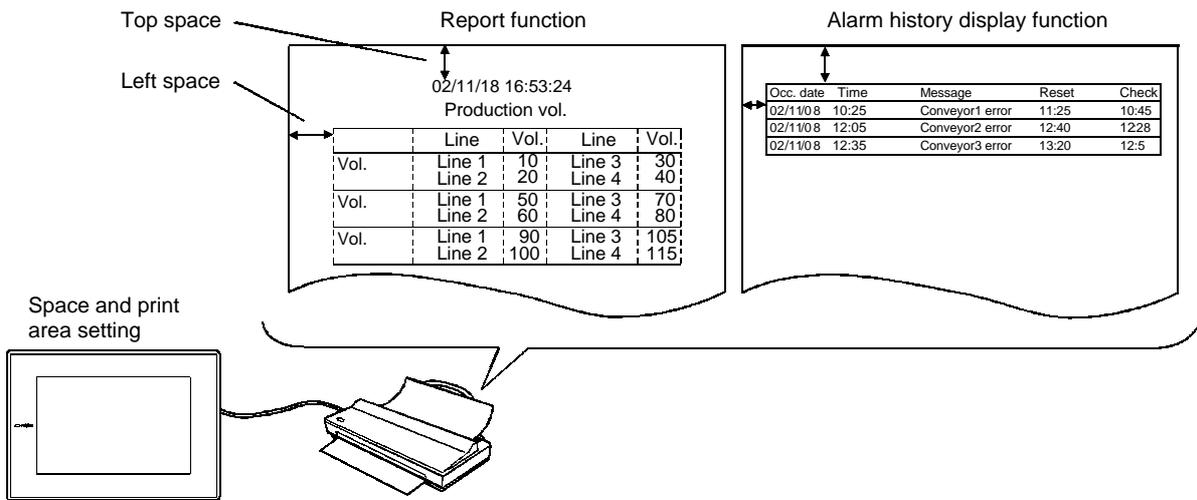
Set the format for printing with alarm history display function or report function.

This setting is common to print (common) tag of alarm history display function and report function.

(With this setting, the same settings are updated on print (common) tag of alarm history display function and report function automatically.)

Section 5.14 Alarm History

Section 5.34 Report Function



3.6.1 Settings

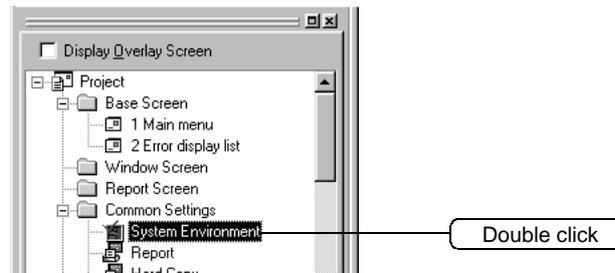
- 1 Select [Common Settings] → [System Environment] in the menu.
- 2 When "System Environment" dialog box appears, double click on [Print Format] .
- 3 As the setting dialog box appears, make the settings with reference to the following explanation:



Remark

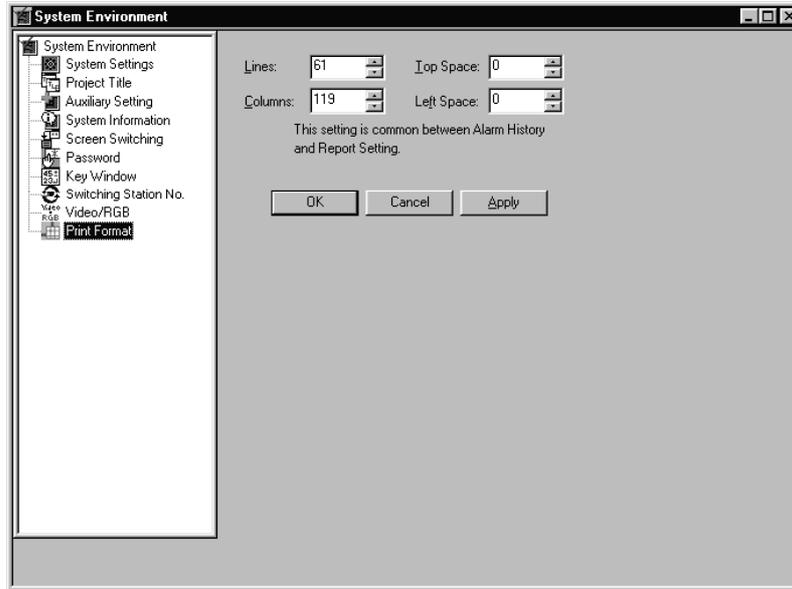
When setting in project workspace

Double click on [System Environment] , and "System Environment" dialog box appears, then double click on [Print Format]



3.6.2 Setting items

Set print format.



| Item | Description | A | F |
|------------|--|---|---|
| Lines | <p>Set the number of lines (1 to 127) and number of columns (1 to 255) to be printed in one page; number of lines (0 to 31) for the top space and number of columns (0 to 254) for the left space in printout diagram.</p> | | |
| Columns | | ○ | × |
| Top Space | | | |
| Left Space | | | |

Remark

Column number is different according to the character

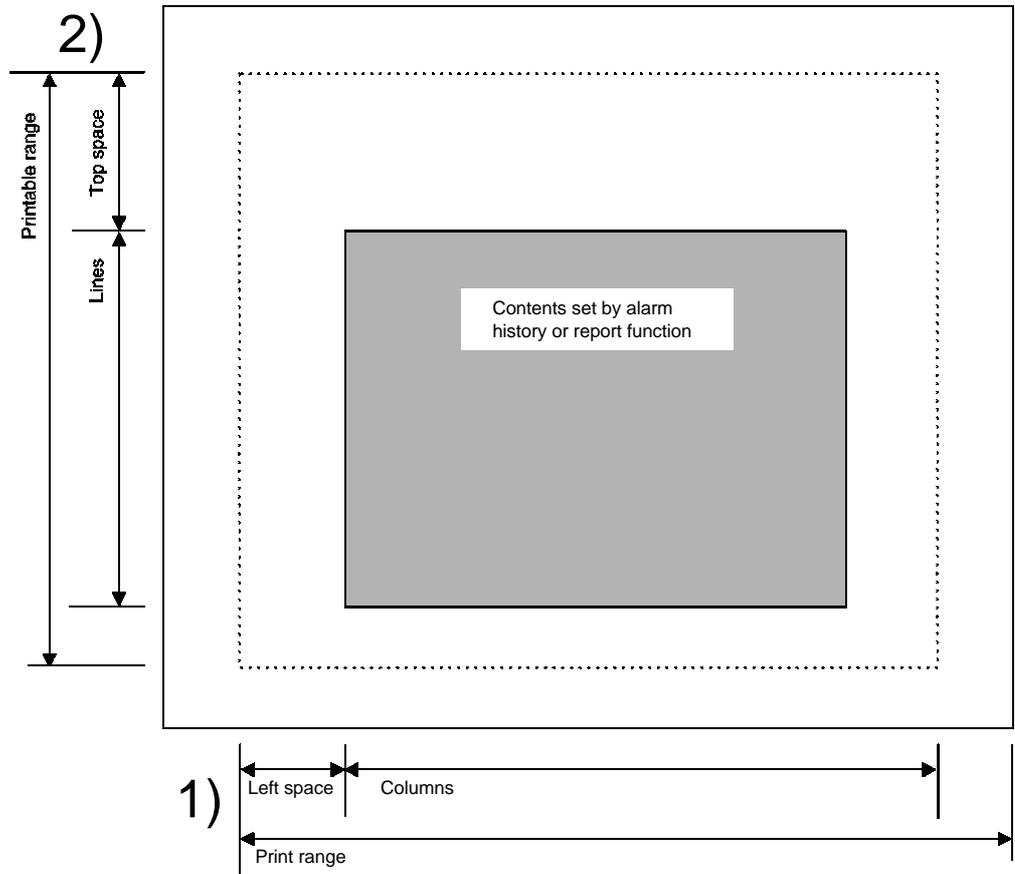
For both alarm history display function and report function, one character occupies one column.

3.6.3 Cautions

1 Cautions for drawing

(1) Setting precautions

- (a) Print format setting is common to alarm history display function and report function.
The settings will be updated on print (common) tag of alarm history display function and report function.
- (b) Report screen size will be automatically adjusted according to the print format settings.
- (c) Set print format according to the printable area. (Set "Printable Range" > top space + lines or left space + columns.)
Print format settings can be calculated as explains below.



- 1) When finding the maximum setting value (width) of columns + left space

$$(\text{Width of printable range for printer [mm]} / 25.4) \times 15$$

Example) When width of printable range for printer is "204mm"

$$204 / 25.4 \times 15 = 120.47 \dots$$

In GOT print format setting, set [Columns] + [Left space] within 120.

- 2) When finding the maximum value (length) of lines + top space
(Length of printable range for printer * [mm]) / 4.23

Example) When length of printable range for printer is "280mm"
 $280 / 4.23 = 66.19\dots$

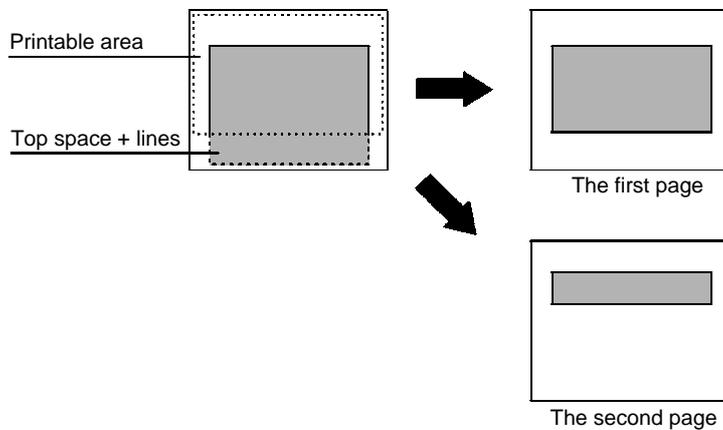
In GOT print format setting, set [Lines] + [Top space] within 66.

The printable range for printer differs depending on the printer in use.
For details of specifications, refer to the instructions of the printer.

Remark

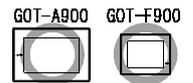
When top space + lines is out of printable range

If top space + lines is out of printable range, the excess lines will be printed on the next page.



4. Preparatory Operation for Object Setting

4.1 Comment Registration

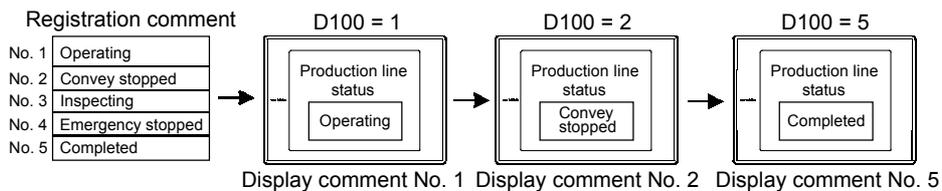


4.1.1 Required knowledge for comment registration

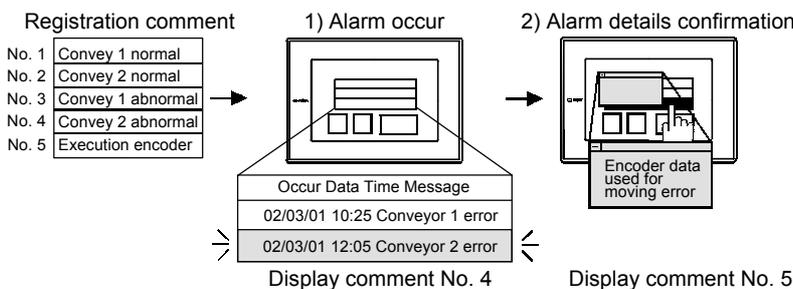
1 Comment

It is the displayed comment contents registered in multiple object function.

- (1) Display a comment with comment display function (👉 Section 5.12 Comment Display)
 Display the comment with the comment No. corresponding to the value of monitor device.



- (2) Display a comment with the alarm history function (👉 Section 5.14 Alarm History)
 Display the detailed comments of the alarm occurrence history.



2 The object function using the comment

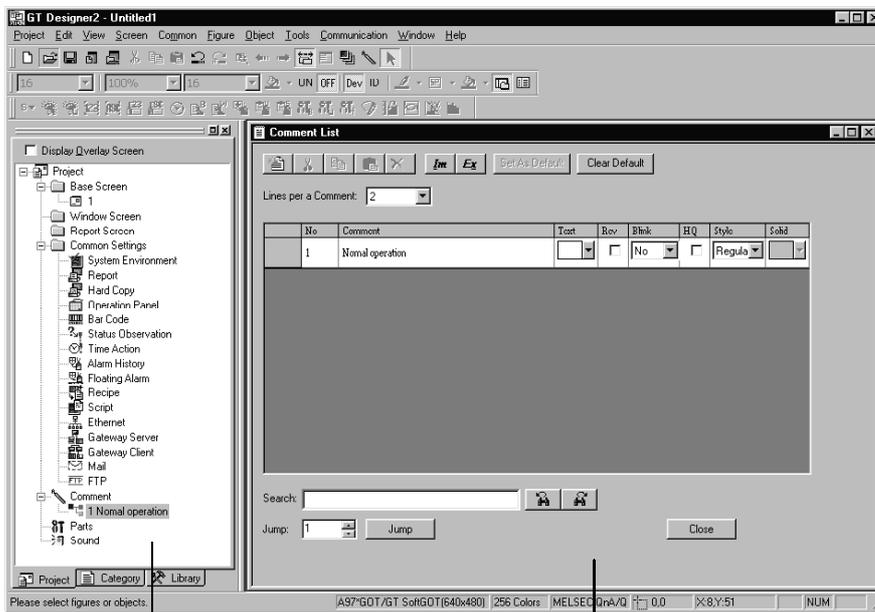
The object functions using the comment are as follows:

- Comment display ● Data list
☞ Section 5.12 Comment Display ☞ Section 5.9 Data List
- Alarm list (User alarm) ● Floating alarm
☞ Section 5.13 Alarm List ☞ Section 5.15 Floating Alarm
- Touch switch function ● Report function
☞ Section 5.27 Touch Switch ☞ Section 5.34 Report Function

3 Comment registration screen

Comments can be registered and edited in the following 2 types of screens.

4



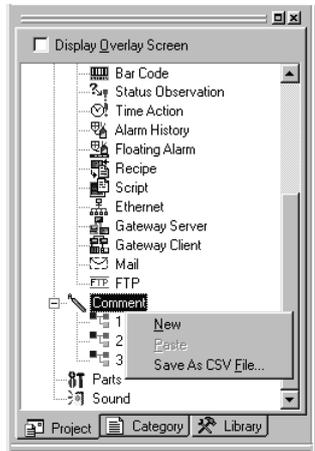
[Project workspace]
It is very convenient to edit and register comments when confirming the overall setting of the project.

Comment list dialog box
All setting relating to comments is carried out on 1 screen. It is very convenient to complete and edit new comments.

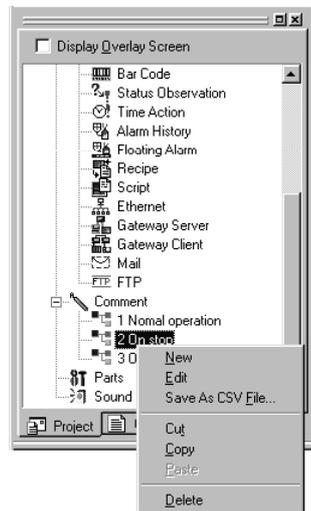
4.1.2 Basic operation for comment registration

1 Basic operation of project workspace

Select the object that carries out operation and right click it, select setting items.
The displayed items will differ according to different selected objects.



Right click when [Comment] is selected



Right click when a registered comment is selected

| Items | Description | A | F |
|--------------------------|--|-----------------------|-----------------------|
| New Comment | Add a new comment. | <input type="radio"/> | <input type="radio"/> |
| Edit | Edit the selected comment. | <input type="radio"/> | <input type="radio"/> |
| Saved in CSV File Format | Save the comment in text file/CSV file format. | <input type="radio"/> | <input type="radio"/> |
| Cut | Cut the selected comment. | <input type="radio"/> | <input type="radio"/> |
| Copy | Copy the selected comment. | <input type="radio"/> | <input type="radio"/> |
| Paste | Paste the copied or cut comment. | <input type="radio"/> | <input type="radio"/> |
| Delete | Delete the selected comment. | <input type="radio"/> | <input type="radio"/> |



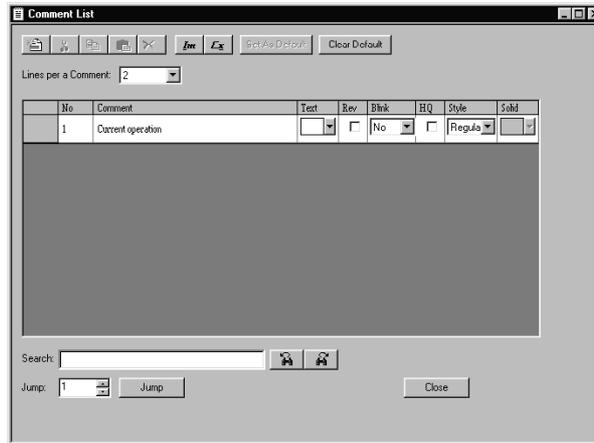
Remark

Comment display of project workspace

In project workspace, only the first line of the comment will be displayed.

2 Basic operation of comment list dialog box

Select [Common Setting] → [Comment Write] from the menu to display the following screen.



| Items | | Description | A | F |
|-----------------------|-------------------|---|-----------------------|--------------------------|
| | [New Comment] | Add a new comment. | <input type="radio"/> | <input type="radio"/> |
| | [Cut] | Cut the selected comment. | <input type="radio"/> | <input type="radio"/> |
| | [Copy] | Copy the selected comment. | <input type="radio"/> | <input type="radio"/> |
| | [Paste] | Paste the copied or cut comment. | <input type="radio"/> | <input type="radio"/> |
| | [Delete] | Delete the selected comment. | <input type="radio"/> | <input type="radio"/> |
| | [Input] | Read text files and CSV files as the comment. | <input type="radio"/> | <input type="radio"/> |
| | [Output] | Write a comment in text file and CSV file format. | <input type="radio"/> | <input type="radio"/> |
| Set as Default | | Set the display attribute of present set comment as default. | <input type="radio"/> | <input type="radio"/> |
| Clear Default | | Clear default of the display attribute of set comment | <input type="radio"/> | <input type="radio"/> |
| Comment Display Rows | | Specify the rows displayed by [Comment] in comment registration list. (Specify the height of comment area) | <input type="radio"/> | <input type="radio"/> |
| Comment Register List | Comment No. | Display the comment No. | <input type="radio"/> | <input type="radio"/> |
| | Comment | Input the comment contents. | <input type="radio"/> | <input type="radio"/> |
| | Text | Select the display color of comment. | <input type="radio"/> | <input type="radio"/> |
| | Flip | Check comment's flip display. | <input type="radio"/> | <input type="checkbox"/> |
| | Blink | Select comment's blink display (None/Low speed/Middle speed/High speed). | <input type="radio"/> | <input type="checkbox"/> |
| | High Quality Font | Check comment's high quality font display. | <input type="radio"/> | <input type="checkbox"/> |
| | Style | Select the style to display comment.  Standard Thick Solid Carve | <input type="radio"/> | <input type="checkbox"/> |
| | Solid | Select the solid color from Solid/Carve in [Style]. | <input type="radio"/> | <input type="checkbox"/> |
| Search | | After inputting the text to be searched, click on [Forward Search] button and [Backward Search] button, comment will be searched according to input text. | <input type="radio"/> | <input type="radio"/> |
| Jump | | After selecting the comment No. to be displayed, click on <u>J</u> ump button, specified comment will be displayed. | <input type="radio"/> | <input type="radio"/> |
| Close | | Close comment list dialog box. | <input type="radio"/> | <input type="radio"/> |

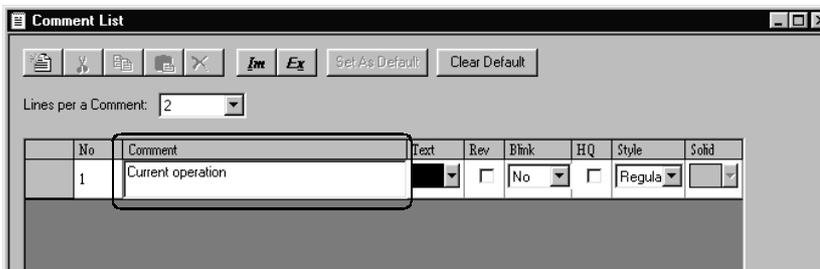
4.1.3 Registering a comment

Register the display comment in object function.

- 1 Click on the comment area of the register comment No.



- 2 Input the comment to 「Comment」 text box.

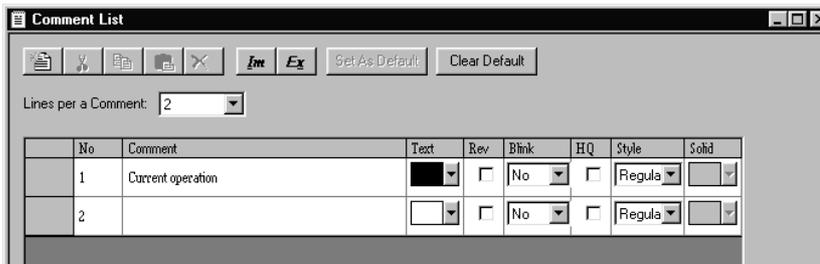


- 3 Set the display attribute of the comment

| No | Comment | Text | Rev | Blink | HQ | Style | Solid |
|----|-------------------|------|--------------------------|-------|--------------------------|--------|-------|
| 1 | Current operation | █ | <input type="checkbox"/> | No | <input type="checkbox"/> | Regula | |

When the style is set as [solid/carve], select [Solid Color].
 Text display format (Standard/Thick/Solid/Carve)
 Use/not use high quality text display
 Blink display of the comment
 (None/Low speed/Middle speed/High speed)
 Forward display/not forward display
 Text color

- 4 Click on  「New Comment」 after the comment registration, the following comment area will be displayed.

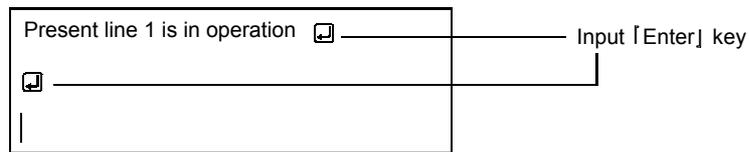


- 5 When the comment registration is completed, click on **Close** button.

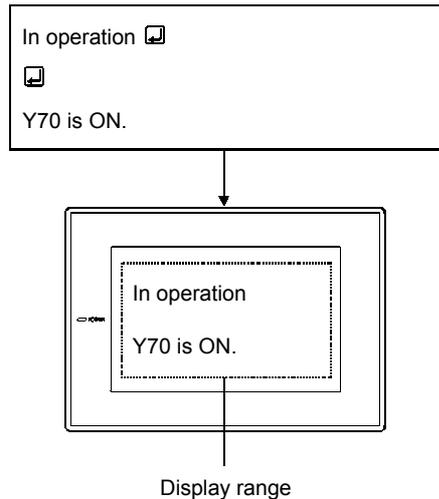
Remark

(1) Create multiple row comment

(a) When changing to another row, input [Enter] key at the end of the row.



(b) When writing multiple row comment, GOT will be displayed as follows:



(2) Create a comment by keyboard

This section explains how to create a comment by keyboard.

As a cursor can move within a comment list dialog box by using keys as shown below, mouse is not needed. (To add a comment No., press **Alt** and **N** key at the same time.)

(a) When a cell is selected

- **Alt** +  key: Moves right one cell.
- **Alt** +  key: Moves left one cell.
- **Alt** +  key: Moves up one cell.
- **Alt** +  key: Moves down one cell

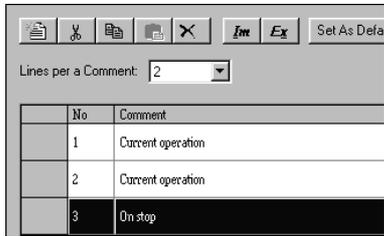
(b) When a line is selected

- **Alt** +  key: Moves to the comment cell in the line.
- **Alt** +  key: Moves to the comment cell in the line.
- **Alt** +  key: Moves up to the comment cell in the above line.
- **Alt** +  key: Moves down to the comment cell in the below line.

4.1.4 Copying the registered comments

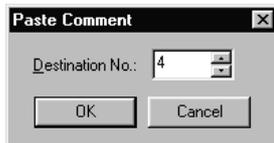
Copy the registered comment as other comment No.

- 1 Select the comment to be copied.

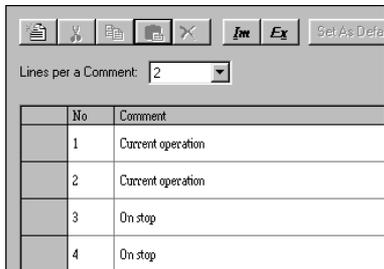


- 2 Click on  [Copy] button, then click on  [Paste] button.

- 3 Paste comment dialog box is displayed.
Set No. for the copied comment, and click on  button.



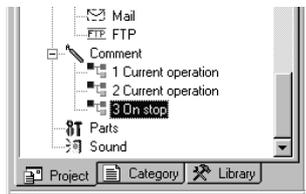
- 4 The selected comment is copied.



Remark

When operating in project workspace

When copy the comment in the project workspace, select the comment and carry out the following operations.

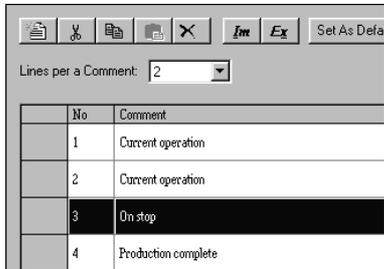


- 1 Right click, and select [Copy] from the menu.
- 2 Right click again, and select [Paste] from the menu.
- 3 Input the No. of the copied comment, and click on  button.

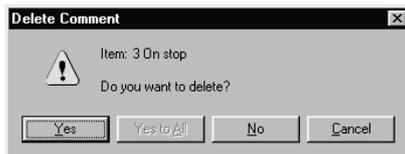
4.1.5 Deleting the registered comments

Delete registered comments.

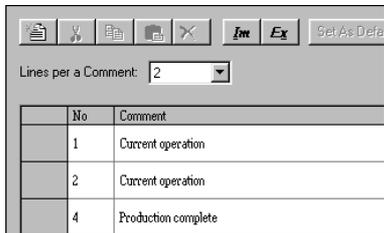
- 1 Select the comment to be deleted.



- 2 Click on  [Delete] button.
- 3 Click on **Yes** button when comment delete dialog box is displayed.



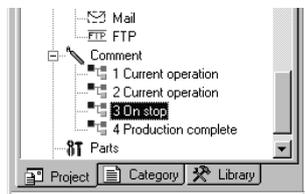
- 4 The selected comment is deleted.



Remark

In the case of operating in project workspace

When deleting comment in project workspace, select the comment and carry out the following operation.

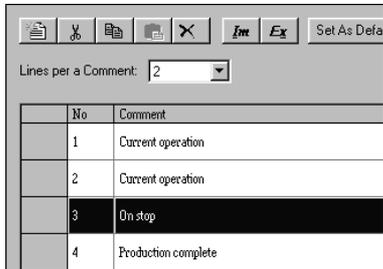


- 1 Right click, and select menu [Delete].
- 2 Click on **Yes** button when the comment delete dialog box is displayed.

4.1.6 Changing the registered comment's settings

Change comment contents, comment No. and the display attribute of registered comment.

- 1 Select the comment whose setting is to be changed.



- 2 Change the items of comment.

| No | Comment | Text | Rev | Blink | HQ | Style | Solid |
|----|---------|------|--------------------------|-------|--------------------------|--------|-------|
| 1 | | █ | <input type="checkbox"/> | No | <input type="checkbox"/> | Regula | █ |

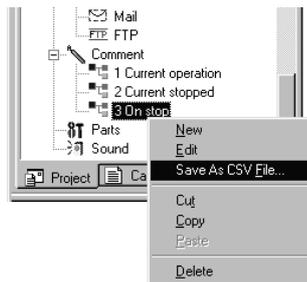
When style is set to [solid/carve], select [Solid Color]
 Display format of font (Standard/Thick/Solid/Carve)
 Display with/without high quality font
 Blink display of comment
 Reverse/without reverse
 Text color
 Comment contents
 Comment No.

- 3 When the comment setting is changed, click on [Close] button.

Remark

When operating in project workspace

When changing the comment setting in project workspace, select the comment and carry out the following operations.

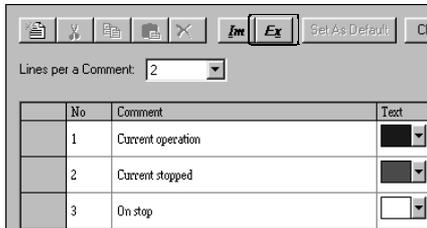


- 1 Right click to select [Edit] from the menu.
- 2 When a comment list dialog box is displayed, change the comment setting.

1 Save comment as file (Export)

The registered comment is saved as text file/Unicode text file/CSV file.

1 Click on  [Export] button.



2 The [File Name Assign/Save] dialog box is displayed.



Select a file type from [File Type]. (txt: Text file/Unicode text file, CSV: CSV file)
Input file names and select the save positions, then click on  button.

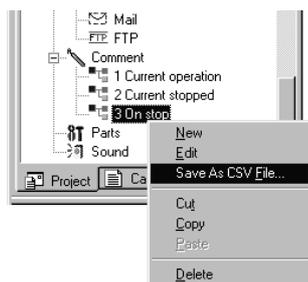
3 When the comment is written, click on  button.



Remark

When operating in project workspace

When comment is to be saved as a file in project workspace, please operate as follows:



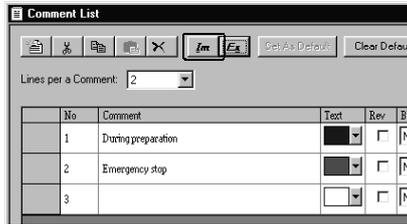
1 Right click to select [Save in CSV File Format] from the menu.

2 Write comments in the [File Name Assign/ Save] dialog box.

2 Read text file/Unicode text file/CSV file (Input)

Read the text file/Unicode text file/CSV file as comment.

1 Click on  [Input] button.



2 Display the dialog box to open filed.



Select the file type from [File Type]. (txt: Text file/Unicode text file, CSV: CSV file)

Select the file to be read and click on [Open] button.

3 When the comment is registered, [Overwrite Confirmation] dialog box will be displayed, click on **Yes** button.



4 When the comment is read, click on **Close** button.

4.1.8 Editing the comment as text/csv file

The following explains how to edit the comment saved in Text/CSV file.

1 Text file

The comment saved/read as text file is edited with following text editor.



- 1 Before the comment is input, input [/] key of SBC case, [/] key, comment No. and [Register] key first.



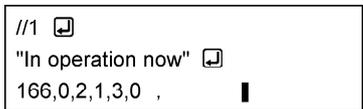
- 2 Input comment.

Input ["] key of SBC case at both the beginning and end of comment, and then input [,] key, and at last input [Register] key.

No matter the comment text is in SBC case or in DBC case, write within the range of 1 to 512.



- 3 Set the comment attribute



Please input in SBC case completely



- Solid color (Set it same with text color No.)
- Style (0: Standard 1: Thick 2: Solid 3: Carve)
- Use/not use high quality font (0: Use 1: Not use)
- Blink (0: None 1: Low speed 2: Middle speed 3: High speed)
- Flip/not flip (0: None 1: Yes)

Text No.

| | | | | | |
|-----------------|------------------|-----------------|-------------------|--------------|-------------------|
| 255 : White | 109 : Dark white | 0 : Black | 182 : Gray | 3 : Blue | 2 : Dark blue |
| 224 : Red | 160 : Dark red | 227 : Purple | 162 : Dark purple | 28 : Green | 20 : Dark green |
| 31 : Light blue | 22 : Dark blue | 31 : Light blue | 22 : Dark blue | 252 : Yellow | 180 : Dark yellow |

Please confirm corresponding No. of the color not listed above in text list by selecting [Other Colors] from [Text] IN [Comment List] dialog box.



- (1) Cautions when saving file

The edited file must be saved in text file (*.TXT) format.

- (2) Cautions when inputting comment

Do not input a double quotation ("), comma (,) and return mark () in that order consecutively, as the comment may not be correctly imported.

If they are already input in that way, modify the comment in text file, and then import it again.

Remark

When writing comment with multiple lines

When writing a comment with multiple lines, input [Register] key at the end of line.
When spacing one line, input [Register] key at the line.

```
//1
"In operation now
Y70 is ON"
```

By //1, [Register] key input is processed as one comment.
Comment No.

```
//1
"In operation now
Y70 is ON"
X30 is ON
250, 0, 0, 1, 1,
//2
"In stop now"
150, 1, 3, 1, 1,
//3
"Operation start",
101, 0, 1, 0, 1,
```

Process as comment No. 1

Process as comment No. 2

Process as comment No. 3

2 CSV format file

The comment saved/ read as CSV format file is edited as follows:

(1) When editing with spreadsheet software and so on

When editing with spreadsheet software and so on, write each setting items as follows:
(Following is an example using Microsoft® Excel.)

| | A | B | C | D | E | F | G | H |
|---|---|--------------------|-------|---------|-------|---------|--------|-------|
| 1 | 1 | During preparation | Color | Reverse | Blink | HQ Font | Style | Solid |
| 2 | 2 | Emergency stop | Blue | Normal | No | No | Normal | |
| 3 | 3 | Power supply check | Red | Normal | No | No | Normal | |

- Solid color (Set it same with text color No.)
- Style (0: Standard 1: Thick 2: Solid 3: Carve)
- High quality font (with/ without)
- Blink (None/ Low speed / Middle speed/ High speed)
- Flip (with/without)
- Text name and No.
(White, dark white, gray, dark blue, red, dark red, purple, dark purple, green, dark green, light blue, dark blue, yellow, dark yellow)
Please confirm corresponding No. of the color not listed above in text list by selecting [Other Colors] from [Text] IN [Comment List] dialog box.
- Comment text
- Comment No.

(2) When editing with text editor and so on

The configuration of the comment data saved in CSV file format under text is as follows.

Specify character string with (" ").

| | |
|----|---|
| | , Color, Flip, Blink, High quality font, Style, Solid color |
| 1, | "During operation preparation", Blue, No, No, Yes, Standard |
| 2, | "Line A, supply stops", Red, No, No, Yes, Solid, Red |

The whole paragraph is divided into 7 fields with 6 comas

Added when style is [Solid]or [Carve].

Coma (,) in the character string is recognized as text.

| Comment |
|---------------------|
| Line A, supply stop |

Point

Cautions for file saving

Edited file must be saved in CSV file format (*.csv).

Remark

When the display attribute of comment cannot be read

When coma number and position in csv file don't match, the display attribute of comment cannot be read.

When reading, please confirm the coma number and position.

3 Unicode text file

Store the comment as unicode text file and edit the comment read by GT Designer2 as follows.

Specify character string with (" ").

| | |
|---|--|
| | → Color → Flip → Blink → High quality font → Style → Solid color |
| 1 | → "During operation preparation" → Blue → No → No → Yes → Standard |
| 2 | → "Line A, supply stops" → Red → No → No → Yes → Solid → Red |

The whole paragraph is divided into 7 fields with 6 Tab.

Added when style is [Solid]or [Carve].

Tab (→) cannot be inserted in the character string.

Point

(1) Display language

Comment text is displayed in various languages that have been input by user. The attribute (color, flip and blink etc.) is displayed in Japanese.

(2) Cautions for storage files

Make sure to save the edited file in unicode text file (*.TXT) format.

(3) Unicode text-compatible code

This code is Unicode (file format: UTF16 LittleEndian).

(4) Unicode version

The text supported by the unicode version 1.1 or above cannot be displayed in GT Designer2.

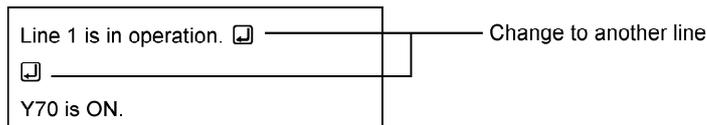
4.1.9 Cautions for comment registration

1 Comment's maximum number of entries

In GOT-A900 Series, up to 32767 types can be registered.
 In GOT-F900 Series, maximally 10000 types can be entered.

2 Maximum number of characters can be registered in one comment

No matter in DBC case or in SBC case, 1 to 512 characters can be written.
 When changing to another line, 2 characters are occupied.



3 Character size of comment displaying

The displayed character size of comment is set in the dialog box of each object setting.

4 Display attribute of comment

Depending on different comment display object functions, the items cannot be displayed may exist in the set display attribute in comment.

For the restriction of each object function's comment, please refer to the explanation page of each object function.

| Object function | Display attribute |
|--------------------------------|--|
| Alarm list display function | "Blink" cannot be displayed. |
| Alarm history display function | In GOT-A900 Series, "Blink" and "Flip" cannot be displayed. In GOT-F900 Series, "Blink", "Flip" and "Text" cannot be displayed. |
| Floating alarm function | "Blink", "Flip" and "High quality font" cannot be displayed. |
| Comment display function | Depending on different object functions, other display attribute can be used instead of the display attribute set in comment to display. |
| Touch switch function | |

4.2 Parts Registration



4.2.1 Required knowledge for parts registration

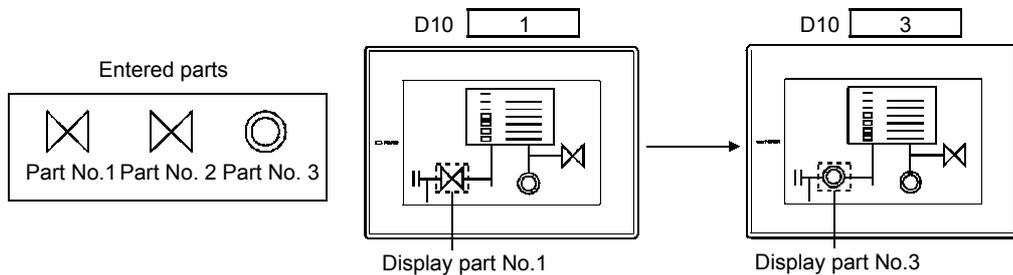
1 Parts

Register user-created figure as parts.

The registered figure can be displayed as parts by part display function and parts movement function.

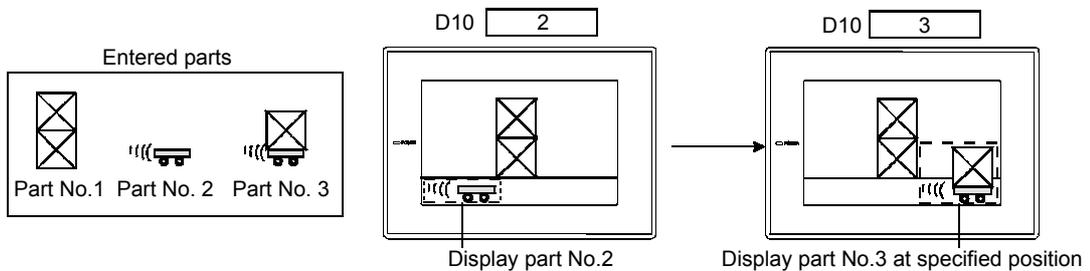
- (1) Use parts display function (👉 Section 5.16 Parts Display)

The Figure of multiple types can be displayed by changing monitor device value.



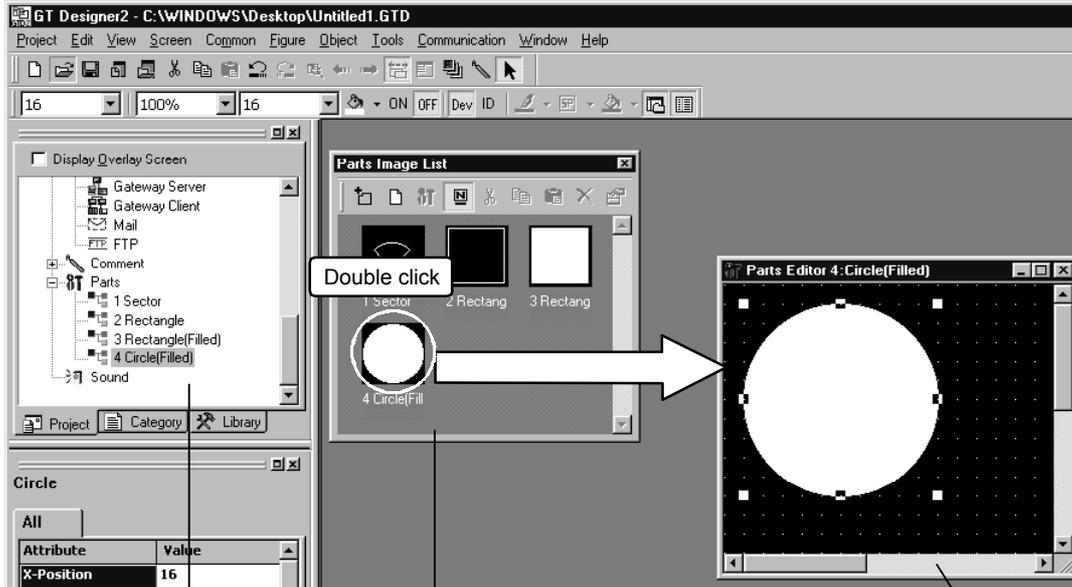
- (2) Use the parts movement display (👉 Section 5.17 Parts Movement) (for GOT-A900 Series only)

By changing the monitor device value, multiple types of figures position can be displayed while they are being changed.



2 Parts registration execution screen

The parts registration executes registration and read operation etc. in the following screen.



[Project Workspace]
Convenient for project's
general setting
confirmation, parts entry
and parts correction.

[Parts Image Display]
Display image of parts.
Convenient for parts image
confirmation, parts entry and
parts correction.

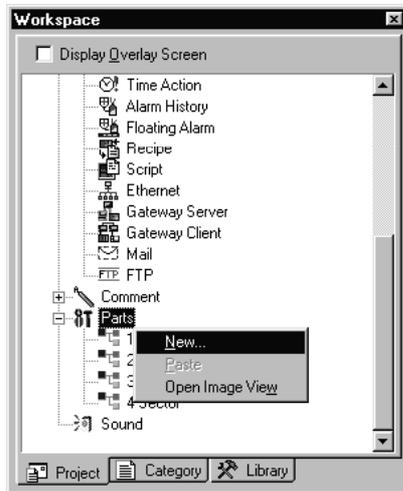
[Parts Editor]
Simple edit for the
parts entered with
dedicated editor can
be executed.

4.2.2 Basic operation for parts registration

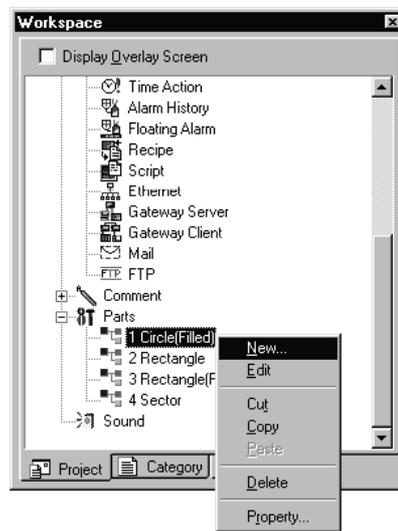
1 Basic operation of project workspace

Select an operation execution object and right click it to select setting items.

Owing to the difference of selected objects, the displayed items will be different.



Right click when select [Parts]

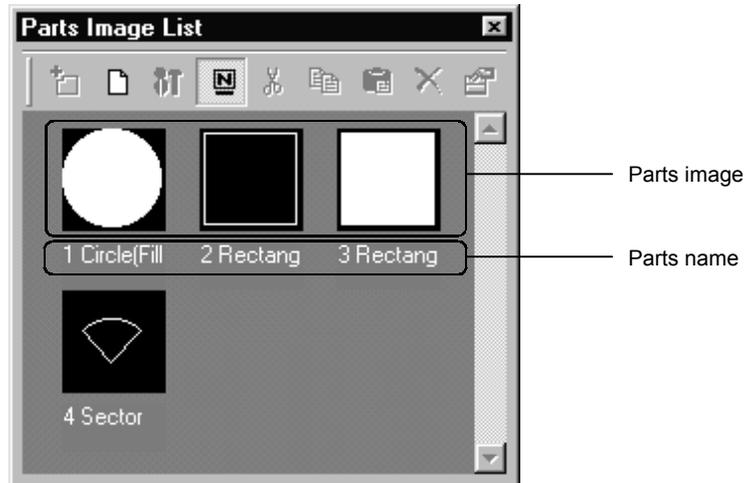


Right click when select parts name

| Items | Description | A | F |
|---------------|--|-----------------------|-----------------------|
| New | Register a new part. | <input type="radio"/> | <input type="radio"/> |
| Edit | The selected parts can be edited/corrected on parts editor screen. | <input type="radio"/> | <input type="radio"/> |
| Cut | Cut the selected parts. | <input type="radio"/> | <input type="radio"/> |
| Copy | Copy selected parts. | <input type="radio"/> | <input type="radio"/> |
| Paste | Paste the copied or cut parts. | <input type="radio"/> | <input type="radio"/> |
| Delete | Delete the selected parts. | <input type="radio"/> | <input type="radio"/> |
| Property | Change [Parts No.] and [Parts Name] of the selected parts. | <input type="radio"/> | <input type="radio"/> |
| Image Display | Display the parts image in [Parts Image Display] dialog box. | <input type="radio"/> | <input type="radio"/> |

2 Basic operation of parts image display dialog box

Select [Common Settings] → [Parts] from the menu for displaying.

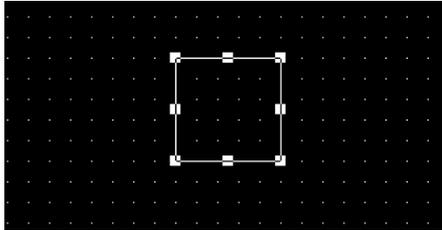


| Items | Description | A | F |
|--|--|-----------------------|-----------------------|
|  [Register] | Register selected figure to parts. | <input type="radio"/> | <input type="radio"/> |
|  [New Parts] | Register a new part. | <input type="radio"/> | <input type="radio"/> |
|  [Edit] | Correct the contents of registered parts. | <input type="radio"/> | <input type="radio"/> |
|  [Name] | Switch display/not display parts name. | <input type="radio"/> | <input type="radio"/> |
|  [Cut] | Cut the selected parts. | <input type="radio"/> | <input type="radio"/> |
|  [Copy] | Copy the selected parts. | <input type="radio"/> | <input type="radio"/> |
|  [Paste] | Paste the copied or cut parts. | <input type="radio"/> | <input type="radio"/> |
|  [Delete] | Delete the selected parts. | <input type="radio"/> | <input type="radio"/> |
|  [Property] | Change [Parts No.] and [Parts Name] of the selected parts. | <input type="radio"/> | <input type="radio"/> |

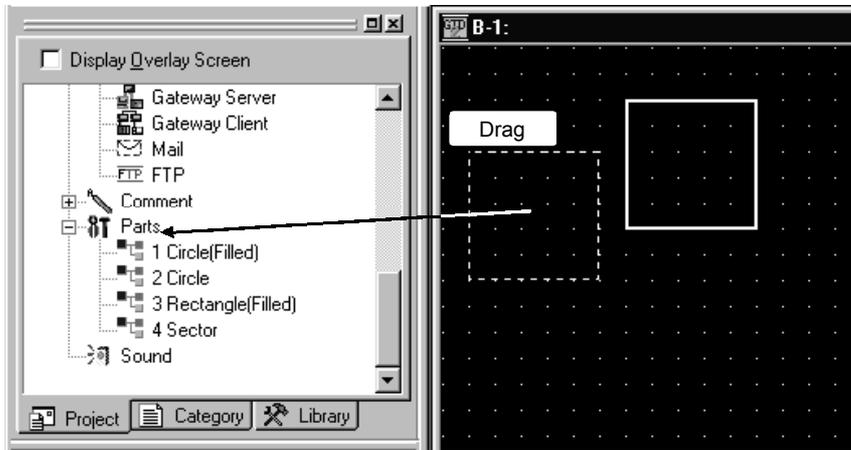
4.2.3 Registering parts

Register the parts displayed by parts display function and parts movement display function.

- 1 Select the figure to be registered.

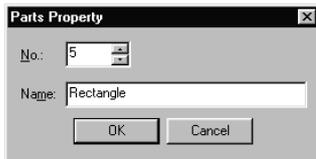


- 2 Drag the figure to be registered to the parts in project workspace.

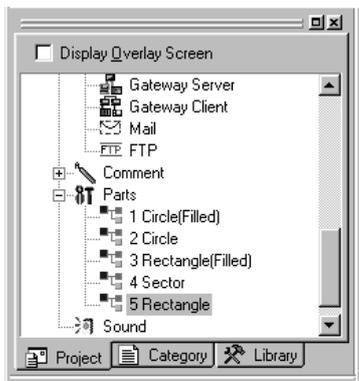


- 3 Display parts property dialog box.

Input No. and the name of the parts to be registered, and click on **OK** button.



- 4 The registration is completed.

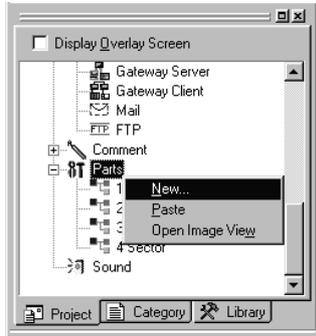


Project workspace

Remark

- (1) When registering parts with the parts editor
The figure registered as parts can be created with parts editor.

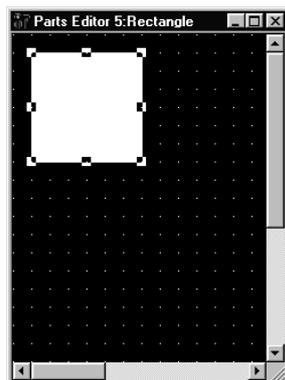
- 1 Right click to select [New Parts] from the menu.



- 2 The parts property dialog box is displayed.

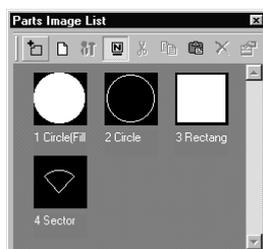
Input No. and the name of the parts to be registered, and click on button.

- 3 When the parts editor is displayed, draw the figure as parts when figure is drawn, then close parts editor.



- (2) When registering parts in parts image dialog box

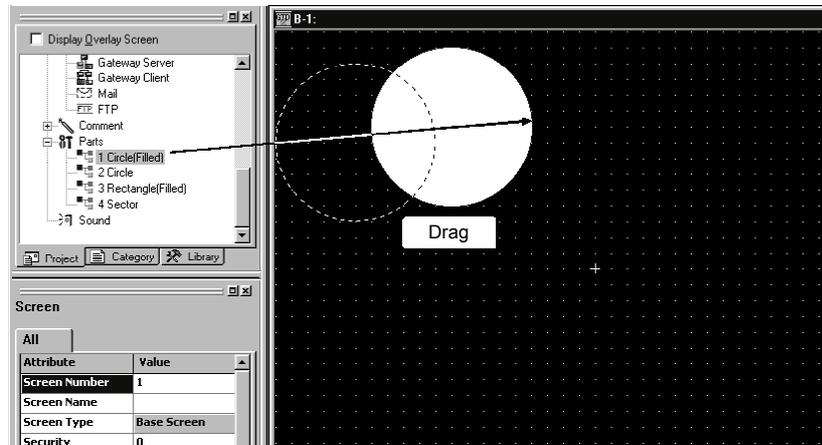
When registering parts in parts image dialog box, select the figure to be registered and operate as follows.



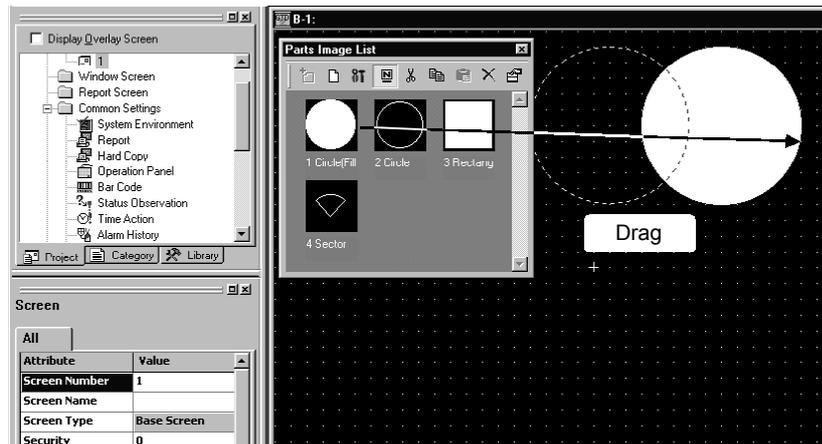
- 1 Click on [Register] button.

- 2 When the parts property dialog box is displayed, input No. and the names of the parts to be registered, and click on button.

- (3) Paste the figure registered in parts to the screen
- Select the parts to be read, and drag it to drawing screen.
- Paste from the project workspace



- Paste from the parts image display dialog box



The figure can be registered as parts

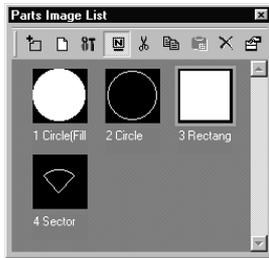
The bitmap file (*.BMP) data input as a figure can be registered by the same procedure with that of figure.

☞ GT Designer2 Version1 Operating Manual

4.2.4 Copying the registered parts

Copy the registered parts to other part No.

- 1 Select the parts to be copied.



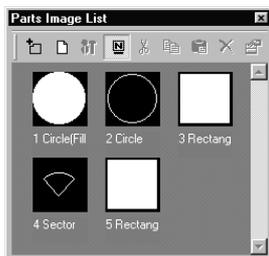
- 2 Click on  [Copy] button, then click on  [Paste] button.

- 3 Parts property dialog box is displayed.

Set the destination parts No. and parts name, and click on **OK** button.



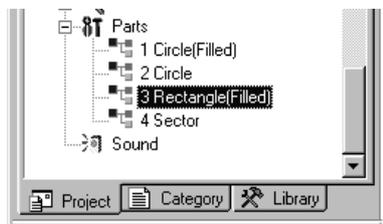
- 4 Copy the selected parts.



Remark

When operating in the project workspace

When copying in the project workspace, select the parts and operate them as follows.

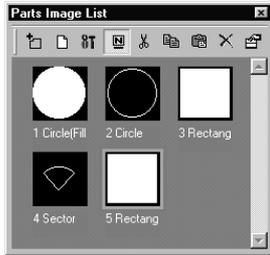


- 1 Right click, and select [Copy] from the menu.
- 2 Right click again, and select [Paste] from the menu.
- 3 Input the destination parts No. and names.

4.2.5 Deleting the registered parts

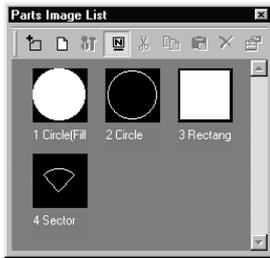
Delete the registered parts.

- 1 Select the parts to be deleted.



- 2 Click on  [Cut] button.

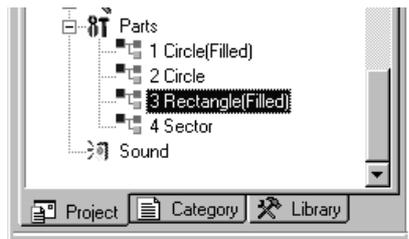
- 3 Delete the selected parts.



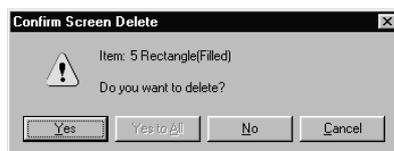
Remark

When operating in the project workspace

When deleting parts in the project workspace, select the parts and operate them as follows.



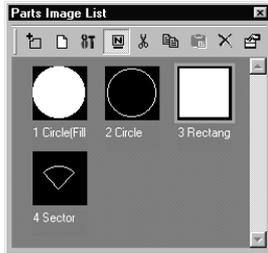
- 1 Right click, and select [Delete] from the menu.
- 2 When the parts delete confirmation dialog box is displayed, click on [Yes] button.



4.2.6 Changing the registered parts settings

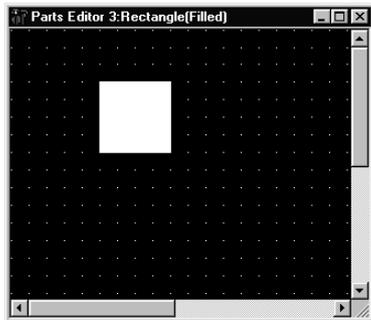
Edit the registered parts.

- 1 Select the parts to be edited.



- 2 Click on  [Edit] button. (The parts can be double-clicked too.)

- 3 When the parts editor screen is displayed, edit the parts.

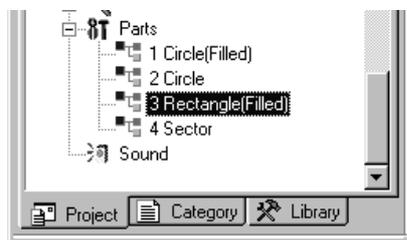


- 4 When parts edit is completed, close the screen.
(Click on [×] button at the top-right of screen.)

Remark

When operating in the project workspace

When editing parts in the project workspace, select the parts and operate them as follows.

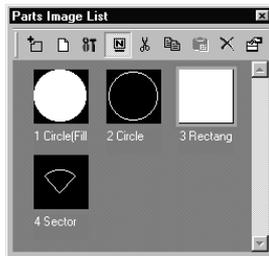


- 1 Right click, and select [Edit] from the menu. (It can be double-clicked too.)
- 2 When the parts editor screen is displayed, edit the parts.

4.2.7 Changing property of the registered parts

Change the No. and name of registered parts.

- 1 Select the parts whose property is to be changed.



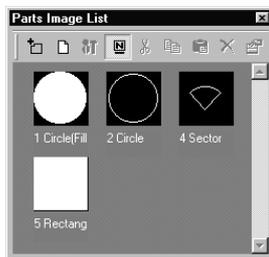
- 2 Right click the mouse, and select [Property] menu.

- 3 The parts property dialog box is displayed.

Input the parts No. and name to be changed, and click on **OK** button.



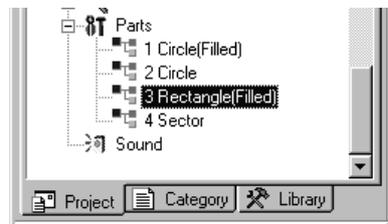
- 4 Change the property of selected parts.



Remark

When operating in the project workspace

When changing parts property in the project workspace, select the parts and operate them as follows.



- 1 Right click to select [Property] from the menu.
- 2 In the parts property dialog box, set the parts No. and parts name to be changed.

4.2.8 Cautions

1 Maximum number of Parts can be registered

For GOT-A900 Series, up to 32767 types of parts can be registered.
 For GOT-F900 Series, up to 2000 types of parts can be registered.

2 Memory capacity required for parts

It is same with memory capacity for drawing figure.

 Section 2.2.5 Data Capacity of Each Figure

3 Cautions when registering figure as parts

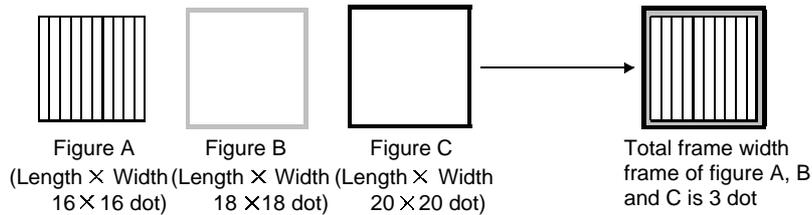
For a figure to be registered as parts, its frame must be drawn in 1-dot line.

If drawn in 2-dot or wider line, it may not appear in actual width on GOT.

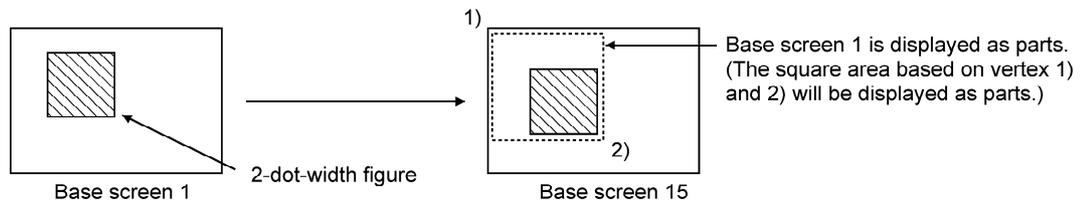
However, the frame of 2-dot or wider line can be displayed by following the steps below.

(1) Combing figures drawn in 1-dot line

(Example) Combine three figures drawn in 1-dot line to make one figure with 3-dot-wide frame.
 drawn.



(2) Set a figure drawn in 2-dot or wider line on an unused base screen and display the base screen as parts using parts display function.



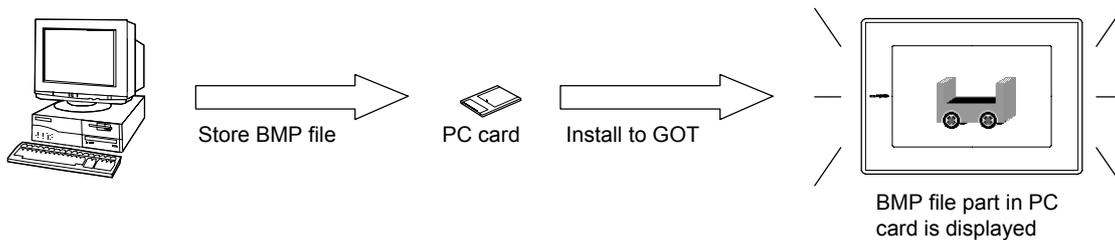
4.3 Registrating BMP Files for Parts



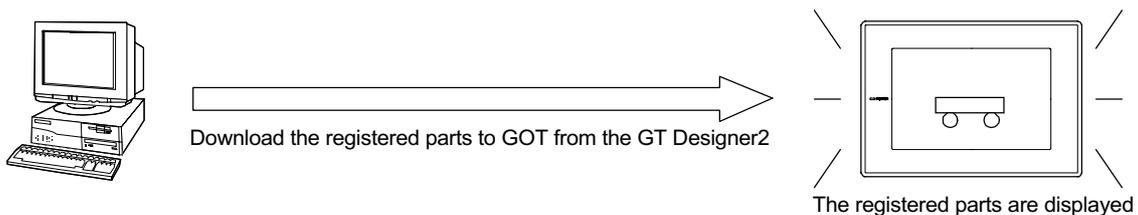
With use of a large-capacity PC card, such as a Compact Flash PC card is used, it can store large numbers of BMP files that cannot be registered on GT Designer2 files.

When the parts number from 9001 to 9999 are specified and the GOT internal device (GS450.b8) is ON, BMP image parts stored in the PC card (BMP image parts) can be displayed as a part in parts display and parts movement.

● When displaying BMP file part



● When displaying registered part



Time taken to display BMP image parts (reference value)

The following table shows times taken to display a BMP image parts on each GOT.

| Item | Data format of displayed BMP file | | | Time taken to display part *1 (Seconds) |
|-------------|-----------------------------------|---------------------------|--------------------|---|
| | Resolution (Dots) | Number of colors (Colors) | File capacity (KB) | |
| GT SoftGOT2 | 1280 × 1024 | 24-bit, full-color | 3850 | 0.4 |
| | | 256 | 1280 | 0.3 or less |
| | 1024 × 768 | 24-bit, full-color | 2300 | 0.3 or less |
| | | 256 | 770 | 0.3 or less |
| A985GOT | 800 × 600 | 24-bit, full-color | 1400 | 4.9 |
| | | 256 | 480 | 4.4 |
| A97 * GOT | 640 × 480 | 24-bit, full-color | 900 | 3.5 |
| | | 256 | 302 | 3.1 |
| A960GOT | 640 × 400 | 24-bit, full-color | 770 | 3.2 |
| | | 256 | 256 | 2.8 |
| A956WGOT | 480 × 234 | 24-bit, full-color | 330 | 1.7 |
| | | 256 | 112 | 1.6 |
| A95 * GOT | 320 × 240 | 24-bit, full-color | 230 | 0.9 |
| | | 256 | 76 | 0.9 |

*1 Depending on the used monitor screen data, the time taken may differ from the above value.



Parts number

When GS450.b8 is ON, parts that can be displayed differs depending on parts number.

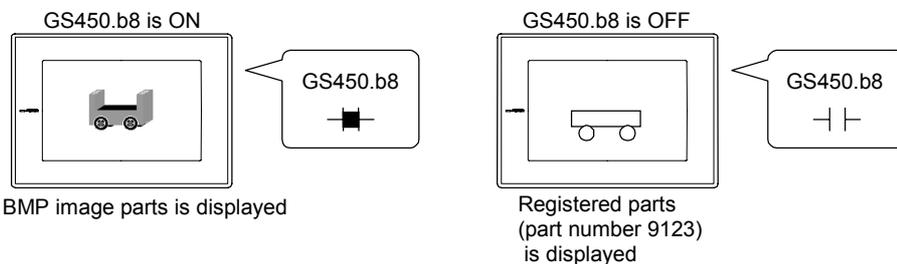
Refer to the following table for the parts that can be displayed.

○: Can be displayed ×: Cannot be displayed

| Part number | When GS450.b8 is ON | | When GS450.b8 is OFF | |
|----------------|---------------------|---------------|----------------------|---------------|
| | Registered part | BMP file part | Registered part | BMP file part |
| 0 | × | × | × | × |
| 1 to 8999 | ○ | × | ○ | × |
| 9000 | × | × | ○ | × |
| 9001 to 9999 | ×*1 | ○ | ○ | × |
| 10000 to 32767 | ○ | × | ○ | × |

*1 Cannot be displayed even if parts have been registered.

Example) When parts are registered to the part number , 9123



4.3.1 Before using the BMP image parts

1 Checking the OS

To use the BMP image parts, the following OS must be installed in the GOT.

| OS type | Description |
|-------------------|---------------------|
| Basic function OS | Ver. 9.5.5 or later |

(1) How to check the basic function OS

Basic function OS versions installed in the GOT can be checked in the built-in memory information on GT Designer2.

If the basic function OS installed in the GOT is old, reinstall new OS version.

 GT Designer2 Version 1 Operating Manual

2 BMP files that can be displayed

The following table shows the data formats of BMP files that can be displayed in parts display/parts movement.

| Item | Description | |
|---------------------|--|---|
| Number of colors *1 | 24-bit full color, 256 colors, 16 colors, monochrome BMP file *2 | |
| Resolution | GT SoftGOT2 *3 | Maximum: 1280 × 1024 dots, minimum: 1 × 1 dot |
| | A985GOT | Maximum: 800 × 600 dots, minimum: 1 × 1 dot |
| | A97 * GOT | Maximum: 640 × 480 dots, minimum: 1 × 1 dot |
| | A960GOT | Maximum: 640 × 400 dots, minimum: 1 × 1 dot |
| | A956WGOT | Maximum: 480 × 234 dots, minimum: 1 × 1 dot |
| | A95 * GOT | Maximum: 320 × 240 dots, minimum: 1 × 1 dot |

*1 The BMP file stored in the PC card is displayed in reduced number of colors that can be displayed on the GOT.

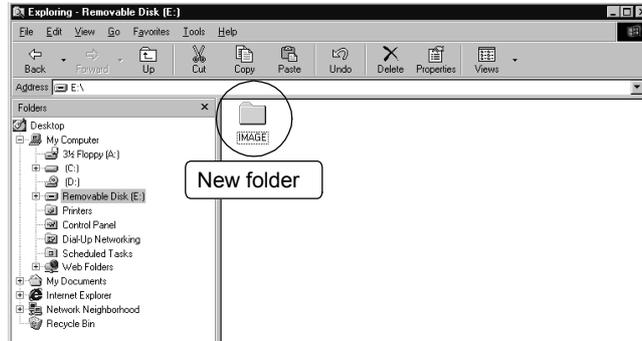
The actual image of BMP file can be checked with the Preview of GT Designer2.

*2 The BMP file compressed by compression software or similar software cannot be used.

*3 The maximum resolution of the BMP file that can be displayed on the GOT depends on the resolution set on GT SoftGOT2.

4.3.2 Storing the BMP file parts into the PC card

- 1 Create a new folder named IMAGE to store BMP image parts, on the PC card.
If BMP file parts are already stored in other folders, parts cannot be displayed in parts display/parts movement.

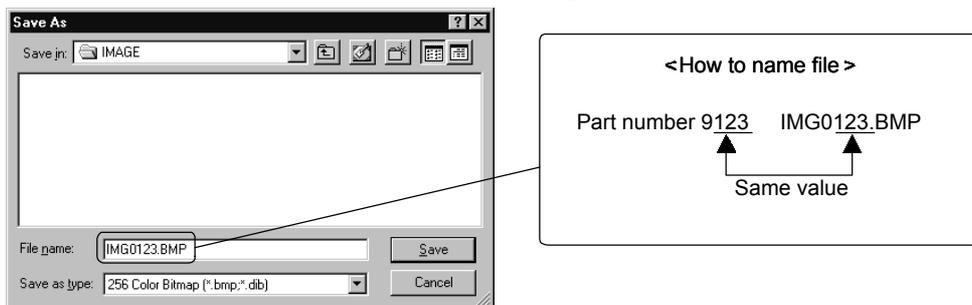


- 2 Register the BMP parts as the Registered Parts (part numbers 9001 to 9999) on GT Designer2.

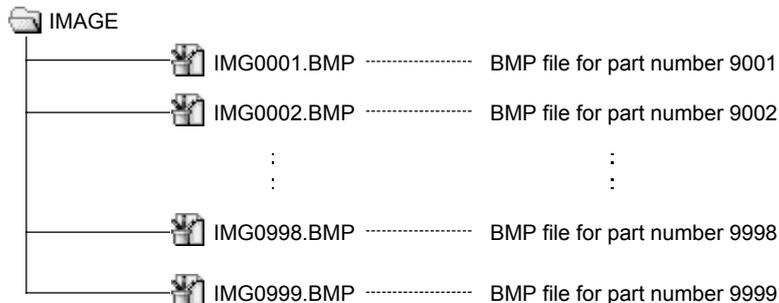
 Section 4.2 Parts Registration

- 3 After creating monitor screen data, check display position of the parts and BMP file colors numbers using the Preview.
Correct the monitor screen data if the parts are displayed in a position where it extends off the monitor screen or if the BMP file cannot be viewed easily by color reduction.
- 4 Double-click the BMP image parts to start the image editing software. Save data into the IMAGE folder on the PC card under the name of IMG****. BMP. (**** indicates any of 00001 to 0999)
The last 3-digit value of **** corresponds to that of the parts number from 9001 to 9999.

Example) How to name the BMP file that has been registered as parts number 9123



• Data configuration on PC card



- 5 Delete the BMP image parts (parts numbers from 9001 to 9999) registered in Step 2.

4.3.3 BMP image parts displaying method

The following provides how to display BMP image parts on PC card in parts display or parts movement.

1 Turn ON GS450.b8 before displaying parts in parts display or parts movement.

If device value is changed on registered part being displayed, BMP image parts will not changed. The following shows an example of how to turn ON GS450.b8, the GOT is switched ON automatically.

● Status monitor function setting example

On the status monitor function, set the internal device (Ordinary ON device: GS0.b4) to store "1" to GS450.b8 when the Trigger is ON.

After the GOT is powered on, "1" is stored into GS450.b8 by the status monitor function.



● Make setting on the status monitor.

● Set the first line of the status monitor function. ("1" is stored into GS450.b8 immediately after the GOT is switched ON.)*¹

● Set the condition monitor cycle to "Ordinary".

*1 At a GOT startup, to display or parts movement parts may not be changed to BMP image parts. (Switch the screen change parts.)

Design screens considering the characteristics of BMP image parts.

2 By taking the above procedure, the BMP image parts are displayed.

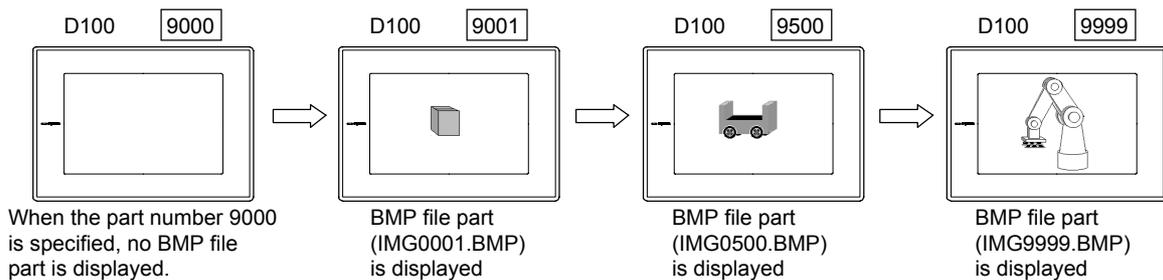
The display example in the case where the following BMP file parts are stored on the PC card is shown below.



Example) BMP file parts are displayed in parts display (word)

When any of the part numbers from 9001 to 9999 is entered in a word device, the corresponding BMP file part is displayed.

● Word device for parts display : D100



4.3.4 Cautions

1 Cautions for drawing

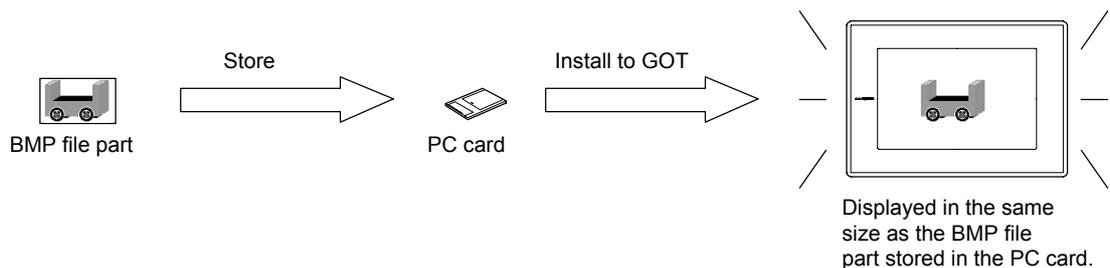
(1) BMP file parts stored on PC card

The BMP file parts displayed in the GOT is the same size as the BMP image parts stored on the PC card.

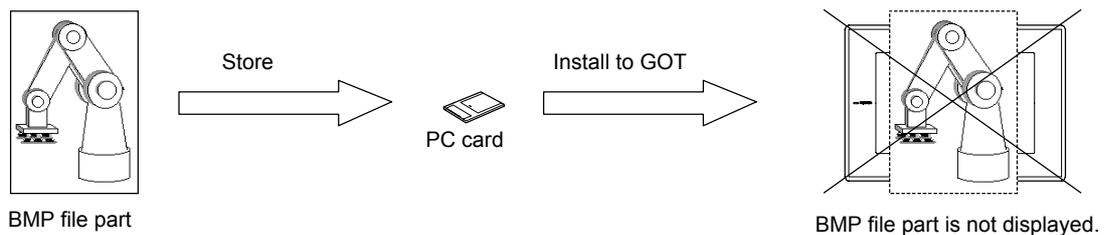
The BMP file parts which are larger than the display size cannot be displayed.

The BMP file parts to be stored onto the PC card should be smaller than the display size of the GOT.

- When the BMP file part is equal to or smaller than the display size of the GOT



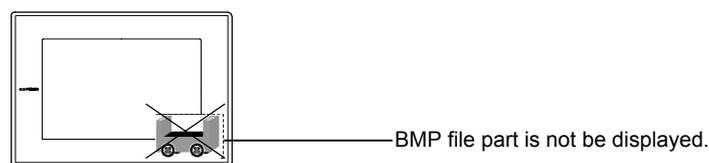
- When the BMP file part is larger than the display size of the GOT



(2) Setting parts display and parts movement

The BMP file part will not be displayed if it has been set in the display position where it will extend off the screen.

Check the display position on the Preview.



2 Cautions for hardware

(1) GOT with restrictions on use

BMP image parts cannot be used as the A95* handy GOT does not support PC card.

(2) Required optional Units

The following Units is required to use BMP file parts.

| Used GOT | Required device |
|----------------------------|---|
| A985GOT, A97 *GOT, A960GOT | None |
| A956WGOT | SRAM type : Memory Card Interface Unit Compact Flash PC card: No device required |
| A95 *GOT | SRAM type : Memory Card Interface Unit Compact Flash PC card: Unavailable |

(3) SRAM type PC card

When using the SRAM type PC card, carefully check the capacity of the PC card and the total capacity of the BMP files.

If the total capacity of the BMP files exceeds the PC card capacity, the BMP files cannot be stored.

4.4 Registering Gaiji



4.4.1 What are external characters

External characters indicate character patterns, company logos and symbols which are created and registered in advance, then displayed as characters of objects or comments.

In models not equipped with built-in Shift JIS second level Kanji character fonts, such Kanji characters can be created and displayed as external characters.

4.4.2 Setting

- 1 Select [Common Settings] → [Gaiji] from the menu.
- 2 When the setting dialog box is displayed, please make settings referring to the following explanation.



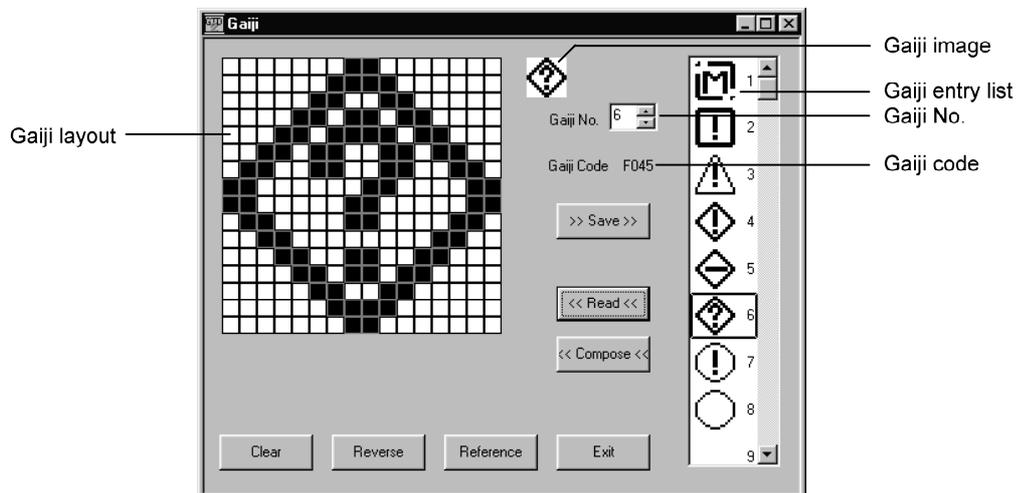
Remark

When setting in the project workspace

In the project workspace, when double clicking , the setting dialog box can also be displayed.

4.4.3 Setting items

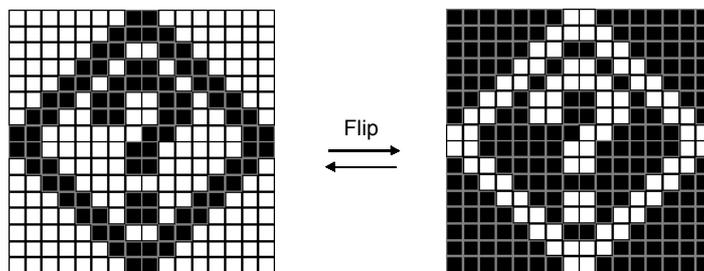
The explanation about Gaiji setting items is as follows.



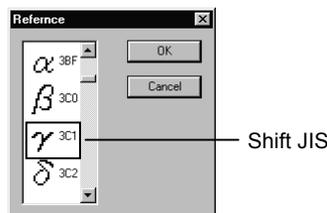
| Items | Description | A | F |
|-------------------------|---|---|---|
| Gaiji layout | Click the mouse in 16 dots × 16 dots matrix, dot becomes ON (black) of OFF (white), and Gaiji can be created/edited. Additionally, click the mouse and drag it at the same time, dot will be filled with the selected color. | × | ○ |
| Gaiji No. | Select the Gaiji No. to be created, edited or saved. | × | ○ |
| Gaiji image | The Gaiji being created can be displayed, confirmed and edited with actual-sized image. | × | ○ |
| Gaiji code | Display character code No. corresponding to the saved Gaiji No. from F040H to F0C0H (Hexadecimal). | × | ○ |
| Gaiji registration list | Display saved Gaiji image with serial number. | × | ○ |

Before **>>Save>>** **<<Read<<** **<<Compose<<** is executed, please select Gaiji No. from [Gaiji Registration List] or [Gaiji No.] and execute as above.

- >>Save>>**..... In the selected No. of created image data in [Gaiji Layout], up to 128 Gaiji No. can be saved.
- <<Read<<**..... As previous data is overwritten, please confirm the saved Gaiji No. before execution. Saved Gaiji can be read ([Gaiji Layout]) and edited.
- <<Compose<<**..... Before termination, it is necessary to save the changed Gaiji. Combine the Gaiji in editing ([Gaiji Layout]) and the Gaiji being saved. When [Gaiji Layout] or the one being already registered is black, dots are displayed in black.
- Clear**..... All dots of [Gaiji Layout] changes into white and are cleared.
- Flip**..... Dots of [Gaiji Layout] flip from black → white or white → black.



Reference..... This function is to utilize Gaiji code that will be created by system font built in GOT-F900. Open reference dialog box, and select from the displayed list in Shift JIS order.



Exit..... Cancel the Gaiji being edited and close the dialog box.

Point

Display input method of the Gaiji registered in object and comment

1. Specify character, comment, lamp, etc.

When specify newly-created Gaiji in character input area, indicate Gaiji No. with "|" (DBC vertical line *1) and it is represented as 1 character.

(Comment is used in alarm message, bit comment, word comment, etc.)

*1: Vertical line can be input by pressing [Shift] key and [|] key at the same time.

Input example 1) (Register Gaiji No.  = 3)

|3| MITSUBISHI Electric
 MITSUBISHI Electric is displayed.

Input example 2) Register Gaiji No.  = 9,  = 5,  = 1

| | | | 9 | | | | 5 | | | | 1 | | | |
| | | | | | | | | | | | | | | |
   is displayed.

2. Gaiji specification of ASCII input and ASCII display

Please specify character code No. displayed in [Gaiji No.] which is same with Chinese character and symbol, etc.

4.4.4 Cautions

1 Use of external characters

The external character creation function is available only when "Japanese" is selected in "Language Character Set" in "System Environment".

4.5 Auxiliary Settings



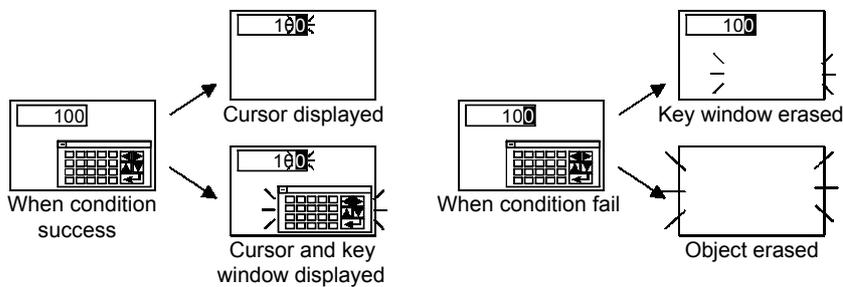
Operation of cursor, key window or other can be set for each screen or project.
The auxiliary settings are explained as follows:

In the case of GOT-A900 series

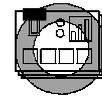
1 Action of cursor and key window when condition success/switching screen/condition fail

When condition success/switching screen, cursor and key window are displayed.

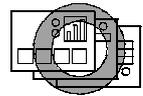
When condition fail, cursor and key window are erased.



Setting for each project

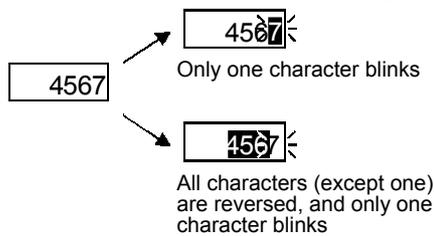


Setting for each screen

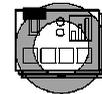


2 Methods of displaying cursor input area

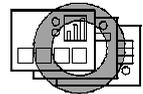
For numeric input and ASCII input, cursor display method is selectable.



Setting for each project

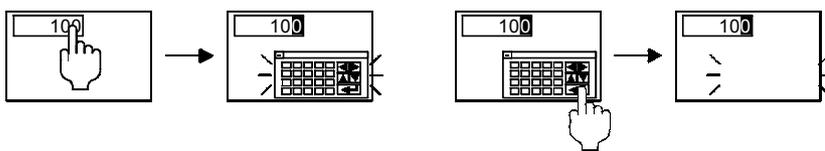


Setting for each screen



3 Methods of displaying/erasing key window

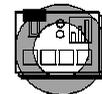
Key window can be displayed as soon as touch input is detected; can be erased when the RET key is pressed.



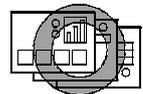
Display key window with input touch

Press the RET key (input definition), key window is erased.

Setting for each project

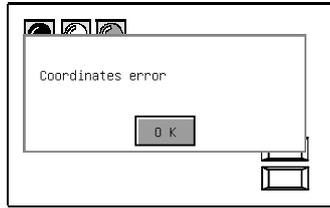


Setting for each screen

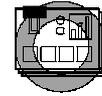


4 Check for overlapping objects

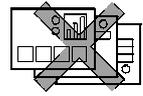
If objects overlap when screen calling function and superimpose window are used, message will appear on GOT. As GOT may not the display overlapping objects correctly, correct the monitor screen data.



Setting for each project

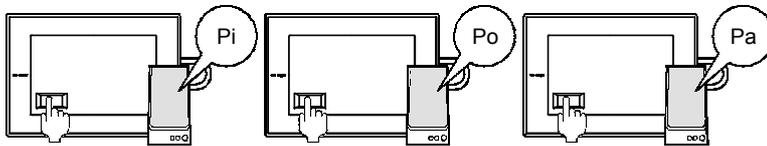


Setting for each screen

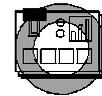


5 Change of touch key sound

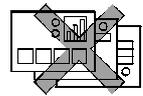
The sound output when a touch switch is pressed can be set. (Prepare the files that play sounds.)



Setting for each project



Setting for each screen



Remark

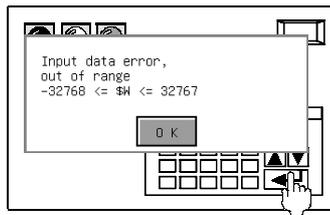
Change touch key sound

To change touch key sound, sound files must have been registered in advance. For the GOT that does not support sound function, touch key sound cannot be changed.

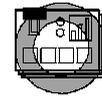
Section 5.38 Sound Output Function

6 Displaying input range for numeric value Input

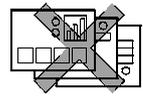
When a numeric value out of input range is input, a message appears showing the input range.



Setting for each project



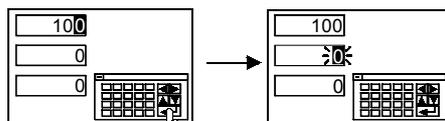
Setting for each screen



7 Action of cursor key

If multiple areas for numerical input and ASCII input are provided, the input order can be set.

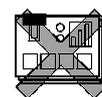
After input definition, the cursor is moved to the next input area automatically.



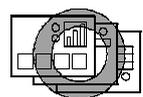
Input definition

The cursor is moved to the next input area

Setting for each project

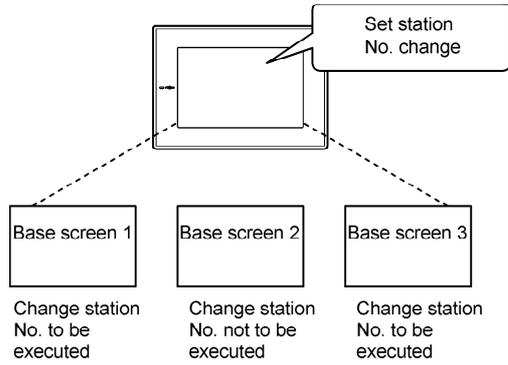


Setting for each screen

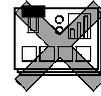


8 Station No. change execution/inexecution

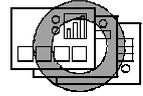
Station No. change can be set to be executed or not for each screen.



Setting for each project

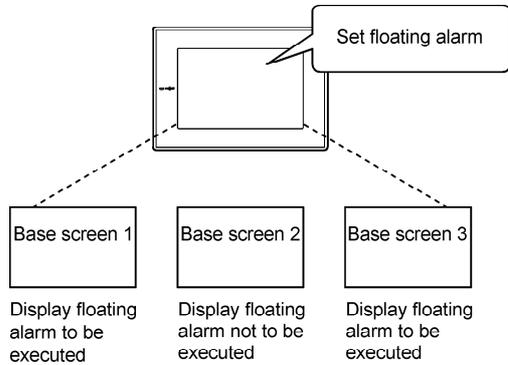


Setting for each screen

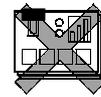


9 Floating alarm display execution/inexecution

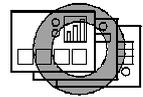
Floating alarm display can be set to be executed or not for each screen.



Setting for each project



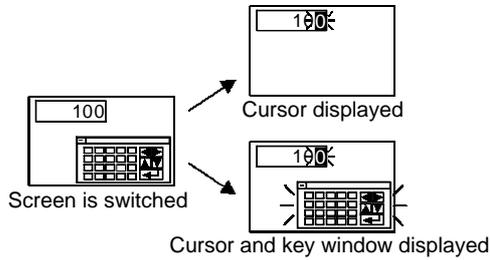
Setting for each screen



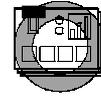
In the case of GOT-F900 series

1 Actions of cursor and key window when switching screen

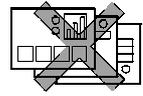
When switching screen, the cursor and key window can be displayed.



Setting for each project

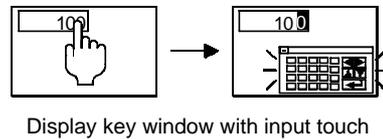


Setting for each screen

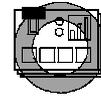


2 Method of displaying/erasing key window

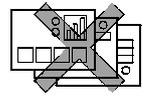
Key window can be displayed as soon as touch input is detected; can be erased when the RET key is pressed.



Setting for each project

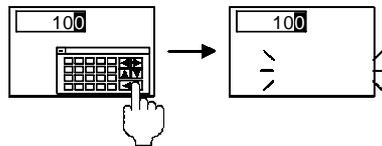


Setting for each screen

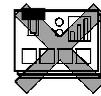


3 Method of erasing key window

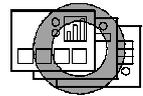
Key window can be erased when the RET key is pressed.



Setting for each project



Setting for each screen

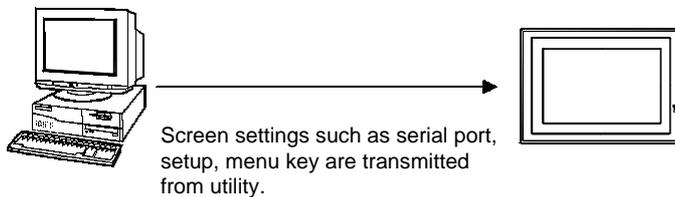


4 Use serial port, setup, language, menu key.

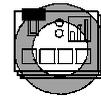
All kinds of basic settings can be written according to the settings made with drawing software.

Check this item when making the settings with drawing software.

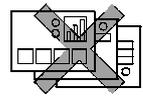
Uncheck this item when writing the basic settings within utility screen of GOT-F900 series.



Setting for each project

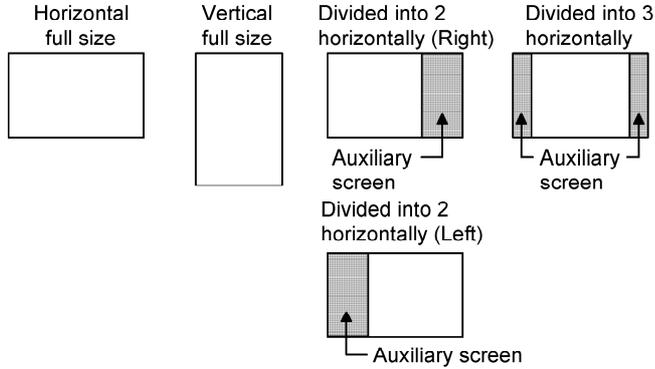


Setting for each screen

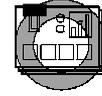


5 Screen division method and layout method (for F940WGOT, F930GOT only)

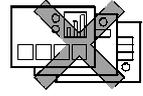
Screen layout can be classified as vertical installation and horizontal installation. In latter case, one screen can be divided into two or three. (can be divided in F940WGOT only)



Setting for each project

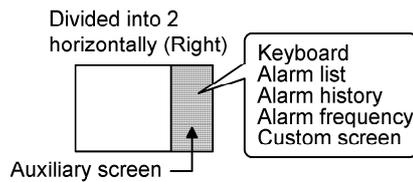


Setting for each screen

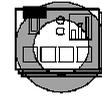


6 Auxiliary screen settings for wide display(for F940WGOT only)

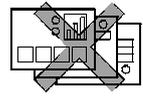
For F940WGOT, function(s) and background to be displayed on auxiliary screen can be selected.



Setting for each project



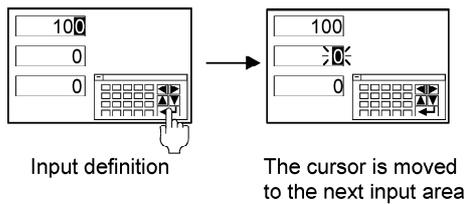
Setting for each screen



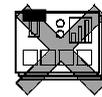
7 Cursor key action

If multiple areas for numerical input and ASCII input are provided, the input order can be set.

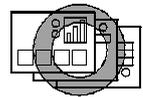
After input definition, the cursor is moved to the next input area automatically.



Setting for each project

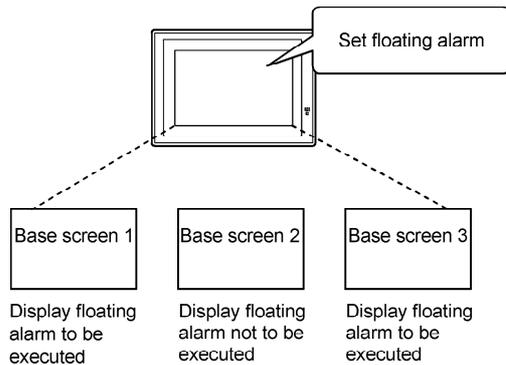


Setting for each screen

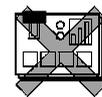


8 Floating alarm display execution/inexecution

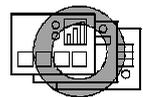
Floating alarm display can be set to be executed or not for each screen.



Setting for each project



Setting for each screen



4.5.1 Settings

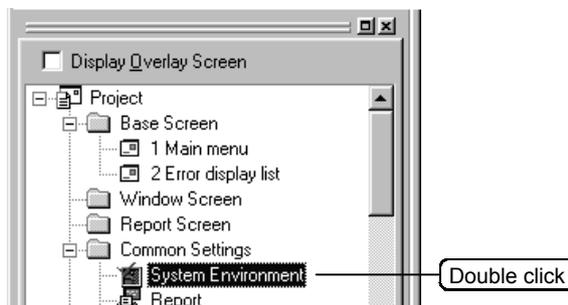
1 When setting for each project

- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 As "System Environment" dialog box appears, double click on [Auxiliary Settings] there.
- 3 As "Auxiliary Settings" dialog box appears, make the setting with reference to the following explanation (Section 4.5.2 **1**).

Remark

When setting in project workspace

Double click on System Environment and "System Environment" dialog box appears, then double click on Auxiliary Settings



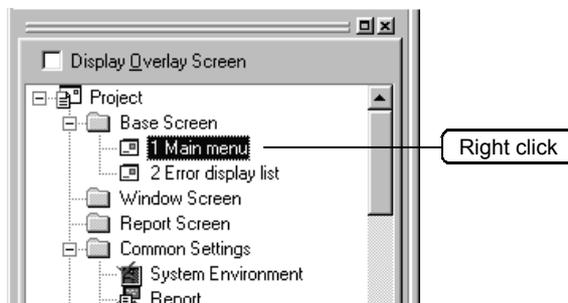
2 When setting for each screen

- 1 Select a screen, and then select [Screen] → [Properties] from the menu.
- 2 As the setting dialog box appears, click on "Auxiliary" tab dialog box, and then make the setting with reference to the following explanation (Section 4.5.2 **2**).

Remark

When setting in project workspace

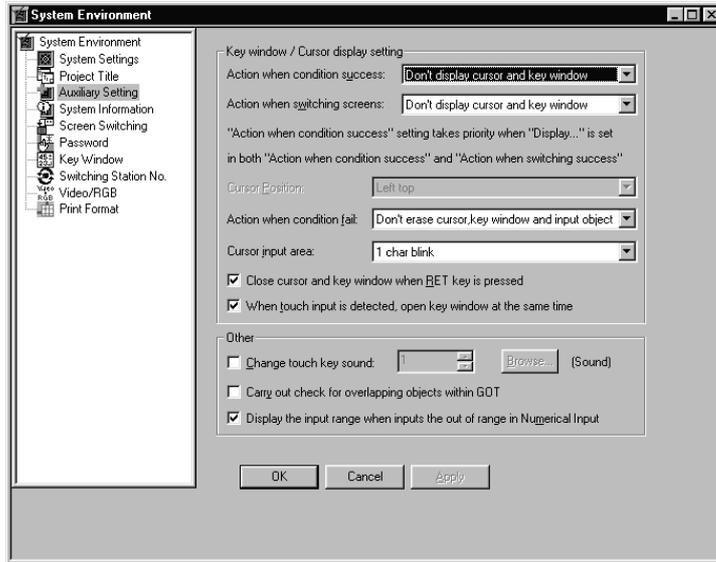
Select a screen and right-click on the screen with a mouse, and then select [Property]. As the setting dialog box appears, double click on "Auxiliary" tab dialog box.



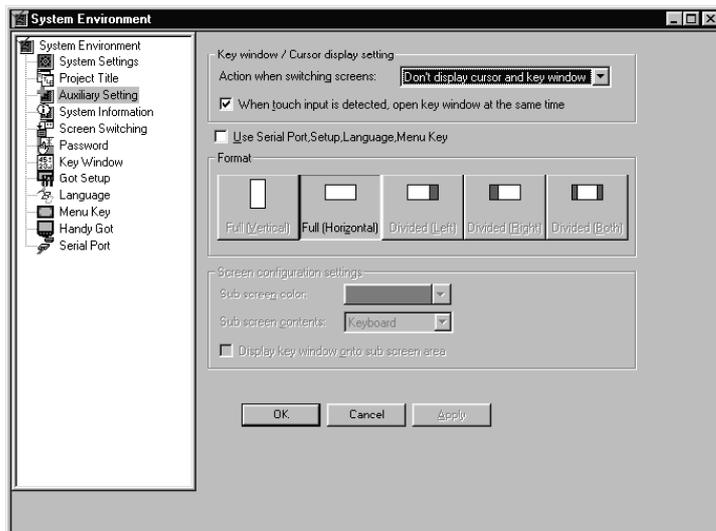
4.5.2 Setting items

1 Setting dialog box for each project

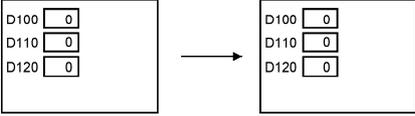
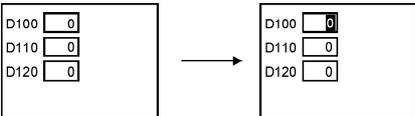
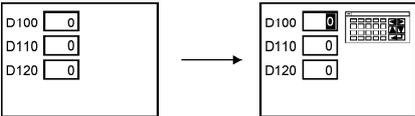
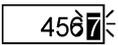
Make the auxiliary settings for each project.

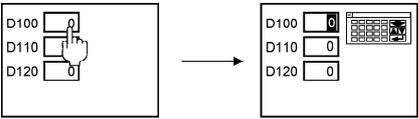
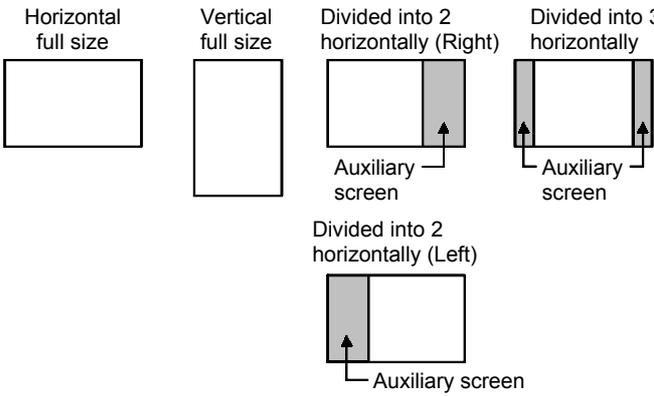


In the case of GOT-A900 Series

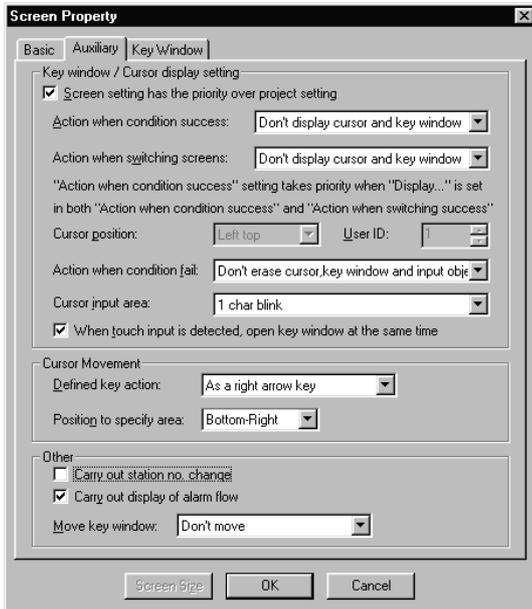


In the case of GOT-F900 Series

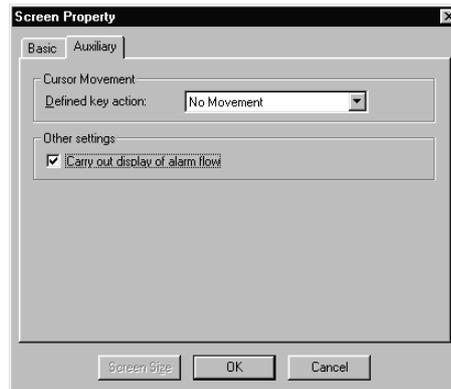
| Items | Description | A | F |
|--|---|---|---|
| Action when condition success | <p>Set the display method of cursor and key window with numerical input function and ASCII input function when the condition is satisfied/switching screen.</p> <p>Cursor and key window are not displayed: When the condition is satisfied/switching screen, the cursor or key window is not displayed. In the case of key input, touch the input area.</p>  | | |
| Switching screen option | <p>Only cursor is displayed: When the condition is satisfied/switching screen, the cursor is displayed automatically. If there is key for key input on the screen, key input can be executed.</p>  <p>Both the cursor and key window are displayed: When the condition is satisfied/switching screen, the cursor and key window are displayed. Even if there is no key for key input on the screen, key input can be executed.</p>  | ○ | ○ |
| Cursor position | <p>Set the cursor position when switching screen.</p> <p>Left top : When switching screen, the cursor is displayed on input area in upper left part of the screen.</p> <p>User ID minimum : When switching screen, the cursor is displayed on the input area in which minimum user ID has been set.</p> | ○ | × |
| Action when condition fail | <p>Set the display method of cursor and key window with numerical input function, ASCII input function and switch touch function when the condition is not satisfied.</p> <p>They will be erased only when the trigger has been set to [ON], [OFF], [Range] or [Multi Bit Trigger].</p> <p>Shape of numeric value/ ASCII input (frame) is displayed as it is.</p> <p>Cursor, key window and input object are not erased: When the condition is not satisfied, cursor/key window/ object is displayed as it is.</p> <p>Cursor and key window are erased: When the condition is not satisfied, cursor/ key window is erased.</p> <p>Cursor, key window and input object are erased: When the condition is not satisfied, cursor/key window/ object is erased.</p> | ○ | × |
| Cursor input area | <p>Set the display method of input area in input area.</p> <p>1 character blink : One character blinks within input area.</p>  <p>All reverse + 1 character blink : The characters are reversed within input area, and only one character blinks</p>  | ○ | × |
| Close cursor and key window when RET key is pressed. | <p>Check this item to automatically erase the key window and input cursor when the RET key is touched after inputting numeric value/ASCII code with key window</p> | ○ | × |

| Items | Description | A | F |
|--|---|---|---|
| <p>When touch input is detected, open key window at the same time</p> | <p>Check this item to automatically display the key window when the input area for numeric input function and ASCII input function is touched. (In the case of ASCII input, ASCII key screen No. must have been set in the key windows screen No. setting.)</p>  | ○ | ○ |
| <p>Change touch key sound</p> | <p>Check this item to change the sound that is output by touching a touch switch. Then set sound No. of the sound file that replays the sound. The replay sound can be selected from the displayed list by clicking on [Reference] button.</p> | ○ | × |
| <p>Carry out check for overlapping objects within GOT</p> | <p>Check this item to make the GOT to display a message when objects are overlapped due to screen calling function and superimpose window.</p> | ○ | × |
| <p>Display the input range when inputs the out of range in numerical input</p> | <p>Check this item to display a message showing the input range if the value out of range is input on a key window while numerical input function is used.</p> | ○ | × |
| <p>Use serial port, setup, language, menu Key</p> | <p>Check this item to make the settings for system environment setup, language, serial port and menu key with a drawing software.</p> | × | ○ |
| <p>View format</p> | <p>Select the screen direction and division.</p>  <p>GOT-F900 series corresponding view format</p> <ul style="list-style-type: none"> ● Horizontal full size GOT-F900 series full type ● Vertical full size F930GOT and F940WGOT ● Divided into 2 horizontally (Right) F940WGOT ● Divided into 2 horizontally (left) F940WGOT ● Divided into 3 horizontally F940WGOT | × | ○ |
| <p>Sub screen color</p> | <p>Select a background of auxiliary screen when view format is divided into two or three by F940WGOT.</p> | × | ○ |
| <p>Sub screen contents</p> | <p>Select the alarm list, alarm history, keyboard, and customize to be displayed on auxiliary screen.</p> | × | ○ |
| <p>Display auxiliary screen on key window</p> | <p>Check this item to display the keyboard (Standard only) that appears on auxiliary screen when numerical input or ASCII input is touched.</p> | × | ○ |

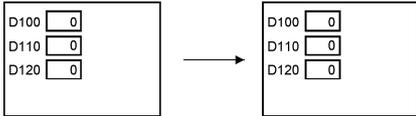
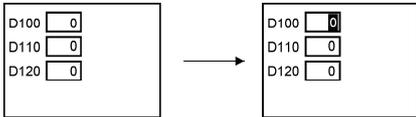
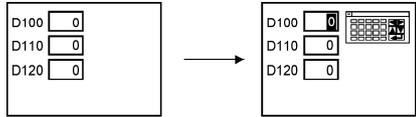
2 Setting dialog box for each screen
 Make the auxiliary settings for each screen.

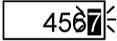
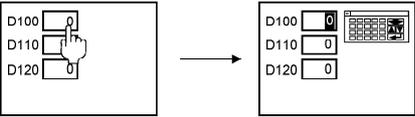


GOT-A900 series



GOT-F900 series

| Items | Description | A | F |
|--|--|---|---|
| Screen setting has the priority over project setting | Check this item to give screen settings priority over project setting. | ○ | × |
| Action when condition success | <p>Set the display method of cursor and key window with numerical input function and ASCII input function when the condition is satisfied/switching screen.</p> <p>Cursor and key window are not displayed: When the condition is satisfied/switching screen, the cursor or key window is not displayed. In the case of key input, touch the input area.</p>  <p>Only cursor is displayed: When the condition is satisfied/switching screen, the cursor is displayed automatically. If there is a key for key input on the screen, key input can be executed.</p>  | ○ | × |
| Switching Screen Option | <p>Both cursor and key window are displayed: When the condition is satisfied/switching screen, the cursor and key window are displayed. Even if there is no key for key input on the screen, key input can be executed.</p>  | ○ | × |

| Items | Description | A | F |
|--|---|---|---|
| Cursor Position | Set the cursor position when switching screen. Left top : When switching screen, the cursor is displayed on input area in upper left part of the screen. User ID minimum : When switching screen, the cursor is displayed on the input area in which minimum user ID has been set. User ID order : When switching screen, the cursor is displayed on the input area in which the set user ID order has been set. | ○ | × |
| Action when condition fail | Set the display method of cursor and key window with numerical input function, ASCII input function and switch touch function when the condition is not satisfied. They will be erased only when the trigger has been set to [ON], [OFF], [Range] or [Multi Bit Trigger]. Shape of numeric value/ ASCII input (frame) is displayed as it is. Cursor, key window and input object are not erased: When the condition is not satisfied, cursor/ key window/ object is displayed as it is. Cursor and key window are erased: When condition is not satisfied, cursor/ key window is erased. Cursor, key window and input object are erased: When the condition is not satisfied, cursor/ key window/ object is erased. | ○ | × |
| Cursor input area | Set the display method of input area in input area. 1 character blink : One character blinks within input area.  All reverse + 1 character blink : The characters are reversed within input area, and only one character blinks  | ○ | × |
| When touch input is detected, open key window at the same time | Check this item to automatically display the key window when the input area for numeric input function and ASCII input function is touched. (In the case of ASCII input, ASCII screen No. must have been set in the key windows screen No. setting.)  | ○ | × |
| Defined key action *1 | Select the position to display the input cursor after defined key for numeric value input/ASCII input function is input. As a right arrow key: (GOT-A900 series only) After defined key input, the cursor moves to the input area at the right of the position set in [Position to Specify Area]. As a down arrow key: (GOT-A900 series only) After defined key input, the cursor moves to the input area at the bottom of the position set in [Position to Specify Area]. No movement: After defined key input, the cursor does not move from the written input area. User ID order: After defined key input, the cursor moves to the input areas in user ID order. (This setting is valid when the settings of move destination ID have been made on "Numeric input/ASCII input function" option tab dialog box. Cursor and key window are erased: After defined key input, cursor and key window are erased. | ○ | ○ |

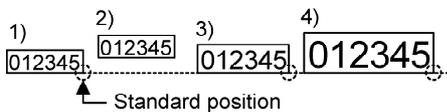
| Items | Description | A | F |
|---------------------------------|--|---|---|
| Position to specify area *1 | Select a position within input area as a base point to move the input cursor. Bottom-right : Move the cursor based on the position at the lower-right of input area. Top-left : Move the cursor based on the position at the upper-left of input area. | ○ | × |
| Carry out station no. change | Check this item to use station No. change function. | ○ | × |
| Carry out display of alarm flow | Check this item to use floating alarm function. | ○ | ○ |
| Move key window | Select a method of displaying key window. Don't move : Key window is displayed at the set fixed position. Automatic move : Key window is displayed at the position that is not overlapping with input area. | ○ | × |
| Back Light Color | Select a back light color from (White/Red). (for F920GOT-K only) | × | ○ |

For details of * 1, refer to the following.

*1 Relation of [Defined Key Action] and [Position to Specify Area] (for GOT-A900 series only)

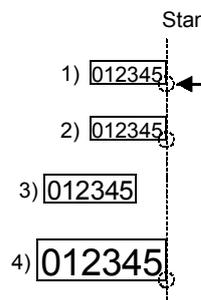
When [As a Right Arrow Key] or [As a Down Arrow Key] is selected in [Defined Key Action], according to settings in [Position to Specify Area], the cursor moves as follows:

[Defined Key Action] : As a right arrow key
 [Position to specify area] : Bottom-right



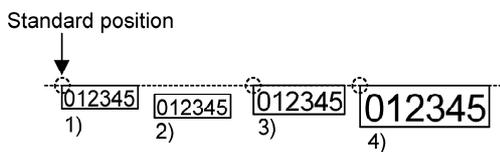
The cursor moves to 1) → 3) → 4).
 As 2) does not exist on standard position, the cursor will not move to it.

[Defined Key Action] : As a down arrow key
 [Position to specify area] : Bottom-right



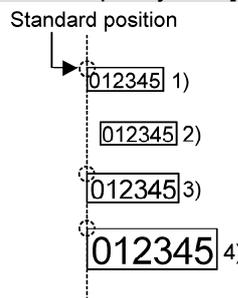
The cursor moves to 1) → 2) → 4).
 As 3) does not exist on standard position, the cursor will not move to it.

[Defined Key Action] : As a right arrow key
 [Position to specify area] : Top-left



The cursor moves to 1) → 3) → 4).
 If 2) does not exist on standard position, the cursor will not move.

[Defined Key Action] : As a down arrow key
 [Position to specify area] : Top-left



The cursor moves to 1) → 3) → 4).
 If 2) does not exist on standard position, the cursor will not move.

4.5.3 Cautions

1 Cautions when making the auxiliary settings for each project

- (1) Change a touch key sound with reference to cautions for sound function.

 Section 5.38 Sound

- (2) Cautions for displaying the input range when a value out of range is input by numerical input function.

- (a) In the case of A95*GOT, A956WGOT and GOT-F900 series, the input range cannot be displayed on key window.

2 Cautions when making the auxiliary settings for each screen

- (1) RET key operation setting

Make sure to uncheck [Close cursor and key window when RET key is pressed] in the project setting when [Close cursor and key window when RET key is pressed] and [User ID order] are used for defined key action setting,

If checked, action of [Close cursor and key window when RET key is pressed] will be executed with priority.

- (2) “Action when condition success”, “Switching Screen Option” setting

It is recommended to make the same settings for the base screen and overlap window.

Otherwise, the screens may not operate correctly as described below.

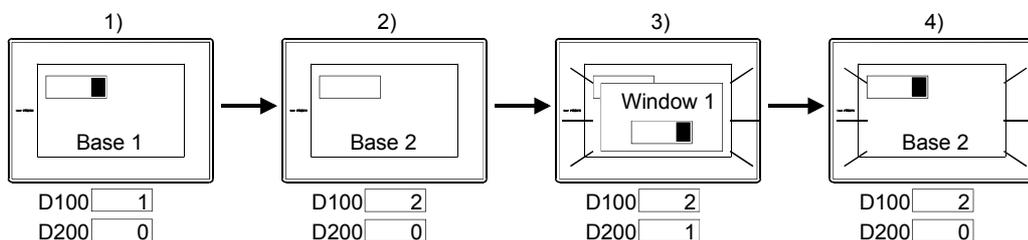
For “Action when condition success”, “Switching Screen Option” setting, the settings for the screen activated most recently remain active.

If the settings of an overlap window are active (the overlap window is displayed after the base window is switched) as described in 3) below, and then the overlap window is closed as described in 4), its settings will remain active (a cursor is displayed).

- Ex)

| | | |
|----------------------------------|---------------------|--|
| • Base screen 1 | Condition satisfied | Only a cursor is displayed. |
| • Base screen 2 | Condition satisfied | A cursor and key window are not displayed. |
| • Window screen 1 | Condition satisfied | Only a cursor is displayed. |
| • Base screen switching device | D100 | |
| • Window screen switching device | D200 | |

<Operation when the condition is satisfied>



Hint!

Activating base screen settings

Make the settings in order that a superimpose window set as a dummy on a base screen will be switched when closing an overlap window.

(The script function is used to observe the overlap window switching device, and change the superimpose window switching device when the device value is 0.)



Setting priority when base screen, overlap window 1, 2 are simultaneously switched.

Setting priority of the screens is as follows:

| Higher | ← | Priority | → | Lower |
|-------------------------------------|---|------------------|---|------------------|
| Base screen (Superimpose window) | | Overlap window 1 | | Overlap window 2 |

When switching the station No. (common to all projects) or security level, GOT recognizes that screens are switched, and activates the settings of base screen according to the above priority.

(Also when station No. is switched simultaneously for each screen type, GOT operates as described above.)

4.6 Key Window



This section explains how to operate key window for numeric value input function and ASCII input function as well as how to create user-key-window.

4.6.1 Key window type

Key window can be classified into two types: GOT original key window (Default key window) and key window created by user (User-created key window).

Default key window is used for numerical input.

The key window for ASCII input must be created by user.

1 Default key window

Default key window will display the key window according to the data type (hexadecimal, decimal, octal or binary) of input area automatically.

When the data type of input area is hexadecimal, decimal, octal or binary, the key window for hexadecimal input will be displayed.

(1) Key window for decimal input



(2) Key window for hexadecimal input



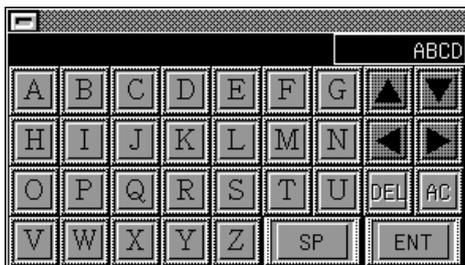
* The above windows are based on GOT-A900 series. Those for GOT-F900 series are different.

2 User-created key window

User's original key window can be created by registering a user-created window as key window. To use ASCII input function, create a key window with a user-created key window.

(1) User-created key window

(Created for ASCII input)



(2) User-created key window

(Created for numeric input (hexadecimal))



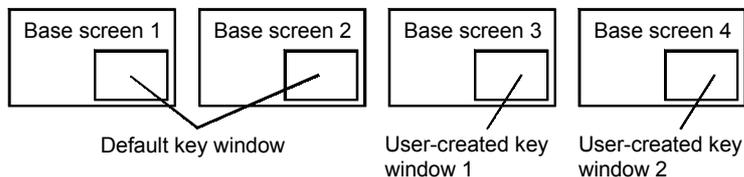
* The above windows are based on GOT-A900 series. Those for GOT-F900 series are different.

Remark

User-created key window

By using a user-created key window, different key windows can be displayed on each base screen. (In the GOT-F900 Series, the key window can be assigned to each Numeric Input (decimal/hexadecimal) and ASCII Input.)

Section 4.6.3 Methods of creating user-created key window



4.6.2 Keys on default key window and display items

Keys displayed on default key window and the display items will be explained as follows.



(Example: Key window for hexadecimal)

| Items | Description | A | F |
|-------|---|-----------------------|----------------------------------|
| *1 | Displays the input value. | <input type="radio"/> | <input type="radio"/> |
| *1*2 | Displays the numerical input range. (Does not display in A95*GOT, A956WGOT or GOT-F900 Series.) | <input type="radio"/> | <input checked="" type="radio"/> |
| | The key to input numeric value, decimal point and minus symbol. (In GOT-F900 series, decimal point is not displayed.) | <input type="radio"/> | <input type="radio"/> |
| | The key to move the input cursor. (In GOT-F900 series, left/right keys are not displayed.) | <input type="radio"/> | <input type="radio"/> |
| | The key to delete the least significant digit of the numeric value being input and shift the whole numeric value to right by one digit. | <input type="radio"/> | <input type="radio"/> |
| | The key to erase whole input numeric value. | | <input type="radio"/> |
| | The key to write the input numeric value to a device. (Confirmation key) | <input type="radio"/> | <input type="radio"/> |
| | The key to close key window. | <input type="radio"/> | <input type="radio"/> |

*1 Input value and input range can be set to not be displayed.

Section 4.6.4 How to create user-created key window

*2 When state is set by numerical input, the input range of the state with minimum No. will be displayed.

Section 5.3 State Setting

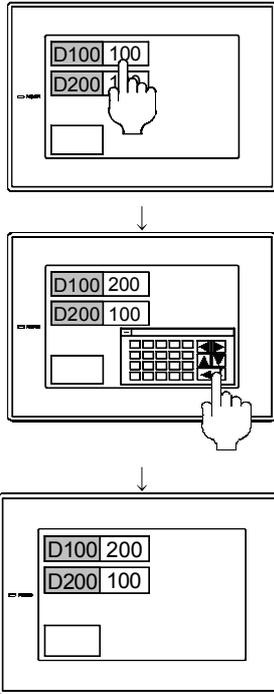
4.6.3 How to operate key window

This section explains the methods of displaying a key window.

1 Basic operation method

Basic operation method of key window is explained as follows.

In the following case, numerical input function is used to explain key window operation as an example. The operation is the same as when ASCII input function is used.



① Touch the numerical input function to be input.

② As a key window appears, input the numeric value.

Then, touch the RET key.

By default, a key window is displayed at the lower-right.

The user can set key window position.

③ The input value is updated, and key window is closed.

Remark

(1) Key window position

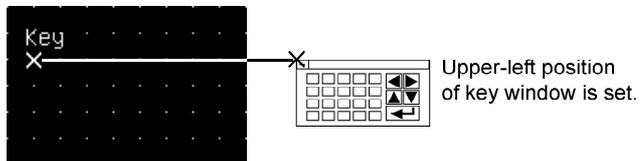
Key window position can be set as follows.

① Select either of the following ways from the menu.

GOT-A900 Series: [Object] → [Window Position] → [Key Window]

GOT-F900 Series: [Object] → [Key Window Position]

② Click on the position to display a key window with a mouse.



(2) Key window display

By making the auxiliary settings, following operations can be carried out.



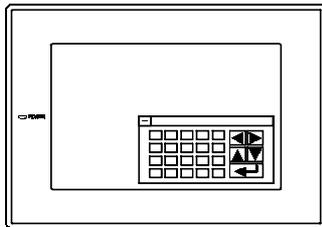
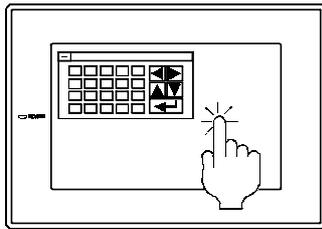
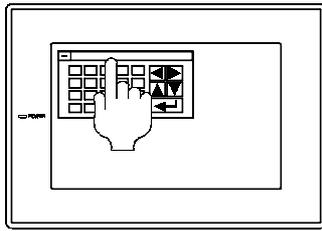
Section 4.5 Auxiliary Settings

(Example 1) A key window is displayed at the same time when switching to the screen on which numeric input function and ASCII input function are set.

(Example 2) A key window will not be displayed when numerical input function or ASCII input function is being touched.

2 Method of moving key window

This section explains how to move a key window.



- 1 Touch the upper part of key window.
A key window goes to movement mode.
- 2 Touch the position to move the key window to within three seconds.
If not touched in more than three seconds, the movement mode of the key window will be released. Even if the position in which the object has been set is touched within less than three seconds, the object will not operate.
- 3 The key window moves to the specified position.



Hint!

Method of confirming key window movement mode (for GOT-A900 series only)

If buzzer volume is set to [LONG] or [SHORT] within GOT menu setup utility, buzzer will be output when a key window is in movement mode. If buzzer volume is set to [NONE], it will not be output.

4.6.4 How to create user-created key window

A user-created key window is created in order to input numeric value on the original key window or display key window by ASCII input function.

To use a user-created key window, arrange touch switches on a window screen and set the screen as key window.

The user-created key window can be displayed instead of default key window, and can control as default key window.



Hint!

To create key window quickly

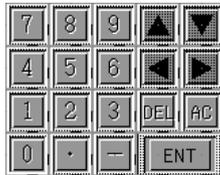
Keys for numeric input/ASCII input have been registered in the library.

A user-created key window can be created quickly by utilizing those keys.

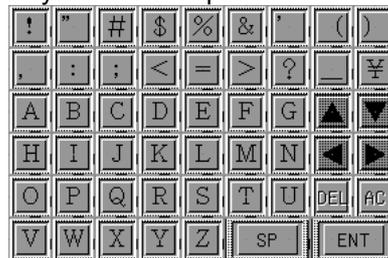
(Example) The key registered in the library

(Keys other than following types have been registered.)

Keys for numerical input



Keys for ASCII input



For details of library, refer to the following manual.



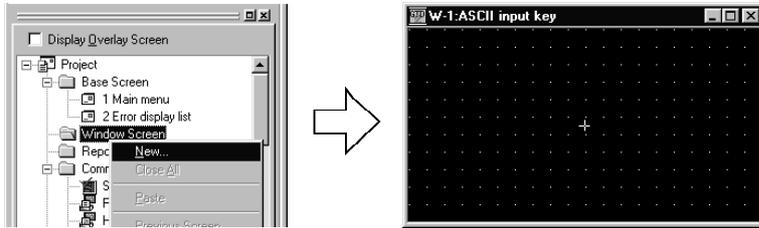
GT Designer2 Version1 Operating Manual

1 Outline procedure

The outline procedure of creating a user-created key window is as follows.

Start

Create a window screen.

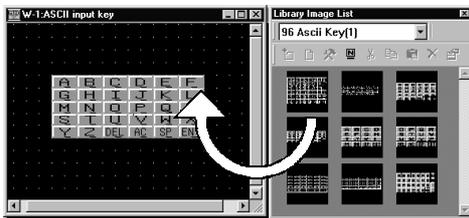


Right click in workspace

Create a new window screen

- ● ● Create a new window screen.
- ☞ GT Designer2 Version1 Operating Manual

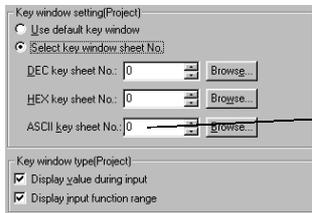
Set touch switches assigned with key code on the window screen.



Set touch switches on the window screen.
Use of library is allowed.

- ● ● Set the touch switch assigned with key code on window screen.
- ☞ Section5.27 Touch Switch
- By utilizing the key for numeric input/ASCII input in the library, it can be easily set.

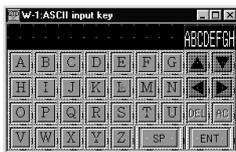
Make the settings in order that the created window screen will be displayed as a key window.



Select a window screen to be used as a key windows for ASCII input.

- ● ● Set the screen to be used commonly for a whole project or used for each base screen.
- ☞ 2 Settings to display key window

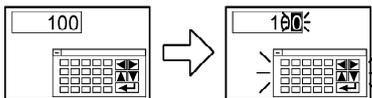
Make the required settings to display input value and input range.



Set input value position and number of digits.

- ● ● Set the view format and position of input value and input range.
- ☞ 3 Input area/input range setting

Set the cursor action and key window action as necessary.



When the condition is satisfied, a cursor and key window will be displayed automatically.

Cursor and key window are displayed.

- ● ● Set the key window display method and cursor action.
- ☞ Section 4.5 Auxiliary Settings

Completed

2 Setting to display key window

Set a key window to be used for a whole project or for each screen. (for GOT-A900 series only).

(1) Settings

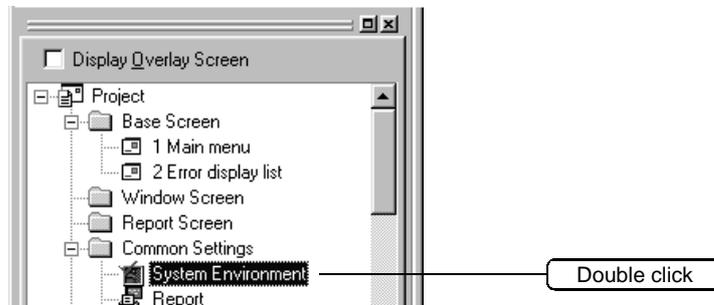
(a) When setting a key window used for a whole project

- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 As [System Environment] dialog box appears, double click on [Key Window].
- 3 As the setting dialog box appears, make the settings with reference to the following explanation ((2)(a)).

Remark

When setting in project workspace

Double click on it to display "System Environment" dialog box. And then double click on [Auxiliary Settings] there.



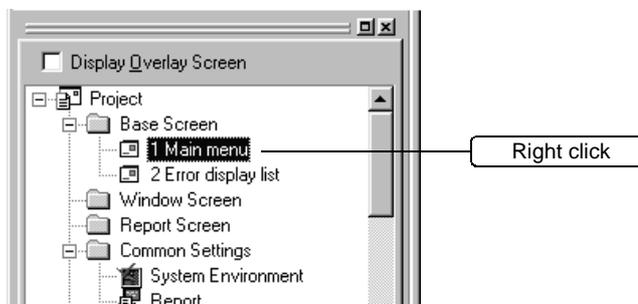
(b) When setting a key window used for each screen (for GOT-A900 series only)

- 1 Select a screen, and then select [Screen] → [Property] from the menu.
- 2 As the setting dialog box appears, double click on "Key window" tab dialog box, and make the settings with reference to the following explanation ((2)(b)).

Remark

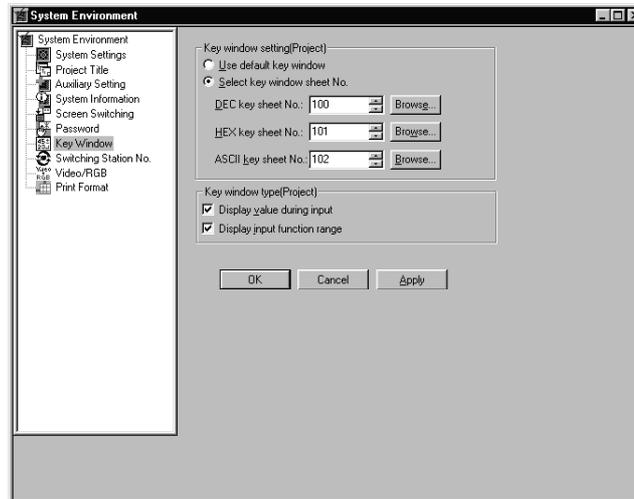
When setting in project workspace

Select a screen and right-click on the screen with a mouse, and then select [Property]. As the setting dialog box appears, double click on "Auxiliary" tab dialog box.



(2) Setting items

(a) When setting a key window for a whole project



| Items | Description | A | F |
|-----------------------------|---|-----------------------|-------------------------------------|
| Use default key window | Select this item to use a default key window. | <input type="radio"/> | <input type="radio"/> |
| Use user-created key window | Select this item to use a user-created key window. | <input type="radio"/> | <input type="radio"/> |
| DEC key sheet No. | Set a window screen to be used as key window for numerical input (Decimal/Hexadecimal) and ASCII input. The screen can be confirmed by clicking on [Reference] button. DEC/HEX key No. sheet : When the No. is set to 0, a default key window will be displayed. ASCII key No. sheet : When the No. is set to 0, a key window will not be displayed in GOT-A900 series. In GOT-F900 series, a default key window will be displayed. | <input type="radio"/> | <input type="radio"/> |
| HEX key sheet No. | | | |
| ASCII key sheet No. | | | |
| Display value during input | Check this item to display the value being input on a key window. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Display the input range | Check this item to display the data input range on a key window. | <input type="radio"/> | <input checked="" type="checkbox"/> |



To display the value being input and the input range in GOT-F900 series
 To display the value being input and the input range in GOT-F900 series, arrange numerical display on the created window.

(1) When displaying value being input

Arrange numerical display and set GOT internal device (GD12) in the device.

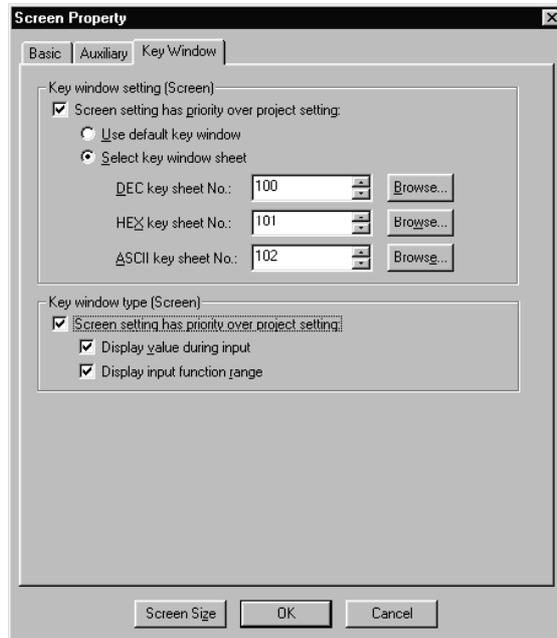
(2) When displaying input range

Arrange numerical display and set GOT internal device in the device.

For upper limit of input numeric value, set GOT internal device GD8 to 32 bit (GD8, GD9).

For lower limit of input numeric value, set GOT internal device GD10 to 32 bit (GD10, GD11).

(b) When setting a key window for each screen



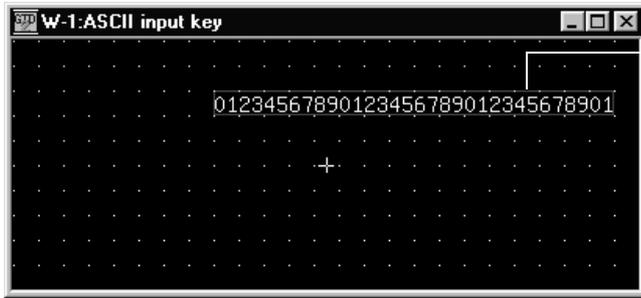
| Items | Description | A | F |
|--|---|-----------------------|---|
| Screen setting has the priority over project setting | Check this item to give screen settings priority over project setting. After setting, select the type of key window to be used. | <input type="radio"/> | × |
| Use default key window | Select this item to use a default key window. | <input type="radio"/> | × |
| Use user-created key window | Select this item to use a user-created key window. | <input type="radio"/> | × |
| DEC key sheet No. | Set a window screen to be used as a key window for numerical input (Decimal/Hexadecimal) and ASCII input. The screen can be confirmed by clicking on [Reference] button. DEC/HEX key No. sheet : When the No. is set to 0, a default key window will be displayed. ASCII key No. sheet : When the No. is set to 0, a key window will not be displayed in GOT-A900 series. In GOT-F900 series, a default key window will be displayed. | <input type="radio"/> | × |
| HEX key sheet No. | | <input type="radio"/> | × |
| ASCII key sheet No. | | <input type="radio"/> | × |
| Screen setting has the priority over project setting | Check this item to give screen settings priority over project setting. After setting, select the display of key window to be used. | <input type="radio"/> | × |
| Display value during input | Check this item to display the value being input on a key window. | <input type="radio"/> | × |
| Display the input range | Check this item to display the data input range on a key window. | <input type="radio"/> | × |

3 Input area/input range setting (for GOT-A900 series only)

Set the area to display the value being input and the input range on user-created key window.

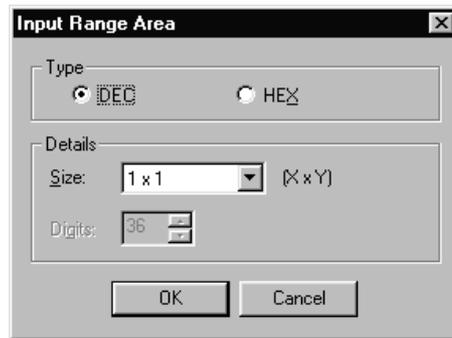
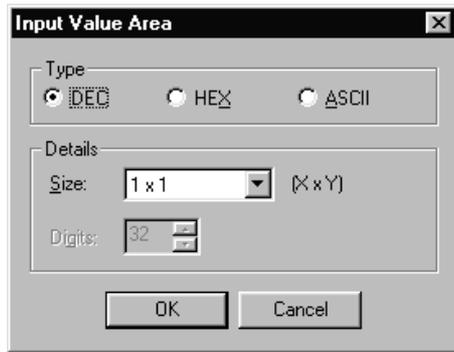
1 Select [Object] → [Key Window Setting] → [Input Value Area] or [Input Range Area] from the menu.

2 Click on the position to display input value/input range.



Input value display and input range display will be arranged by clicking.

3 Double click on the assigned input value area/input range area to set the attribute.



| Items | | Description | A | F |
|---------|-----------|--|-----------------------|---|
| Type | | Select the view format of the input value to be displayed. Decimal : Select this item when a decimal key window has been created. Hexadecimal : Select this item when a hexadecimal key window has been created. ASCII : Select this item when a key window for ASCII input has been created. | <input type="radio"/> | × |
| Details | Text size | Select character size of the input value to be displayed. | <input type="radio"/> | × |
| | Digits | When setting input value area For ASCII input, select the number of digits (1 to 80) to be used for display. When [Type] is set to [Decimal], [Digits] will be fixed to 32 digits; set to [Hexadecimal], [Digits] will be fixed to 16 digits. When setting input range Fixed to 36 digits. | <input type="radio"/> | × |

4.6.5 Cautions

This section provides the cautions for using key window are as follows.

1 Cautions for using default key window and user-created key window.

A key window cannot be displayed when details of alarm is displayed on a comment window by using alarm list display function and alarm history display function.

2 Cautions for creating user-created key window (for GOT-A900 series only)

(1) Object that can be set on user-created key window

Make sure to set only touch switches in which key codes for numerical input/ASCII input has been set on a user-created key window.

(2) Action of the touch switch set on a user-created key window

(a) If the actions of key code (000DH), bit SET and word SET are set together in the action setting, only key code action will be available.

(b) Even if ON/OFF shape is set, touch switch will be displayed in OFF shape.



Hint!

To create a key that includes function (1) and (2)

When creating a key window with a key that includes the above functions, use a normal window screen as a key window without making the settings for displaying the key window.

(3) Size of user-created key window

The key window size is same with the size of set window screen.

It can be changed by changing the size of window screen.



GT Designer2 Version1 Operating Manual

The applicable size of window screen is different according to the status of close key and move key, i.e., whether they are displayed or not.



Section 2.1.2 Window Screen

(4) Input value area/Input range area (for GOT-A900 Series only)

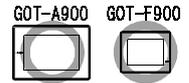
(a) In A95*GOT and A956WGOT, input range area can not be displayed.

In GOT-F900 series, input value area and input range area cannot be set.

(b) Multiple input value areas/input range areas cannot be set on one window screen.

5. Object Settings

5.1 Device Setting



This chapter explains the setting method of the device applicable for monitoring or writing using object functions.

5.1.1 Device setting

1 Device that can be set by GT Designer2

For details on the device type and setting range, please refer to the following.

 Section 2.6 Supported Device

2 Device usable for PLC monitoring

The device range available for setting by GT Designer2 depends on the PLC type selected when the GT Designer2 project is created. ( Section 3.1 GOT/PLC Type Setting)

As the following table shows, the device range set by GT Designer2 may be different with the usable range in PLC.

Example) Difference between the device setting range of PLC and GT Designer2

| Device setting range | SIEMENS PLC: SIMATIC S7-300 Series (Input relay) | Matsushita Electric Works PLC: MEWNET-FP Series (Index register) |
|----------------------|--|--|
| PLC | 10000 to 11277 | IX0 to IX13, IY0 to IY13 |
| GT Designer2 | 10000 to 15117 | N/A |

GT Designer2 does not check whether the setting for the device (device name and device number) is usable for the connected PLC.

For the availability, check it as follows:

(1) Check the following when drawing

- Device type and setting range available for setting by GT Designer2.

 Section 2.6 Supported Device

- Device type and setting range available for PLC monitoring

 User's Manual of the connected PLC

(2) Check when monitoring

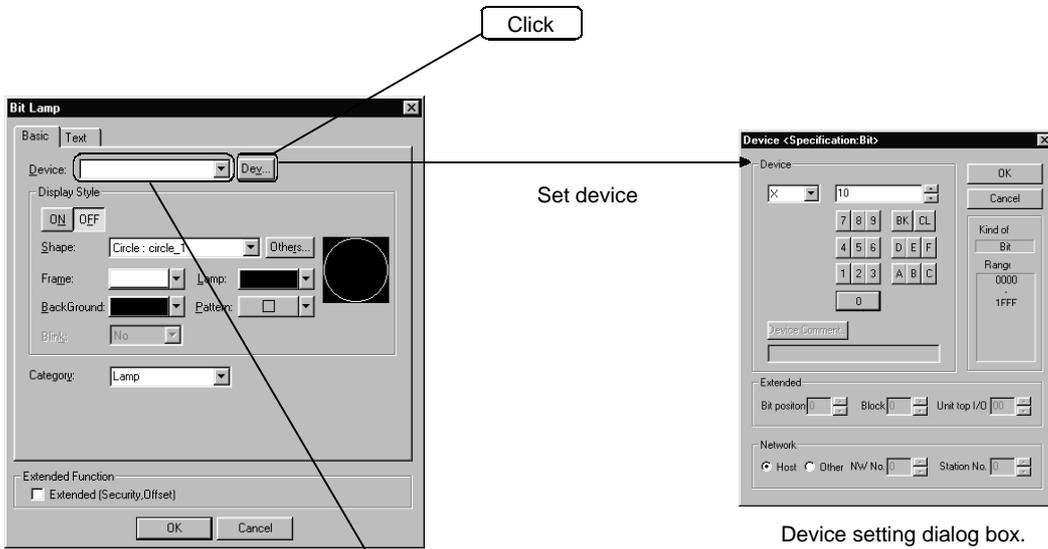
Check the device name and range with the system alarm.

If a device name or range invalid for the PLC is set for monitoring, an error (322 Out of device range error) will occur.

5.1.2 Settings

Click the **Device** button in the setting dialog box provided for each object function and make setting for devices.

Example) Setting a device to be monitored by "Lamp"



Lamp display dialog box.

Device setting dialog box.

Device can be set by input from keyboard.

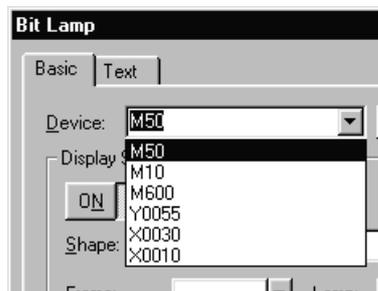


Hint!

Setting of frequently-used device.

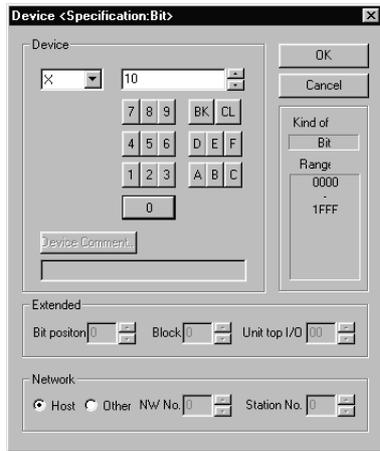
Once a device is set, it can be selected from the displayed list for setting from the next time.

Maximum 10 device names can be added to the list. If more than 10 devices are kept, the device name will be deleted from the oldest one.

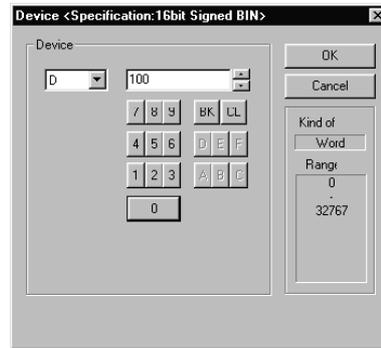


5.1.3 Setting items

1 Mitsubishi Electric PLC



GOT-A900 series



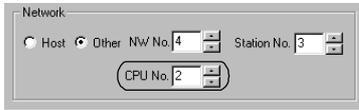
GOT-F900 series

| Items | | Description | A | F |
|--------------------|--------------------------|--|-----------------------|--------------------------|
| Device | | Select the device name to be set. Then, set the device number by <input type="text" value="0"/> to <input type="text" value="F"/> buttons (or by direct input). When setting BM (buffer memory), set the buffer memory address in the space for the device number. | <input type="radio"/> | <input type="radio"/> |
| | Device comment reference | Reading the device comment data created by GX Developer and confirming the device comment/device name is available during device setting. (GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="checkbox"/> |
| Device type | | Displays the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Number range | | Displays the setting range available for the device selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Extension | Bit position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input type="checkbox"/> |
| | R block | Set the block number of the extended file register. (It can be set when "ER" is selected as the device name.) | <input type="radio"/> | <input type="checkbox"/> |
| | BM head | Set the head I/O number of the buffer memory for the special function module. Set the first 2 digits of the 3-digit head I/O number. (It can be set when "BM" is selected as the device name.) | <input type="radio"/> | <input type="checkbox"/> |
| Network setting *1 | | Set the station number of the PLC to be monitored. | <input type="radio"/> | <input type="radio"/> |
| Host | | Select this when monitoring the host PLC. | <input type="radio"/> | <input type="checkbox"/> |
| Other *2 | | Select this when monitoring other PLC. Then, set the station number and network number of the PLC to be monitored. NW No. : Set the network No. PLC station No. : Set the station No. | <input type="radio"/> | <input type="checkbox"/> |

Refer to the next page for the details of *1 and *2.

***1 When monitoring multi-CPU system**

- In the case of GOT-A900 series
Set the CPU number (1 to 4) in the network setting when monitoring a multiple CPU system.
If monitoring a single CPU system, set CPU No. to 0.



- In the case of GOT-F900 series
In the Q multi-CPU system, set the CPU unit No. (1 to 4) in the network setting.
In the single-CPU system, select "System Settings"->"PLC Type", then select "MELSEC-QnA/Q".

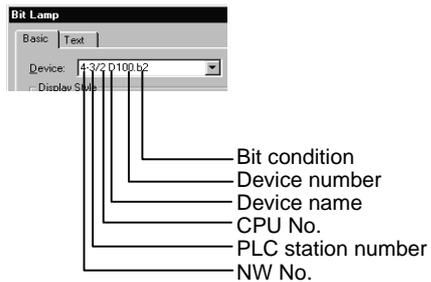
***2 When monitoring B and W assigned in link parameter and network parameter.**

Set device B and W running cyclic communication as [Host].
If it is set as [Other] in the network setting, the cyclic transmission will be changed to the transient transmission irrespective of the network type, resulting in delay of the object display.

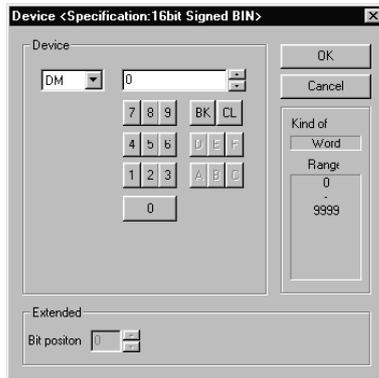


Setting device by inputting directly from keyboard

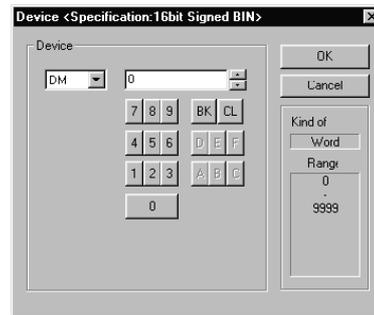
When setting it by inputting directly from the keyboard, set the items as follows:



2 Omron PLC



GOT-A900 series



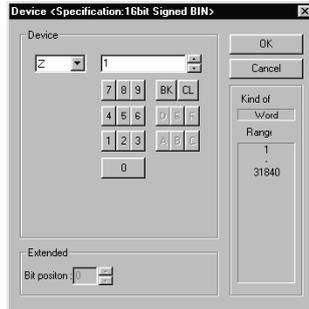
GOT-F900 series

| Items | | Description | A | F |
|--------------|--------------|--|-----------------------|--------------------------|
| Device | | Select the device name to be set. Then, set the device number by <input type="text" value="0"/> to <input type="text" value="F"/> buttons (or by direct input). | <input type="radio"/> | <input type="radio"/> |
| Device type | | Displays the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Number range | | Displays the setting range available for the device selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Extension | Bit position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input type="checkbox"/> |

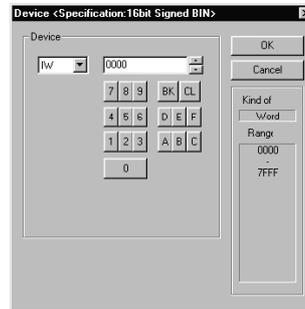
3 Yaskawa PLC

(For GOT-A900: CP-9200 (H), CP-9200SH, CP-9300MS, CP-9300MC (only a portion of this range), MP-920, MP-930, PROGIC-8

For GOT-F900: CP-9200SH, MP-920, MP-930)



GOT-A900 series



GOT-F900 series

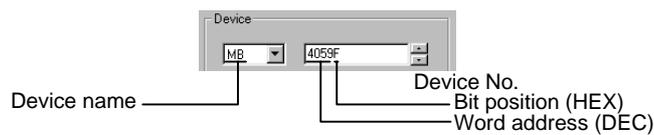
| Items | | Contents | A | F |
|--------------|--------------|---|---|---|
| Device *1 | | Select the device name to be set. Then, set the device number by [0] to [F] buttons (or by direct input). | ○ | ○ |
| Device type | | Displays the device type (Bit/Word) selected in [Device]. | ○ | ○ |
| Number range | | Displays the setting range available for the device selected in [Device]. | ○ | ○ |
| Extension | Bit position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting). | ○ | × |

Refer to the following for details of *1.

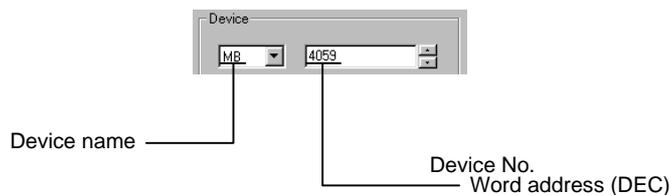
*1 Device settings for Yaskawa PLC (For CP-9200SH, CP-9300MS, MP-920, MP-930)

Set the coil device (MB) as follows:

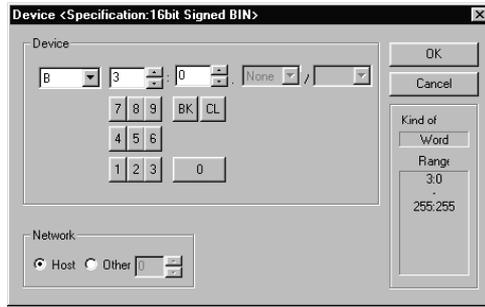
- (1) Set the link and coil as a bit device
Set it in the format of word address (DEC)+bit position (HEX).



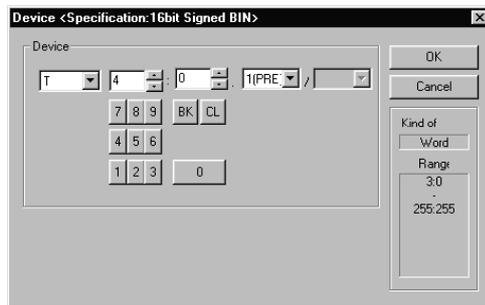
- (2) Set a register as a word device
Set it with a word address (DEC).



4 Allen-Bradley PLC



GOT-A900 series



GOT-F900 series

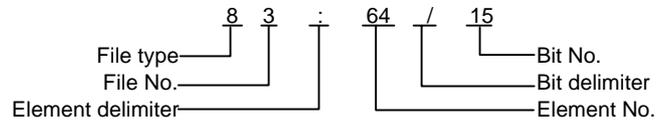
| Items | Description | A | F |
|-----------------|--|-----------------------|--------------------------|
| Device *1 | Select the device name to be set. Then, set the file numbers/element number by <input type="text" value="0"/> to <input type="text" value="9"/> buttons (or by direct input). | <input type="radio"/> | <input type="radio"/> |
| Device type | Displays the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Number range | Displays the setting range available for the device selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Network setting | Set the station number of the PLC connected to the specified device. | <input type="radio"/> | <input type="checkbox"/> |
| | Host Select this when monitoring the host PLC. | <input type="radio"/> | <input type="checkbox"/> |
| | Other Select this when monitoring the other PLC. Then, set the station number of the PLC to be monitored. | <input type="radio"/> | <input type="checkbox"/> |

Refer to the next page for details of *1.

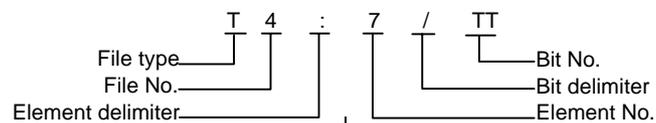
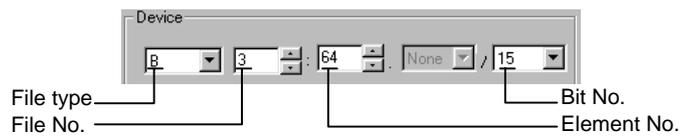
*1 Device settings for Allen-Bradley PLC

The Allen-Bradley PLC device addressing consists of a file and element.
 Make setting as follows using GT Designer 2.

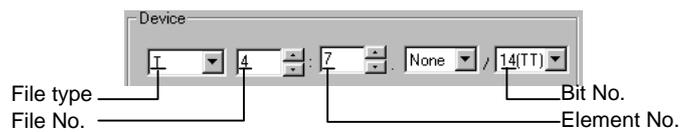
(1) Set a bit address as a bit device



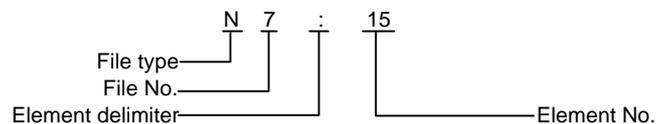
• Setting by GT Designer 2



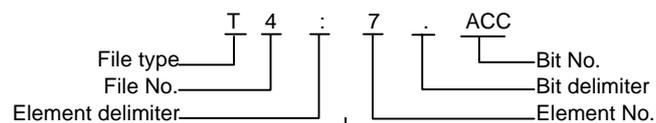
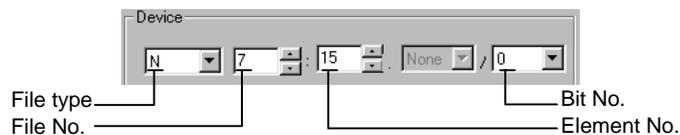
• Setting by GT Designer 2



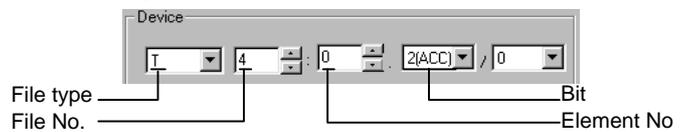
(2) Set an element address as a word device



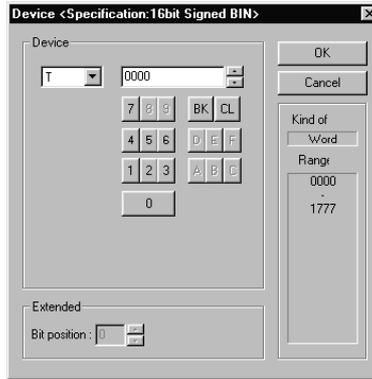
• Setting by GT Designer 2



• Setting by GT Designer 2



5 SHARP PLC (Compatible with GOT-A900 series only)



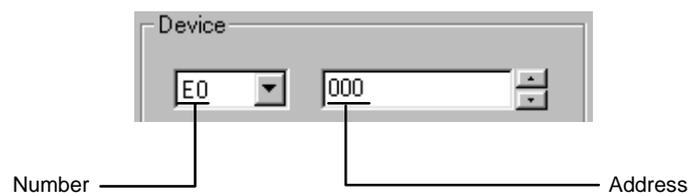
| Items | | Description | A | F |
|--------------|--------------|---|-----------------------|-------------------------------------|
| Device *1 | | Select the device name to be set. Then, set the address number by [0] to [F] buttons or by direct input). | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device Type | | Displays the selected device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Number Range | | Displays the setting range available for the device selected in [Device]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Extension | Bit Position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input checked="" type="checkbox"/> |

Refer to the following for details of *1.

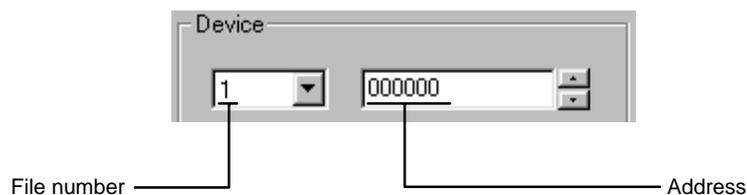
*1 Device settings of SHARP PLC

Make the device setting for Sharp PLC as follows:

- (1) Set a register as a bit device.
 - (a) Registers
Set the type (first 2 digits) and the address.



- (b) File register
Set the file number and the address.



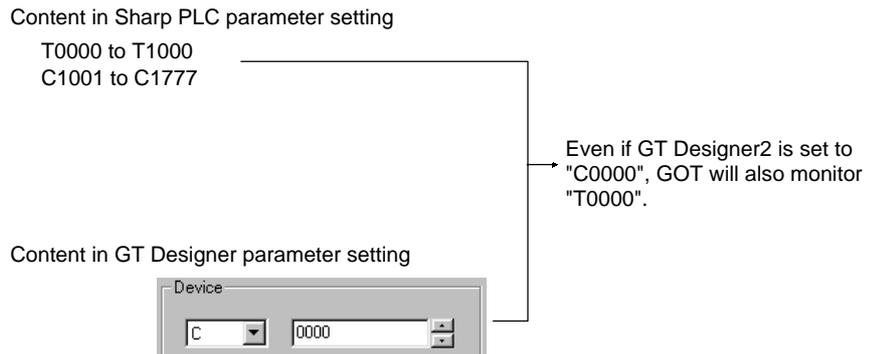
Remark

Monitoring the timer and the counter:

(1) Address setting

Be sure not to set the same address range for the timer and the counter. Even if these addresses are overlapped, GOT will display no error. GOT monitors them according to the address instead of the device name. Therefore, if the device invalid for the Sharp PLC side parameter is set using GT Designer2, GOT will monitor other device (the device corresponding to the set device address range).

Example)



(2) Contact writing into timer and counter

Writing the contact for the timer and counter can only be done while the CPU is in RUN (while the timer and counter is in operation).

(2) Set a register and memory as a word device

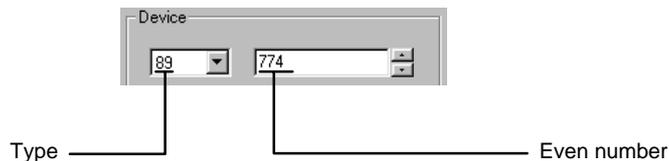
(a) I/O relay

Set a combination of the device address (multiple of 16)+bit address format (fixed to 0).

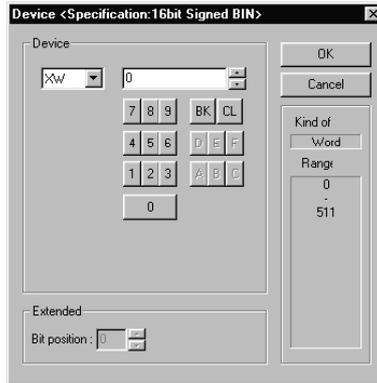


(b) Registers and file register

Set the device address (multiple of 16).



6 TOSHIBA PLC (GOT-A900 series only)



| Items | | Description | A | F |
|--------------|--------------|--|-----------------------|----------------------------------|
| Device *1 | | Select the device name to be set. Then, set the device number by [0] to [F] buttons (or direct input it). | <input type="radio"/> | <input checked="" type="radio"/> |
| Device Type | | Display the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input checked="" type="radio"/> |
| Number Range | | Display the setting range available for the device selected in [Device]. | <input type="radio"/> | <input checked="" type="radio"/> |
| Extension | Bit Position | Set the bit position for the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input checked="" type="radio"/> |

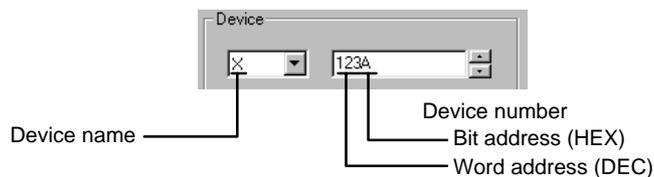
Refer to the following for details of *1.

*1 Device settings for Toshiba PLC

Make the device setting for Toshiba PLC as follows:

- (1) Set a relay as a bit device

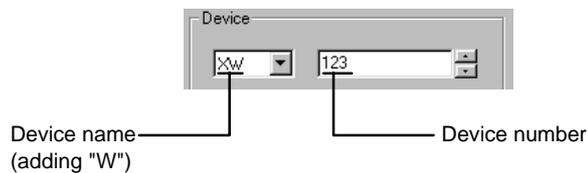
Set the device using the format of word address (DEC)+bit address (HEX)



- (2) Set a relay as a word device

Set the word address (DEC).

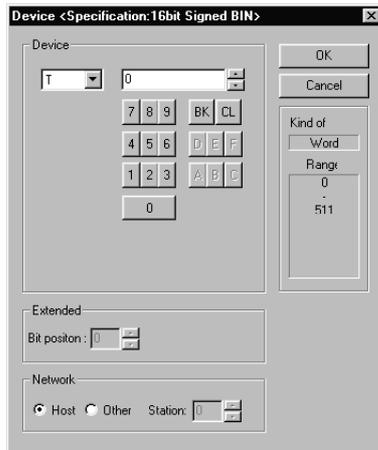
For device name setting, enter "W" after the bit device name.



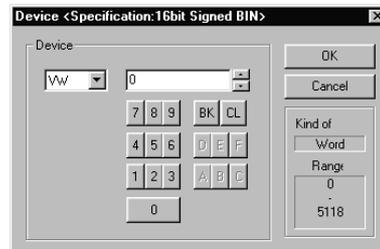
Notation of device address (when using PROSEC V series)

The notation of device address setting is different between the Toshiba PLC peripheral software and GOT. Refer to the following for details.

Section 2.6 Supported Device



GOT-A900 series



GOT-F900 series

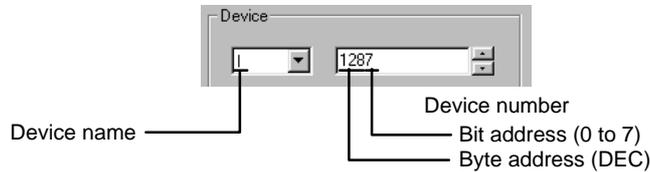
| Items | | Description | A | F |
|-----------------|--------------|--|-----------------------|-------------------------------------|
| Device *1 | | Select the device name to be set. Then, set the device number by <input type="text" value="0"/> to <input type="text" value="F"/> buttons (or direct input it). | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device Type | | Display the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Number Range | | Display the setting range available for the device selected in [Device]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Extension | Bit Position | Set the bit position for the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Network Setting | | Set the monitor target of the set device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Host | Select this to monitor the PLC specified as the host from the GOT utility screen (setup). | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Other | Select this when monitoring the PLC other than the one specified as [Host]. Then, set the PLC MPI address. | <input type="radio"/> | <input checked="" type="checkbox"/> |

Refer to the next page for details of *1.

*1 Device settings of SIEMENS PLC

Make the device setting for SIEMENS PLC as follows:

- (1) Set a bit memory as a bit device
Set the device using the format of byte address (DEC)+bit address (0 to 7)



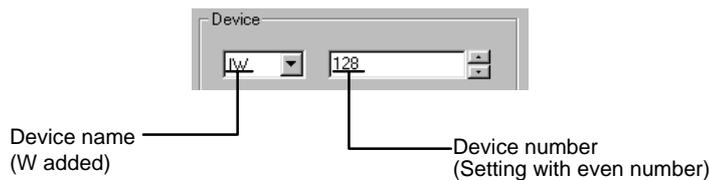
Remark

Notation of bit memory

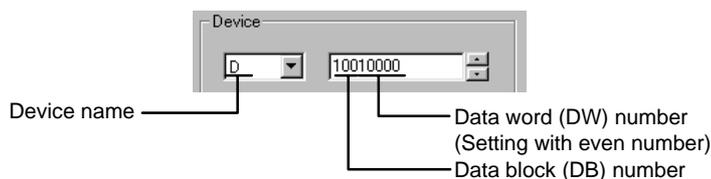
The difference in bit memory notation between GOT and PLC is as follows:

| Notation of GOT | Notation of PLC |
|-----------------|-----------------|
| Q0007 | Q0.7 |

- (2) Set a bit memory as a word device
Set it with device number.
For the device name setting, enter "W" after the bit memory device name.



- (3) When setting a data register
Set the device using the format of data block (DB) + data word (DW).



Remark

- (1) Before setting data register

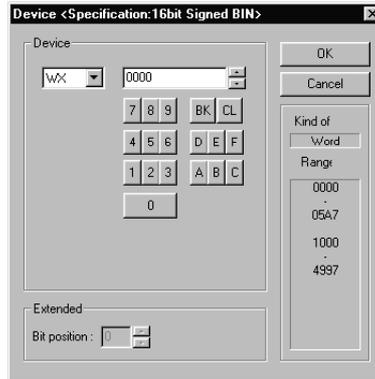
- (a) It is necessary to define the data block using a peripheral software and sequence program, before using a data register.
- (b) Setting more than one data block cannot be done.

- (2) Timer (Current value) (T)

Only one device can be set for the write target of this device.

Therefore, multiple devices, such as, using the recipe function, etc., cannot be used.

8 HITACHI PLC (GOT-A900 series only)



| Items | | Description | A | F |
|--------------|--------------|--|-----------------------|----------------------------------|
| Device *1 | | Select the device name to be set. Then set the device number by <input type="text" value="0"/> to <input type="text" value="F"/> buttons (or direct input). | <input type="radio"/> | <input checked="" type="radio"/> |
| Device Type | | Display the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input checked="" type="radio"/> |
| Number Range | | Display the setting range available for the device selected in [Device]. | <input type="radio"/> | <input checked="" type="radio"/> |
| Extension | Bit Position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | <input type="radio"/> | <input checked="" type="radio"/> |

Refer to the following for details of *1.

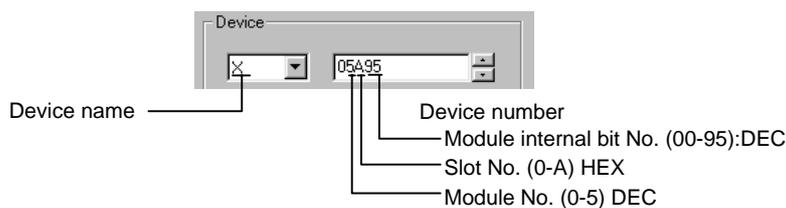
*1 Device setting for Hitachi PLC

Make the device setting for Hitachi PLC as follows:

(1) When specifying an external I/O device

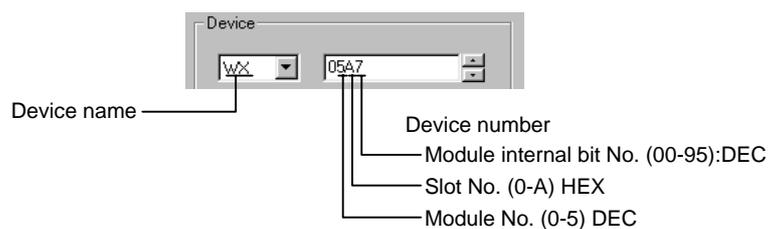
(a) When setting a bit device

Set the device using the format of module No.+ slot No.+ module bit No.



(b) When setting a word device

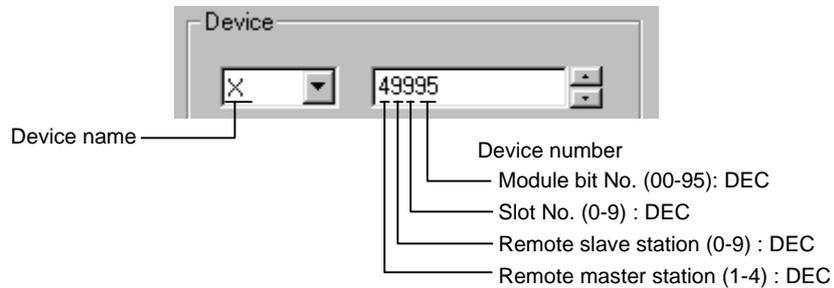
Set the device using the format of module No.+ slot No.+ module bit No.
For the device name setting, enter "w" before the bit device name.



(2) When specifying a remote external I/O device

(a) Setting a bit device

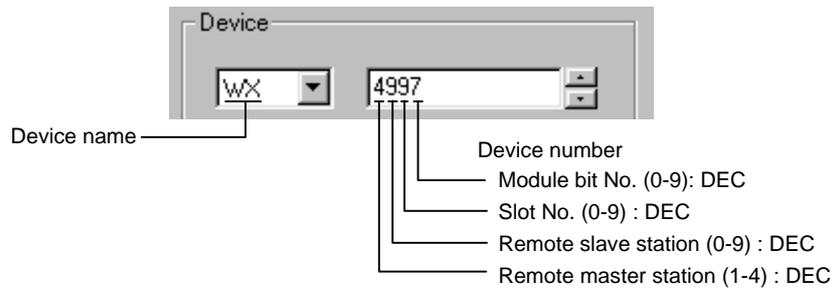
Set the device using the format of remote master station + remote slave station + slot No. + module bit No.

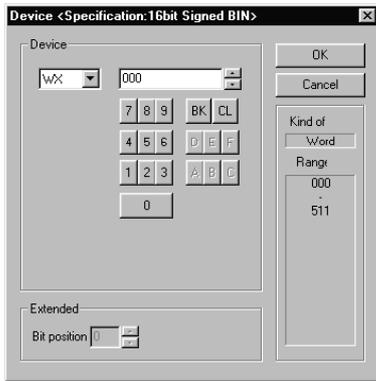


(b) When setting a word device.

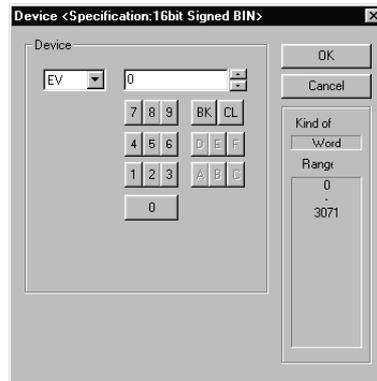
Set the device using the format of remote master station + remote slave station + slot No. + module bit No.

For device name setting, enter "W" before the bit device name.





GOT-A900 series



GOT-F900 series

| Items | | Description | A | F |
|--------------|--------------|---|---|---|
| Device *1 | | Select the device name to be set. Then, set the device number by [0] to [F] buttons. (or direct input). | ○ | ○ |
| Device Type | | Display the device type (Bit/Word) selected in [Device]. | ○ | ○ |
| Number Range | | Display the setting range available for the device selected in [Device]. | ○ | ○ |
| Extension | Bit Position | Set the bit position of the word device to be monitored. (It can be set if the word device name is selected in [Device] in bit device setting.) | ○ | × |

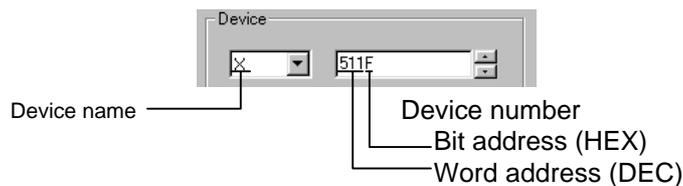
Refer to the following for details of*1.

*1 Device setting for Matsushita Electric Works PLC

Make the device setting for Matsushita Electric Works PLC as follows.

(1) Set a contact as a bit device

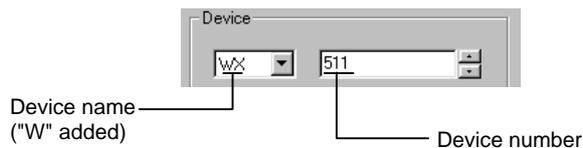
Set the device using the format of word address (DEC)+ bit address (HEX).



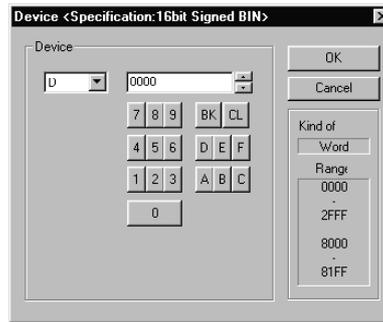
(2) Set a contact as a word device

Set the device number.

Enter "W" before the device name, not including the bit address.

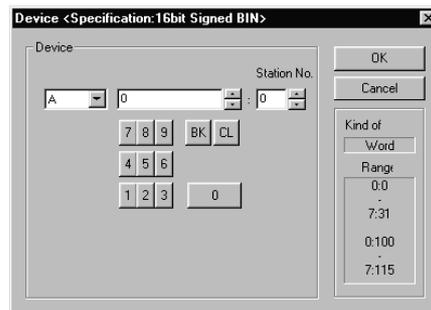


10 FUJI Electric Works PLC (GOT-F900 series only)



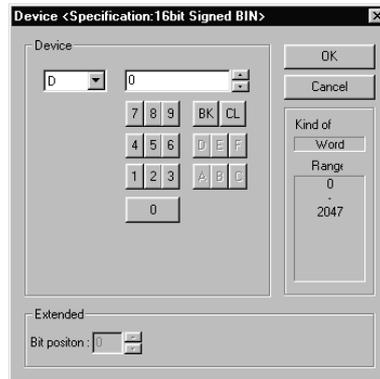
| Items | Description | A | F |
|--------------|---|---|---|
| Device | Select the device name to be set. Then, set the device number by [0] to [F] buttons (or direct input). | × | ○ |
| Device Type | Display the device type (Bit/Word) selected in [Device]. | × | ○ |
| Number Range | Display the setting range available for the device selected in [Device]. | × | ○ |

11 Inverter (GOT-F900 series only)



| Items | Description | A | F |
|--------------|---|---|---|
| Device | Select the device name to be set. Then, set the device number by [0] to [9] buttons (or direct input). | × | ○ |
| Device Type | Display the device type (Bit/Word) selected in [Device]. | × | ○ |
| Number Range | Display the setting range available for the device selected in [Device]. | × | ○ |

12 Microcomputer



| Items | | Description | A | F |
|--------------|--------------|---|-----------------------|----------------------------------|
| Device *1 | | Select the device name to be set. Then, set the device number by <input type="text" value="0"/> to <input type="text" value="9"/> buttons (or direct input). | <input type="radio"/> | <input type="radio"/> |
| Device Type | | Display the device type (Bit/Word) selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Number Range | | Display the setting range available for the device selected in [Device]. | <input type="radio"/> | <input type="radio"/> |
| Extension | Bit Position | Set the bit position of the word device to be monitored. (It can be set if the word device name selected in [Device] in bit device setting.) | <input type="radio"/> | <input checked="" type="radio"/> |

5.2 Object Arrangement and Display Image Setting

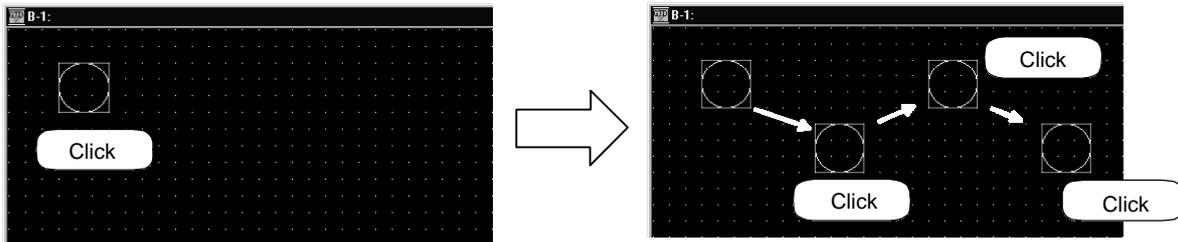


5.2.1 Object arrangement

If the menu/icon for setting object is selected, the cursor will go to arrangement mode (+).

In default setting, clicking on the drawing screen arranges an object. When continuously clicked on the screen, multiple same type objects will be continuously arranged.

The arrangement mode can be released by right-clicking the mouse or using the [ESC] key.



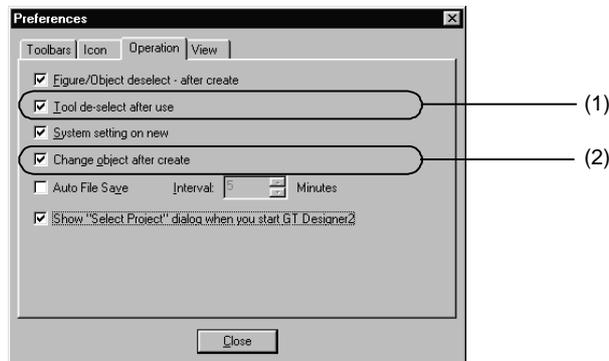
1 To change the object arrangement method

Object arrangement method can be changed in the Preferences dialog box.

(Select [Project] → [Preferences] from the menu to display the dialog box.)

For details of the Preferences dialog box, refer to the following manual.

 GT Designer2 Version1 Operating Manual



Preferences dialog box

(1) Tool de-select after use

To select whether to arrange one object or multiple objects continuously.

The option is checked when releasing the arrangement mode after one object is arranged.

(2) Change object after creation

To select whether to change object after object arrangement.

The option is checked when displaying the dialog box for the arranged object after object arrangement is completed.

5.2.2 Object shape setting

Frames, i.e., shapes can be set to objects in order to make distinction between display images and ranges of objects such as touch switches, lamps and others.

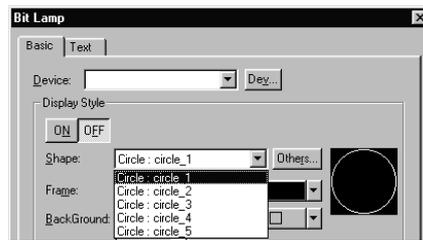
1 Setting procedure

Set the shape in the object setting dialogue box.

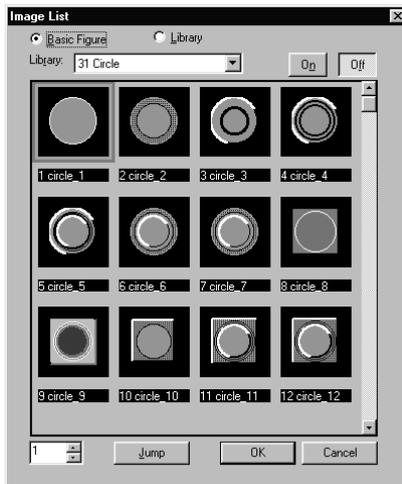
The following explains the setting procedure of shape with the example of bit lamp.

- Five basic shapes can be selected in the *Basic* tab.

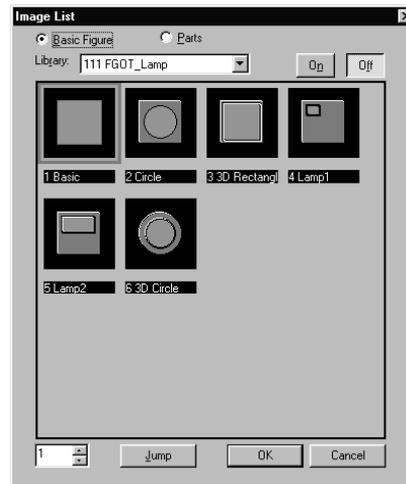
To select other shapes than basic ones, click on the **Others** button.



- Click on the **Others** button to display the "Image List" dialogue box. Select one shape among them.



GOT-A900 series



GOT-F900 series

| Items | Description | A | F |
|---|--|---|---|
| Basic figure library *1 *2/parts (Only for lamp function and touch switch function) | Select the shape for an object. Basic figure : Basic shapes that have been registered for each object Library : Shapes that have been registered as library (My favorite, User defined Libraries, System Libraries). (Only for GOT-A900 series) Parts : Shapes that have been registered as parts. (Only for GOT-F900 series) | ○ | ○ |
| Library | Switch the basic shape type or library type. | ○ | ○ |
| ON/OFF (Only for lamp function and touch function) | These buttons are used to switch the shapes displayed at the time of ON/OFF. | ○ | ○ |

| Items | Description | A | F |
|---|--|---|---|
| Image view | Select the shape for an object. | ○ | ○ |
|  | Set the No. of shape to be displayed. Click on the [Jump] button to switch the shapes. | ○ | ○ |

*1 For details of 1, refer to the followings.

*1 Use of high quality font

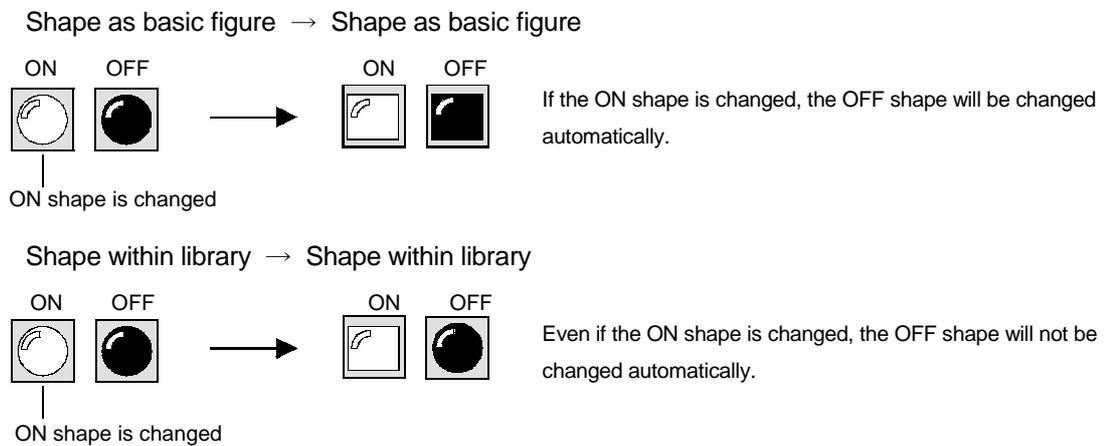
When using the library that includes the high quality font for lamp function and touch switch function, make the following settings as well. Without the setting, the high quality font cannot be displayed.

- (1) Register high quality font as comment
 Register the character string of high quality font as high quality font comment.
 It is not necessary to display the registered comment.
- (2) Arrange high quality font as character on screen
 Arrange the character string of high quality font as text of high quality font on a screen.
 It is not necessary to display the screen in which that text is arranged.

*2 Cautions for changing switch/lamp shape

When switch/lamp shape is changed, the ON/OFF shapes may not be switched automatically depending on the shape used as switch/lamp. Make sure to check whether the ON/OFF shape can be automatically switched before changing the switch/lamp shape, and make the relevant setting as necessary.

Example) Lamp (Bit)



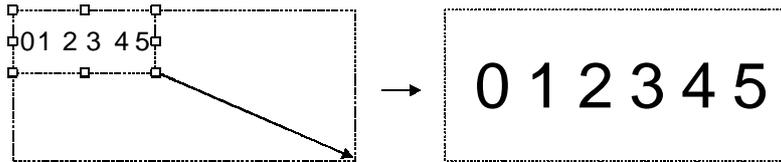
5.2.3 Object size change

This section explains how to change the size of arranged object.

1 Object size change

(1) Method of changing size

- 1 Select the object to be changed in size.
- 2 Position the cursor over the sizing handles, click and drag it to change the object size.



Remark

The size of some objects cannot be changed using the above method.

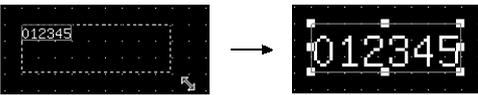
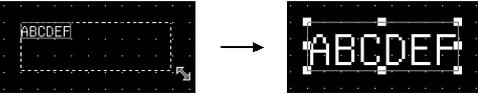
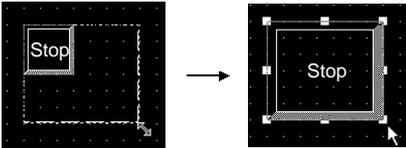
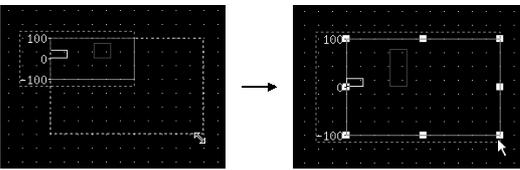
The size of data list and alarm history is determined according to the text size set on the corresponding basic tab. Therefore, changing the size using the above method is not applicable.

To change the object size, open the setting dialogue box and change the text size within the basic tab.

(2) Text size

The text size changes with the object size.

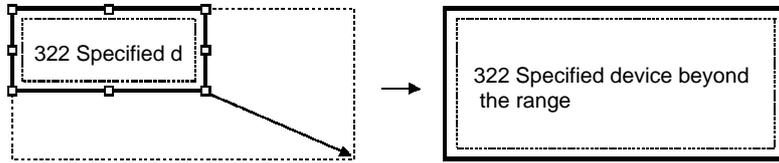
The changing details are different according to object types.

| Change of text size | Object | Details of change |
|---------------------|---|--|
| Changeable | Numerical display Numerical input | The text size is enlarged 0.5 to 8 times from the original object size.  |
| | ASCII display ASCII input | The text size is enlarged 1 to 8 times from the original object size.  |
| Unchangeable | Touch switch Lamp Alarm list Comment display Data list Alarm history Trend graph Line graph Bar graph Statistics graph Scatter graph Panel meter | The text size can be changed by setting text size from the dialog box of each object. Example) Touch switch  Example) Bar graph  |

2 Change size of object with shape

(1) Method of changing size

- 1 Select the object to be changed in size.
- 2 Position the cursor over the sizing handles, click and drag it to change the object size.

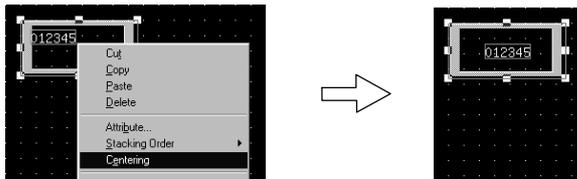


(2) Misalignment of object and shape

Some objects, to which shape is set, may cause the following phenomena;
When the whole object size is changed, i.e., enlarged by click and drag, only the shape is enlarged, but the object remains at the original position, resulting in misalignment between the object and shape.

(a) Center the object in its shape

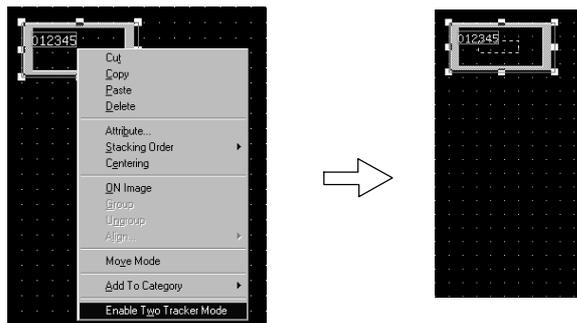
Right click on the object to realign the shape with the object.



Right-click the mouse and select [Centering] in menu.

(b) Move the object to any position within the shape

The position of object and shape can be changed separately as instructed below.

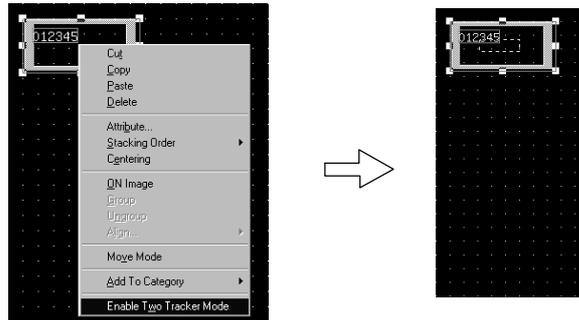


Right-click the mouse and select [Enable Two Tracker Mode] in menu.

Drag the object to align it with the shape.

(c) Change the size of object and shape separately

The size of object and shape can be changed separately as instructed below.



Right-click the mouse and select [Enable Two Tracker Mode] in menu.

Drag the object to change its size.

5.3 State Setting



With this setting, the ON/OFF status of bit device can be changed as well as the color of object shape according to the word device value.

- Word device value being monitored by object function.
- Bit device ON/OFF for display change.
- Word device value for display change.

The objects compatible with state setting and the conditions for display change are listed in the following table.

○: Applicable ×: N/A

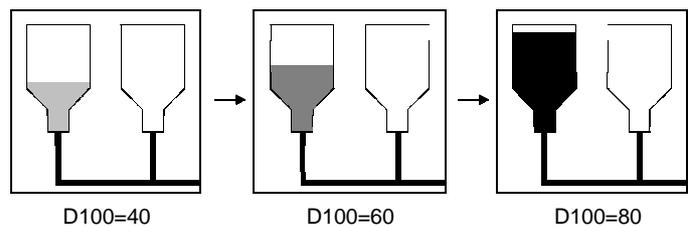
| Object type | Conditions for display changing | | |
|---|-----------------------------------|--------------------|-------------------|
| | Word device value being monitored | For display change | |
| | | Bit device ON/OFF | Word device value |
| Numerical display Word parts display Parts movement (word) Word lamp | ○ | ○ | ○ |
| Numerical input Data list Word comment Level Panel meter Scatter graph | ○ | × | ○*1 |

*1 The word device value being monitored must be set as the condition for display change.

1 Display changes according to the word device value being monitored.

Example) Level display function

- Word device D100 being monitored

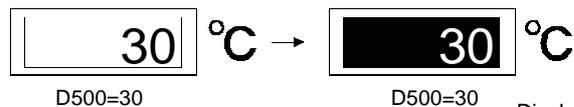


Display color changes according to the word device value being monitored.

2 Display changes according to word device ON/OFF.

Example) Numerical display function

- Bit device D500 (temperature) being monitored
- Bit device M10 (ON in error occurrence) for display changing

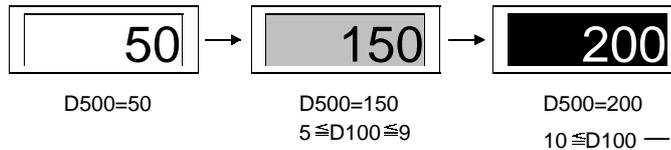


Display changes due to an error occurrence.

3 Display changes according to word device value

Example) Numerical display function

- Bit device D500 (production output) being monitored
- Word device D100 (defective products) for display changing



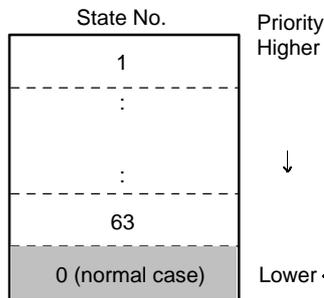
Display changes when the number of defective products exceeds the specified number.

5.3.1 Display priority

Up to 64 (0 to 63) states can be set to one object.

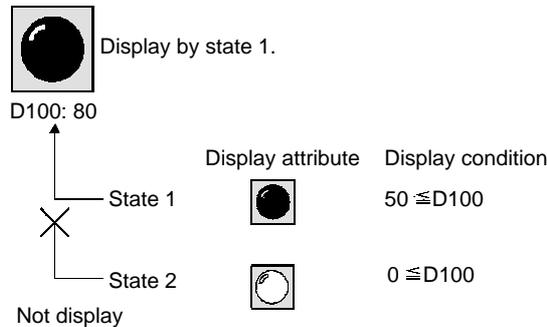
When display change conditions overlap, the state of the smaller No. will be displayed with the priority.

[Display priority]



The display attribute that must be set to an object. If conditions for other states (1 to 63) have not been satisfied, the attribute of state No.0 is displayed.

Example) When conditions for displaying state 1 and 2 occur simultaneously.



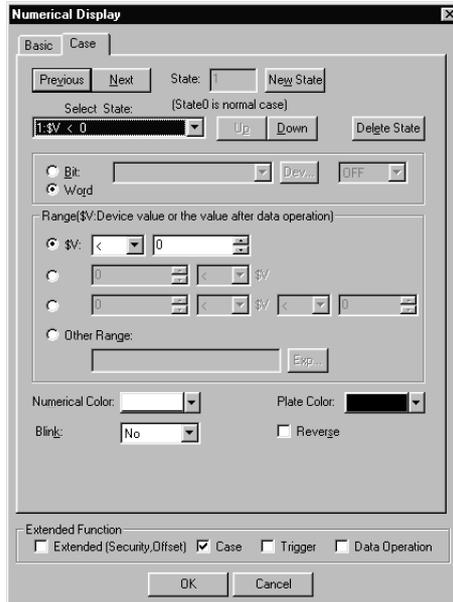
5.3.2 Arrangement and settings

State is set for each object function.

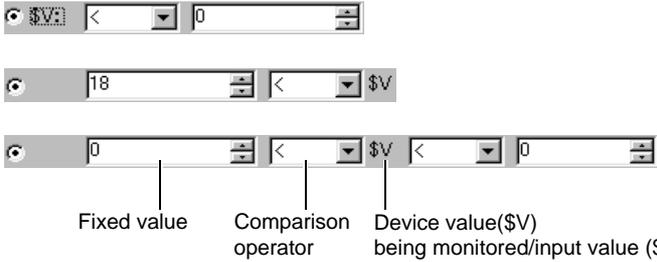
For details, refer to the arrangement and setting of the object.

5.3.3 Setting items

This section explains the setting items for state setting with the example of numerical display.



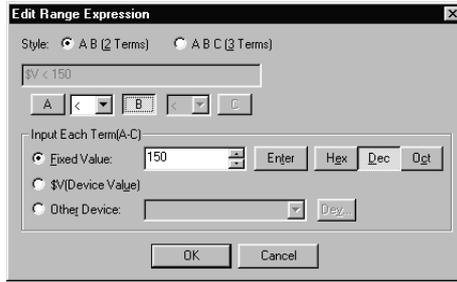
| Items | Description | A | F |
|---------------|---|-----------------------|-------------------------------------|
| State | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New state | Create a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete state | Delete a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/next | Switch the currently editing state to the previous/next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/down | Change the priority level of the currently editing state. Example) When changing the priority level of "B" in state 2 with the [Up]/[Down] buttons. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Up</p> </div> <div style="text-align: center;"> <p>Down</p> </div> </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select state | Displays the list of preset states. Selecting any state from the list can make it active on the tab. <div style="text-align: center;"> <p>Display conditional expression State</p> </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | Description | A | F |
|--|--|-----------------------|-------------------------------------|
| Device | <p>Select the display change conditions according to state.</p> <p>Bit : Select it when changing the display according to the ON/OFF status of bit device. After selecting, set the bit device and device status (ON/OFF).</p> <p> Section 5.1 Device Setting)</p> <p>Word : Select it when changing the display according to the value of word device. After selecting, set the conditional expression of word device value in [Range]</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | <p>Set the value of word device range to change the display using a conditional expression.</p> <ul style="list-style-type: none"> Select the conditional expression from the following patterns. Combine device value (\$V, \$W) and fixed value to set the conditional expression. <div style="text-align: center;">  </div> <ul style="list-style-type: none"> When setting the operation expression other than the above 3 patterns.*1 User-setting conditional expression. Click on the [Range] button after selecting [Others]. For user-setting conditional expression, the word device for display change can be set as a condition. <div style="text-align: center;">  </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |
|  (Fixed value) | Input the value in decimal. | <input type="radio"/> | <input checked="" type="checkbox"/> |
|  (Comparison operator) | <p>Set the comparison operator of conditional expression.</p> <p>< : The left value is smaller than right value. == : The left value is equal to the right value. <= : The left value is smaller than or equal to the right value. != : The left value is not equal to the right value.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| \$V (\$W) | Indicates the device value monitored using the object. Indicates the operation value when data operation function is used. (The input value of numerical input function is expressed as \$W.) | <input type="radio"/> | <input checked="" type="checkbox"/> |
|  *1 | Used to display the range input dialogue box. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Color | Set the color of numeric value when display conditions of the state are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Plate color | <p>Select the plate color when display conditions of the state are satisfied.</p> <div style="text-align: center;">  </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Blink | <p>Select the blinking pattern of numerical value when display conditions of state are satisfied.</p> <p>None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Reverse | Check this item to reverse the numerical value when display conditions of state are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

*1 For details, refer to the next page.

***1 Input range dialog box setting**

This dialog box is used to set the value range of word device used for state.



| Items | Description | A | F |
|---|--|---|---|
| Style | <p>Select the format of the conditional expression.</p> <p>A B (2 items) : Display condition range is set using two expressions. A B C (3 items) : Display condition range is set using three expressions.</p> <p>Example)</p> <ul style="list-style-type: none"> • \$V = 500 • 10 <= \$V(\$W) <= D50 <p>Value of the word device for display change.</p> <p>Set the comparison operator (<,<=,==,!=) of the conditional expression.</p> <p>\$V: Indicate the value of the device monitored using object. It indicates operation value when data operation function is used.</p> <p>\$W: Indicate the input value of the data input function.</p> <p>Fixed value directly set by user (hexadecimal system/decimal system/octal system)</p> | ○ | × |
|  | Click on the [A] to [C] button to set fixed value and variable value of each item. | ○ | × |
|  | <p>Set the comparison operator of conditional expression.</p> <p>< : The left value is smaller than the right value. == : The left value equals the right value. <= : The left value is smaller than or equivalent with the right value. != : The left value doesn't equal the right value.</p> | ○ | × |
| Each Item | <p>Set the description of condition expression items.</p> <p>Fixed value : Set the fixed value. Then, input the numeric value and click on the [Input] button. The data type of numeric value can be selected with the [HEX] [DEC] [Octal] buttons.</p> <p>\$V, \$W (Device value) : Specify the word device that is set as monitoring and writing target by using the object.</p> <p>Other device value : Set the word device for display change. (☞ Section 5.1 Device Setting)</p> | ○ | × |

5.3.4 Example of state setting operation

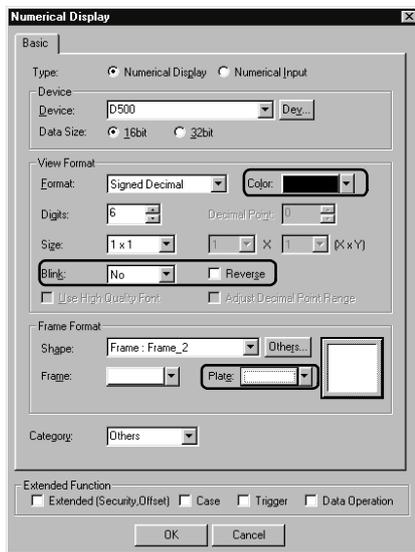
This section explains the state setting operation with the example of numerical display setting.

- The monitor word device
D500 (productivity)
 - The word device for display changes
D100 (the number of defective goods)
-

1 Set state 0

Set state 0 on the basic tab.

The display attribute set on the basic tab is displayed except when the conditions set for state 1,2 are applied.



(1) Setting the conditions of displaying state 0 is not required.

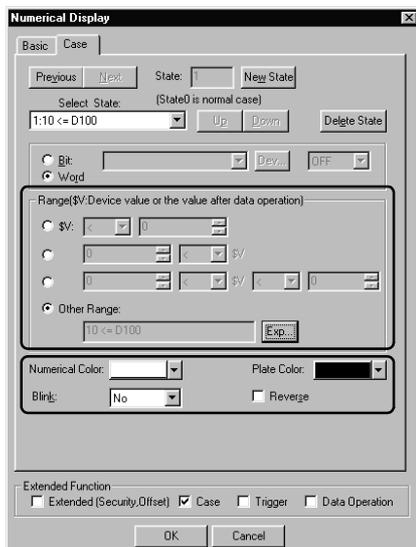
(2) Set the display attribute of state 0.

The display attribute set here is changed when the conditions for each state are satisfied.

- Color : Black
- Blink : None
- Reverse : Unchecked
- Plate color : White

2 Set state 1

Set state 1 on the case tab.



(1) Create state 1 by clicking [New state].

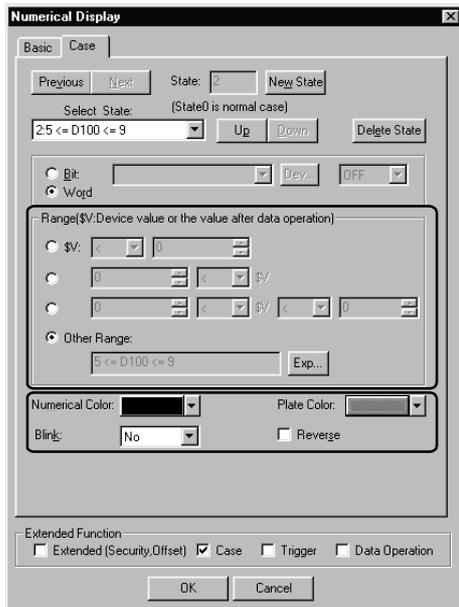
(2) Set the conditions displaying state1.

- Others ($10 \leq D100$)

(3) Set the display attribute of state1.

- Color : White
- Blink : None
- Reverse : Unchecked
- Plate color : Black

3 Set state 2.



- (1) Click on the [New State] to create State No.2.
- (2) Set the conditions of displaying State No.2.
 - Others ($5 \leq D100 \leq 9$)
- (3) Set the display attribute of State 1.
 - Color : Black
 - Blink : None
 - Reversed : Unchecked
 - Plate Color : Gray Color

5.3.5 Cautions

1 Cautions for drawing

Do not set the conditional expressions that cannot be satisfied (e.g. “ $100 < \$V < 10$ ”).
GT Designer2 does not check whether the conditional expressions are applicable or not.
If this kind of conditional expression is set, the corresponding state will not be displayed during monitoring by GOT.

5.4 Trigger Setting

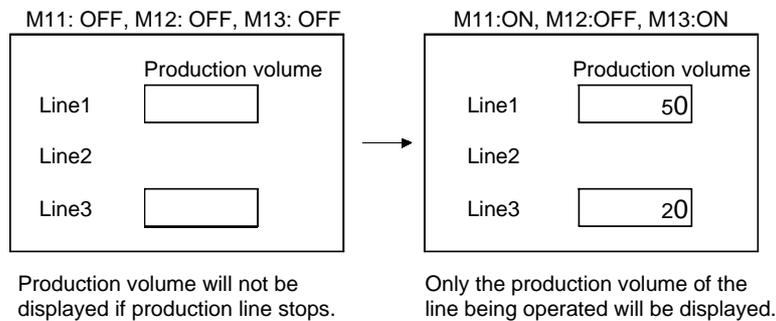


The following triggers can be set for monitoring and writing operations of each object function.

- (1) Trigger (for display) (For GOT-A900 series only)
Set for the object that monitors device.
When the trigger is not satisfied, the object will stop device monitor or disappear.
- (2) Trigger (for write)
Set for the object that writes to device.
When the trigger is not satisfied, the writing operation will be disabled or only the operable objects will be displayed. (GOT-F900 series can disable writing operation only.)

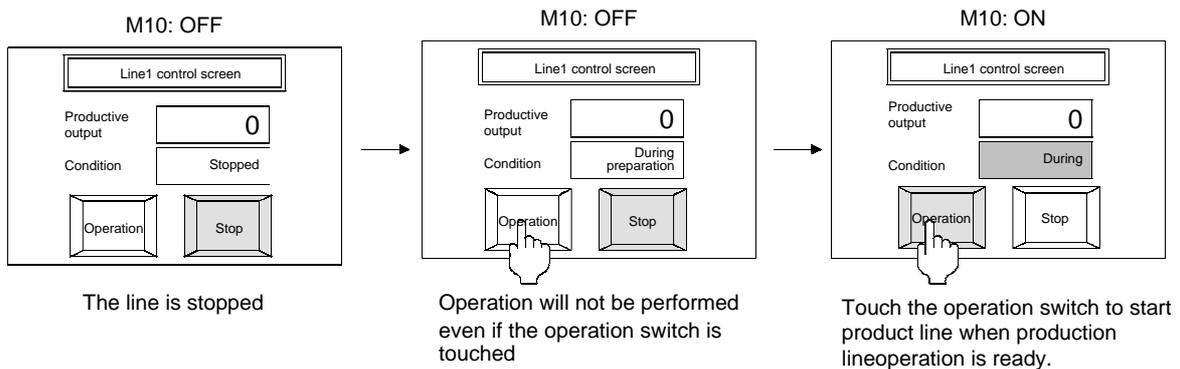
Example 1) Only the numerical display functions that are monitoring the production line are displayed.

Production start signal (line1: M11, line2: M12, line3: M13)



Example 2) Set an interlock device for a touch switch

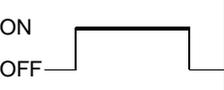
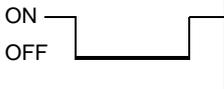
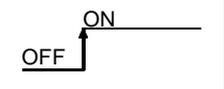
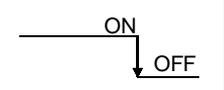
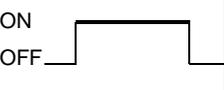
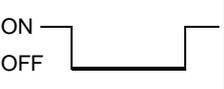
Line operation ready signal: M10



1 Trigger

The triggers and actions that can be set for objects are shown below.

(1) GOT-A900 Series

| Trigger type | Execution trigger | Actions when condition is satisfied |
|----------------------|---|--|
| Ordinary | None | <p><Trigger></p> <ul style="list-style-type: none"> The object always monitors devices. <p><Trigger></p> <ul style="list-style-type: none"> The action set for object can always be executed. |
| ON |  | <p><Trigger></p> <ul style="list-style-type: none"> When the trigger is satisfied, the object monitors devices based on the GOT monitoring cycle. The action to be taken when trigger is not satisfied can be specified by selecting check /uncheck [Hold Display] in the trigger setting. ( Section 5.4.2 Setting items) Check: Holds the previous object display *2 Uncheck: Erases the object display *3 |
| OFF |  | <p><Trigger></p> <ul style="list-style-type: none"> When the trigger is satisfied, the actions set for the object can be executed. When the trigger is not satisfied, the object will disappear. *3 ( Section 4.5 Auxiliary Setting) |
| Rise |  | <p><Trigger></p> <ul style="list-style-type: none"> When the trigger is satisfied, the object monitors the device only once. Even when the trigger is not satisfied, the object can be displayed by monitoring device at the time of screen switch. Check [Initial Display] in the trigger setting. ( Section 5.4.2 Setting items) |
| Fall |  | |
| Sampling | None | <p><Trigger></p> <ul style="list-style-type: none"> The object monitors the devices at each set cycle (1 to 3600 seconds) |
| Range | Word device value | <p><Trigger></p> <ul style="list-style-type: none"> When the trigger is satisfied, the object monitors devices based on the GOT monitoring cycle. |
| Multi bit trigger *1 | Logical operation result of ON/OFF condition of the set multi bit device*1 | <p><Trigger></p> <ul style="list-style-type: none"> When the trigger is satisfied, the actions set for the object can be executed. When the trigger is not satisfied, the previous object display is held. When the trigger is not satisfied, the object will disappear. *3 ( Section 4.5 Auxiliary Setting) |
| ON Sampling |  | <p><Trigger></p> <ul style="list-style-type: none"> The object monitors the devices if the trigger of each set cycle (1 to 3600 seconds) is satisfied. |
| OFF Sampling |  | |

For details of *1 to *3, refer to the following.

***1 Multi bit trigger**

As trigger, 2 to 8 bit devices and its ON/OFF statuses.

Operate logical AND or logical OR based on the preset ON/OFF status of the multi bit device.

Example) Trigger M10 : ON
 M11 : OFF
 M12 : ON

Area where trigger is satisfied ○: Trigger satisfied ×: Trigger not satisfied

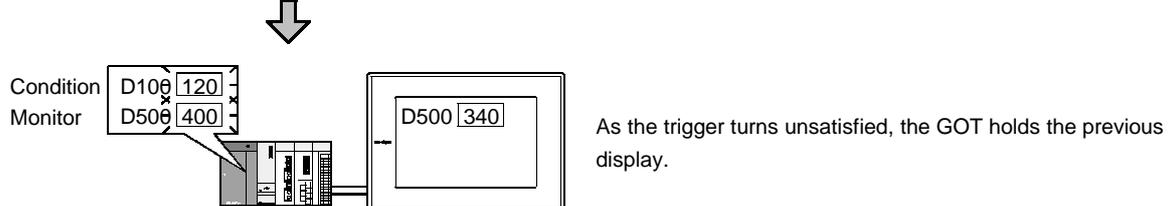
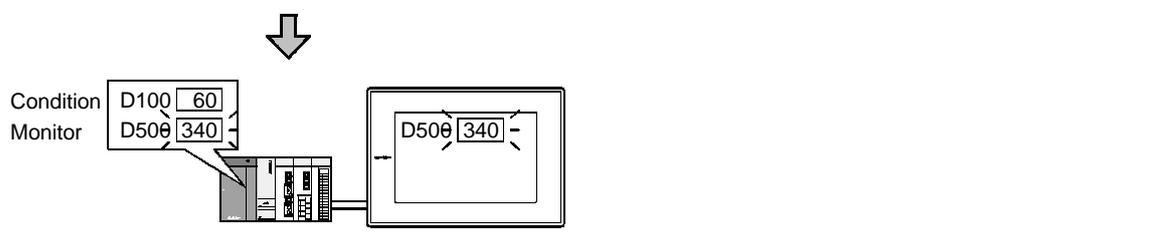
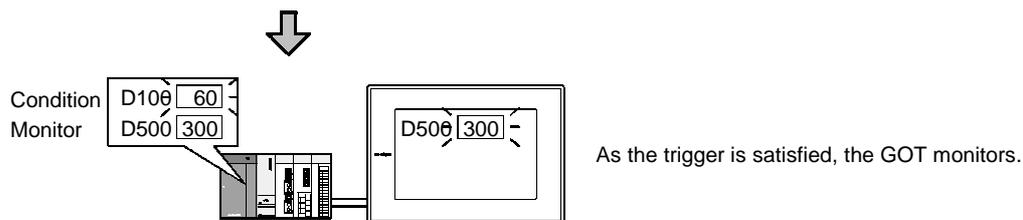
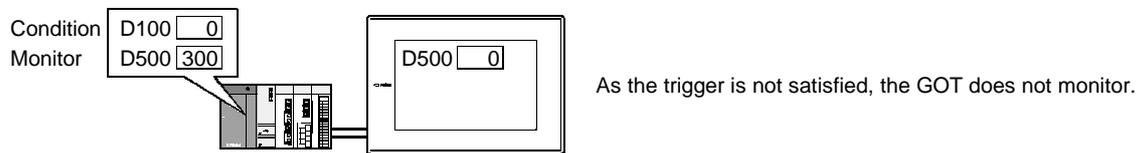
| M10 | M11 | M12 | Logical AND | Logical OR |
|-----|-----|-----|-------------|------------|
| OFF | OFF | OFF | × | ○ |
| ON | OFF | OFF | × | ○ |
| OFF | ON | OFF | × | × |
| ON | ON | OFF | × | ○ |
| OFF | OFF | ON | × | ○ |
| ON | OFF | ON | ○ | ○ |
| OFF | ON | ON | × | ○ |
| ON | ON | ON | × | ○ |

***2 Trigger and display on GOT**

When the trigger is not satisfied, GOT does not monitor.

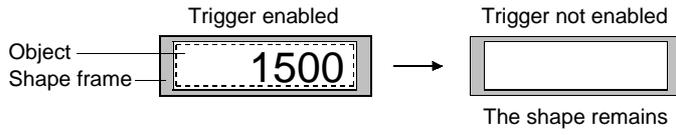
If the trigger is satisfied once and then unsatisfied, the previous display is held.

Example) • Condition: range (D100: 50 to 100) • Display: D500 is numerically displayed



***3 Object placed into shape**

The object shape will remain when the object is erased.



(2) GOT-F900 Series

| Trigger type | Execution trigger | Actions when trigger is satisfied |
|--------------|-------------------|---|
| Ordinary | None | <Trigger> <ul style="list-style-type: none"> ● The action set for object can always be executed. |
| ON | | <Trigger> <ul style="list-style-type: none"> ● When the trigger is satisfied, the actions set for the object can be executed. ● When the trigger is not satisfied, the actions set for the object cannot be executed. (☞ Section 4.5 Auxiliary Setting) |
| OFF | | |

2 Objects that support trigger condition

The object types that can be set by a trigger are listed below.
The trigger type varies according to object types.

(1) GOT-A900 Series

| Object type | Trigger type | | | | | | | ON Sampling/ OFF Sampling |
|---|--------------|--------|-----------|----------|-------|----------------------|---|------------------------------------|
| | Ordinary | ON/OFF | Rise/Fall | Sampling | Range | Multi Bit trigger | | |
| Numerical display Data list ASCII display Comment display Alarm list (User alarm) display Parts display Parts movement Line graph Bar graph Statistics graph Level | ○ | ○ | ○ | ○ | ○ | ○ | × | |
| Trend graph Scatter graph Line graph *4 | × | × | ○ | ○ | × | × | ○ | |
| Alarm list (User alarm)*5 | × | × | × | ○ | × | × | × | |
| Touch switch Numerical input ASCII input | ○ | ○ | × | × | ○ | ○ | × | |

*4 [Locus] function has been set.

*5 [Store Memory] function has been set using alarm list (user alarm) display function.

(2) GOT-F900 Series

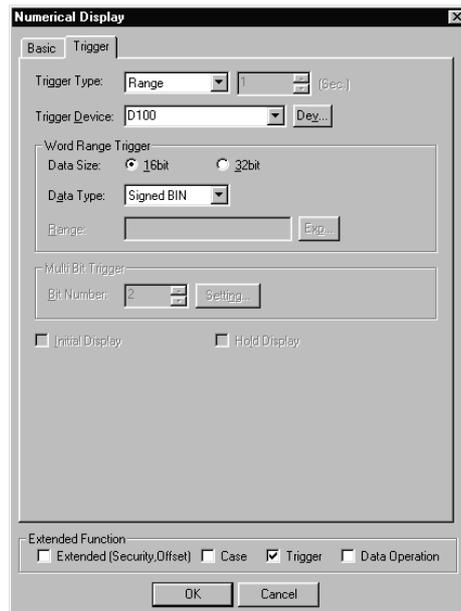
| Object type | Trigger type | | | | | | | ON Sampling/O FF Sampling |
|--|--------------|--------|-----------|----------|-------|----------------------|---|------------------------------------|
| | Ordinary | ON/OFF | Rise/Fall | Sampling | Range | Multi bit trigger | | |
| Touch switch Numerical input ASCII input | ○ | ○ | × | × | × | × | × | |

5.4.1 Arrangement and settings

Set the trigger for each object function.
Refer to the arrangement and setting of the object.

5.4.2 Setting items

This section explains the setting items of trigger with the example of numerical display.



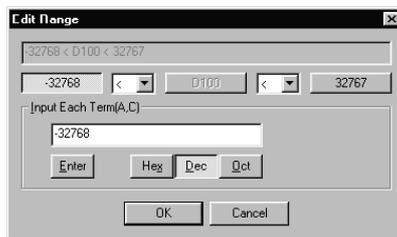
(Example: In the case of GOT-A900 series)

| Items | Description | A | F | |
|--------------------|---|--|---|---|
| Trigger type | Select the trigger for displaying/operating the object. When [Sampling] is selected, the cycle is set in second unit (1 to 3600Sec). <ul style="list-style-type: none"> ● Ordinary ● Sampling ● Range ● ON ● OFF ● Rise ● Fall ● Bit trigger | ○ | ○ | |
| Trigger device | When [ON], [OFF], [Rise], [Fall] or [Range] is selected in [Trigger Type], click on the Device button to set the bit/word device range for the trigger. (This is only valid when selecting the range for word device.) (Section 5.1 Device Setting) | ○ | ○ | |
| Word range trigger | Set the type of word device that has been set when [Range] is selected in [Trigger Type]. | ○ | × | |
| | Data size | Select the data size of word device (16 bit or 32 bit) | ○ | × |
| | Data type | Select the data type of word device. Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. Real : Treats the word device value as a floating point type real number. | ○ | × |
| | Range *1 | Click Range button to set the conditional expression of word device range. | ○ | × |

| Items | | Description | A | F |
|---------------------|---------------|---|-----------------------|-------------------------------------|
| Multi bit condition | Bit number *2 | Select number of bit devices (2 to 8) to be set as the trigger when [Bit trigger] has been selected in [Trigger Type]. After selecting, click on the <input type="button" value="Setting"/> button to set the bit device and execution trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial display | | <p>Check this item to monitor and display device even if the initial trigger of screen switch is not satisfied when [Rise] or [Fall] has been selected in [Trigger Type].</p> <p>Initial display Monitor and display device when trigger is not satisfied.</p> <p>No initial display Not display when trigger is not satisfied.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Hold display | | <p>Check this item to hold the object display if the trigger is not satisfied when [ON] or [OFF] is selected in [Trigger Type].</p> <p>Hold display Hold display state when the display condition is satisfied.</p> <p>Not hold display Clear it as the display condition is not satisfied.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |

For details of *1 and *2, refer to the following.

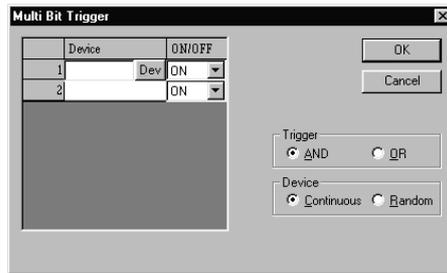
*1 Edit range dialog box settings



| Items | | Description | A | F |
|---|-------------------------------------|-------------|---|---|
| <input radio"="" type="button" value="] Button</td> <td></td> <td>Click on this button to set the fixed value for each term in [Input Each term (A-C)]</td> <td><input type="/> | <input checked="" type="checkbox"/> | | | |
| <input radio"="" type="button" value=" <] (Comparison operator)</td> <td></td> <td> <p>Set the comparison operator of range expression.</p> <p>< : Left value is smaller than right value</p> <p>== : Left value is equal to right value</p> <p><= : Left value is smaller than or equal to right value</p> <p>!= : Left value is not equal to right value</p> </td> <td><input type="/> | <input checked="" type="checkbox"/> | | | |

| Items | | Description | A | F |
|-----------------|-------------|--|-----------------------|---|
| Input each term | Enter | Updates the input fixed value on the range expression. | <input type="radio"/> | × |
| | Hex/Dec/Oct | Select the data type for the numeric value. | <input type="radio"/> | × |

***2 Multi bit trigger dialogue box settings**



| Items | | Description | A | F |
|----------------------------------|--|---|-----------------------|---|
| Device | | The devices preset as multi bit trigger are listed. | <input type="radio"/> | × |
| <input type="text" value="Dev"/> | | This button will be displayed by clicking on the device bar. Click on the <input type="text" value="Dev"/> button to set the bit device used as trigger. (Section 5.1 Monitor Device Setting) | <input type="radio"/> | × |
| ON/OFF | | Select whether ON or OFF status of bit device will be set as the trigger condition. | <input type="radio"/> | × |
| Trigger | | Select the definition for multi bit trigger condition. AND : If all triggers that are specified based on the bit device ON/OFF statuses are satisfied, the multi bit trigger is set. OR : If any of the triggers specified based on the bit device ON/OFF statuses are satisfied, the multi bit trigger is set. | <input type="radio"/> | × |
| Device | | Select the method of setting device. Continuous : Set the specified number of devices continuously starting from the set device automatically. Random : Randomly set the specified number of devices. | <input type="radio"/> | × |

5.4.3 Cautions

1 Object of which trigger has been set to sampling

Up to 1000 objects can be set on one screen, of which the trigger type was been set to "Sampling". Therefore, any objects form 101 onwards will not operate on the screen.

2 Setting of status observation function

(1) When the object display on GOT screen is delayed

When excessive number of devices set as trigger is arranged, or the cycle of monitoring device is short, object display on the screen will be delayed.

In this case, reduce the number of devices set as trigger or set the cycle of monitoring device longer.

(2) When GOT does not monitor according to the setting of observation cycle (E.g. data sampling cannot be operated normally as timing is delayed)

In some cases, GOT may not normally monitor the object for which offset function is specified or the screen displayed as superimpose window screen according to the setting of status observation. (E.g. data sampling cannot be operated normally as timing is delayed.)

In this case, set the observation cycle to [Ordinary].

(3) Cycle of trigger device

Make the settings in order that the trigger device will turn ON/OFF more frequently than the observation cycle.

3 Setting of trigger for line graph

When many devices are monitored in line graph form, and the trigger is set to [Ordinary], the object processing may be delayed.

In this case, change the trigger type to [Sampling] and adjust the sampling cycle to 2 seconds or longer.

4 Setting of trigger for each object

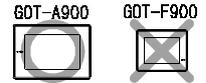
(1) Trigger type and trigger device

If trigger types are set while some or all of trigger devices are not set, the object operates by the default trigger type.

(2) When [Range] is selected in [Trigger]

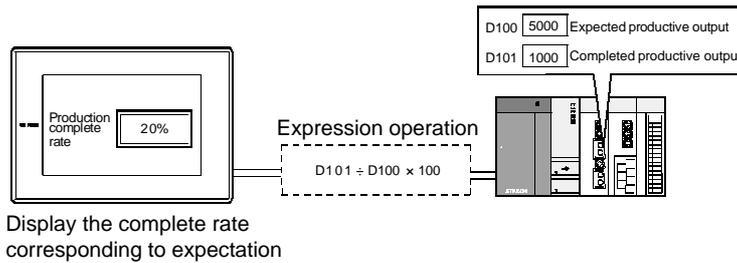
If Real is selected as the data type when [Range] has been set as trigger for each object, GOT reads decimal data by rounding it off. In case that GOT may read decimal data, select the data type for decimal from GT Designer2

5.5 Data Operation Function



If data operation function has been set, each object executes the operations set in [Data operation] the preset word device values, and monitors based on the results.

Example) Data operation is used in numerical display function
 Monitored device: D101



1 Bit operation

This function executes operation of the word device value in bit unit.

(1) Bit mask (for GOT-A900 only)

Executes a logical operation of the word device value by the preset pattern value.

(a) Logical AND (AND)

The operation result is "1" when the corresponding bits of both the device value and pattern value are "1".

(b) Logical OR (OR)

The operation result is "0" when the corresponding bits of both device value and pattern value are "0".

(c) Exclusive logic XOR (XOR)

The operation result is "0" when the corresponding bits of device value and pattern value are equivalent; "1" when not equivalent.

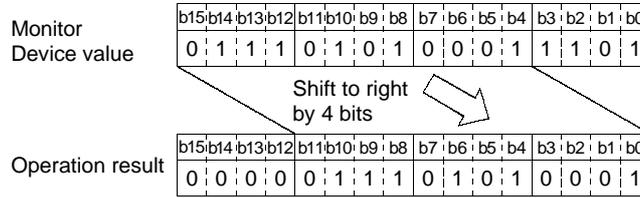
Example) When logical AND (AND) is operated

| | | | | | | | | | | | | | | | | |
|-----------------------------|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| Monitor device value | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| AND | | | | | | | | | | | | | | | | |
| Pattern value (Hexadecimal) | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| ↓ | | | | | | | | | | | | | | | | |
| Operation result | b15 | b14 | b13 | b12 | b11 | b10 | b9 | b8 | b7 | b6 | b5 | b4 | b3 | b2 | b1 | b0 |
| | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |

(2) Bit shift (for GOT-A900 series only)

Shifts the word device value to the right or left in bit unit to execute an operation on the value. (It becomes arithmetic shift when it comes to the signed monitor format of device.)

Example) Shift right for 4 bits



2 Data operation

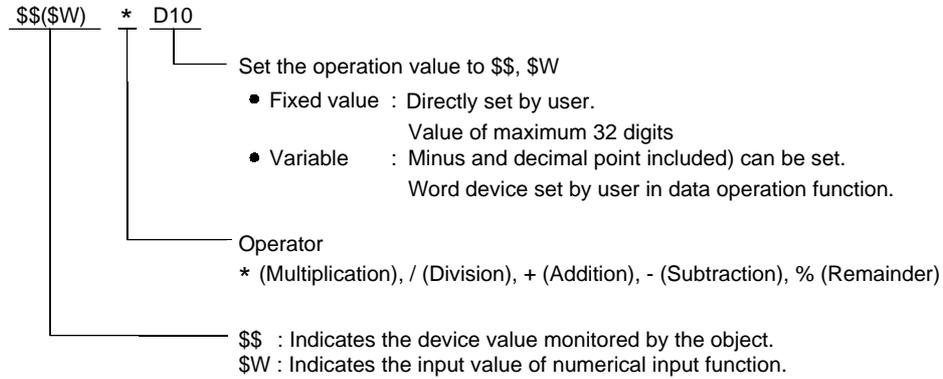
Executes the preset data operation on the word device value.

(1) In the case of GOT-A900 series

Select and set the data operation format from the 9 types.

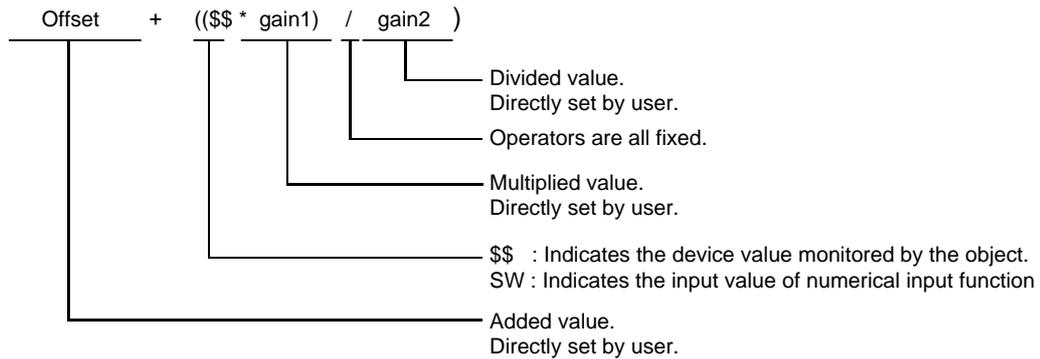
The operation is executed based on the following conditions:

Example)



(2) In the case of GOT-F900 series

The data operation is executed using a fixed format.



Data operation function is applicable to the following objects. (GOT F900 series, only the Numeric Display and Numeric Input functions are available)

- | | | |
|---------------------|----------------------|---------------------|
| ● Numerical display | ● Numerical input *1 | ● Data list display |
| ● Comment display | ● Parts display | ● Parts movement |
| ● Lamp | ● Panel meter | ● Level |
| ● Trend graph | ● Line graph | ● Bar graph |
| ● Statistics graph | ● Scatter graph | ● Report |

*1 If bit mask operation is used for numerical input function, only logical (AND) is applicable. Logical add (OR) and exclusive logical add (XOR) are not applicable.

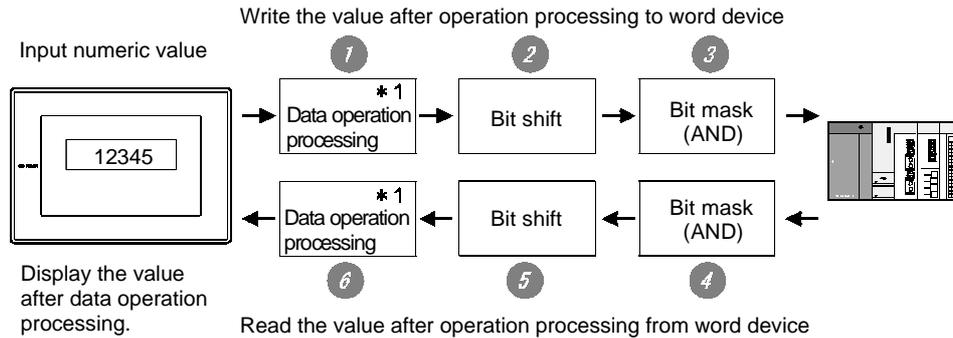
3 Procedure for operation processing (GOT-A900 series only)

The operation processing for device monitoring and numerical inputting is shown as follows.

(1) When monitoring device

- 1 Bit mask
- 2 Bit shift
- 3 Data operation processing

(2) When using numerical input function



*1: Other data operations can be set for write destination device during monitoring and writing.

<Write the value after operation processing to word device>

- 1 Data operation processing
The input value by the preset operation expression for writing device value is calculated.
- 2 Bit shift
Shifts the input value in the set direction (right / left)
- 3 Bit mask
Executes bit mask (logical AND) on the input value by the preset value.
To write the bit and mask the remaining, carry out the following.

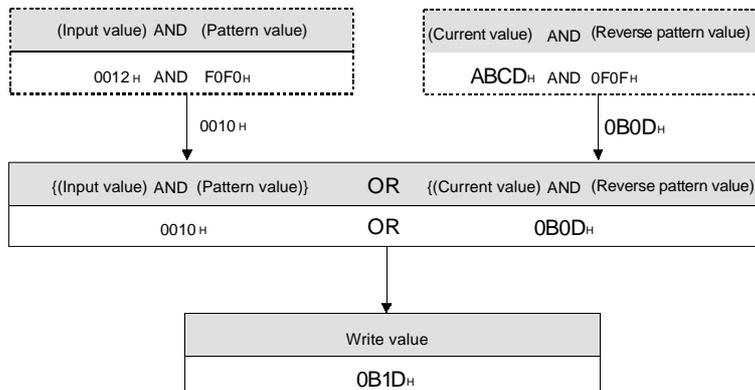
[Operation data]

$$(\text{Write value}) = \{ \{ (\text{Input value}) \text{ AND } (\text{Pattern value}) \} \text{ OR } \{ (\text{Current value}) \text{ AND } (\text{Reverse pattern value}) \} \}$$

User-set value

Value created for GOT operation

| | | |
|----------|---|---------|
| Example) | Input value (value input by user) | : 0012H |
| | Current value (value before write) | : ABCDH |
| | Pattern value (value set by user) | : F0F0H |
| | Reverse pattern value (value created for GOT operation) | : 0F0FH |



<Read the word device value after operation processing>

- ④ Bit mask
Executes bit mask (logical (AND) of the device value by the preset pattern value.
- ⑤ Bit shift
Shifts the device value in the reverse direction.
- ⑥ Data operation processing
Calculates and displays the written device value by the preset operation expression for reading device value.

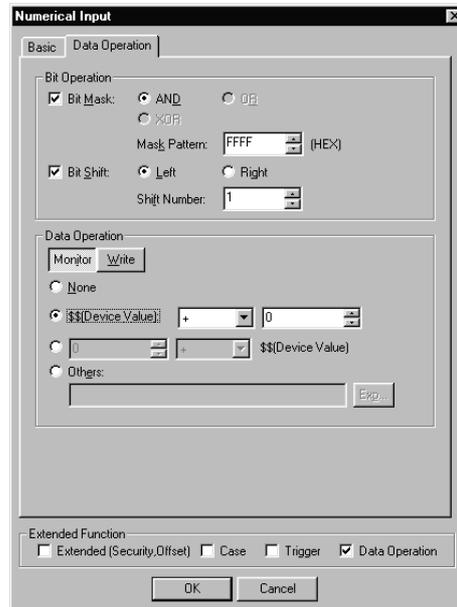
5.5.1 Arrangement and settings

Data operation function is set for each arranged object function.
For the details, refer to the arrangement and setting of the object.

5.5.2 Setting items

This section explains the setting items for data operation function with the example of numerical input function.

1 GOT-A900 series



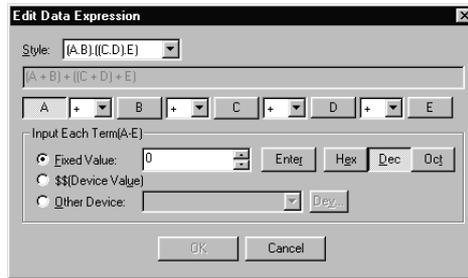
(Example: When setting GOT-A900 series numerical input function)

| Items | | Description | A | F |
|----------------|----------------------|---|-----------------------|-------------------------------------|
| Bit operation | Bit mask | Check this item to enable the bit mask operation. Select the bit mask type and set the mask pattern value in hexadecimal format. AND : Executes logical product. OR : Executes logical add. XOR : Executes exclusive logical add. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Bit shift | Check this item to enable the bit shift operation (for monitoring/writing). Select the shift direction and set the number of bits to shift [Shift Number]. Left : Shift left Right : Shift right | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Data operation | | Set the data operation for writing to device and for monitoring each. Switch by Monitor and Write buttons. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Monitor/ write *1 | Select the data operation format from the following 4 patterns.  | <input type="radio"/> | <input checked="" type="checkbox"/> |

*1 For details of *1, refer to the next page.

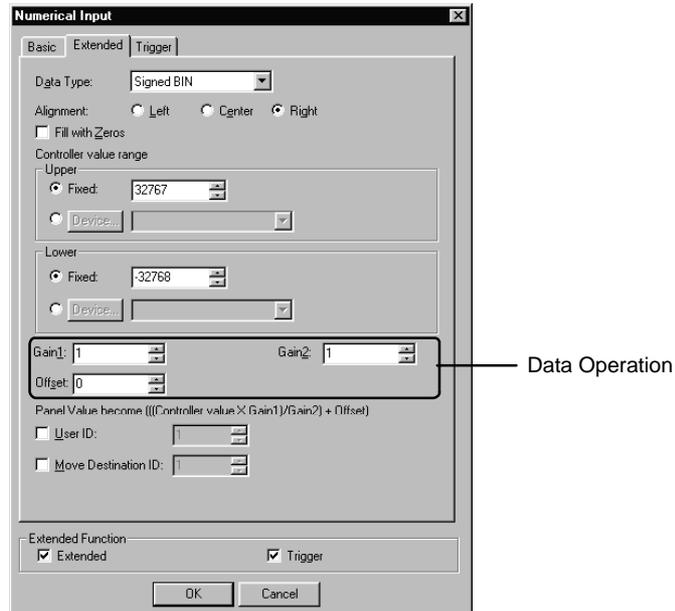
***1 Edit data expression dialog box**

Set the expression for data operation.



| Items | Description | A | F | | | | | | | | | |
|--------------------------|---|--------------------|------------|--------------------|--------|----------------|--------------------|------------|----------------|--------------------|---|---|
| Style | <p>Set the operation expression format.</p> <p>A · B</p> <ul style="list-style-type: none"> — Fixed value,variable (represented as "\$\$", "SW" , respectively; any word device set for operation) — Operator <p>Select from the following 9 types.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">1) A</td> <td style="width: 33%;">4) (A·B)·C</td> <td style="width: 33%;">7) ((A·B)·C)·(D·E)</td> </tr> <tr> <td>2) A·B</td> <td>5) A·((B·C)·D)</td> <td>8) (A·B)·((C·D)·E)</td> </tr> <tr> <td>3) A·(B·C)</td> <td>6) A·(B·(C·D))</td> <td>9) ((A·B)·(C·D))·E</td> </tr> </table> | 1) A | 4) (A·B)·C | 7) ((A·B)·C)·(D·E) | 2) A·B | 5) A·((B·C)·D) | 8) (A·B)·((C·D)·E) | 3) A·(B·C) | 6) A·(B·(C·D)) | 9) ((A·B)·(C·D))·E | ○ | × |
| 1) A | 4) (A·B)·C | 7) ((A·B)·C)·(D·E) | | | | | | | | | | |
| 2) A·B | 5) A·((B·C)·D) | 8) (A·B)·((C·D)·E) | | | | | | | | | | |
| 3) A·(B·C) | 6) A·(B·(C·D)) | 9) ((A·B)·(C·D))·E | | | | | | | | | | |
| [A] [B] [C] [D] [E] | <p>Click buttons [A] to [E] to set fixed value and variable for each item in [Input f Each Term (A-E)].</p> | ○ | × | | | | | | | | | |
| Operator | <p>Select the operator for operation expression.</p> <p style="text-align: center;"> +: Add *: Multiply %: Remainder -: Subtract /: Divide </p> <p>% (Remainder operator) The left value is divided by the right value and the remainder the result. Example) 100 % 3 = 1 (100 / 3 = 33 remainder is 1)</p> | ○ | × | | | | | | | | | |
| Input of each item (A-E) | <p>Set each item for data operation.</p> <p>Fixed value : Select this item when using fixed value to execute the operation. After selecting, input the value and click on the [Enter] button. Select the data type for the value by [Hex], [Dec] and [Oct] buttons.</p> <p>\$\$, \$W (Device value) : Select this item to execute the operation of the word device value that has been set as monitor and write destination.</p> <p>Other device value : Select this item to execute the operation of the word device value.</p> <p> Section 5.1 Device Setting) Data type is the same as the monitor device (\$\$ and \$W).</p> | ○ | × | | | | | | | | | |

2 GOT-F900 series



(Example: When setting GOT-F900 series numerical input function)

| Items | Description | A | F |
|--------|---|---|---|
| Gain1 | Set the multiplication value for monitor device | × | ○ |
| Gain2 | Set the division value for monitor device | × | ○ |
| Offset | Set the addition value for monitor device | × | ○ |

5.5.3 Cautions

This section provides cautions for using data operation function.

1 Cautions in using the GOT-F900.

- (1) Bit operation (bit mask and bit shift) cannot be executed in GOT-F900 series.
Only data operation is available.
- (2) Data operation of "Gain1", "Gain2" and "Offset" cannot be executed in the GOT-F900 series if "Real" is set in "Format" on the "Basic" tab.

5.6 Offset Function

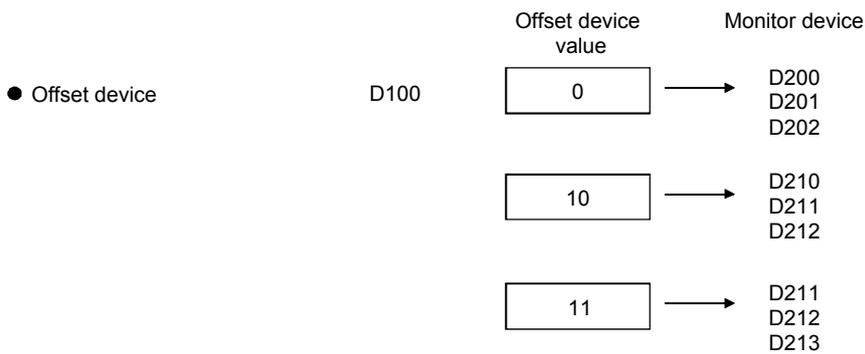


This function enables switching and monitoring plural devices by setting a single device in each object function. (In the alarm list function, plural comments can be switched and displayed by setting a single device.)

1 Switching and monitoring plural device statuses by a single device

The value set in the device using the offset function (hereinafter referred to as offset device) is added to the device set in each object function.

- Device set in each object function D200, D201, D202



Switch the monitor device according to the value stored in offset device.

This function is available for the following objects.

- | | | | |
|---------------------|-------------------|--------------------|------------------|
| ● Numerical display | ● Numerical input | ● Data list | ● ASCII input |
| ● ASCII display | ● Comment display | ● Parts display | ● Parts movement |
| ● Lamp | ● Panel meter | ● Level | ● Trend graph |
| ● Line graph | ● Bar graph | ● Statistics graph | ● Scatter graph |
| ● Touch switch* | ● Script | | |

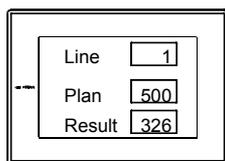
* The offset device value is added to the device set in the action setting.

Example

Switch and monitor plural line statuses with a single numerical display function.

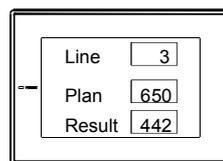
Section 5.8 Numerical Display/Numerical Input

| | | | |
|---------|----------------------------|---------------|------|
| Line: | Numerical input function | Device | D100 |
| Plan: | Numerical display function | Device | D200 |
| | | Offset device | D100 |
| Result: | Numerical display function | Device | D210 |
| | | Offset device | D100 |

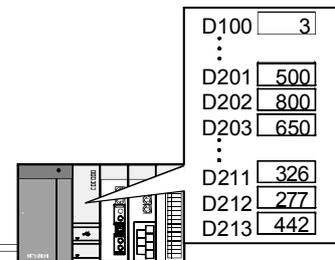


Plan to monitor D201
(D200 + 1 = D201)
Result is to monitor D211
(D210 + 1 = D211)

Write 3 to offset device (D100) in numerical input function



Plan to monitor D203.
(D200 + 3 = D203)
Result is to monitor D213.
(D210 + 3 = D213)



2

Switch and display plural comments by a single device (The alarm list function (user alarm))

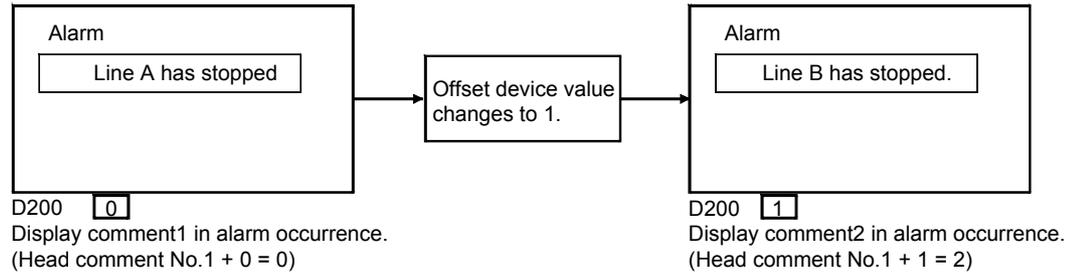
The offset device value is added to the comment set in the alarm list function.

In a normal alarm list, it needs to set bit devices for the number of displayed comments. However, by using the offset function, plural comments can be switched and displayed by a single device.

(1) Offset of display setting

The offset device value is added to the number of the comment to be displayed.

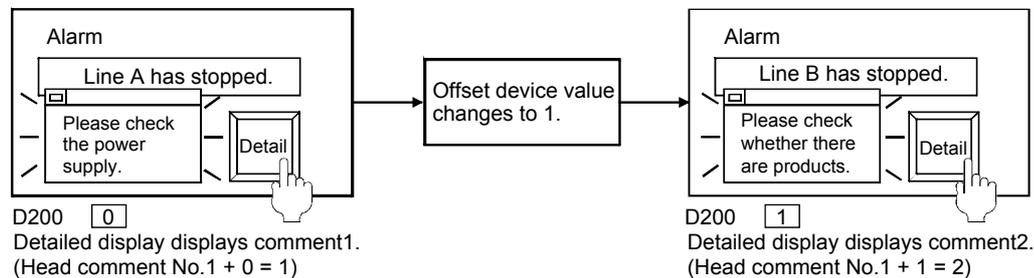
Head comment No. : 1
 Comment No. offset : D200



(2) Offset of detailed display setting

The offset device value is added to the numbers of comment (comment window), window screen and base screen to be displayed as details.

Detailed display : Comment window
 Head comment No. : 1
 Comment No. offset : D200



When executing offset of detailed display setting

When executing offset of detailed display setting, the comment for detailed display will change. The message of alarm list is not relevant.

To relate the message to the comment, adjust comment and the message displayed by using offset of display setting.

5.6.1 Arrangement and settings

The offset function is to arrange and set each object function.
Refer to the arrangement and setting of the objects.

5.6.2 Setting items

The offset function is set in each object function.
Refer to the setting items of the corresponding objects.

5.6.3 Cautions

Cautions for using the offset function are as follows.

1 Cautions for drawing

- (1) When monitoring the trigger device in sampling by the status observation function
When offsetting the trigger device in a constant sampling, set the offset sampling longer than the monitor sampling.
(Example) Changing cycle (7 sec) of offset device value > Status observation function sampling (5 sec)

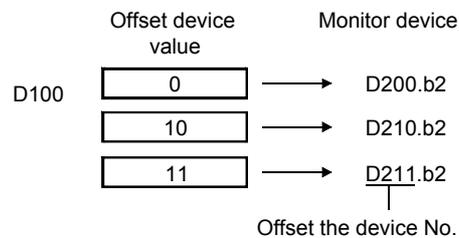
(2) Device setting

- (a) The offset function is not available for the bit device word specification.
- (b) For the word device bit specification, the device No. is offset.

(Example)

- Device that has been set in each object D200.b2

- Offset device



2 Cautions for use

(1) Offset value change

The monitor device will be read as the offset value changes; so do not change the offset value frequently.

If the offset value is changed frequently, the monitor speed will become low.

(2) When the offset device No. exceeds the PLC word range trigger

When the offset device No. exceeds the PLC device range, monitoring and writing will not be executed. Error will be displayed in alarm list (system alarm), if it is set in advance.

When monitoring plural devices with a single graph, the display method is determined by the setting method of monitored device.

(a) Trend graph, line graph, bar graph and statistics graph

When setting the device consecutively : Holds the previous display.

When setting the device at random : Holds the previous display only when the displaying exceeds word range trigger.

For the display other than the above, the offset device will be monitored.

(b) Scatter graph

When setting the device consecutively : Holds the previous display.

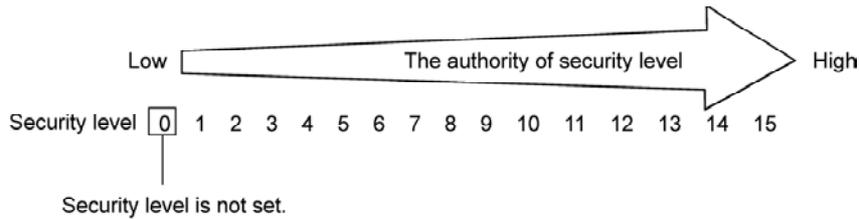
When setting the device at random : Holds the previous display.

5.7 Security Function



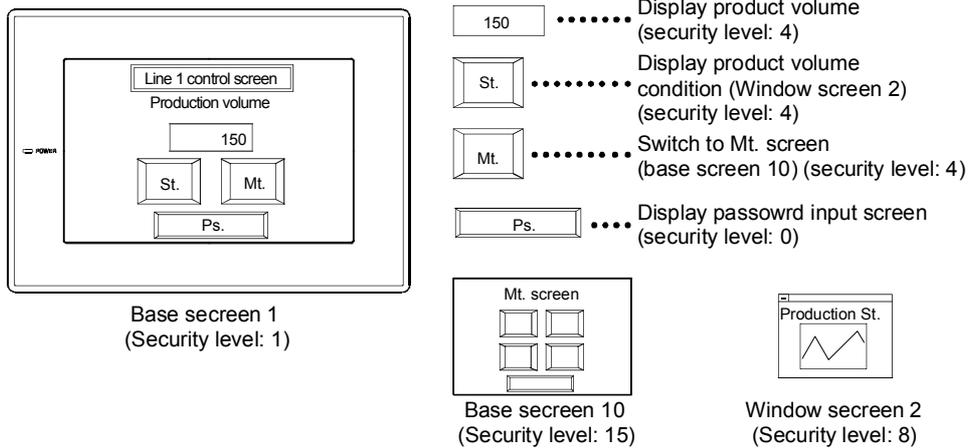
This function determines which screen is displayed depending on the security level. The security level can be changed by inputting the password corresponding to each level. The security level (0 to 15) can be set for each screen and object. The objects that are settable by the security level depend on the GOT model type used.

- GOT-A900 series: Base screen, window screen, each object function
- GOT-F900 series: Base screen, each utility screen



1 Example (when using GOT-A900 series)

Change the contents that can be operated by each user in the screen for setting plural objects.



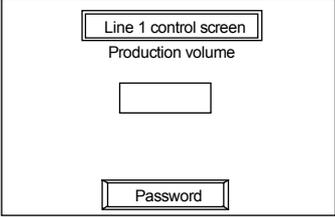
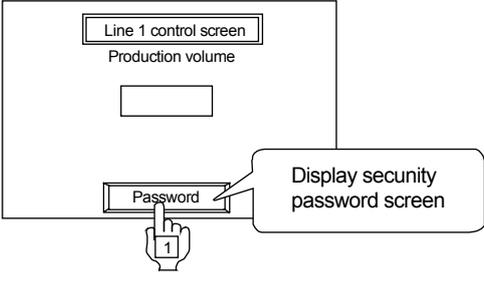
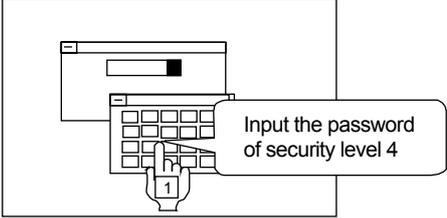
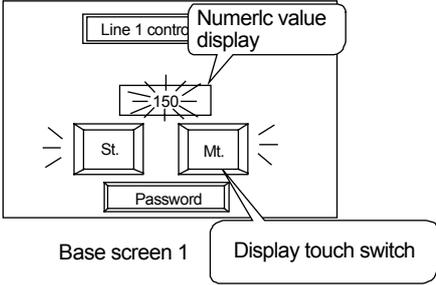
○: Enabled. ×: Not enabled.

| User | User's security level | 150 | St. | Mt. | Pt. | Maintenance screen | Production situation |
|-------------------|-----------------------|-----|-----|-----|-----|--------------------|----------------------|
| Operator | 4 | ○ | ○ | ○ | ○ | × | × |
| Supervisor | 8 | ○ | ○ | ○ | ○ | × | × |
| Maintenance staff | 15 | ○ | ○ | ○ | ○ | ○ | ○ |
| Others | 0 | × | × | × | × | × | × |

(1) Operation example

(a) Set the security function in the object function.

The display and operation of the object can be determined from the security level setting.

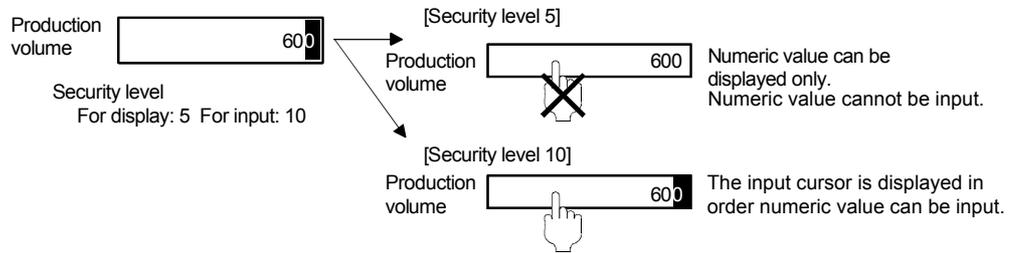
| Security level status | Screen | Operation contents |
|-------------------------|---|--|
| Level 0 |  <p>Line 1 control screen Production volume</p> <p>Base screen 1</p> | <p>The object function on the screen cannot be used, because the security level is in a low status</p> <ul style="list-style-type: none"> ● Base screen 1 (security level 0) ● Each object function (security level 4) |
| Level 0 |  <p>Line 1 control screen Production volume</p> <p>Base screen 1</p> <p>Display security password screen</p> | <p>In order to change the security level, display the password screen by the touch switch.</p> <p>(☞ 2 Change method of the security level)</p> |
| Level 0 ↓ Level 4 |  <p>Input the password of security level 4</p> <p>Password screen 1</p> | <p>Input the password, and change the security level into 4.</p> |
| Level 4 |  <p>Line 1 control Numeric value display 150 St. Mt. Password</p> <p>Base screen 1</p> <p>Display touch switch</p> | <p>Display the object function corresponding to security level 4.</p> |

Remark

(1) The security level set in the numerical input function, the ASCII input function and the touch switch function.

2 types of security levels (for input and display) can be set in the numerical input function, the ASCII input function and the touch switch function.

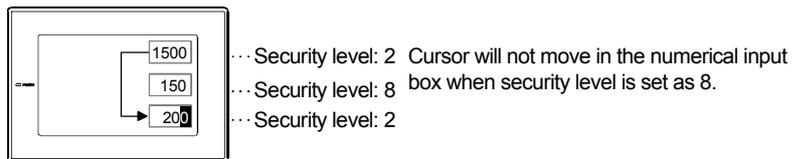
Example) When the security level is set in the numerical input function.



(2) The movement of the input cursor when setting the security function

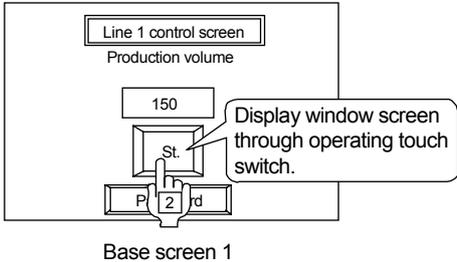
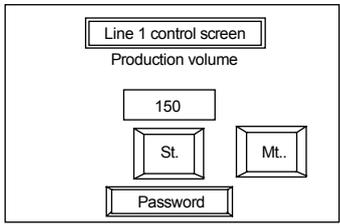
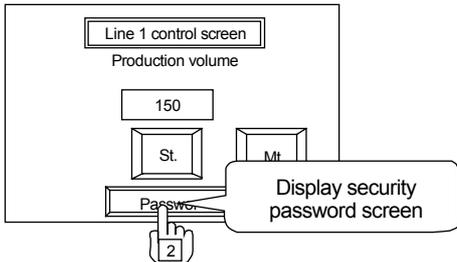
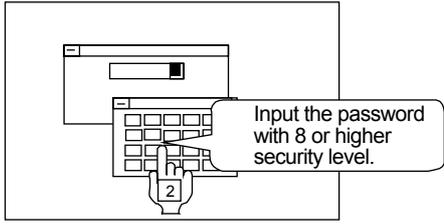
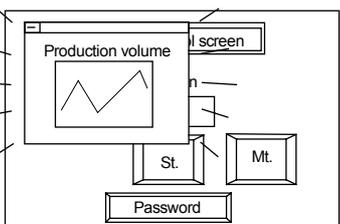
The cursor will move to the currently available numerical input box or ASCII input box, when setting security level respectively in plural numerical input function and ASCII input function.

Example) Input numeric value when the base screen security level is "2".



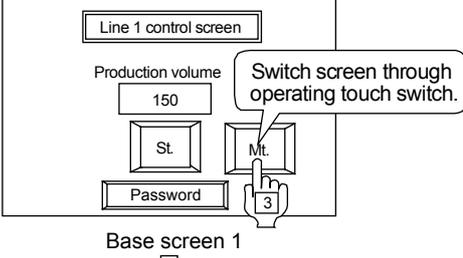
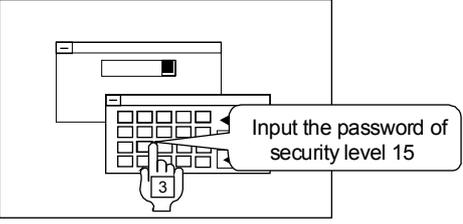
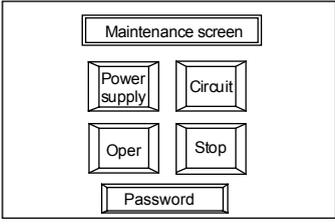
(b) Window screen

The following explains an example for displaying screens with higher security level setting.

| Security level status | Screen | Operation contents |
|-------------------------|--|---|
| Level 4 |  <p>Line 1 control screen Production volume 150 St. Mt. Password</p> <p>Base screen 1</p> | Base screen 1 (security level 4) Window screen 2 (security level 8) |
| Level 4 |  <p>Line 1 control screen Production volume 150 St. Mt. Password</p> <p>Base screen 1</p> | Do not display the window screen. |
| Level 4 |  <p>Line 1 control screen Production volume 150 St. Mt. Password</p> <p>Base screen 1</p> | In order to change security level, display the password screen by touch switch. (Hand icon) 2 Change method of the security level) |
| Level 4 ↓ Level 8 |  <p>Input the password with 8 or higher security level.</p> <p>Password screen</p> | Input the password, and change the security level into 8 or higher. |
| Level 8 |  <p>Production volume St. Mt. Password</p> <p>Window screen 2</p> | Display a window screen. |

(c) Switching the base screen

The following explains an example for switching the screen to the base screen with a higher security level setting.

| Security level status | Screen | Operation contents |
|--------------------------|---|--|
| Level 8 |  | Base screen 1 (security level 8) Base screen 10 (security level 15) |
| Level 8 ↓ Level 15 |  | Display the password screen automatically. Input the password, and change the security level into 15. |
| Level 15 |  | Switch to base screen 10 |

2 Change method of the security level

In order to change the security level, the password of each security level needs to be input on the password screen.

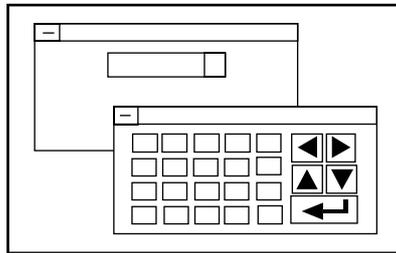
(1) In the case of GOT-A900 series

Either of the following methods is available to display the password screen.

- (a) Use the touch switch for switching to the password screen. (Extension: Password)
- (b) Display the GOT utility, and touch 「Password」

The following indicates how to change the security level.

- 1 Display the password screen.
- 2 Input the password of the security level to be changed and touch  (GOT-A900 series)/  (GOT-F900 series)
To close the password screen, touch  at the top-left of the password display window.



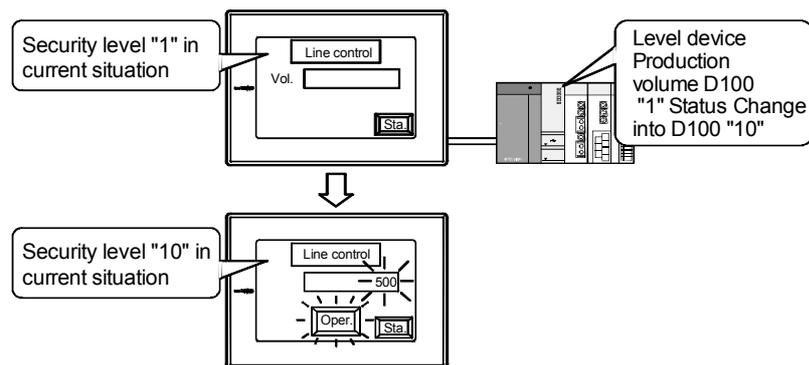
Point

Changing the security level from the PLC CPU (GOT-A900 series only)

The level of security is stored in the device storing "security level status" (Level device)

( Section 3.4 Password Setting)

Current security level can be changed by directly changing the level device value from the PLC CPU.



Change the display according to the changed security level.

(2) In the case of GOT-F900 series

Switching to the password input screen or canceling the security password (Level 0), can be done by creating touch switches on the base screen and setting key codes to each touch switch.

- Security password input screen : Key code "FF68"
- Security password cancellation (level 0) : Key code "FF69"

It is recommended to arrange the touch switches for the security password input and cancellation on the same screen.

(a) Automatic display setting of the security password input screen.

When switching to the screen with a higher security level, the security password input screen can be displayed.

When displaying the security password input screen, it is necessary to turn ON the read device system signal 1 (b8) of the system information except in the F920GOT-K.

In the F920GOT-K, the security password input screen is automatically displayed.

Use the ten keys to input the password.

(b) Password setting for the security level 15 (essential)

If at least one security password is set, utility screens (system screens) are set to the level 15.

Accordingly, system screens cannot be displayed if the password is not set for the level 15. Make sure to set the password for the level 15.

The level of a utility screen (system screen) can be changed by right-clicking a system screen whose level is to be changed in the project work space, selecting the project, then selecting a desired level.



To undo temporarily-raised security level

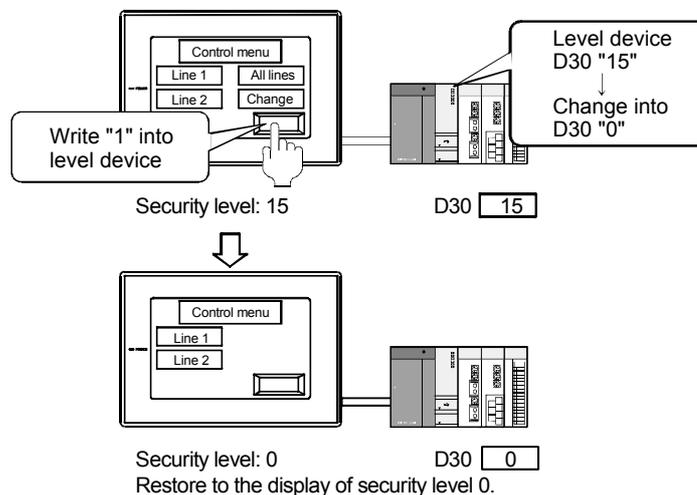
The security level that is increased temporarily for maintenance and inspection tasks can be restored back to its original state easily.

(a) Inform the users of the normal security level password to restore the security level through the normal password input operation.

(b) Create the touch switch for restoring the security level to normal level.

Example) When changing the security level to "0" with the touch switch.

- Level device : D30
- Touch switch : Write "0" into level device D30



5.7.1 Security function setting

The following setting is needed when using the security function.

1 Setting the password for the security function

Set the device (level device) where each security level is to be stored and its password.

☞ Section 3.4 Password Setting

2 Setting the security level of each screen/object

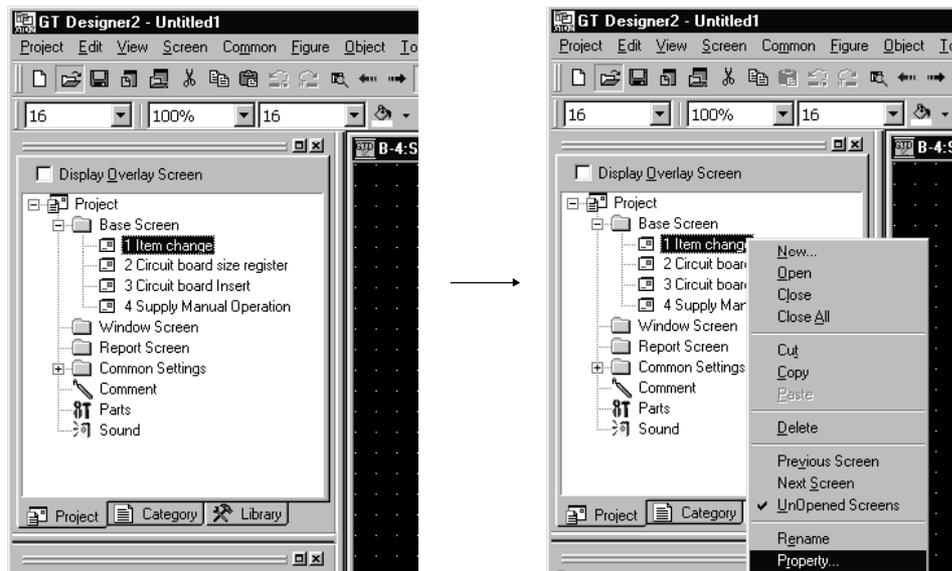
Set security level in the screen (using security function) and object function.

(1) Object function (GOT-A900 series only)

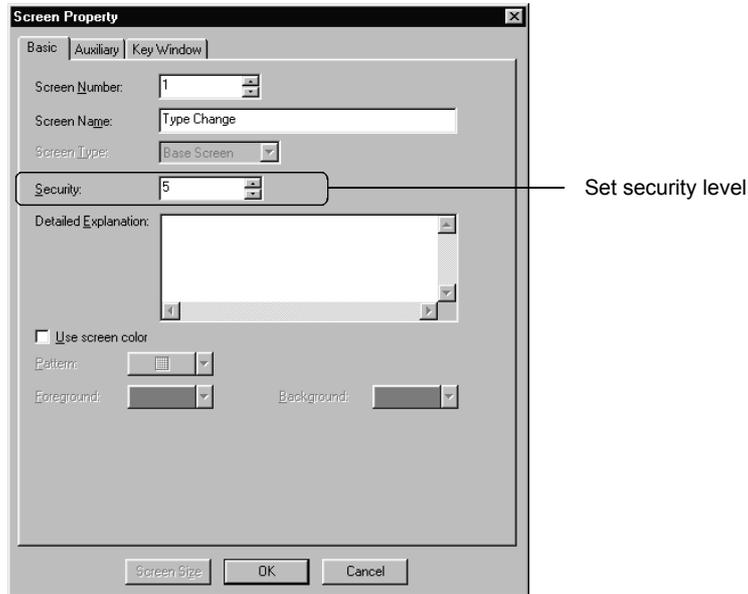
Set the security levels in the setting dialogue box for each object function.

(2) Screen

- 1 In the workspace (the project tab), select the screen whose security function is to be set, and right click the mouse to select [Property] in the menu.



- 2 Display the Screen Property dialogue box.
Set the security level (that is to be set to the screen) in 「Security」 of the basic tab.



5.7.2 Cautions

1 Making a note of the password

It is recommended make a note of the registered security password.

If in the event the security password is forgotten, as it cannot be cancelled. Also, the password of GT Designer2 cannot be deleted or changed.

2 Cautions for using GOT-F900 series

- (1) When GOT power supply is OFF

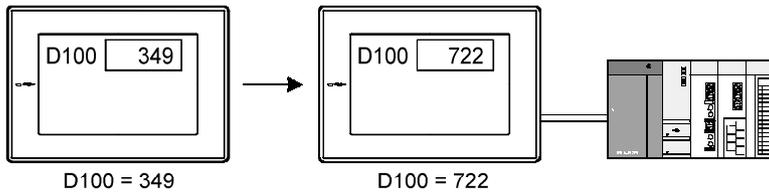
When GOT power supply is OFF, the security level will be canceled (level 0).

5.8 Numerical Display/Numerical Input



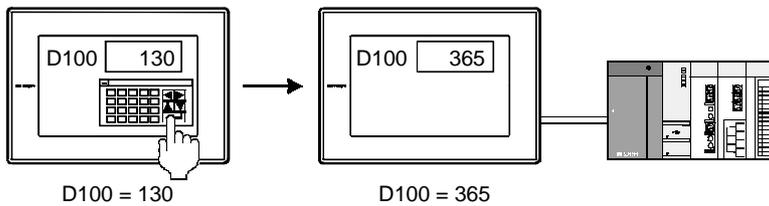
1 Numerical display (Section 5.8.2)

This function allows the data saved in PLC CPU devices to be displayed as numeric values on GOT.



2 Numerical input (Section 5.8.3)

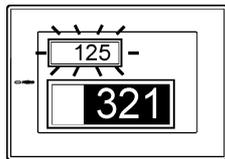
This function enables writing any value from GOT to PLC CPU device.



Example

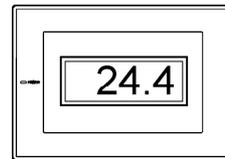
Displays numeric values in various patterns

Basic tab setting



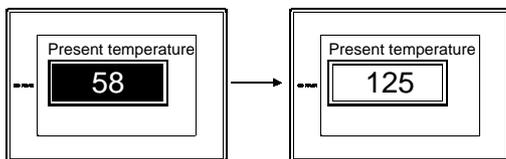
Displays/Inputs numeric value with decimal points

Basic tab setting



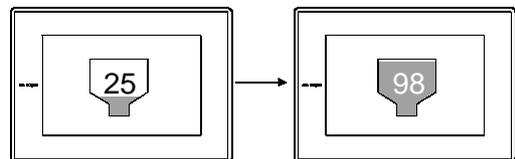
Changes display /background color depending on the value
(GOT-A900 Series only)

Setting on Range setting tab



Uses numerical display/numerical input in combination with the lever display function
(GOT-A900 Series only)

Level display setting





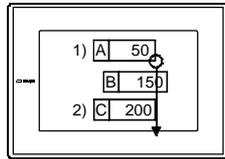
When inputting using the numerical input function

Setting for various operations such as input operation is available for each project or screen.

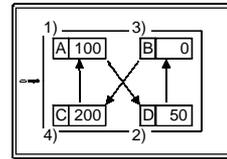
<Setting example>

- Setting the input order of multiple numerical values

☞ Section 4.5 Auxiliary Setting



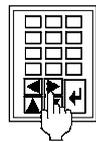
Sets the input order based on coordinate position



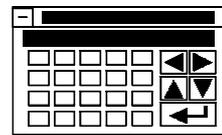
Sets the input order in desired order

- Setting the input key window

☞ Section 4.6 Key Window



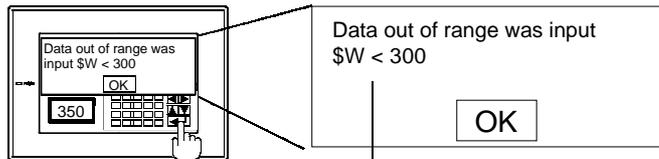
Uses user-created key window (GOT-A900 Series only)



Displays input value/input range on key window

- When the input value is out of range, displaying input range with message

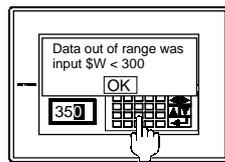
☞ Section 4.5 Auxiliary Setting



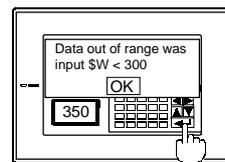
Display/Not display of input range can be selected

- When input is out of range, setting display timing of message

☞ Section 2.6.1 GOT internal devices



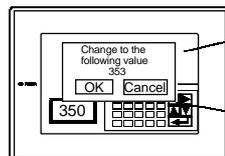
When GS450.b1 is ON, displays message during numerical input. (Input check mode)



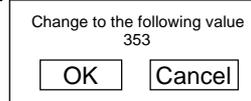
When GS450.b1 is OFF, displays message on entry of numerical input (Input confirmation mode)

- Setting Display/Not display confirmation message when inputting numerical values

☞ Section 2.6.1 GOT internal devices



When GS450.b0 is ON, displays confirmation message on entry of numerical input



When GS450.b0 is OFF, does not display confirmation message

5.8.1 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  (Numerical Display)/ (Numerical Input)
 - Select [Object] → [Numerical Display]/[Numerical Input] from the menu.
- 2 Clicking at a desired position completes the numerical display/numerical input setting.
(After the arrangement, release the arrangement mode by right-clicking the mouse or using  key.)
- 3 Double-clicking on the setting area of the numerical display/numerical input displays the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



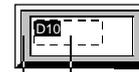
Remark

Method of adjusting objects in which figure frame is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the figure frame.



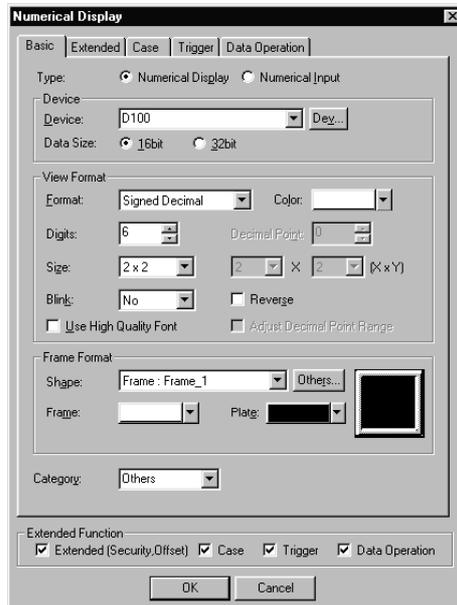
Section 5.2.3 Object size change



Object outline frame
Shape

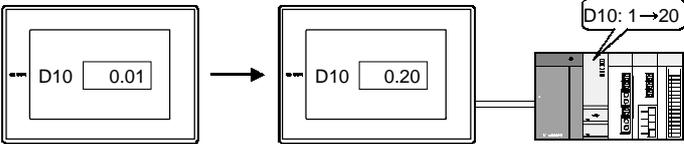
5.8.2 Setting items of numerical display

1 Setting items of Basic tab

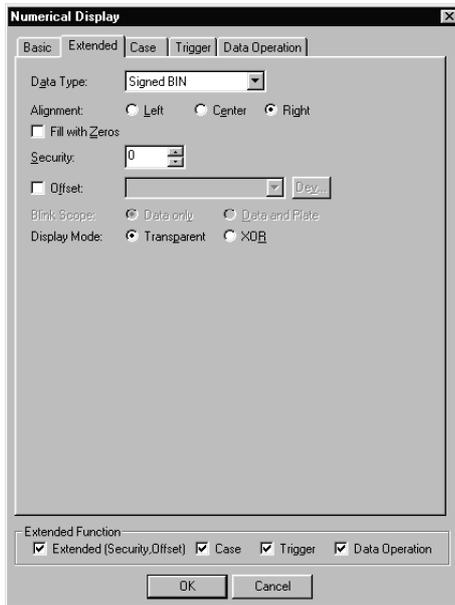


(Example: When setting GOT-A900 series)

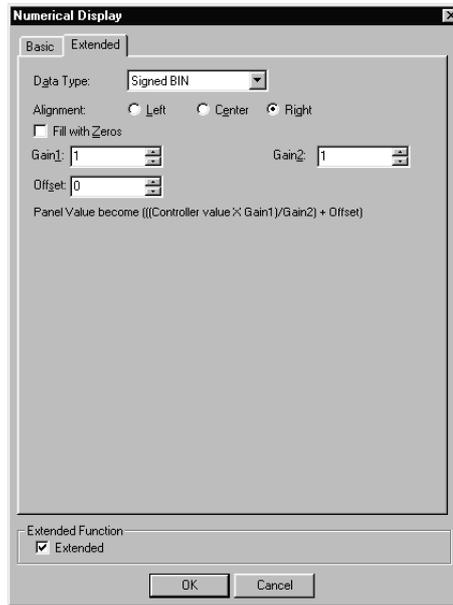
| Items | | Description | A | F |
|-------------|---------------|---|-----------------------|-----------------------|
| Type | | Select the function to be used (Numerical display/Numerical input). | <input type="radio"/> | <input type="radio"/> |
| Device | Device | Set the device to be monitored. (See Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| View Format | Format | Select the view format of the monitor device value. Signed/Unsigned decimal : Displays the value in decimal. Real : Displays the value in floating point type real number. (For GOT-F900 Series, binary floating values are displayed in real numbers.) Octal : Displays value in octal. Binary : Displays value in binary. Hexadecimal : Displays value in hexadecimal. (Example) Example of GOT display Signed decimal : -12623 Binary : 0011000101001111 Unsigned decimal: 12623 Octal : 30517 Real : 1262.3 Hexadecimal : 314F | <input type="radio"/> | <input type="radio"/> |
| | Color | Select the color of the numeric character to be displayed. | <input type="radio"/> | <input type="radio"/> |
| | Digits | Set the number of digits for the numeric value to be displayed. Available number of digits is different depending on the [Format] setting. Signed (Unsigned) decimal: 1 to 13 digits (including minus (-)) Hexadecimal : 1 to 8 digits Octal : 1 to 6 digits Binary : 1 to 32 digits Real : 1 to 32 digits (including minus (-), decimal point and decimal part) | <input type="radio"/> | <input type="radio"/> |
| | Decimal Point | When REAL is selected in [Format], set the number of digits after the decimal points (1 to 32). | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|-----------------|--|---|--------------------------|--------------------------|
| View Format | Size | Select the text size (magnification of X × Y) of the numeric value. Text size of 1X and 1Y represents 16 × 8 dots. GOT-A900 series:  0.5 to 8 multiple 0.5 to 8 multiple GOT-F900 series:  0.5 to 4 multiple 1 to 8 multiple | <input type="radio"/> | <input type="radio"/> |
| | Blink | Select the blinking pattern of the numeric value/figure frame None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input type="checkbox"/> |
| | Reverse | Check this item when reversing the numeric character. | <input type="radio"/> | <input type="checkbox"/> |
| | Use High Quality Font | Check this item when using high quality font to display numeric values. (Only when display size X, Y is set to any of 2, 4, 6 or 8.)  Normal Using high quality font | <input type="radio"/> | <input type="radio"/> |
| | Adjust Decimal Point Range | Check this item when displaying device values corresponding to those set in the [Decimal Point]. The values of monitored devices are automatically adjusted in GOT for display. (Example) In case of displaying the value with decimal point  The automatic adjustment is also available for the following: Display range : \$V (Value of monitor device/Value of data operation result), the specified device value Data operation: \$\$ (Value of monitor device), the specified device value | <input type="radio"/> | <input type="radio"/> |
| | Use 6 × 8 bit font | Font is displayed in size of 6 × 8 dots. (Characters only) | <input type="checkbox"/> | <input type="radio"/> |
| Frame Format | Shape | Set a frame for the object. When [None] is selected, no frame will be displayed. By clicking on the <input type="checkbox"/> Others button, figures other than those in the list box or library figures can be selected. ( Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the frame/plate color. | <input type="radio"/> | <input type="radio"/> |
| | Plate |  Frame Plate | | |
| | Background Transparent | Select this when the background is to be transparent. | <input type="checkbox"/> | <input type="radio"/> |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> | |

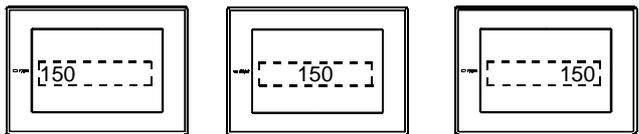
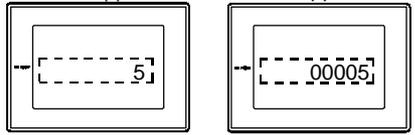
2 Extended Tab

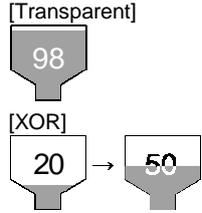


In case of GOT-A900 Series



In case of GOT-F900 Series

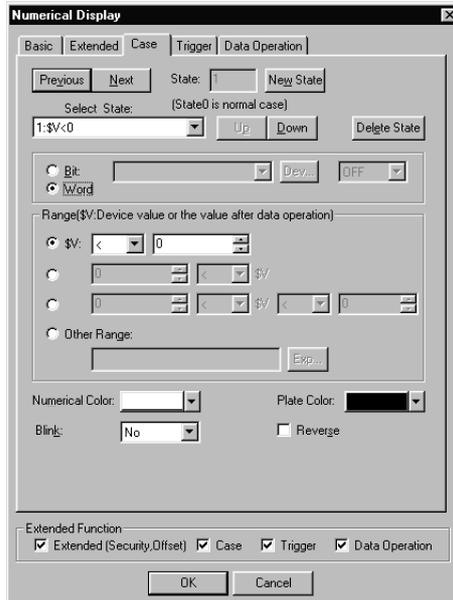
| Items | Description | A | F |
|-----------------|--|-----------------------|----------------------------------|
| Data Type | Select the data type of the device to be displayed. GOT-A900 Series Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. BCD : Treats the word device value as a BCD (binary decimal) value. Real : Treats the word device value as a floating point type real number. GOT-F900 Series Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary | <input type="radio"/> | <input type="radio"/> |
| Alignment | Select the position to display the numeric value. Left Center Right  | <input type="radio"/> | <input type="radio"/> |
| Fill with zeros | When [Right Alignment] is selected in [Alignment] and displaying zeros on the left to the numeric value is needed, check this item. Example (In the case of five digits) Zero not suppressed Zero suppressed  | <input type="radio"/> | <input type="radio"/> |
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (👉 Section 5.7 Security Function) | <input type="radio"/> | <input checked="" type="radio"/> |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (👉 Section 5.6 Offset Function) After checking, set the offset device. (👉 Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | <input checked="" type="radio"/> |

| Items | Description | A | F |
|--------------|--|---|---|
| Blink Scope | Select a blink area. Numeric value : Makes the numerical area blink. Numeric value + Plate : Makes the numerical area and plate blink. | ○ | × |
| Display Mode | Select a desired display mode when displaying a numeric value with the level display overlapped. Transparent : Displays the numeric value on the level display. XOR : In order to identify the level and numeric easily, the numeric character is displayed in color different from the level color based on XOR. This is valid when GOT is Monochrome type/EL type. (👉 App. 5 Synthesized Colors Available for XOR) <div style="text-align: center; margin-top: 10px;">  </div> | ○ | × |
| Gain1 | Set the value by which the monitor device value is multiplied. | × | ○ |
| Gain2 | Set the value by which the monitor device value is divided. | × | ○ |
| Offset | Set the value to be added to the monitor device value. | × | ○ |

3 Case Tab (GOT-A900 Series only)

The attribute can be changed on this setting tab depending on the device status. For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|-----------------|---|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case.) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device | Select a condition for display change depending on the state. Bit : Select this to change the display based on ON/OFF status of a bit device. Then, set the bit device and the device status (ON/OFF). ( Section 5.1 Device Setting) Word : Select this to change the display based on a word device value. Then, set a conditional expression for the word device value in [Range]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Numerical Color | Select a numerical color for the case that conditions for the state display are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Plate Color | Select a plate color for the case that conditions for the state display are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|----------|---------|--|-----------------------|--------------------------|
| State *1 | Blink | Select the blinking pattern of the numeric value. None : Not blink. Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input type="checkbox"/> |
| | Reverse | Check this item to reverse numeric display. | <input type="radio"/> | <input type="checkbox"/> |

For the details of *1, refer to the following.

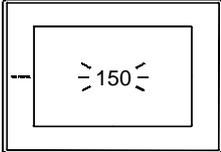
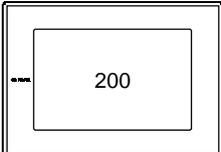
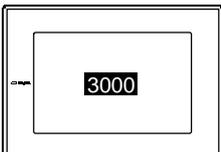
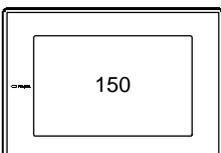
*1 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

Example) Monitor device : D100
Data view format : Signed decimal with 16-bit data size

| Priority level for overlapped setting | State No. | Range | Color |
|---------------------------------------|-----------------------|---------------|------------------|
| High ↓ Low | 1 | M10 ON | Red (Blink) |
| | 2 | 200<=\$V<=300 | Blue |
| | 3 | 1000<=\$V | Yellow (Reverse) |
| | Normal case (State 0) | — | Green |

* \$V represents the monitor device value.

| | | |
|-------------|--|---|
| State 1 | When M10 is ON, the numeric value will be displayed in red (Blink). |  |
| State 2 | When the device value is within a range of 200 to 300 (200<=\$V<= 300), the numeric value will be displayed in blue. |  |
| State 3 | When the device value is 1000 or more (1000<=\$V), the numeric value will be displayed in yellow (Reverse). |  |
| Normal case | When the condition is out of the range of State 1 to 3, the numeric value will be displayed in green. |  |

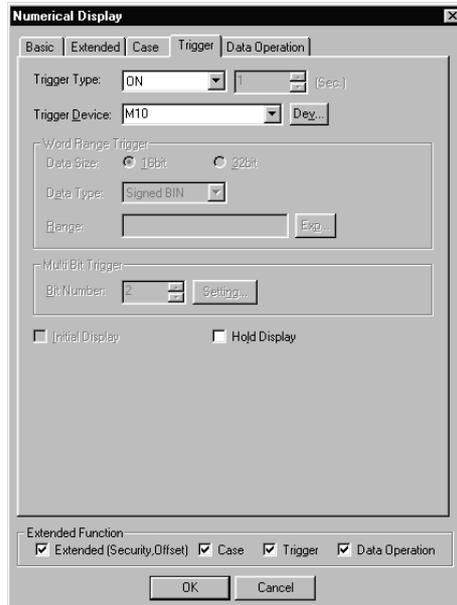
4 Trigger Tab (GOT-A900 Series only)

Set conditions for displaying the object.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



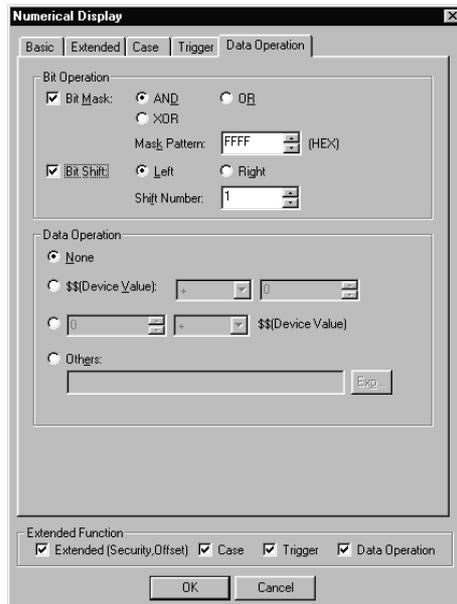
| Items | Conditions | A | F | |
|--------------------|---|--|---|---|
| Trigger Type | Select trigger by which the object is displayed. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Multi Bit Trigger | ○ | × | |
| Trigger Device | Specify the device used for the trigger. | ○ | × | |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | ○ | × | |
| | Date Size | Select the data size (16 bit/ 32 bit) of the word device. | ○ | × |
| | Data Type | Select the data type (Signed BIN/ Unsigned BIN/Real) of the word device. | ○ | × |
| | Range | Click on the Range button and set conditional expression for the word device range. | ○ | × |
| Multi Bit Trigger | Bit Number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the Setting button and set the bit devices and their conditions. | ○ | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the conditions are not satisfied. | ○ | × | |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the conditions are not satisfied. If not checked, the object will be deleted when the conditions become invalid. | ○ | × | |

5 Data Operation Tab (GOT-A900 Series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, refer to the following.

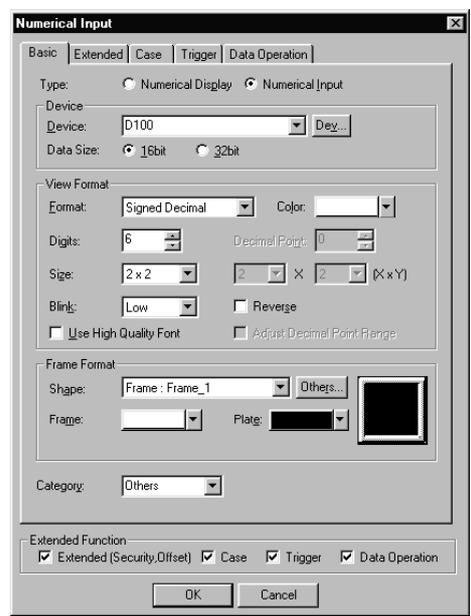
 Section 5.5 Data Operation Function



| Items | | Conditions | A | F |
|----------------|-----------|---|-----------------------|-------------------------------------|
| Bit Operation | Bit Mask | <p>Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format.</p> <p>AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Bit Shift | <p>Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number].</p> <p>Left : Left shift Right : Right shift</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | <input checked="" type="checkbox"/> |

5.8.3 Setting items of numerical input

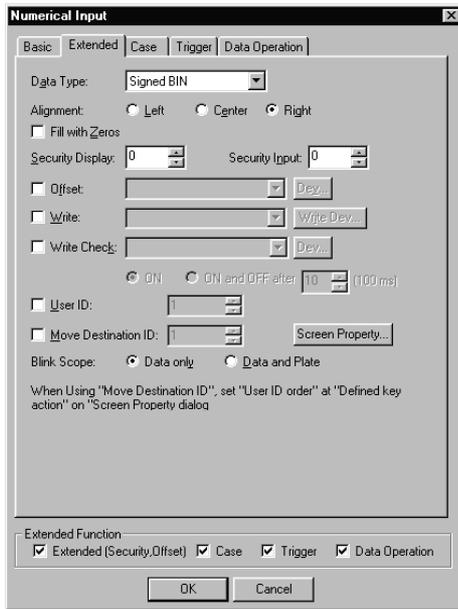
1 Basic Tab



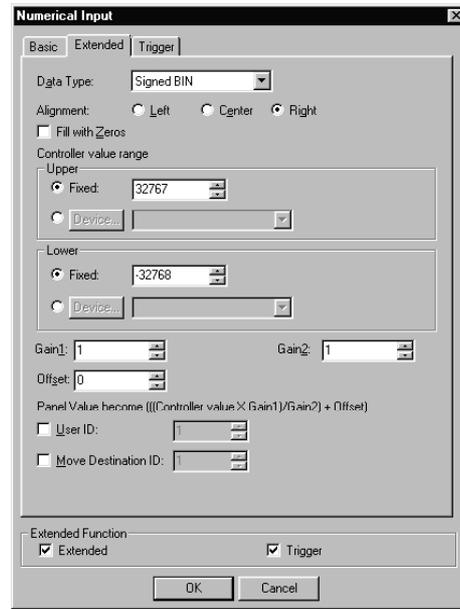
(Example: GOT-A900 Series setting)

| Items | | Description | A | F |
|-------------|---------------|--|-----------------------|-----------------------|
| Type | | Select the function to be used (Numerical Display/Numerical Input) | <input type="radio"/> | <input type="radio"/> |
| Device | Device | Set a word device to which the value is written. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| | Data Size | Select data size of word device (16 bits, 32 bits) | <input type="radio"/> | <input type="radio"/> |
| View Format | Format | Select the view format of the written device value. Use decimal or hexadecimal to input numeric values to the key window. Signed (Unsigned) decimal: Displays the value in decimal. Real : Displays the value in floating decimal point type real number. (For GOT-F900 Series, binary floating values are displayed in real number.) Octal : Displays the value in octal. Binary : Displays the value in binary. Hexadecimal : Displays the value in hexadecimal. (Example) Example of GOT display Signed decimal : -12623 Binary : 0011000101001111 Unsigned decimal: 12623 Octal : 30517 Real : 1262.3 Hexadecimal : 314F | <input type="radio"/> | <input type="radio"/> |
| | Color | Select the color for numeric character to be displayed. | <input type="radio"/> | <input type="radio"/> |
| | Digits | Set the number of digits for the numeric value to be displayed. Available number of digits is different depending on the [Format] setting. Signed/ Unsigned decimal : 1 to 13 digits (including minus (-)) Hexadecimal : 1 to 8 digits. Octal : 1 to 6 digits. Binary : 1 to 32 digits. Real : 1 to 32 digits (including minus (-), decimal point and decimal part) | <input type="radio"/> | <input type="radio"/> |
| | Decimal point | When REAL is selected in [Format], set the number of digits after the decimal points (1 to 32). | <input type="radio"/> | <input type="radio"/> |

2 Extended Tab

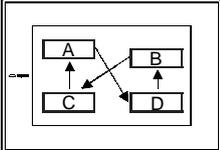


In case of GOT-A900 Series



In case of GOT-F900 Series

| Items | Description | A | F |
|-----------------|--|---|---|
| Data Type | <p>Select the data type of the device to be displayed or input.</p> <p>GOT-A900 Series</p> <ul style="list-style-type: none"> Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. BCD : Treats the word device value as a BCD (binary decimal) value. Real : Treats the word device value as a floating point type real number. <p>GOT-F900 Series</p> <ul style="list-style-type: none"> Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary | ○ | ○ |
| Alignment | <p>Select the position to display the numeric value.</p> <p style="text-align: center;">Left Center Right</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ [150]</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ [150]</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ [1500]</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ [] 150]</div> </div> | ○ | ○ |
| Fill with zeros | <p>When [Right Alignment] is selected in [Alignment] and displaying zeros on the left to the numeric value is needed, check this item.</p> <p>Example (In the case of five digits)</p> <p style="text-align: center;">Zero not suppressed Zero suppressed</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ []] 5]</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">→ [] 0005]</div> </div> | ○ | ○ |
| Security | <p>When using the security function, set the security level (1 to 15).</p> <p>When not using the function, set it to "0".</p> <p>(☞ Section 5.7 Security Function)</p> | ○ | × |

| Items | | Description | A | F | | | | | | | | | | | | | | | |
|------------------------|-------------|---|-------------------------------------|-------------------------------------|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------------|-----------------------|
| Offset | | <p>Check this item when switching the devices where numerical values are input by adding a certain value set as an offset value.</p> <p>(☞ Section 5.6 Offset Function)</p> <p>After checking, set the offset device.</p> <p>(☞ Section 5.1 Device Setting)</p> <p>Data length is fixed to 16 bits.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| Blink Scope | | <p>Select a blink area.</p> <p>Numeric value : Makes the numerical area blink.</p> <p>Numeric value + Plate : Makes the numerical area and plate blink.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| Write | | <p>Check this item when writing the value input in [Numerical Input] to devices.</p> <p>When the data operation has been set, the data before operation can be saved.</p> <p>After checking, set the device.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| Write Check | | <p>After completion of numerical input, check this item when turning ON a bit device.</p> <p>After checking, click on the <input type="button" value="Device"/> button and set the device.</p> <p>When setting is completed, set the device operation.</p> <p>ON : When numerical input is completed, the set bit device is turned on.</p> <p>ON to OFF : When numerical input is completed, the set bit device is turned on, and it will be turned off after a certain period of time has elapsed. It is very convenient for the case that handshake on the PLC CPU side is difficult.</p> <p>After selecting, set the time for which the bit device is on (0.5 to 3 seconds).</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| User ID *1 | | Check this item when setting user ID No. (1 to 65535). | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Move Destination ID | | <p>When numerical input is completed, check this item to move the cursor for the numerical input of the specified user ID No.</p> <p>After checking, set the user ID No. to move the cursor for the next numerical input.</p> <p>After setting, click on the <input type="button" value="Screen Property Dialog"/> button and set [Defined Key Action] to [User ID Order] to display this function.</p> <div style="display: flex; align-items: center;">  <table style="margin-left: 20px;"> <thead> <tr> <th></th> <th>User ID</th> <th>Move Destination ID</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> <td>1</td> </tr> <tr> <td>B</td> <td>4</td> <td>3</td> </tr> <tr> <td>C</td> <td>3</td> <td>2</td> </tr> <tr> <td>D</td> <td>1</td> <td>4</td> </tr> </tbody> </table> </div> <p>Arrow: Cursor's movement</p> | | User ID | Move Destination ID | A | 2 | 1 | B | 4 | 3 | C | 3 | 2 | D | 1 | 4 | <input type="radio"/> | <input type="radio"/> |
| | User ID | Move Destination ID | | | | | | | | | | | | | | | | | |
| A | 2 | 1 | | | | | | | | | | | | | | | | | |
| B | 4 | 3 | | | | | | | | | | | | | | | | | |
| C | 3 | 2 | | | | | | | | | | | | | | | | | |
| D | 1 | 4 | | | | | | | | | | | | | | | | | |
| Controller Value Range | Upper/Lower | <p>Use the radio buttons to select whether to set upper/lower values as fixed values or to set with the value saved in the specified device.</p> <p>Fixed : Select this when setting by inputting upper/lower limit values.</p> <p>Device : Select this when setting the values stored in the specified devices as the upper/lower limit values.</p> <p>Click on the <input type="button" value="Device"/> button and set the word devices.</p> | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Gain1 | | Set the value by which the write value is multiplied. | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Gain2 | | Set the value by which the write value is divided. | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Offset | | Set the value to be added to the write value. | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | | | | |

* For the details of 1, refer to the next page.

*1 User ID

The user ID setting allows the cursor position setting for screen switching (☞ Section 4.5 Auxiliary Setting) and confirm timing of numerical input to be stored into devices (☞ refer to the following).

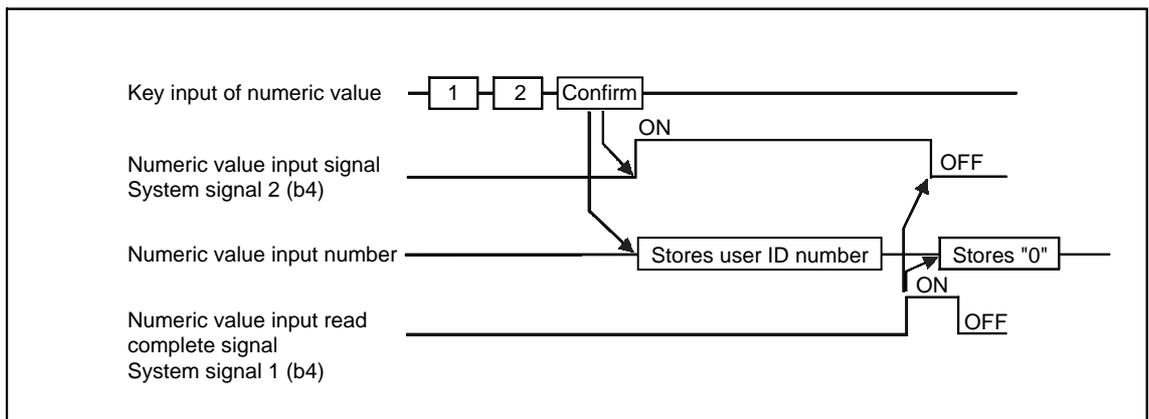
(1) Confirm timing of numerical input (System Information)

- In the case of GOT-A900 series

When a input value is entered using the numerical input function, the user ID is written to 「Numeric Value Input Number」 in 「System Information」 and 「Numeric Value Input Signal」 turns on.

When clearing the user ID written to 「Numeric Value Input Number」 or turning off 「Numeric Value Input Signal」, turn on 「Numeric Value Input Read Complete Signal」.

(After clearing, turn off the numeric value input read complete signal. If the signal remains ON, storing the user ID or turning on the bit device cannot be done even if the numerical value has been input.)



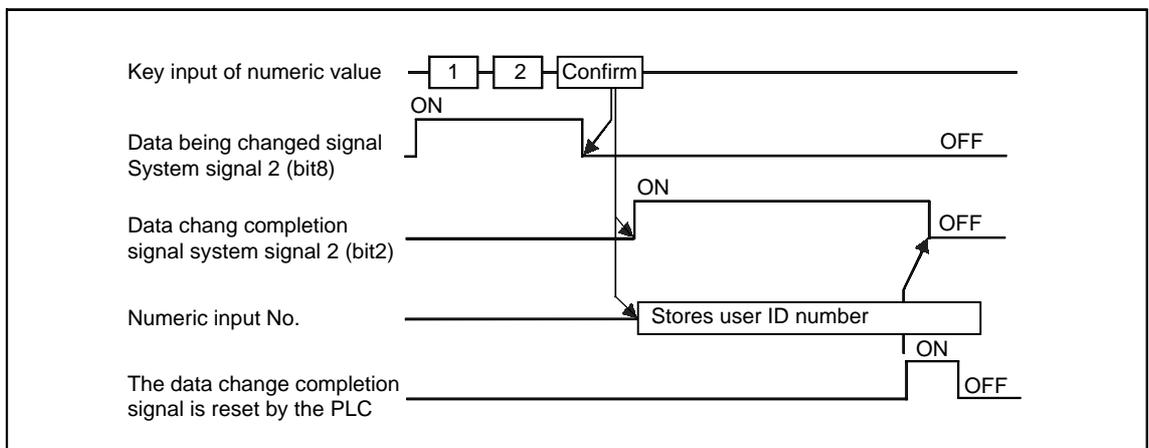
System signal 2 b4 Numeric value input signal : Turn on when a value is entered using the numerical input function.

System signal 1 b4 Numeric value read complete signal : When this signal turns on, the numeric value input signal (System signal 2 b4) turns off.

- In the case of GOT-F900 series

When the input value is determined in the Numeric input function, the user ID is written in "User ID" in "System Information", and the "data change completion" signal turns ON.

To set to OFF the "data change completion" signal, reset it in the sequence program.



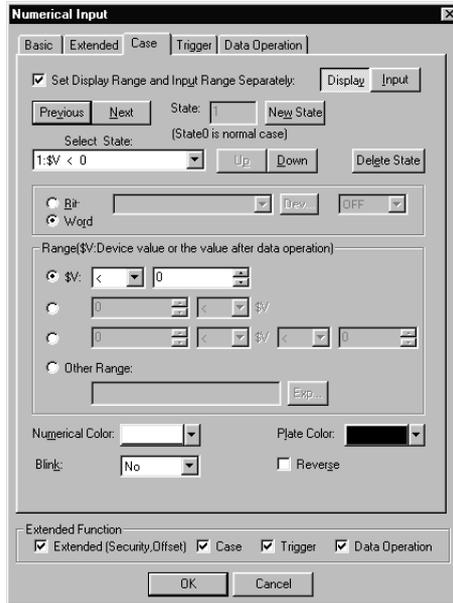
For the setting method of the system information, refer to the following.

☞ Section 3.5 System Information Setting

3 Case Tab (GOT-A900 Series only)

The attribute can be changed on this setting depending on the device status.
For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---|--|-----------------------|-------------------------------------|
| Set Display Range and Input Range Separately *1 | Check this item when setting the display range and the input range separately. After checking, click on the Display or Input button to set each range. Display : Set condition and attribute for the numerical display. Input : Set input range for the numerical input function. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| State *2 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case.) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the state during editing. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device | Select a condition for display change depending on the state. Bit : Select this to change the display based on ON/OFF status of a bit device. Then, set the bit device and the device status (ON/OFF).  Section 5.1 Device Setting Word : Select this to change the display based on a word device value. Then, set a conditional expression for the word device value in [Range]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Numerical Color | Select a numerical color for the case that conditions for the state display are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Plate Color | Select a plate color for the case that conditions for the state display are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|-------|---------|--|-----------------------|---|
| State | Blink | Select the blinking pattern of the numeric display. None : Not blink. Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | × |
| | Reverse | Check this item to reverse numeric display. | <input type="radio"/> | × |

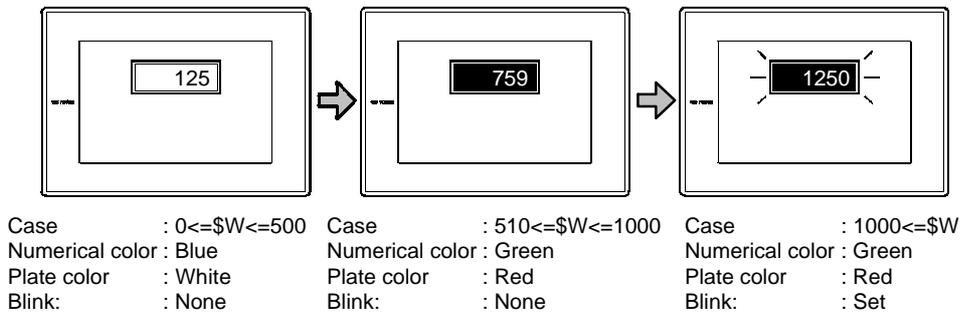
For the details of *1 and *2, refer to the following.

***1 Set Display Range and Input Range Separately**

By setting display range and input range separately, the attribute can be changed depending on the displayed value and the input exceeding the set range can be restricted.

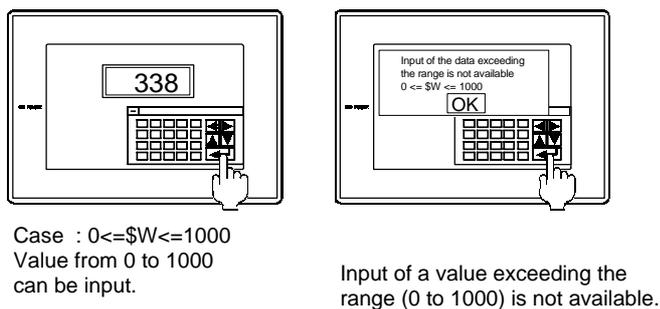
(1) When displaying

The attributes (Numerical color/Background color/Reverse display/Blink) can be changed depending on the display value.



(2) When inputting

When an input exceeds the set range, a message will be displayed and the numerical input will be restricted.



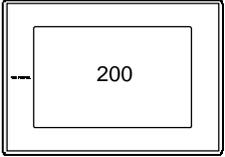
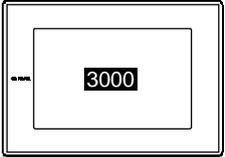
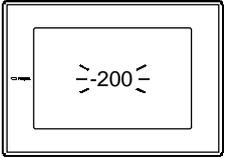
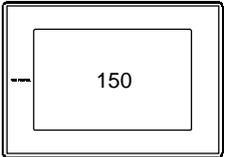
*2 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

Example) Monitor device : D100
Data view format : Signed decimal with 16-bit data size

| Priority level for overlapped setting | State No. | Range | Color |
|---------------------------------------|-----------------------|-------------------------|------------------|
| High ↓ | 1 | $200 \leq \$W \leq 300$ | Blue |
| | 2 | $1000 \leq \$V$ | Yellow (Reverse) |
| | 3 | $\$W \leq 0$ | Red (Blink) |
| Low | Normal case (State 0) | — | Green |

* \$V represents the monitor device value.

| | | |
|-------------|---|---|
| State 1 | When the device value is 200 to 300 ($200 \leq \$V \leq 300$), numeric value will be displayed in blue. |  |
| State 2 | When the device value is 1000 or more ($1000 \leq \$V$), the numeric value will be displayed in yellow (reverse). |  |
| State 3 | When the device value is 0 or less ($\$V \leq 0$), the numeric value will be displayed in red (blink). |  |
| Normal case | When the condition is out of the range of State 1 to 3, the numeric value will be displayed in green. |  |

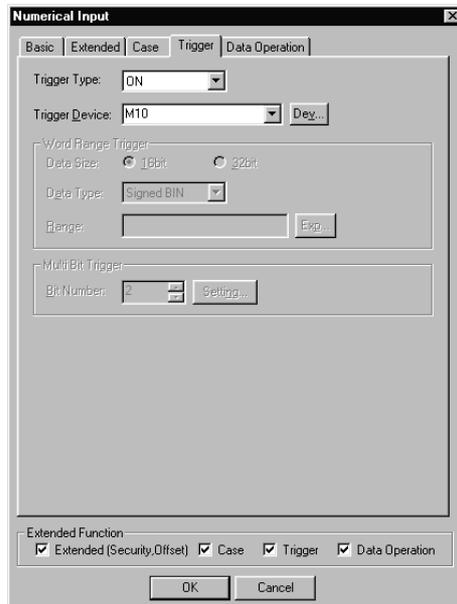
4 Trigger Tab

Set conditions for displaying the object.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



(Example: On GOT-A900 Series setting)

| Items | Conditions | A | F | |
|--------------------|--|--|-------------------------------------|-------------------------------------|
| Trigger Type | Select the trigger type for displaying the object. GOT-A900 Series <input checked="" type="radio"/> Ordinary <input checked="" type="radio"/> ON <input type="radio"/> OFF <input type="radio"/> Range <input type="radio"/> Multi Bit Trigger GOT-F900 Series <input checked="" type="radio"/> Ordinary <input checked="" type="radio"/> ON <input type="radio"/> OFF | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| | Date Size | Select the data size (16 bit/ 32 bit) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | Select the data type (Signed BIN/ Unsigned BIN/Real) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | Click on the <input type="text" value="Range"/> button and set conditional expression for the word device range. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the <input type="text" value="Setting"/> button and set the bit devices and their conditions. | <input type="radio"/> | <input checked="" type="checkbox"/> | |

For the details of *1, refer to the following.

*1 Cursor display when condition fails in numerical input

For cursor display when the condition fails in numerical input, refer to the following.

 Section 4.5 Auxiliary Setting

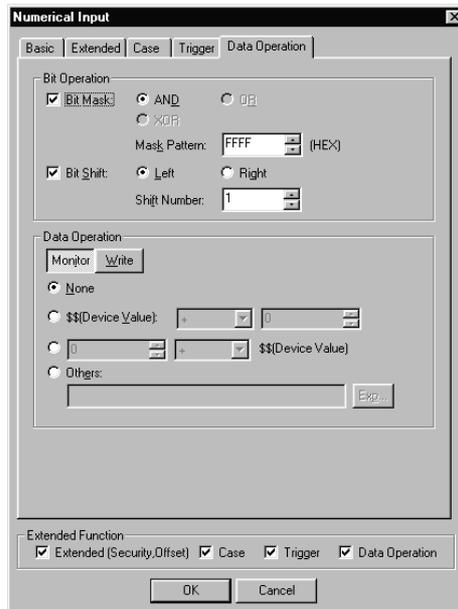
5 Data Operation Tab (GOT-A900 Series only)

Operational expression is set on this tab when operating the input value and writing the obtained value to the device.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | Check this to enable bit mask operation. Set the bit mask pattern value in hexadecimal format. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |
| | Monitor | Click on this and set the operational expression for monitoring device. | <input type="radio"/> | × |
| | Write | Click on this and set the operational expression for writing to device. | <input type="radio"/> | × |

5.8.4 Cautions

This section explains the cautions for using the numerical display/input function.

1 Cautions for drawing

(1) Maximum number of objects that can be set on 1 screen

(a) GOT-A900 Series

- Number of numerical display objects : Up to 512
- Number of numerical input objects : Up to 256

(b) GOT-F900 Series

- Number of numerical display objects : Up to 50
- Number of numerical input objects : Up to 50

(2) Display overlapped on level display

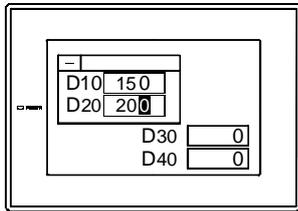
When displaying numerical values with the level display overlapped, refer to the level cautions.

 Section 5.20 Level

2 Cautions for use

(1) When numerical input is set on window screen

When the numerical input function is used on the base screen and the window screen at the same time, the input cursor is displayed only on the window screen.



(2) When special function switch (key window) is set

If a key window is displayed using a special function switch when an input cursor is not displayed at a numerical input, the key window will be displayed as follows;

(a) For default key window

A default key window for hexadecimal input will be displayed.

(b) For user-created key window

The screen set at [DEC key sheet No.] will be displayed.

If the above setting is not made, a default key window for hexadecimal input will be displayed.

(3) When blink is set

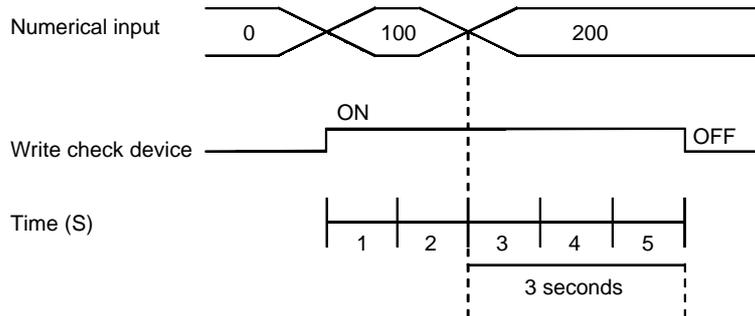
The input cursor will stop blinking temporarily when it is displayed.

(4) When [ON and OFF after] is set in write check (GOT-A900 series only)

(a) Don't turn on twenty-one devices above simultaneously.

Or not, the 22nd device or later cannot be turned off automatically.

- (b) Do not execute numerical input for the same write check device that is still ON. If such input is executed, the write check device will turn off when the time set with the executed numerical input elapses.



- (c) Even if the screen is switched (including switching to Utility) during the write check device ON, it will be ON for the specified time.

- (5) To insert/delete numerals in a numeric value
The cursor is fixed to the right end of the object. Continue to delete numerals from that point until the cursor reaches the position you want to insert/delete numerals.

3 When using input check mode (GOT-A900 series only)

- (1) For use of the input check mode

- (a) When using the input check mode, install the standard monitor OS of the GT Designer2 Version1 00A or later into GOT.
If the standard monitor OS version is old, install it again.
For how to install the standard monitor OS, refer to the following manual.

 GT Designer2 Version1 Operating Manual

- (b) The input check mode will be enabled when GOT's internal device GS450.b1 is ON. When GOT is started, GS450.b1 must be turned on with the touch switch, etc.



Hint!

Activating the input check mode when starting GOT

Using the script function allows the input check mode to be activated when starting GOT.

- Rise trigger : GS0.b4
- Script description example : set ([b:GS450.01])

- (2) Cautions for using input check mode

The input check mode operates under the following conditions.

- (a) One Case

If the number of cases is more than one, the input range check is executed not during input but when the RET key is pressed.

- (b) When range expression pattern is as follows:

- $A < B, A \leq B$
A: Monitor device (\$W) B: Fixed value/Specified device
(B is a positive numeric value)
- $A < B < C, A \leq B < C, A < B \leq C, A \leq B \leq C$
A: Fixed value/Specified device, B: Monitor device (\$W), C: Fixed value/Specified device
(C is a positive numeric value)



Remark

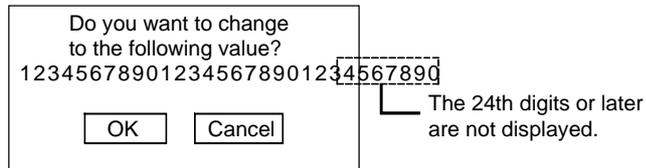
- (1) Lower limit value check
The lower limit value check is executed when the RET key is pressed.
- (2) Comparison with specified device
When comparing with the specified device, if the device value cannot be read, an error message will be displayed.

4 Cautions for input confirmation message display

- (1) Number of digits for numeric value available for message
Depending on GOT types, the numeric value digits available for display is different.
The digits exceed the following limit are not displayed on the message.

- GT SoftGOT2, A985GOT, A97*GOT, A960GOT: 35 digits
- A956WGOT, A95*GOT: 23 digits

Example) A956WGOT, A95*GOT



- (2) Message position
The message position will be different depending on the key window type.
- (a) When using default key window
The message is displayed on the key window.
 - (b) When using user-created key window or no key window
The message is displayed on the center of the screen.

5 Cautions in using the GOT-F900 series

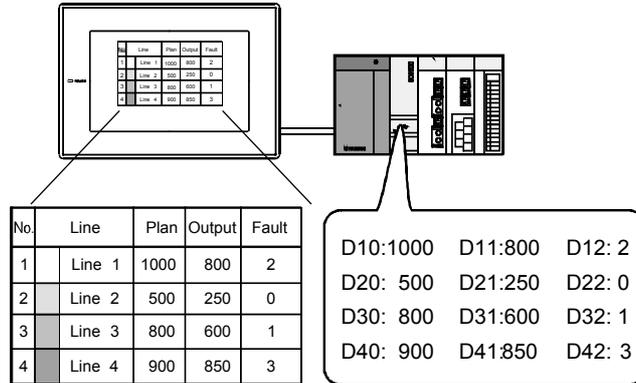
- (1) Real number display and availability of data operation when "Real" is set in "Format" on the "Basic" tab, data operation of "Gain1", "Gain2" and "Offset" cannot be executed.



5.9 Data List



This section explains the data list function that displays multiple word device values in list form. With this function, line No. and ruled lines of the list are displayed automatically.



Example

Sort lines according to the values of the prior setting item.

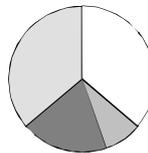
➡ Set on Basic tab

| No. | Line | Plan | Output | Fault |
|-----|--------|------|--------|-------|
| 2 | Line 2 | 500 | 250 | 0 |
| 3 | Line 3 | 800 | 600 | 1 |
| 1 | Line 1 | 1000 | 800 | 2 |
| 4 | Line 4 | 900 | 850 | 3 |

The lines will be displayed in ascending order of "Output" values.

Display the list with statistics graph on the same screen

➡ Section 5.24 Statistics Graph



| No. | Line | Plan | Output | Fault |
|-----|--------|------|--------|-------|
| 1 | Line 1 | 1000 | 800 | 2 |
| 2 | Line 2 | 500 | 250 | 0 |
| 3 | Line 3 | 800 | 600 | 1 |
| 4 | Line 4 | 900 | 850 | 3 |

Device status can be displayed effectively.



Remark

Comments displayed by using data list

Comments must be registered in advance for displaying in data list.

➡ Section 4.1 Comment Registration

5.9.1 Required knowledge for data list setting

1 Methods of setting data list

The basic function of data list can be set on the following 1 to 2 tab screen in order.

1 Basic tab

Set the number of columns and lines for data list.

| Fixed text | Comment column | Data column | | |
|------------|----------------|-------------|--------|-------|
| No. | Line | Plan | Output | Fault |
| 1 | Line 1 | 1000 | 800 | 2 |
| 2 | Line 2 | 500 | 250 | 0 |
| 3 | Line 3 | 800 | 600 | 1 |
| 4 | Line 4 | 900 | 850 | 3 |

Setting item name is displayed.

Number of lines (rows, display rows)

Label (Rows)

Comment is displayed.

Device value is displayed.

2 List tab

Set devices, comments, label color or similar on each dialog box.

Set devices, comments, label color to be displayed in lines

Set the view format of comment columns.

Set the view format of data columns.

Continuous : Set continuous comments and devices.
Set the head comment and device in 1).

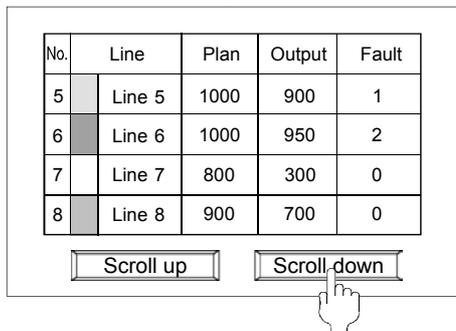
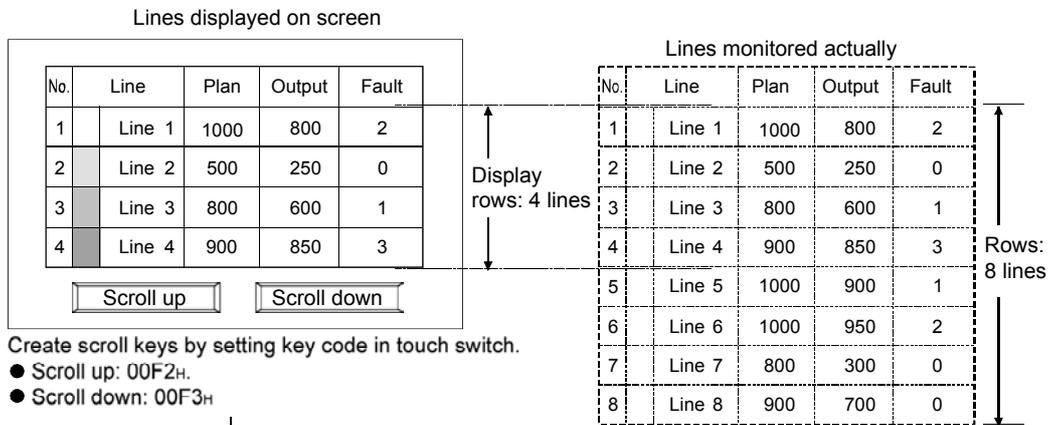
Random : Set comments and continuous devices for each line.
Set comments and the head device in 1) to 4).

2 Data list function

(1) Scroll function

In data list, the number of screen display lines (display rows) can be set separately from the number of corresponding set lines (rows).

When scroll up/scroll down key is set, data list can be scrolled up and down



Touch scroll up/scroll down key to switch the screen display by one screen.

(2) Sort function

Lines can be sorted based on device status of specified columns (ascending/descending order of device value).

Example) Sort the lines in descending order of device values of the third column.

Make the settings on basic tab as follows:

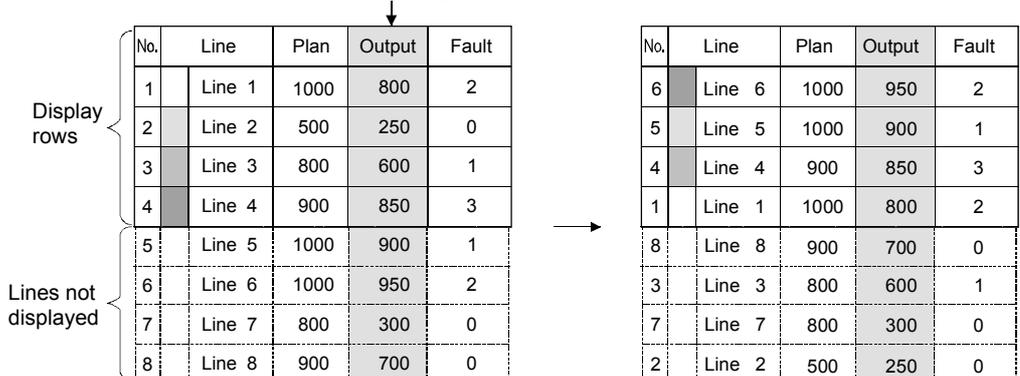
Rows : 8 lines

Sort : Ascending

Display rows: 4 lines

Sort/Attribute column : 3 columns

The lines will be sorted in descending order of "Output" values.



5.9.2 Arrangement and settings

1 Carry out either of the following operations.

-  Click on (Data List)
- Select [Object] → [Data List] from the menu.

2 Click on the data list display position to complete the data list arrangement.

(After arrangement, release the arrangement mode by right-clicking the mouse or using **[ESC]** key.)

3 Double click on the arranged data list to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer 2 Version1 Operating Manual



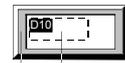
Remark

Methods of adjusting objects in which figure frame is set

Select **[Enable Two Tracker Mode]** to adjust the position of the object and the figure frame.



Section 5.2.3 Object size change

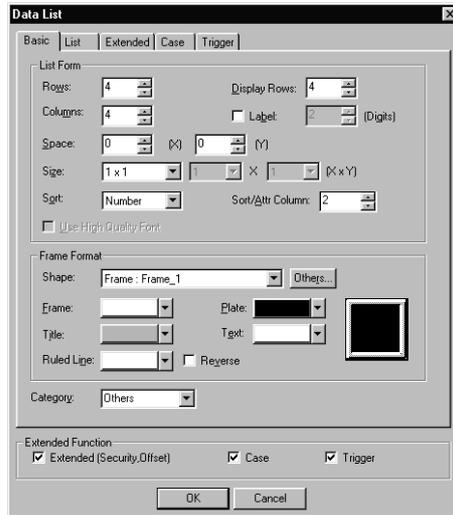


Object display frame
Shape frame

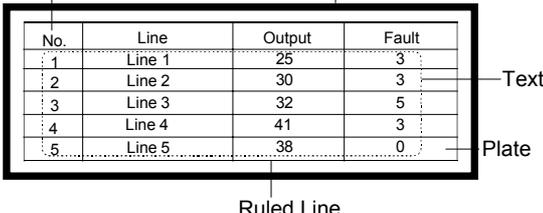
5.9.3 Setting items

1 Basic tab

This tab screen is used to set the device value to be monitored and the list form to display a comment.



| Items | | Description | A | F |
|-----------------------|---|--|----------------------------------|----------------------------------|
| List Form | Rows | Set the number of lines for monitoring devices using data list. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Display Rows | Set the number of lines to be displayed on screen (1 to 27). The lines out of the screen can be displayed with scroll up/scroll down key. (Section 5.9.1 Required knowledge for data list setting) | <input type="radio"/> | <input checked="" type="radio"/> |
| | Columns | Set the number of columns to be displayed (2 to 6). | <input type="radio"/> | <input checked="" type="radio"/> |
| | Label | Check this item to display a label. After check, set number of label digits (2 to 6). (one digit for one character) | <input type="radio"/> | <input checked="" type="radio"/> |
| | Space | Set the text (title, comment, numeric value) to be displayed and ruled line space of the list (0 to 32 dots). | <input type="radio"/> | <input checked="" type="radio"/> |
| | Size | Select the size of text (title, comment, numeric value) to be displayed. Size of X × Y is 16 × 8 dots. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Sort | Set the method of arranging (sort) lines. No. order : Display in line number column order. Ascending : Arrange from small value to large value. Descending : Arrange from large value to small value. Without sort : Not sort. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Sort/Attr Column | Set the sort basis column. | <input type="radio"/> | <input checked="" type="radio"/> |
| Use High Quality Font | Check this item to display numeric values as high quality font. (only when the magnification factor of X × Y is set to 2, 4, 6, 8) | <input type="radio"/> | <input checked="" type="radio"/> | |

| Items | | Description | A | F |
|--------------|---|---|-------------------------------------|-------------------------------------|
| Frame Format | Shape | <p>Set a frame for the object.</p> <p>When [None] is selected, no frame will be displayed.</p> <p>By clicking on the <input type="text" value="Others"/> button, figures other than those in the list box or library figures can be selected.</p> <p>( Section 5.2.2 Object shape setting)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Frame | <p>Set the color for each part of the list.</p> <div style="text-align: center;"> <p>Title (The color of each title)</p> <p>Frame</p>  </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Plate | | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Title | | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Text | | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Ruled Line | | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Reverse | | Check this item to reverse text. | <input type="radio"/> |
| Category | <p>When allocating category to the object, select a proper category.</p> <p>( GT Designer2 Version1 Operating Manual)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | |

2 List tab

Click on **Column** button and **Row** button on this dialog box to display the corresponding setting dialog box. Then set devices and comments on the dialog box.

For the settings on each setting dialog box, refer to the following explanation (1) to (3).

(1) Edit rows dialog box
Make the settings to be displayed in rows.
(Device, comment, label)

(2) Edit columns dialog box (comment column)
Set the display attribute of comment column.

(3) Edit rows (Data column) dialog box
Set the display attribute of data column.

Title, device and comment can be input directly.

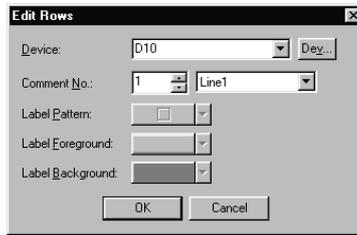
Title

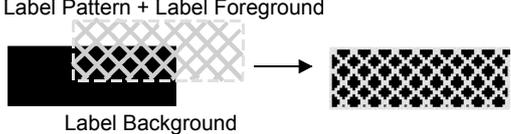
Comment No. Device

| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|----------|----------|----------|----------|----------|--------|---|-----|-----|-----|--------|---|-----|-----|-----|--------|---|-----|-----|-----|--|----------|----------|----------|----------|--------|---|-----|-----|-----|--------|---|-----|-----|-----|--------|---|-----|-----|-----|---|---|
| Device: | <p>Select a device setting method.</p> <p>Continuous : Set devices of continuous No. through all rows. Random : Set devices of continuous No. in each row.</p> <p>Example) When "Continuous" is set When "Random" is set</p> <p>Set initial device Set initial device in each row</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th></th> <th>Column 1</th> <th>Column 2</th> <th>Column 3</th> <th>Column 4</th> </tr> </thead> <tbody> <tr> <td>Line 1</td> <td>1</td> <td>D10</td> <td>D11</td> <td>D12</td> </tr> <tr> <td>Line 2</td> <td>2</td> <td>D13</td> <td>D14</td> <td>D15</td> </tr> <tr> <td>Line 3</td> <td>3</td> <td>D16</td> <td>D17</td> <td>D18</td> </tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th></th> <th>Column 1</th> <th>Column 2</th> <th>Column 3</th> <th>Column 4</th> </tr> </thead> <tbody> <tr> <td>Line 1</td> <td>1</td> <td>D10</td> <td>D11</td> <td>D12</td> </tr> <tr> <td>Line 2</td> <td>2</td> <td>D20</td> <td>D21</td> <td>D22</td> </tr> <tr> <td>Line 3</td> <td>3</td> <td>D30</td> <td>D31</td> <td>D32</td> </tr> </tbody> </table> | | Column 1 | Column 2 | Column 3 | Column 4 | Line 1 | 1 | D10 | D11 | D12 | Line 2 | 2 | D13 | D14 | D15 | Line 3 | 3 | D16 | D17 | D18 | | Column 1 | Column 2 | Column 3 | Column 4 | Line 1 | 1 | D10 | D11 | D12 | Line 2 | 2 | D20 | D21 | D22 | Line 3 | 3 | D30 | D31 | D32 | ○ | × |
| | Column 1 | Column 2 | Column 3 | Column 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 1 | 1 | D10 | D11 | D12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 2 | 2 | D13 | D14 | D15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 3 | 3 | D16 | D17 | D18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Column 1 | Column 2 | Column 3 | Column 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 1 | 1 | D10 | D11 | D12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 2 | 2 | D20 | D21 | D22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 3 | 3 | D30 | D31 | D32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comment: | <p>Select a comment setting method.</p> <p>Continuous : Set comments of continuous No. through all rows. Random : Set comments of continuous No. in each row.</p> | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

(1) Edit Rows dialog box

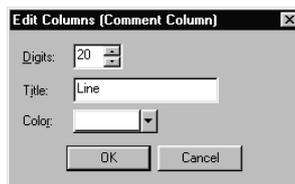
This dialog box is used to set the device to be monitored, comment to be displayed and label (display attribute).



| Items | Description | A | F |
|------------------|---|-----------------------|--------------------------|
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="checkbox"/> |
| Comment No. | Set the comment No. to be displayed in the selected line. | <input type="radio"/> | <input type="checkbox"/> |
| Label Pattern | Select label pattern/label foreground/label background. | <input type="radio"/> | <input type="checkbox"/> |
| Label Foreground | The pattern is displayed in color of the label foreground on the label background. | <input type="radio"/> | <input type="checkbox"/> |
| Label Background | <p>Example)</p> <p>Label Pattern : </p> <p>Label Foreground : </p> <p>Label Background : </p> <p>Label Pattern + Label Foreground</p>  <p>Label Background</p> | <input type="radio"/> | <input type="checkbox"/> |

(2) Edit columns (comment column) dialog box

This dialog box is used to set the number of comment characters, the title and title color of the column.

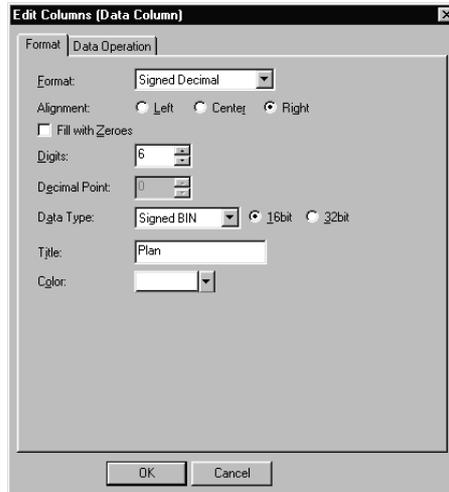


| Items | Description | A | F |
|--------|--|-----------------------|--------------------------|
| Digits | Set number of comment characters from 1 to 80 (80 characters). | <input type="radio"/> | <input type="checkbox"/> |
| Title | Input the title of comment column. | <input type="radio"/> | <input type="checkbox"/> |
| Color | Select the title color. | <input type="radio"/> | <input type="checkbox"/> |

(3) Edit Columns (Data Column) dialog box

(a) View format tab

This tab is used to set the number of digits for device value, view format/ data type of the device to be monitored, title and title color of the column.

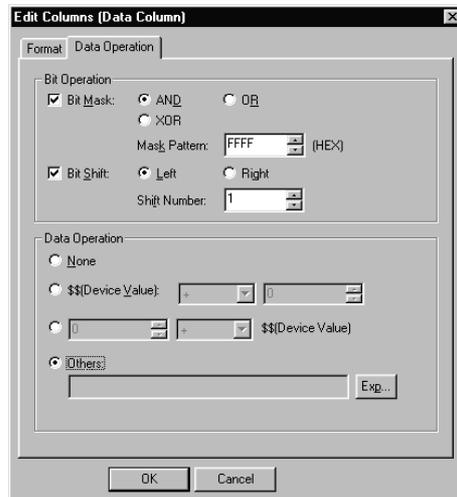


| Items | Description | A | F |
|------------------|---|-----------------------|-------------------------------------|
| View Format | Select the view format of the monitor device value. Signed decimal : Displays the value in signed decimal. Unsigned decimal : Displays the value in unsigned decimal. Hexadecimal : Displays value in hexadecimal. Octal : Displays value in octal. Binary : Displays value in binary. Real : Displays the value in floating point type real number. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Alignment | Select the position based on the width of data column. Left : Align left. Center : Align center. Right : Align right. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Fill with Zeroes | When [Right Alignment] is selected in [Alignment] and displaying zeros on the left to the numeric value is needed, check this item. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Digits | Set the number of digits for the device value to be displayed in data column. Available number of digits is different depending on the [Format] setting. Signed (Unsigned) decimal : 1 to 13 digits (includes minus (-)) Hexadecimal : 1 to 8 digits Octal : 1 to 6 digits Binary : 1 to 32 digits Real : 1 to 32 digits (includes minus (-), decimal point and decimal part) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Decimal Point | When REAL is selected in [Format], set the number of digits (1 to 32) for the decimal part. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Data Type | Select the data type of word device to be monitored. After selecting, set the data size (16 bits, 32 bits). Signed BIN : Treats word device value as signed binary value. Unsigned BIN : Treats word device value as unsigned binary value. BCD : Treats word device value as BCD (binary decimal) value. Real : Treats word device value as floating point type real number. (Only when data size is 32 bits only) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Title | Input the title of data column. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Color | Select the title color. | <input type="radio"/> | <input checked="" type="checkbox"/> |

(b) Data Operation tab

This tab is used to set the expression to operate the device value and display the results. For details of data operation, refer to the following.

 Section 5.5 Data Operation Function

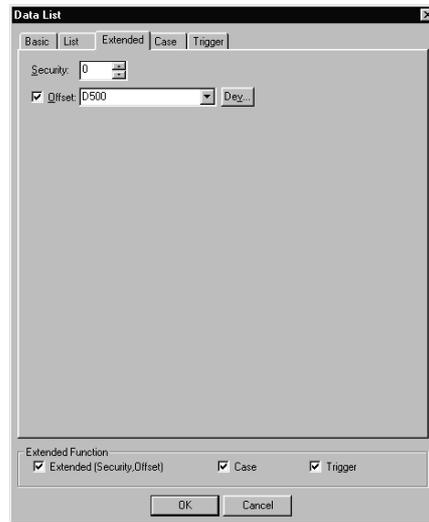


| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | <p>Check this item to enable bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format.</p> <p>AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR.</p> | <input type="radio"/> | × |
| | Bit Shift | <p>Check this item to enable bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number].</p> <p>Left : Left shift Right : Right shift</p> | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

3 Extended tab

Set the security and offset.

This tab is displayed by checking "Extended" at the bottom of dialog box.

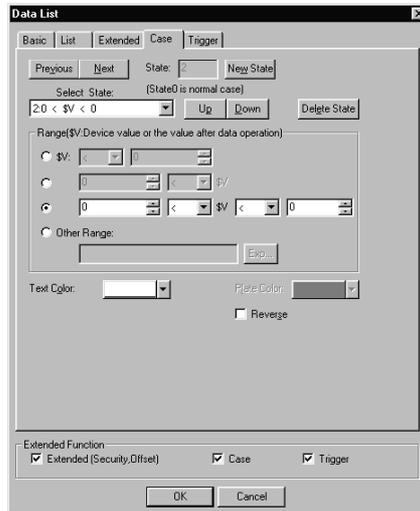


| Items | Description | A | F |
|----------|--|-----------------------|---|
| Security | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0".</p> <p> Section 5.7 Security Function)</p> | <input type="radio"/> | × |
| Offset | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value.</p> <p> Section 5.6 Offset Function)</p> <p>After checking, set the offset device.</p> <p> Section 5.1 Device Setting)</p> <p>Data length is fixed to 16 bits.</p> | <input type="radio"/> | × |

4 Case tab (GOT-A900 Series only)

Operational expression is set on this tab when monitoring the device by computing the device values. This tab is displayed by checking the corresponding extended function at the bottom of the dialog box. For details of state, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Change the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Text Color | Select a text color for the case that conditions for the state display are satisfied | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Plate Color | Select a plate color for the case that conditions for the state display are satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

* For details of 1, refer to the next page.

*1 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

(3) State conditions of data list

In data list, \$V value of a state condition (monitor device) is the device value set in the 2nd column.

Example)

| Line | Plan | Output | Fault | Comment |
|------|------|--------|-------|---------|
| 1 | D10 | D11 | D12 | |
| 2 | D10 | D11 | D12 | |
| 3 | D30 | D31 | D32 | |
| 4 | D40 | D41 | D42 | |

D10, D20, D30 and D40 are treated as \$V value.

Example) Device : D10, D20, D30, D40

Data view format : Signed decimal, with size of 16 bits

| No. | Line | Output | Fault |
|-----|--------|--------|-------|
| 1 | Line 1 | D10 | D11 |
| 2 | Line 2 | D20 | D21 |
| 3 | Line 3 | D30 | D31 |
| 4 | Line 4 | D40 | D41 |

Action priority
when setting
overlaps

High
↓
Low

| State No. | Range | Text color | Plate color |
|--------------------------|-----------------|------------|-------------|
| 1 | 1000 ≤ \$V | White | Green |
| 2 | 900 ≤ \$V ≤ 999 | Yellow | White |
| Normal case (State 0) | — | Black | White |

State 1

When monitor device value is over 1000 ($1000 \leq \$V$), the plate color will be changed to green.

| No. | Line | Output | Fault |
|-----|--------|--------|-------|
| 1 | Line 1 | 1000 | 2 |
| 2 | Line 2 | 1000 | 0 |
| 3 | Line 3 | 950 | 1 |
| 4 | Line 4 | 980 | 3 |

State 2

When monitor device value is 900 to 999 ($900 \leq \$V \leq 999$), the text color will be changed to yellow.

| No. | Line | Output | Fault |
|-----|--------|--------|-------|
| 1 | Line 1 | 890 | 2 |
| 2 | Line 2 | 880 | 0 |
| 3 | Line 3 | 920 | 1 |
| 4 | Line 4 | 910 | 3 |

Normal case

When monitor device value is out of the range (below 899), the text color will be black and the plate color will be white.

| No. | Line | Output | Fault |
|-----|--------|--------|-------|
| 1 | Line 1 | 890 | 2 |
| 2 | Line 2 | 880 | 0 |
| 3 | Line 3 | 820 | 1 |
| 4 | Line 4 | 810 | 3 |

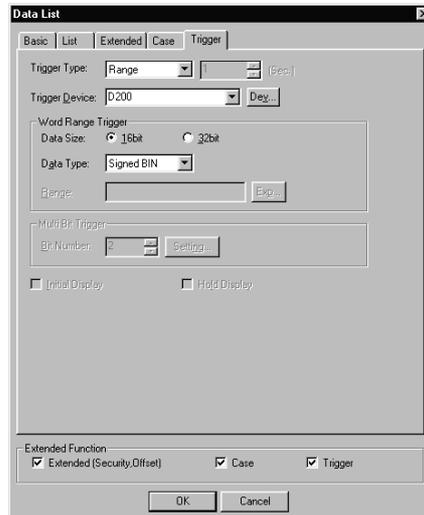
5 Trigger tab

Set conditions to display an object.

This tab is displayed by checking the extended function at the bottom of dialog box.

For details of trigger, refer to the following.

 Section 5.4 Trigger Setting



| Items | Description | A | F | |
|--------------------|--|--|-------------------------------------|-------------------------------------|
| Trigger Type | Select the trigger type for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Multi Bit Trigger | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| Trigger Device | Click on button <input type="text" value="Device"/> to specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| | Date Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | Select the data type (Signed BIN/ Unsigned BIN/Real) of word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | Click on the <input type="text" value="Range"/> button and set conditional expression for the word device range. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | Bit number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the conditions are not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> | |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the conditions are not satisfied. If not checked, the object will be deleted when the conditions become invalid. | <input type="radio"/> | <input checked="" type="checkbox"/> | |

5.9.4 Cautions

This section provides the cautions for using data list function.

1 Cautions for drawing

- (1) Maximum number of data list objects in one screen
 - GOT-A900 Series: 1
- (2) Applicable screen
 - Only base screen can be set.
- (3) Cautions for using together with other object
 - (a) The object that cannot be set on the same screen
 - Alarm history cannot be set on the same screen.
 - (b) The object restricted on the applicable function
 - In alarm list, the touch switch used for alarm list (user alarm) cannot be set.

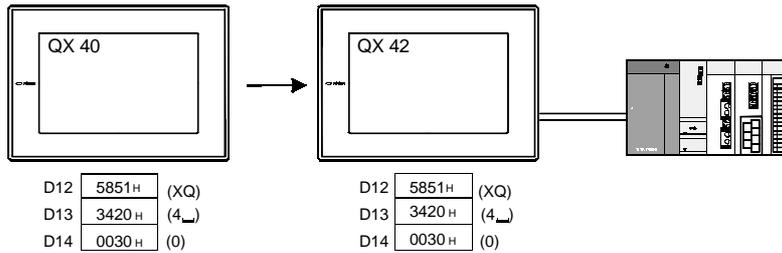


5.10 ASCII Display/Input



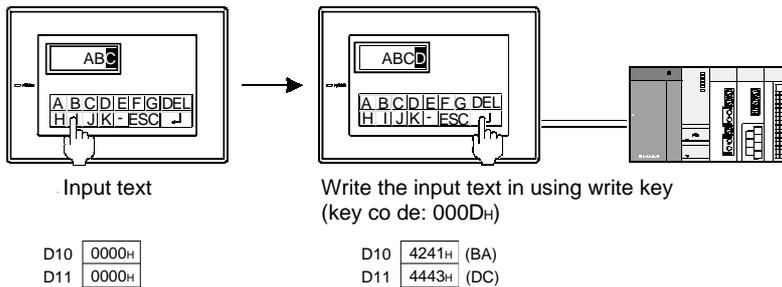
1 ASCII display

ASCII display is the function that treats the data stored in word device as text code (ASCII code) to display the text column.



2 ASCII input

ASCII input is the function that writes the input text into word device in text code (ASCII code). The keys for input are created by assigning key codes to touch switch.

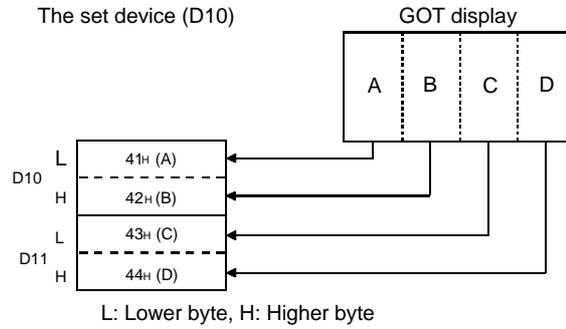




Method of storing text code

The text codes are stored into bytes in lower to higher order within the continuous deices beginning with the set one.

Example 1) When displaying "ABCD"

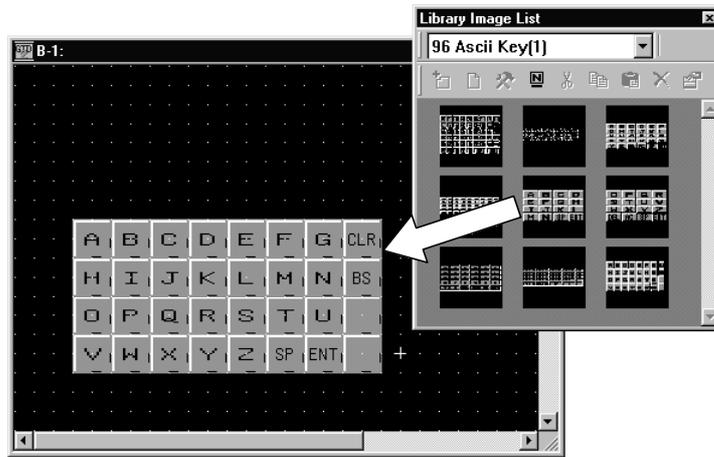




(1) The key for ASCII input

(a) To use the key registered in GT Designer2 library

The key for ASCII input is registered in GT Designer2 library.



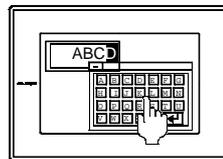
(b) To create the key window for ASCII input.

Users can create key window for ASCII input.

Register the window screen in which keys for ASCII input are arranged as key window.

The created key window operates as numerical input function key window.

☞ Section 4.6.4 How to create user-created key Window



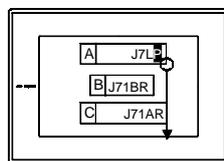
Register the user-created window for ASCII input as key window. (Only with GOT-A900 series)

(2) Input operation during ASCII input

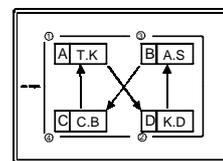
The input status during ASCII input (display of key window and cursor) and the input order (cursor sort) can be customized for each project and screen.

☞ Section 4.5 Auxiliary Setting

Example 1) Setting the input order of multiple ASCII input

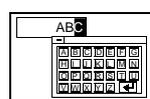


Make the settings according to the positions



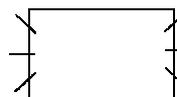
Make the settings at random

Example 2) Erasing ASCII input function when trigger is disabled

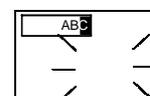


When the trigger is disabled

When the trigger is disabled.



ASCII input function is erased.



The key window for ASCII input is erased.

5.10.1 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  (ASCII Display)/  (ASCII Input)
 - Select [Object] → [ASCII Display] / [ASCII Input] from the menu.
- 2 Click on the position where ASCII Display/ASCII Input to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using  key.)
- 3 Double click on the arranged ASCII Display/ASCII Input to display the setting dialog box.
Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



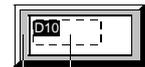
Remark

Method of adjusting objects in which figure frame is set

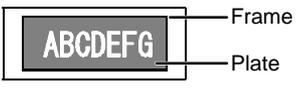
Select [Enable Two Tracker Mode] to adjust the position of the object and the figure frame.



Section 5.2.3 Object size change



Object outline frame
Shape

| Items | | Description | A | F |
|--------------|----------------|---|--------------------------|-----------------------|
| Frame Format | Shape | Set a frame for the object. When [None] is selected, no frame will be displayed. By clicking on the Others button, figures other than those in the list box or library figures can be selected. (Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the frame/plate color. | <input type="radio"/> | <input type="radio"/> |
| | Plate |  | <input type="radio"/> | <input type="radio"/> |
| | Bg Transparent | Select this when the background is to be transparent. | <input type="checkbox"/> | <input type="radio"/> |
| Category | | When allocating category to the object, select a proper category. (GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

For details of *1, refer to the following.

*1 Digits

- (1) The number of words to store text code differs according to digits as follows:

$$\frac{\text{Digits}}{2} = \text{Number of the storing words (round off the decimal part and add 1 to the integral part)}$$

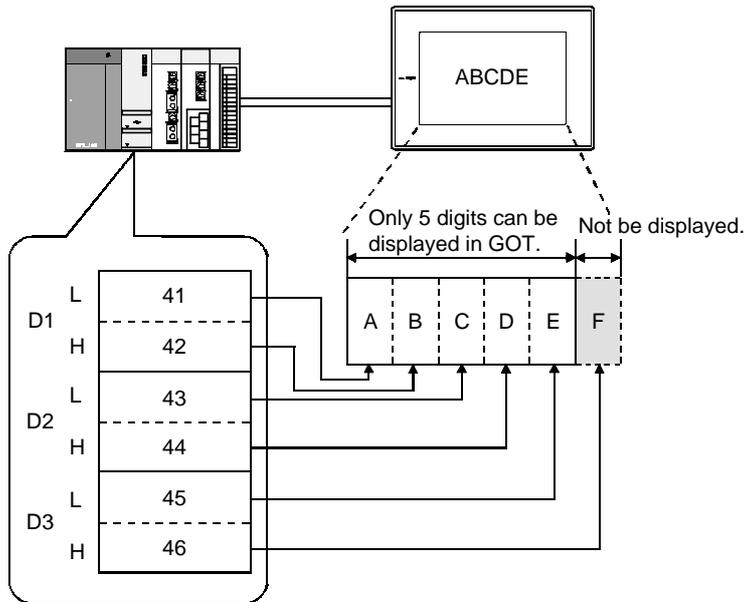
Example) Set device: D1, Digits: 5 digits

$5 \div 2 = 2.5$ 3 "D1 to D3", 3 words are used.

- (2) Space occupies 1 digit.

- (3) When the number of Digits is odd, the higher byte of the end device will not be displayed.

Example) In the case of DBC (Set device: D1, Digits: 5 digits)

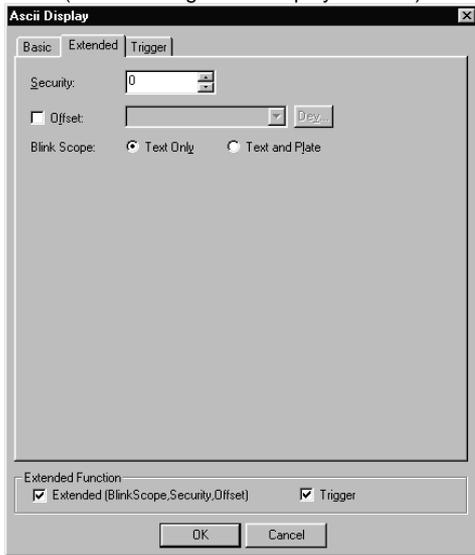


L: Lower byte, H: Higher byte

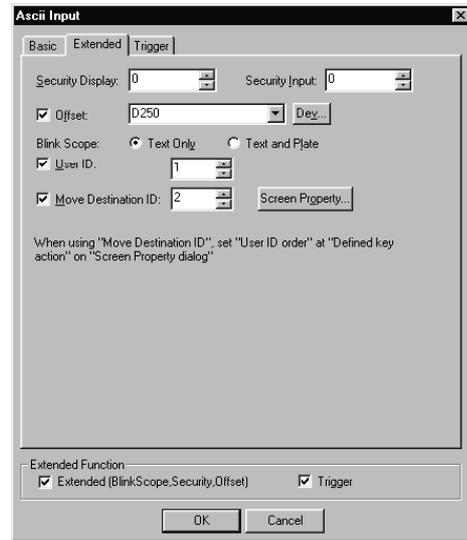
2 Extended tab (for GOT-A900 series only)

This tab is used to set security, offset, blink scope, user ID and move destination ID.

(When setting ASCII display function)



(When setting ASCII input function)



| Items | Description | A | F |
|---|--|-----------------------|---|
| Security/ Security Display | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". | <input type="radio"/> | × |
| Security Input (Only when setting ASCII input function) | The number for security input must be larger than that for security display. (Section 5.7 Security Function) | <input type="radio"/> | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (Section 5.6 Offset Function) After checking, set the offset device. (Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | × |
| Blink Scope | Select a blink area. Text : Makes the text area blink. Text and Plate : Makes the text area and plate blink. | <input type="radio"/> | × |
| User ID *1 (Only when setting ASCII input function) | Check this item when setting the user ID No. (1 to 65535). By setting the user ID, the following operations are available. Decides the cursor display position when switching screen. <ul style="list-style-type: none"> ● (Section 4.5 Auxiliary Setting) Confirms the ASCII input definition timing using PLC CPU. <ul style="list-style-type: none"> ● (Section 3.5 System Information Setting) | <input type="radio"/> | × |

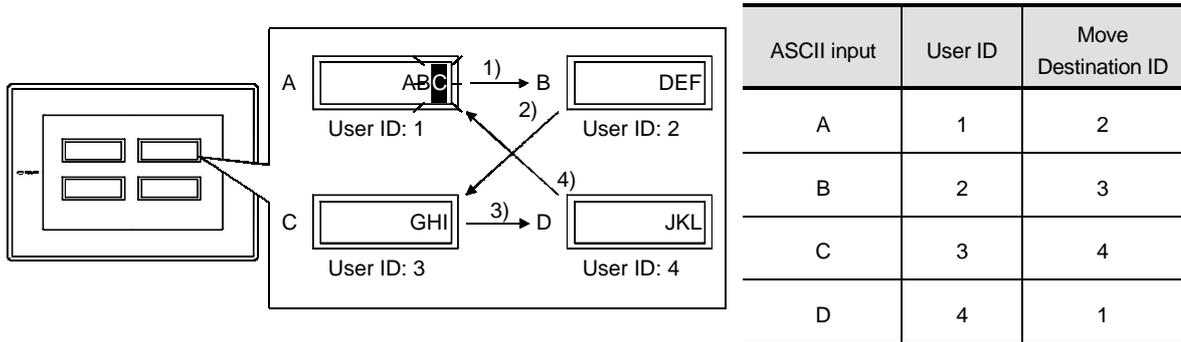
| Items | Description | A | F |
|--|---|---|---|
| Move Destination ID *1 (Only when setting ASCII input function) | Check this item when moving the cursor to the ASCII input specified by the user ID No. after an ASCII input is defined. After checking, set the user ID No. for the ASCII input to which the cursor is moved. Then, click on the Screen <input type="button" value="Properties"/> button and set [Defined key action] to [User ID order] to make the function available. | ○ | × |

For details of *1, refer to the following.

*1 Relation between User ID and Move Destination ID

The destination ID No. indicates the user ID No. of ASCII input function to which the cursor will move.

Example) Cursor movement to the destination ID



3 Trigger tab (for GOT-A900 series only)

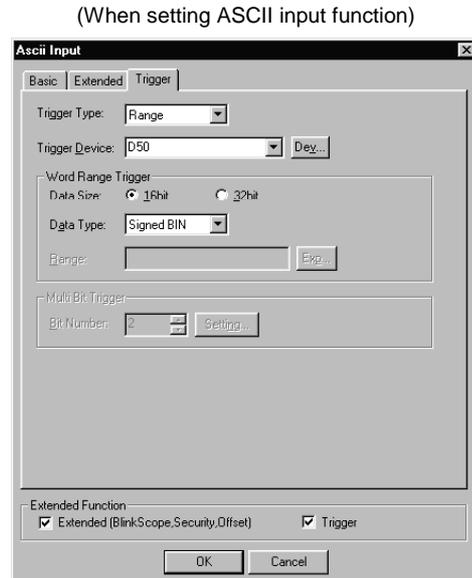
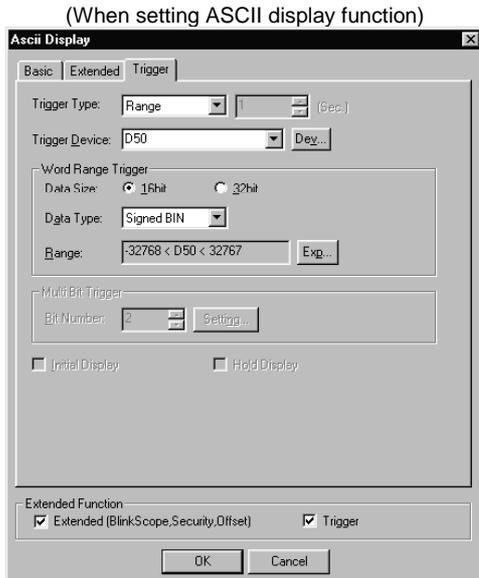
This tab is used to set the display and operation condition of object.

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



| Items | Description | A | F | |
|---|--|--|---|---|
| Trigger Type | <ul style="list-style-type: none"> When setting ASCII display function: Select the trigger by which data is displayed in ASCII. When [Sampling] is selected, sampling (1 to 3600 sec) is set with 1 sec as unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Bit trigger When setting ASCII input function Select the trigger to operate ASCII input <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Range ● Bit trigger | ○ | × | |
| Trigger Device | Specify the device used as trigger. | ○ | × | |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | ○ | × | |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | ○ | × |
| | Data Type | Select the data type of word device (Signed BIN/Unsigned BIN/Real number). | ○ | × |
| | Range | Click on the Range button and set conditional expression for the word device range. | ○ | × |
| Multi Bit Trigger | Bit Number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used as trigger. After setting, click on the Setting button and set the bit devices and their conditions. | ○ | × |
| Initial Display (Only when setting ASCII display function) | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the conditions are not satisfied. | ○ | × | |

| Items | Description | A | F |
|---|--|---|---|
| Hold Display (Only when setting ASCII display function) | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the conditions are not satisfied. If not checked, the object will be deleted when the conditions become invalid. | ○ | × |

For details about *1, refer to the following.

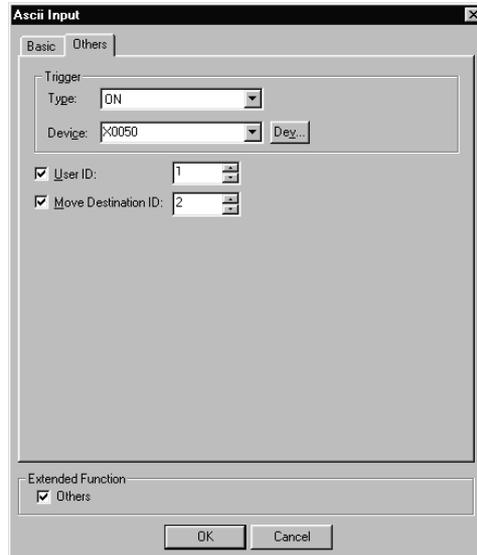
*1 The cursor display when trigger is enabled during ASCII input

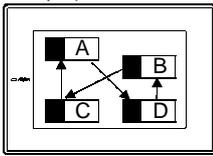
Refer to the following for the cursor display when trigger is enabled during ASCII input.

 Section 4.5 Auxiliary Setting

4 Other tabs (for GOT-F900 series only)

This tab is used to set ASCII input function trigger, user ID and destination ID. The Others tab is displayed only when the ASCII input function is set.



| Items | | Description | A | F | | | | | | | | | | | | | | | |
|---------------------|---------|--|---|---------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trigger | Type | Select the trigger for displaying the data in ASCII. (☞ Section 5.4 Trigger Setting) ● Ordinary ● ON ● OFF | × | ○ | | | | | | | | | | | | | | | |
| | Device | The bit device range can be set by clicking the [Device] button when [ON]/[OFF] is selected in [Trigger Type]. (☞ Section 5.1 Device Setting) | × | ○ | | | | | | | | | | | | | | | |
| User ID | | Check this item when setting the user ID No. (1 to 65535). By setting the user ID, the following operations are available. ● Decides the cursor display position when switching screen. (☞ Section 4.5 Auxiliary Setting) ● Confirms the ASCII input definition timing using PLC CPU. (☞ Section 3.5 System Information Setting) | × | ○ | | | | | | | | | | | | | | | |
| Move Destination ID | | Check this item when moving the cursor to the ASCII input specified by the user ID No. after an ASCII input is defined. After checking, set the user ID No. for the ASCII input to which the cursor is moved. Then, click on the Screen Properties button and set [Defined key action] to [User ID order] to make the function available. (Example) <div style="display: flex; align-items: center;">  <table style="margin-left: 20px;"> <thead> <tr> <th></th> <th>User ID</th> <th>Destination ID</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2</td> <td>1</td> </tr> <tr> <td>B</td> <td>4</td> <td>3</td> </tr> <tr> <td>C</td> <td>3</td> <td>2</td> </tr> <tr> <td>D</td> <td>1</td> <td>4</td> </tr> </tbody> </table> </div> <p>Arrow: Cursor moving route</p> | | User ID | Destination ID | A | 2 | 1 | B | 4 | 3 | C | 3 | 2 | D | 1 | 4 | × | ○ |
| | User ID | Destination ID | | | | | | | | | | | | | | | | | |
| A | 2 | 1 | | | | | | | | | | | | | | | | | |
| B | 4 | 3 | | | | | | | | | | | | | | | | | |
| C | 3 | 2 | | | | | | | | | | | | | | | | | |
| D | 1 | 4 | | | | | | | | | | | | | | | | | |

5.10.3 Cautions

This section provides the cautions when using ASCII display/ASCII input function.

1 Cautions for drawing

- (1) Maximum Number of ASCII display/input objects that can be set in one screen
 - GOT-A900 series: 256
 - GOT-F900 series: 10

2 Cautions for use

- (1) When the text code with meaning other than the text is stored.
Note that if the text code with meaning other than the text (000H to 001FH, 0080H to 009FH, 00E0H to 00FFH) is included in the data that enables ASCII display, the whole character string with the text code cannot be displayed.
- (2) To insert/delete characters in a character string
As the cursor is fixed to the right end of the object. Continue to delete characters from that point until the cursor reaches the position you want to insert/delete characters.

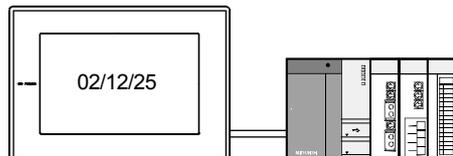


5.11 Clock Display



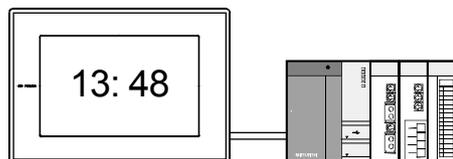
1 Date display

Date display is the function for displaying a date on GOT.
Year display is the function for displaying the last 2 digits of the year.



2 Time display

Time display is the function for displaying the time on GOT.
The hour is displayed in 24-hour display format.



Displayed clock data

Different clock data are displayed depending on the GOT type.

- (1) GOT-A900 series
Displaying the clock data of the connected PLC CPU.
(There are no clock data in the GOT.)
Every hour the PLC CPU clock data is verified.
- (2) GOT-F900 series
Displaying the GOT built-in clock data.
F920GOT-K displays the clock data of the connected PLC CPU (FX).
- (3) GOT SoftGOT2
Displaying the clock data of PC.

5.11.1 Arrangement and Settings

- 1 Carry out either of the following operations.
 - Click on [Clock Display]
 - Select [Object] → [Date Display]/[Time Display] from the menu.
- 2 Click on the position where Clock Display to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using **ESC** key.)
- 3 Double click on the arranged Clock Display to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual.



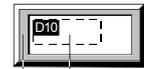
Remark

Method of adjusting objects in which figure frame is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the figure frame.



Section 5.2.3 Object size change

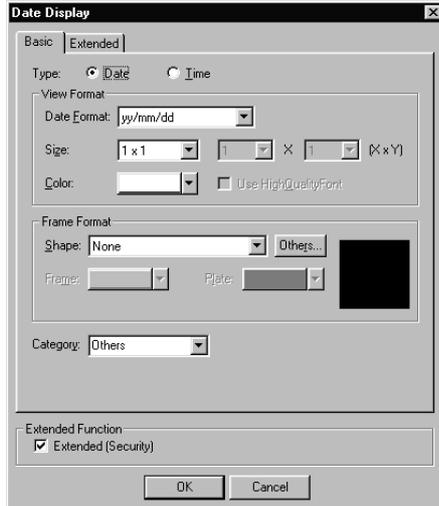


Object outline frame
Shape

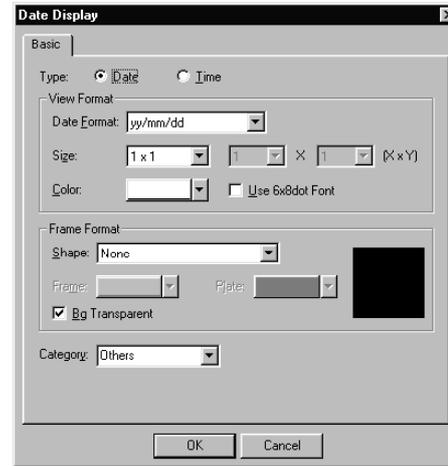
5.11.2 Setting items

1 Basic tab

Set the view items (alarm date/time) and the displaying format.

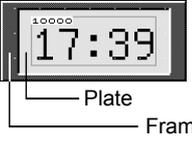


In the case of GOT-A900 series



In the case of GOT-F900 series

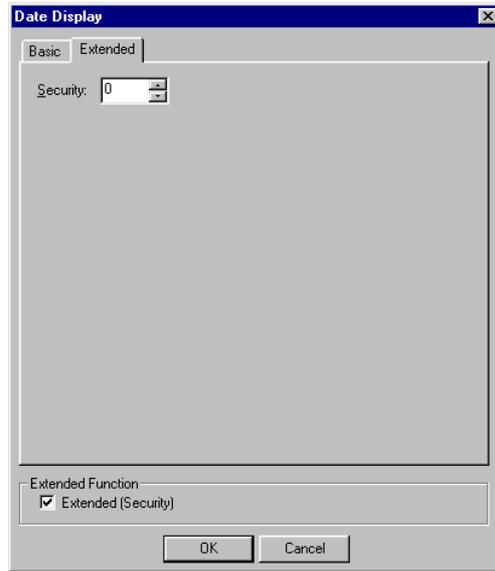
| Items | | Description | A | F |
|---------|-------------------------|--|--------------------------|--------------------------|
| Type | | Select whether to display the date or time Date : Displays the Year/Month/Day Time : Displays the time | <input type="radio"/> | <input type="radio"/> |
| Display | Date format/time format | Select view format of date and time. View format of date (In the case of 12/25/2002) GOT-A900 series yy/mm/dd : 02/12/25 mm/dd/yy : 12/25/02 dd/mm/yy : 25/12/02 GOT-F900 series yy/mm/dd : 02/12/25 mm/dd/yy : 12/25/02 dd/mm/yy : 25/12/02 Type 1 : Dec. 25, 2002 (Wednesday) Type 2 : Dec. 25, 2002 View format of time (In the case of 13:48:20) GOT-A900 series Time : Minute : 13:48 GOT-F900 series Type 1 : 13:48 Type 2 : 13:48:20 | <input type="radio"/> | <input type="radio"/> |
| | Size | Select the text size for the date/time display (Xx, Yx) When (1 × 1) is set, the font size is 8 × 16 dots. GOT-A900 series  1 to 8 multiple 1 to 8 multiple GOT-F900 series  0.5 to 4 multiple 1 to 8 multiple | <input type="radio"/> | <input type="radio"/> |
| | Color | Select the color for displaying the date and time. | <input type="radio"/> | <input type="radio"/> |
| | High Quality Font | Check this item when displaying the date and time using the high quality font. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | <input type="radio"/> | <input type="checkbox"/> |
| | Use 6 × 8dot Font | Font is displayed in size of 6 × 8 dots. (Characters only) | <input type="checkbox"/> | <input type="radio"/> |

| Items | | Description | A | F |
|-----------------|----------------|---|----------------------------------|-----------------------|
| Frame Format | Shape | <p>Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the <input type="checkbox"/> Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting)</p> | <input type="radio"/> | <input type="radio"/> |
| | Frame | <p>Select the frame/plate color.</p>  | <input type="radio"/> | <input type="radio"/> |
| | Plate | | <input type="radio"/> | <input type="radio"/> |
| | Bg Transparent | Select this item when the background is to be transparent. | <input checked="" type="radio"/> | <input type="radio"/> |
| Category | | <p>When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual)</p> | <input type="radio"/> | <input type="radio"/> |

2 Extended tab (GOT-A900 series only)

Make the security setting on this tab.

This tab will be displayed by checking the corresponding "Extended" at the bottom of this dialog box.



| Items | Description | A | F |
|----------|---|---|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | ○ | × |

5.11.3 Cautions

This section provides the cautions for using the clock display function.

1 Cautions for drawing

- (1) The maximum number of the clock displays that can be set on one screen.
 - GOT-A900 series: 2
 - GOT-F900 series: 10

2 Cautions for use

- (1) System configuration in which the clock function is not available
GOT-A900 series and F920GOT-K
The clock display function may not be used depending on the PLC CPU or connection type.
 Section 2.4 Clock Function
GOT-F900 series (other than F920GOT): Uses GOT built-in clock.
- (2) When reading/writing the clock data with sequence program
The clock data will not set properly with this function if it is uploaded/downloaded to the PLC CPU side using a sequence program.
- (3) When M9028 is on in ACPU
When the connected PLC CPU is ACPU and M9028 is ON, the clock setting function of GOT utility is not available.
- (4) When Character Set is not set to Japanese
The type1 and the type2 of the date/time format are displayed in irregular characters.

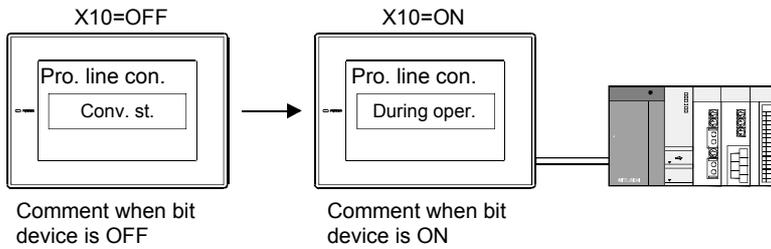


5.12 Comment Display



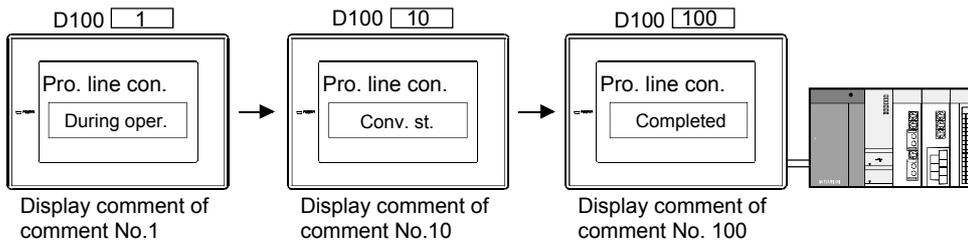
1 Bit comment (Section 5.12.2 Setting items of bit comment)

It is the function to display the comment corresponding to the ON/OFF status of bit device.



2 Word comment (Section 5.12.3 Setting items of word comment)

It is the function to display the comment corresponding to word device value.



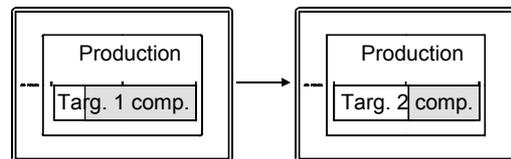
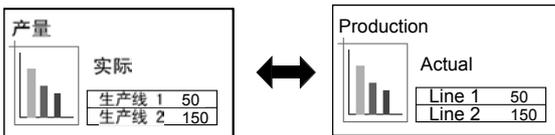
Remark

Comment displayed by comment display

The comment to be displayed by comment display needs to be registered in advance.

Section 4.1 Comment Registration

| | |
|--|--|
| Switch all the comment on the screen (Comment display (bit/word)) | Used with level function (Comment display (bit/word)) |
| Display comment tab setting | Set in extended tab <GOT-A900 series only> |



5.12.1 Arrangement and settings

- 1 Carry out either of the following operations.
 -  Click on [Bit Comment]/  [Word Comment]
 - Select [Object] → [Comment Display] → [bit] / [word] from the menu.
- 2 Click on the position where Comment Display to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged Comment Display to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.

 GT Designer2 Version1 Operating Manual

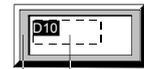


Remark

- (1) Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.

 Section 5.2.3 Object size change

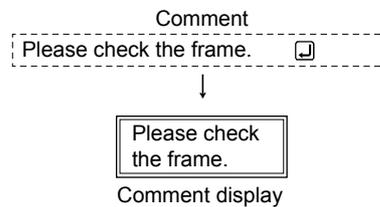


Object outline frame
Shape

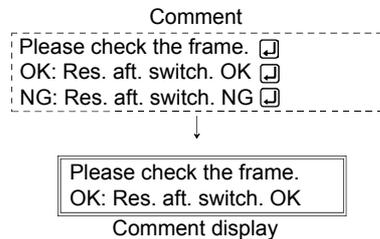
- (2) When displaying the comment out of the display range

(GOT-A900 series only)

When the comment is out of the horizontal display range, display the remaining part in the next line.



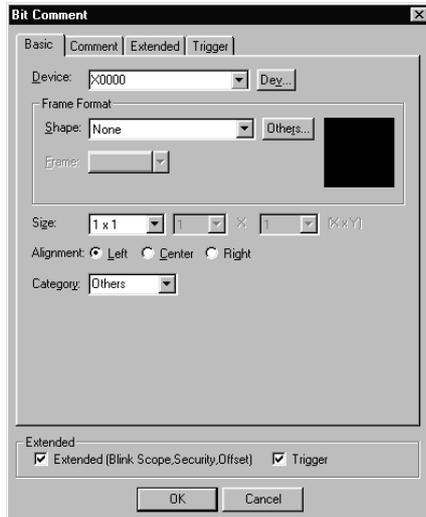
When the comment is out of the vertical display range, only the part within the display range is displayed.



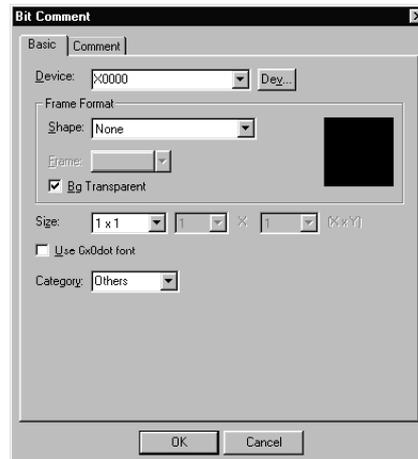
5.12.2 Setting items of bit comment

1 Basic tab

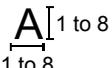
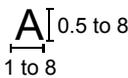
Set the view format of device to be monitored and comment (Shape/Size/Alignment).



In the case of GOT-A900 series

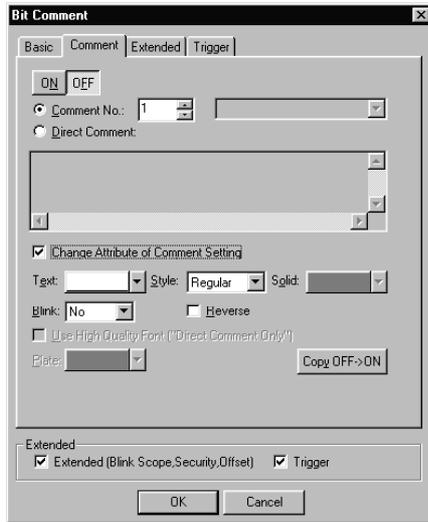


In the case of GOT-F900 series

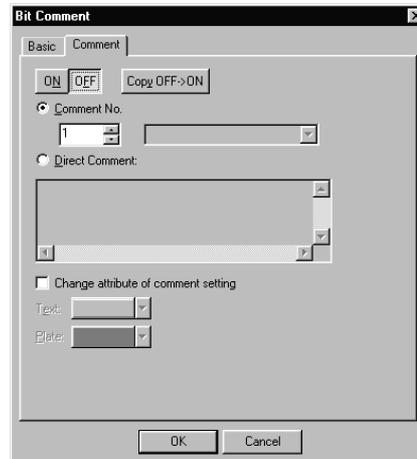
| Items | | Description | A | F |
|-------------------|-------|--|---|---|
| Device | | Select the device to be monitored. (☞ Section 5.1 Device Setting) | ○ | ○ |
| Frame Format | Shape | Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the <input type="button" value="Others..."/> button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | ○ | ○ |
| | Frame | Select the shape color. | | |
| Size | | Select the size of comment to be displayed (0.5 to 8). GOT-A900 series:  1 to 8 1 to 8 GOT-F900 series:  0.5 to 8 1 to 8 | ○ | ○ |
| Alignment | | Select the position to display the text value. Left:  Center:  Right:  | ○ | × |
| Use 6 × 8dot Font | | Font is displayed in size of 6 X 8 dots. (Characters only) | × | ○ |
| Category | | When allocating category to the object, select a proper category. ☞ GT Designer2 Version1 Operating Manual) | ○ | ○ |

2 Comment tab

Set the device ON/OFF comment and display attributes.

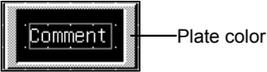


In the case of GOT-A900 series



In the case of GOT-F900 series

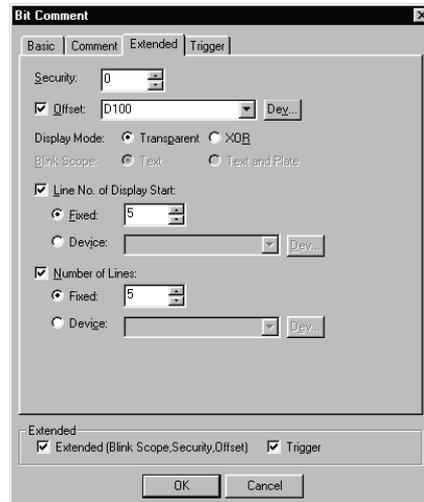
| Items | Description | A | F |
|-------------------------------------|--|-----------------------|--------------------------|
| ON | Click on this item to set the text to be displayed when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| OFF | Click on this item to set the text to be displayed when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| Comment No. | Select this item to display the registered comment data. After selecting , set the comment No. to be displayed . Comment will not be displayed if its No. is set to 0. (Set the comment No. to 0 during OFF if the comment is to be displayed only ON.) | <input type="radio"/> | <input type="radio"/> |
| Direct Comment | Select this item to directly input the displayed comment. After selecting, enter comment. | <input type="radio"/> | <input type="radio"/> |
| Change Attribute of Comment Setting | Check this item to display the display attribute which is different from the one set in comment registration. | <input type="radio"/> | <input type="radio"/> |
| Text | Select the color of text to be displayed. | <input type="radio"/> | <input type="radio"/> |
| Style | Select the view format of text (regular/bold/raised/).  Regular Bold Solid Raised | <input type="radio"/> | <input type="checkbox"/> |
| Solid | Select the solid color when [Solid] or [Raised] is set in [Style]. | <input type="radio"/> | <input type="checkbox"/> |
| Blink | Select the blinking pattern of the Comment. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input type="checkbox"/> |
| Reverse | Check this item to reverse comment. | <input type="radio"/> | <input type="checkbox"/> |

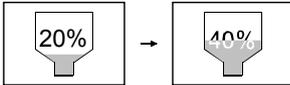
| Items | Description | A | F |
|--|--|----------------------------------|----------------------------------|
| Use High Quality Font ["Direct Comment Only"] | Check this item when displaying the comment using the high quality font setting. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) Only the display comment which is input directly by keyboard can use this font. | <input type="radio"/> | <input checked="" type="radio"/> |
| Plate | Select the background color for the inside display area of the comment.  | <input type="radio"/> | <input type="radio"/> |
| Bg Transparent | Select this when the background is to be transparent. | <input checked="" type="radio"/> | <input type="radio"/> |
| Copy OFF → ON/ Copy ON → OFF | This button is used to copy the set attribute. Copy OFF → ON: Copies the text and display position in the attribute of "OFF" status to that of "ON" status. Copy ON → OFF: Copies the text and display position in the attribute of "ON" status to that of "OFF" status. | <input type="radio"/> | <input type="radio"/> |

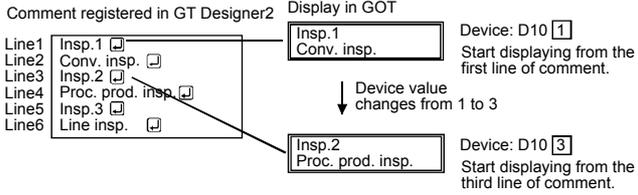
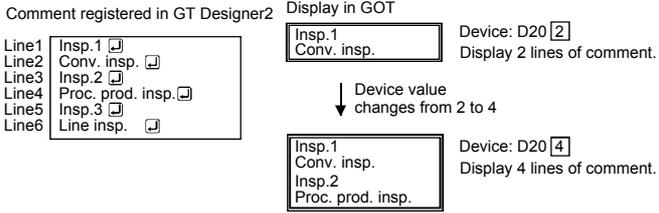
3 Extended tab (GOT-A900 series only)

Set the method of displaying security, offset and comment (Display Mode/Line No. of Display Start, etc.)

This tab is displayed when Extended is checked at the bottom of the dialog box.



| Items | Description | A | F |
|--------------|---|-----------------------|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | <input type="radio"/> | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | × |
| Display Mode | Select a desired display mode when displaying a comment with the level display overlapped. Transparent : Displays the comment on the level display.  XOR : In order to identify the level and comment, the comment is displayed in color different from the level color based on XOR.  This is valid when GOT is Monochrome type/EL type. (☞ Appendix 5 Synthesized Colors Available for XOR) | <input type="radio"/> | × |
| Blink Scope | Select a blink area. Text : Makes the comment blink. Text and Plate : Makes the comment and plate blink. | <input type="radio"/> | × |

| Items | Description | A | F |
|----------------------------------|--|---|---|
| <p>Line No. of Display Start</p> | <p>Check this item to change the line No. of display start when multiple comments have been set.</p> <p>Fixed : Select this item to set the line No. of display start by direct input. Device : Select this item to display comments of which line No. is the same as the device value to be set. After selecting, set the device. (☞ Section 5.1 Device Setting)</p>  <p>The created comment will not be displayed if the line No. out of the range is specified for it. In this case, confirm the line No. specified for that comment.</p> | ○ | × |
| <p>Number of Lines</p> | <p>Check this item to change the line No. of display start when multiple comments have been set.</p> <p>Fixed : Select this item to set the line No. of display start by direct input. Device : Select this item to display comments from which line No. is the same as the device value to be set. After selecting, set the device. (☞ Section 5.1 Device Setting)</p>  <p>If the fixed/device value is "0", the comment will not be displayed.</p> | ○ | × |

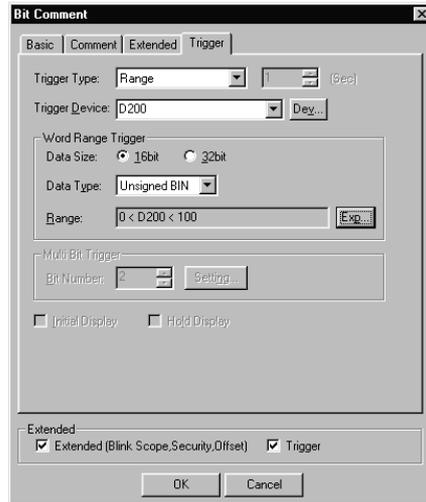
4 Trigger tab (GOT-A900 series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting

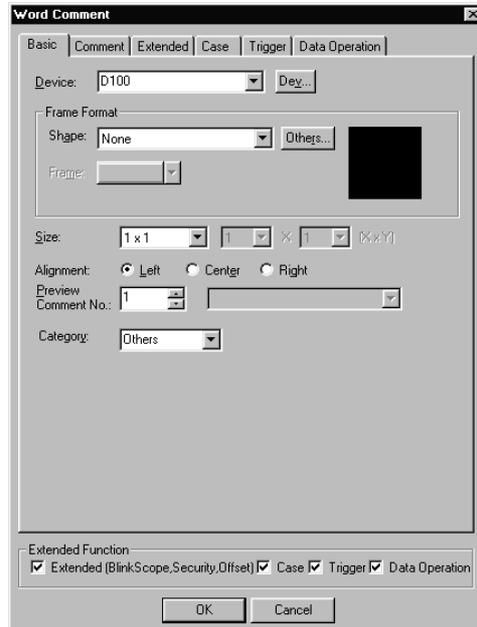


| Items | Description | A | F |
|--------------------|--|-----------------------|---|
| Trigger Type | Select trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Bit trigger | <input type="radio"/> | × |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | × |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | × |
| | Data Size | <input type="radio"/> | × |
| | Data Type | <input type="radio"/> | × |
| | Range | <input type="radio"/> | × |
| Multi Bit Trigger | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the Setting button and set the bit devices and their triggers. | <input type="radio"/> | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | × |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | <input type="radio"/> | × |

5.12.3 Setting items of word comment

1 Basic tab

Set a view format of the device to be monitored and comment (Shape/Size/Alignment).

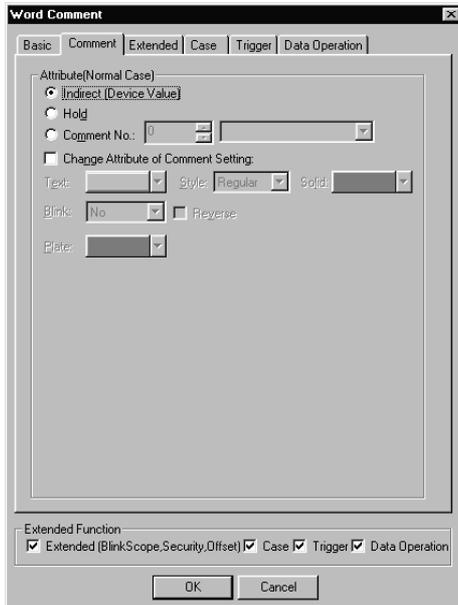


(Example: When setting GOT-A900 series)

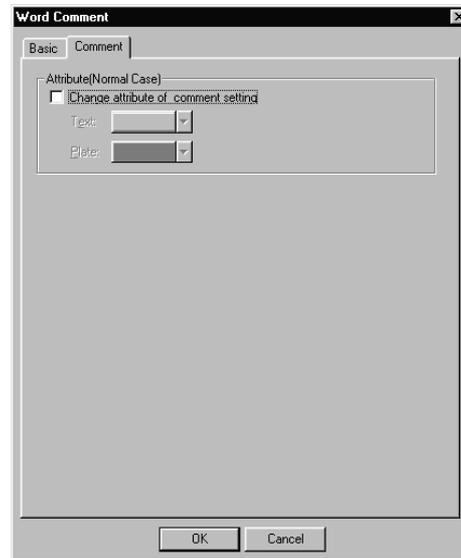
| Items | | Description | A | F |
|---------------------|----------------|---|----------------------------------|----------------------------------|
| Device | | Set the device to be monitored. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Frame Format | Shape | Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the [Others] button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the shape color. | <input type="radio"/> | <input type="radio"/> |
| | Bg Transparent | Select this when the background is to be transparent. | <input checked="" type="radio"/> | <input type="radio"/> |
| Size | | Select the size of comment to be displayed (0.5 to 8). GOT-A900 series: <u>A</u> _I 1 to 8 1 to 8 GOT-F900 series: <u>A</u> _I 0.5 to 8 1 to 8 | <input type="radio"/> | <input type="radio"/> |
| Alignment | | Select the position to display the text value. | <input type="radio"/> | <input checked="" type="radio"/> |
| Preview Comment No. | | Displays the comment with specified comment No. on the GT Designer2 screen. | <input type="radio"/> | <input type="radio"/> |
| Use 6 × 8 dot font | | Font is displayed in size of 6 × 8 dots. (Characters only) | <input checked="" type="radio"/> | <input type="radio"/> |
| Category | | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

2 Comment tab

Set the comment to be displayed and its attributes.



In the case of GOT-A900 series



In the case of GOT-F900 series

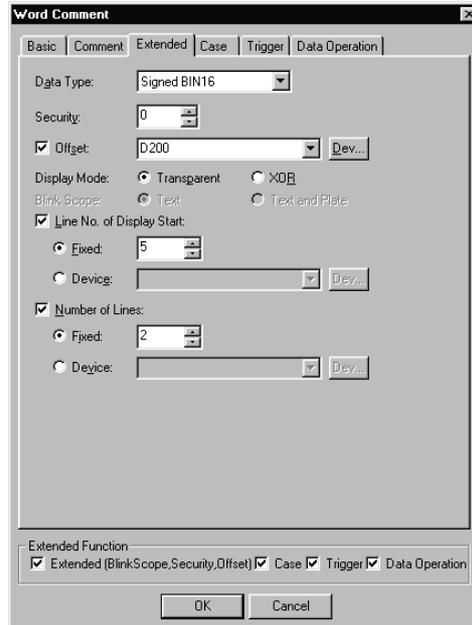
| Items | Description | A | F |
|-------------------------------------|---|---|---|
| Attribute [Normal case] | <p>Sets display attribute of comment.</p> <p>To change the display attribute in this setting, it is necessary to set state in the case tab.</p> <p>Indirect [Device Value] : Check this item to display comment No. corresponding to monitor device value.</p> <p>Hold : Check this item to hold currently displayed comment.</p> <p>Comment No. : Check this item to display the registered comment data.</p> <p>After this, set the displayed comment No.</p> <p>The comment is not displayed when comment No. is set as 0.</p> | ○ | × |
| Change Attribute of Comment Setting | Check this item to display with the display attribute different from the one set during comment registration. | ○ | ○ |
| Text | Select the color of text to be displayed. | ○ | ○ |
| Style | Select the view format of text (regular/bold/raised/).  | ○ | × |
| Solid | Select the solid color when [Solid] or [Raised] is set in [Style]. | ○ | × |
| Blink | Select the blinking pattern of the Comment. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | ○ | × |
| Reverse | Check this item to reverse comment. | ○ | × |

| Items | Description | A | F |
|-------|--|---|---|
| Plate | Select the background color for the inside display area of the comment.  Plate color | ○ | ○ |

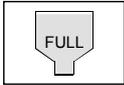
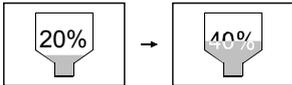
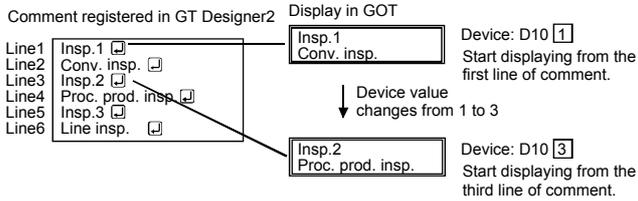
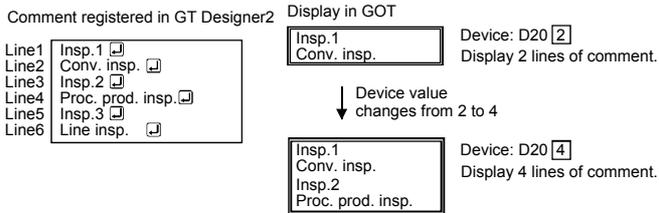
3 Extended tab (GOT-A900 series only)

Set the data type, security, and offset of monitor device and the method of displaying comment (Display Mode/Line No. of Display Start).

This tab will be displayed when Extended is checked at the bottom of this dialog box.



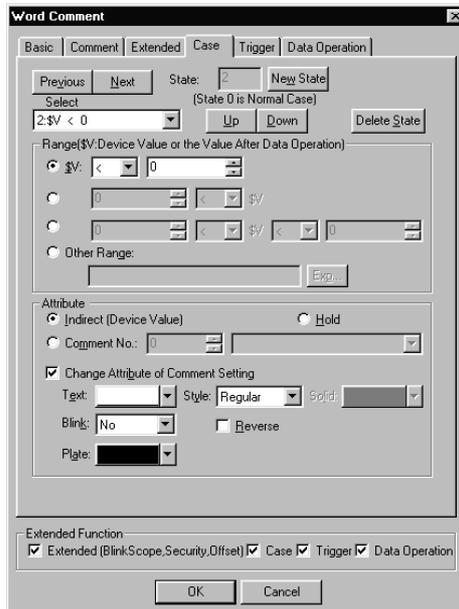
| Items | Description | A | F |
|-----------|--|---|---|
| Data type | Select the data type of the word device to be monitored. Word (BIN16) : Comments will be displayed based on the word device (BIN16) binary value. Word (BCD16) : Comments will be displayed based on the word device (BCD16) binary coded decimal value. | ○ | × |
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | ○ | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits. | ○ | × |

| Items | Description | A | F |
|---------------------------|--|---|---|
| Display Mode | <p>Select a desired display mode when displaying a comment with the level display overlapped.</p> <p>Transparent : Displays the comment on the level display.</p>  <p>XOR : In order to identify the level and comment, the comment is displayed in color different from the level color based on XOR.</p>  <p>This is valid when GOT is Monochrome type/EL type. (☞ Appendix 5 combination color when XOR is specified.)</p> | ○ | × |
| Blink scope | <p>Select a blink area.</p> <p>Text : Makes the comment blink.</p> <p>Text and Plate : Makes the comment and plate blink.</p> | ○ | × |
| Line No. of Display Start | <p>Check this item to change the line No. of display start when multiple comments have been set.</p> <p>Fixed : Select this item to set the line No. of display start by direct input.</p> <p>Device : Select this item to display comments of which line No. is the same as the device value to be set.</p> <p>After selecting, set the device. (☞ Section 5.1 Device Setting)</p>  <p>The created comment will not be displayed if the line No. out of the range is specified for it. In this case, confirm the line No. specified for that comment.</p> | ○ | × |
| Number of Lines | <p>Check this item to change the line No. of display start when multiple comments have been set.</p> <p>Fixed : Select this item to set the line No. of display start by direct input.</p> <p>Device : Select this item to display comments of which line No. is the same as the device value to be set.</p> <p>After selecting, set the device. (☞ Section 5.1 Device Setting)</p>  <p>If the fixed/device value is "0", the comment will not be displayed.</p> | ○ | × |

4 Case tab (GOT-A900 series only)

The attribute can be changed on this setting depending on the device status.
For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device | Select the display change conditions according to state. Bit : Select it when changing the display according to the ON/OFF status of bit device. After selecting, set the bit device and device status (ON/OFF). ( Section 5.1 Device Setting) Word : Select it when changing the display according to the value of word device. After selecting, set the conditional expression of word device value in [Range]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Attribute | Select the method of displaying comment. Indirect [Device value] : Display the comment corresponding to the word device value. Hold : After it is selected, the comment display is held even if state condition is satisfied. Comment No. : Specify the comment to be displayed. After this, set the parts/screen to be displayed. Parts/screen will not be displayed when parts No. is set to 0. | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | Description | A | F |
|-------------------------------------|---|-----------------------|-------------------------------------|
| Change Attribute of Comment Setting | Check this item to display the display attribute which is different from the one set in comment registration. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Text color | Select the color of text to be displayed. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Style | Select the view format of text (regular/bold/raised/). <div style="display: flex; justify-content: center; align-items: center; gap: 10px; margin-top: 10px;">     </div> <div style="display: flex; justify-content: center; align-items: center; gap: 10px; margin-top: 5px;"> Regular Bold Solid Raised </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Solid | Select the solid color when [Solid] or [Raised] is set in [Style]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Blink | Select the blinking pattern of the Comment. <ul style="list-style-type: none"> None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Reverse | Check this item to reverse comment. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Plate | Select the plate color when the condition to display state is satisfied. <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 10px;">Plate color</div> </div> | <input type="radio"/> | <input checked="" type="checkbox"/> |

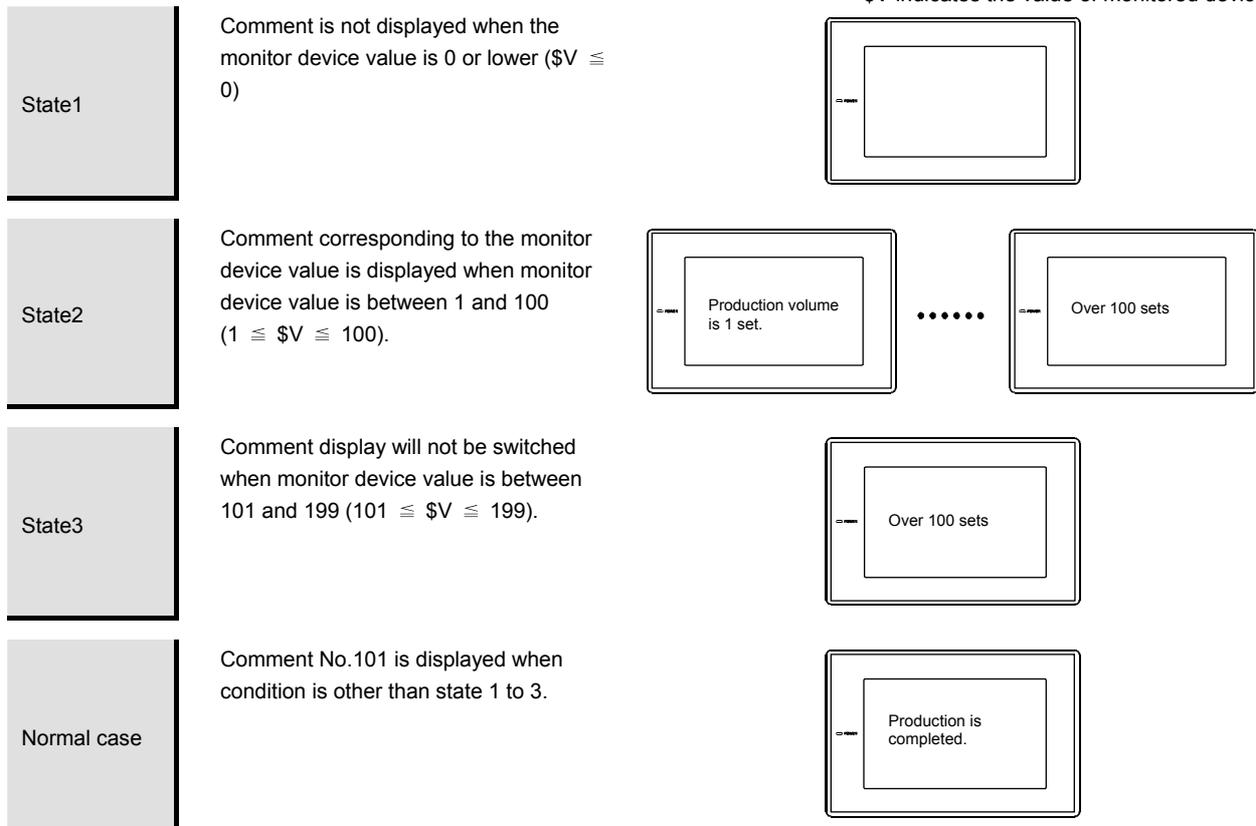
*1 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

Example) Monitored device : D100
 Data view format : Signed decimal, 16bit length
 Registered comment : Comment No.1 The production volume is 1 set
 Comment No.100 Over 100 sets
 Comment No.101 Production completed

| Operation priority for repeated setting | State No. | Display range | Display comment |
|---|-------------------|-------------------------|-----------------|
| High | 1 | $\$V \leq 0$ | No.0 |
| | 2 | $1 \leq \$V \leq 100$ | Indirect |
| | 3 | $101 \leq \$V \leq 199$ | Hold |
| ↓ | | | |
| Low | Ordinary (State0) | — | No.101 |

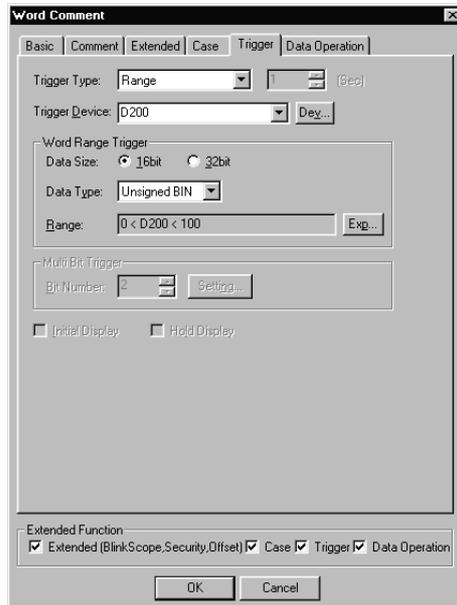
* \$V indicates the value of monitored device.



5 Trigger tab (GOT-A900 series only)

The setting items of trigger tab are the same with bit comment.
Refer to the following for the details of setting items.

 Section 5.6.2 Setting items



The screenshot shows the 'Word Comment' dialog box with the 'Trigger' tab selected. The dialog has several sections:

- Trigger Type:** A dropdown menu set to 'Range' and a numeric input field set to '1' with a '(Sec)' label.
- Trigger Device:** A dropdown menu set to 'D200' and a 'Dev...' button.
- Word Range Trigger:** A section containing:
 - Data Size:** Radio buttons for '16bit' (selected) and '32bit'.
 - Data Type:** A dropdown menu set to 'Unsigned BIN'.
 - Range:** A text input field containing '0 < D200 < 100' and an 'Exp...' button.
- Multi Bit Trigger:** A section containing:
 - Bit Number:** A numeric input field set to '2' and a 'Setting...' button.
- Initial Display / Hold Display:** Two unchecked checkboxes.
- Extended Function:** A section with four checked checkboxes: 'Extended (Blink,Scope,Security,Offset)', 'Case', 'Trigger', and 'Data Operation'.

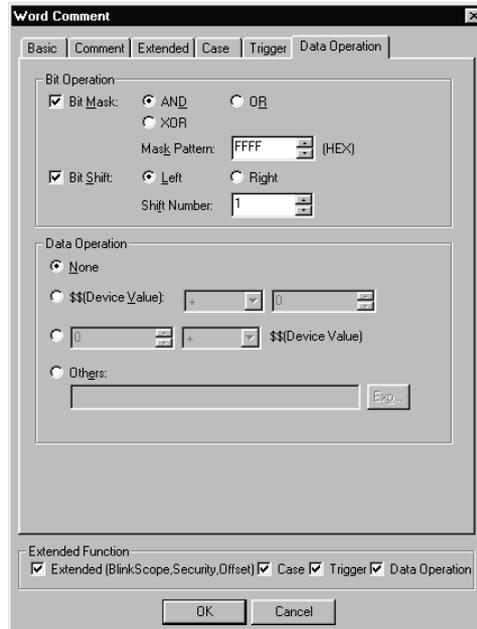
At the bottom of the dialog are 'OK' and 'Cancel' buttons.

6 Data operation tab (GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right: Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.12.4 Cautions

This section provides the cautions for using comment display function.

1 Cautions for drawing

(1) Maximum number of settable comments on one screen

- GOT A900 series: 256 comments
- GOT-F900 series: 50 comments

(2) Cautions for using cascading level display

Following restrictions are applied for cascading comment display and level display.

- (a) Only one comment can be cascaded to one level function.
- (b) Comment cannot be set to blink (flickering display).
- (c) Comment cannot be reversed.
- (d) Comment may not appear normally when it is out of the shape of level display.
- (e) Comment may not appear normally when setting the shape for the comment.
- (f) Display can be updated only when level is changed.
Display cannot be updated even when the value of monitored device set in comment is changed.

(3) Cautions for comment registration

Make sure to follow the basic cautions before registering comments for comment display.

 Section 4.1 Comment Registration

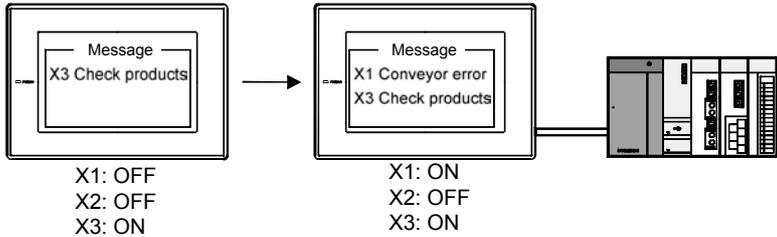


5.13 Alarm List



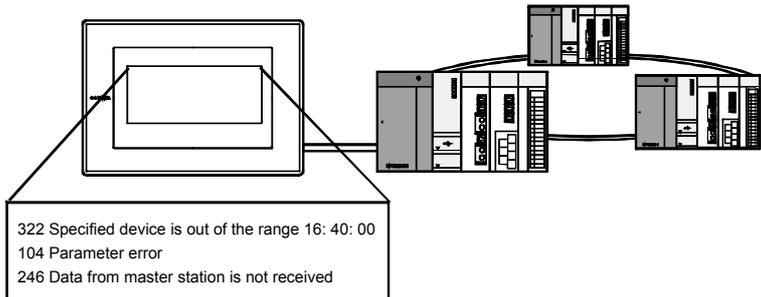
1 User alarm (Section 5.13.4)

It is the function that displays the user-created comment when an alarm occurs (when user-specified bit device is ON).
If multiple bit devices turn ON, the corresponding comments appear in the set order.



2 System alarm (GOT-A900 series only) (Section 5.13.5)

It is the function that displays the error code and error message when an error occurs during the communication between GOT and PLC CPU.
The error occurrence status and cause can be confirmed.



Remark

The comment displayed in alarm list

The comment displayed in user alarm needs to be registered in advance.



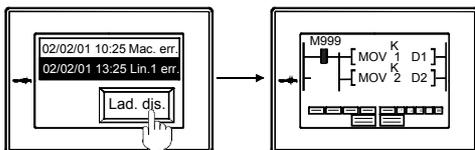
Section 4.1 Comment Registration

The comment displayed in system alarm needs not to be registered. (Pre-registered in GOT)

Application Example

Start the ladder monitor function from alarm list (User alarm)

Set by touch switch (Section 5.13.6)



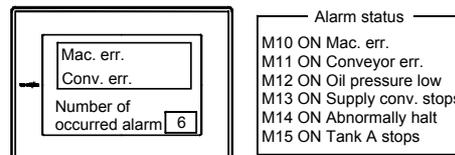
Displays the ladder monitor function by touch operation.

Monitor the ladder status of device corresponding to the alarm occurrence causes

Display the number of alarm occurrences (User alarm)

(User alarm)

Set in device tab



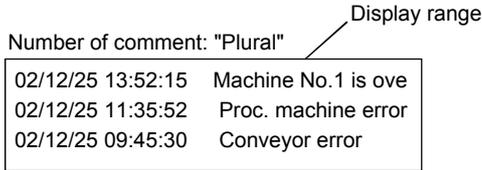
Display the number of all the occurred alarms in the alarm list.

5.13.1 Required knowledge for user alarm setting

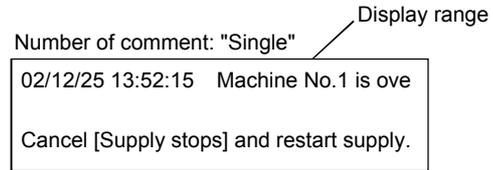
Display the date and time of alarm occurrence and the comment that has been registered by user.

1 Number of displayed alarms

Select whether to display multiple alarm occurrences (with plural comments) or only one (with single comment).



One alarm is displayed in one line.
The text out of the line will not be displayed.
If a comment is longer than two lines, only the first line is displayed.



The texts will be continuously displayed in the second line.
Even if the comment size exceeds two lines, the texts from the second line can be displayed, providing it does not exceed the display range.

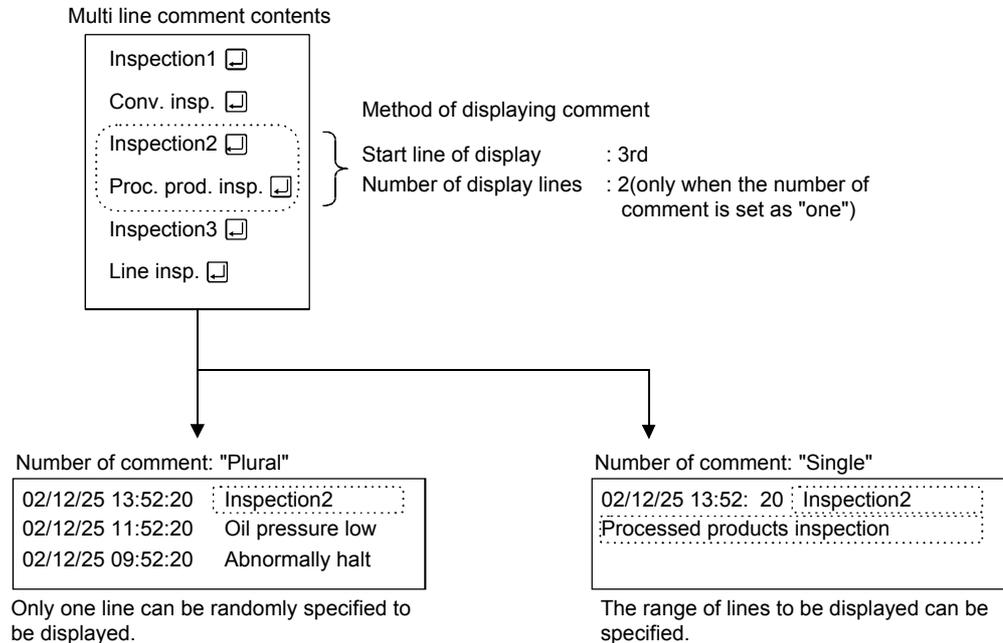


Remark

Display method for multi line comment (Set in extended tab)

Any line of the multi line comment can be specified to display.

Example) Display any line of the 6-line comment that has been registered

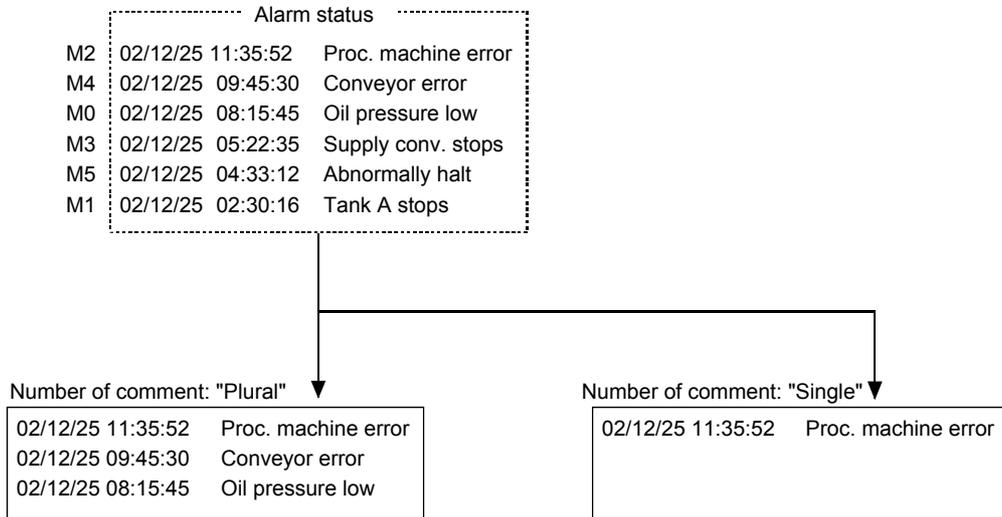


2 Sort

Set the order to display alarm occurrences.

It can be set by the device No. order (ascending/descending) and alarm occurrence order (Oldest /Latest).

Example) Display alarms by "Latest" sort

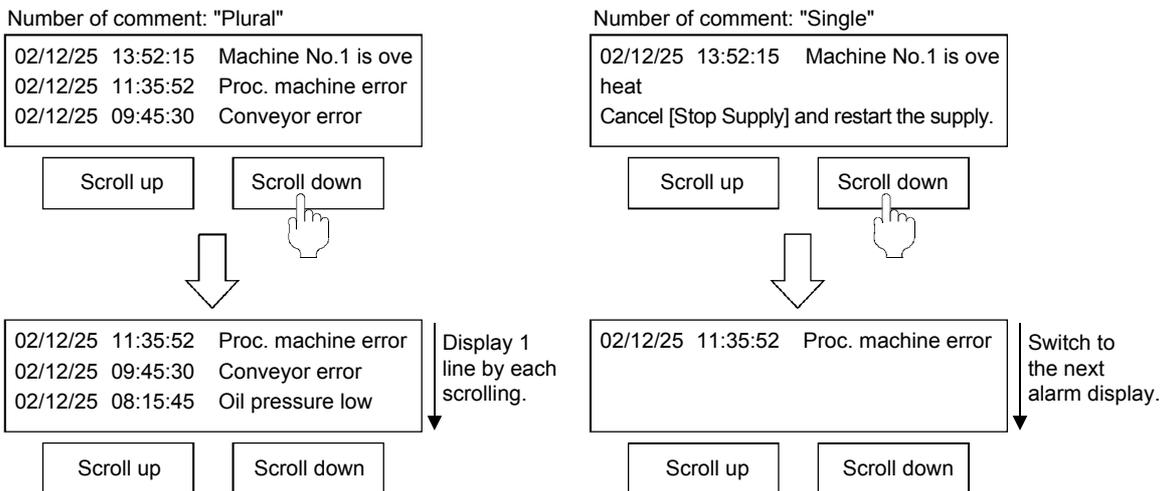


3 Scroll on

Checking if the alarm comment exceeds the display range is done by scrolling the alarm list with touch switches

Create the touch switches for alarm list (user alarm).

Section 5.13.6 Touch switch for alarm list (user alarm)



4 Details of display (only for [Plural] number of comment)

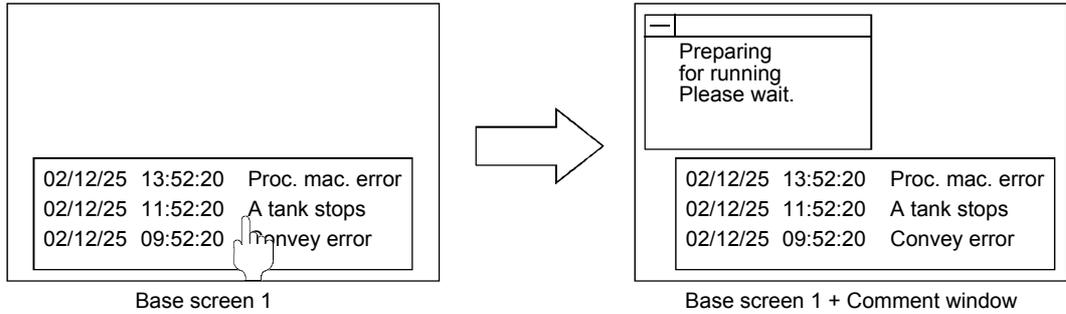
(1) Applicable screen (☞ Set in device tab)

To display the cause and corrective action of alarm in details, select a screen from the following three types.

(a) Comment window

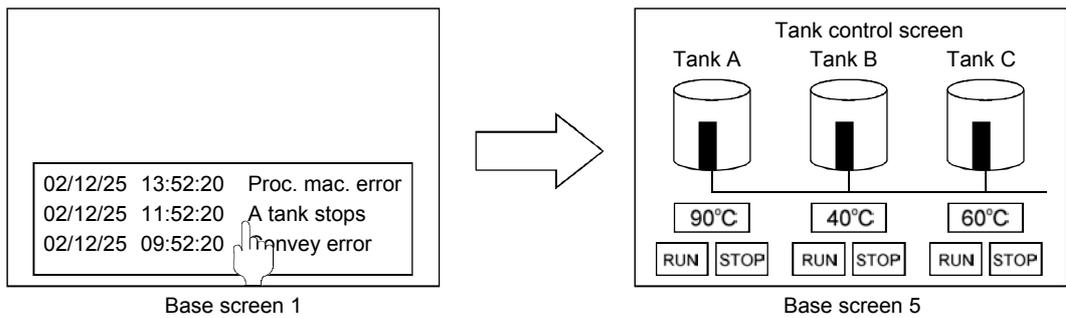
Display the user-registered comment in a comment window.

The comment different from that in alarm list comment can be displayed as a detailed comment.



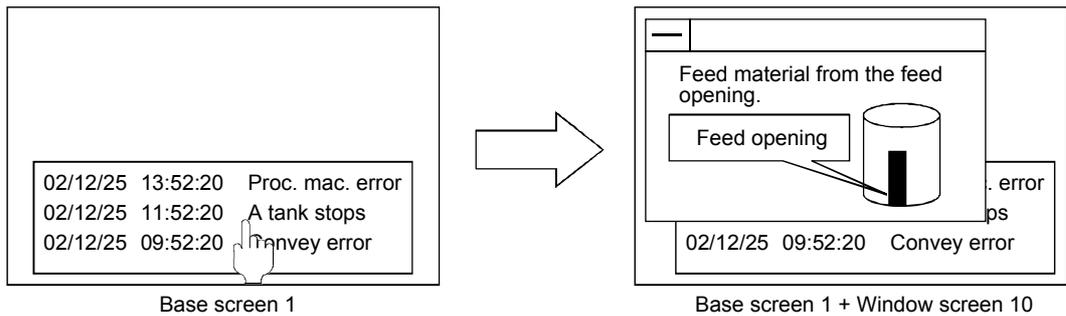
(b) Base screen

Display the specified base screen.



(c) Window Screen (GOT-A900 series only)

Display the specified window screen (overlap window 1).



(2) Screen that includes alarm list and the corresponding detailed alarm type screen.

| Screen that includes alarm list | Detailed alarm display type screen | | |
|---------------------------------|------------------------------------|----------------------|----------------------|
| | Base screen | Window screen | Comment window |
| Base screen | Switch | Simultaneous display | Simultaneous display |
| Overlap window 1 | Simultaneous display | Switch | |
| Overlap window 2 | | Simultaneous display | |
| Superimpose window | | | |

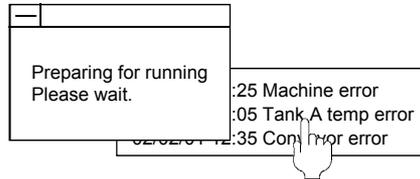
- * Switch : Switch the screen that includes alarm list to the corresponding detailed alarm display type screen.
- Simultaneous display : Display the detailed alarm display type screen keeping the screen that includes alarm list on the display.

(3) Display method

Select the method for details display from the following two types.

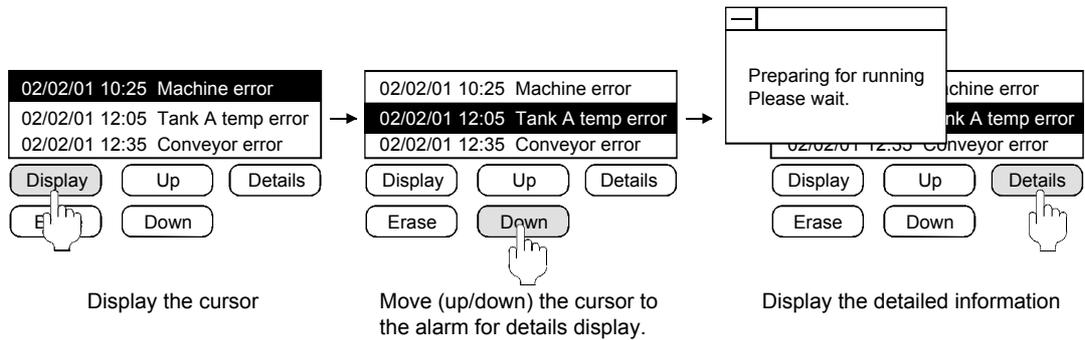
- (a) One touch (👉 Set in the device tab)

Touch the alarm list directly to display the detailed information.



- (b) Touch switch (👉 Section 5.13.6 Touch switches for alarm list (user alarm))

Create touch switches for alarm list to display the detailed information.



5 Store memory

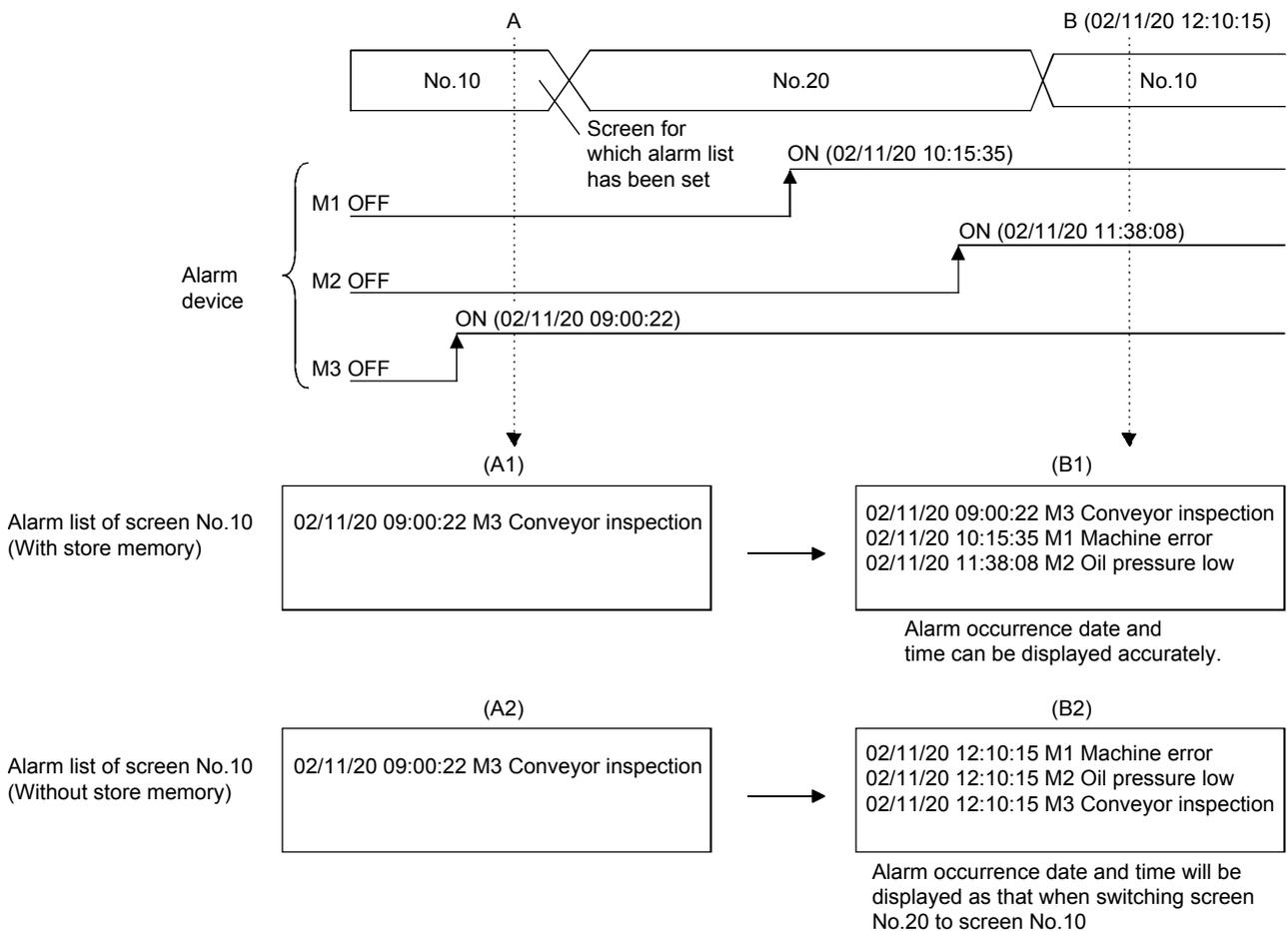
Check [Store Memory] to collect the alarm occurrence date and time while the screen that does not include alarm list is displayed. (Refer to B1)

Usually the alarm occurrence status is monitored and stored in the GOT internal memory.

This setting can be made in the extended tab.

Without this setting, if the alarm device has turned ON before the screen that includes alarm list is displayed, the date and time when that screen was previously displayed will appear as the alarm occurrence date and time. (Refer to B2)

Example) When screen is switched and alarm device is turned ON/OFF at the timing shown below, the alarm list will be displayed differently depending on whether store memory is set or not.



Timing of erasing store memory data

The data stored in memory may be erased when GOT is reset or powered off.

5.13.2 Required knowledge for system alarm setting

1 System alarm type

There are following three types of system alarm.

- 1) Alarm detected by GOT
- 2) Alarm detected by PLC CPU
- 3) Alarm detected by communication module (only when connected with MELSECNET or CC-Link)

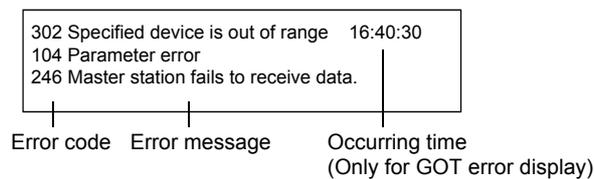
2 Method of collecting data

Even while the screen that does not include alarm list is displayed, data are always collected every 3 seconds and stored into GOT.

3 Displayed information

The error code, error message as well as error time will be displayed in system alarm.

The error code and error message for display are provided by default within GOT. Therefore, they do not need to be created by user.



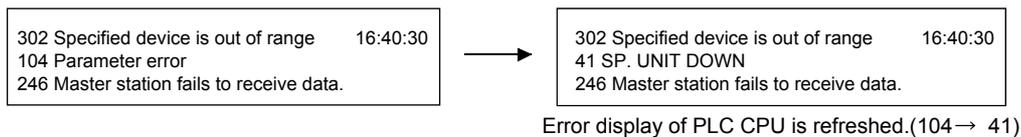
4 Method of displaying alarm

- (1) Maximum number of alarms can be displayed

Each system alarm is displayed in one line type; up to 3 lines can be displayed.

The alarm display is updated when new alarm is detected.

Example) When new alarm is detected by PLC CPU



- (2) Display priority

When the display range is lower than 2 lines, alarms will be displayed in the following order.

- 1) Alarm detected by GOT
- 2) Alarm detected by PLC CPU
- 3) Alarm detected by communication module

When the number of alarm occurrence exceeds the display range, the lower priority alarms will not be displayed.

The error code, error message and error time beyond a single line will not be displayed.

5 Factors for each alarm type and corrective actions for error codes

| Alarm type | Factors | How to read error code | Reference manual | | | | | | | | | | | | |
|---|---|---|---|---|--------------------------|-----|---|-------|---|--|---|-----|---|-------|--------------------------|
| Alarm detected by GOT | GOT communication error, hardware error | Not corrective action is required (It is required to calculate error code and read it again) | A985GOT/A975GOT/A970GOT/A960GOT Users Manual A950GOT/A951GOT/A953GOT/A956GOT Users Manual | | | | | | | | | | | | |
| Alarm detected by PLC CPU *1 | The error code is stored to D9008 of connection destination CPU (ACPU) | Not corrective action is required (It is required to calculate error code and read it again) | ACPU Users Manual (Refer to the items of explanation for special link relay) | | | | | | | | | | | | |
| | The error code is stored to FXCPU | The special relay No. of FXCPU are as follows. <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>Error code</u></th> <th style="text-align: center;">→</th> <th style="text-align: center;"><u>Special relay No.</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">100</td> <td style="text-align: center;">→</td> <td style="text-align: center;">M8060</td> </tr> <tr> <td style="text-align: center;">:</td> <td></td> <td style="text-align: center;">:</td> </tr> <tr> <td style="text-align: center;">100</td> <td style="text-align: center;">→</td> <td style="text-align: center;">M8069</td> </tr> </tbody> </table> <p>Example) When error code is 100 Carry out the corrective action referring to the explanation of M8060.</p> | <u>Error code</u> | → | <u>Special relay No.</u> | 100 | → | M8060 | : | | : | 100 | → | M8069 | FXCPU Programming Manual |
| | <u>Error code</u> | → | <u>Special relay No.</u> | | | | | | | | | | | | |
| | 100 | → | M8060 | | | | | | | | | | | | |
| : | | : | | | | | | | | | | | | | |
| 100 | → | M8069 | | | | | | | | | | | | | |
| The error code is stored to the CPU manufactured by other company | Refer to the error message to specify the error factors. (ignore the error code.) | PLC CPU manual (other company product) | | | | | | | | | | | | | |
| The error code is stored to the SD0 of connection destination CPU (QnACPU and QCPU) | Not corrective action is required (It is not required to calculate error code and read it again.) | QnACPU, QCPU Users Manual | | | | | | | | | | | | | |
| Alarm detected by communication module | Data link special relay (M9200 to M9299) is ON | Execute the following calculation. Error code + 9000 = Referred relay No. for use of link Example) When error code is 210 $210 + 9000 = 9210$ Carry out the corrective action referring to the explanation of M9210. | MELSECNET/B, MELSECNET (II) Reference Manual (Refer to the items of explanation for special link relay) | | | | | | | | | | | | |
| | Network link special relay SB is ON | Execute the following calculation. Error code – 500 = Referred relay No. for use of link (Replace DEC number with hexadecimal number) Example) When the error code is 510 $510 - 500 = 10 \rightarrow "000AH"$ Carry out the corrective action referring to the explanation of SB000A. | MELSECNET/10 Reference Manual (Refer to the items of explanation for special link relay) | | | | | | | | | | | | |
| | CC-Link special relay SB is ON | Execute the following calculation. Error code – 800 = Referred relay No. for use of link (Replace DEC number with hexadecimal number) Example) When the error code is 910 $910 - 800 = 110 \rightarrow "006EH"$ Carry out the corrective action referring to the explanation of SB0006E. | CC-Link System Master and Local Module Users Manual (Refer to the items of explanation or special link relay) | | | | | | | | | | | | |

*1 For more information, refer to the next page.

*1 Alarm detection target for network connection and multi-CPU system connection

(1) For network connection

For network connection, following alarms detected by PLC CPU will be displayed in system alarm.

| Connection type | | Alarm detection target |
|--------------------------|------------------|---------------------------------------|
| Bus connection | | PLC CPU of the connection destination |
| CPU direct connection | | |
| Computer link connection | | |
| MELSECNET connection | MELSECNET/B (II) | Master station |
| | MELSECNET/10 | Control station of host network |
| CC-Link connection | | Master station |
| Ethernet connection | | PLC CPU set as host by GT Designer2 |

(2) For multi-CPU system connection

For multi-CPU system connection, following alarms detected by PLC CPU will be displayed in system alarm.

| Connection type | | Alarm detection target |
|--------------------------|--|--|
| Bus connection | | CPU that controls GOT |
| CPU direct connection | | CPU that is connected with GOT |
| Computer link connection | | CPU that controls the computer link module connected with GOT |
| MELSECNET connection | | CPU that controls the network module connected with GOT |
| CC-Link connection | | CPU that controls the CC-Link module connected with GOT |
| Ethernet connection | | CPU that controls the Ethernet module set as host by GT Designer |

5.13.3 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [User Alarm]/  [System Alarm]
 - Select [Object] → [Alarm List] → [User Alarm]/[System Alarm] from the menu.
- 2 Click on the position where Alarm List to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged alarm list to display the setting dialog box.
For the setting method, refer to the explanation on the next page.
- 4 After setting alarm list, set the touch switch for scrolling alarm list up/down and to display the alarm detailed information.

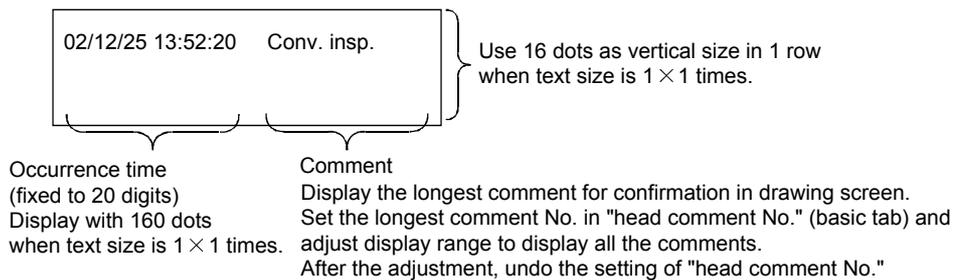
 Section 5.13.6 Touch switches for alarm list (user alarm)

Point

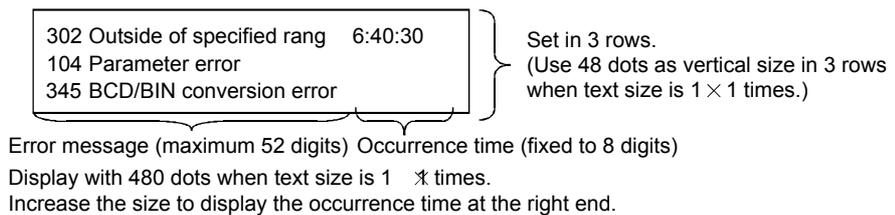
Method of adjusting display range

Adjust the display range as following when the comment cannot be displayed completely.

(1) In the case of user alarm



(2) In the case of system alarm



Hint!

Easy setting method

The direct setting of object can be made on property sheet.

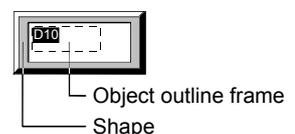
 GT Designer2 Version1 Operating Manual

Remark

The adjusting method when shape is set for object.

Adjust the display position of object and the shape in [Enable two track mode].

 5.2.3 Object size change



5.13.4 Setting items of user alarm

1 Basic tab

Set the number of monitor devices and view format (number of comments/sort/shape).



In the case of GOT-A900 series



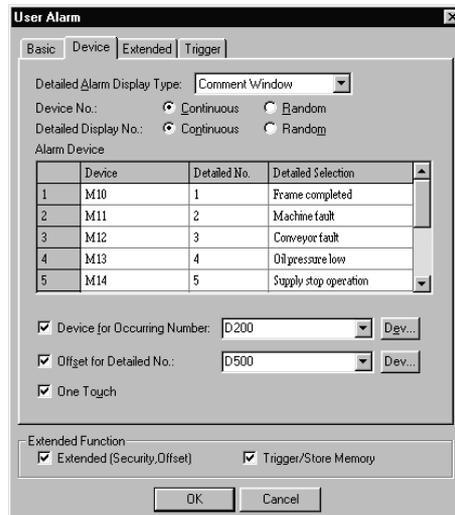
In the case of GOT-F900 series

| Items | | Description | A | F | | | | | | | | | | | | | | |
|-------------------|---|---|----------------|------------------|--|------------------|-----------|-----------------------|-------|---|-----------|-----------------------|---|--|-----------|-----------------------|---|---|
| View Format | Device | Device as many alarms are set continuously starting from the specified device. (☞ Section 5.1 Device Setting) | × | ○ | | | | | | | | | | | | | | |
| | Alarm (Device) Points | Set the number of monitor devices. [GOT-A900 series] The devices that can be set are different on the settings made in [Device No.] of device tab. ● In [Continuous] setting: 8129 devices ● In [Random] setting: 512 devices [GOT-F900 series] Up to 256 devices can be set. | ○ | ○ | | | | | | | | | | | | | | |
| | Head Comment No. | Set the comment to be displayed when an alarm occurs. The comment No. set here is assigned in head device of device tab. Continuous comment No. will be set respectively according to the number of monitor devices from the comment No. of head comment No. Example) Head device: M10, head comment No.: 1 <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="text-align: right;">Monitor device</td> <td style="text-align: center;">Comment No.</td> <td></td> <td style="text-align: right;">Head comment No.</td> </tr> <tr> <td>M10</td> <td>1 Conveyor inspection</td> <td>—————</td> <td></td> </tr> <tr> <td>M11</td> <td>2 Conveyor inspection</td> <td rowspan="2">} The comment of continued No. is set from head comment No.</td> <td></td> </tr> <tr> <td>M12</td> <td>3 Conveyor inspection</td> </tr> </table> | Monitor device | Comment No. | | Head comment No. | M10 | 1 Conveyor inspection | ————— | | M11 | 2 Conveyor inspection | } The comment of continued No. is set from head comment No. | | M12 | 3 Conveyor inspection | ○ | ○ |
| | Monitor device | Comment No. | | Head comment No. | | | | | | | | | | | | | | |
| | M10 | 1 Conveyor inspection | ————— | | | | | | | | | | | | | | | |
| M11 | 2 Conveyor inspection | } The comment of continued No. is set from head comment No. | | | | | | | | | | | | | | | | |
| M12 | 3 Conveyor inspection | | | | | | | | | | | | | | | | | |
| Size | Select the size of text to be displayed. (GOT-A900 series: 0.5 to 8, GOT-F900 series: 1 to 8 × 0.5 to 4) When (1 × 1) is set, the font size is 8 × 16 dots GOT-A900 series <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">1 to 8</td> </tr> <tr> <td style="text-align: center;">1 to 8</td> <td></td> </tr> </table> GOT-F900 series <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">0.5 to 4</td> </tr> <tr> <td style="text-align: center;">1 to 8</td> <td></td> </tr> </table> | A | 1 to 8 | 1 to 8 | | A | 0.5 to 4 | 1 to 8 | | ○ | ○ | | | | | | | |
| A | 1 to 8 | | | | | | | | | | | | | | | | | |
| 1 to 8 | | | | | | | | | | | | | | | | | | |
| A | 0.5 to 4 | | | | | | | | | | | | | | | | | |
| 1 to 8 | | | | | | | | | | | | | | | | | | |
| Number of Comment | Set the number of comments to be displayed. Plural : Display plural comments in frame. Single : Display only one comment in frame. | ○ | ○ | | | | | | | | | | | | | | | |

| Items | | Description | A | F | | | | | | | | | | | |
|---|---|--|-----------------------|-----------------------|-----------------------|-------|-----|-----------|------|--------------------------|--------------------------|---|---|-----------------------|-----------------------|
| View Format | Alignment | Select the position to display the text. Left: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>AAAA</td></tr><tr><td>BB</td></tr><tr><td>CCCC</td></tr></table> Center: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>AAAA</td></tr><tr><td>BB</td></tr><tr><td>CCCC</td></tr></table> Right: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>AAAA</td></tr><tr><td>BB</td></tr><tr><td>CCCC</td></tr></table> | AAAA | BB | CCCC | AAAA | BB | CCCC | AAAA | BB | CCCC | <input type="radio"/> | <input checked="" type="checkbox"/> | | |
| | AAAA | | | | | | | | | | | | | | |
| | BB | | | | | | | | | | | | | | |
| | CCCC | | | | | | | | | | | | | | |
| AAAA | | | | | | | | | | | | | | | |
| BB | | | | | | | | | | | | | | | |
| CCCC | | | | | | | | | | | | | | | |
| AAAA | | | | | | | | | | | | | | | |
| BB | | | | | | | | | | | | | | | |
| CCCC | | | | | | | | | | | | | | | |
| Sort | Select the sort of comment. Ascending : display according to the order of the smallest to the biggest. Descending : display according to the order of the biggest to the smallest Oldest : display according to the order of the oldest to the latest Latest : display according to the order of the newest to the oldest. When monitor is set randomly, [Ascending] [Descending] will be based on the setting order of device. Example) When making following settings in device tab. <table border="1" style="display: inline-table; vertical-align: middle;"><caption>Alarm Device</caption><thead><tr><th></th><th>Device</th></tr></thead><tbody><tr><td>1</td><td>M50</td></tr><tr><td>2</td><td>M25</td></tr><tr><td>3</td><td>M100</td></tr></tbody></table> Display commentProcessing machine errorLow oil pressureConveyor inspection <table style="width: 100%;"><tr><td style="text-align: center;">Displayed in [Ascending]</td><td style="text-align: center;">Displayed in [Decending]</td></tr><tr><td>M50 ON Processing machine error M25 ON Low oil pressure M100 ON Conveyor inspection</td><td>M100 ON Conveyor inspection M25 ON Low oil pressure M50 ON Processing machine error</td></tr></table> | | Device | 1 | M50 | 2 | M25 | 3 | M100 | Displayed in [Ascending] | Displayed in [Decending] | M50 ON Processing machine error M25 ON Low oil pressure M100 ON Conveyor inspection | M100 ON Conveyor inspection M25 ON Low oil pressure M50 ON Processing machine error | <input type="radio"/> | <input type="radio"/> |
| | Device | | | | | | | | | | | | | | |
| 1 | M50 | | | | | | | | | | | | | | |
| 2 | M25 | | | | | | | | | | | | | | |
| 3 | M100 | | | | | | | | | | | | | | |
| Displayed in [Ascending] | Displayed in [Decending] | | | | | | | | | | | | | | |
| M50 ON Processing machine error M25 ON Low oil pressure M100 ON Conveyor inspection | M100 ON Conveyor inspection M25 ON Low oil pressure M50 ON Processing machine error | | | | | | | | | | | | | | |
| Date Display | Check this item to display date when an alarm occurs. Date is displayed in the form of "yy/mm/dd: hh: mm: sec" (Year is displayed with the last 2 digits, and hour is displayed in the 24-hour system.) <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>02/07/07</td><td>09:30:40</td><td>Confirm Line1</td></tr><tr><td style="text-align: center;">Space</td><td style="text-align: center;">Space</td><td></td></tr><tr><td colspan="2" style="text-align: center;">20 digits</td><td style="text-align: center;">Comment</td></tr></table> | 02/07/07 | 09:30:40 | Confirm Line1 | Space | Space | | 20 digits | | Comment | <input type="radio"/> | <input type="radio"/> | | | |
| 02/07/07 | 09:30:40 | Confirm Line1 | | | | | | | | | | | | | |
| Space | Space | | | | | | | | | | | | | | |
| 20 digits | | Comment | | | | | | | | | | | | | |
| Use 6 × 8 dot font | Font is displayed in size of 6 × 8 dots. (Characters only) | <input checked="" type="checkbox"/> | <input type="radio"/> | | | | | | | | | | | | |
| Frame Format | Shape | Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | |
| | Frame | Select the shape color/plate color. | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | |
| | Plate | <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Machine fault</td></tr></table> Frame Plate | Machine fault | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | |
| Machine fault | | | | | | | | | | | | | | | |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | |

2 Device tab (GOT-A900 series only)

Set the monitor device and the detailed alarm display type when an alarm occurs.



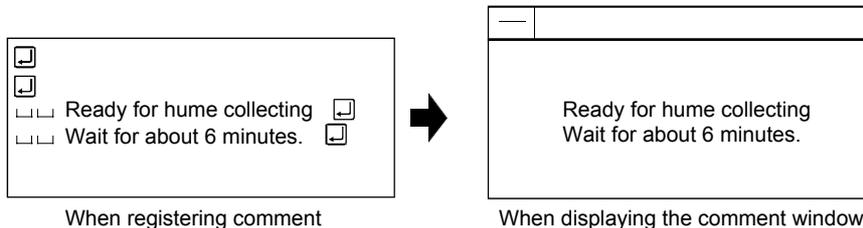
| Items | Description | A | F |
|-----------------------------|---|---|---|
| Detailed alarm display type | <p>Select the method of displaying the detailed alarm comment information. This setting is usable only when [Plural] is selected in [Number of Comment].</p> <p>Not Display : No detailed information to be displayed. Comment Window*1 : A comment window is displayed to provide detailed information.</p> <p>Base screen : A registered comment is used for the window. : The detailed information is displayed on a base screen. The base screen specified by detailed displayed No. of the alarm device is used.</p> <p>Window screen : Display the window screen by details display. : Display the window screen that is set in the detailed No. of alarm device.</p> | ○ | × |
| Device No. | <p>Select the method of setting the device to be monitored.</p> <p>Continuous : Devices are consecutively numbered from the set device. Random : Devices are numbered at random.</p> | ○ | × |
| Detailed Display No. | <p>Select the method of displaying the comment/window screen/base screen used for providing detailed information of alarm.</p> <p>Continuous : Devices are consecutively numbered starting from the set comment No./window screen No./base screen No. Random : Devices are numbered at random.</p> | ○ | × |
| Alarm Device | Setting the screen No. for monitor device and detailed display. | ○ | ○ |
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | ○ | ○ |
| Detailed No. | Number the comment/window screen/base screen used for displaying the detailed information when an alarm occurs (when the specified device condition is satisfied.) | ○ | ○ |
| Detailed Selection | Select the comment to be displayed in details when selecting [Comment Window] in [Detailed alarm display type]. The comment can be displayed when confirming the comment contents. | ○ | ○ |
| Device for Occurring Number | <p>Check this item to store the number of alarms (the number of bit devices that have turned ON) in the word device. After checking, set the device to store alarms. (☞ Section 5.1 Device Setting)</p> | ○ | × |

| Items | Description | A | F |
|-------------------------|--|---|---|
| Offset for Detailed No. | <p>Check this item to switch the detailed information on screen according to the value of one device.</p> <p>The comment No. (Comment Window)/window screen No./base screen No. set as the detailed No. of alarm device is added to the device (offset device) value set here. (The data size of the set device is fixed to 16 bits)</p> <p>For the details about offset function, refer to the following. (☞ Section 5.6 Offset Function)</p> | ○ | × |
| One Touch | <p>Check this item to display the detailed display screen by touching any row of the alarm list. (This setting is usable in the basic tab when [Plural] is set in [Comment Number])</p> | ○ | × |

For the details about *1, refer to the following.

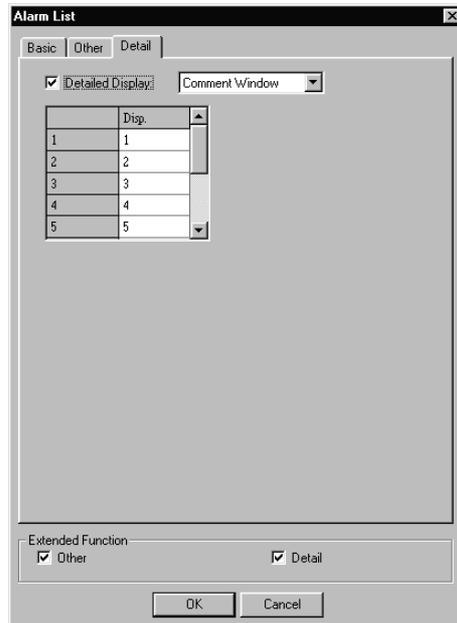
*1 Display Method of Comment Window

- (1) The number of characters to be displayed in the comment window
 - A960GOT, A97*GOT, A985GOT : 39 characters × 11 lines (429 characters)
 - A95*GOT, A956WGOT : 23 characters × 7 lines (161 characters)
- (2) The comment window is displayed on the upper left of base screen.
Closing and moving of window is the same with the operation of window screen.
- (3) The comment text is displayed as follows.
 - Text Size: Fixed size (1 × length times 1 × width).
 - Text visual effects i.e., reverse, blink and style will not be reflected on comments, even when they are set in the comment registration.
- (4) The comment line is displayed in the comment window as follows.
 - Comments are displayed at the upper left of comment window.
 - If the comments exceed the comment window display range, the remaining part will be displayed on the second line.
 - To display comments in the center of comment window, adjust the display position by starting new line.



3 Detailed Tab (GOT-F900 series only)

Check the Extended Function at the bottom of dialog box to display this tab.



| Items | Description | A | F |
|---------------------|---|---|---|
| Detailed Display *1 | <p>After it is ON, select the detailed display screen type that displays the details about the bit device displaying the comment. This setting is usable only when the number of displayed comment is plural (set in the basic tab).</p> <p>No display : No detailed display Comment Window : Displays in details on the dedicated comment window screen for the alarm list. Base Screen : Display in details on the base screen with specified base screen No.</p> | × | ○ |

*1 Detailed Display

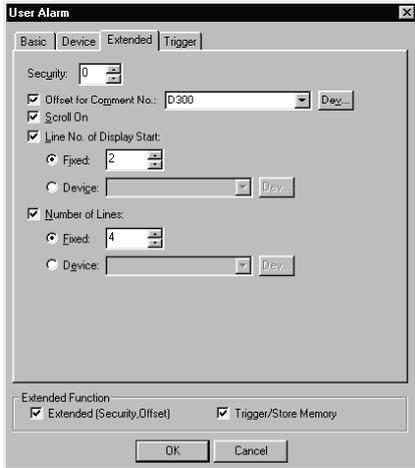
The detailed error information is displayed on the base screen/comment window.

 5.13.1 Required knowledge for user alarm setting

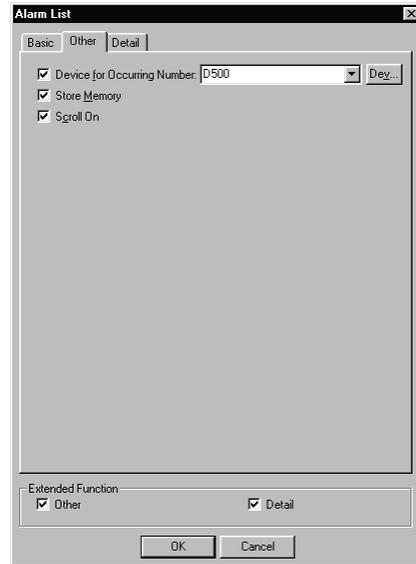
4 Extended Tab (GOT-F900 series only)

Set the security, offset and the touch switch for alarm list.

Check the Extended Function at the bottom of dialog box to display this tab.



In the case of GOT-A900 series



In the case of GOT-F900 series

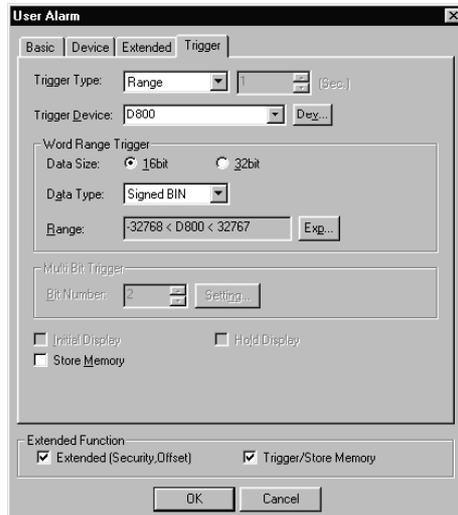
| Items | Description | A | F |
|-----------------------------|--|---|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | ○ | × |
| Offset for Comment No. | Check this item to switch and display the comment contents in the alarm list according to the value of a device. The head comment No. (set in [Head Comment No.] of basic tab) assigned to the alarm device is added to the device (offset device) value set here. (The data size of the set device is fixed to 16 bits) For the details about offset function, refer to the following. (☞ Section 5.6 Offset Function) | ○ | × |
| Device for Occurring Number | Check this item to store the current number of bit devices being monitored in the word device. After checking, click on Device button to set the store device. (☞ Section 5.1 Device Setting) | × | ○ |
| Store Memory | Check this item to store the date when the monitor device turns on while the alarm list is not displayed, after the screen on which alarm list is displayed with the corresponding date is switched to another screen and the alarm list is displayed again. When the data is not stored into the memory and the alarm list display screen is displayed again, all the data time stamp displayed in the alarm list will be as same as the displayed time. <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p>M1 00/5/31 12:00:15 Conveyor check</p> <p>M2 00/5/31 13:30:25 Products check</p> </div> <div style="text-align: center;"> <p>Switch screen</p> <p>→</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>00/5/31 14:00:33 M5 ON</p> <p style="text-align: center;">Screen Alarm</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p>M1 00/5/31 12:00:15 Conveyor check</p> <p>M2 00/5/31 13:30:25 Products check</p> <p>M5 00/5/31 14:00:33 Conveyor error</p> <p style="text-align: center;">M5 is the date and time of ON.</p> </div> <div style="text-align: center;"> <p>Memory is stored</p> <p>↓</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>00/5/31 14:14:00 Switch screen</p> </div> <div style="text-align: center;"> <p>Memory is not stored</p> <p>↓</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>00/5/31 12:00:15 Conveyor check</p> <p>00/5/31 13:30:25 Products check</p> <p>00/5/31 14:00:33 Conveyor error</p> <p style="text-align: center;">M5 is the date and time when the alarm list is displayed.</p> </div> </div> | × | ○ |

| Items | Description | A | F |
|---------------------------|---|---|---|
| Scroll On | <p>Check this item to operate the alarm list by using a touch switch for which key code has been set for alarm list (user alarm). After checking, arrange above touch switch. (☞ Section 5.13.6 Touch switches for alarm list (user alarm)) This item is disabled when data list and alarm history are displayed on the same screen.</p> | ○ | × |
| Line No. of Display Start | <p>Check this item to specify the display-start line of the multi-line comment. After checking, set the value of each line. Fixed : Set by direct input. Device : To set the number as the same as the device value. After checking, set the device. (☞ Section 5.1 Device Setting)</p> <p>When comment display is blank, check whether the value of initial line is set outside the range for the number of created comment lines.</p> | ○ | × |
| Number of Lines | <p>Specify the number of lines of the multi-line comment. It can be used only when [Number of Comment] is set as [single] (set in Basic tab)</p> <p> Fixed : Set by direct input. Device : To set the number the same as the device value. After checking, set the device. (☞ Section 5.1 Device Setting).</p> | ○ | × |

5 Trigger tab (GOT-A900 series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.



| Items | Description | A | F |
|--------------------|--|---|---|
| Trigger Type | Select the trigger for displaying which the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Bit trigger | ○ | × |
| Trigger Device | Specify the device used for the trigger. | ○ | × |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items | ○ | × |
| | Data Size | ○ | × |
| | Data Type | ○ | × |
| | Range | ○ | × |
| Multi Bit Trigger | Bit Number | ○ | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object display needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | ○ | × |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | ○ | × |
| Store Memory | Check this item to collect the alarm occurrence time while the screen where alarm list has not been set is displayed. The alarm occurrence status are always monitored and stored to the GOT internal memory. After checking, set the cycle to collect data (1 to 3600 sec) in [Trigger Type]. | ○ | × |

5.13.5 Setting items of system alarm

1 Basic tab (GOT-A900 series only)

Set the display format (shape/text size) of system alarm

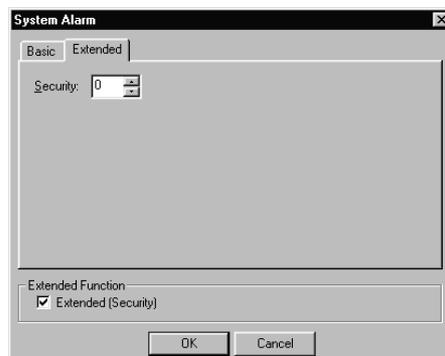


| Items | Description | A | F |
|--------------|---|-----------------------|-------------------------------------|
| Size | Select the text size (0.5 to 8) of the error message to be displayed | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Frame Format | Shape Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Frame Select the shape/plate | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Plate  | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input checked="" type="checkbox"/> |

2 Extended (GOT-A900 series only)

Set the security.

Check "Extended" at the bottom of this dialog box to display this tab.

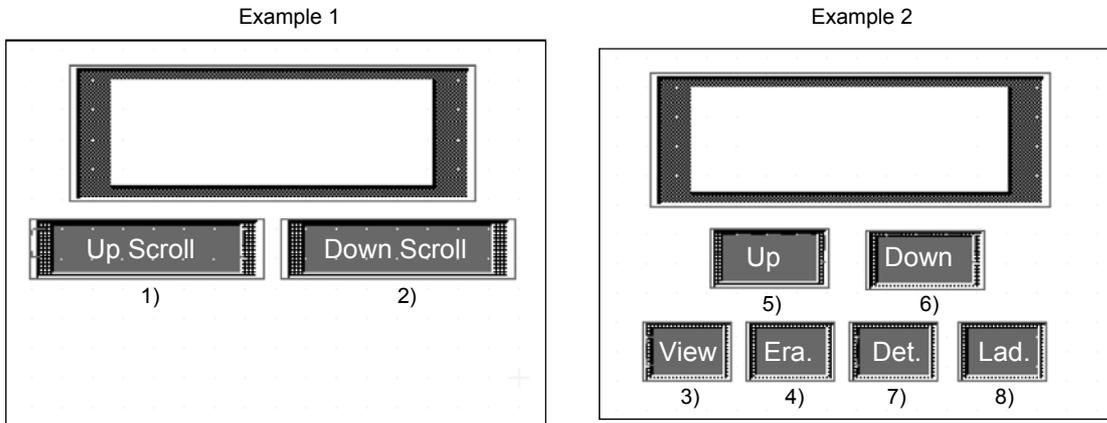


| Items | Description | A | F |
|----------|---|-----------------------|-------------------------------------|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | <input type="radio"/> | <input checked="" type="checkbox"/> |

5.13.6 Touch switches for alarm list (user alarm)

Set the touch switches for operating alarm list (user alarm).

For the touch switches, create by setting the following key codes to them or read from the GT Designer2 library.



Switch display by the Up/Down Scroll key.
Touching the alarm list directly enables the details display.
(Set by checking [One Touch] of Device tab.)

Move cursor by the Up/Down Move key to start the details display of alarm specified by cursor and the ladder monitor screen.

| Function | Function | Key code |
|-----------------------|---|----------|
| 1) Up Scroll *1, *2 | Scroll to the upper part of the display. | 00F2H |
| 2) Down Scroll *1, *2 | Scroll to the lower part of the display. | 00F3H |
| 3) Display (cursor) | Display the cursor. | FFB0H |
| 4) Erase (cursor) | Erase the cursor. | FFB1H |
| 5) Up Move | <ul style="list-style-type: none"> ● Move the cursor up when the cursor is displayed. ● Move to the next page when the cursor is not displayed. | FFB2H |
| 6) Down Move | <ul style="list-style-type: none"> ● Move the cursor down when the cursor is displayed. ● Move to the next page when the cursor is not displayed. | FFB3H |
| 7) Details | Display the screen of details. | FFB8H |
| 8) Ladder *2 | Search the alarm device and display on the ladder monitor screen. (Automatically search the specified device ladder and display it.) | FFBCH |

*1 It will not act when the cursor is displayed.

*2 Not supported by GOT-F900 series.



To use the touch switches for alarm list (user alarm)

When using the touch switches for alarm list, make sure to check [Scroll] on the Extended tab.

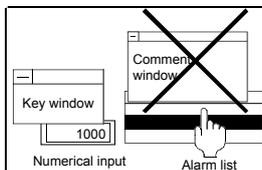
5.13.7 Cautions

This section provides the cautions for using alarm list function.

1 Cautions for alarm list

- (1) Maximum number of alarm list objects set in one screen
 - GOT-A900 series: 24
 - GOT-F900 series: 1
- (2) Maximum number of devices applicable for monitoring
 - Continuously specified bit device : 8192 devices (GOT-A900 series)
: 256 devices (GOT-F900 series)
 - Randomly specified bit device : 512 devices (GOT-A900 series only)
- (3) When [Store Memory] is checked
 - (a) Up to 16 alarm list objects can be set in the whole project when [Store Memory] is set.
 - (b) Up to 8192 alarm list objects can be set in the whole projects as the devices applicable for monitoring by [Store Memory]. The preset number of alarm lists is not relevant.
- (4) Display of comment window

When key window is on display, the comment window cannot be displayed.
Make sure to erase the key window before displaying the comment window.



- (5) Display of occurrence time

The occurrence time may not be displayed due to the connection type and connection destination.
(GOT-F900 series uses the clock function built-in GOT.)

 Section 2.4 Clock Function
- (6) Cursor color for alarm list (for GOT-F900 only)

When touching the touch key for which the key code (FFB0H) has been set, the cursor will be displayed in black at the top of the alarm list.
Therefore, if the screen background is black, the cursor is invisible. Make sure to set the alarm list object and plate in the color other than black.

(7) When used with other objects

After checking [Scroll] in the extended tab (settings to use touch switch for alarm list (user alarm)), the following objects cannot be set in the same screen.

- Data list function object
- Alarm history function object

(8) Touch switch for alarm list (user alarm)

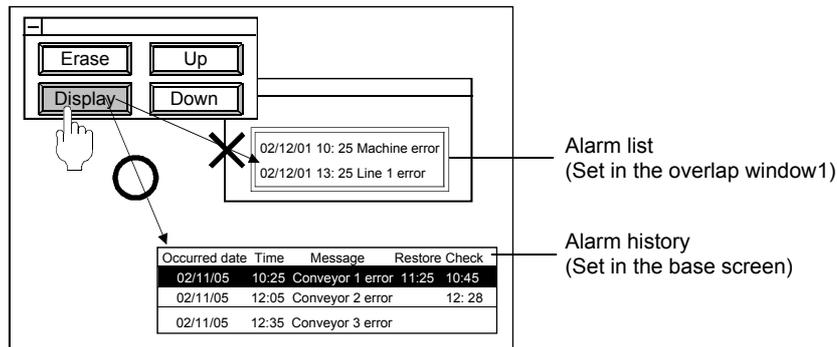
Make sure to set the touch switch for alarm list (user alarm) and alarm list in the same screen. If not, the touch switch may operate instead of the alarm list, when both alarm history and data list are displayed.

To set only the touch switch for alarm list (user alarm) in the other screens, refer to the following priority order.

- Priority order corresponding to the touch switch screen

| | |
|--|------|
| Screen for which touch switch has been set | High |
| Base screen | |
| Call screen 1 to 5 | |
| Superimpose window | ↓ |
| Overlap window1 | |
| Overlap window2 | Low |

Example) When touch switch has been set for other screens (overlap window2)



As the base screen has higher priority, operates it as the touch switch of alarm history.

(9) Comment display line range (GOT-F900 series only)

Only the first line of each comment is displayed.

The second and later lines of each comment are not displayed.

(10)Cautions in using the F920GOT-K

"Occurred date" and "Time" are not available in the F920GOT-K.

If these items are set, a screen error will occur.

2 Cautions for using system alarm

- (1) Maximum number of system alarm that can be set in one screen
 - GOT-A900 series: 1

- (2) When using QCPU in connection with MELSECNET/10 (A7GT-J71LP23/A7GT-J71BR13 only)
 - (a) Make sure to check [Use Special Relay/Special Register Later Than SM1000, SD1000] of [A Series CPU Exchange Setting] in [PC System Setting] of [PC Parameter Setting] of GX Developer.
When this item is not checked, the alarms detected by communication module and PLC CPU will not be displayed in system alarm.
 - (b) When using Q00JCPU, Q00CPU and Q01CPU, the alarms detected by communication module and PLC CPU will not be displayed in system alarm.
(The above [Use Special Relay/Special Register Later Than SM1000, SD1000] of GX Developer cannot be checked in Q00JCPU, Q00CPU and Q01CPU.)

- (3) When using SIMENS PLC CPU
Alarms detected by PLC CPU are not displayed.

- (4) Message area of alarm detected by GOT
Even if the alarm factors are cleared, message of the alarm detected by GOT will remain in system alarm.
To clear the message, make sure to turn the following bit device of system information function ON.
 - GOT error reset message (system signal1 [b13])
 Section 3.5 System Information Setting

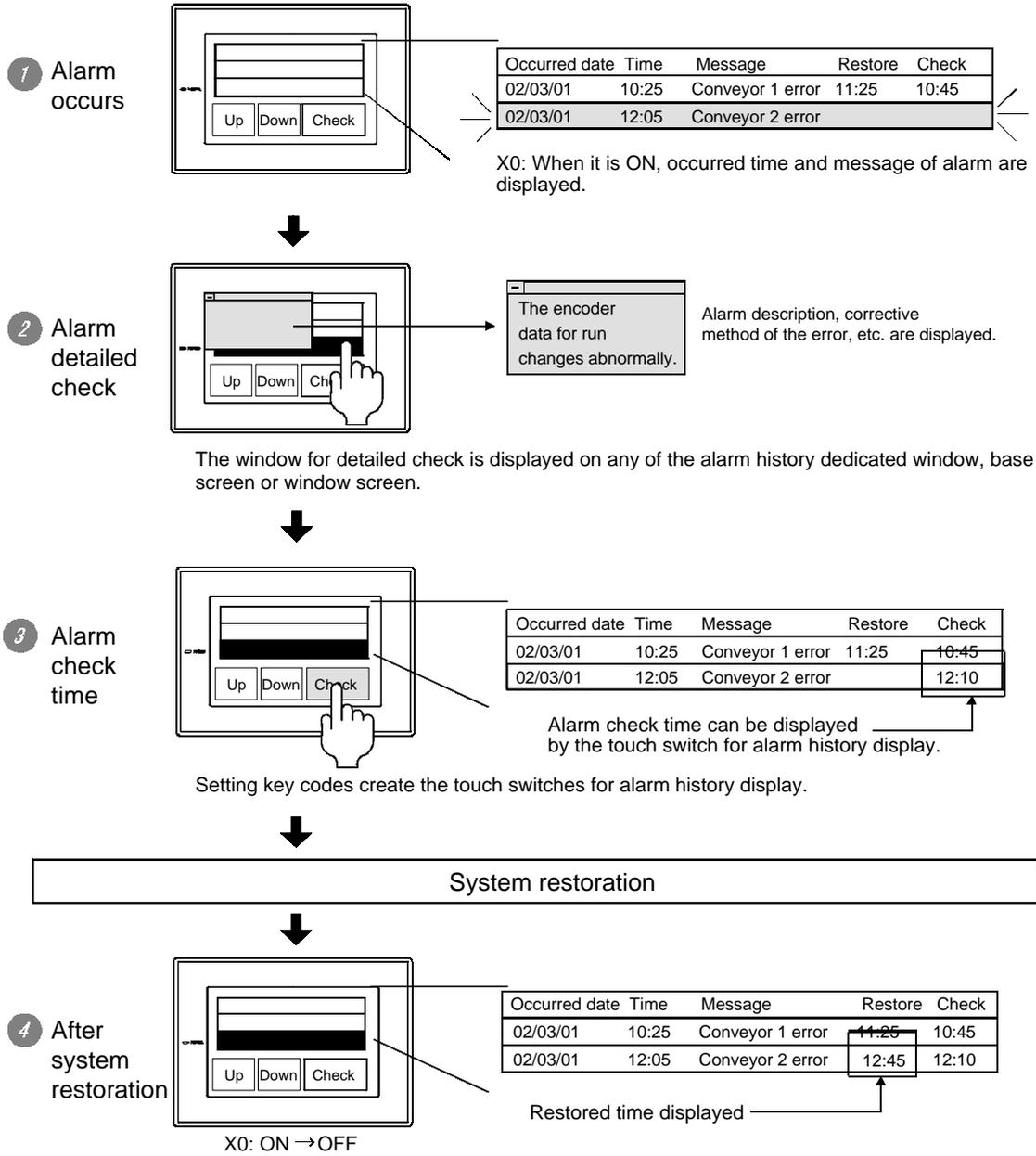
- (5) Display of occurrence time
The date and time may not be displayed due to the connection type and PLC CPU of the connection destination.
(GOT-F900 series uses the clock function built-in GOT)
 Section 2.4 Clock Function



5.14 Alarm History



When trigger conditions of the device specified for alarm detection are satisfied (when bit changes from ON → OFF/word device), the alarm history function records and displays historical data, i.e., alarm occurrence time and comments, etc.

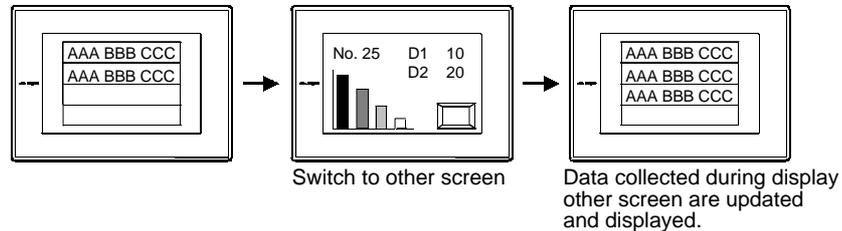




Collection and storage of alarm historical data

(1) Collection of alarm historical data

GOT constantly collects alarm historical data and stores them inside GOT. Even if alarm history display is not arranged on the monitor screen, the alarm history data are constantly collected and updated.



(2) Erasure of alarm historical data

- In the case of GOT-A900 series
When GOT is powered off or reset, all data are deleted.
By operating the switch key for alarm history (touch switch), data can be erased one by one or all at once.
- In the case of GOT-F900 series
All the data can be erased by ON of the device set in the system information.
By operating the switch key for alarm history (touch switch), data can be erased one by one or all at once.
(Even if GOT is powered off or reset, historical data will not be deleted.)

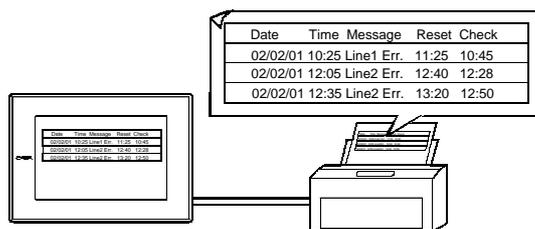
(3) Retention of alarm historical data during power failure

- In the case of GOT-A900 series
If they are saved to PC card, alarm historical data can be held even if the GOT is powered off.
- In the case of GOT-F900 series
Alarm historical data can be saved in the built-in RAM memory and held in the built-in RAM battery.
For F920GOT-K, EEPROM memory is used.

Example

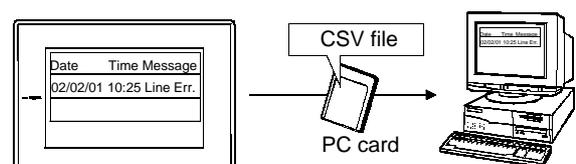
Print out (GOT-A900 series only)

Make setting on Print (Common) tab



Edit alarm historical data on PC (GOT-A900 series only)

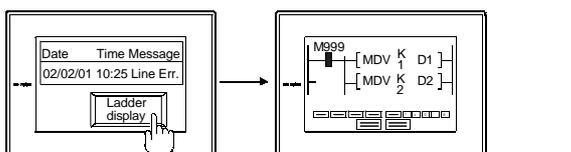
Make setting on Option (common) tab



The alarm historical data saved to PC card in CSV file format are read by spreadsheet software.

Start ladder monitor function from alarm history display (GOT-A900 series only)

Make setting with touch switch (Section 5.27)

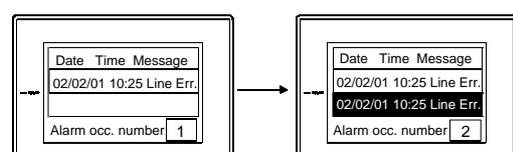


Ladder monitor function is displayed by touch switch

Ladder status of device displayed as alarm history is monitored

Display number of alarm that have been occurred (GOT-A900 series only)

Make setting on Option (common) tab



The number of all alarms occurred is displayed in alarm history

5.14.1 Arrangement and settings

1 Carry out either of the following operations.

-  Click on (Alarm History)
- Select [Object] → [Alarm History] from the menu

2 Click on the desired position completes the arrangement of the alarm history display.

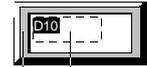
Remark

Adjusting method for setting object shape

Use [Enable Two Tracker Mode] tab to adjust the position of object and shape.



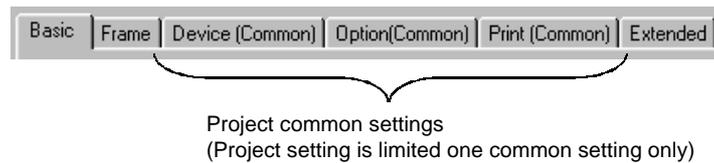
Section 5.2.3 Object size change



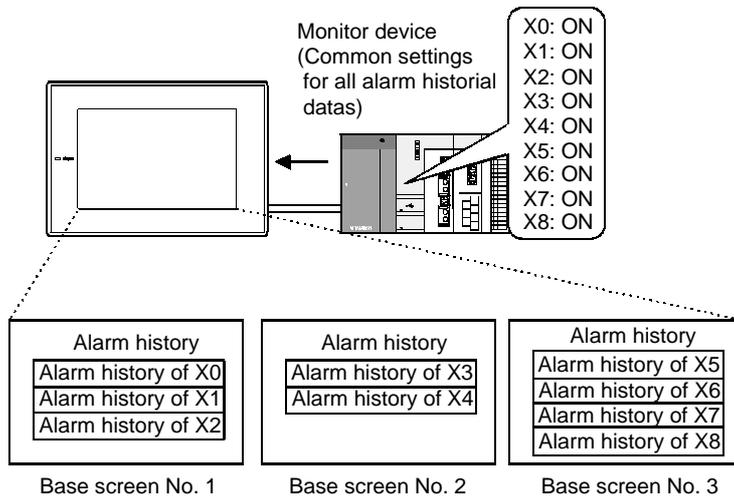
Object outline frame
Shape

3 Double click on the arranged alarm history display, and make setting in the displayed dialog box with reference to the following explanation.

The settings whose tab names are marked with (Common) in the dialog box are common settings in project.



As shown in the following example, although monitor devices are set in the same way for all alarm history displays, different display formats (number of display rows/alarm frame color) can be set for each display.



Different settings for the number of row and frame color are available for each alarm history



(1) Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual

(2) Common settings of alarm history

The common settings of alarm history can be set as follows.

- Select [Common Settings] → [Alarm History] from the menu.
- Select "Project" → "Common Settings" → "Alarm History" from project workspace

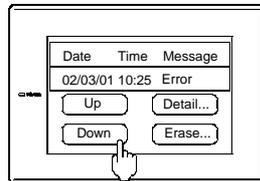
4

Setting touch switches for alarm history

Set the touch switches that are used for alarm history display such as cursor display, movement, detailed alarm display.



Section 5.14.3 Touch switches for alarm history



5.14.2 Setting items

1 Basic tab

Set display items (view items, view format, sort, etc.)

Alarm History

Basic | Frame | Device (Common) | Option (Common) | Print (Common) | Extended

Number of Rows: 10 Display Head Row: 1

Space: 0 (X) 0 (Y)

Size: 1 x 1 1 X 1 (X x Y) Use High Quality Font

Sort Setting: Oldest Title: Display Alarm Details by One Touch

Display style

Occurrences Restorations Checks Cumulative Time Occur Frequency

| | Occurred | Message | Restored | Checks | Cum. Time | Occur Freq |
|----------|-----------|---------|----------|----------|-----------|------------|
| Title | OCCURRED | MESSAGE | REST. | CHECK | CUMULATE | COUNT |
| Width | 17 | 10 | 5 | 5 | | |
| Color | | | | | | |
| Contents | Date/Time | | Time | Time | | |
| | yy/mm/dd | | yy/mm/dd | yy/mm/dd | | |
| | hh:mm:ss | | hh:mm | hh:mm | | |
| Text | | | | | | |

Category: Others

Extended Function

Extended (Security)

OK Cancel

In the case of GOT-A900 series

Alarm History

Basic | Frame | Device (Common) | Option (Common) | Extended

Settings

Occurred Message

Title: OCCURRED MESSAGE Occurred:

Width: 17 (Digit) 10 (Digit)

Contents: Alarm Date/Time Alarm Text

Date: yy/mm/dd

Time: hh:mm:ss

Number of Rows: 10 Title:

Size: 1 x 1 1 X 1 (X x Y)

Use 6x8dot font

Sort Setting: Oldest

Category: Others

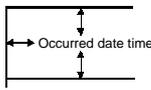
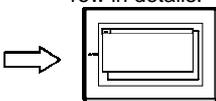
Extended Function

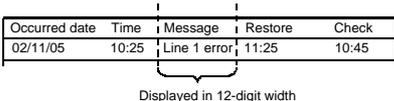
Extended

OK Cancel

In the case of GOT-F900 series

| Items | Description | A | F |
|----------|---|---|---|
| Title | Input the title names of view items individually. | × | ○ |
| Occurred | Select the text color of date, time and message in alarm display rows (display rows). | × | ○ |

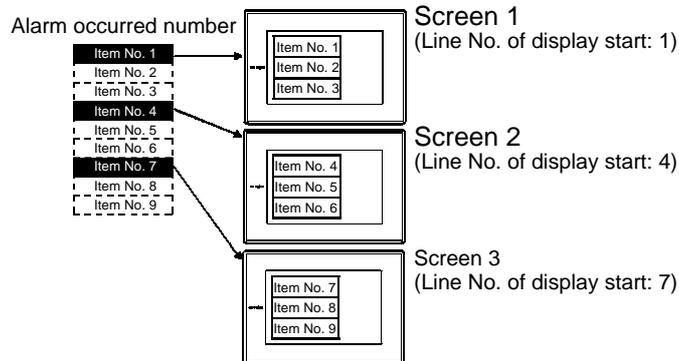
| Items | | Description | A | F | | | | | | | | | | | | | | | | | | | |
|--|--|---|-----------------|--|--|--------------|--------------|-------|------------------|-------|-------|----------|-------|------------------|-------|-------|----------|-------|-----------------|-------|-------|---|---|
| Contents | Alarm Date/Time, Text | Select the format or text for alarm date/time display so that it will be displayed in "Occurred" when an alarm occurs. | × | ○ | | | | | | | | | | | | | | | | | | | |
| | Date | When displaying the date, check this item and select the format. | × | ○ | | | | | | | | | | | | | | | | | | | |
| | Time | When displaying the time, check this item and select the format | × | ○ | | | | | | | | | | | | | | | | | | | |
| | Text | Input the text so that the character string is specified will be displayed in "Occurred" when an alarm occurs (when triggers of the specified device are satisfied). Select [Text] from [Contents], and input the text to be displayed in [Text]. | × | ○ | | | | | | | | | | | | | | | | | | | |
| Number of Rows | Set the number of rows displayed for each screen. (Up to 27 rows) (Example) When this is set to 3 <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td>Conveyor 1 error</td> <td>11:25</td> <td>10:45</td> </tr> <tr> <td>02/11/05</td> <td>12:05</td> <td>Conveyor 2 error</td> <td>12:25</td> <td>12:28</td> </tr> <tr> <td>02/11/06</td> <td>08:30</td> <td>Processor error</td> <td>09:45</td> <td>09:40</td> </tr> </tbody> </table> } Display rows (not including the title line) | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | Conveyor 1 error | 11:25 | 10:45 | 02/11/05 | 12:05 | Conveyor 2 error | 12:25 | 12:28 | 02/11/06 | 08:30 | Processor error | 09:45 | 09:40 | ○ | ○ |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | Conveyor 1 error | 11:25 | 10:45 | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 12:05 | Conveyor 2 error | 12:25 | 12:28 | | | | | | | | | | | | | | | | | | | |
| 02/11/06 | 08:30 | Processor error | 09:45 | 09:40 | | | | | | | | | | | | | | | | | | | |
| Display Head Row *1 | When triggers of more than one specified device are satisfied, set from which alarm data are to be displayed in order of alarm occurrence. (Example) When this is set to 4 <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td>M3 No</td> <td>11:25</td> <td>10:45</td> </tr> <tr> <td>02/11/05</td> <td>12:05</td> <td>M3 No</td> <td>12:25</td> <td>12:28</td> </tr> </tbody> </table> Alarm No.4 and later are displayed <div style="margin-left: 20px;"> Alarm occurred items 1) M0 ON 2) M0 ON 3) M0 ON 4) M0 ON 5) M0 ON ⋮ </div> Alarm occurred order | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | M3 No | 11:25 | 10:45 | 02/11/05 | 12:05 | M3 No | 12:25 | 12:28 | ○ | × | | | | | |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | M3 No | 11:25 | 10:45 | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 12:05 | M3 No | 12:25 | 12:28 | | | | | | | | | | | | | | | | | | | |
| Space | Set the distance between the ruled line and the text and time display. Setting is available in 1-dot unit for vertical, 8-dot unit for horizontal direction and up to 32 dots for each.  | ○ | × | | | | | | | | | | | | | | | | | | | | |
| Size | Select the text size (X × Y) for display of alarm history. When (1 × 1) is set, the font size is 8 × 16 (X × Y) dots. <table style="width: 100%; text-align: center;"> <tr> <td>GOT-A900 series</td> <td>GOT-F900 series</td> </tr> <tr> <td> 1 to 8 times</td> <td> 0.5 to 4 times</td> </tr> <tr> <td>1 to 8 times</td> <td>1 to 8 times</td> </tr> </table> | GOT-A900 series | GOT-F900 series |  1 to 8 times |  0.5 to 4 times | 1 to 8 times | 1 to 8 times | ○ | ○ | | | | | | | | | | | | | | |
| GOT-A900 series | GOT-F900 series | | | | | | | | | | | | | | | | | | | | | | |
|  1 to 8 times |  0.5 to 4 times | | | | | | | | | | | | | | | | | | | | | | |
| 1 to 8 times | 1 to 8 times | | | | | | | | | | | | | | | | | | | | | | |
| Use 6x8 dot Font | Font is displayed in size of 6 × 8 dots. (Characters only) | × | ○ | | | | | | | | | | | | | | | | | | | | |
| Use High Quality Font | Check this item when using high quality font to display text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | ○ | × | | | | | | | | | | | | | | | | | | | | |
| Sort Setting | Select the display order of alarm items. Oldest: Displays the alarm data in order of occurrence starting from the oldest data. Latest: Displays the alarm data in order of occurrence starting from the latest data. | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| Title | Select the title color. | ○ | × | | | | | | | | | | | | | | | | | | | | |
| Display Alarm Details By One Touch | Check this item to display the detailed display screen by touching any row of the alarm history. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td>Line error</td> <td>11:25</td> <td>10:45</td> </tr> <tr> <td>02/11/05</td> <td>10:05</td> <td>Line error</td> <td>12:25</td> <td>12:28</td> </tr> </tbody> </table> Touch the row to view the details display.  Display the touched row in details. | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | Line error | 11:25 | 10:45 | 02/11/05 | 10:05 | Line error | 12:25 | 12:28 | ○ | × | | | | | |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | Line error | 11:25 | 10:45 | | | | | | | | | | | | | | | | | | | |
| 02/11/05 | 10:05 | Line error | 12:25 | 12:28 | | | | | | | | | | | | | | | | | | | |

| Items | Description | A | F | | | | | | | | | | | | | | | | | | |
|--------------------|---|-----------------------|--------------------------|-----------------|------------------|-----------------|-----------------|----------------|------------------|-------|------------------|-----------------------|--------------------------|-----------------------|--------------------------|-------|-------|-------|---|-----------------------|--------------------------|
| Display style | <p>Check items to be displayed in alarm history.</p> <p style="text-align: center;"> <input type="checkbox"/> [Occurred] <input type="checkbox"/> [Restore] <input type="checkbox"/> [Cumulative time] <input type="checkbox"/> [Check] <input type="checkbox"/> [Occur frequency] </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Occurred date time</th> <th>Message</th> <th>Restore</th> <th>Check</th> <th>Cumulative time</th> <th>Occur frequency</th> </tr> </thead> <tbody> <tr> <td>02/11/05 10:25</td> <td>Conveyor 1 error</td> <td>11:25</td> <td>10:45</td> <td>01:00</td> <td>1</td> </tr> <tr> <td>02/11/05 12:05</td> <td>Conveyor 2 error</td> <td>12:25</td> <td>12:28</td> <td>00:20</td> <td>5</td> </tr> </tbody> </table> | Occurred date time | Message | Restore | Check | Cumulative time | Occur frequency | 02/11/05 10:25 | Conveyor 1 error | 11:25 | 10:45 | 01:00 | 1 | 02/11/05 12:05 | Conveyor 2 error | 12:25 | 12:28 | 00:20 | 5 | <input type="radio"/> | <input type="checkbox"/> |
| Occurred date time | Message | Restore | Check | Cumulative time | Occur frequency | | | | | | | | | | | | | | | | |
| 02/11/05 10:25 | Conveyor 1 error | 11:25 | 10:45 | 01:00 | 1 | | | | | | | | | | | | | | | | |
| 02/11/05 12:05 | Conveyor 2 error | 12:25 | 12:28 | 00:20 | 5 | | | | | | | | | | | | | | | | |
| Occurred | Check this item to display the corresponding comment when an alarm occurs (when triggers of the specified device are satisfied). | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Restored | Check this item to display the date and time when alarm is restored (when triggers of specified device changes from satisfied → not satisfied). | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Checks | <p>Check this item to display the alarm check time when an alarm occurs. The time when the check switch is touched after alarm is displayed.</p> <p>( Section 5.14.3 Touch switches for alarm history)</p> <div style="text-align: center;"> <table border="1" style="display: inline-table; margin-right: 10px;"> <thead> <tr> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>Conveyor 1 error</td> <td></td> <td></td> </tr> </tbody> </table> → <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 10px;"> <input type="checkbox"/> Check </div> → <table border="1" style="display: inline-table;"> <thead> <tr> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>Conveyor 2 error</td> <td></td> <td>12:00</td> </tr> </tbody> </table> </div> | Message | Restore | Check | Conveyor 1 error | | | Message | Restore | Check | Conveyor 2 error | | 12:00 | <input type="radio"/> | <input type="checkbox"/> | | | | | | |
| Message | Restore | Check | | | | | | | | | | | | | | | | | | | |
| Conveyor 1 error | | | | | | | | | | | | | | | | | | | | | |
| Message | Restore | Check | | | | | | | | | | | | | | | | | | | |
| Conveyor 2 error | | 12:00 | | | | | | | | | | | | | | | | | | | |
| Cum. Time | <p>Check this item to display the time elapsed from alarm occurrence until restoration in units of minutes (when triggers of specified device changes from satisfied → not satisfied).</p> <p>To set this item, change the mode to [Cumulation] on the Device (Common) tab.</p> | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Occur Freq | <p>Check this item to display the number of alarms occurred (when triggers of specified device are satisfied).</p> <p>To set this item, change the mode to [Cumulation] on the Device (Common) tab.</p> | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| View Format | Set the view format of the items set in [View Format]. | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Title | Input the title name for each view item. | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Width | <p>Set the number of digits (1 to 80) for each view item.</p> <p>(Example) When message width is set to 12</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td>Line 1 error</td> <td>11:25</td> <td>10:45</td> </tr> </tbody> </table> <p style="text-align: center;">  </p> | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | Line 1 error | 11:25 | 10:45 | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | Line 1 error | 11:25 | 10:45 | | | | | | | | | | | | | | | | | |
| Color | Select the title color for each view item. | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Contents *2 | <p>Select this item to set the view format for date and time of alarm occurrence.</p> <p>Date + Time : Displays data and time. (After selection, select the view format for data and time)</p> <p>Date : Displays date only. (After selection, select the view format for date)</p> <p>Time : Displays time only. (After selection, select the view format for time)</p> <p>Text : Displays the specified character string. (After selection, input the character string to the [Text] below.)</p> | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Text | <p>Input characters to display the date and time of the alarm occurred (when triggers of specified device are satisfied) as a specified character string.</p> <p>Select [Text] in [Contents] to set this item.</p> <p>Maximum 20 characters can be input.</p> | <input type="radio"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | |
| Category | <p>When allocating category to the object, select a proper category.</p> <p>( GT Designer2 Version1 Operating Manual)</p> | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | | | | |

For details of *1 and *2, refer to the next page.

***1 Display Head Row**

If different line No. of display start are set on plural screens, different alarm history can be displayed for each screen.



***2 View format of alarm date/time**

- View format of date

Year is displayed by the last 2 digits of the year.

(Example) Nov. 25, 2002

GOT-A900 series

[yy/mm/dd] : 02/11/25 (8 digits)
 [mm/dd/yy] : 11/25/02 (8 digits)
 [dd/mm/yy] : 25/11/02 (8 digits)
 [mm/dd] : 11/25 (5 digits)

GOT-F900 series

[yy/mm/dd] : 02/11/25 (8 digits)
 [mm/dd/yy] : 11/25/02 (8 digits)
 [dd/mm/yy] : 25/11/02 (8 digits)
 Type1 : 1/NOV/2002 (FRI) (16 digits)
 Type2 : 1/NOV/2002 (11 digits)

- View format of time

Time is displayed by 24-hour format.

(Example) 9: 50: 48a.m.

GOT-A900 series

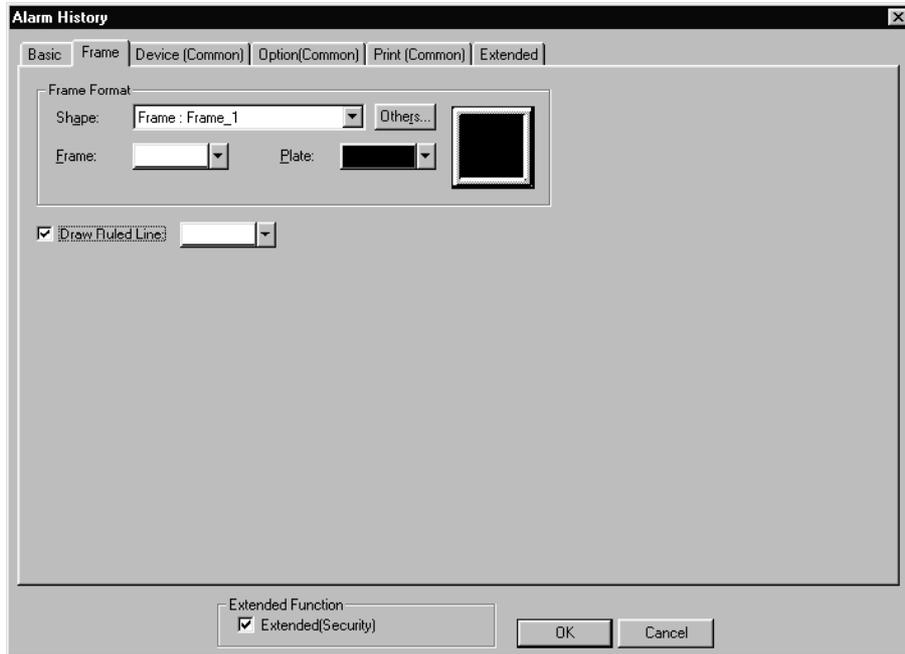
[hh: mm: Sec] : 09: 50: 48 (8 digits)
 [hh: mm] : 09: 50 (5 digits)

GOT-F900 series

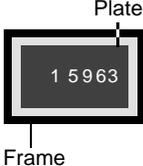
[hh: mm: Sec] : 09: 50: 48 (8 digits)
 [hh: mm] : 09: 50 (5 digits)

2 Frame tab

Set the view frame, ruled line/ vertical line for alarm history.



(Example: In the case of GOT-A900 series)

| Items | | Description | A | F | | | | | | | | | | | | | | | |
|-----------------|--|--|----------------------------------|-----------------------|---------|---------|-------|----------|-------|--|-------|-------|----------|-------|--|-------|-------|--|--|
| Shape | Shape | Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| | Frame | Select the shape/plate color. | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| | Plate Color |  | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Draw Ruled Line | Check this item to draw ruled lines for alarm history. After checking, select a color for the ruled line. | <input type="radio"/> | <input checked="" type="radio"/> | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td></td> <td>11:25</td> <td>10:45</td> </tr> <tr> <td>02/11/05</td> <td>10:25</td> <td></td> <td>11:25</td> <td>10:45</td> </tr> </tbody> </table> | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | | 11:25 | 10:45 | 02/11/05 | 10:25 | | 11:25 | 10:45 | | |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | | 11:25 | 10:45 | | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | | 11:25 | 10:45 | | | | | | | | | | | | | | | |

| Items | Description | A | F | | | | | | | | | | | | | | | |
|--------------------------------|--|----------------------------------|----------------------------------|---------|---------|-------|----------|-------|--------------|-------|-------|----------|-------|--------------|-------|-------|-----------------------|-----------------------|
| Watch Cycle | Set the watch cycle for GOT to monitor the specified device of the PLC CPU. From 600ms up to 80 seconds can be set in the units of 100ms. | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Detailed alarm display type *1 | Select the method of detailed alarm display in event of alarm occurrence. On [Monitor Device List], set the comment No./base screen No./window screen No. to be displayed. Not display : Displays no detailed alarm data. Comment window : Displays created comment on the alarm history dedicated window. Base screen : Displays the data on the base screen. Window screen : Displays the window screen on overlap window 1. (GOT-A900 series only) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Data Type | Select the data type of the monitor device. Bit : Select this item to monitor ON/OFF status of a bit device. Bit specification for word : Select this item to set the monitor device data type to word device bit. Signed BIN16 : Select this item to set the monitor device data type to signed word device 16-bit binary. Unsigned BIN 16 : Select this item to set the monitor device data type to unsigned word device 16-bit binary value. Signed BIN 32 : Select this item to set the monitor device data type to signed word device 32-bit binary value. Unsigned BIN 32 : Select this item to set the monitor device data type to unsigned word device 32-bit binary value. 16-bit BCD : Select this item to set the monitor device data type to 16-bit BCD (binary coded decimal) value. 32-bit BCD : Select this item to set the monitor device data type to 32-bit BCD (binary coded decimal) value. Real : Select this item to set the monitor device data type to floating point type (real). After selection, set the monitor device in the following monitor device list. | <input type="radio"/> | <input checked="" type="radio"/> | | | | | | | | | | | | | | | |
| Monitor Device List | Set the monitor device, alarm triggers and operational behavior when an alarm occurs. | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Alarm Range | When a device has been set by a word device, click on the button Format , and set a range of the word device value that displays alarm items. (☞ Section 5.4 Trigger Setting) | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Cmnt No. | Set the comment No. that corresponds to the specified device. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Occurred date</th> <th>Time</th> <th>Message</th> <th>Restore</th> <th>Check</th> </tr> </thead> <tbody> <tr> <td>02/11/05</td> <td>10:25</td> <td>Line 1 error</td> <td>11:25</td> <td>10:45</td> </tr> <tr> <td>02/11/05</td> <td>12:05</td> <td>Line 2 error</td> <td>12:25</td> <td>12:28</td> </tr> </tbody> </table> Set the comment No. of the message that is to be displayed in this column. | Occurred date | Time | Message | Restore | Check | 02/11/05 | 10:25 | Line 1 error | 11:25 | 10:45 | 02/11/05 | 12:05 | Line 2 error | 12:25 | 12:28 | <input type="radio"/> | <input type="radio"/> |
| Occurred date | Time | Message | Restore | Check | | | | | | | | | | | | | | |
| 02/11/05 | 10:25 | Line 1 error | 11:25 | 10:45 | | | | | | | | | | | | | | |
| 02/11/05 | 12:05 | Line 2 error | 12:25 | 12:28 | | | | | | | | | | | | | | |
| Comment Selection | Displays the comment corresponding to [Comment No.] Comment can be selected here. If selected, [Comment No.] will be switched automatically. | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Detail No. | Set the number of the comment/window screen/base screen used for displaying detailed information when an alarm occurs (when triggers of the specified device are satisfied). | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Print | When an alarm factor turns ON, GOT will print out the alarm occurred data/time and message. | <input checked="" type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Ack | Even if an alarm factor changes from ON to OFF, without ACK (acknowledge), it can be displayed as an alarm status on the alarm list screen. | <input checked="" type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |
| Reset | If "Yes" is selected, the corresponding alarm is selected in the alarm display. Pressing the reset touch switch resets the alarm device. | <input checked="" type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | | |

| Items | | Description | A | F |
|----------------------|---|--|---|---|
| Monitor Device List | RST | Check this item to reset the specified device for displayed alarm by reset switch input. After checking, set a reset value if the specified device is a word device. (☞ Section 5.14.3 Touch switches for alarm history) | ○ | × |
| | RST Value | Set a value to be written to the word device (reset value) when resetting by the reset switch. | ○ | × |
| | Mail | Check this item to send data such as the occurred/restoration date/time, comment by electronic mail when an alarm occurs (triggers of specified device are satisfied) or the alarm is restored (triggers of specified device are not satisfied). After check, select a mail and send condition from [Occurred]/[Return to Source]/[Occurrences/Return to Source]. (Available for GT SoftGOT2 only) | ○ | × |
| Device No. | Select the setting method for the device to be specified. Continuous : Specified devices are consecutively numbered starting from the set device. Random : Device No. are set to devices of specified points at random. Fixed : In the word device setting, more than one alarm range are set by the same word device. When set to "Random", setting bit device and word device bit together as monitor devices is not allowed. | ○ | × | |
| Comment No. | Select this item to set the comment No. corresponding to specified devices. Continuous : Devices are consecutively numbered starting from the set comment No. Random : Comment No. is set to devices at random. | ○ | × | |
| Detailed Display No. | Select the method of displaying the comment/window screen/base screen used for providing detailed information of alarm. Continuous : Devices are consecutively numbered starting from the set comment No./window screen No./base screen No.. Random : Comment No. is set to devices at random. | ○ | ○ | |
| Copy *2 | Click on <input type="button" value="Copy"/> button to copy the setting to another place. | ○ | ○ | |

For details of *1 and *2, refer to the following.

*1 Detailed alarm display

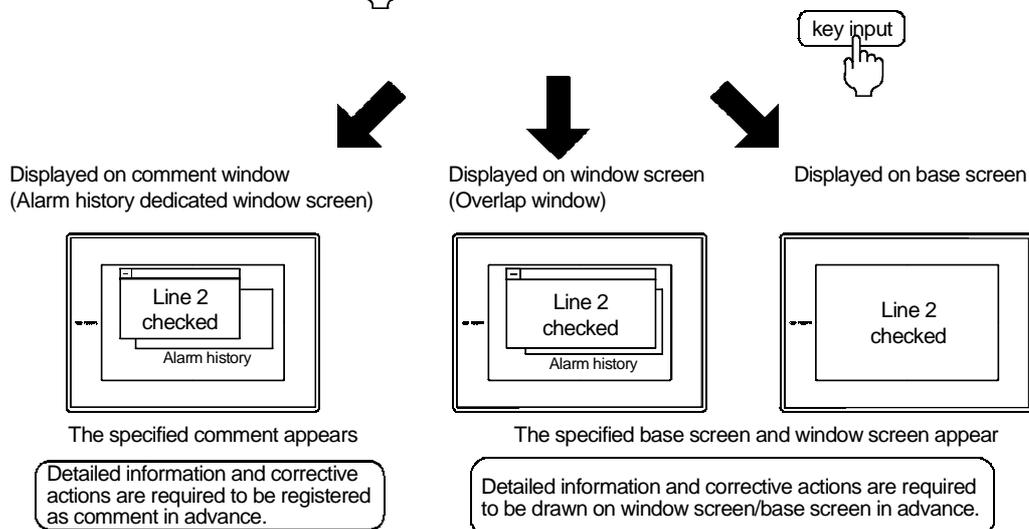
The details of a device error are displayed on the comment window/window screen (GOT-A900 series only)/base screen as shown below.

1) Display detailed display screen by one touch operation

| Occurred date | Time | Message | Restore | Check |
|---------------|-------|--------------|---------|-------|
| 02/02/01 | 10:25 | Line 1 error | 11:25 | 10:45 |
| 02/02/01 | 12:05 | Line 2 error | | 12:28 |
| 02/02/01 | 12:35 | Line 3 error | | |

2) Display detailed display screen by touch switch key input

| Occurred date | Time | Message | Restore | Check |
|---------------|-------|--------------|---------|-------|
| 02/02/01 | 10:25 | Line 1 error | 11:25 | 10:45 |
| 02/02/01 | 12:05 | Line 2 error | | 12:28 |
| 02/02/01 | 12:35 | Line 3 error | | |





Display of comment window

(1) Number of characters available for comment window

- A960GOT, A97*GOT, A985GOT: 39 characters × 11 lines (429 characters)
- A95*GOT, A956WGOT : 23 characters × 7 lines (161 characters)

(2) Comment window is displayed on top-left of base screen

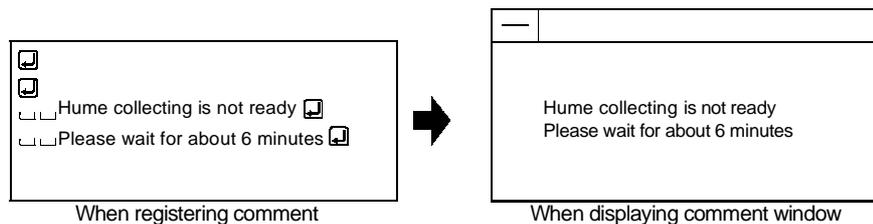
The operation of moving and closing the window is the same as that of the window screen.

(3) Comment text is displayed as follows

- Text size: fixed to 1 × length, 1 × width
- The setting reverse, blink and style are not supported, regardless of the comment registration settings.

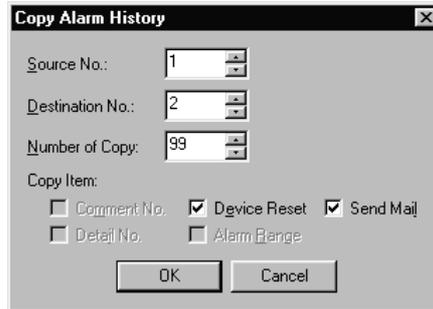
(4) The comment lines are displayed in the comment window as follows.

- Comments are displayed from top-left to right in the comment window.
- If the comment exceeds the display range of the comment window, it is continued starting a new line.
- To place the comment in the center of the comment window, make adjustment using the line feed for the comment.



*2 Copy

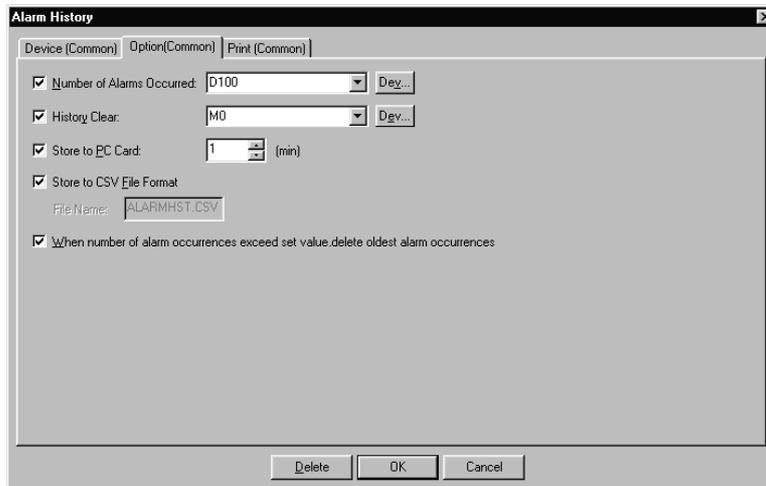
This section explains how to copy the set alarm history items to other place.



| Items | Description | A | F |
|-----------------|--|---|---|
| Source No. | Set the alarm history No. that will be copied. | ○ | ○ |
| Destination No. | Set the alarm history No. that will be a copy destination. | ○ | ○ |
| Number of Copy | Set the number of copies. | ○ | ○ |
| Copy Item | Check the relevant items. | ○ | ○ |
| Comment No. | Copies comment No. of the source. | ○ | ○ |
| Detailed No. | Copies the detailed display No. of the source. | ○ | ○ |
| Device Reset | Copies the device reset settings of the source. | ○ | ○ |
| Alarm Range | Copies the range setting of the source. | ○ | ○ |
| Send Mail | Copies the send mail settings of the source. | ○ | × |

4 Option (Common) tab

Set the history retention (history clear, saved to PC card) for alarm history.
The settings on this tab will be reflected in all alarm history display.



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|--|--|---|---|
| Number of Alarms Occurred | Check this item to store the number of alarms currently occurred and restored to a word device. After checking, click on Device button and set the device. (Section 5.1 Device Setting) The cycle for GOT to monitor the history clear trigger device is the same as [Watch Cycle] set on the Device (Common) tab. | ○ | ○ |
| History Clear | Check this item to delete the restored (triggers of specified device condition satisfied → not satisfied) alarm data forcibly. After checking, click on Device button to set the device to be used for forcible deletion of the restored alarm history data. (Section 5.1 Device Setting) The cycle for GOT to monitor the history clear trigger device is the same as [Watch Cycle] set on the Device (Common) tab. History clear function can be executed with the input operation of the history clear switch (touch switch). (Section 5.14.3 Touch switches for alarm history) | ○ | ○ |
| Store to PC Card *1 | Check this item to save alarm historical data to PC card. After checking, select the storage cycle in one-minute unit within a range from 1 minute to maximum 60 minutes. Data can be stored to PC card using the alarm history switch. (Section 5.14.3 Touch switches for alarm history) | ○ | × |
| Store to CSV File Format | Check this item to store alarm historical data to PC card in the CSV file format. This item can be checked only when [Store to PC Card] has been checked. | ○ | × |
| File Name | Displays the file name to be stored. Stores in CVS file format: Displayed as ALARMHST.CSV Store not in CSV file format: Displayed as ALARMHST.DAT | ○ | × |
| When number of alarm occurrences exceed set value, delete oldest alarm occurrences | Check this item to delete the oldest alarm when the number of alarm occurrences exceeds a certain value (GOT-A900 series: 1024 or 3072, GOT-F900 series: 1000) and in the case of the triggers of the newly specified device are satisfied. | ○ | × |
| When number of alarm occurrences exceed 1000, delete oldest alarm occurrences | (Section 5.14.4 Cautions) If this item is not checked, when the number of alarm occurrences exceeds a certain value, new alarm data cannot be added. | × | ○ |

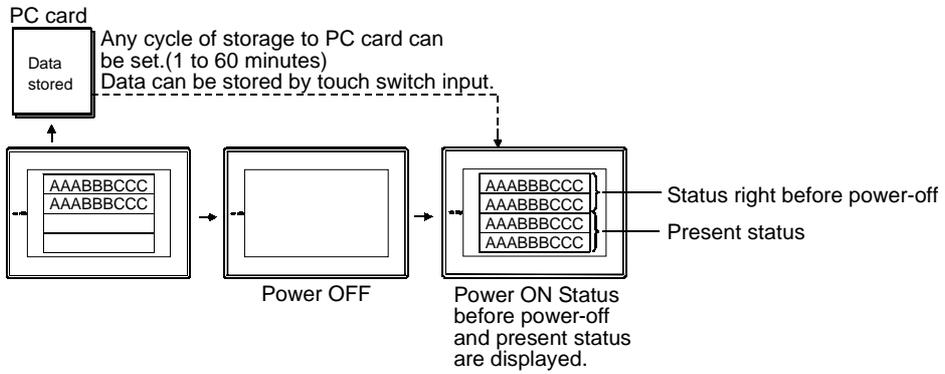
For details of *1, refer to the next page.

***1 Store to PC card**

Alarm historical data being displayed can be stored to a PC card.

(1) Latch (Data retention while power supply is OFF)

Alarm history data will be deleted when GOT is powered off. If they are stored to a PC card, the alarm historical data before power off can be displayed.



(2) Storing of CSV format data

When alarm historical data are stored to PC card in CSV format, they can be read and edited on a personal computer using spreadsheet software.



Remark

PC card capacity required for storing alarm history

For details of required PC card capacity, please refer to the following.



Section 2.3 Specifications of Available Object Functions

(3) Storing erroneous alarm information data

If the PC card is faulty or the files are different from those in the PC card, the GOT internal device (error detection common information: GS252.b0) turns ON to disable the alarm information to be stored (Device data collection is continued).

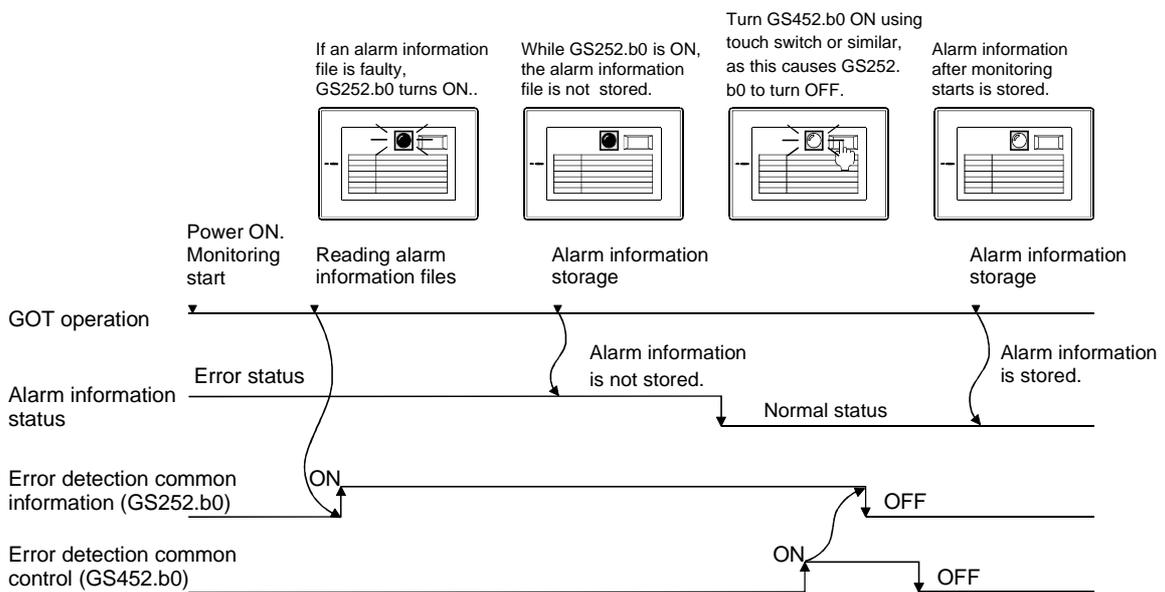
If the storage operation is done in this situation, the system alarm (334 memory card failure) will occur.

If GS252.b0 turns ON, replace the PC card or check the data within the card.

Turning ON the GOT internal device (error detection common control: GS452.b0) will turn GS252.b0 OFF. This allows the file storage to be resumed.

For details of GOT internal devices, refer to the following.

 Section 2.6.1 GOT internal devices



Application of error detection common information

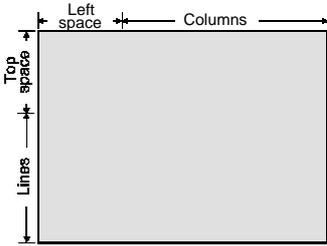
An overlap window (for file error detection) can be displayed by detecting GS252.b0 with script function.

5 Print (Common) tab (GOT-A900 series only)

Set the print item and print format for printing of the alarm history.

Alarm historical data are printed based on these settings, separately from the settings on the basic tab.

| Items | | Description | A | F |
|---------------|------------------|---|---|---|
| History Print | | <p>Check this item to print out the alarm history.</p> <p>History print is real time executed at the timing of alarm occurrence, restoration and check. GOT is capable of accepting 100 lines of print at a time.</p> <p>When the print data exceeds the limit of 100 lines as the following cases, the exceeded data will not be printed.</p> <ol style="list-style-type: none"> 1. When print of data exceeding 100 lines is requested during [Printer Error]. 2. When more than one print request exceeding the limit of 100 lines data are issued concurrently. | ○ | × |
| Print Item | Title | <p>Check this item to print out the following items.</p> <p>After checking, input the title corresponding to each item.</p> <p>Date : Input the title name for the date column.</p> <p>Time : Input the title name for the time column.</p> <p>Message : Input the title name for the message column.</p> | ○ | × |
| | Cumulative Time | <p>Check this item to print out the input cumulative time data.</p> <p>After checking, input the title name for the cumulative time column.</p> <p>When making this setting, set the alarm history mode to [Cumulation] of the Device (Common) tab.</p> | ○ | × |
| | Occur Frequency | <p>Check this item to print out the input occur frequency item.</p> <p>After check, input the corresponding title name to occur frequency.</p> <p>When making this setting, please set the alarm history mode of device (common) tab in [Cumulation].</p> | ○ | × |
| | State | <p>Input the title name for the state column.</p> | ○ | × |
| | Status Print Out | <p>Set the timing to print out alarm historical data.</p> <p>After checking each item, input the title name to be printed out at each timing.</p> <p>Occurred : Printed out when an alarm occurs.</p> <p>Restored : Printed out when the alarm is restored.</p> <p>Checks : Printed out when displayed data are checked (when touching the check/all check switch).</p> | ○ | × |

| Items | Description | A | F |
|--------------|--|---|---|
| Print Format | <p>Set the number of lines (1 to 127) and columns (1 to 255), and the space for the top (the number of lines) and the left (the number of characters) of the printout.</p>  <p>This setting is common to the print format for the report function.</p> | ○ | × |



Cautions for print format setting

The print format must be set according to the print range of the printer in use. For the cautions of print format setting, refer to the following.



Section 3.6 Print Format Setting



Printing result of alarm history

The print setting items of alarm history during printing are as follows.

- 1) Select Print/Not print
- 4) Set format and space

- 2) Set print timing
- 3) Set print title

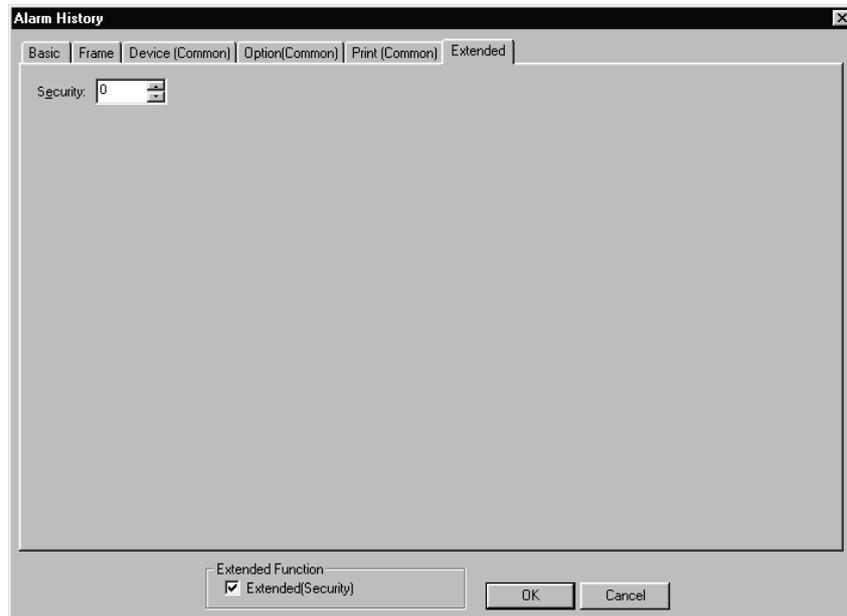


Print example

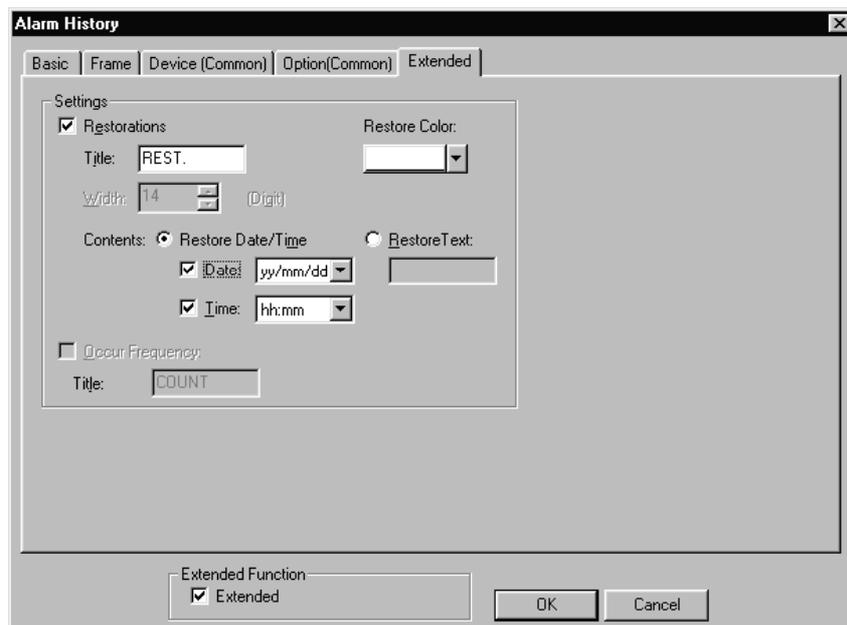
| DATE | TIME | MESSAGE | CUMULATE | COUNT | STATUS |
|----------|-------|------------------|----------|-------|------------------------------|
| 02/11/01 | 10:25 | Conveyor 1 error | 00:00 | 2 | Occurred Check Restore |
| 02/11/01 | 10:25 | Conveyor 1 error | 00:00 | 2 | |
| 02/11/01 | 10:25 | Conveyor 1 error | 00:25 | 2 | |

6 Extended tab

Setting of this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.



(In the case of GOT-A900 series)



(In the case of GOT-F900 series)

| Items | Description | A | F |
|-----------------|--|---|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | ○ | × |
| Restorations | Check this item to display the date and time of alarm restoration (Triggers of specified device are satisfied/not satisfied). Title : Input the title name for the item to be displayed. Restore color : Select the text color for the date, time and message displayed on alarm display lines (display rows). | × | ○ |
| Contents | Select the alarm date/time format or the text to be displayed on the column of restorations when alarm is restored. | × | ○ |
| | Restore Date/Time *1 Date : In the case of displaying date, check this and select the format. Time : In the case of displaying time, check this and select the format. | × | ○ |
| | Restore Text Input the text to display it specified when an alarm occurs (Triggers of specified device are satisfied). When setting this item, select [Text] from [Contents]. (Then, input the text into [Text].) | × | ○ |
| Occur Frequency | Check this item to display the number of alarm occurrence (Triggers of specified device are satisfied). When setting this item, set the history mode to in [Cumulative Mode] on the Device (Common) tab. Title: Input the title name for the occur frequency column to be displayed. | × | ○ |

5.14.3 Touch switches for alarm history

Set touch switches used for the cursor display/movement, detailed display of alarm data on the alarm history display.

As the touch switches for alarm history has been registered in the library of GT Designer2, read them from the library when using.

The following table explains the type and function of the touch switches for alarm history.

| Occurred date | Time | Message | Restore | Check |
|---------------|------------|---------|---------|--------|
| 02/09/24 | 09: 31: 32 | | 09: 31 | 09: 31 |
| 02/09/24 | 09: 31: 32 | | 09: 31 | 09: 31 |

| | | | | | |
|---------|-----------|------------|---------|---------|--------|
| 1) | 2) | 3) | 4) | 5) | 6) |
| Display | Up Move | Confirm | Delete | Details | Save |
| Erase | Down Move | Delete All | Confirm | Reset | Ladder |
| 1) | 2) | 3) | 4) | 5) | 6) |

| Function | Description | Example |
|---------------------|--|---------|
| 1) Display (cursor) | Displays the cursor for alarm history. | — |
| 2) Erases (cursor) | Erases the cursor for alarm history. | — |
| 3) Up Move | <ul style="list-style-type: none"> Moves the cursor for alarm history upward (When the cursor for alarm history is displayed) Changes the page of alarm items (When the cursor for alarm history is not displayed) | (1) |
| 4) Down Move | <ul style="list-style-type: none"> Moves the cursor for alarm history downward (When the cursor for alarm history is displayed) Changes the page of alarm items (When the cursor for alarm history is not displayed) | (1) |
| 5) Check *1 *2 | Displays the date and time of the selected and check item. | (2) |
| 6) All Check *2 | Displays the date and time of all check data. | — |
| 7) Delete *1 | Deletes the display of selected alarm data. | (3) |
| 8) All Delete | Deletes the display of all alarm data. | — |
| 9) Details | Displays detailed display screen of an alarm data. | — |
| 10) Reset *1 | Changes the status of the specified device to OFF state/the reset value. | (4) |
| 11) Save *2 | Save the current alarm data to PC card. | — |
| 12) Ladder *1 *2 | Coil-searches the alarm devices of the alarm lines and displays the ladder monitor screen. (Automatically searches and displays the ladder of the specified device) | — |

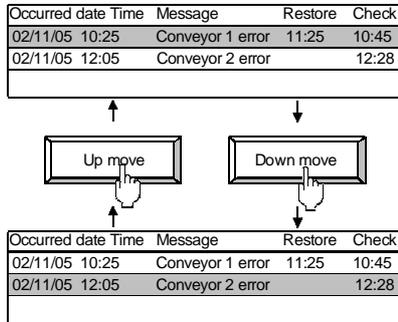
*1 Use the display/erase touch switch (1, 2 in the above table) and the up move/down move touch switch (3, 4 in the above table) accordingly.

*2 It is not available for GOT-F900 series.

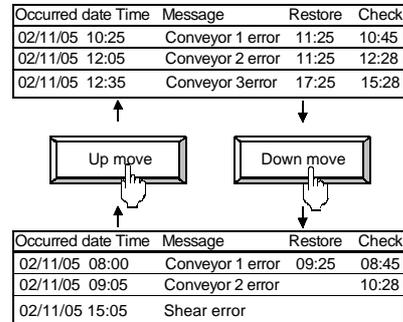
(1) Up move/Down move

Action is different depending if the cursor is displayed or not.

(Example1) When alarm display cursor is displayed
Move cursor position in the alarm history.



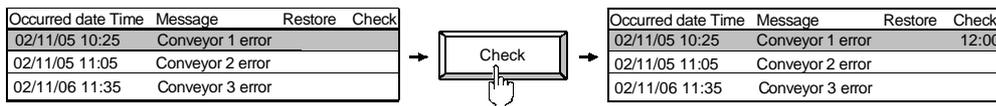
(Example2) When alarm history cursor is not displayed
Page up/down alarm items.



(2) Check date display of selected alarm (GOT-A900 series only)

Displays the check date of the selected (cursor display) alarm data.

(Example)

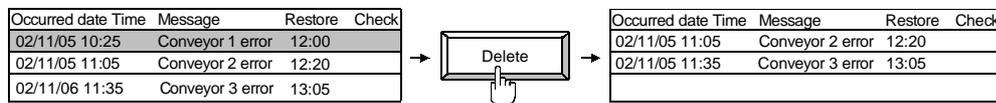


(3) Deletion of selected alarm items display

Deletes the selected (cursor display) alarm data.

The alarm data that has not been not restored cannot be deleted.

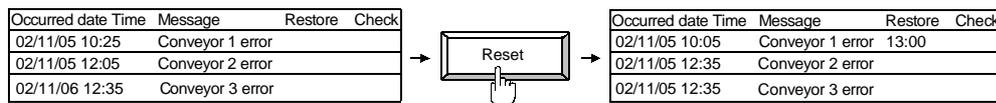
(Example)



(4) Reset of specified device

Change the state of the selected alarm data device to OFF status/the reset value to display the restore date and time (the first timing date and time in the watch cycle after the switch input).

(Example)



Creation of touch switches for alarm history

Setting any of the following key codes to a touch switch, allows users to create a respective touch switch for alarm history. (5, 6, 11 and 12 are available for GOT-A900 series only.)

- | | | | |
|---------------------|---------|---------------|----------|
| 1) Display (Cursor) | : FFB0H | 7) Delete | : FFB6H |
| 2) Erase (Cursor) | : FFB1H | 8) All Delete | : FFB7H |
| 3) Up Move | : FFB2H | 9) Details | : FFB8H |
| 4) Down Move | : FFB3H | 10) Reset | : FFB9H |
| 5) Check | : FFB4H | 11) Save | : FFBBH |
| 6) All Check | : FFB5H | 12) Ladder | : FFBC H |

5.14.4 Cautions

Pay attention to the following cautions when using alarm history.

1 Cautions for drawing

- (1) Maximum number of alarm history displayable for one screen
GOT-A900 series/GOT-F900 series: 1
- (2) Applicable screen
The alarm history is settable for the base screen only.
- (3) Monitor device setting
Only one monitor device and its device name can be set for each project.
On each of plural screens, the alarm history function can be set for each object, but monitor devices have to be the same.
- (4) Types and maximum numbers of devices which can be monitored.

GOT-A900 series:

- (a) Bit devices, bit devices (bit specification of word devices) and word devices (ON is recognized according to the value range setting) can be monitored.
- (b) Maximum number of monitor devices is as follows.
 - Bit device : 3072
 - Word device (16bit) : 1024
 - Word device (32bit) : 512

GOT-F900 series:

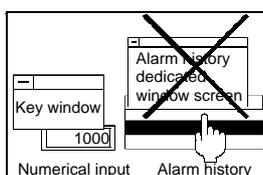
- (a) Bit devices only can be monitored.
- (b) Maximum number of monitor devices is as follows.
 - Bit device : 256
 - Word device (16bit) : 256
 - Word device (32bit) : 256



Specifying monitoring bit devices as random

When monitor devices are randomly specified, bit devices and bit devices (bit device word specification) must not be set together.

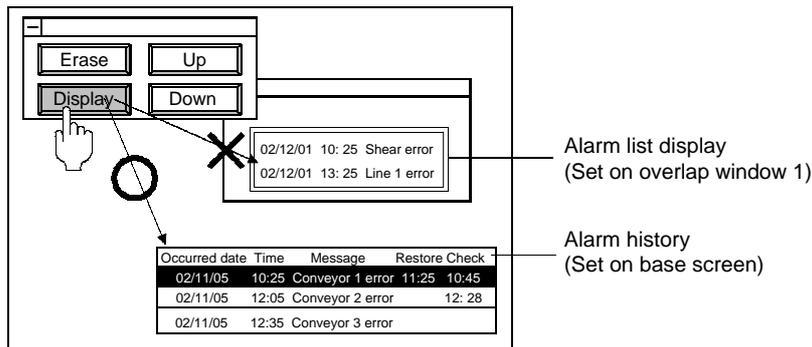
- (5) Number of alarm historical data that can be displayed
The number of alarm historical data available for GOT display varies according to the number of devices to be monitored.
If [When number of alarm occurrences exceed set value, delete oldest alarm occurrences] has been checked on the Option (Common) tab, historical data will be erased from the oldest when the following limit is exceeded.
 - When the number of monitor devices is 1024 or less: Alarm historical data can be displayed up to 1024.
 - When the number of monitor devices is 1025 or more: Alarm historical data can be displayed the same number as monitor devices.
- (6) The comment window cannot be displayed while the key window is displayed.
Erase the key window to display the comment window.



(7) When using other objects at the same time

- (a) The following objects cannot be set on the screen where the alarm history function has been set.
- Data list function object
 - Alarm list (user alarm) display function object with the up/down scroll function setting
- (b) Cautions for the case when the alarm history and alarm list are displayed simultaneously
If the touch switches for alarm list (user alarm) are set for any other screen, they can function for the alarm history.

Example) When the touch switches for alarm list are set for the other screen (overlap window2)



As the base screen has higher precedence, the touch switches function for alarm history.

(8) Display of occurred time, check time and restore time

The time may not be displayed depending on the type of PLC CPU and/or the connection method.

Section 2.4 Clock Function

2 Cautions for OS

- (1) Extended function OS (specific for GOT-A900 series)

Be sure to install the extended function OS (CSV) to GOT when using the CSV format file.

3 Cautions for hardware

- (1) Required optional device

To use the alarm history function, the following devices are required.

| GOT in use | | Required device |
|--------------------------------|-----------------------|---|
| A985GOT (-V), A97*GOT, A960GOT | | None |
| A956WGOT | When using PC card | SRAM type : Memory card interface module Compact flash PC card: Not required |
| | When printing history | Printer interface module |
| A95*GOT | When using PC card | SRAM type : Memory card interface module Compact flash PC card: Not used |
| | When printing history | Printer interface module |

4**Number of files that can be stored in PC card (when using A985GOT/A97*GOT/A960GOT/A956WGOT/A95*GOT)**

Following table shows the upper limit for the number of object files (including other object files) that can be stored.

| PC card memory capacity | Number of files |
|---|-----------------|
| 1M, 2M | 128 |
| 4M | 256 |
| 16M(A9GTMEM-10MF*1), 32M(A9GTMEM-20MF*1), 64M(A9GTMEM-40MF*1) | 512 |

*1 Memory capacity differs according to the hardware versions of flash PC card.

It can be checked on the rated plate of flash card.



5.15 Floating Alarm



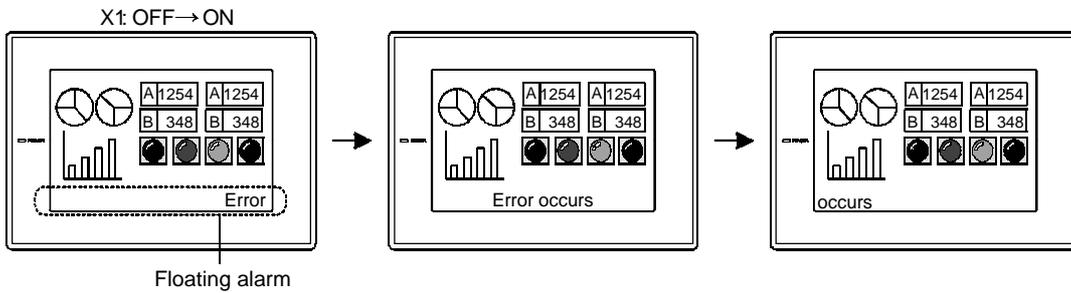
This section explains the floating alarm function.

When the corresponding bit device turns ON, this function causes the alarm text to scroll across the base screen from the right to the left. This cycle is repeated until the bit device turns OFF. The comment is displayed on the bottom of the base screen.

Comment appears at the bottom of the base screen.

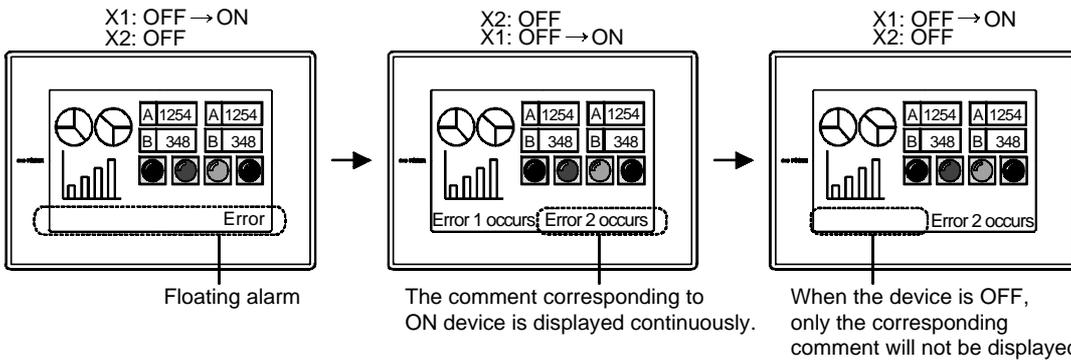
1 When only one bit device turns ON

The comment corresponding to the device that has turned ON scrolls across the screen from the right to the left.



2 When multiple bit devices turns ON

The comments corresponding to the device that have turned ON scroll across the screen from the right to the left in the error occurrence order.



Remark

Comments displayed by floating alarm function

To display comments by floating alarm function, register the comments in advance.

➡ Section 4.1 Comment Registration

5.15.1 Settings

- 1 Select [Common Settings] → [Floating Alarm] from the menu.
- 2 As the setting dialog box is displayed, make the settings with reference to the following explanations.



Remark

When setting in the project workspace

Double click on  in the project workspace to display the setting dialog box.

5.15.2 Setting items of floating alarm

Set the device to be monitored and the comment corresponding to that device.
The following are common settings on all base screens.

Floating Alarm

Device Points: 5 Display Order: Occurred

Device No.: Continuous Random

| | Device | Crmt No. | Comment |
|---|--------|----------|---------|
| 1 | X0000 | 1 | |
| 2 | X0001 | 2 | |
| 3 | X0002 | 3 | |
| 4 | X0003 | 4 | |
| 5 | X0004 | 5 | |

Size: 1 x 1 1 X 1 (X x Y)

Storage Device: D100 Dev...

Delete All OK Cancel

(In the case of GOT-A900 series)

Floating Alarm

Device Points: 5 Display Order: Ascending

Display Location: Lower

Report Method: Ticker

| | Device | Crmt No. | Comment |
|---|--------|----------|---------|
| 1 | X0000 | 1 | |
| 2 | X0001 | 2 | |
| 3 | X0002 | 3 | |
| 4 | X0003 | 4 | |
| 5 | X0004 | 5 | |

Size: 1 x 1 1 X 1 (X x Y)

Delete All OK Cancel

(In the case of GOT-F900 series)

| Items | Description | A | F |
|---------------------|--|---|---|
| Device Points | Set the number of bit devices that execute floating alarm. The maximum number of devices that can be set are as follows. For GOT-A900 Series When monitoring bit devices of continuous No. : 512 devices (256 devices for GOT-F900 series) When monitoring bit device of discontinuous No. : 255 devices For GOT-F900 Series When monitoring bit devices of continuous No. : 256 devices | ○ | ○ |
| Device No. | Select the method of setting device. Continuous : Automatically set the specified number of devices continuously starting from the set device. Random : Set the specified number of devices at random. | ○ | × |
| Monitor device List | Set the device to be monitored and the comment corresponding to that device. | ○ | ○ |
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | ○ | ○ |
| Comment No. | Set the comment number corresponding to the set device. When multiple devices are set, the same number of continuous comment Nos. are automatically set starting from the head comment No. | ○ | ○ |
| Comment | The comment corresponding to comment No. is displayed. | ○ | ○ |
| Size | Select the size of comment to be displayed (X × Y). | ○ | ○ |
| Display Location | Set the floating alarm display position to either among "Upper", "Middle" and "Lower" of the screen. Input a comment in only one line. If a comment is input in two or more lines and "Upper" or "Lower" is selected, characters of the comment are cut in half when displayed. | × | ○ |

| Items | Description | A | F |
|----------------|---|---|---|
| Storage Device | <p>Check this item to store the number of specified bit devices that are ON into word device. After checking, set the device to be monitored. (☞ Section 5.1 Device Setting) If numerical display is used to monitor the set device, the number of occurred alarms can be checked.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <div style="border: 1px solid black; padding: 2px; width: 100%;">Occurrence number</div> <div style="border: 1px solid black; padding: 2px; width: 100%;">3</div> <div style="border: 1px solid black; padding: 2px; width: 100%;">Line 1 abnormal</div> </div> <p style="text-align: center; font-size: small;">If set device is numerically displayed, alarm occurrence number can be checked.</p> | ○ | × |
| Delete All | Clicking on this item deletes all the settings. | ○ | × |

5.15.3 Cautions

This section explains the cautions for using floating alarm function.

1 Cautions for drawing

(1) Number of floating alarm function objects that can be set

Only one floating alarm function object can be set for each project.

However, the same floating alarm function object can be simultaneously set for multiple base screens.

In this case, the comment of floating alarm can be set to be displayed/hidden for each base screen.

 Section 4.5 Auxiliary Settings

(2) Floating alarm

The position for comment of floating alarm is fixed at the bottom of the base screen.

It cannot be changed.

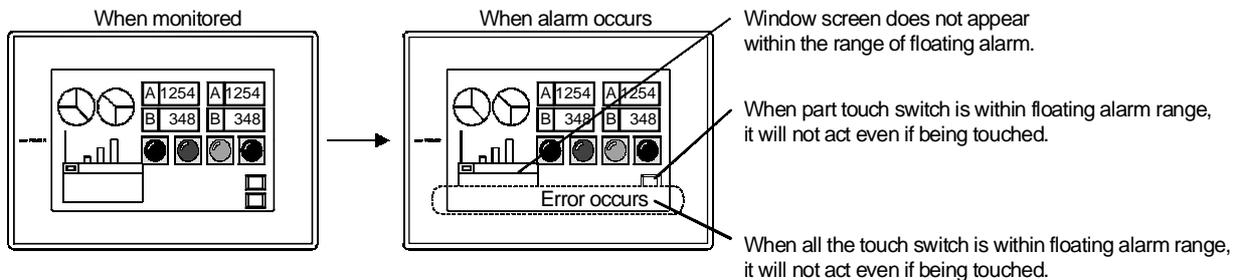
(3) Cautions for setting

Even when floating alarm function object is set, the comment cannot be displayed on GT Designer 2.

Make the settings in order that the comment of floating alarm will not overlap with other objects or window screens.

As the comment of floating alarm is designated to appear in front of other objects and window screens, if other objects or window screens are located on the bottom of the screen, the message will be hidden or input cannot be done when an alarm occurs.

(Example) When the comment of floating alarm overlaps with touch switch/window screen



(4) Display of comment

(a) Floating alarm function is disabled if the comment in which "Reverse", "Blink" or "Use high quality font" has been set.

(b) The comment for floating alarm function must be entered in one line.

- In the case of GOT-A900 series

If created in multiple lines, the comment will be displayed as one line and the remaining comment will be shown as text.

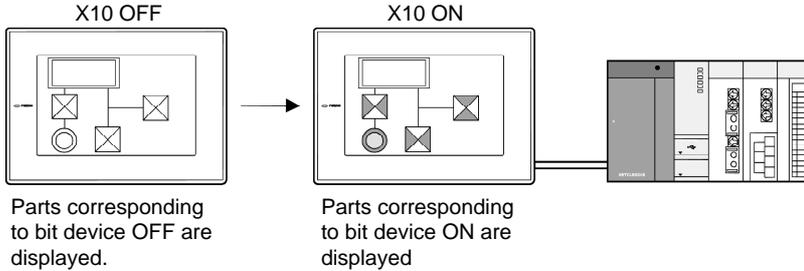
- In the case of GOT-F900 series

If a comment is input in two or more lines and "Display Location" is set to "Upper" or "Lower", characters of the comment are cut in half horizontally, and only upper or lower half portions are displayed.

5.16 Parts Display

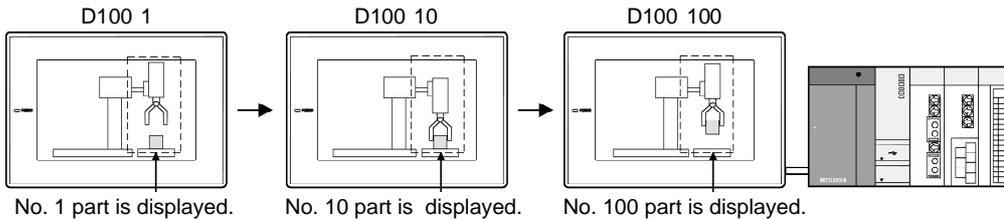
1 Bit parts display (Section 5.16.2)

This function is used to display the parts/screen corresponding to bit device ON/OFF.



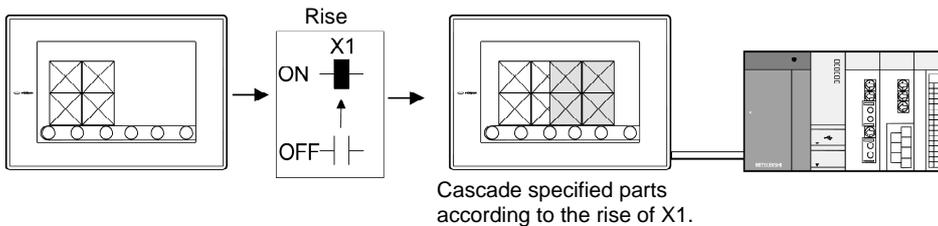
2 Word parts display (Section 5.16.3)

This function is used to display the parts/screen corresponding to word device value.



3 Fixed parts display (Section 5.16.4)

This function is used to cascade specified parts/figures.



Remark

Parts displayed in parts display

There are two different parts that are displayed in parts display, and they must be registered in advance.

- (1) Parts data registered on GT Designer2 (registered part)



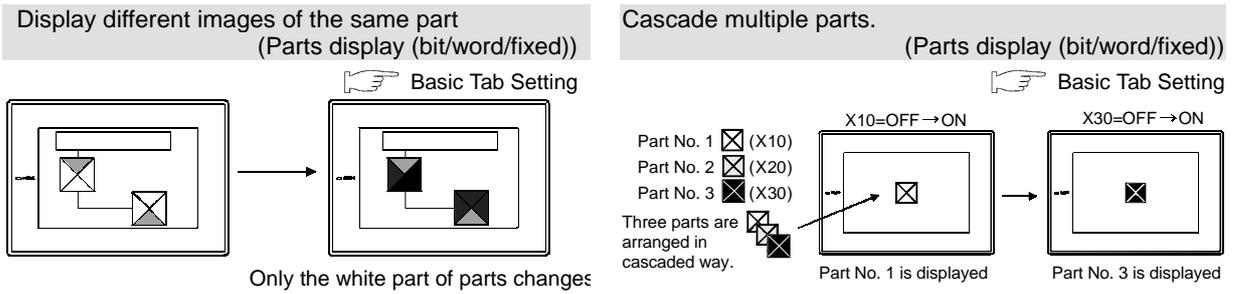
Section 4.2 Parts Registration

- (2) BMP file stored on PC card (BMP file part)



Section 4.3 Registration of BMP Files for Parts

Application example



5.16.1 Arrangement and settings

- 1 Carry out either of the following operations
 - Click on [Bit Parts Display]/ [Word Parts Display]/ [Fixed Parts Display]
 - Select [Object] → [Parts Display] → [Bit Parts]/[Word Parts]/[Fixed Parts] from the menu.
- 2 Click on the position where the part to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged part to display the setting dialog box. Make the settings with reference to the following explanation.



Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



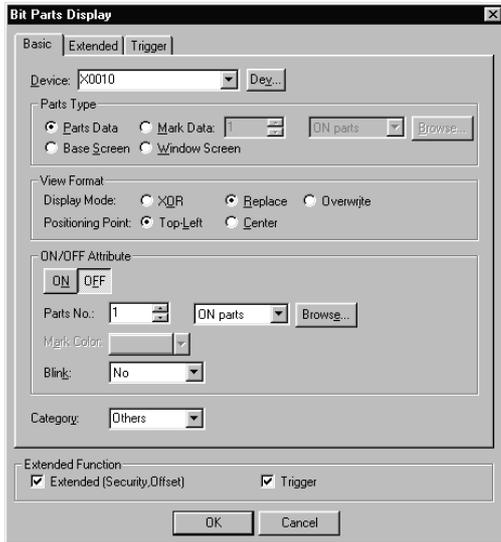
Part image displayed when the part is arranged.

- (1) When parts are displayed
 - In the case of bit parts display
Parts of which status is set in ON/OFF attribute of basic tab are displayed.
 - In the case of word parts display
Parts of which part No. is set in [Preview No.] of basic tab are displayed.
- (2) When base screen and window screen are displayed as parts
"X" mark indicating position is displayed.

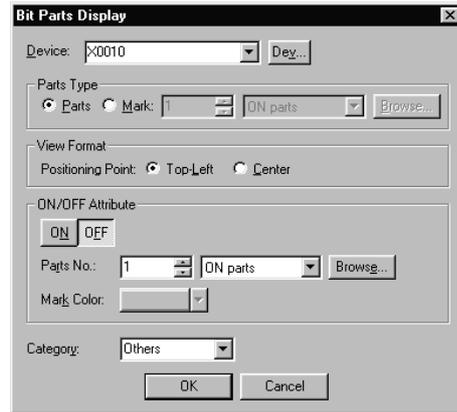
5.16.2 Setting items of bit parts display

1 Basic tab

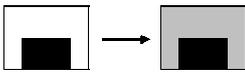
In basic tab, the parts type and parts No. during ON/OFF are set.
The setting of this screen is for GOT-F900 series only.

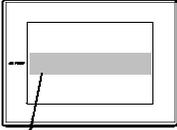
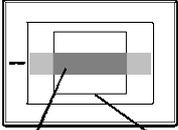
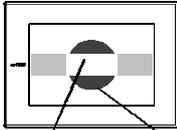
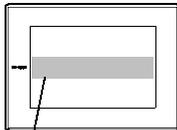
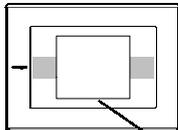
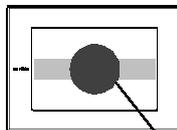
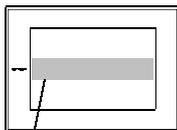
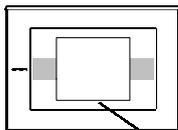
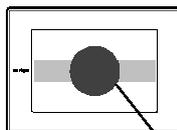
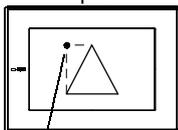
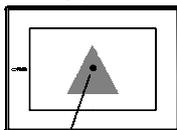


In the case of GOT-A900 series



In the case of GOT-F900 series

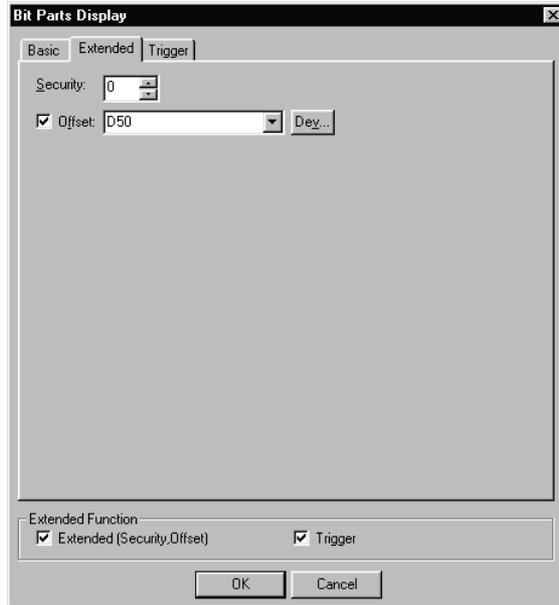
| Items | Description | A | F |
|---------------|--|---|---|
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | ○ | ○ |
| Parts Type | Select the type of part to be displayed. | ○ | ○ |
| Parts Data | The registered part is displayed. | ○ | ○ |
| Mark Data | <p>Changes the white part of the registered part into the different color according to the device change. After selecting this item, set the parts No. The type of registered part can be checked by clicking on <input type="button" value="Browse"/> button.</p>  <p>Make sure to draw the part to be marked using the color white. If the bitmap image parts (Both the registered part and BMP image parts) are set to be marked, the marked color will not be displayed.</p> | ○ | ○ |
| Base Screen | <p>Displays the registered base screen as part. When the base screen is displayed as part, the objects arranged on the screen will not be displayed.</p> | ○ | × |
| Window Screen | <p>Displays the registered window screen as part. When the window screen is displayed as part, the objects arranged on the screen will not be displayed.</p> | ○ | × |

| Items | Description | A | F |
|------------------|--|---|---|
| View Format | <p>Select the method of displaying parts when they are switched.</p> <p>XOR : Distinguishes between overlapping parts by showing different colors in the overlapping portion of the parts. For the XOR combination of the overlapped colors, refer to the following. ( Appendix 5 Synthesized Colors Available for XOR)</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Shape (Blue)</p> </div> <div style="text-align: center;"> <p>Display parts →</p>  <p>Overlapped part changes to yellow. Part No. 1 (White)</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">XOR combination of shape + color of part No. 1</div> </div> <div style="text-align: center;"> <p>Switch parts →</p>  <p>Overlapped part changes to white. Part No. 2 (Red)</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">XOR combination of shape + color of part No. 2</div> </div> </div> <p>Replace: Replaces the previous part with the newer part. Please note this item is not available when the new part is for the base screen or window screen.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Shape</p> </div> <div style="text-align: center;"> <p>Display parts →</p>  <p>Parts</p> </div> <div style="text-align: center;"> <p>Switch parts →</p>  <p>New parts</p> </div> </div> <p>Overwrite: Displays the new part/screen over the previously displayed part.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Shape</p> </div> <div style="text-align: center;"> <p>Display parts →</p>  <p>Parts</p> </div> <div style="text-align: center;"> <p>Switch parts →</p>  <p>New parts</p> </div> </div> | ○ | × |
| | <p>Select the reference point to display parts/screen.</p> <p>Top-left : Sets the display position according to the upper-left reference position. Center : Set the display position according to the center reference position.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Top-Left</p>  <p>Set display position</p> </div> <div style="text-align: center;"> <p>Center</p>  <p>Set display position</p> </div> </div> | ○ | ○ |
| ON/OFF Attribute | <p>ON : Click on this item to set the part/screen to be displayed the device turns ON.</p> | ○ | ○ |
| | <p>OFF : Click on this item to set the part/screen to be displayed the device turns OFF.</p> | ○ | ○ |
| | <p>Parts No. : Set the part/screen No. to be displayed. The registered part/screen can be checked by clicking on Browse button. The part No. set to "0" will not be displayed. (Set the parts No. condition when the device bit is OFF to "0" in order to display the part/screen only when the device bit is ON.)</p> | ○ | ○ |
| | <p>Mark Color : Select the color to be switched from the white area of the part when [Mark color] has been set in [Parts Type].</p> | ○ | ○ |
| Category | <p>Select the blinking pattern of the parts.</p> <p>None : Not blink. Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds.</p> <p>When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual.)</p> | ○ | ○ |

2 Extended tab (for GOT-A900 series only)

Set the security and offset.

This tab will be displayed when the extended function at the bottom of the dialog box is checked.



| Items | Description | A | F |
|----------|---|---|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | ○ | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits. | ○ | × |

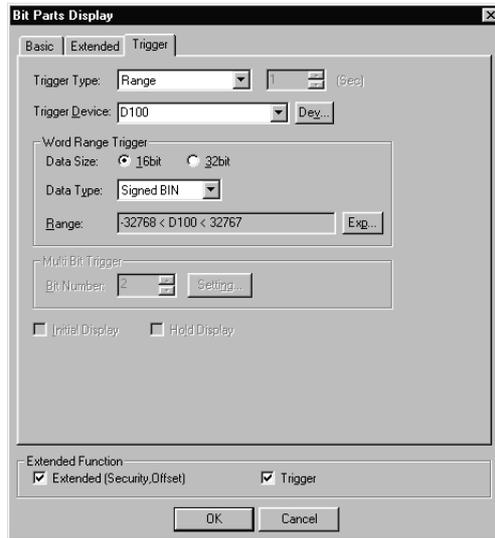
3 Trigger tab (for GOT-A900 series only)

Set conditions for displaying the object.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting

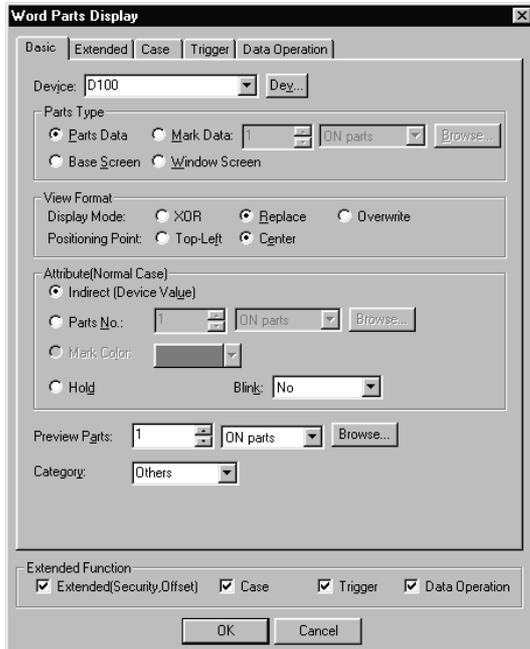


| Items | Description | A | F |
|--------------------|--|-----------------------|-------------------------------------|
| Trigger Type | Select the trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Period ● Range ● Bit Trigger | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the [Setting] button and set the bit devices and their conditions. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the conditions are not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the conditions are not satisfied. If not checked, the object will be deleted when the conditions become invalid. | <input type="radio"/> | <input checked="" type="checkbox"/> |

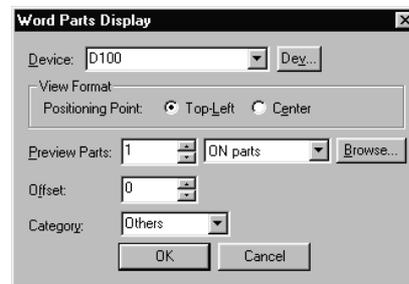
5.16.3 Setting items of word parts display

1 Basic tab

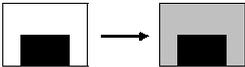
Here the parts type and parts No. displayed corresponding to word device value is set. The setting of this screen is for GOT-F900 series only.

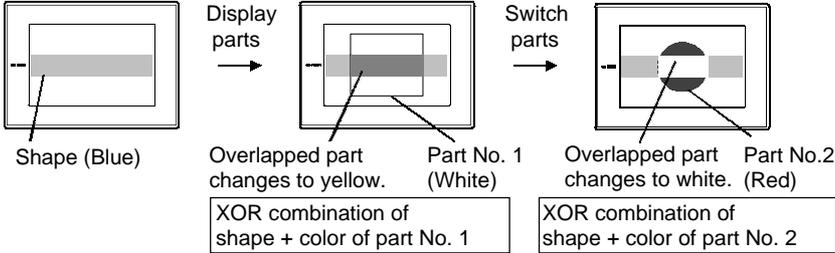
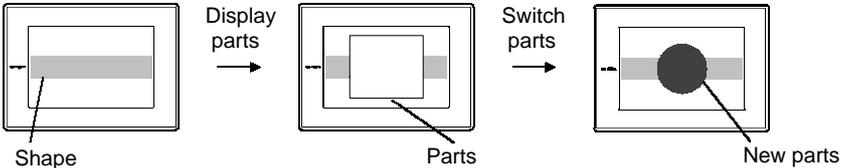
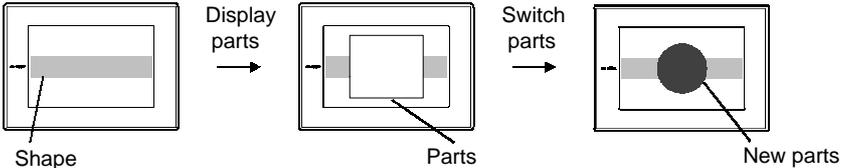
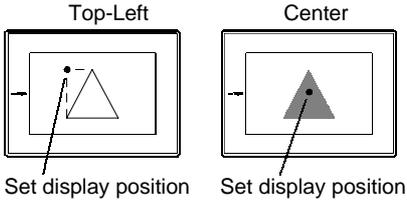


In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F |
|---------------|--|-----------------------|--------------------------|
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Parts Type | Select the type of part to be displayed. | <input type="radio"/> | <input type="radio"/> |
| Parts Data | Displays the registered part. | <input type="radio"/> | <input type="radio"/> |
| Mark Data | <p>Changes the white part of the registered part into the different color according to the device change.</p> <p>After selecting this item, set the parts No.</p> <p>The type of registered part can be checked by clicking on <input type="button" value="Browse"/> button.</p>  <p>Make sure to draw the part to be marked in white color.</p> <p>The marked color will not be displayed even when the bitmap image parts (Both the registered parts and BMP file parts) have been set to be marked.</p> | <input type="radio"/> | <input type="checkbox"/> |
| Base Screen | The registered base screen is displayed as part. When the base screen is displayed as part, the objects arranged on the screen will not be displayed. | <input type="radio"/> | <input type="checkbox"/> |
| Window Screen | Displays the registered window screen as part. When the window screen is displayed as part, the objects arranged on the screen will not be displayed. | <input type="radio"/> | <input type="checkbox"/> |

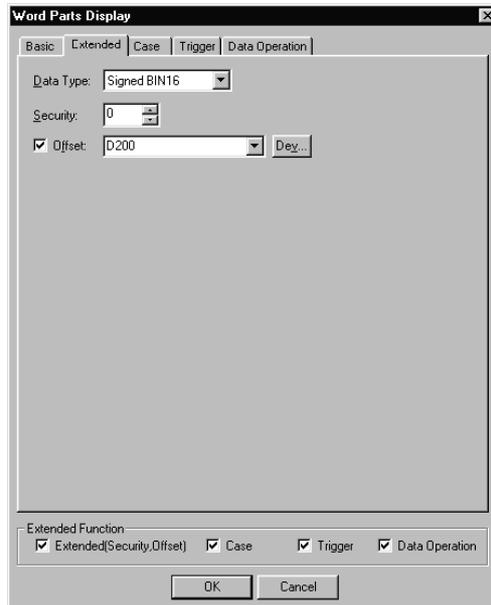
| Items | Description | A | F |
|----------------------|--|---|---|
| View Format | <p>Select the method of displaying parts when they are switched.</p> <p>XOR : Distinguishes between overlapping parts by showing different colors in the overlapping portion of the parts. For the XOR combination of the overlapped colors, refer to the following. (☞ Appendix 5 Synthesized Colors Available for XOR)</p>  <p>Replace : Replaces the previous part with the newer part. ● Please note this item is not available when the new part is for the base screen or window screen.</p>  <p>Overwrite: Displays the new part/screen over the previously displayed part.</p>  | ○ | × |
| Positioning Point | <p>Select the reference point to display parts/screen.</p> <p>Top-left : Sets the display position according to the upper-left reference position. Center : Set the display position according to the center reference position. (Example)</p>  | ○ | ○ |

| Items | Description | A | F |
|-------------------------|--|---|---|
| Attribute (Normal case) | <p>Set the display attribute of parts. Set the state in case tab to change display attribute of the setting.</p> <p>Indirect (Device value) : Display the parts/screen No. corresponding to word device value.</p> <p>Parts No. : Check this item to display the parts/screen during registration. Click on [Browse] button, the registered parts/screen can be confirmed. The parts/screen No. set to "0" will not be displayed. (When the parts/screen during ON is displayed only, set the No. of the parts/screen during OFF to "0".)</p> <p>Mark Color : When the registered parts are mark selected in [Parts Type], select the color to which the white part of the parts will be switched.</p> <p>Hold : Check this item if the parts/screen being displayed is required to be held. (i.e., to hold the current object, in order not to display a blank object if the device value does not correspond to the settings.)</p> | ○ | × |
| Blink | <p>Select the blinking pattern of the parts.</p> <p>None : Not blink. Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds.</p> | ○ | × |
| Preview Parts. | Displays the part of specified No. on the GT Designer2 screen. | ○ | ○ |
| Offset | <p>Specify the offset corresponding to monitor device value. For example, if the offset is set to 10 and current monitor device value is 100, the part No. 110 is displayed.</p> | × | ○ |
| Category | <p>When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual)</p> | ○ | ○ |

2 Extended tab (for GOT-A900 series only)

Set the data type, security and offset of monitor device.

This tab is displayed when the extended function at the bottom of the dialog box is checked.

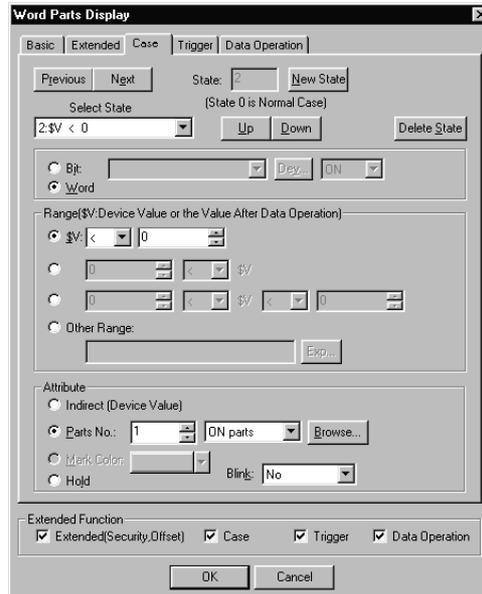


| Items | Description | A | F |
|-----------|---|-----------------------|-------------------------------------|
| Data Type | Select the data type of the word device to be monitored. Signed BIN16 : Treats the word device value as a signed binary value. Unsigned BIN16 : Treats the word device value as an unsigned binary value. BCD16 : Treats the word device value as a 16-bit BCD (binary decimal) value. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (Section 5.7 Security Function) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (Section 5.6 Offset Function) After checking, set the offset device. (Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | <input checked="" type="checkbox"/> |

3 Case tab (for GOT-A900 series only)

The attribute can be changed on this setting depending on the device status.
For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 includes the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device | Select the condition to change the display according to the state. Bit : Select it when changing the display according to the ON/OFF status of bit device. After selecting, set the bit device and device status (ON/OFF). ( Section 5.1 Device Setting) Word : Select it when changing the display according to the value of word device. After selecting, set the conditional expression of word device value in [Range]. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Attribute | Select the display method of parts. Indirect (Device value) : Display the parts/screen corresponding to word device value. Parts No. : Display the parts and screen during registration. After selection, set the parts/screen to be displayed. The parts/screen No. set to "0" will not be displayed. Hold : Check this item to hold current parts display even if state condition is enabled. Mark Color : When mark selecting in [Parts Type], select this item to switch the white of the parts to other color. | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|----------|-------|--|---|---|
| State *1 | Blink | Select the blinking pattern of the parts. None : Not blink. Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | ○ | × |

For details of *1, refer to the following.

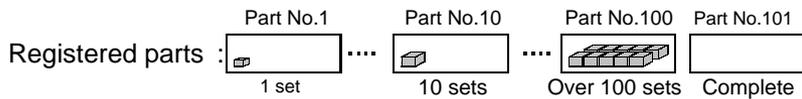
*1 State

(1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.

(2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

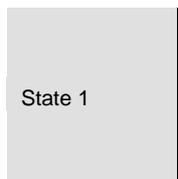
Example) Monitor device : D100

Data view format : Signed decimal, 16-bit signed decimal

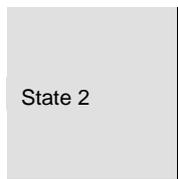
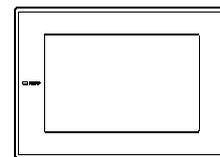


| Action priority for setting overlap conditions | State No. | Display range | Display parts |
|--|-----------------------|-------------------------|---------------|
| | High | 1 | $\$V \leq 0$ |
| ↓ | 2 | $1 \leq \$V \leq 100$ | Indirect |
| | 3 | $101 \leq \$V \leq 199$ | Hold |
| Low | Normal case (State 0) | — | No.101 |

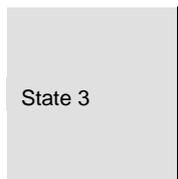
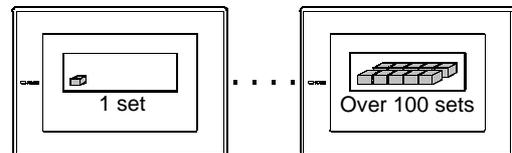
* \$V indicates monitor device value



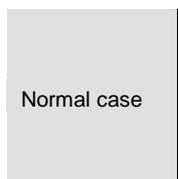
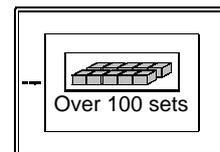
When monitor device value is equal to or less than 0 ($\$V \leq 0$), the parts will not be displayed.



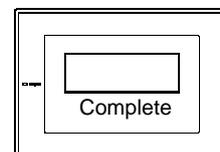
When monitor device value is between 1 and 100 ($1 \leq \$V \leq 100$), the parts corresponding to device value will not be displayed.



When monitor device value is between 101 and 199 ($101 \leq \$V \leq 199$), parts display will not be switched.



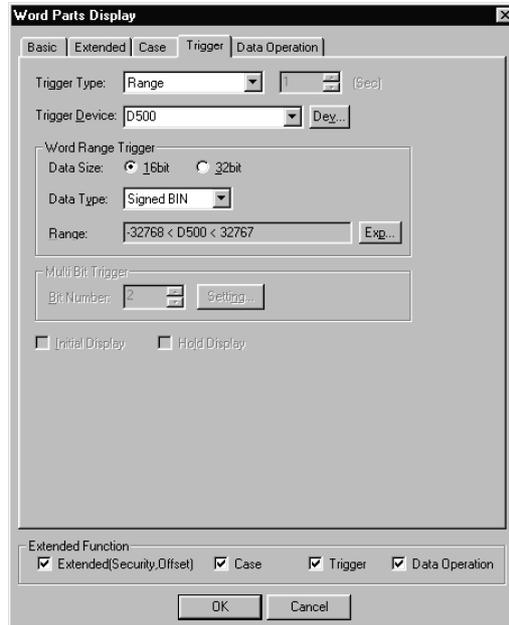
In the case when other than the conditions of state 1 to 3, part No. 101 will be displayed.



4 Trigger tab (for GOT-A900 series only)

The setting items of the trigger tab are the same with bit parts display. For details of setting items, refer to the following.

 Section 5.16.2 Setting items of bit parts display

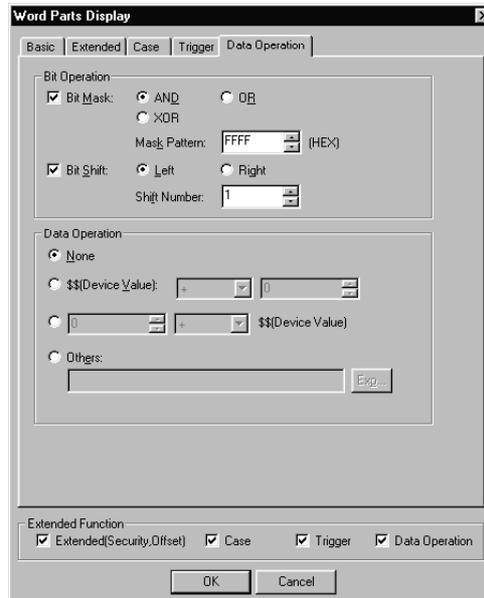


5 Data Operation tab (for GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



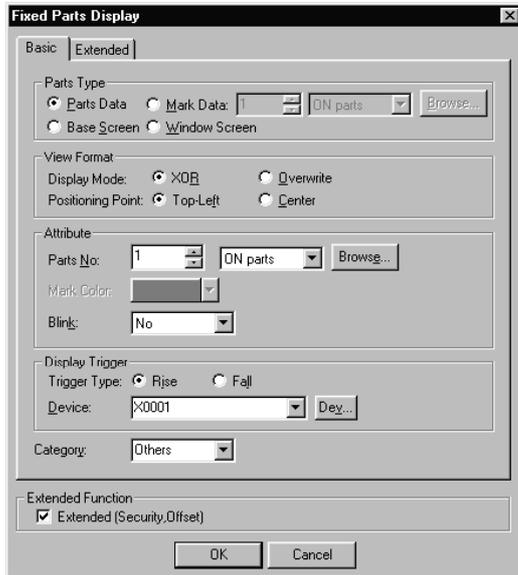
| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.16.4 Setting items of fixed parts display

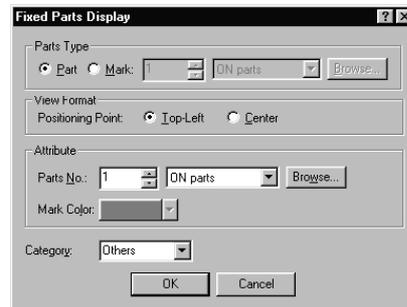
1 Basic tab

Directly specify and set the parts/screen to be displayed.

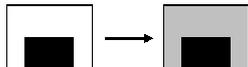
The setting of this screen is only applicable to GOT-F900 series.

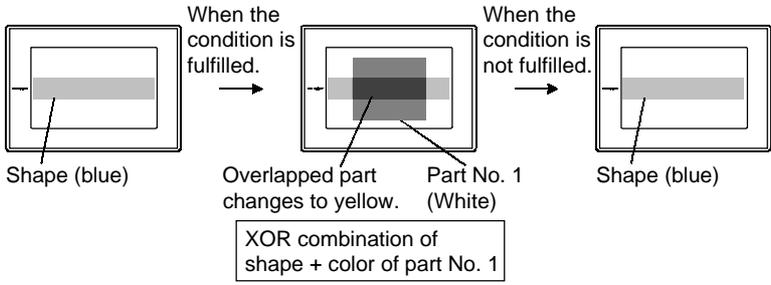
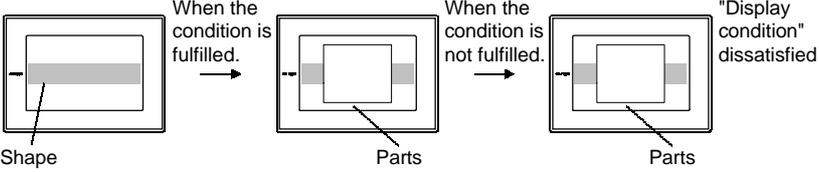
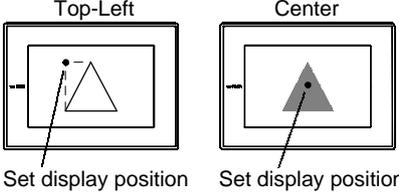


In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F |
|---------------|--|-----------------------|-------------------------------------|
| Parts Type | Select the type of part to be displayed. | <input type="radio"/> | <input type="radio"/> |
| Parts Data | Displays the registered part. | <input type="radio"/> | <input type="radio"/> |
| Mark Data | <p>Changes the white part of the registered part into the different color according to the device change. After selecting this item, set the parts No. The type of registered part can be checked by clicking on [Browse] button.</p>  <p>Make sure to draw the part to be marked using the color white. If bitmap image parts (Both the registered parts and BMP image parts) are set to be marked, the marked color will not be displayed.</p> | <input type="radio"/> | <input type="radio"/> |
| Base Screen | Displays the registered base screen as part. When the base screen is displayed as part, the objects arranged on the screen will not be displayed. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Window Screen | Displays the registered window screen as part. When the window screen is displayed as part, the objects arranged on the screen will not be displayed. | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | Description | A | F |
|----------------|---|---|---|
| View Format | <p>Select the method of displaying parts when the "display condition" is fulfilled.</p> <p>XOR : Distinguishes between overlapping parts by showing different colors in the overlapping portion of the parts. For the XOR combination of the overlapped colors, refer to the following. (☞ Appendix 5 Synthesized Colors Available for XOR) The part is erased when the "display condition" is fulfilled.</p>  <p>Replace: Replaces the previous part with the newer part. Please note this item is not available when the new part is for the base screen or window screen.</p> <p>Overwrite: Displays the new part/screen over the previously displayed part. The part is not erased if the "display condition" is fulfilled.</p>  | ○ | × |
| | <p>Select the reference point to display parts/screen.</p> <p>Top-left : Sets the display position according to the upper-left reference position. Center : Set the display position according to the center reference position.</p>  | ○ | ○ |

| Items | Description | A | F |
|-----------------|---|---|---|
| Attribute | Set the display attribute of parts. Parts No. : Select this item to display the parts and screen during registration. After the selection, set the parts/screen No. to be displayed. The parts of which No. is set as "0" will not be displayed. Mark Color : When the registered parts are marked in [Parts Type], select the color to which the white part of the parts will be switched. | ○ | × |
| | Blink Select the blinking pattern of the Parts. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | ○ | × |
| Display Trigger | Trigger Type Select the trigger by which data is displayed. (☞ Section 5.4 Trigger Setting) <input type="radio"/> Rise <input type="radio"/> Fall | ○ | × |
| | Device Click on [Device] button to specify the device to be set as trigger. (☞ Section 5.1 Device Setting) | ○ | × |
| Category | When allocating category to the object, select a proper category. GT Designer2 Version1 Operating Manual | ○ | ○ |

3 Extended tab (for GOT-A900 series only)

Set the security and offset.

This tab is displayed when the extended function at the bottom of the dialog box is checked.

The setting items of option tab are the same with bit parts display.

For details of setting items, refer to the following.

☞ Section 5.16.2 Setting items of bit parts display



5.16.5 Cautions

The following provides the cautions when using parts display function.

1 Cautions for drawing

- (1) Maximum number of parts display objects settable on one screen
 - For GOT-A900 series: 256
 - For GOT-F900 series: 50

(2) Cautions for registering parts

Refer to the following for the cautions for registering parts.

(a) When using registered parts

 Section 4.2 Parts Registration

(b) When using BMP image parts

 Section 4.3 Registration of BMP Files for Parts



5.17 Parts Movement



It is the function to change parts position and display (movement) according to the value of word device. The parts to be displayed can be switched in movement.

Parts movement can be displayed by the following 2 types of devices.

- Position device : The device storing parts move destination.
- Parts switching device : The device to switch the types of parts to be displayed.



Remark

Parts displayed in Parts Movement

There are two different parts that are displayed in parts movement, and they must be registered in advance.

(1) Parts data registered on GT Designer2 (registered part)



Section 4.2 Parts Registration

(2) BMP file stored on PC card (BMP file part)



Section 4.3 Registration of BMP Files for Parts

1 Move way of parts (control with position device)

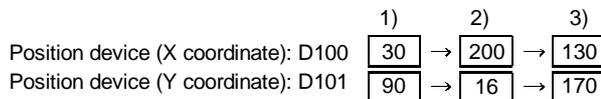
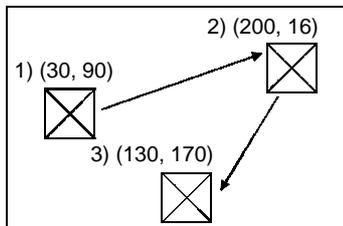
The following three types of move ways can be selected.

(1) Position

Display parts at the position (dot notation).

Specify the display position using 2 points indicated by the word device values in X/Y axis, respectively.

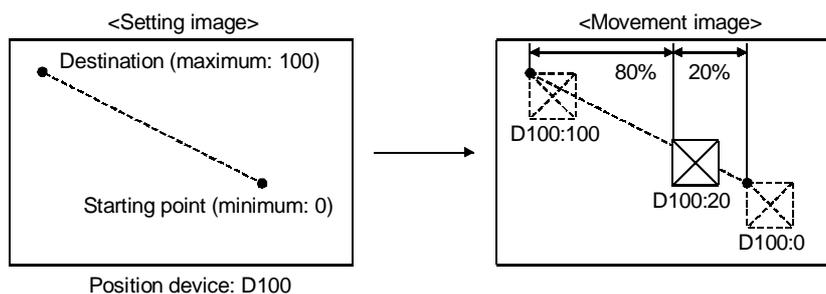
The display position can be changed in dot unit by changing the value of position device.



(2) Line

Move parts along lines between starting point and destination point that have been set.

Set the start point as minimum value, and the maximum value for the destination position, in order to display the parts using this method.

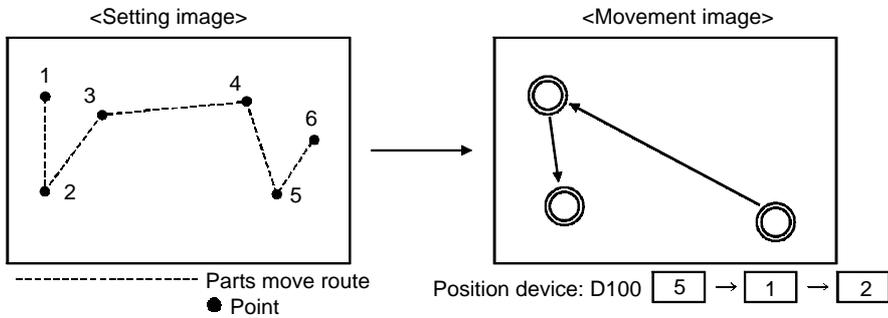


(3) Point

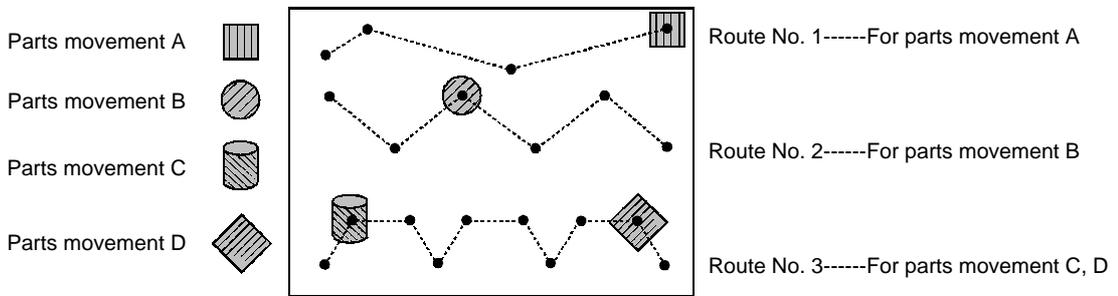
Display parts at preset display position (point).

Point setting is made by registering a line connecting multiple points (parts move route).

Parts are displayed at the place indicated by the point No. that is the same as the value of position device.



Up to 30 Parts move routes can be set in one screen. This setting is made for each screen. The parts move route can be used for moving multiple parts.

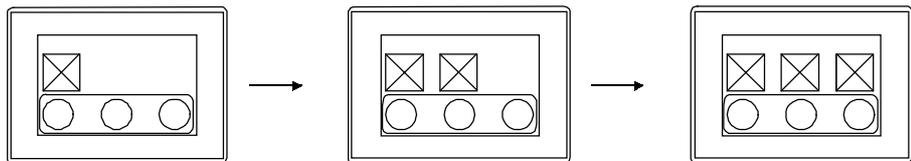


Remark

Locus

Movement locus that keeps the locus can be set in each move way.

The setting of parts movement setting dialog box (basic tab)



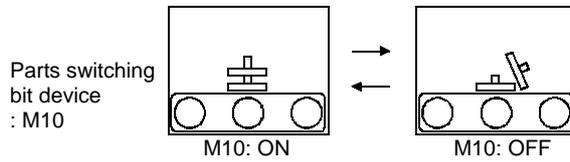
2 Parts switching method (control with parts switching device)

The following 3 switching methods can be selected.

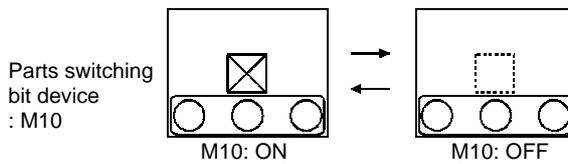
(1) Bit parts movement (Section 5.17.3)

Switches to display 2 types of parts.

(a) Switch different parts according to ON/OFF of bit device.



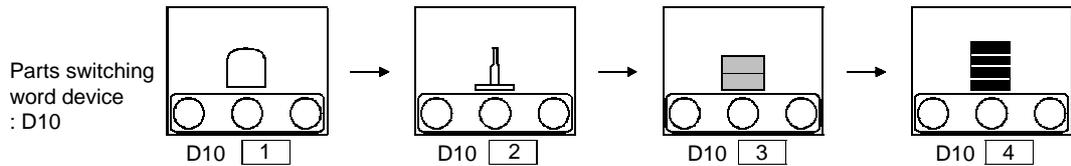
(b) Displays/hides parts according to ON/OFF of bit device.



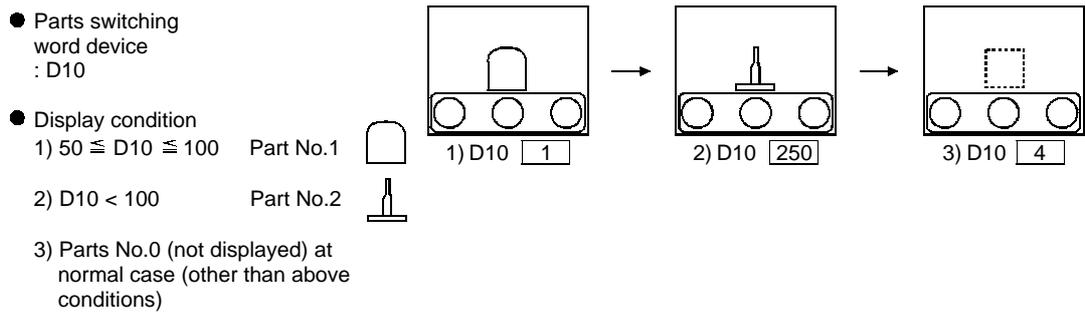
(2) Word parts movement (Section 5.17.4)

Switches to display more than 3 types of parts.

(a) Switch to display parts of which parts No. is the same as the word device value.



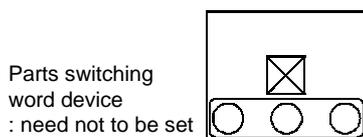
(b) Switch parts type according to the range and condition of word device value.



(3) Fixed part movement (Section 5.17.5)

Only one type of parts is displayed.

Parts switching device is not set.

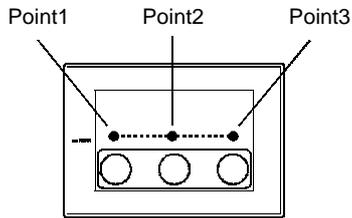


3 Parts movement example

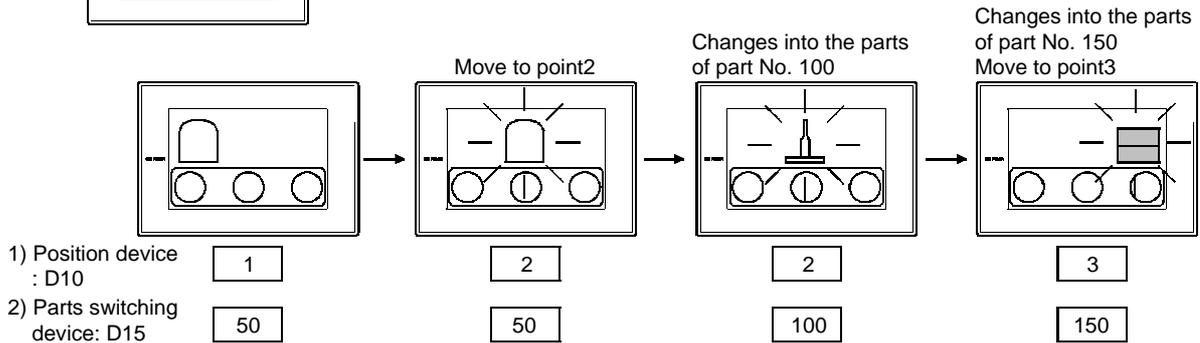
Execute parts movement display by position device and parts switching device.

1) Position device (D10)
Move way: Point

2) Parts switching device (D15)
Switching way: Parts movement



- Part No. 50 :
- Part No. 100 :
- Part No. 150 :



4 The setting order of parts movement

When setting the object of parts movement, select parts switching way, then parts move way.

1 Select parts switching way

Select from the menu. (👉 Section 5.17.2 Arrangement and setting)

The switching method cannot be changed after setting the object of parts movement.

2 Select parts move way

Set in the dialog box that is displayed after selecting parts switching way.

The move method can be changed even after setting the object of parts movement.



When setting the move way of parts movement in [Point] within [Part Move Route] dialog box.

Make sure to set parts move route in advance before setting object of parts movement.

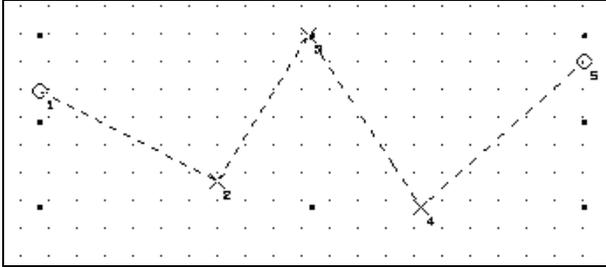
(👉 Section 5.17.1 Parts move route setting)

5.17.1 Setting of parts move route (common setting for each screen)

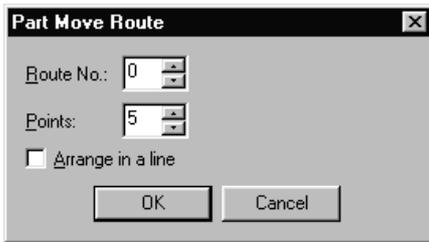
Set parts move route as parts display position when setting parts move way in [Point].

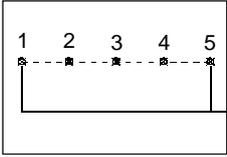
Up to 30 parts move routes can be set in one screen

The parts move route can be used for multiple parts movement.

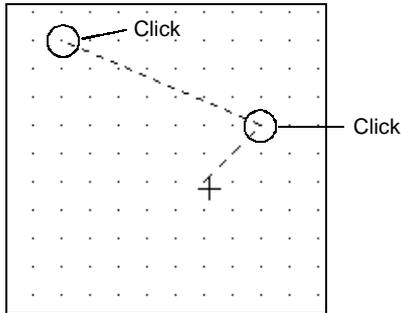


- 1 Select [Object] → [Parts move route] from the menu.
- 2 After parts move route dialog box appears, make the following settings and click on the button.

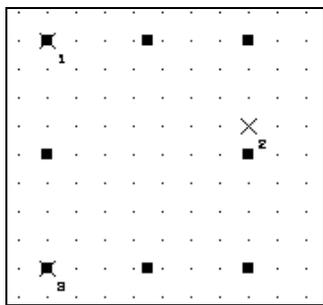


| Items | Description | A | F |
|-------------------|---|---|---|
| Route No. | Set route No. (0 to 29) of parts move route to be created. | ○ | × |
| Points | Set points (1 to 100) movement position (position to display parts). | ○ | × |
| Arrange in a line | <p>Check this item to move parts in a line. When arranging in a line, points proportion set in [Points] will be arranged automatically according to the setting of starting point and destination. (Example) Points: Set to 5</p>  | ○ | × |

- 3 As the mark (+) will appear on GT Designer2, click on the mark to arrange Point 1. Click on the positions as many as the number of set points for arrangement.



- 4 Point No. will appear at the set position after setting.

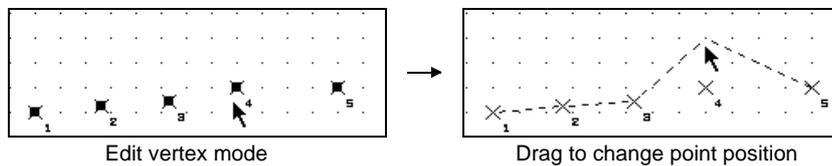


Remark

The correction of parts move route

- (1) Change the point position

- 1 Click to select parts move route, then carry out either of the following operations.
 - Select [Edit] → [Edit Vertex] from the menu
 - Right click on the route to [Edit Vertex]
- 2 The route is now in "Edit Vertex" mode. Drag a point of the selected route to the destination position. Thus, the point position can be changed. Vertex mode.



- (2) Change the point and route No.

Double click on the parts move route to display the setting dialog box. Then change the number of points and route No. in the corresponding items.

5.17.2 Arrangement and setting

- 1 Carry out any of the following operations
 -  Click on bit parts movement /  word parts movement /  fixed part movement.
 - Select [Object] → [Parts movement] → [Bit] / [Word] / [Fixed] from menu.
- 2 As the setting dialog box appears, make the settings with reference to the following explanation.

Point

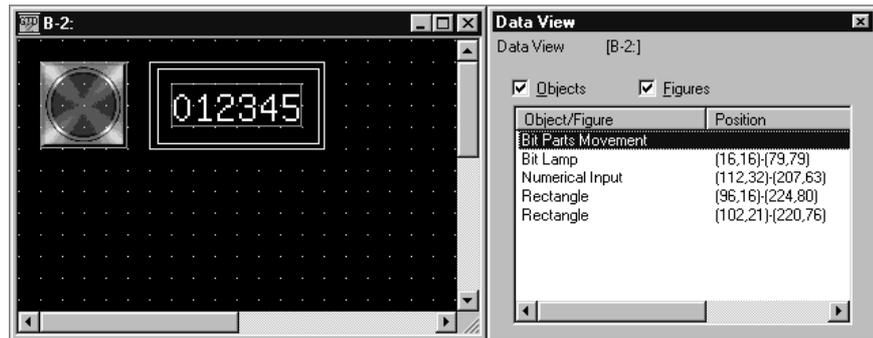
When changing the settings of parts movement

Parts movement cannot be arranged on screen when movement type is [Position], [Point].

Carry out the following method when changing the settings of the preset parts movement.

- (1) Edit using data view

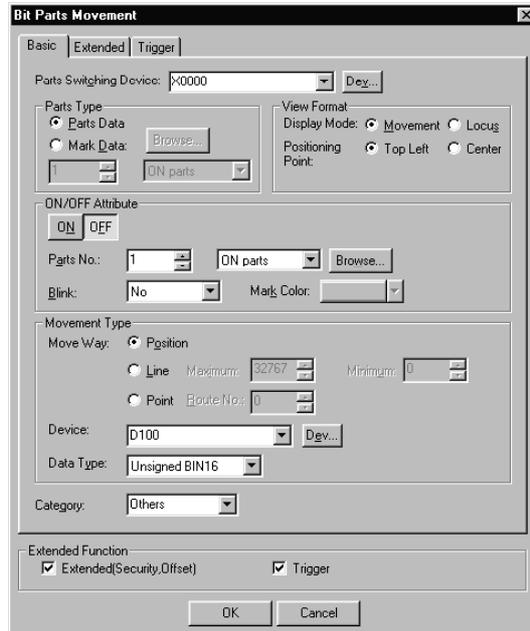
Double click on the parts movement displayed in data view to display the setting dialog box.



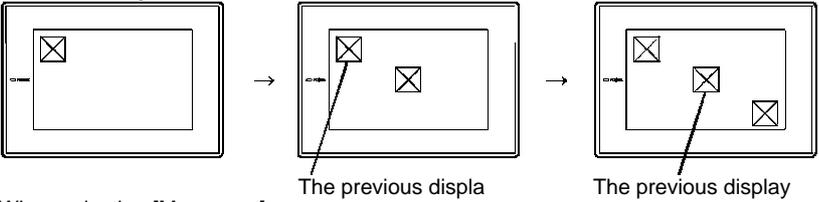
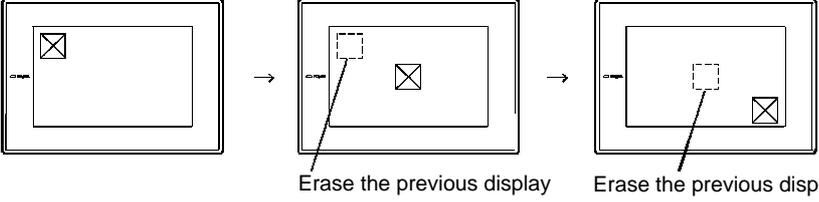
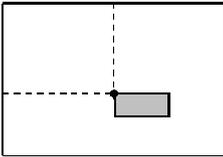
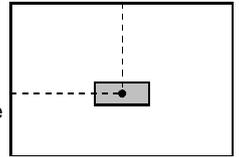
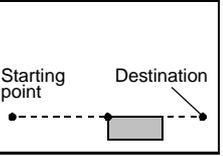
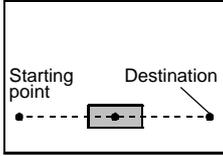
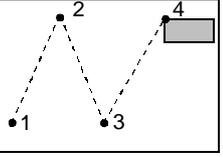
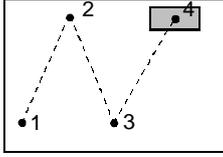
5.17.3 Setting items of bit parts movement

1 Basic tab (bit)

Set the parts move way and the parts to be displayed when the device turns ON/OFF.



| Items | Description | A | F |
|------------------------|--|---|---|
| Parts Switching Device | <p>Set the device to switch the part to be displayed. With this setting, the part to be displayed can be switched even while the parts are moving.</p> <p>(Section 5.1 Device Settings)</p> <p>Example)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>X10: ON</p> <p>Display part No.1</p> </div> <div style="text-align: center;"> <p>X10: OFF</p> <p>Display part No.10</p> </div> </div> | ○ | × |
| Parts Type | <p>Select the part to be moved.</p> <p>Parts Data : Displays the registered part</p> <p>Mark Data : Changes the white part of the registered part into the different color according to the parts switching device change.</p> <p>Multiple colors can be applied to one part. This eliminates the necessity of registering multiple parts and saves the GOT memory capacity.</p> <p>After selecting, set the parts No. to be displayed as mark. The registered part can be checked by clicking on Browse button.</p> <div style="text-align: center; margin: 10px 0;"> </div> <p>Make sure to draw the part to be marked using the color white. If the bitmap file data is set to be marked, the marked color will not be displayed</p> | ○ | × |

| Items | Description | A | F |
|---|--|---|---|
| <p>Display Mode</p> | <p>Select the method of displaying parts during parts movement.</p> <p>Locus : Displays the moving parts while showing the images of previous display on the screen.</p> <p>Movement: Displays the moving parts without showing the images of previous display on the screen.</p> <p>Example)</p> <p>When selecting [Locus]</p>  <p>The previous displa The previous display</p> <p>When selecting [Movement]</p>  <p>Erase the previous display Erase the previous display</p> | ○ | × |
| <p>View Format</p> <p>Positioning Point</p> | <p>Select the base point to display the part.</p> <p>Top-left : Displays the part with reference to the upper-left position to that part.</p> <p>Center : Displays the part with reference to the center of that part.</p> <p>Example)</p> <p>When [Position] is selected in [Move Way] (X coordinate device: 320, Y coordinate device:240)</p> <div style="display: flex; justify-content: space-around;"> <div> <p>Device for X coordinate</p>  <p>Device for Y coordinate</p> <p>Top-left</p> </div> <div> <p>Device for X coordinate</p>  <p>Device for Y coordinate</p> <p>Center</p> </div> </div> <p>When [Line] is selected in [Move Way] (Device: D100=50)</p> <div style="display: flex; justify-content: space-around;"> <div>  <p>Starting point Destination</p> <p>Top-left</p> </div> <div>  <p>Starting point Destination</p> <p>Center</p> </div> </div> <p>When [Point] is selected in [Move Way] (Device: D200=4)</p> <div style="display: flex; justify-content: space-around;"> <div>  <p>Top-left</p> </div> <div>  <p>Center</p> </div> </div> | ○ | × |

| Items | | Description | A | F |
|------------------|---|--|-----------------------|---|
| ON/OFF Attribute | ON | Click on this item to set the part to be displayed when the device turns ON | <input type="radio"/> | × |
| | OFF | Click on this item to set the part to be displayed when the device turns OFF | <input type="radio"/> | × |
| | Parts No. | Set the part No. to be displayed. The registered part can be checked by clicking on <input type="button" value="Browse"/> button. The part of No. set to "0" will not be displayed. (Set the part No. when the device is OFF to "0" in order to display the part only when the device is ON.) | <input type="radio"/> | × |
| | Blink | Select the blinking pattern of the Parts. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | × |
| | Mark Color | Select the color to change from white color of the part. | <input type="radio"/> | × |
| Movement Type *1 | Select the movement type. Position : Select this item to display the moving part using two word device values as X/Y coordinate points respectively. Set the devices to store the position The two consecutively numbered devices starting from the set device will be automatically set for storing X/Y coordinate points (Directly-specified device is for storing X coordinate point.) ( Section 5.1 Device Setting) Line*2 : Select this item to display the moving part in the line of which starting point and end point have been set. Se the minimum value to the starting point, and maximum value to the end point. Point : Select this item to display the part at the position (point) specified in advance. Then, set the parts movement route No. (0 to 29). The parts movement route must be set on the corresponding screen in advance. ( Section 5.17.1 Parts movement route setting). | <input type="radio"/> | × | |
| Device | After selecting the [Movement Type], set the position device to store the movement destination of parts. ( Section 5.1 Device Setting) The setting items differ according to the settings made in [Movement Type]. Position : Sets the device to store the value of X and Y coordinate. From the set device, 2 point value is set continuously for X • Y position storage. (The set device is for X storage) Line : Sets the device storing the relative value corresponding to the starting point and ending point. Point specification : Sets the device to store the display position (point). | <input type="radio"/> | × | |
| Data Type | When selecting [Line] from [Movement Type], select the data type of word device (signed BIN16/unsigned BIN16). (Fixed to unsigned BIN16 when selecting [Position], [Point specification]) | <input type="radio"/> | × | |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | × | |

Refer to the next page for the details of *1, *2.

*1 Movement Type

Select the movement type when moving parts.

Refer to the following for the details about parts movement type.

 Section 5.17  Parts move route setting

*2 Line

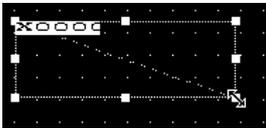
Set the line as the parts move range when the movement type is set as [Line].

Execute the following operations after making settings in the setting dialog box.

- 1 Click on the start position in drawing screen.



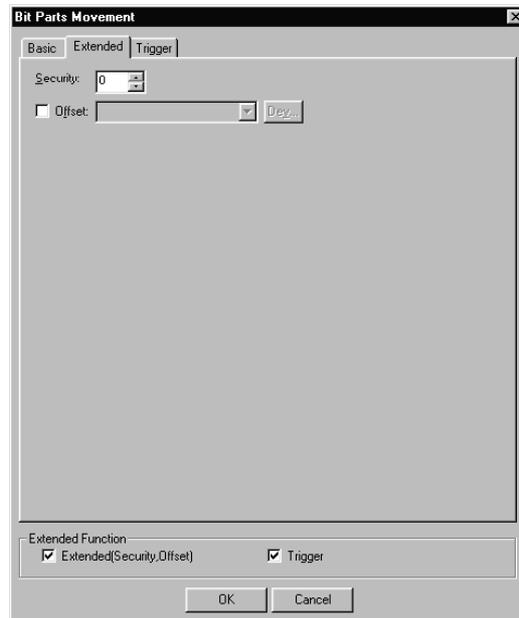
- 2 Set the line as the parts move range after moving cursor and clicking on the destination.



2 Extended tab (bit)

It is to set the security and offset.

Check the Extended Function at the bottom of dialog box to display this tab.



| Items | Description | A | F |
|----------|---|-----------------------|-------------------------------------|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". ( Section 5.7 Security Function) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (Section 5.6 Offset Function) After checking, set the offset device. ( Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | <input checked="" type="checkbox"/> |

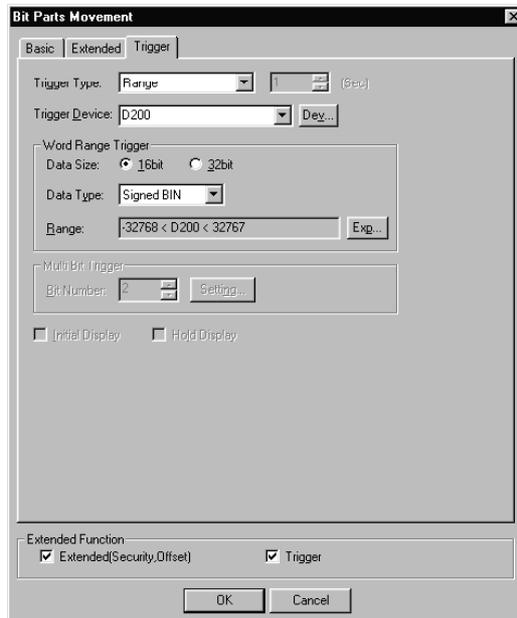
3 Trigger tab (bit)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting

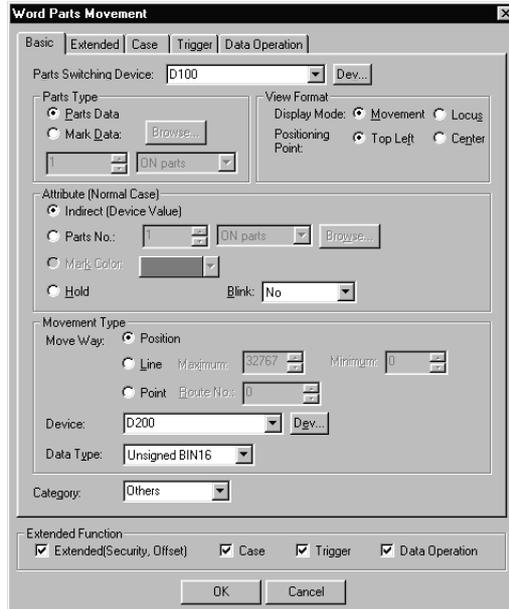


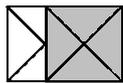
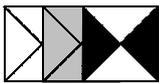
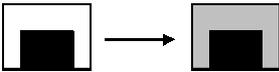
| Items | Description | A | F | |
|--------------------|--|---|-----------------------|---|
| Trigger Type | Select the trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● NO ● OFF ● Rise ● Fall ● Sampling ● Range ● Multi Bit Trigger | <input type="radio"/> | × | |
| Device | Specify the device used for the trigger. | <input type="radio"/> | × | |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | × | × | |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | × |
| | Data Type | Select the data type of word device (Signed BIN/Unsigned BIN/Real number). | <input type="radio"/> | × |
| | Range | Click on the Range button and set conditional expression for the word device range. | <input type="radio"/> | × |
| Bit trigger | Bit Number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used as trigger. After setting, click on the Setting button and set the bit devices and their triggers | <input type="radio"/> | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | × | |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | <input type="radio"/> | × | |

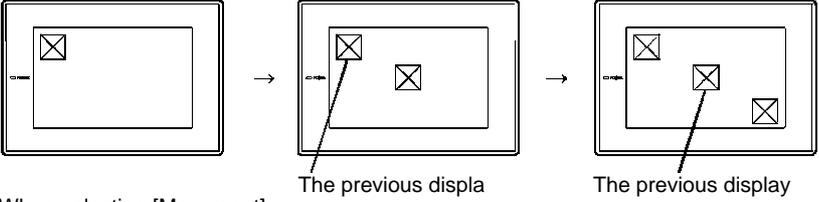
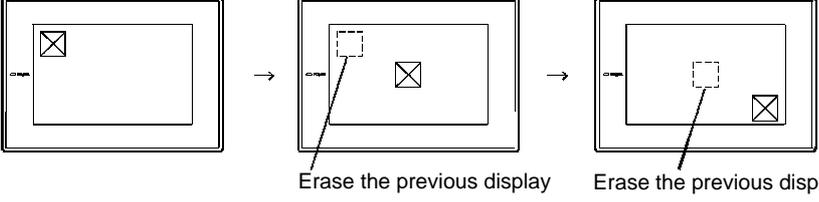
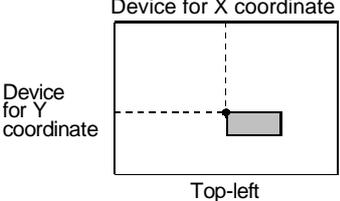
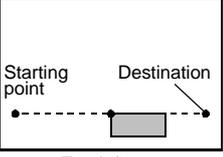
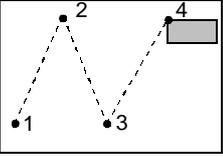
5.17.4 Setting items of word parts movement

1 Basic tab (word)

Set move way of parts, the parts type and Parts No. to be displayed according to word device value.



| Items | Description | A | F |
|------------------------|--|---|---|
| Parts Switching Device | <p>Set the device to switch the part to be displayed. With this setting, the part to be displayed can be switched even while the parts are moving.</p> <p>( Section 5.1 Device Setting)</p> <p>Example)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>D10: 1</p>  <p>Display part No.1</p> </div> <div style="text-align: center;"> <p>D10: 2</p>  <p>Display part No.2</p> </div> <div style="text-align: center;"> <p>D10: 3</p>  <p>Display part No.3</p> </div> </div> | ○ | × |
| Parts Type | <p>Select the part to be moved.</p> <p>Parts Data : Displays the registered part Mark Data : Changes the white part of the part into the different color according to the parts switching device change. Multiple colors can be applied to one part. This eliminates the necessity of registering multiple parts and saves the GOT memory capacity.</p> <p>After selecting, set the parts No. to be displayed as mark. The registered part can be checked by clicking on Browse button.</p> <div style="text-align: center;">  </div> <p>Make sure to draw the part to be marked using the color white. If the bitmap file data part is set to be marked, the marked color will not be displayed.</p> | ○ | × |

| Items | Description | A | F |
|---|--|---|---|
| <p>Display Mode</p> | <p>Select the method of displaying parts during parts movement.</p> <p>Locus : Displays the moving parts while showing the images of previous display on the screen.</p> <p>Movement: Displays the moving parts without showing the images of previous display on the screen.</p> <p>Example)</p> <p>When selecting [Locus]</p>  <p>The previous displa The previous display</p> <p>When selecting [Movement]</p>  <p>Erase the previous display Erase the previous display</p> | ○ | × |
| <p>View Format</p> <p>Positioning Point</p> | <p>Select the base point to display the part.</p> <p>Top-left : Displays the part with the reference to the upper-left position to that part.</p> <p>Center : Displays the part with the reference to the center of that part.</p> <p>Example)</p> <p>When [Position] is selected in [Move Way] (X coordinate device: 320, Y coordinate device:240)</p>  <p>Device for X coordinate Device for X coordinate</p> <p>Device for Y coordinate Device for Y coordinate</p> <p>Top-left Center</p> <p>When [Line] is selected in [Move Way] (Device: D100=50)</p>  <p>Starting point Destination</p> <p>Top-left Center</p> <p>When [Point] is selected in [Move Way] (Device: D200=4)</p>  <p>Top-left Center</p> | ○ | × |

| Items | Description | A | F |
|-------------------------|---|---|---|
| Attribute (Normal Case) | <p>Set the display attribute of parts. Set state in the Case tab to change the display attribute of this setting.</p> <p>Indirect [Device Value] : Display the parts No. corresponding to word device value. Example)</p>  <p>Display the parts with parts No. 100 Monitor device value</p> <p>Parts No. : Select this item to display parts to be registered. After this, set the parts No. to be displayed. The parts No. set to 0 will not be displayed.</p> <p>Mark Color : Select which color to change from white color of the part.</p> <p>Hold : Select this item to hold current parts display.</p> | ○ | × |
| Blink | <p>Select the blinking pattern of the Parts.</p> <p>None : Not blink</p> <p>Low : Blinks every 1 second.</p> <p>Middle : Blinks every 0.5 seconds.</p> <p>High : Blinks every 0.2 seconds.</p> | ○ | × |
| Movement Type *1 | <p>Select the movement type.</p> <p>Position : Select this item to display the moving part using two word device values as X/Y coordinate points respectively. Set the devices to store the position The two consecutively numbered devices starting from the set device will be automatically set for storing X/Y coordinate points (Directly-specified device is for storing X coordinate point.) (☞ Section 5.1 Device Setting)</p> <p>Line*2 : Select this item to display the moving part in the line of which starting point and end point have been set. Se the minimum value to the starting point, and maximum value to the end point.</p> <p>Point : Select this item to display the part at the position (point) specified in advance.</p> | ○ | × |
| Device | <p>After selecting the [Movement Type], set the position device to store the movement destination of parts. (☞ Section 5.1 Device Setting)</p> <p>The setting items differ according to the settings made in [Movement Type].</p> <p>Position : Sets the device to store the value of X and Y coordinate. From the set device, 2 point value is set continuously for X • Y position storage. (The set device is for X storage)</p> <p>Line : Sets the device storing the relative value corresponding to the starting point and ending point.</p> <p>Point specification : Sets the device to store the display position (point).</p> | ○ | × |
| Data Type | <p>When selecting [Line] from [Movement Type], select the data type of word device (signed BIN16/unsigned BIN16). (Fixed to unsigned BIN16 when selecting [Position], [Point specification])</p> | ○ | × |
| Category | <p>When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual)</p> | ○ | × |

Refer to the next page for the details about *1, *2.

*1 Movement Type

Select the movement type when moving parts.

Refer to the following for the details about parts movement type.

 Section 5.17  Parts Movement

*2 Line

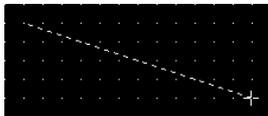
Set the line as the parts move range when the movement type is set as [Line].

Execute the following operations after making settings in the setting dialog box.

- 1 Click on the start position in drawing screen.



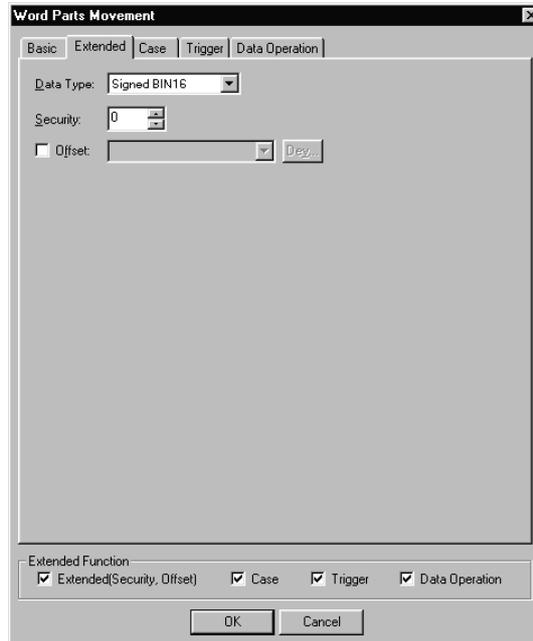
- 2 Set the line as the parts move range after moving cursor and clicking on the destination.



2 Extended tab (word)

Set the data type, security and offset of monitor device.

Check "Extended Function" at the bottom of the dialog box to display this tab.

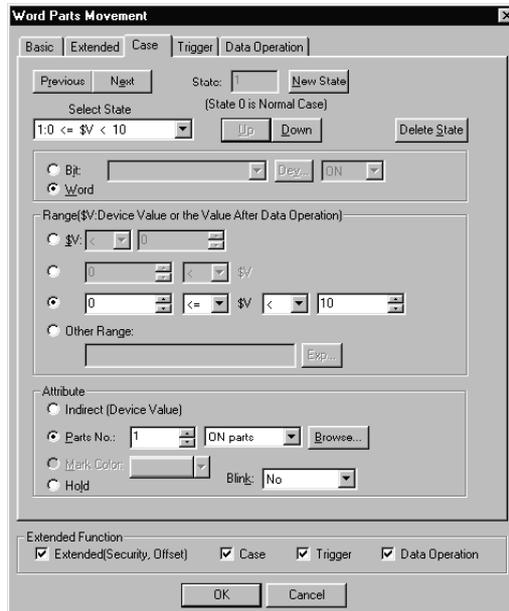


| Items | Description | A | F |
|-----------|--|---|---|
| Data Type | <p>Select the data type of the word device to be monitored.</p> <p>Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. BCD : Treats word device value as BCD (binary decimal) value.</p> <p>This setting item is not available for the following devices. Position device (set in [Move Way] within the basic tab. [Range] device set in [Trigger Type] within the trigger tab.</p> | ○ | × |
| Security | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits.</p> | ○ | × |

3 Case tab (word)

The attribute can be changed on this setting depending on the device status. For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|-----------------------|---|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | × |
| New State | Creates a new state. | <input type="radio"/> | × |
| Delete State | Deletes a specified state. | <input type="radio"/> | × |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | × |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | × |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | × |
| Device | Select the display change conditions according to state. Bit : Select it when changing the display according to the ON/OFF status of bit device. After selecting, set the bit device and device status (ON/OFF). ( Section 5.1 Device Setting) Word : Select it when changing the display according to the value of word device. After selecting, set the conditional expression of word device value in [Range]. | <input type="radio"/> | × |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | × |

| Items | | Description | A | F |
|----------|-----------|---|---|---|
| State *1 | Attribute | <p>Select the method of displaying parts.</p> <p>Indirect (Device Value) : Display the parts corresponding to word device value.</p> <p>Parts No. : Displays the registered parts After selecting. Stet the parts No. to be displayed. The parts of which No. is set to be 0 cannot be displayed.</p> <p>Hold : Select this item to hold current parts display even though state condition is satisfied.</p> <p>Mark Color : Select this item to change the white part of the registered part into the different color when mark-selecting in [Parts Type].</p> | ○ | × |
| | Blink | <p>Select the blinking pattern of the Parts.</p> <p>None : Not blink</p> <p>Low : Blinks every 1 second.</p> <p>Middle : Blinks every 0.5 seconds.</p> <p>High : Blinks every 0.2 seconds.</p> | ○ | × |

Refer to the next page for the details about *1.

*1 State

- (1) Display for condition other than those set on the Case tab

When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.

- (2) Display when conditions are overlapped

When conditions are overlapped, a state with smaller No. has priority.

Example) Monitored device : D100

Data view format : Signed decimal 16-bit signed decimal

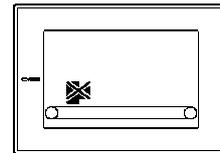
Registered parts : Parts No. 1 Parts No. 10 Parts No. 11 Parts No. 12

| The operation priority for setting overlap conditions. | State No. | Display range | Display parts |
|--|--------------------|---------------------|---------------|
| High | 1 | M10 ON | No.11 |
| ↓ | 2 | $1 \leq \$V \leq 9$ | Indirect |
| ↓ | 3 | $10 \leq \$V$ | Hold |
| Low | Ordinary (state 0) | _____ | No.12 |

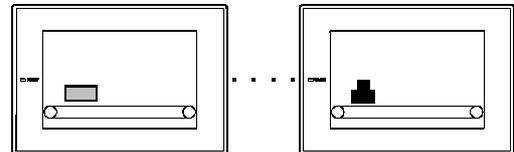
*\$V indicates the value of monitor device.



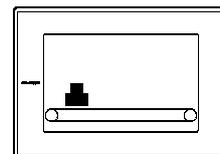
Display parts No.11 when M10 is ON.



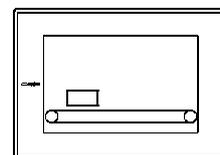
Display the parts corresponding to monitor device value when the value is between 1 and 9 ($1 \leq \$V \leq 9$).



Do not switch parts display when monitor device value is 10 or greater ($10 \leq \$V$).



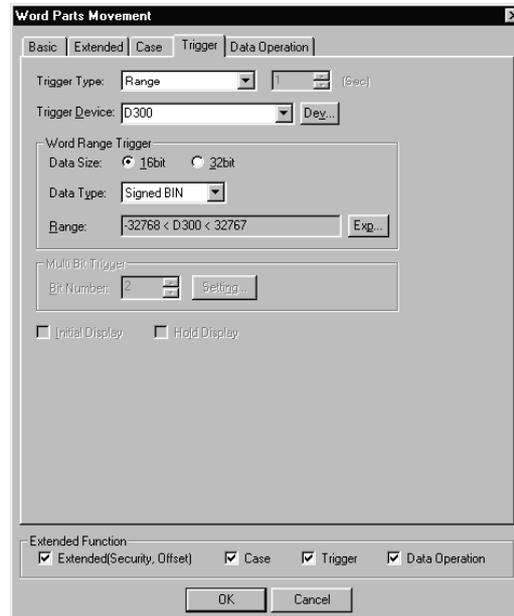
Display parts No.12 in the condition other than state 1 to 3.



4 Trigger tab (word)

The setting items of trigger tab are the same as bit parts movement. For details of setting items, refer to the following.

 Section 5.17.3 Setting items of parts movement

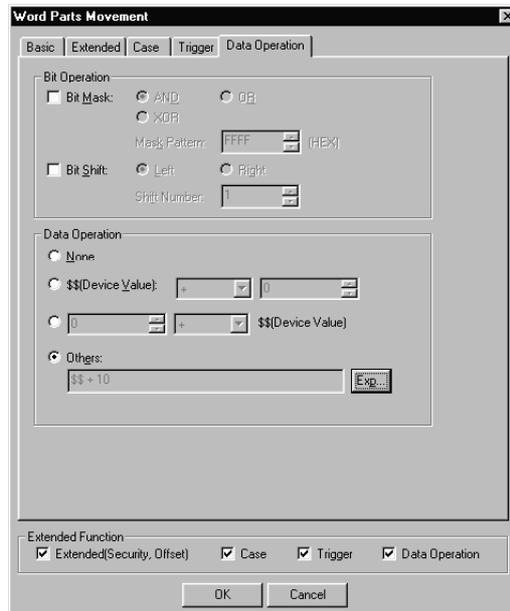


5 Data Operation tab (word)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function

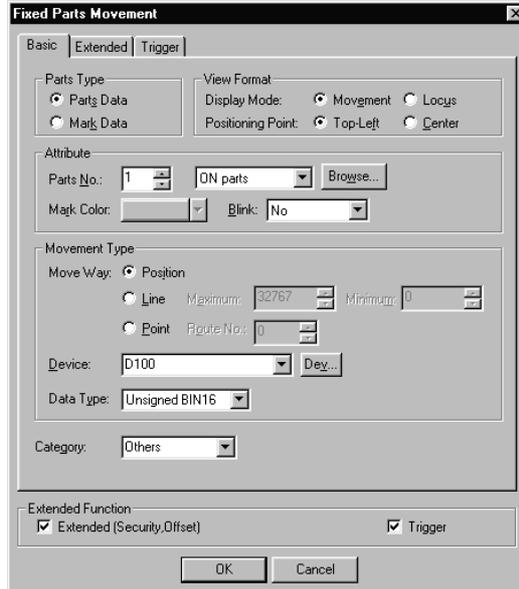


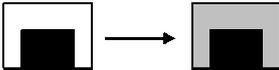
| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR: Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift. Right: Right shift. | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

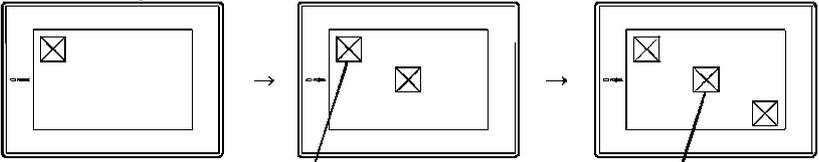
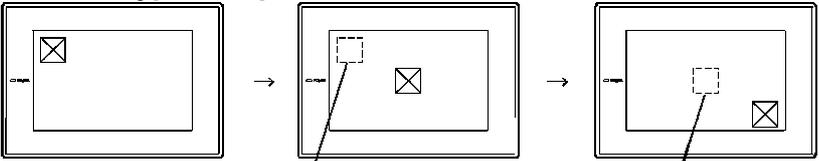
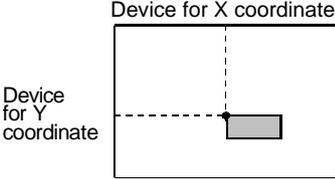
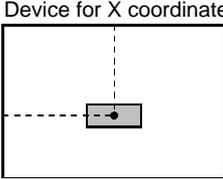
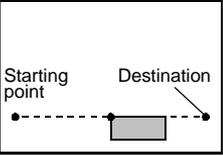
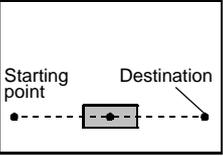
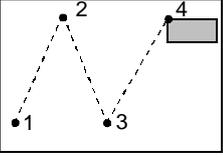
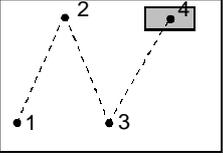
5.17.5 Setting items of fixed parts movement

1 Basic tab (fixed)

Directly specify and set the parts move way as well as the parts to be display.



| Items | Description | A | F |
|------------|--|---|---|
| Parts Type | <p>Select the part to be moved.</p> <p>Parts Data : Displays the registered part</p> <p>Mark Data : Changes the white part of the part into the different color according to the parts switching device change. Multiple colors can be applied to one part. This eliminates the necessity of registering multiple parts and saves the GOT memory capacity. After selecting, set the parts No. to be displayed as mark. The registered part can be checked by clicking on [Brows] button.</p> <div style="text-align: center;">  </div> <p>Make sure to draw the part to be marked using the color white. If the bitmap file data part is set to be marked, the marked color will not be displayed.</p> | ○ | × |

| Items | Description | A | F |
|---|--|---|---|
| <p>Display Mode</p> | <p>Select the method of displaying parts during parts movement.</p> <p>Locus : Displays the moving parts while showing the images of previous display on the screen.</p> <p>Movement: Displays the moving parts without showing the images of previous display on the screen.</p> <p>Example)</p> <p>When selecting [Locus]</p>  <p>The previous displa The previous display</p> <p>When selecting [Movement]</p>  <p>Erase the previous display Erase the previous display</p> | ○ | × |
| <p>View Format</p> <p>Positioning Point</p> | <p>Select the base point to display the part.</p> <p>Top-left : Displays the part with reference to the upper-left position to that part.</p> <p>Center : Displays the part with reference to the center of that part.</p> <p>Example)</p> <p>When [Position] is selected in [Move Way] (X coordinate device: 320, Y coordinate device:240)</p>  <p>Top-left</p>  <p>Center</p> <p>When [Line] is selected in [Move Way] (Device: D100=50)</p>  <p>Top-left</p>  <p>Center</p> <p>When [Point] is selected in [Move Way] (Device: D200=4)</p>  <p>Top-left</p>  <p>Center</p> | ○ | × |

| Items | Description | A | F |
|------------------|---|---|---|
| Attribute | <p>Set the display attribute of parts.</p> <p>Parts No. : Select this item to display parts in registration. Set the parts No. to be displayed after the selection. Click on [Reference] button to specify the registered parts.</p> <p>Mark Color : Select the color to change from white color of the part. mark-selecting registered parts in [Parts Type].</p> | ○ | × |
| Blink | <p>Select the blinking pattern of the Parts.</p> <p>None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds.</p> | ○ | × |
| Movement Type *1 | <p>Select the movement type.</p> <p>Position : Select this item to display the moving part using two word device values as X/Y coordinator points respectively. Set the devices to store the position The two consecutively numbered devices starting from the set device will be automatically set for storing X/Y coordinator points (Directly-specified device is for storing X coordinator point.) ( Section 5.1 Device Setting)</p> <p>Line*2 : Select this item to display the moving part in the line of which\ starting point and end point have been set. Se the minimum value to the starting point, and maximum value to the end point.</p> <p>Point : Select this item to display the part at the position (point) specified in advance. Then, set the parts movement route No. (0 to 29). The parts movement route must be set on the corresponding screen in advance. ( Section 5.17.1 Parts movement route setting).</p> | ○ | × |
| Device | <p>After selecting the [Movement Type], set the position device to store the movement destination of parts. ( Section 5.1 Device Setting)</p> <p>The setting items differ according to the setting made in [Movement Type].</p> <p>Position : Sets the device to store the value of X and Y coordinate. From the set device, 2 point value is set continuously for X • Y position storage. (The set device is for X storage)</p> <p>Line : Sets the device storing the relative value corresponding to the starting point and ending point.</p> <p>Point specification : Sets the device to store the display position (point).</p> | ○ | × |
| Data Type | <p>When selecting [Line] from [Movement Type], select the data type of word device (signed BIN16/unsigned BIN16). (Fixed to unsigned BIN16 when selecting [Position], [Point specification])</p> | ○ | × |
| Category | <p>When allocating category to the object, select a proper category  GT Designer2 Version1 Operating Manual)</p> | ○ | × |

Refer to the next page for the details about *1, *2.

*1 Movement Type

Select the movement type when moving parts.

Refer to the following for the details about parts movement type.

 Section 5.17  Parts Movement

*2 Line

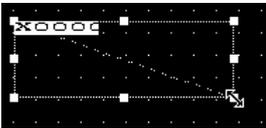
Set the line as the parts move range when the movement type is set as [Line].

Execute the following operations after making settings in the setting dialog box.

- 1 Click on the start position on a drawing screen.



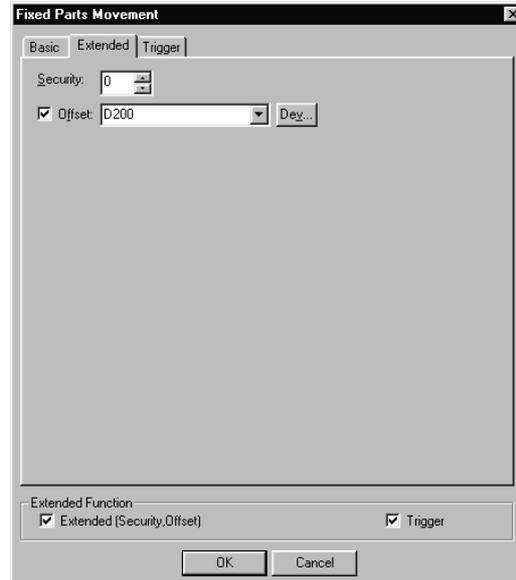
- 2 Set the line as the parts move range after moving cursor and clicking on the destination.



2 Extended tab (fixed)

The setting items of extended tab are the same as bit parts movement. Refer to the following for the details about the setting items.

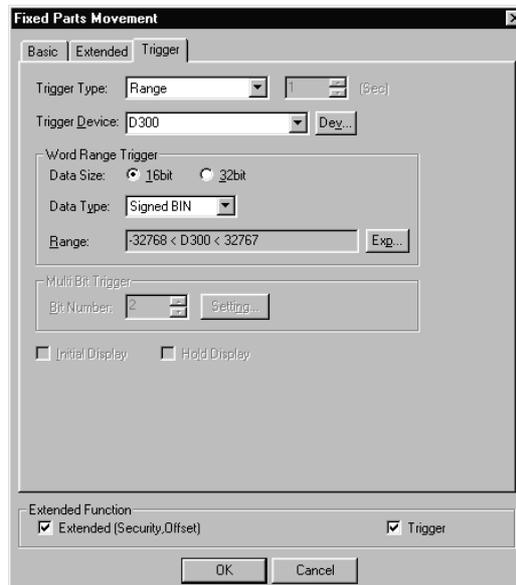
 Section 5.17.3 Setting items of bit parts movement



3 Trigger tab (fixed)

The setting items of trigger tab are the same as bit parts movement. Refer to the following for the details about the setting items.

 Section 5.17.3 Setting items of bit parts movement



5.17.6 Cautions

This section provides the cautions for using parts movement function.

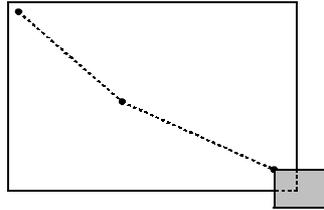
1 Cautions for drawing

- (1) The maximum number of parts movement objects can be set for one screen
 - GOT-A900 series: 256 objects

- (2) Display position of parts

If the display position of parts out of screen is set in Designer2, parts will not be movement-displayed. The previous display will be held.

Example) In the case of movement type [Point]



Parts out of the screen will not be displayed.

- (3) Cautions for registering parts

Refer to the following for the cautions of registering parts.

- (a) When using registered parts

 Section 4.2 Parts Registration

- (b) When using BMP image parts

 Section 4.3 Registration of BMP Files for Parts

2 Cautions for use

- (1) The value stored in position device

If the value stored in position device exceeding the display range (position, out of the range of maximum to minimum, point No.), parts will not be movement-displayed. The previous display will be held.

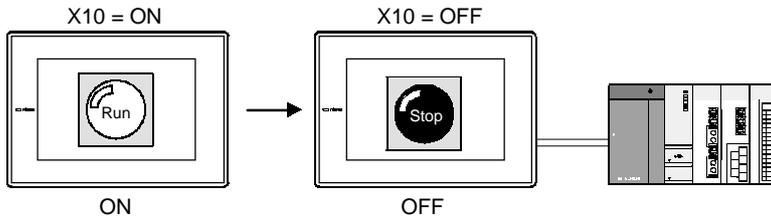


5.18 Lamp Display



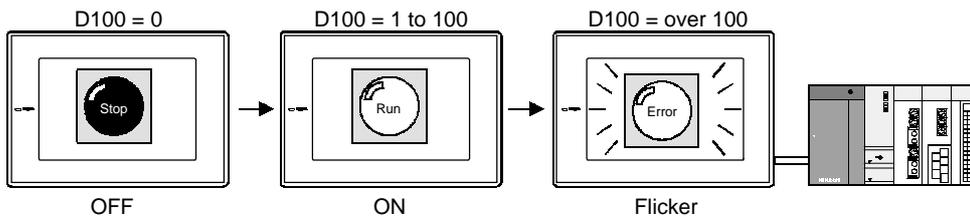
1 Bit lamp (Section 5.18.2)

This function turns ON/OFF the lamp according to the ON/OFF status of the bit device.



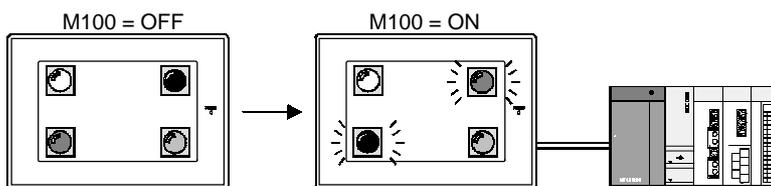
2 Word lamp (Section 5.18.3)

This function enables changing lamp color according to the word device value.
(GOT-A900 series only)



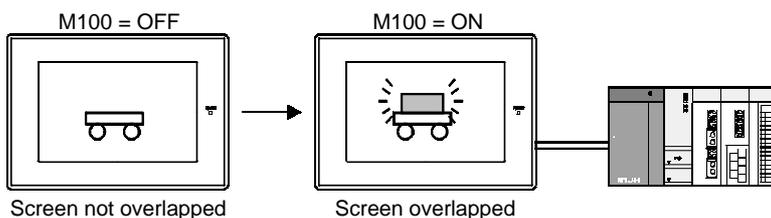
3 Bit lamp area (Section 5.18.4)

This function enables exchange of two colors used within the specified range according to the ON/OFF status of the bit device.
(GOT-F900 series only)



4 Screen lamp (Section 5.18.5)

This function enables overlapping of the specified screen No. according to the ON status of the bit device.
(GOT-F900 series only)

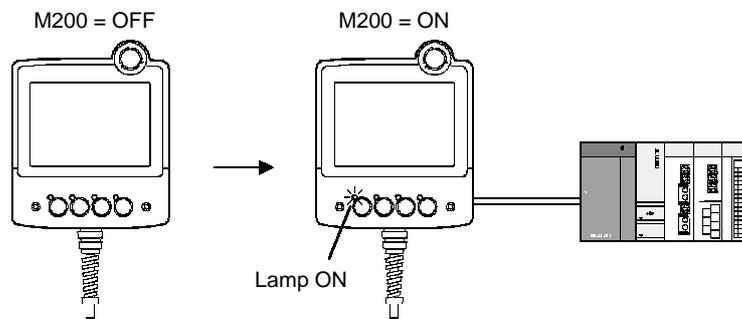


5 External lamp (Section 5.18.6)

This function enables control of the operation switch lamps for GOT-F900 series (F930GOT-K, F94* handy GOT only) according to the ON/OFF status of the bit device.

Assign the operation switch and function switch lamp to bit devices.
(GOT-F900 series only)

<In the case of handy GOT>



5.18.1 Arrangement and settings

1 Carry out either of the following operations.

- Click on  (Bit lamp)/  (Word lamp)/  (Bit lamp area)/  (Screen lamp)/  (External lamp).
- Select [Object] → [Lamp] → [Bit lamp]/[Word lamp]/[Bit lamp area]/[Screen lamp]/[External lamp] from the menu.

2 Click on the position where the lamp is to be located to complete the arrangement.

(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key. For the screen lamp and external lamp, the arrangement is not required.)

3 Double click on the arranged lamp to display the setting dialog box. Make the settings with reference to the following explanation.
(For the screen lamp and external lamp, the dialog box is not displayed.)



Easier setting method

Using the property sheet enables direct on-screen object setting.

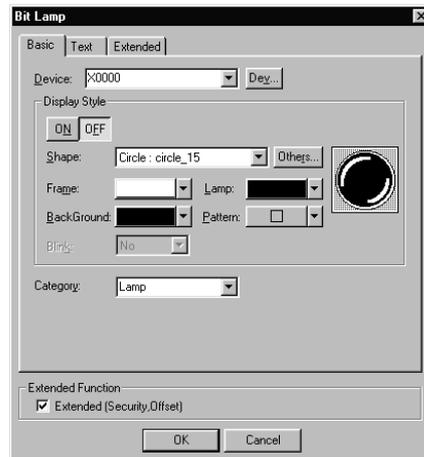


GT Designer2 Version1 Operating Manual

5.18.2 Setting items of bit lamp

1 Basic tab

Set the device to be monitored and the lamp figure (shape/color) to be displayed when the device is ON/OFF.

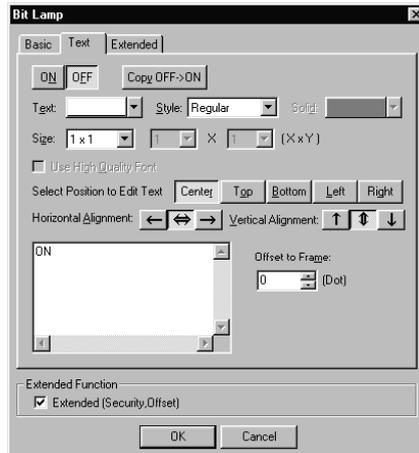


(Example: In the case of GOT-A900 series)

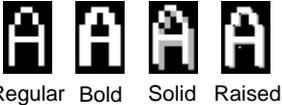
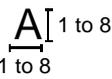
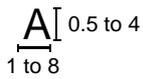
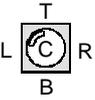
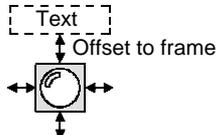
| Items | | Description | A | F |
|---------------|--|---|----------------------------------|----------------------------------|
| Device | | Set the device to be monitored. (Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Display Style | ON | Click on this item to set the display attributes when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| | OFF | Click on this item to set the display attributes when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| | Shape | Set a Lamp Figure. By clicking on the <input type="button" value="Others"/> button, shapes other than those in the list box or library shapes can be selected. (Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the color of the lamp shape. | <input type="radio"/> | <input type="radio"/> |
| | Lamp | Select the color of the lamp figure. | <input type="radio"/> | <input type="radio"/> |
| | BackGround | Select the pattern and background color of the lamp figure. The selected pattern in the lamp color is displayed on the background color. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Pattern | (Example) BackGround : Pattern : Lamp : | <input type="radio"/> | <input checked="" type="radio"/> |
| Blink | Select the blinking pattern of the Lamp. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input checked="" type="radio"/> | |
| Category | | When allocating category to the object, select a proper category. (GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

2 Text tab

Set the text to be displayed at the center or on the top, bottom, right or left of the lamp.



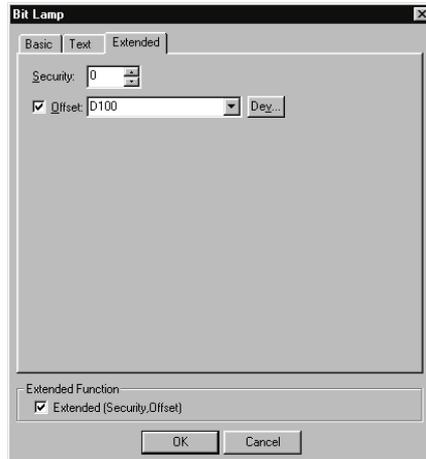
(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|---------------------------------|--|-----------------------|--------------------------|
| ON | Click on this item to set the text to be displayed when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| OFF | Click on this item to set the text to be displayed when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| Copy OFF → ON/ Copy ON → OFF | This button is used to copy the set attribute. Copy OFF → ON :The set text and display position for the "OFF" attribute are copied to the "ON" attribute. Copy ON → OFF :The set text and display position for the "ON" attribute are copied to the "ON" attribute. | <input type="radio"/> | <input type="radio"/> |
| Text | Select the color of text to be displayed. | <input type="radio"/> | <input type="radio"/> |
| Style | Select the view format of the text (Regular/Bold/Solid/Raised).  | <input type="radio"/> | <input type="checkbox"/> |
| Solid | Select the solid color when [Solid] or [Raised] is set in [Style] | <input type="radio"/> | <input type="checkbox"/> |
| Size | Select the size (X × Y) of the text that is displayed to the right, left, top or bottom of the object. GOT-A900 series:  GOT-F900 series:  | <input type="radio"/> | <input type="radio"/> |
| Use High Quality Font | Check this item when using high quality font to display the text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | <input type="radio"/> | <input type="checkbox"/> |
| Select Position to Edit Text | Select the position where the object is to be displayed. (Center/Top/Bottom/Left/Right)  | <input type="radio"/> | <input type="checkbox"/> |
| Horizontal Alignment | Select the horizontal position of the text. | <input type="radio"/> | <input type="checkbox"/> |
| Vertical Alignment | Select the vertical position of the text. | <input type="radio"/> | <input type="checkbox"/> |
| Text Input Area | Input the text to be displayed. (Up to 32 characters) Press the <input type="button" value="Enter"/> key to input a new line of the end of the first line. (A line feed is counted as two characters.) | <input type="radio"/> | <input type="radio"/> |
| Offset to Frame | Set the number of dots for the distance between the text and object shape, i.e., frame. (Up to 100 dots)  | <input type="radio"/> | <input type="checkbox"/> |

3 Extended tab (GOT-A900 series only)

Set the security level and offset value.

Check "Extended" at the bottom of the dialog box to display this tab.

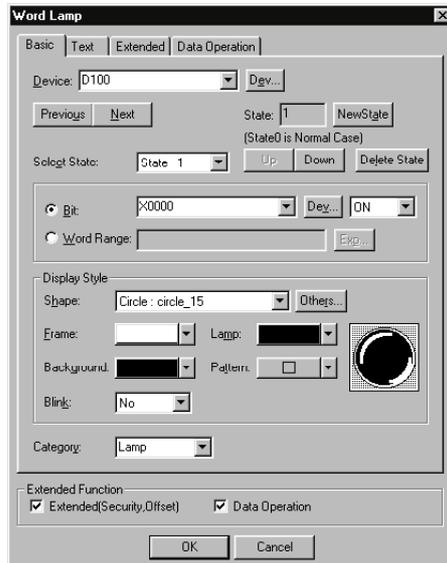


| Items | Description | A | F |
|----------|---|---|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (👉 Section 5.7 Security Function) | ○ | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (👉 Section 5.6 Offset Function) After checking, set the offset device. (👉 Section 5.1 Device Setting) Data length is fixed to 16 bits. | ○ | × |

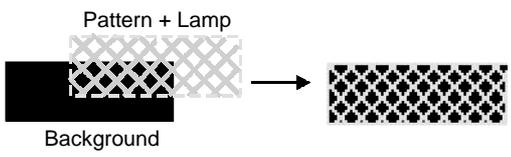
5.18.3 Setting items of word lamp (for GOT-A900 series only)

1 Basic tab

Set the lamp figure (shape/color) corresponding to the device to be monitored or monitor device value.



| Items | Description | A | F |
|---------------|---|---|---|
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | ○ | × |
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | ○ | × |
| New State | Creates a new state. | ○ | × |
| Delete State | Deletes a specified state. | ○ | × |
| Previous/Next | Switches the currently editing state to the previous or next state. | ○ | × |
| Up/Down | Changes the priority of the current state. | ○ | × |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | ○ | × |
| Range | Set the condition by which the display attribute is changed. When a word device value is taken as a condition, click on Exp to enter the conditional expression in the dialog box for editing the display range. (☞ Section 5.4 Trigger Setting) | ○ | × |
| Display Style | Set the display attribute for the lamp. | ○ | × |
| Shape | Set a lamp figure. When [None] is selected, no frame will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | ○ | × |
| Frame | Select the frame color of the lamp figure. | ○ | × |
| Lamp | Select the color of the lamp figure. | ○ | × |

| Items | | Description | A | F |
|----------|------------|---|-----------------------|--------------------------|
| State *1 | Background | Select the pattern and background color of the lamp figure. The selected pattern in the lamp color is displayed on the background color. | <input type="radio"/> | <input type="checkbox"/> |
| | Pattern | (Example) Background :  Pattern :  Lamp :   | <input type="radio"/> | <input type="checkbox"/> |
| | Blink | Select the blinking pattern of the Lamp. None : Not blink Low : Blinks every 1 second. Middle : Blinks every 0.5 seconds. High : Blinks every 0.2 seconds. | <input type="radio"/> | <input type="checkbox"/> |
| Category | | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="checkbox"/> |

For details of *1, refer to the next page.

***1 State**

For details of states, refer to the following.

 Section 5.3 State Setting

(1) When conditions are overlapped

When conditions are overlapped, a state with smaller No. has priority.

Example) Monitor device : D100

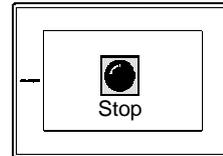
Data view format : Signed decimal, 16-bit signed decimal

| The operation priority for setting overlap conditions | | State No. | Display range | Lamp | Display text |
|---|--|-----------------------|-----------------------|-------------|------------------|
| High ↓ | | 1 | M10 ON | Red (Blink) | Stop |
| | | 2 | $60 \leq \$V \leq 80$ | Yellow | Caution |
| | | 3 | $81 \leq \$V$ | Red | Alarm |
| Low | | Normal case (State 0) | — | Blue | Normal operation |

* \$V is the monitor device value.

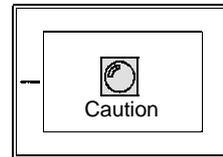
State 1

When M10 is ON, the lamp will be red (blink) and the displayed text will be "Stop".



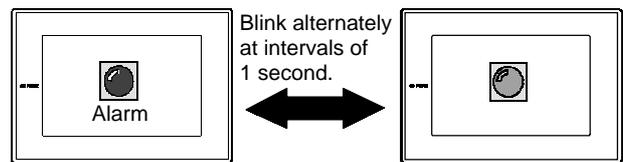
State 2

When the device value is between 60 and 80 ($60 \leq \$V \leq 80$), the lamp will be yellow and the displayed text will be "Caution".



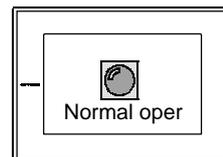
State 3

When the monitor device value is 81 or more ($81 \leq \$V$), the display (lamp color and displayed text) of State 3 and the lamp color of State 0 blink alternately. The text that appears in State 0 is not displayed.



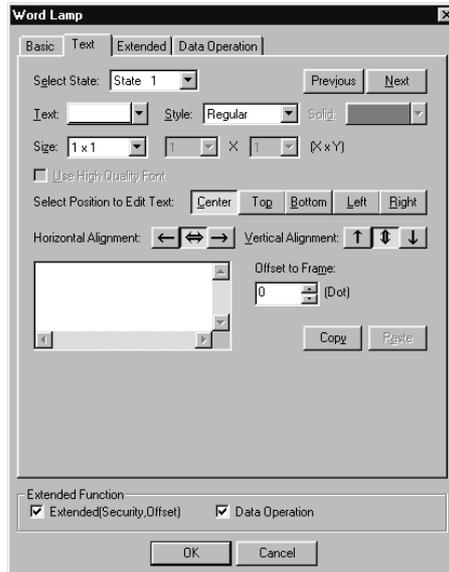
Normal case

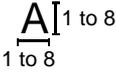
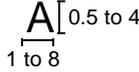
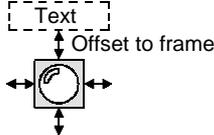
When condition is other than state 1, 2 and 3, the lamp will be blue and the displayed text will be "Normal operation".



2 Text tab

Set the text to be displayed at the center or on the top, bottom, left or right of the lamp.

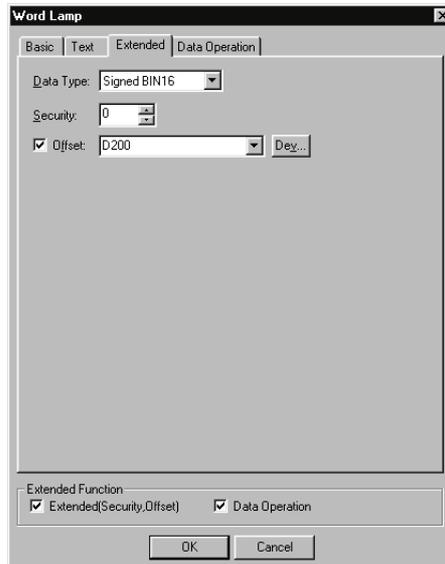


| Items | Description | A | F |
|------------------------------|--|---|---|
| Previous/Next | When changing the lamp text setting of the preset state, select the state No. and then change the setting. | ○ | × |
| Select State | | | |
| Text | Select the color of text to be displayed. | ○ | × |
| Style | Select the view format of the text (Regular/Bold/Solid/Raised).  Regular Bold Solid Raised | ○ | × |
| Solid | Select the solid color when [Solid] or [Raised] is set in [Style]. | ○ | × |
| Size | Select the text size (X × Y). Size of 1 × 1 represents 16 x 8 dots. GOT-A900 series:  1 to 8 GOT-F900 series:  1 to 8 | ○ | × |
| Use High Quality Font | Check this item when using high quality font to display the text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | ○ | × |
| Select Position to Edit Text | Select the position where the text is to be displayed on the object. (Center/Top/Bottom/Left/Right)  | ○ | × |
| Horizontal Alignment | Select the horizontal position of the text. | ○ | × |
| Vertical Alignment | Select the vertical position of the text. | ○ | × |
| Text Input Area | Input the text to be displayed. (Up to 32 characters) Press the [Enter] key to input a new line at the end of the first line. | ○ | × |
| Offset to Frame | Set the number of dots for the distance between the text and object shape, i.e., frame. (Up to 100 dots)  | ○ | × |

| Items | Description | A | F |
|-------|--|---|---|
| Copy | Copy the set text attribute. | ○ | × |
| Paste | Clicking on the <input type="button" value="Paste"/> button in other state completes the copy of the text attribute. | | |

3 Extended tab

Set the data type, security level and offset value of the monitor device.
Check "Extended" at the bottom of this dialog box to display this tab.



| Items | Description | A | F |
|-----------|---|---|---|
| Data Type | <p>Select the data type of the word device to be monitored.</p> <p>Signed BIN16 : Lamp display is executed by a signed 16-bit binary value of a word device.</p> <p>Unsigned BIN16 : Lamp display is executed by an unsigned 16-bit binary value of a word device.</p> <p>BCD16 : Lamp display is executed by a 16-bit BCD (Binary-Coded Decimal) value of a word device.</p> | ○ | × |
| Security | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits.</p> | ○ | × |

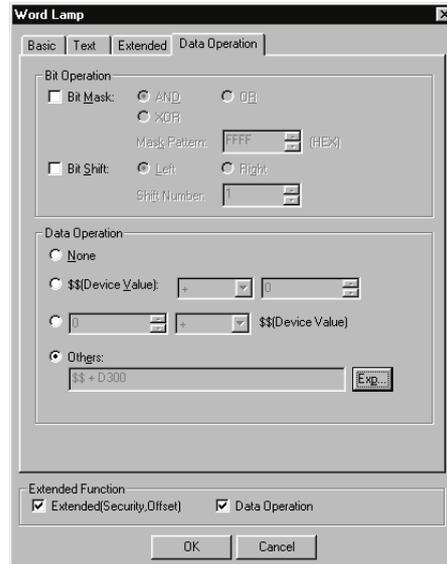
4 Data Operation tab

Set an operational expression for the device monitoring.

Check "Extended" at the bottom of the dialog box to display this tab.

For details of data operation, refer to the following.

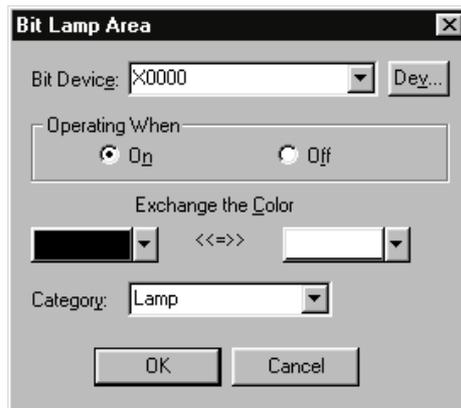
 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | <p>Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format.</p> <p>AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR.</p> | <input type="radio"/> | × |
| | Bit Shift | <p>Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number].</p> <p>Left : Left shift Right : Right shift</p> | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.18.4 Setting items of bit lamp area (for GOT-F900 series only)

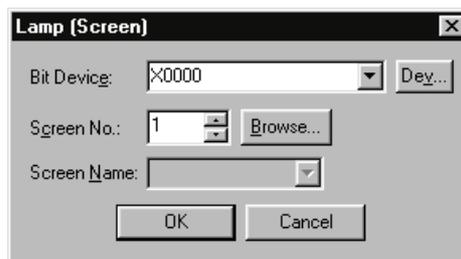
Set the device to be monitored and the colors to be exchanged.



| Items | Description | A | F |
|--------------------|--|---|---|
| Bit Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | × | ○ |
| Operating When | Select the condition for color replacement when bit device is ON/OFF. | × | ○ |
| Exchange the Color | Select 2 colors to be exchanged in 1-dot unit within the arranged area on the screen. | × | ○ |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | × | ○ |

5.18.5 Setting items of screen lamp (for GOT-900 series only)

Set the device to be monitored and overlapped screen of color.

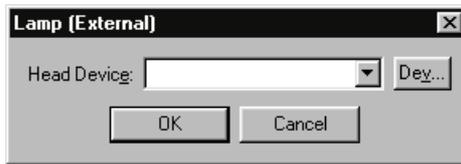


| Items | Description | A | F |
|-------------|--|---|---|
| Bit Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | × | ○ |
| Screen Type | Only base screen can be set here. (Up to 3 screens in total can be overlapped on one and other) | × | ○ |
| Screen No. | Select the screen to be overlapped by screen No. | × | ○ |
| Screen Name | Select the screen to be overlapped by the screen name. | × | ○ |

The image for the object arrangement is not displayed on the screen.

5.18.6 Setting items of external lamp (for GOT-F900 series only)

Set the device that makes the external lamp ON.



| Items | Description | A | F |
|-------------|---|---|---|
| Head Device | Set the head of the bit device that is related to the operation switch lamp on the F930GOT-K or F94* handy GOT (☞ Section 5.1 Device Setting) The ON/OFF of the operation switch lamp is controlled according to the ON/OFF status of a bit device that is set by a PLC. | × | ○ |

The image for the object arrangement is not displayed on the screen.

5.18.7 Cautions

The following is the cautions for using the lamp function.

1 Cautions for drawing

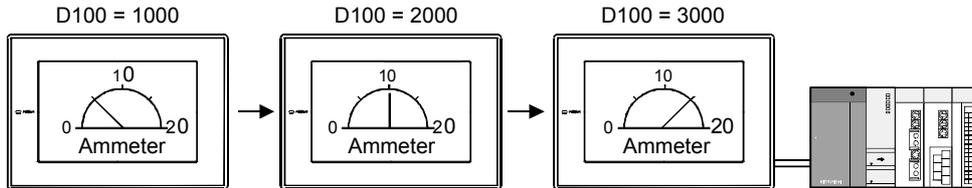
- (1) Maximum number of lamp objects settable on one screen
 - GOT-A900 series: 256
 - GOT-F900 series: 50



5.19 Panelmeter



This function enables meter display (needle display) of the word device value relative to the preset upper/lower limit value.



5.19.1 Required knowledge for panelmeter setting

Panelmeter setting method

Basic functions of the panelmeter are set on the following tabs of 1 to 3.

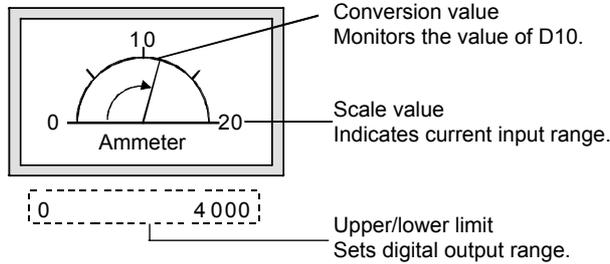
The following example is used to explain the general procedure for the panelmeter setting.

Example) Panelmeter that indicates analog/digital conversion value for 12mA

Current input range : 0 to 20mA

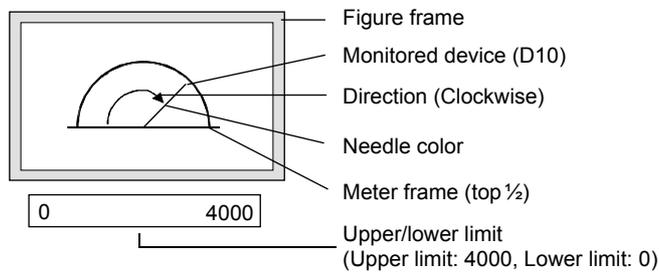
Digital output range : 0 to 4000

Conversion value : D10



1 Basic tab

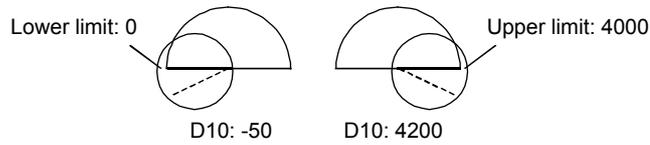
Set the meter type, needle color, shape, i.e., frame and upper/lower limit.



Remark

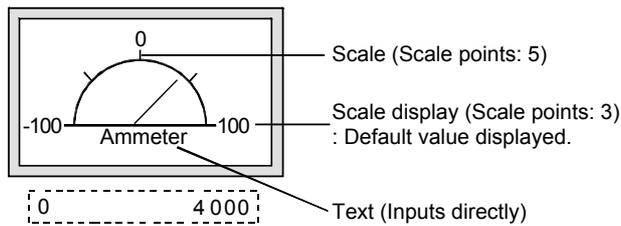
Display of value exceeding upper/lower limit

If the monitor device value exceeds the upper/lower limit value, the graph shows it as the upper/lower limit value.



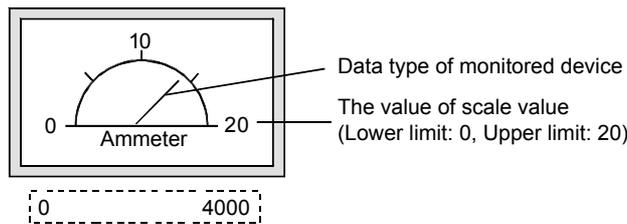
2 Scale/Text tab

Sets the scale and name plate (text) for the panelmeter.



3 Extended tab

Changes the scale values and the data type of the monitored device.



5.19.2 Arrangement and settings

1 Carry out either of the following operations.

- Click on  [Panelmeter].
- Select [Object] → [Panelmeter] from the menu.

2 Click on the position where the panelmeter is to be located to complete the arrangement.

(After arrangement, release the arrangement mode by right-clicking the mouse or using **[ESC]** key.)

3 Double click on the arranged panelmeter to display the setting dialog box. Make the settings with reference to the following explanation.

Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.

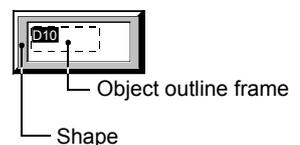
 GT Designer2 Version1 Operating Manual

Remark

Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.

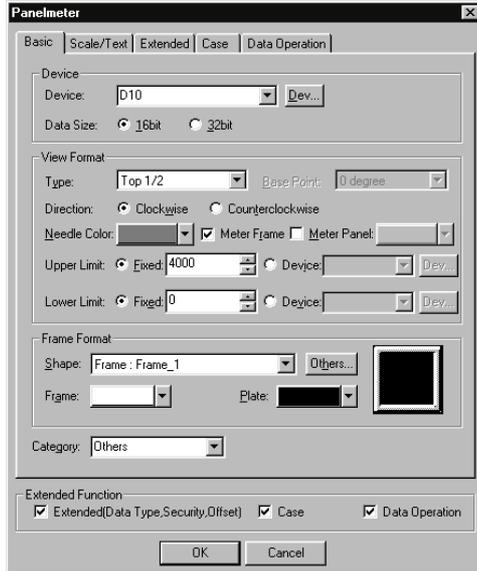
 Section 5.2.3 Object size change



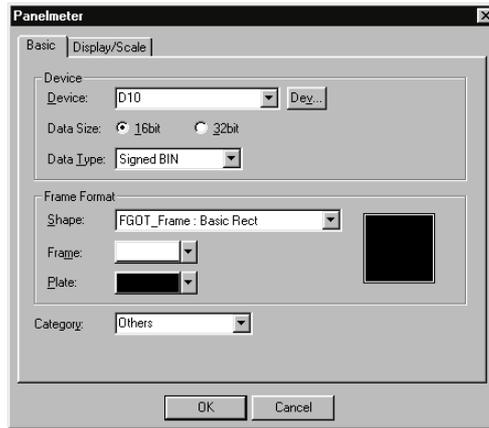
5.19.3 Setting items

1 Basic tab

Set the type and view format (upper/lower limit value, display frame) for the panelmeter.

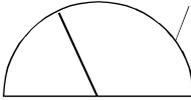
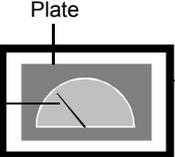


In the case of GOT-A900 series



In the case of GOT-F900 series

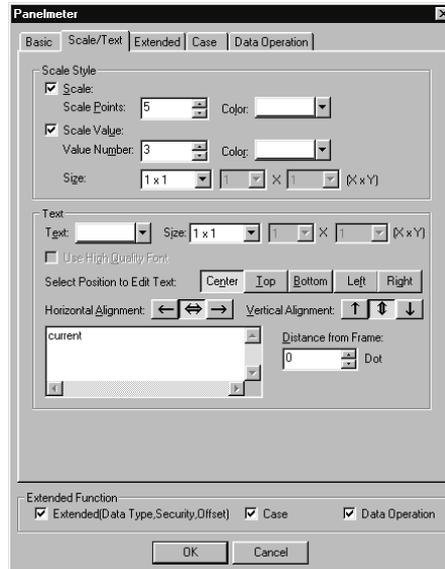
| Items | | Description | A | F |
|-------------|-------------|---|----------------------------------|----------------------------------|
| Device | Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) For GOT-A900 series, the device data format is preset to "Signed BIN (Treats it as signed binary value)" as a default. The device data format is changed on the extended tab. | <input type="radio"/> | <input type="radio"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the word device to be monitored. Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. | <input checked="" type="radio"/> | <input type="radio"/> |
| View Format | Type*1 | Select the panelmeter type. <div style="display: flex; justify-content: space-around; text-align: center;"> <div>Top ¼ </div> <div>Bottom ¼ </div> <div>Left ¼ </div> <div>Right ¼ </div> <div>Top-left ¼ </div> <div>Top-right ¼ </div> <div>¾ </div> </div> <div style="display: flex; justify-content: space-around; text-align: center;"> <div>Bottom-left ¼ </div> <div>Bottom-right ¼ </div> <div>Top ½ </div> <div>Bottom ½ </div> <div>Left ½ </div> <div>Right ½ </div> <div>Full circle </div> </div> | <input type="radio"/> | <input checked="" type="radio"/> |
| | Base Point | When the full circle is selected for [Type], select the meter needle reference point (the position where device lower limit value is displayed) for the meter needle. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Direction*1 | Select the direction of the needle will move according to the monitor device value. The base point of the panelmeter changes depending on the direction. Clockwise : Clockwise rotation Counterclockwise : Counterclockwise rotation | <input type="radio"/> | <input checked="" type="radio"/> |

| Items | | Description | A | F |
|---------------|----------------|---|-----------------------|-------------------------------------|
| View Format | Needle Color*1 | Select the needle color of the panelmeter. (The thickness of needle is fixed to 3 dots.) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Meter Frame | | Check this item to display the meter frame. Line width of the frame is fixed to 1 dot, and the color fixed to white.  | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Meter Panel*1 | | Check this item to color the meter panel face. After checking, select the panel color.  | <input type="radio"/> | <input checked="" type="checkbox"/> |
| View Format | Upper Limit*1 | Select whether the device value range (Lower/Upper limit) is displayed based on the setting by fixed values or specified device values. Fixed : Sets the fixed values as the upper/lower limit values Device : Sets the device values as the upper/lower limit values. ( Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Lower Limit*1 | The range available for this setting depends on the data format of the device to be monitored. Set the data format in advance. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Frame Format | Shape | Set a shape i.e., frame for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. ( Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the shape, i.e., frame/plate color  | <input type="radio"/> | <input type="radio"/> |
| | Plate | Needle color | <input type="radio"/> | <input type="radio"/> |
| Category | | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

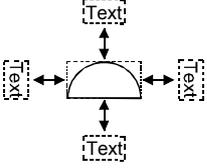
*1 In the GOT-F900 series, set garanation/character.

2 Scale/Text tab (GOT-A900 series only)

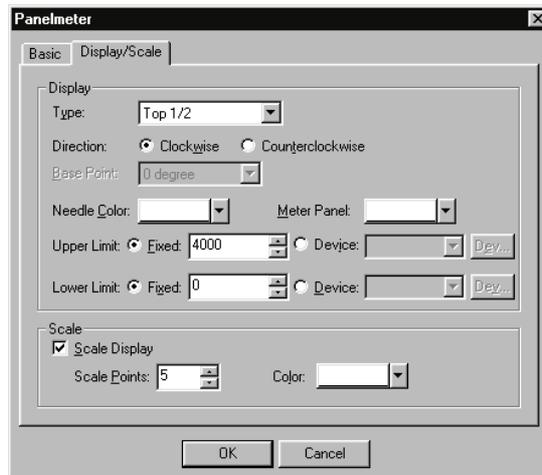
Set the details of the panelmeter (scale upper/lower limit) and the text to be displayed at the center or on the top, bottom, left or right.



| Items | Description | A | F |
|------------------------------|--|-----------------------|-------------------------------------|
| Scale Style | <p>Set the scale and scale value to the panelmeter.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Scale | <p>Check this item to display the scale. After checking, set the number of scale points (2 to 11) and the scale color. Once this is set, the space between each scale tick is automatically defined.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Scale Value | <p>Check this item to display the scale by using numeric values. Set the number of numeric values (2 to 11) in [Value Number] and numeric size (0.5 to 8) in [Size]. The default numeric values are set within the range -100 to 100. When changing the numeric value, set the upper limit/lower limit values for the scale value in the extended tab.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Text | <p>Select the color of text to be displayed.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Size | <p>Select the size of text size to be displayed (0.5 to 8).</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Use High Quality Font | <p>Check this item when using high quality font to display the text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select Position to Edit Text | <p>This selects the display position of text. Five patterns of text can be displayed simultaneously. The following positions (A to E) can be set by the combined use of Select Position to Edit Text (Center/Top/Bottom/Left/Right) and Horizontal/Vertical Alignment.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Horizontal Alignment | <p>Select Position to Edit Text A: Center B: Up C: Bottom D: Left E: Right</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Vertical Alignment | <p>Select Position to Edit Text A: Center B: Up C: Bottom D: Left E: Right</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|-------|---------------------|--|-----------------------|---|
| Text | Distance from Frame | Set the number of dots for the distance between the text and frame. (Up to 100 dots)  | <input type="radio"/> | × |
| | Text | Input the text to be displayed on the panelmeter. (Up to 32 characters) Press the [Enter] key to input a new line at the end of the first line. | <input type="radio"/> | × |

3 Display/Scale tab (GOT-F900 series only)

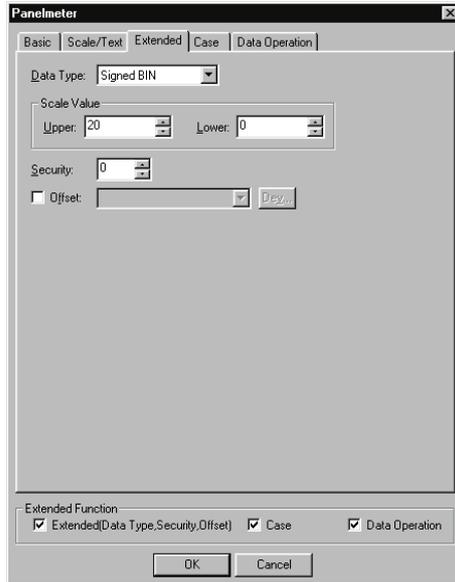


| Items | | Description | A | F |
|---------|---------------|---|---|---|
| Display | Type | Select the type for the panelmeter. | × | ○ |
| | Direction | Select the direction of the needle according to the monitor device value. The base point of panelmeter changes with the direction. Clockwise : Clockwise rotation Counterclockwise : Counterclockwise rotation | × | ○ |
| | Base Point | When the full circle is selected for [Type], select the meter needle reference point (the position where device lower limit value is displayed) for meter needle. | × | ○ |
| | Needle Color | Select the needle color of the panelmeter. (The needle thickness is fixed to 3 dots.) | × | ○ |
| | Meter Panel | Select the panel color of the panelmeter. | × | ○ |
| | Upper Limit | Select whether the device value range (Lower/Upper limit) is displayed based on the setting by fixed values or specified device values. Fixed : Sets the fixed values as the upper/lower limit values Device : Sets the device values as the upper/lower limit values. (Section 5.1 Device Setting) | × | ○ |
| | Lower Limit | The range available for this setting depends on the data format of the device to be monitored. Set the data format in advance. | × | ○ |
| Scale | Scale Display | Check this item to display the scale. After checking, set the number of scale points (2 to 50) and the scale color. Once this is set, the space between each scale tick is automatically defined. | × | ○ |

4 Extended tab (GOT-A900 series only)

Set the security level, offset values, data type of the monitor device and upper/lower limit of scale value.

Check "Extended" at the bottom of the dialog box to display this tab.

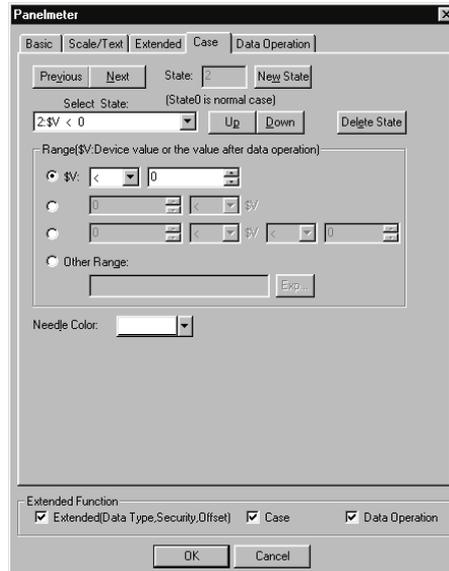


| Items | | Description | A | F |
|-------------|-------|--|---|---|
| Data Type | | <p>Select the data type of the word device to be monitored.</p> <p>Signed BIN : Treats word device value as a signed binary value.</p> <p>Unsigned BIN : Treats word device value as an unsigned binary value.</p> <p>Real : Treats word device value as floating point type real number.</p> <p>BCD : Treats word device value as BCD (binary decimal) value.</p> | ○ | × |
| Scale Value | Upper | <p>Before changing a scale value, set the upper/lower limit values. Example) Change the lower limit value.</p> <p style="text-align: center;">Lower limit change of scale value -100 → 0</p> | ○ | × |
| | Lower | | ○ | × |
| Security | | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function)</p> <p>After checking, set the offset device. (☞ Section 5.1 Device Setting)</p> <p>Data length is fixed to 16 bits.</p> | ○ | × |

5 Case tab (GOT-A900 series only)

Set the change properties of the panelmeter needle color according to the device state.
For details of state, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|---|---|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | ○ | × |
| New State | Creates a new state. | ○ | × |
| Delete State | Deletes a specified state. | ○ | × |
| Previous/Next | Switches the currently editing state to the previous or next state. | ○ | × |
| Up/Down | Changes the priority of the current state. | ○ | × |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | ○ | × |
| Range | Set the range of word device values for display change using a conditional expression. | ○ | × |
| Needle Color | Select the needle color that is displayed corresponding to the set condition. | ○ | × |

For details of *1, refer to the next page.

*1 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

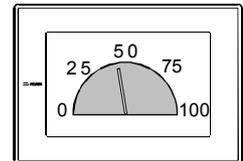
Example) Monitored Device: D100

| Operation priority for setting overlap condition | State No. | Display range | Needle Color |
|--|--------------------------|-----------------------|--------------|
| High | 1 | $21 \leq \$V \leq 60$ | Yellow |
| ↓ | 2 | $\$V \leq 20$ | Red |
| Low | Normal case (State 0) | — | Blue |

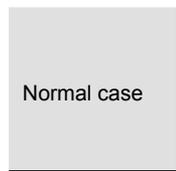
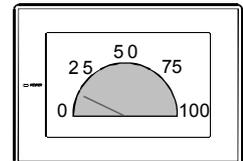
* \$V indicates the monitored device value.



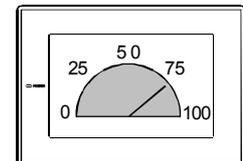
When the device value is between 21 and 60 ($21 \leq \$V \leq 60$), the needle color will be yellow.



When the device value is 20 or below ($\$V \leq 20$), the needle color will be red.



When the condition is other than state 1,2 and 3, the needle color will be blue.

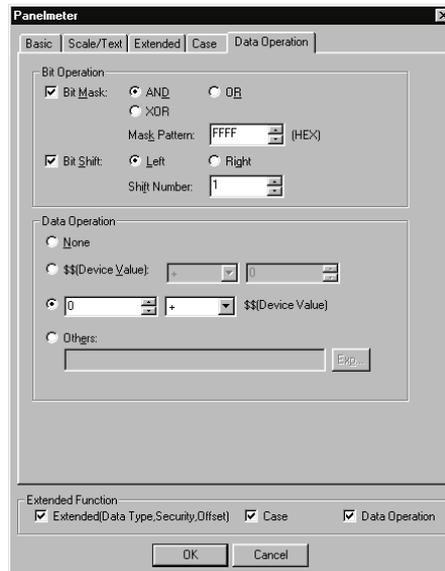


6 Data Operation tab (GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item when to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.19.4 Cautions

The following is the cautions for using the panelmeter function.

1 Cautions for drawing

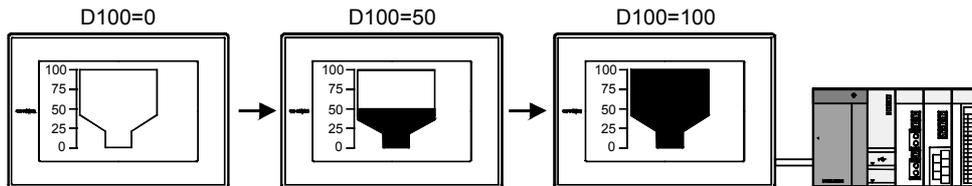
- (1) Maximum number of panelmeter objects settable on one screen
 - GOT-A900 series: 256
 - GOT-F900 series: 50



5.20 Level



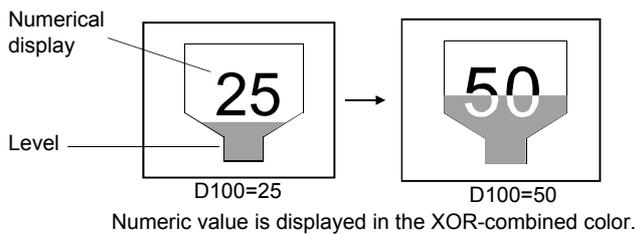
This function is used to fill the specified range (level) equivalent to the device value, corresponding to the percentage of the difference between the upper/lower limit values. With this function, the device value can be shown as a level in any closed figure.



Example

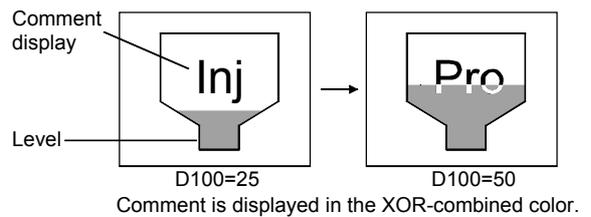
When combined with the numerical display function

Section 5.8 Numerical Display/Numerical Input



When combined with the comment display function

Section 5.12 Comment Display



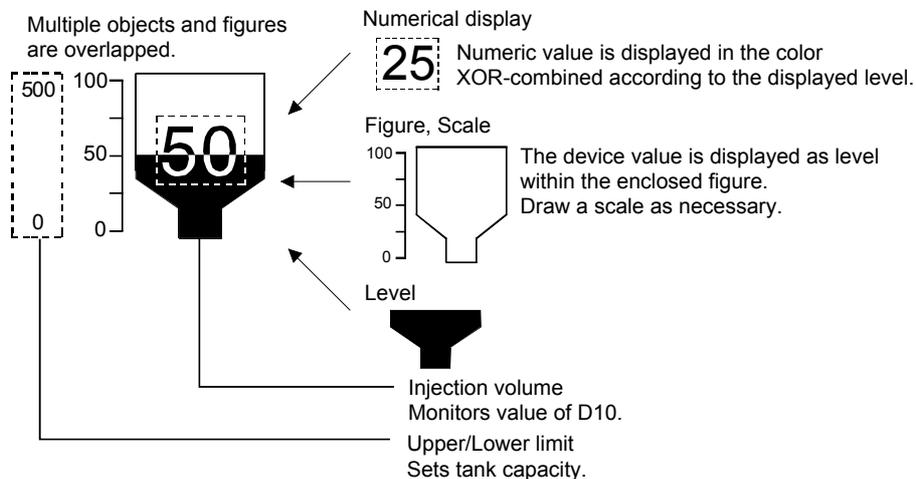
5.20.1 Required knowledge for level setting

A level object can be overlapped with figures and numerical/comment display objects.

The following example explains how to make the settings for overlapping a level object with figures and numerical display objects.

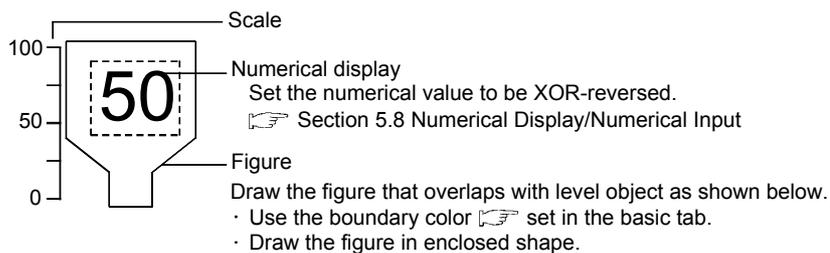
Example) Level for tank Injection volume

Tank capacity : 0 to 500 liter
Injection volume : D10
Injection rate : 0 to 100%

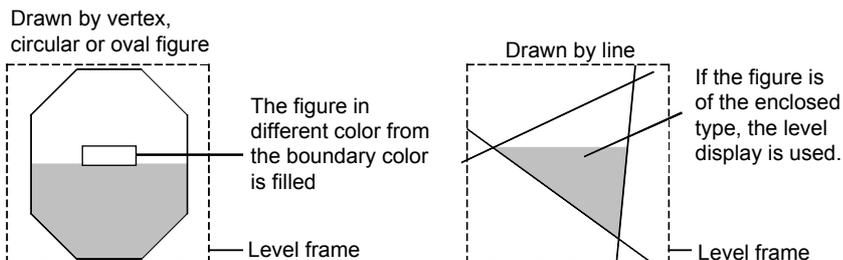


1 Setting figure, scale and numerical display

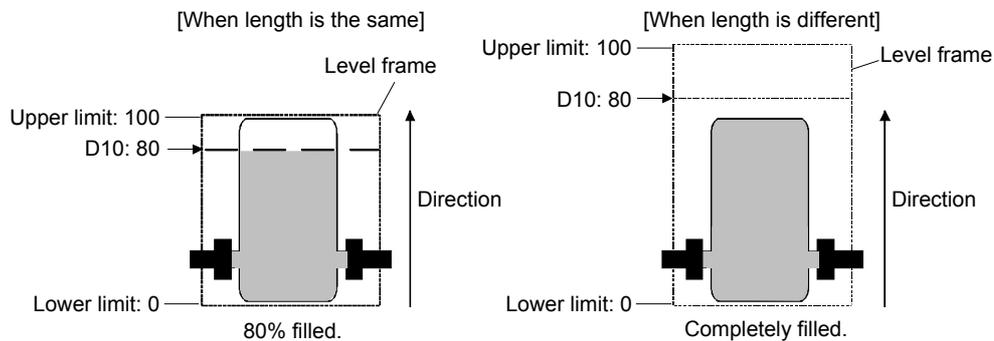
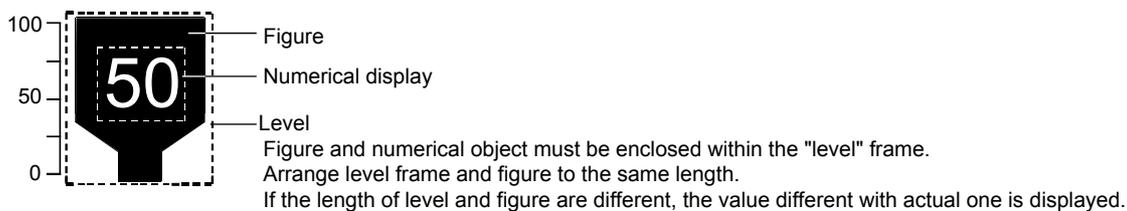
Make the settings for figure, scale and numerical display before arranging the "level" object.



Example) Figure drawn for level display

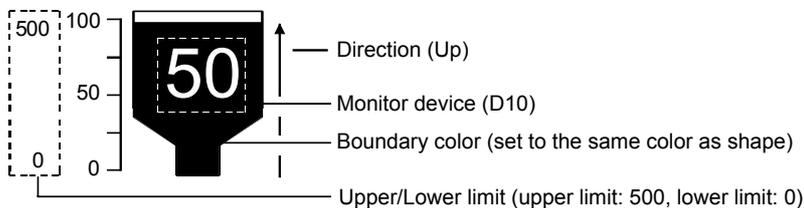


2 Level and figure overlapped



3 Basic Tab

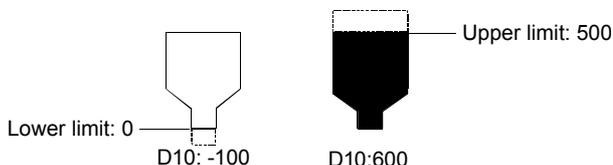
Set the direction, boundary color and upper/lower limit of level.



Remark

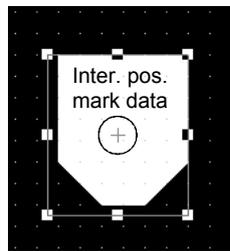
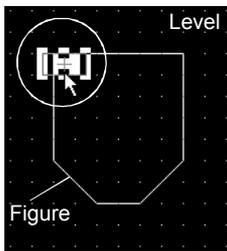
Display the value out of the upper/lower limit

When the monitor device value exceeds upper limit, it will be displayed as the new upper limit. When falling below lower limit, it will not be displayed.

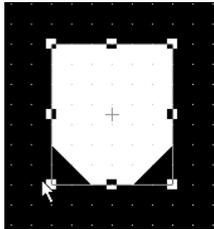


5.20.2 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [Level Graph].
 - Select [Object] → [Level] from the menu.
- 2 As a dotted frame that indicates the display range of the level is displayed, click on the area to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 To display the level within a figure, adjust the dotted frame in order that it will fit the figure.
If the internal position mark (+) is overlapped with the figure and then reversed, this means the level display has been arranged.



- 4 Adjust the dotted line of level display in order that it will fit the outline of the figure.



- 5 Double click on the arranged level object to display the setting dialog box. Make the settings with reference to the following explanation.



Easier setting method

Using the property sheet enables direct on-screen object setting.

 GT Designer2 Version1 Operating Manual

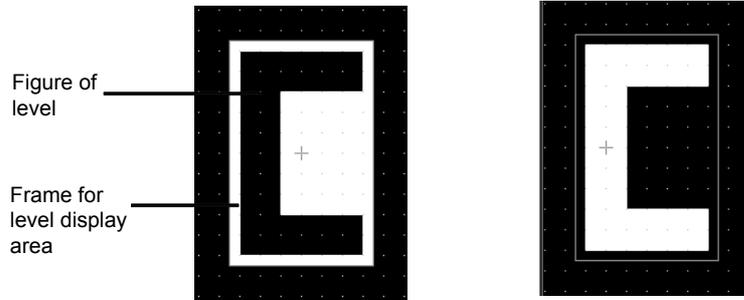
Remark

When internal position mark (+) are not overlapped with the figure

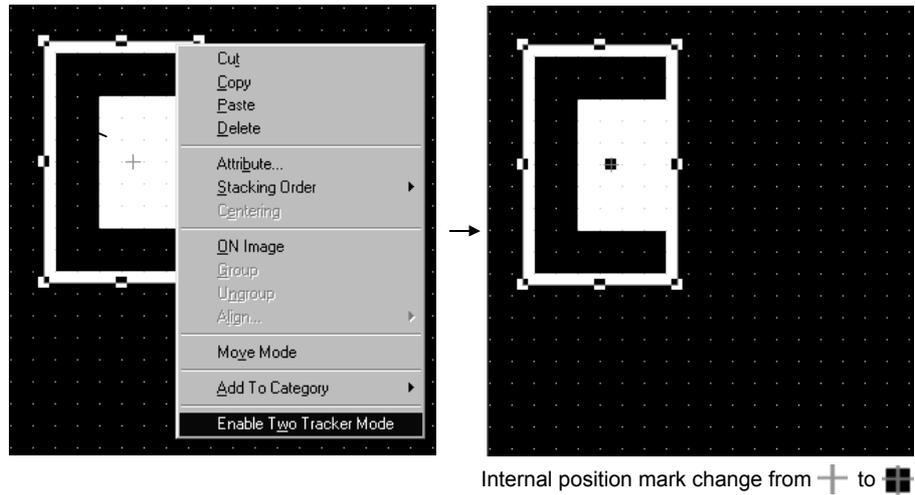
When internal position marks are not overlapped with the figure, move the internal position mark according to the following procedure.

The level display is not applicable to the figure that is not overlapped with internal position mark.

When level display is valid When level display is invalid



- 1 Right click on the frame for level display, and click on [Enable Two Tracker Mode].



- 2 Drag the internal position mark in order it will overlap with the figure.

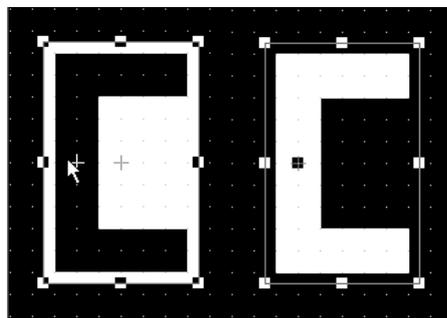
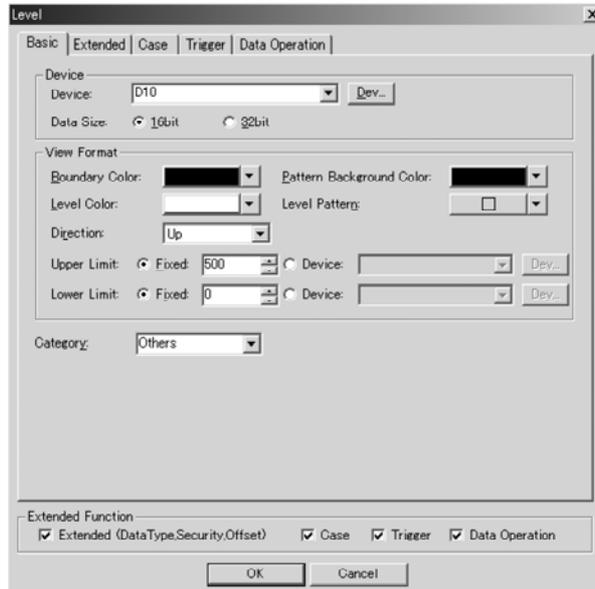


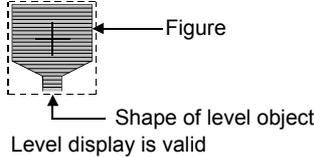
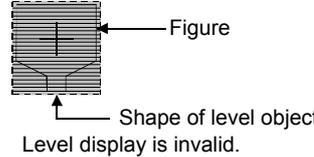
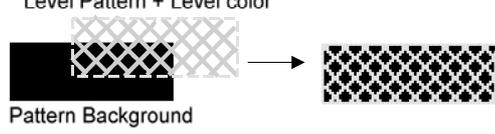
Figure is reversed and level display is valid.

5.20.3 Setting items

1 Basic tab

Set the upper/lower limit and display attribute (color, direction) for monitor device and level.



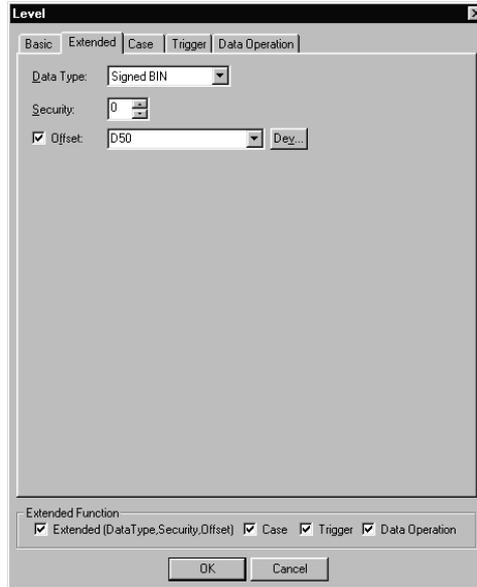
| Items | | Description | A | F |
|-------------|--------------------------|---|-----------------------|-------------------------------------|
| Device | Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) For GOT-A900 series, the device data format is preset to "Signed BIN (Treats it as signed binary value)" as a default. The device data format is changed on the extended tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| View Format | Boundary Color | Select the color set to line of the figure for level display. The same color as the figure for level display must be set. Example 1) When boundary color is the same with line of the figure for level display  Level display is valid Example 2) When boundary color is different from line of the figure for level display  Level display is invalid. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Level Color | Select filling color for level display. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Level Pattern | Select the pattern and background color for level display. The selected pattern in the level color is displayed on the background color. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Pattern Background Color | (Example) Pattern Background :  Level Pattern :  Level color :   Level Pattern + Level color Pattern Background | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|-------------|-------------|---|-----------------------|---|
| View Format | Direction | <p>Select the direction the color changes when the monitor device value increases.</p> <p>[Right] [Left] [Up] [Down]</p>  | <input type="radio"/> | × |
| | Upper Limit | <p>Select whether the device value range (upper/lower limit) for level display is displayed based on the setting by fixed values or specified device values.</p> <p>Fixed : Sets the fixed values as the upper/lower limit values</p> <p>Device : Sets the device values as the upper/lower limit values.</p> <p>(☞ Section 5.1 Device Setting)</p> | <input type="radio"/> | × |
| | Lower Limit | <p>The range available for this setting depends on the data format of the device to be monitored. Set the data format in advance.</p> | | |
| Category | | <p>When allocating category to the object, select a proper category.</p> <p>(☞ GT Designer2 Version1 Operating Manual)</p> | <input type="radio"/> | × |

2 Extended tab

Set the security and offset.

Check Extended Function at the bottom of dialog box to display this tab.

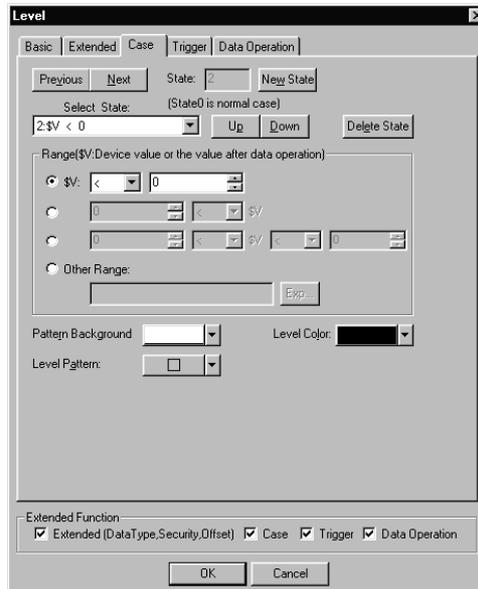


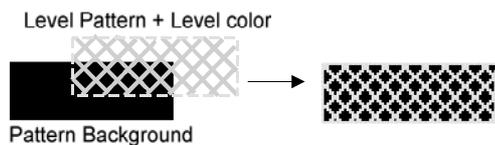
| Items | Description | A | F |
|-----------|--|---|---|
| Data Type | <p>Select the data type of the word device to be monitored.</p> <p>Signed BIN : Treats word device value as a signed binary value.</p> <p>Unsigned BIN : Treats word device value as an unsigned binary value.</p> <p>Real : Treats word device value as floating point type real number.</p> <p>BCD : Treats word device value as BCD (binary decimal) value.</p> | ○ | × |
| Security | <p>When using the security function, set the security level (1 to 15).</p> <p>When not using the function, set it to "0".</p> <p>(Section 5.7 Security Function)</p> | ○ | × |
| Offset | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (Section 5.6 Offset Function)</p> <p>After checking, set the offset device. (Section 5.1 Device Setting)</p> <p>Data length is fixed to 16 bits.</p> | ○ | × |

3 Case tab

The attribute can be changed on this setting depending on the device status.
For details of states, refer to the following.

 Section 5.3 State Setting



| Items | Description | A | F |
|--------------------|--|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous /Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Level Color | Select the filling color for level. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Level Pattern | Select the pattern and background color for level display. The selected pattern in the level color is displayed on the background color. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Pattern Background | (Example) Pattern Background :  Level Pattern :  Level color :   | <input type="radio"/> | <input checked="" type="checkbox"/> |

For details of *1, refer to the next page.

*1 State

- (1) Display for condition other than those set on the Case tab
When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.
- (2) Display when conditions are overlapped
When conditions are overlapped, a state with smaller No. has priority.

Example) Level object and comment are combined.

● Level

Monitor device : D100
Direction : Up
Upper limit : 100
Lower limit : 0

● Comment display

Monitor device : D100
Display mode : Transparent
Register comment : Comment No. 1.....Water amount increases
Comment No. 2Water amount decreases
Comment No. 3Proper

Operation priority for setting overlap condition

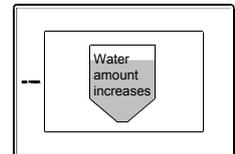
High
↓
Low

| State No. | Display range | Level | Comment display |
|-----------------------|---------------|-------------|------------------------|
| | | Level color | Display comment |
| 1 | $71 \leq \$V$ | Red | Water amount increases |
| 2 | $\$V \leq 30$ | Yellow | Water amount decreases |
| Normal case (State 0) | — | Light blue | Proper |

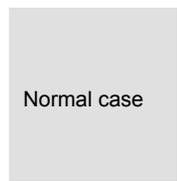
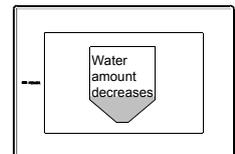
* \$V represents the monitor device value



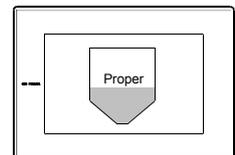
When the device value is 71 or greater ($71 \leq \$V$), the level color will appear as red and the text, "Water amount increases", will be displayed.



When the device value is 20 or less ($\$V \leq 20$), the level color will appear as yellow and the text, "Water amount decreases" will be displayed.



Under the condition other than the range of state 1 to 3, the level color will appear as light blue and the text, "Proper", will be displayed as text.



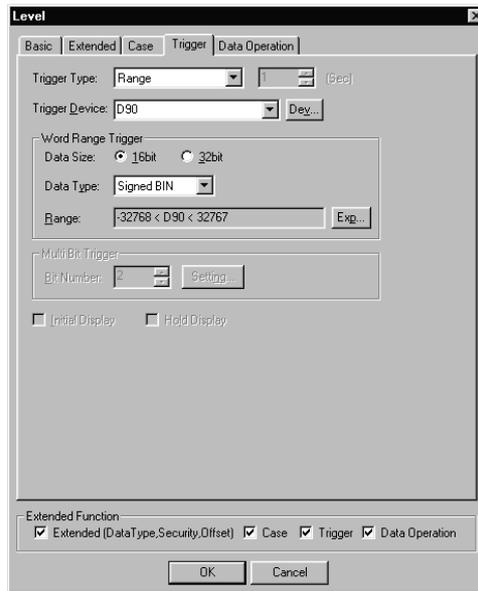
4 Trigger Tab

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



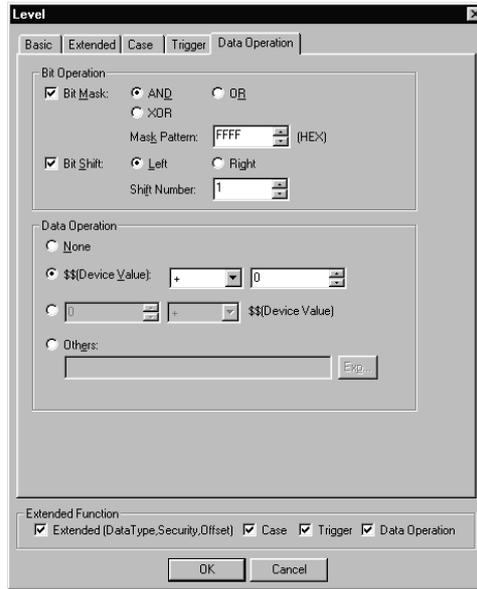
| Items | Description | A | F |
|--------------------|--|-----------------------|-------------------------------------|
| Trigger Type | Select the trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● OFF ● Fall ● Range ● ON ● Rise ● Sampling ● Multi bit trigger | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | Bit Number | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

5 Data operation tab

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.20.4 Cautions

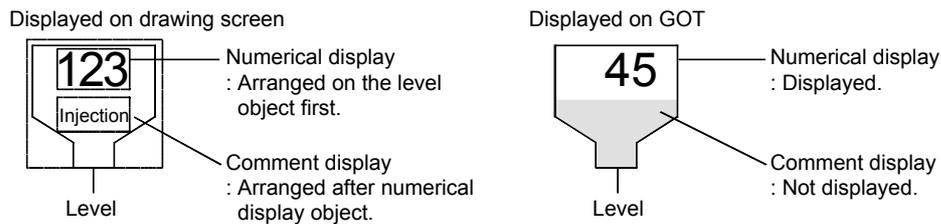
This section provides the cautions when using the level function.

1 Maximum number of level objects settable on one screen: 256 objects

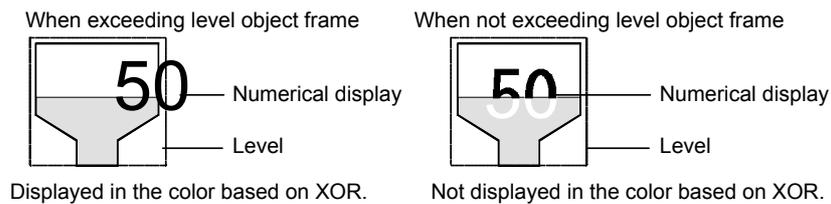
2 Cautions when numerical/comment display object is arranged on a level object

(1) Cautions for arrangement

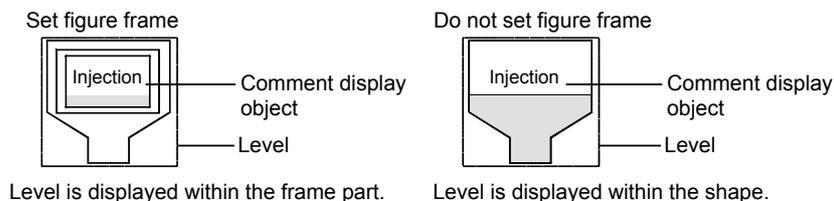
- (a) Only one numerical/comment can be displayed with a level object. Second or later object cannot be displayed if one object has been overlapped with the level object.



- (b) Arrange within level frame.
Make sure to arrange the object in order that it will not be out of the shape of level frame. If arranged to be out of the frame, it will not be displayed in the color based on XOR.



- (c) Make sure not set the shape, i.e., frame for numerical /comment display object. The level display is performed within the frame part of shape

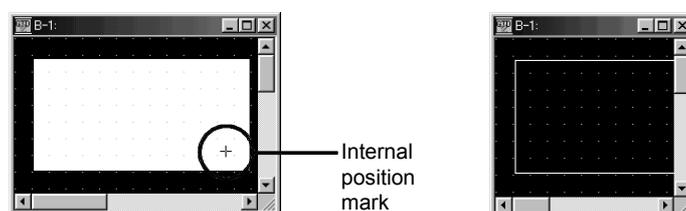


(2) Cautions for use

- (a) The numerical/comment display will be updated when the level is updated. The settings (trigger) to update the display for numerical display/comment display is not relevant.
- (b) Numerical display/Comment display is not blinked or reversed.

3 Display on the drawing screen

If internal position mark is not displayed on the drawing screen, the level will not be filled.

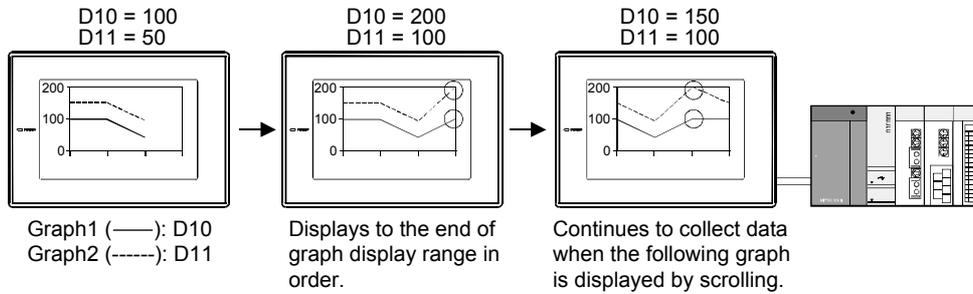




5.21 Trend Graph



This function is used to collect word device data continuously and display it in trend graph.



5.21.1 Required knowledge for trend graph setting

1 Setting method of trend graph

The basic functions of trend graph are set on the following ① to ④ tab.

The following example explains the general procedures for setting trend graph.

Example) Trend graph for the comparison between Plan and Actual

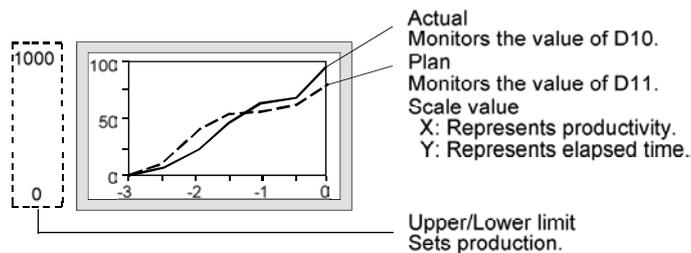
Productivity : 0 to 100%

Time : 0 to 3

Production : 0 to 1000

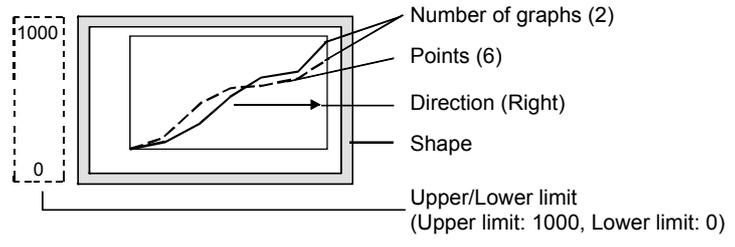
Plan (Graph 1) : D10

Actual (Graph 2) : D11



1 Basic tab

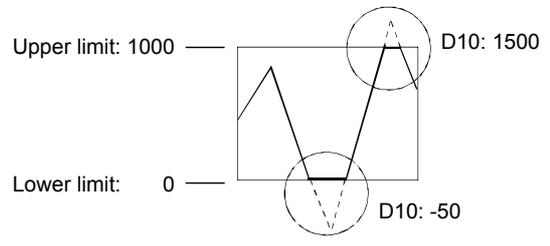
Set the number of graphs, upper/lower limit, number of points and figure.



Remark

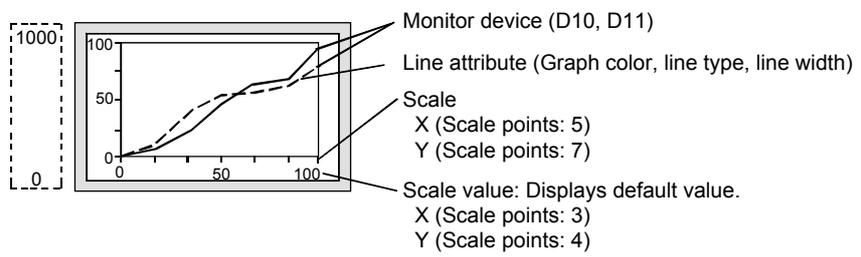
Displaying the value exceeding upper/lower limit

When the monitor device value exceeds upper/lower limit, it will be displayed as new upper/lower limit on the graph.



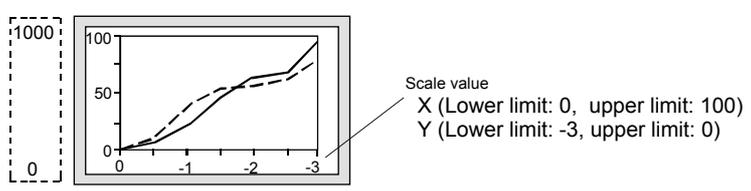
2 Device/Scale tab

Set the device to be monitored, line attribute and scale.



3 Extended tab (in the case of GOT-A900 series)

Change the numeric value used as scale.



4 Trigger tab (in the case of GOT-A900 series)/other tab (in the case of GOT-F900 series)

Set the timing of collecting data.

The default timing of collecting data is set in 1 second (1000ms) cycle.

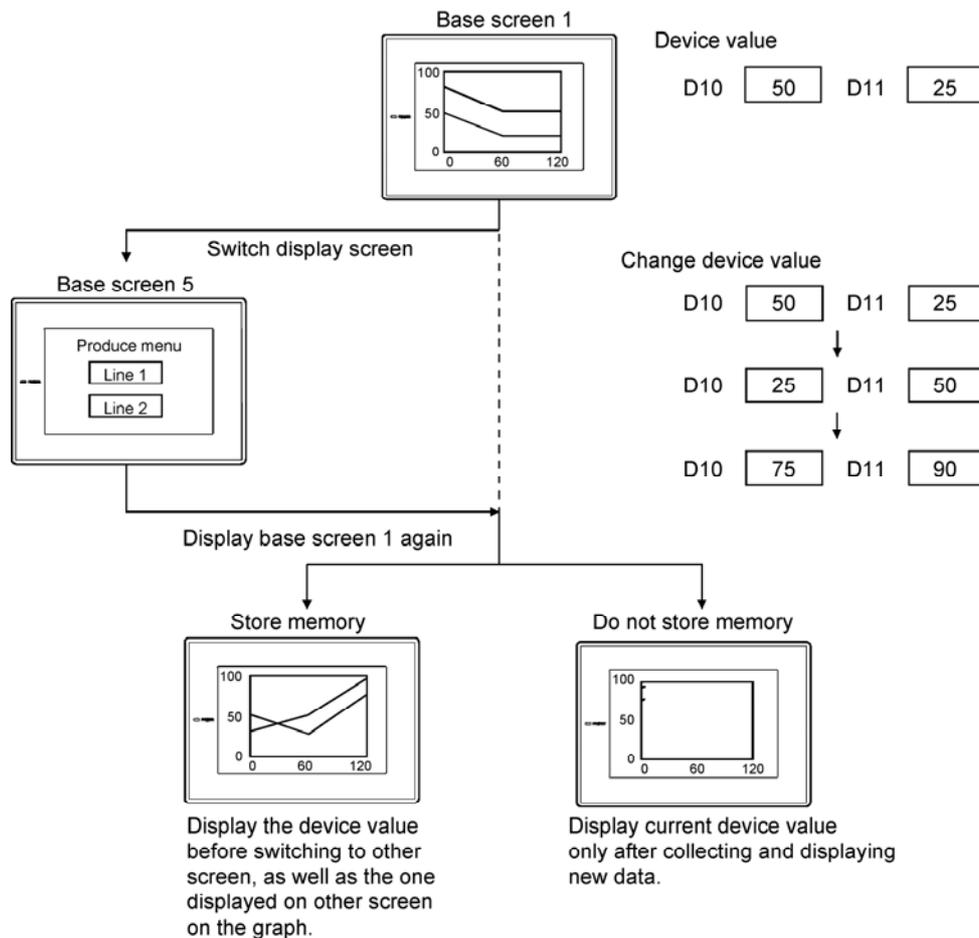
2 Store memory

The trend graph collects data only when the screen including the graph is displayed. When switching to other screen, the collected data will be cleared.

Make sure to check [Store Memory] to collect data even after switching to other screen.

The status of device value is usually monitored and stored in the internal memory of GOT. Set [Store Memory] on basic tab.

(Example) Monitored device: D10, D11



Point

Timing of erasing the display stored in memory

The data stored in memory will be erased according to the following timing.

- When the condition for clearing trigger is enabled
- When GOT is reset or power supply is OFF.

5.21.2 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [Trend Graph].
 - Select [Object] → [Graph] → [Trend Graph] from the menu.
- 2 Click on the position where the trend graph is to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged trend graph to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



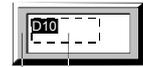
Remark

Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.



Section 5.2.3 Object size change



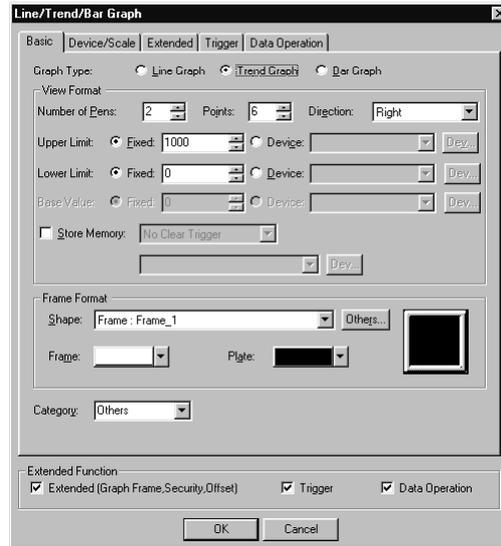
— Object outline frame
— Shape

5.21.3 Setting items

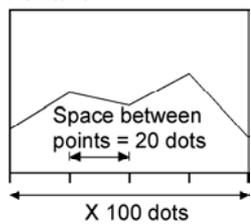
This dialog box is common to the settings for displaying the three types of graphs (line/trend/bar graph). This section provides the explanation about setting trend graph.

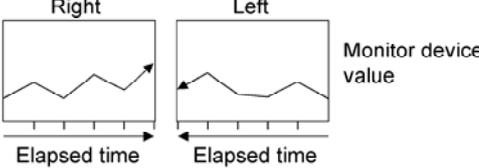
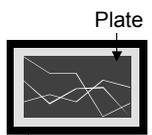
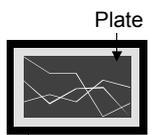
1 Basic tab

Set the graph type (line/trend/bar graph), number of graphs, upper/lower limit and object shape.



(Example: In the case of GOT-A900 series)

| Items | | Description | A | F |
|-------------|------------------|--|-----------------------|-----------------------|
| Graph Type | | Select the graph to be set (line graph/trend graph/bar graph). This section explains the setting for trend graph. | <input type="radio"/> | <input type="radio"/> |
| View Format | Number of Graphs | Set the number of graphs to be displayed. GOT-A900 series : 1 to 8 GOT-F900 series : 1 to 4 | <input type="radio"/> | <input type="radio"/> |
| | Points | Set the points (the number of collected data) to be displayed on the graph. GOT-A900 series : up to 100 (2 to 100) points can be set. GOT-F900 series : up to 50 (0, 2 to 50) points can be set. The space between each point is automatically specified by the set points and display range of X. (Example) Points: 5  | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|--------------|--|--|-------------------------------------|-------------------------------------|
| View Format | Direction | Select the direction for graph.  | <input type="radio"/> | <input type="radio"/> |
| | Upper Limit | Select whether the device value range (Lower/Upper limit) for trend graph is displayed based on the setting by fixed values or specified device values. Fixed : Sets the fixed values as the upper/lower limit values Device : Sets the device values as the upper/lower limit values. ( Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| | Lower Limit | The range available for this setting depends on the data format of the device to be monitored. Set the data format in advance. | <input type="radio"/> | <input type="radio"/> |
| | Base Value | Not available for trend graph. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Store Memory | Check this item to continually collect data when the screen in which trend graph is not set is displayed. The data as many as the number of points for the graph are stored in the GOT internal memory. Select the timing to erase the data stored in the GOT internal memory. No Clear Trigger : Does not clear the data stored in the GOT internal memory. Clear ON Trigger Rise : Clears the data stored in the GOT internal memory when the bit device rises (turns ON). Clear ON Trigger Falls : Clears the data stored in the GOT internal memory when the bit device falls (turns OFF). When [Clear Trigger Rise] or [Clear Trigger Fall] is selected, set the bit device for the clear trigger. ( Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Frame Format | Shape | Set a shape for the object. When [None] is selected, no shape will be displayed. By clicking on the <input type="text" value="Others"/> button, shapes other than those in the list box or library shapes can be selected. ( Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame | Select the shape color/plate color.  | <input type="radio"/> | <input type="radio"/> |
| | Plate |  | <input type="radio"/> | <input type="radio"/> |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> | |

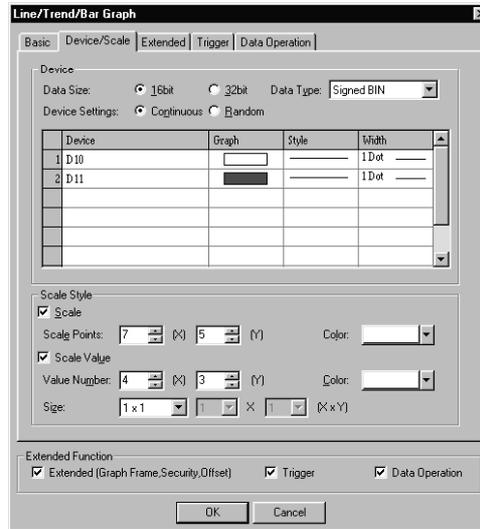
For details of *1, refer to the following.

*1 Timing for recognizing clear trigger

The timing of recognizing clear trigger in GOT is same as that set on [Trigger Type] (trigger tab).
When [Sampling], [ON Sampling], [OFF Sampling] is set in [Trigger Type], the device ON/OFF status set for clear trigger must be retained longer than the cycle set in [Trigger Type].

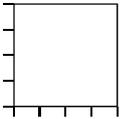
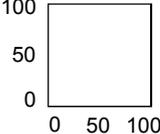
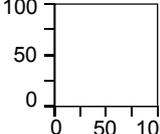
2 Device/Scale tab

Set the display attribute (graph color/width/type/scale) of graph and monitor device.



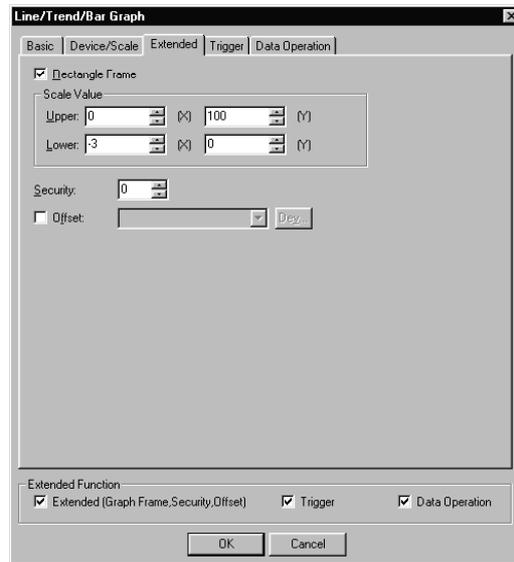
(Example: In the case of GOT-A900 series)

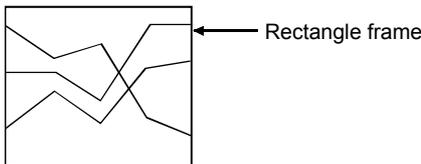
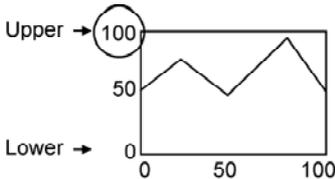
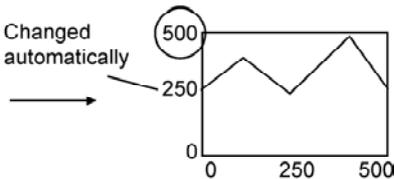
| Items | | Description | A | F |
|--------|------------------------|---|-----------------------|--------------------------|
| Device | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the word device to be monitored. In the case of GOT-A900 series Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. Real : Treats word device value as floating point type real number. BCD : Treats word device value as BCD (binary decimal) value In the case of GOT-F900 series Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. | <input type="radio"/> | <input type="radio"/> |
| | Device Settings | When displaying more than two graphs, select the method of setting the device to be monitored in each graph. Continue : The device to be monitored in the first graph will be set as the head device. The devices will be consecutively assigned to the second and later graph. Random : One device to be monitored is set for each graph. (Only for A-900 series only) | <input type="radio"/> | <input type="checkbox"/> |
| | Display Attribute View | Set the graph attributes. Click on each item of the list in [Device] to display the setting dialog box. Then, make the settings as follows: Device : Enter the word device name here, or click on the <input type="text" value="Dev"/> button and select a word device from the given options to set the word device for monitoring. (Section 5.1 Device Setting) Graph color : Select the graph color. Style : Select the graph style. Width : Select the graph width (1 to 7 dots). | <input type="radio"/> | <input type="radio"/> |

| Items | Description | A | F |
|-------------|---|-----------------------|-------------------------------------|
| Scale Style | <p>Set the scale and scale value to the trend graph. Example)</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Scale (X: 5) (Y: 5)</p> </div> <div style="text-align: center;">  <p>Scale value (X: 3) (Y: 3)</p> </div> <div style="text-align: center;">  <p>Scale is displayed in combination with scale value.</p> </div> </div> | <input type="radio"/> | <input type="radio"/> |
| Scale | <p>Check this item to display the scale. After checking, set the number of scale points, i.e., tick marks (2 to 11) and the scale color. Once this is set, the space between the scale ticks are automatically defined.</p> | <input type="radio"/> | <input type="radio"/> |
| Scale Value | <p>Check this item to display the scale by using numeric values. Set the number of numeric values (2 to 11) in [Value Number] and numeric size (0.5 to 8) in [Size]. The default numeric values for both height and width are set to any of 0 to 100. When changing the numeric value, set the upper limit/lower limit values for the scale value in the extended tab.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |

3 Extended tab (for GOT-A900 series only)

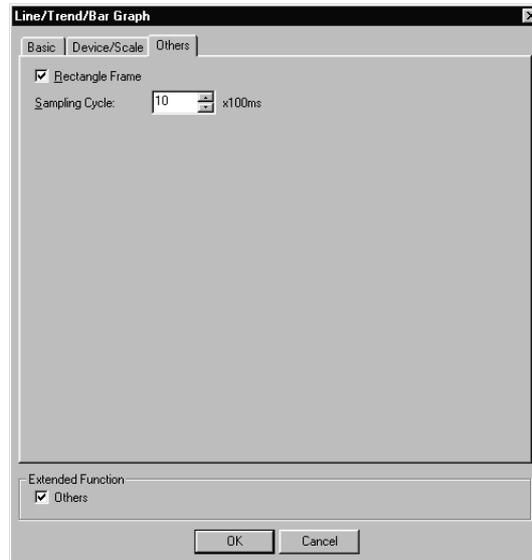
Set the security and offset and the upper/lower limit of scale value.
Check Extended Function at the bottom of dialog box to display this tab.

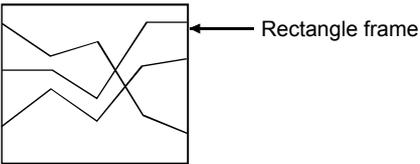


| Items | | Description | A | F |
|-----------------|-------|---|---|---|
| Rectangle Frame | | <p>Check this item to display the frame, i.e., shape for the graph.</p>  | ○ | × |
| Scale Value | Upper | <p>Before changing a scale value, set the upper/lower limit values. Set the scale value for height (Y axis) and width (X axis). Example) Change the upper limit of the scale value on Y</p>  | ○ | × |
| | Lower | <p>Changed automatically</p>  <p>Change scale value on Y Upper: "100" → "500"</p> | ○ | × |
| Security | | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits.</p> | ○ | × |

4 Other tabs (for GOT-F900 series only)

Check Extended Function at the bottom of dialog box to display this tab.



| Items | Description | A | F |
|-----------------|---|---|---|
| Rectangle Frame | <p>Check this item to display the frame, i.e., shape for the graph.</p>  | × | ○ |
| Sampling Cycle | <p>Read the monitor device data for each setting sampling from PLC CPU and then display them.</p> | × | ○ |

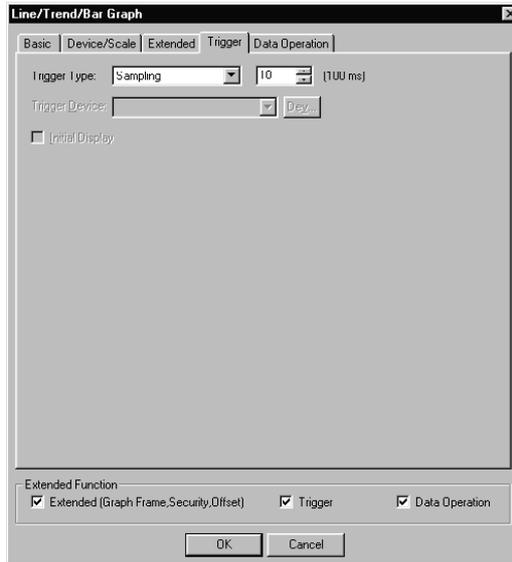
5 Trigger tab (for GOT-A900 series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



| Items | Description | A | F |
|-----------------|---|-----------------------|---|
| Trigger Type *1 | Select the trigger for displaying the object. Set sampling (0.1 to 3600 seconds) with 100ms as unit when selecting [Sampling] [ON Sampling] [OFF Sampling]. ● Rise ● Fall ● Sampling ● ON Sampling ● OFF Sampling | <input type="radio"/> | × |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | × |

For details of *1, refer to the following.

* 1 The measurement when graph display cannot be updated normally in the set sampling.

When data cannot be collected or graph display cannot be updated in the set sampling, the trend graph will be displayed with the value different from actual one.

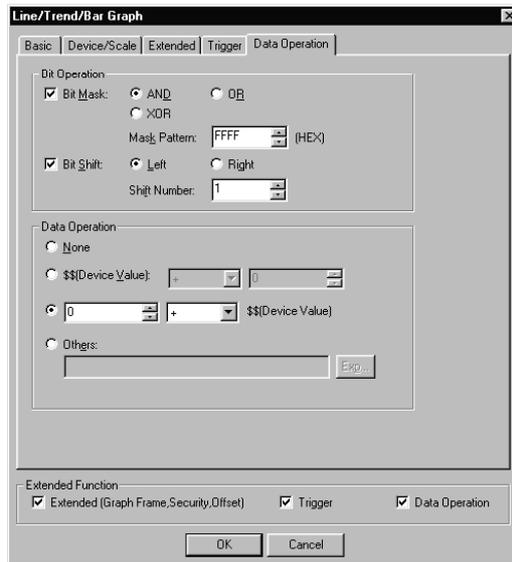
To display the trend graph correctly, check whether the trend graph is displayed based on the actual device value, and make adjustment to prolong setting sampling.

6 Data operation (for GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.21.4 Cautions

This section provides the cautions when using the trend graph function.

1 Cautions for drawing

(1) Maximum number of trend graph objects that can be set for one screen

- GOT-A900 series: up to 24 objects
- GOT-F900 series: up to 1 object

(2) When using store memory

For the trend graph with store memory set, up to 16 objects can be set on the whole project.

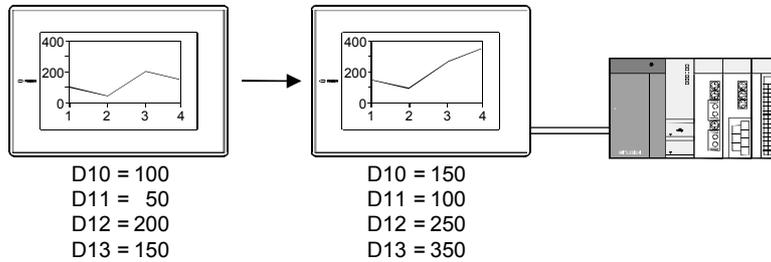
(3) Cautions in using the F920GOT-K

The trend graph function is not provided in the F920GOT-K.

5.22 Line Graph



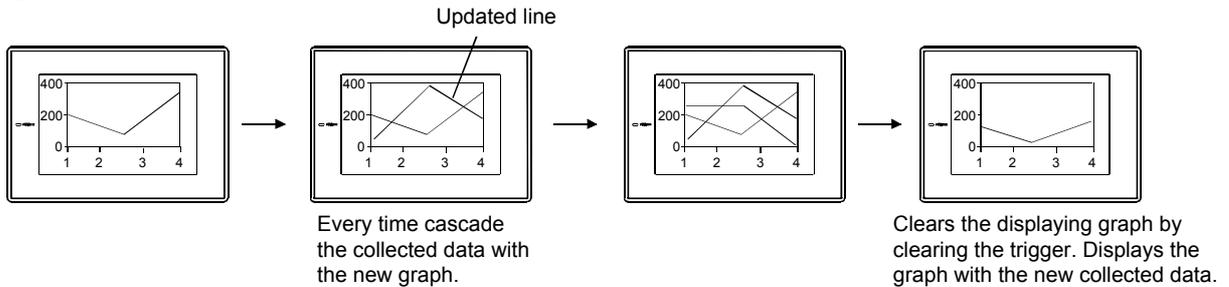
This function enables multiple word device data to be collected in batch and displayed in a line graph.



Example

Compare the data with the ones previously collected. (Display the locus)

☞ Set on Extended tab.



5.22.1 Required knowledge for line graph setting

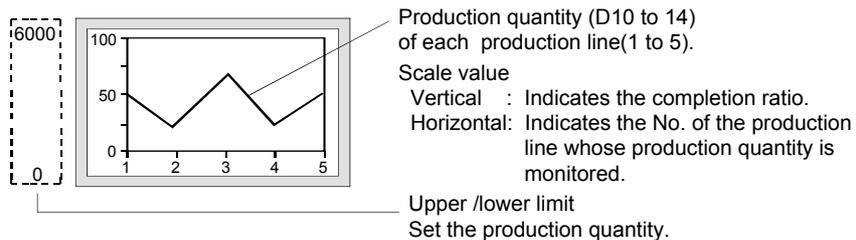
Method for line graph setting

Set the basic function of the line graph on the following tabs, 1 to 3.

The following line graph example explains the general procedure for the line graph setting.

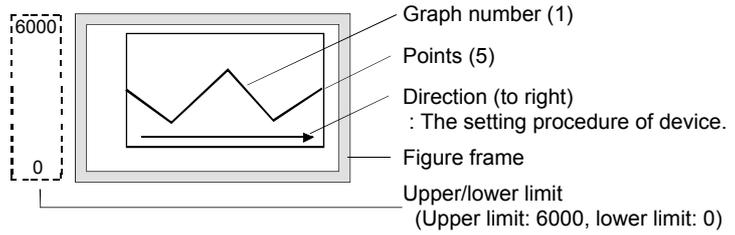
Example) Line graph for displaying production quantity of multi production line.

- Achievement ratio : 0 to 100%
- Production quantity : 0 to 6000
- Actual quantity (line 1) : D10
- (line 2) : D11
- (line 3) : D12
- (line 4) : D13
- (line 5) : D14



1 Basic tab

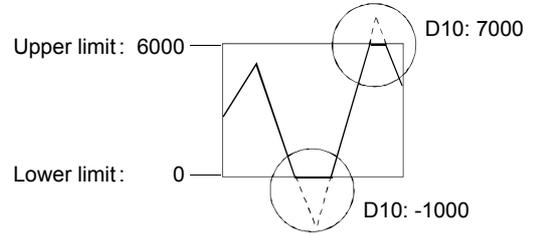
Set the number of graphs, the upper and lower limit values, the number of points and the shape.



Remark

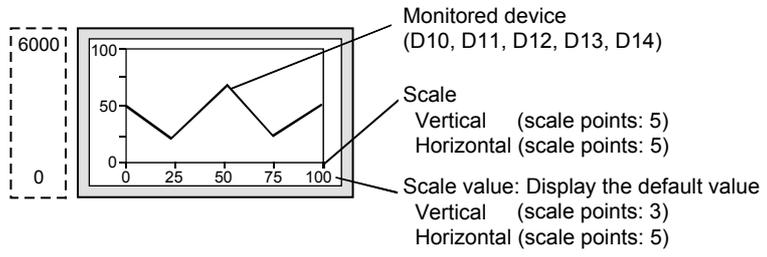
Display of values beyond the upper/lower limit.

When a value of the monitored device exceeds the upper or lower limit, it is displayed numerically on the graph.



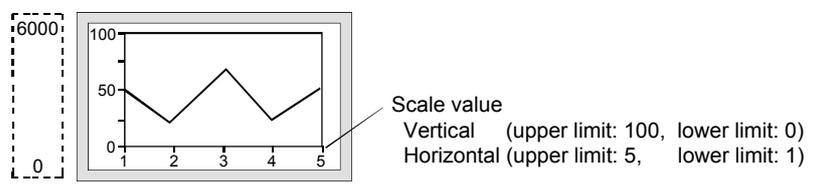
2 Device/Scale tab

Set the monitored devices and the scale.



3 Extended tab

Scale values can be changed on this tab.



5.22.2 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [Line Graph].
 - Select [Object] → [Graph] → [Line Graph] from the menu.
- 2 Click on the position where the line graph is to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged line graph to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



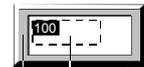
Remark

Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.



Section 5.2.3 Object size change



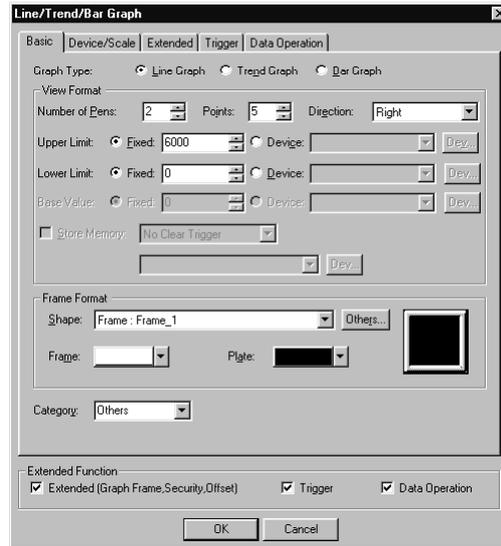
Object outline frame
Shape

5.22.3 Setting items

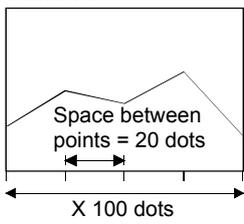
This dialog box is common to the settings for displaying the three types of graphs (line/trend/bar). This section provides the explanation about setting a line graph.

1 Basic tab

Set the graph type (line/trend/bar graph), number of graphs, upper and lower limit and object shape.



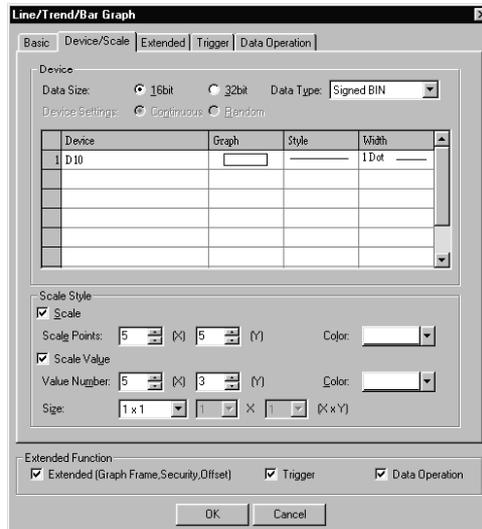
(Example: In the case of GOT-A900 series)

| Items | | Description | A | F |
|-------------|------------------|--|-----------------------|-----------------------|
| Graph Type | | Select the graph to be set (line graph/trend graph/bar graph). This section explains the setting for line graph. | <input type="radio"/> | <input type="radio"/> |
| View Format | Number of Graphs | Set the number of graphs to be displayed. GOT-A900 series : 1 to 8 GOT-F900 series : 1 to 4 | <input type="radio"/> | <input type="radio"/> |
| | Points | Set the points (the number of monitored devices) to be displayed in one graph. GOT-A900 series : 2 to 500. GOT-F900 series : 2 to 50. The space between points is automatically decided by the set points and the display range of X. (Example) Points : 5  | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|----------------|--|---|-----------------------|-----------------------|
| View Format | Direction | <p>Select the setting direction for the graph.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>To right</p> <p>Value of the monitored device</p> <p>Direction of the set monitored device</p> </div> <div style="text-align: center;"> <p>To left</p> <p>Value of the monitored device</p> <p>Direction of the set monitored device</p> </div> </div> | <input type="radio"/> | <input type="radio"/> |
| | Upper Limit | <p>Select whether the device value range (Lower/Upper limit) for line graph is displayed based on the setting by fixed values or specified device values.</p> <p>Fixed : Sets the fixed values as the upper/lower limit values</p> <p>Device : Sets the device values as the upper/lower limit values.</p> <p>(☞ Section 5.1 Device Setting)</p> | <input type="radio"/> | <input type="radio"/> |
| | Lower Limit | <p>The range available for this setting depends on the data format of the device to be monitored. Set the data format in advance.</p> | <input type="radio"/> | <input type="radio"/> |
| | Base Value | Not available for line graph. | - | - |
| | Store Memory | Not available for line graph. | - | - |
| Shape | Shape | <p>Set a shape for the object.</p> <p>When [None] is selected, no shape will be displayed.</p> <p>By clicking on the Others button, shapes other than those in the list box or library shapes can be selected.</p> <p>(☞ Section 5.2.2 Object shape setting)</p> | <input type="radio"/> | <input type="radio"/> |
| | Frame | <p>Select the shape/plate color.</p> | <input type="radio"/> | <input type="radio"/> |
| | Plate | <p>Plate</p> <p>Shape</p> | <input type="radio"/> | <input type="radio"/> |
| Category | <p>When allocating category to the object, select a proper category.</p> <p>(☞ GT Designer2 Version1 Operating Manual)</p> | <input type="radio"/> | <input type="radio"/> | |

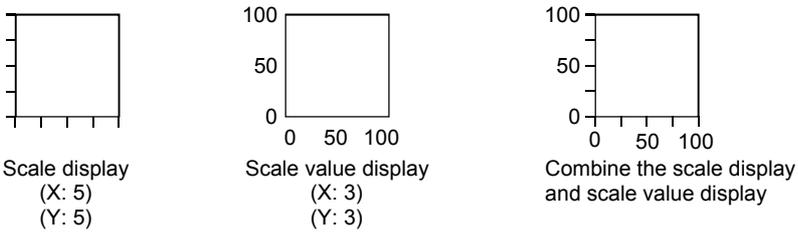
2 Device/Scale tab

Set the display attribute (graph color/width/type, scale) and devices to be monitored.



(Example: In the case GOT-A900 series)

| Items | | Description | A | F |
|--------|------------------------|--|-----------------------|-----------------------|
| Device | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the word device to be monitored. <ul style="list-style-type: none"> In the case of GOT-A900 series <ul style="list-style-type: none"> Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. BCD : Treats word device value as BCD (binary decimal) value Real : Treats word device value as floating point type real number. (Only when "32bit" is selected for "Data Size") In the case of GOT-F900 series <ul style="list-style-type: none"> Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. | <input type="radio"/> | <input type="radio"/> |
| | Device Settings | Not available for line graph. | — | — |
| | Display Attribute View | Set the graph attributes. Click on each item of the list in [Device] to display the setting dialog box. Then, make the settings as follows: <ul style="list-style-type: none"> Device : Click on the <input type="text" value="Dev"/> button and set a word device to be monitored. Graph : Select the graph color. Style : Select the graph style. Width : Select the graph width (GOT-A900 series only). | <input type="radio"/> | <input type="radio"/> |

| Items | Description | A | F |
|-------------|---|-----------------------|----------------------------------|
| Scale | <p>Set the scale and scale value to the line graph. Example)</p>  <p>Scale display (X: 5) (Y: 5)</p> <p>Scale value display (X: 3) (Y: 3)</p> <p>Combine the scale display and scale value display</p> | <input type="radio"/> | <input type="radio"/> |
| Scale | <p>Check this item to display the scale. After checking, set the number of scale points (i.e. tick marks) (GOT-A900 series: 2 to 11; GOT-F900 series: 0, 2 to 50) and the scale color. Once this is set, the space between the scale ticks are automatically defined.</p> | <input type="radio"/> | <input type="radio"/> |
| Scale Value | <p>Check this item to display the scale by using numeric values. Set the number of numeric values (2 to 11) in [Value Number], the color in [Color] and numeric size (0.5 to 8) in [Size]. The default numeric values for both X and Y axes are set to any of 0 to 100. When changing the numeric values, set the upper limit/lower limit values for the scale value in the extended tab.</p> | <input type="radio"/> | <input checked="" type="radio"/> |

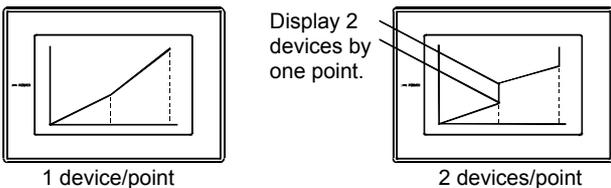
Refer to the next page for the details of *1.

*1 Edit device dialog box

Set the devices to be monitored in the Edit Device dialog box.



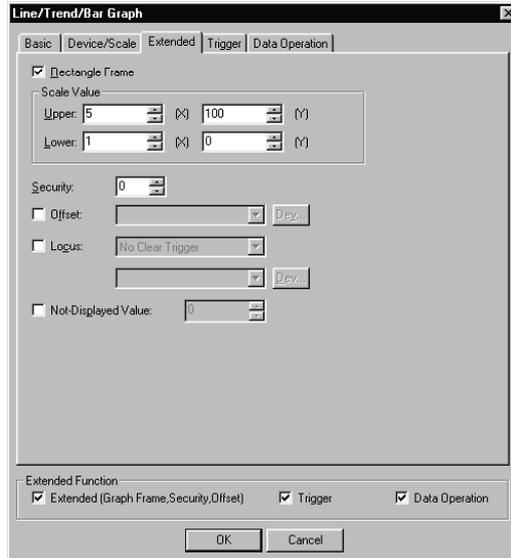
(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|-----------------|--|-----------------------|----------------------------------|
| Device Settings | <p>Select the setting method in [Device List] described below. Continue : The device to be monitored at the first point in the graph will be set as the head device, and any other device will be consecutively assigned to the second and later points. Random : Devices to be monitored are set at random.</p> | <input type="radio"/> | <input checked="" type="radio"/> |
| 2 Device/point | <p>Check this item to display a point using 2 devices.</p>  <p>1 device/point</p> <p>2 devices/point</p> | <input type="radio"/> | <input checked="" type="radio"/> |
| Device List | <p>Click on the desired item in the list to set the monitor device by direct input or clicking on the [Dev.] button. ( Section 5.1 Device Setting)</p> | <input type="radio"/> | <input type="radio"/> |

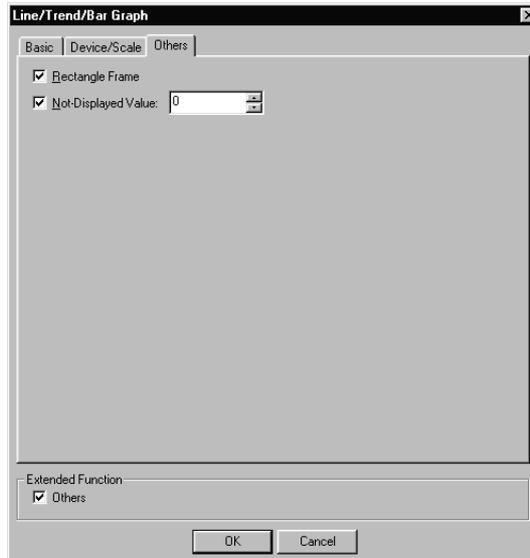
3 Extended tab

Set the security, offset, graph display method (locus, not-displayed value setting) and upper and lower limit scale values.

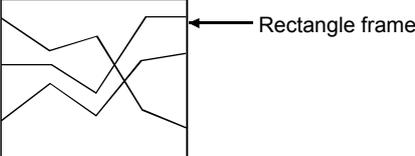
Check Extended Function at the bottom of dialog box to display this tab.

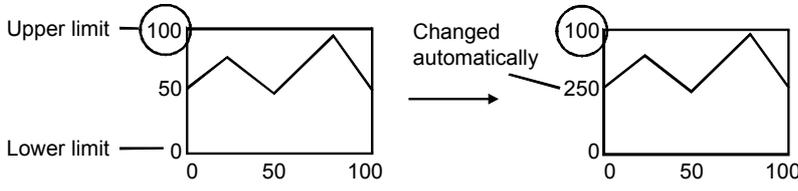
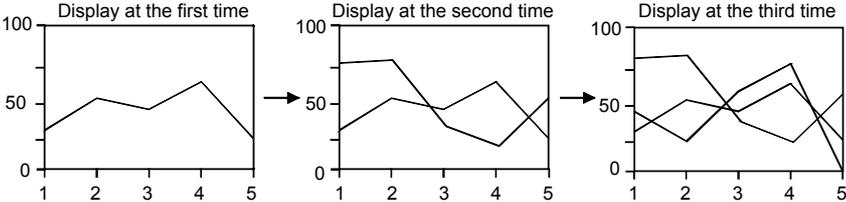
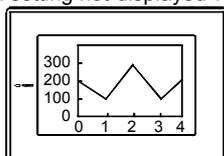
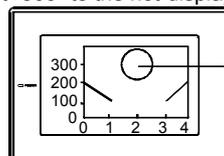


(Example : when setting GOT-A900 series)



(Example : when setting GOT-F900 series)

| Item | Description | A | F |
|-----------------|---|---|---|
| Rectangle Frame | <p>Check this item to display the frame, i.e., shape for the graph.</p>  | ○ | ○ |

| Items | | Description | A | F |
|---------------------|-------------|--|-----------------------|-------------------------------------|
| Scale Value | Upper Limit | Before changing a scale value, set the upper/lower limit values. Set the scale value for vertical (Y axis) and horizontal (X axis) lines. Example) Change the upper limit scale value on Y | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Lower Limit |  <p>Change the scale value of Y. Upper limit : "100" → "250"</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Security | | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". ( Section 5.7 Security Function) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Offset | | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. ( Section 5.6 Offset Function) After checking, set the offset device. ( Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Locus | | Check this item when cascading the updated line graph and the previous graph. The previous graph is stored in the GOT internal memory.  <p>Display the cascaded 1, 2, 3 data contents.</p> <p>Select the timing of clearing locus after the check. No clear trigger : Does not erase the locus. Clear trigger rise : Erases the locus with the rise (ON → OFF) of bit device. Clear trigger fall : Erases the locus with the fall (OFF → ON) of bit device.</p> <p>When selecting [Clear Trigger Rise] or [Clear Trigger Fall], set the bit device to be used for the clear trigger. ( Section 5.1 Device Setting)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Not-displayed value | | Check this item when setting the value without line connection. After checking, set the not-displayed value. (Example) When setting not-displayed value  Set "300" to the not-displayed value.  <p>The line connecting 1 to 3 is not displayed</p> | <input type="radio"/> | <input type="radio"/> |

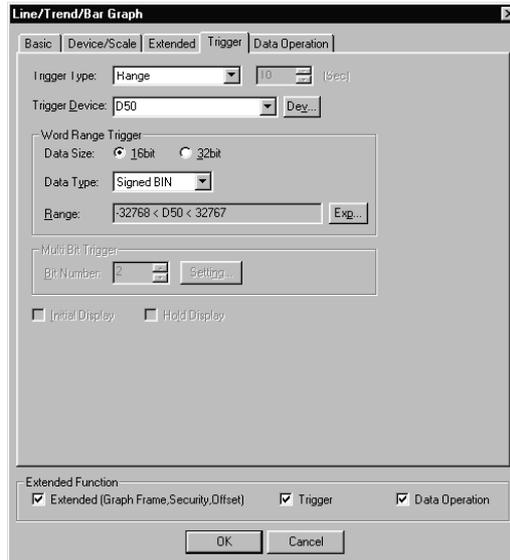
4 Trigger tab (GOT series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



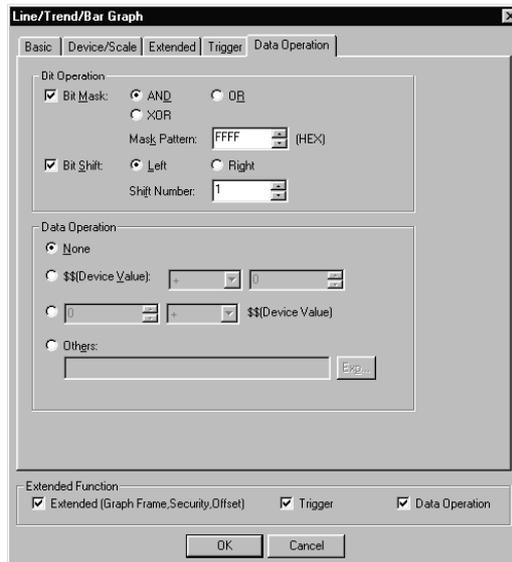
| Items | Description | A | F | |
|---------------------|--|---|---|---|
| Trigger Type | Select the trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Multi Bit Trigger The trigger is displayed as follows, when [Locus] is set on the Extended tab. When [Sampling], [ON Sampling] or [OFF sampling] is selected, set the sampling cycle (1 to 3600 seconds) by second. <ul style="list-style-type: none"> ● Rise ● Fall ● Sampling ● ON sampling ● OFF sampling | ○ | × | |
| Trigger Device | Specify the device used for the trigger. | ○ | × | |
| World Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | ○ | × | |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | ○ | × |
| | Data Type | Select the data type of word device (Signed BIN/Unsigned BIN/Real number). | ○ | × |
| | Range | Click on the Range button and set conditional expression for the word device range. | ○ | × |
| Multi Bit Trigger | Bit Number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the Setting button and set the bit devices and their triggers. | ○ | × |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | ○ | × | |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | ○ | × | |

5 Data operation tab (GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.22.4 Cautions

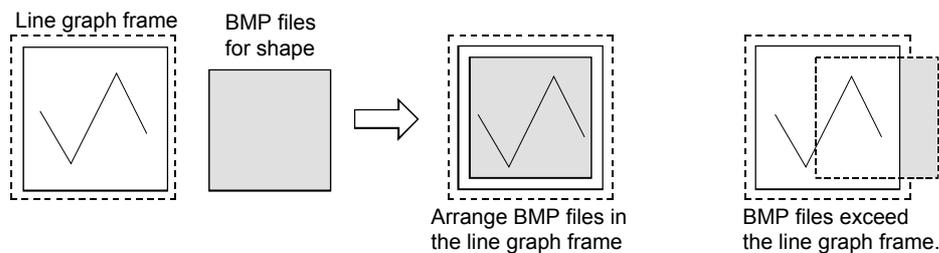
This section provides the cautions when using line graph function.

1 Cautions for drawing

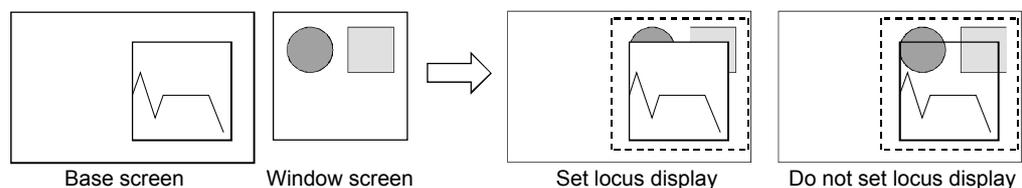
- (1) The maximum number of line graph objects that can be set for one screen.
 - GOT-A900 series: 32 objects
 - GOT-F900 series: 1 object

2 Cautions for the line graph which locus has been set.

- (1) Only one object can be set for the whole project.
When the base screen arranged with line graph is multi-displayed in other base screen with the Set overlay screen function, only the first line graph can be displayed and the second and later will not be displayed.
- (2) The setting is available for the base screen only.
- (3) When setting the line graph size, do not exceed the max. size of the overlap window.
Line graph will not be displayed in the area exceeding the max size of the overlap window.
Refer to the following for the max. size of the overlap window.
(☞ Section 2.1.2 Window screen specifications)
- (4) The Overlap Window 2 and the test window cannot be displayed on the base screen arranged with line graph.
- (5) The offset function and the station number switching function are not available.
- (6) Pay attention to the following when a line graph is overlaid on a shape.
 - (a) The BMP file pasted to the screen cannot exceed the line graph frame.
Otherwise, the area that is not overlapped in the line graph frame will not be displayed.
(Example)

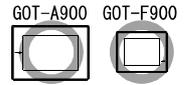


- (b) When using shapes filled with color, arrange the frame of the shape (the boundary line of paint area) within the line graph frame.
Otherwise, the shape will not be painted normally.
- (c) Since the shape set in the overlay screen is not displayed, it must be directly placed over and as the background for the line graph.
- (d) Do not use the superimpose window because shapes within the superimpose window will not be displayed as background.
(Example)

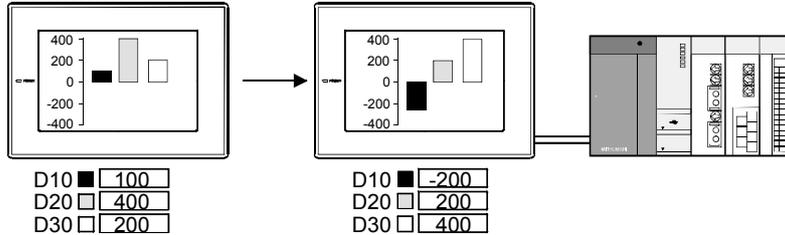




5.23 Bar Graph



This section explains the function for collecting word device data and displaying them as a bar graph.

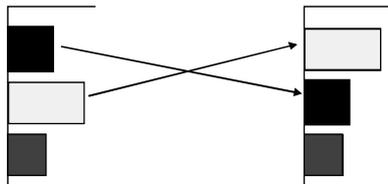


Example

Change bar display



Extended Tab



Sort bar display in descending order.

Bar display can be sorted in ascending/descending order based on the device values

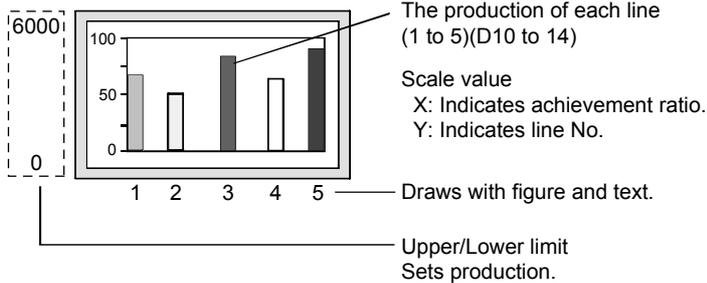
5.23.1 Required knowledge for bar graph setting

Set the basic function of the bar graph on the following tab, 1 to 3.

The following example explains the general procedures for setting a bar graph.

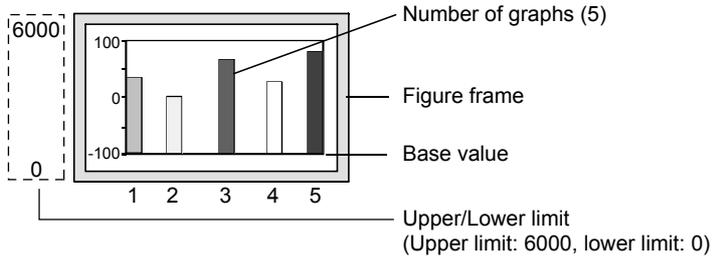
Example) Bar graph displaying production quantity of multiple lines

- Achievement ratio : 0 to 100%
- Production quantity : 0 to 6000
- Actual quantity (Line 1) : D10
- (Line 2) : D11
- (Line 3) : D12
- (Line 4) : D13
- (Line 5) : D14



1 Basic tab

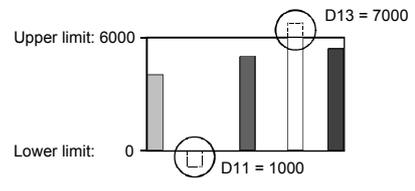
Set the number of graphs, figure frame (object shape), base value and upper and lower limit values.



Remark

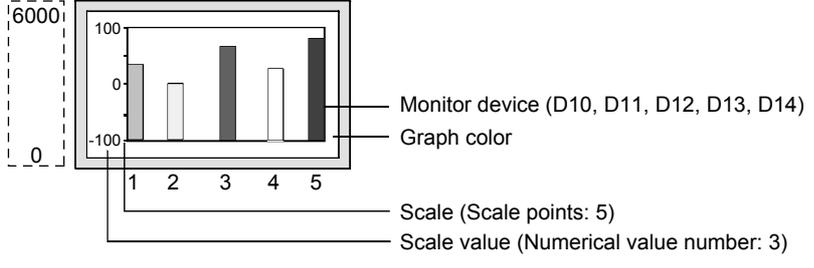
Display of values beyond the upper/lower limit

When a monitor device value exceeds the upper/lower limit, it will be displayed numerically on the graph.



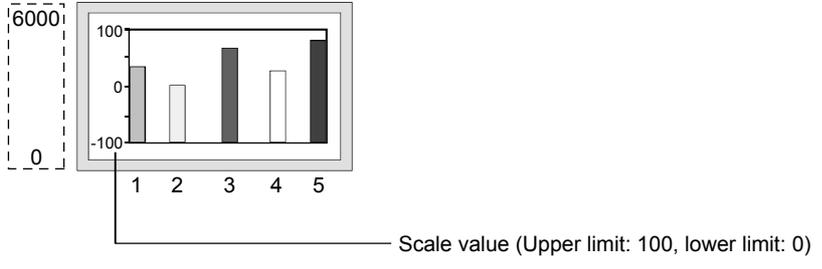
2 Device/Scale tab

Set monitor device, graph color, scale and scale value.



3 Extended tab

Scale values can be changed on this tab.



5.23.2 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [Bar Graph].
 - Select [Object] → [Graph] → [Bar Graph] from the menu.
- 2 Click on the position where the bar graph is to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or use ESC key.)
- 3 Double click on the arranged bar graph to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



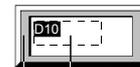
Remark

Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.



Section 5.2.3 Object size change



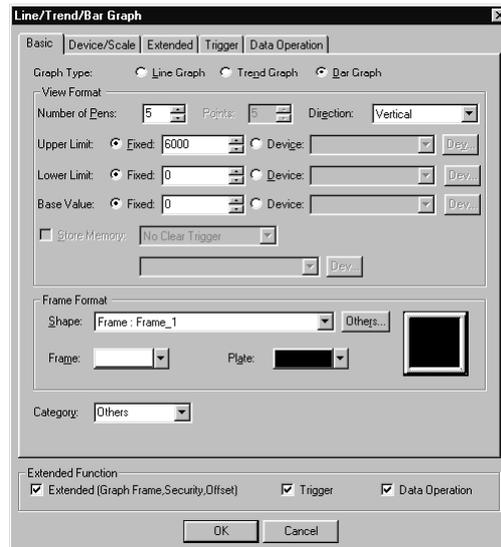
Object outline frame
Shape

5.23.3 Setting items

This dialog box is used in common among three types of graph (line/trend/bar graph). This section provides the explanations of setting of bar graph.

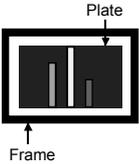
1 Basic tab

Set the graph type (line/trend/bar graph), number of graphs, upper limit/lower limit/base value and object shape, i.e., frame.



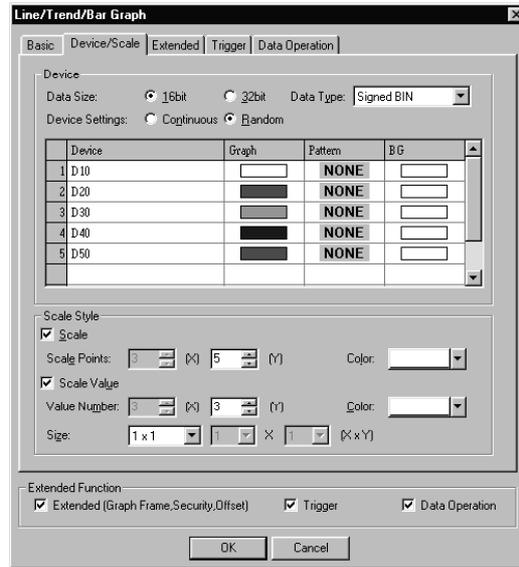
(Example: In the case of GOT-A900 series)

| Items | | Description | A | F |
|-------------|------------------|---|-----------------------|-------------------------------------|
| Graph Type | | Select the graph to be set (line graph/trend graph/bar graph). This section explains the setting for bar graph. | <input type="radio"/> | <input type="radio"/> |
| View Format | Number of Graphs | Set the number of graphs (1 to 8) to be displayed. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Points | Not available for a bar graph. | — | — |
| | Direction | <p>Select the setting method of monitor device.</p> <ul style="list-style-type: none"> GOT-A900 series: Select either of X direction or Y direction. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Y direction:</p> <p>In the set order of the device</p> </div> <div style="text-align: center;"> <p>X direction:</p> <p>In the set order of the device</p> </div> </div> <ul style="list-style-type: none"> GOT-F900 series: Select either Y direction (Up/Down) or X direction (Right/Left). | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|--------------|---|--|---|---|
| View Format | Upper Limit | Select whether the device value range (Base value, Lower/Upper limit) for the bar graph is displayed based on the setting by fixed values or specified device values. Fixed : Sets the fixed values as the upper limit/lower limit/base values Device : Sets the device values as the upper limit/lower limit/base values. (☞ Section 5.1 Device Setting) | ○ | ○ |
| | Lower Limit | | | |
| | Base Value | | | |
| | Store Memory | Not available for bar graph. | — | — |
| Frame Format | Shape | Set a shape, i.e., frame for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | ○ | ○ |
| | Frame | Select the shape/plate color. | ○ | ○ |
| | Plate |  | ○ | ○ |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | ○ | ○ | |

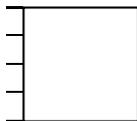
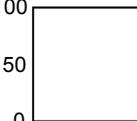
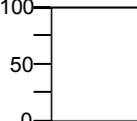
2 Device/Scale tab

Set graph display attribute (graph color/scale) and monitor device.



(Example: When setting in GOT-A900 series)

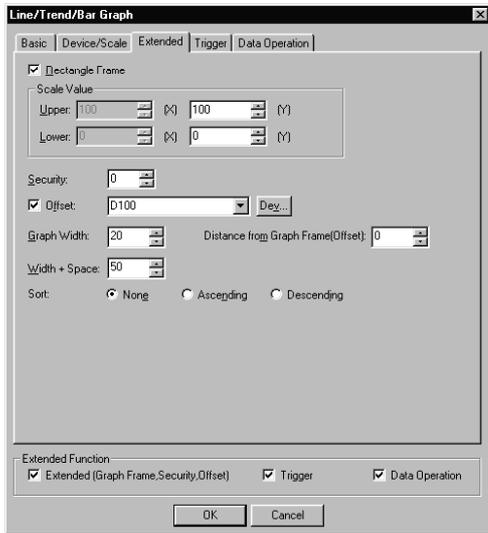
| Items | | Description | A | F |
|--------|------------------------|--|-----------------------|----------------------------------|
| Device | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the word device to be monitored. <ul style="list-style-type: none"> In the case of GOT-A900 series <ul style="list-style-type: none"> Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. BCD : Treats word device value as BCD (binary decimal) value Real : Treats word device value as floating point type real number. (Only when "32bit" is selected for "Data Size") In the case of GOT-F900 series <ul style="list-style-type: none"> Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. | <input type="radio"/> | <input type="radio"/> |
| | Device Settings | When displaying more than two graphs, select the method of setting the device to be monitored in each graph. <ul style="list-style-type: none"> Continue : The device to be monitored in the first graph will be set as the head device. The devices will be consecutively assigned to the second and later graph. Random : One device to be monitored is set for each graph. (For A-900 series only) | <input type="radio"/> | <input checked="" type="radio"/> |
| | Display Attribute View | Set the graph attributes. Click on each item of the list in [Device] to display the setting dialog box. Then, make the settings as follows: <ul style="list-style-type: none"> Device : Enter the word device name here, or click on the [Dev] button and select a word device from the given options to set the word device for monitoring. (See Section 5.1 Device Setting) Graph Color : Select the graph color. Pattern : Select the filling pattern of the graph. Background : Select the background color of the graph. <p>Example)</p> | <input type="radio"/> | <input type="radio"/> |

| Items | Description | A | F |
|-------------|--|-----------------------|-------------------------------------|
| Scale Style | <p>Set the scale and scale values to the bar graph.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Scale points = 5</p> </div> <div style="text-align: center;">  <p>Scale value = 3</p> </div> <div style="text-align: center;">  <p>Scale is displayed in combination with scale value</p> </div> </div> | <input type="radio"/> | <input type="radio"/> |
| Scale | <p>Check this item to display the scale. After checking, set the number of scale points (i.e. tick marks) (GOT-A900 series: 2 to 11; GOT-F900 series: 0, 2 to 50) and the scale color. Once this is set, the space between the scale ticks are automatically defined.</p> | <input type="radio"/> | <input type="radio"/> |
| Scale Value | <p>Check this item to display the scale by using numeric values. Set the number of numeric values (2 to 11) in [Value Number], the color of numeric display in [Color] and the numeric size (0.5 to 8) in [Size]. The default numeric values are set within the range from -100 to 100. When changing the numeric value, set the upper limit/lower limit values for the scale value on the extended tab.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |

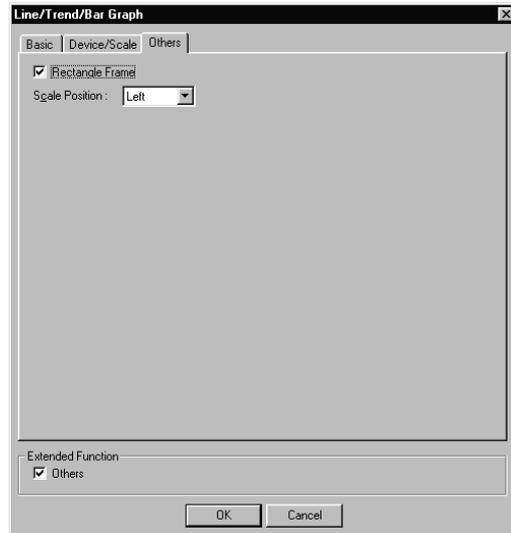
3 Extended tab

Set the security level, offset and upper/lower limit of the scale values.

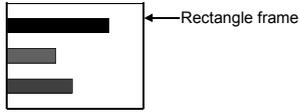
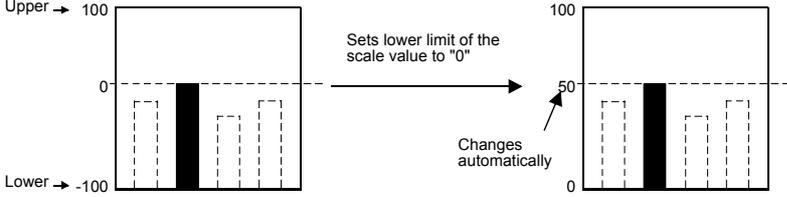
Check Extended Function at the bottom of the dialog box to display this tab.

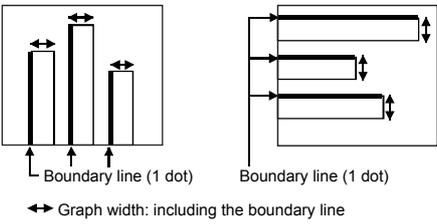
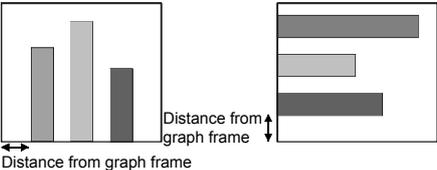
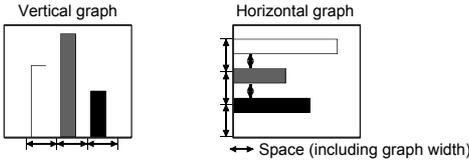
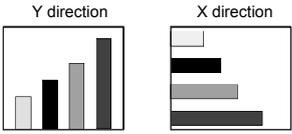
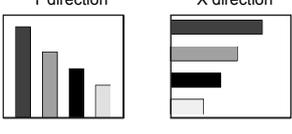


In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | | Description | A | F |
|-----------------|-------|--|---|---|
| Rectangle Frame | | <p>Check this item to display the frame, i.e., shape for the graph.</p>  | ○ | ○ |
| Scale Value | Upper | <p>Before changing a scale value, set the upper/lower limit values.</p> <p>(Example) Changes lower limit of scale value.</p>  | ○ | × |
| | Lower | <p>Changes automatically</p> | | |
| Scale Position | | Select the position (left, right, up, down) for displaying scale. | × | ○ |
| Security | | <p>When using the security function, set the security level (1 to 15).</p> <p>When not using the function, set it to "0".</p> <p>(☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function)</p> <p>After checking, set the offset device. (☞ Section 5.1 Device Setting)</p> <p>Data length is fixed to 16 bits.</p> | ○ | × |

| Items | Description | A | F |
|---------------------------|---|---|---|
| Graph Width | <p>Set the graph width (1 to 500 dots) of the bar graph to be displayed. The graph width includes the 1 dot on the boundary line (Vertical bar: Left side, Horizontal bar: Upper side)</p>  | ○ | × |
| Distance from Graph Frame | <p>Set the space between graph OP and the selected position to edit text in bar graph that is near the OP (1 to 100 dots).</p>  | ○ | × |
| Width + Space | <p>Set the space between bar graphs (including graph width) (1 to 500 dots).</p>  | ○ | × |
| Sort | <p>Sorting the bars. Select the sorting type and check the corresponding check box. None : Sort is invalid. (Bars are displayed in the device setting order.) Ascending : Arrange from small value to large value. Descending : Arrange from large value to small value.</p> <p>[Ascending]</p>  <p>[Descending]</p>  | ○ | × |

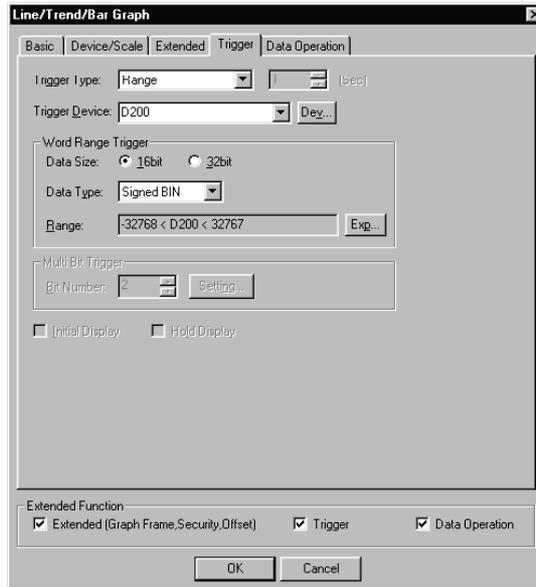
4 Trigger tab (GOT-A900 series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



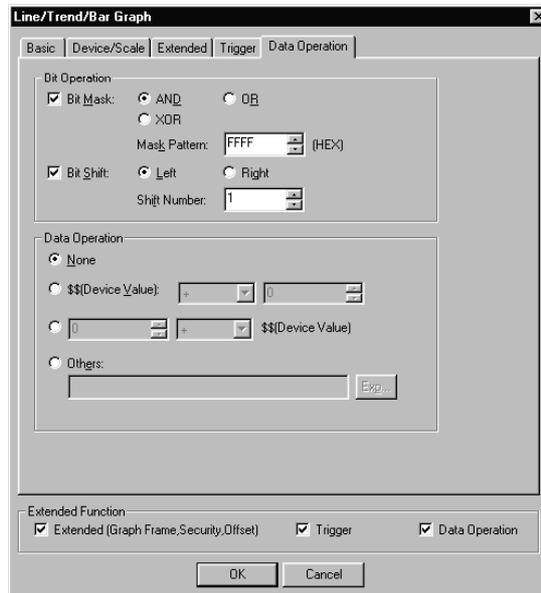
| Items | | Description | A | F |
|-------------------|------------|---|-----------------------|-------------------------------------|
| Trigger Type | | Select the trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● Range ● Bit Trigger | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Word Device Range | | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Date Type | Select the data type of the word device (Signed BIN/Unsigned BIN/Real number). | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | Click on the Range button and set conditional expression for the word device range. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | Bit Number | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the triggers. After setting, click on the Setting button and set the bit devices and their triggers. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial Display | | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Hold Display | | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |

5 Data operation tab (GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.23.4 Cautions

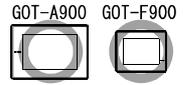
This section provides the cautions when using the bar graph function.

1 Cautions for drawing

- (1) The maximum number of bar graph objects settable on one screen
 - GOT-A900 series: up to 256 objects
 - GOT-F900 series: up to 50 objects

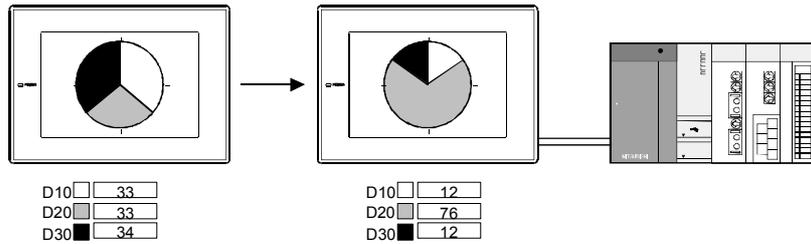


5.24 Statistics Graph

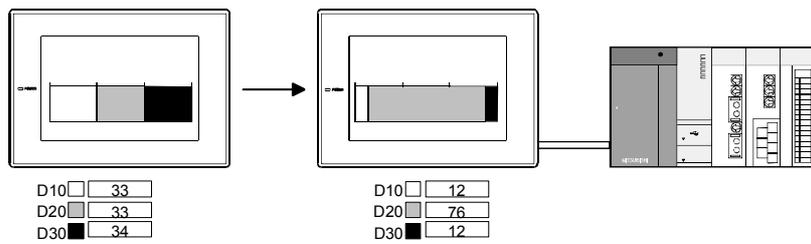


The statistics pie/bar graph shows the data ratio of multiple word devices to the total data value.

1 Statistics pie graph

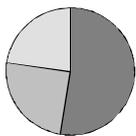


2 Statistics bar graph



Application example

Displaying the graph with the data list on one screen



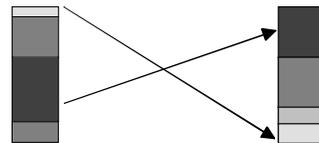
Section 5.9 Data List Setting

| No. | Ma. name | Target vol. | Prod. vol. |
|-----|----------|-------------|------------|
| 1 | Ma. 1 | 5000 | 2000 |
| 2 | Ma. 2 | 5000 | 1200 |
| 3 | Ma. 3 | 5000 | 1000 |

Device status can be displayed more effectively by including the line graph legend.

Sorting the corresponding graph sections according to device values

Set in Extended Tab



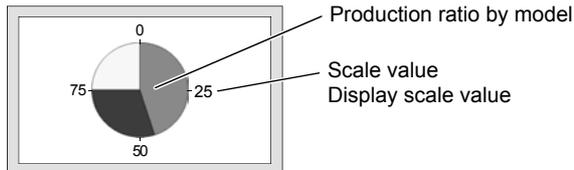
The sections are sorted in the ascending/descending order of device values.

5.24.1 Required knowledge for statistics graph setting

The following ① to ② tabs can be used for setting statistics graph basic function.
The procedure for setting the statistics graph is shown as follows.

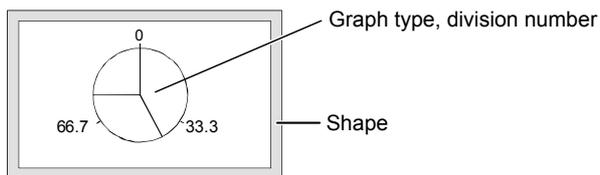
Example) Statistics pie graph displaying the production ratio by model

Type A : D10
Type B : D11
Type C : D12



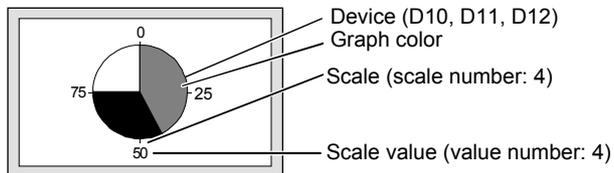
① Basic tab

It is to set the graph type, division number (number of divided sections) and shape.



② Device/Scale tab

It is to set the monitor device, graph color, scale and scale value.



5.24.2 Arrangement and settings

1 Carry out either of the following operations.

- Click on   [Statistics Graph].
- Select [Object] → [Graph] → [Statistics Pie Graph]/[Statistics Bar Graph] from the menu.

2 Click on the position where the statistics graph is to be located to complete the arrangement.

(After arrangement, release the arrangement mode by right-clicking the mouse or using **[ESC]** key.)

3 Double click on the arranged statistics graph to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual



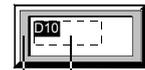
Remark

Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.



Section 5.2.3 Object size change

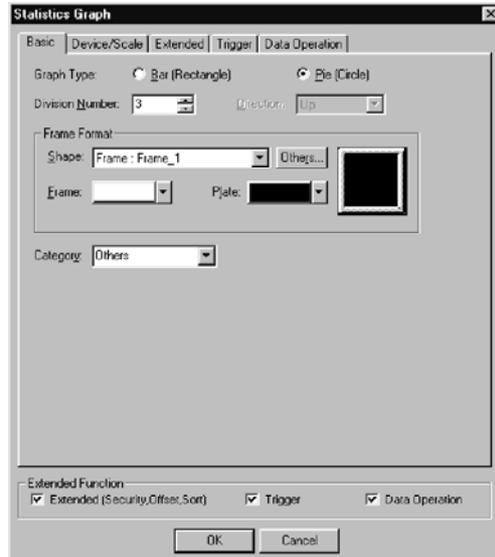


Object outline frame
Shape

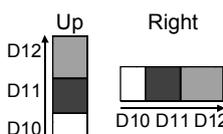
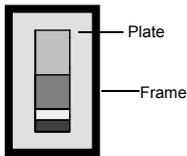
5.24.3 Setting items

1 Basic tab

It is to set the graph type (statistics bar graph, statistics pie graph), division number (number of divided sections) and shape.

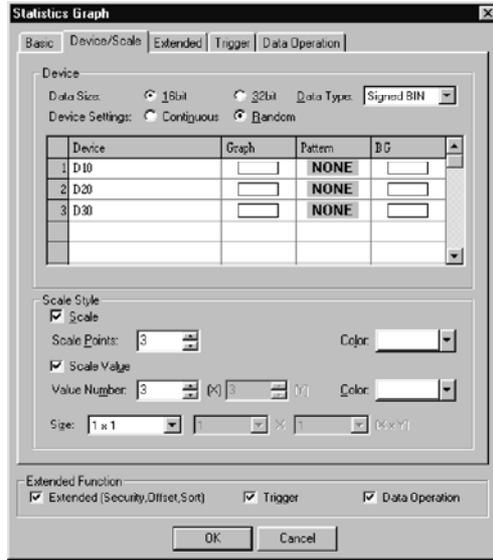


(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|-----------------|---|-----------------------|-----------------------|
| Graph type | Select the statistics graph type (statistics bar graph/statistics pie graph). | <input type="radio"/> | <input type="radio"/> |
| Division number | Set the number of word devices to be monitored GOT-A900 series : 2 to 32 word devices GOT-F900 series : 1 to 8 word devices | <input type="radio"/> | <input type="radio"/> |
| Direction | Select the setting direction of device to be set in [Statistics Bar Graph]. GOT-A900 series  GOT-F900 series  | <input type="radio"/> | <input type="radio"/> |
| Frame Format | Shape Set a shape, i.e., frame for the object. When [None] is selected, no shape will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. ( Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Frame  | <input type="radio"/> | <input type="radio"/> |
| | Plate | <input type="radio"/> | <input type="radio"/> |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

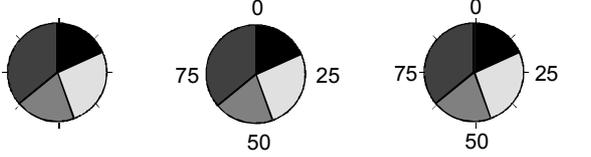
2 Device/scale tab

It is to set monitor device and graph display attribute (graph color, scale).



(Example: In the case of GOT-A900 series)

| Items | | Description | A | F |
|--------|------------------------|--|-----------------------|----------------------------------|
| Device | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the word device to be monitored. <ul style="list-style-type: none"> In the case of GOT-A900 series <ul style="list-style-type: none"> Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. BCD : Treats the word device value as a BCD (binary decimal) value. Real : Treats the word device value as a floating point type real number. (Only when [16 bit] is selected in [Data Size].) In the case of GOT-F900 series <ul style="list-style-type: none"> Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. | <input type="radio"/> | <input type="radio"/> |
| | Device Setting | Select the method of setting the device to be monitored. <ul style="list-style-type: none"> Continuous : Set the devices as many as the number of divided sections continuously. Random : Set the devices as many as the number of divided sections randomly. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Display Attribute List | Set the graph attributes. Click on each item of the list in [Device] to display the setting dialog box. Then, make the settings as follows: <ul style="list-style-type: none"> Device : Enter the word device name here, or click on the [Dev] button and select a word device from the given options to set the word device for monitoring. (Section 5.1 Device Setting) Graph Color : Select the graph color. Pattern : Select the filling pattern of the graph. (for GOT-A900 series only) BackGround : Select the background color of the graph. (for GOT-A900 series only) <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>(Example) BG : </p> <p>Pattern : </p> <p>Graph color : </p> </div> <div style="margin-right: 10px;"> <p>Pattern + Graph color</p> </div> <div style="margin-right: 10px;"> <p>→</p> </div> <div> </div> </div> | <input type="radio"/> | <input type="radio"/> |

| Items | Description | A | F |
|-------------|--|-----------------------|-------------------------------------|
| Scale Style | <p>Set the scale and scale value of statistics graph. Example)</p>  <p>Scale points: 8 Scale value: 4 Combined display of scale and scale value</p> | <input type="radio"/> | <input type="radio"/> |
| Scale | <p>Check this item to display the scale. After checking, set the number of scale points (GOT-A900 series: 2 to 11, GOT-F900 series: 0, 2 to 50) and the scale color. Once this is set, the space between each scale tick is automatically defined.</p> | <input type="radio"/> | <input type="radio"/> |
| Scale Value | <p>Check this item to display the scale numerically. After checking, set the number of numeric values (2 to 11) in [Value Number], numeric color in [Color] and numeric size (0.5 to 8) in [Size].</p> | <input type="radio"/> | <input checked="" type="checkbox"/> |

3 Extended tab (For GOT_A900 series only)

Set the security, offset and the order displaying graphs (sort).

Check the Extended Function at the bottom of dialog box to display this tab.



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|----------|--|-----------------------|---|
| Security | When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function) | <input type="radio"/> | × |
| Offset | Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits. | <input type="radio"/> | × |
| Sort | Sorting the graph sections. Select the sorting type and check the corresponding check box. None : Sort is invalid. (Graph sections are displayed in the device setting order.) Ascending : Arrange from small value to large value. Descending : Arrange from large value to small value. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>[Ascending]</p> <p>Bar graph</p> </div> <div style="text-align: center;"> <p>Pie graph</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>[Descending]</p> <p>Bar graph</p> </div> <div style="text-align: center;"> <p>Pie graph</p> </div> </div> | <input type="radio"/> | × |

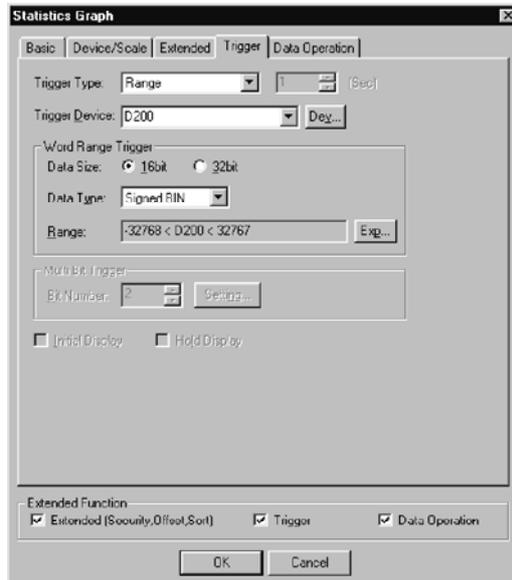
4 Trigger tab (For GOT-A900 series only)

Set conditions for displaying the object, i.e., trigger.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of trigger, refer to the following.

 Section 5.4 Trigger Setting



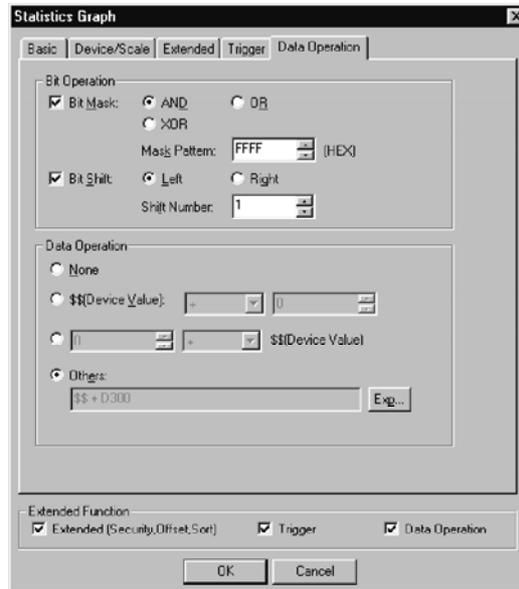
| Items | Description | A | F |
|--------------------|---|-----------------------|-------------------------------------|
| Trigger Type | Select trigger for displaying the object. When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit. <ul style="list-style-type: none"> <input type="radio"/> Ordinary <input type="radio"/> ON <input type="radio"/> OFF <input type="radio"/> Rise <input type="radio"/> Fall <input type="radio"/> Sampling <input type="radio"/> Range <input type="radio"/> Bit trigger | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi bit trigger | When [Multi Bit Trigger] is selected in [Trigger Type], set the number of bit devices (2 to 8) to be used for the trigger. After setting, click on the Setting button and set the bit devices and their triggers. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Hold Display | When [ON] or [OFF] is selected in [Trigger Type], check this item if the object display needs to be held even though the trigger is not satisfied. If not checked, the object will be deleted when the trigger is not satisfied | <input type="radio"/> | <input checked="" type="checkbox"/> |

5 Data operation tab (For GOT-A900 series only)

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|---|-----------------------|---|
| Bit Operation | Bit Mask | <p>Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format.</p> <p>AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR.</p> | <input type="radio"/> | × |
| | Bit Shift | <p>Check this item to enable the bit shift operation. Select the shift direction and set the number of bits shifted in [Shift Number].</p> <p>Left : Left shift Right : Right shift</p> | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation | <input type="radio"/> | × |

5.24.4 Cautions

This section provides the cautions for using statistics graph function.

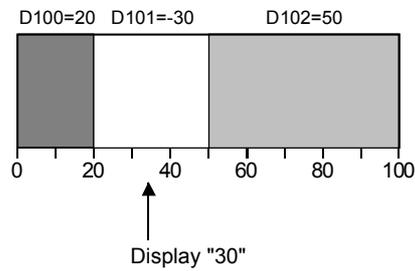
1 Cautions for drawing

- (1) Maximum number of statistics graph objects settable on one screen
 - GOT-A900 series: 32 objects
 - GOT-F900 series: 1 object

2 Cautions for use

- (1) For statistic graph, the absolute value is displayed when monitor device value is a negative number.

(Example) When D101 is "-30"



- (2) Cautions in using the F920GOT-K
The statistics graph function is not provided in the F920GOT-K.



5.25 Scatter Graph

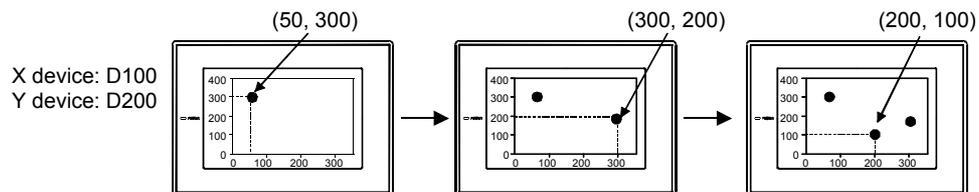


By taking the values of 2 word devices as X and Y coordinates, a corresponding point is displayed on the graph.

1 Sample

Two word device values are collected, and then displayed as a point on the graph.

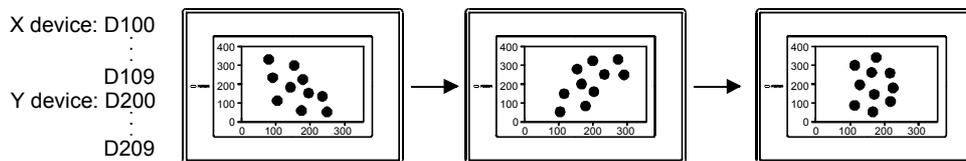
This graph is updated to the new one with the previously displayed point(s) remained. (Locus)



2 Batch

Multiple data of 2 word device values are collected together and displayed as corresponding points.

When refreshing the data, the previously displayed point(s) can be either kept or erased depending on the setting selection.



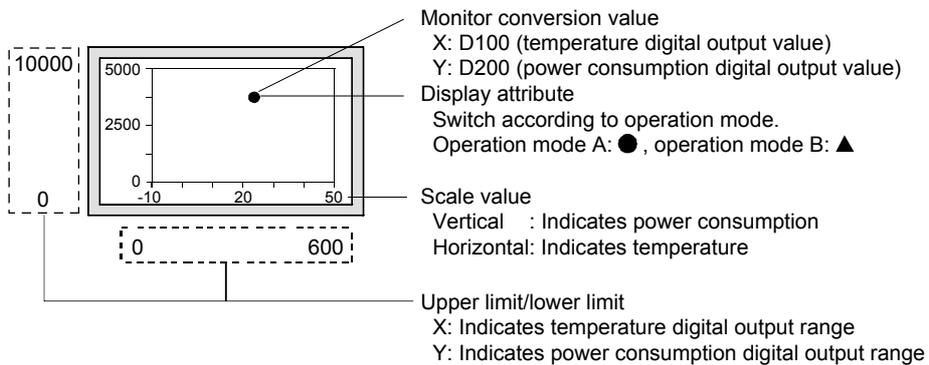
5.25.1 Required knowledge for scatter graph setting

1 Setting method of scatter graph

Set basic function of the scatter graph on the following tabs ① to ⑤.
The following example explains the general setting procedure.

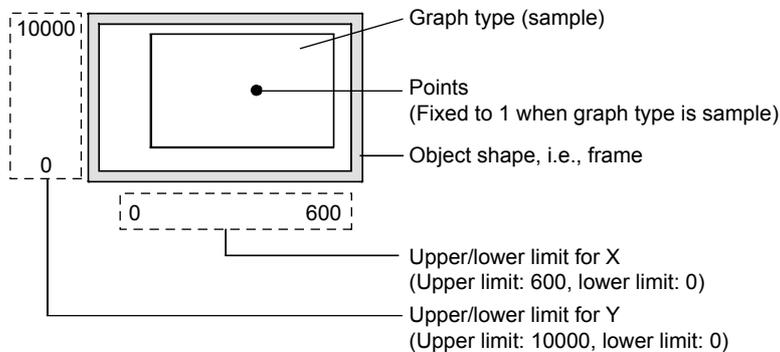
Example) A scatter graph to display power consumption and temperature during line operation

| | |
|---|---------------|
| Digital output range for temperature | : 0 to 600 |
| Digital output range for power consumption | : 0 to 10000 |
| Power consumption variation range | : 0 to 5000W |
| Temperature variation range | : -10 to 50°C |
| Conversion value (Digital output value of temperature) | : D100 |
| Conversion value (Digital output value of power consumption): | D200 |



1 Basic tab

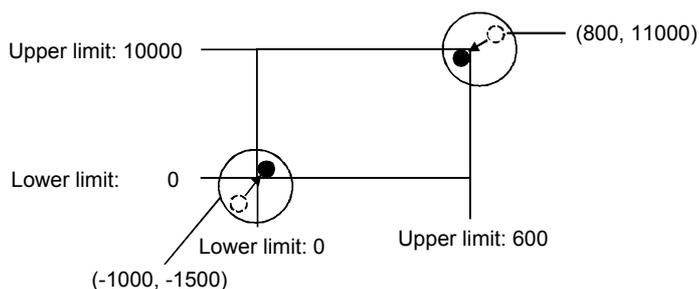
Set the graph type, upper/lower limit values and object shapes.



Remark

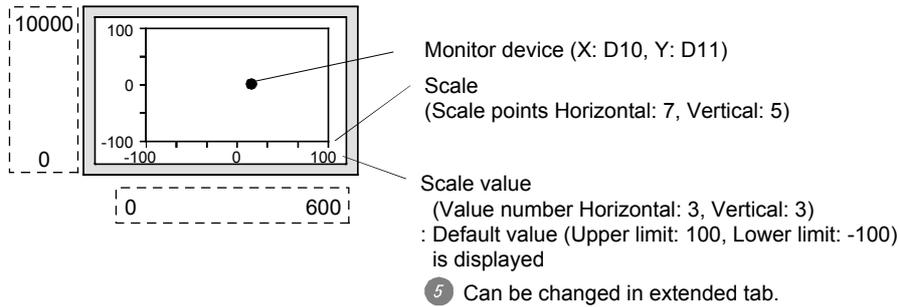
Display of values beyond the upper/lower limit

When a value of the monitored device exceeds the upper or lower limit, it will be displayed numerically on the graph.



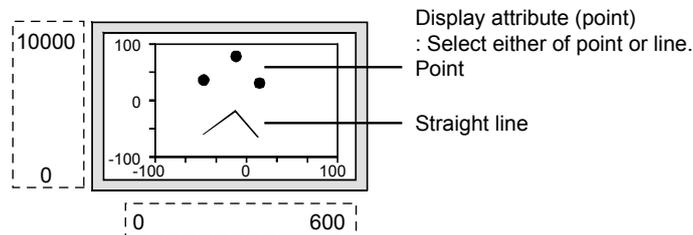
2 Device/Scale tab

Set the monitor devices, scale, and scale values.



3 Attribute tab

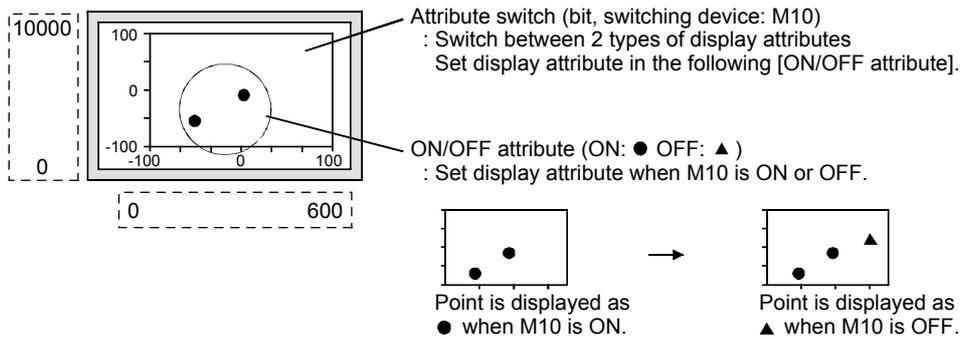
Set the type (point/line) of graph display attribute.



4 Trigger tab

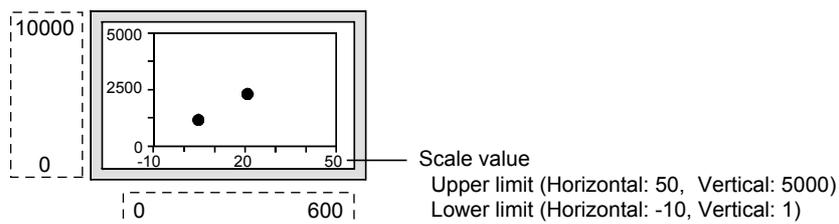
Set the graph display method.

- **Switch display attribute** : Make setting on this to change the display attribute set in ③ according to the condition of a specified switching device.
- **Data collection timing** : Set the sampling of data to 600 seconds in this case. The default value is set to 1 second.



5 Extended tab

Change the scale values.



2 Store memory

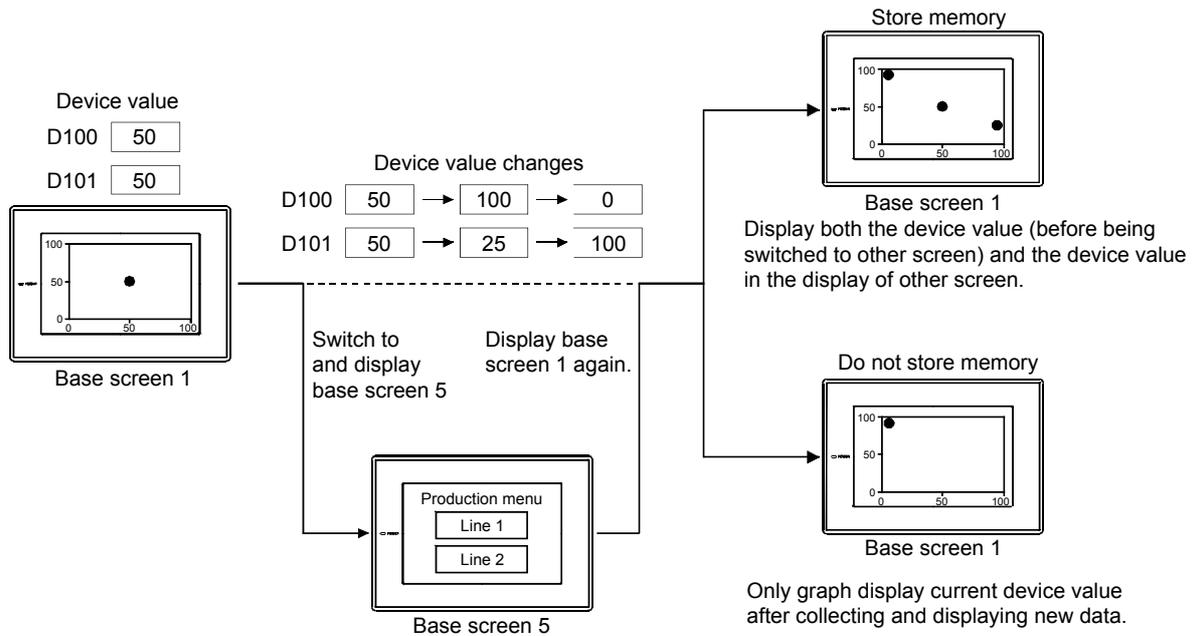
Check the store memory before collecting data after the screen has been switched to another. Be sure to save device values into the internal memory of GOT.

The contents stored in the memory will be erased in the case of GOT reset or power OFF.

The setting for Store Memory is made on the Extended tab.

When no setting is made for Store Memory, the scatter graph executes data collection only when displaying the screen with the graph arranged. If switched to other screen, the collected data will be cleared.

(Example) Graph type [Sample], X-device: D100, Y-device: D101



- (1) The maximum sampling results which can be stored in the memory
Up to 2000 points displayed in scatter graph can be saved in the internal memory. The following shows the upper limit for each graph type of the scatter graph (sample, batch).

- Sample 2000 times
- Batch $\left(\frac{2000}{\text{Points}} \right)$ times (Round off the part after decimal point)

For the case that the number of displayed points exceed 2000, make setting for [Operation at frequency over time] on the Extended tab.

- Interrupt Interrupts data collection
- Initialize and continue · Clears the internal memory, erase the scatter graph display and collects data again.



Hint!

Displaying an error message when the sampling number reaches the maximum
An error message can be displayed when the storage sampling number has reached the maximum. (☞ Section 5.13 Alarm List)

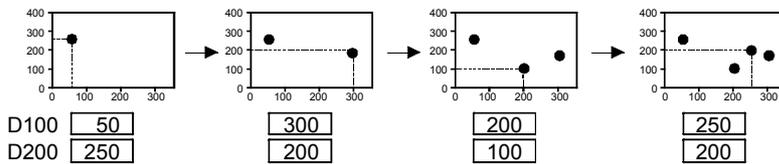
- (2) Conditions for when the stored memory data is erased

- (a) When the clear trigger condition is satisfied
- (b) When the number of sampling data available for storage in memory exceeds the maximum
(Only when setting [Operation at frequency over time] to [Initialize and continue])
- (c) When GOT is reset or power supply is turned OFF

3 Accumulate/Average

The accumulation frequency and the average/maximum/minimum of the data collected in the scatter graph can be written to devices.

(Example) X-device: D100, Y-device: D200



| Contents to be written | | Value that has been written |
|------------------------|---------------|-----------------------------|
| Accumulation Frequency | | 4 |
| X | Average Value | 200 |
| | Maximum | 300 |
| | Minimum | 50 |
| Y | Average Value | 187 |
| | Maximum | 250 |
| | Minimum | 100 |



(1) Average value

- (a) The fractions below the decimal point of the average value are rounded off. If the data type (set on the Device/Scale tab) of the monitor device is real, however, fractions below the decimal point will be written.
- (b) Since the average value is calculated on the basis of the average values of every sampling, it is probable to have an error.

(2) Maximum and minimum values

When the value of the monitor device exceeds the upper or lower limit of the scatter graph, the upper or lower limit value will be written as the maximum or minimum accordingly.

(1) Upper limit of sampling number available for accumulation frequency/average value

The upper limit of the sampling number that can be counted as accumulation frequency/average value varies according to the data type (set on the Device/Scale tab) of the monitor device.

[Data Type of Monitor Device]

- Unsigned BIN, Signed BIN, Real, BCD (32 bit) : 65535
- BCD (16 bit) : 9999

When the accumulation frequency exceeds the upper limit, please set the operation in [Operation at frequency over time] of the extended tab.

- Interrupt Interrupts the sampling of data.
- Initialize and continue Initializes the value of the accumulation frequency, and then recollects data.



Displaying an error message when the accumulation frequency value exceeds the upper limit

When the accumulation frequency value exceeds the upper limit, an error message can be displayed in the alarm list (system alarm). (☞ Section 5.13 Alarm List)

- (2) Initialization timing of accumulation frequency/average value/maximum/minimum
Value "0" is written to the accumulation frequency/average value/maximum/minimum in the following timing.
- (a) When the conditions for the clear trigger (set in the Trigger tab) are satisfied
 - (b) When the accumulation frequency value exceeds the upper limit
(Only when setting [Operation at frequency over time] to [Initialize and continue])
 - (c) When switching the screen
 - When switching the screen (base screen, window screen) with scatter graph arranged
When switching the screen with scatter graph arranged to other screens, the current accumulation frequency/average value will be held. However, when the screen is switched back to the previous screen, the data will be initialized.
 - When switching the base screen
The scatter graph arranged in superimpose window will be initialized when the base screen is switched over.
 - (d) When the security level is changed
 - (e) When the station number is changed

Remark

Executing "the accumulation frequency/average value write" and the "store memory" simultaneously

If the "accumulation frequency/average value" and "store memory" are used simultaneously, the data of accumulation frequency/average value will still be collected even when the screen is switched to others.

However, accumulation frequency/average value can be written until the time that the sampling number for store memory reaches the maximum.

Refer to the following for the maximum sampling number of store memory.



This section **2** Store memory

5.25.2 Arrangement and settings

- 1 Carry out either of the following operations.
 - Click on  [Scatter Graph].
 - Select [Object] → [Graph] → [Scatter Graph] from the menu.
- 2 Click on the position where the scatter graph is to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)
- 3 Double click on the arranged scatter graph to display the setting dialog box. Make the settings with reference to the following explanation.



Easier setting method

Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual

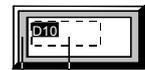


Method of adjusting objects in which shape is set

Select [Enable Two Tracker Mode] to adjust the position of the object and the shape.



Section 5.2.3 Object size change



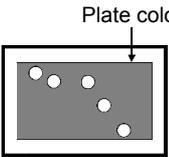
Object outline frame
Shape

5.25.3 Setting items

1 Basic tab

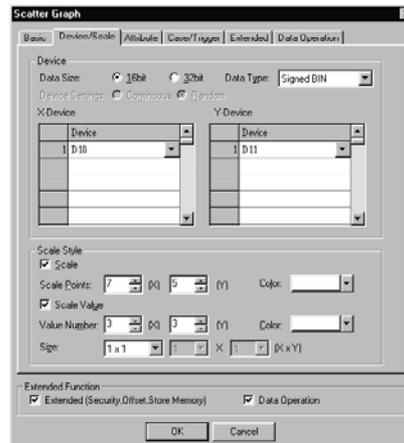
Set the graph type, upper limit/lower limit and shape.

| Items | Description | A | F |
|------------|---------------------------------------|---|---|
| Graph type | Select the graph type (sample/batch). | ○ | × |

| Items | | Description | A | F |
|----------------|---|---|--------------------------|--------------------------|
| View Format | Points | Set the points (2 to 500) to be displayed in the graph of [Batch]. | <input type="radio"/> | <input type="checkbox"/> |
| | Mode | Select how to update the graph display of [Batch]. Replacement : Only displays the graph of the latest data. Locus : Displays the latest data with the previous displayed graph overlapped. | <input type="radio"/> | <input type="checkbox"/> |
| | X: Upper Limit/ Lower Limit Y: Upper Limit/ Lower Limit | Select whether to set the range (upper limit/lower limit of X/Y) of device displayed in scatter graph in fixed value or in the value of the specified device. Fixed : Set a fixed value to the upper limit/lower limit. Device : Set a device value as the upper limit /lower limit. (☞ Section 5.1 Device Setting) The range of the upper limit/lower limit that can be set depends on the data type of the monitor device. Set the data type (set in the Device/Scale tab) in advance. | <input type="radio"/> | <input type="checkbox"/> |
| Shape | Shape | Set a shape, i.e., frame for the object. When [None] is selected, no shape will be displayed. By clicking on the others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="checkbox"/> |
| | Frame Color | Select the shape/plate color. | <input type="radio"/> | <input type="checkbox"/> |
| | Plate Color |  | <input type="radio"/> | <input type="checkbox"/> |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="checkbox"/> | |

2 Device/Scale tab

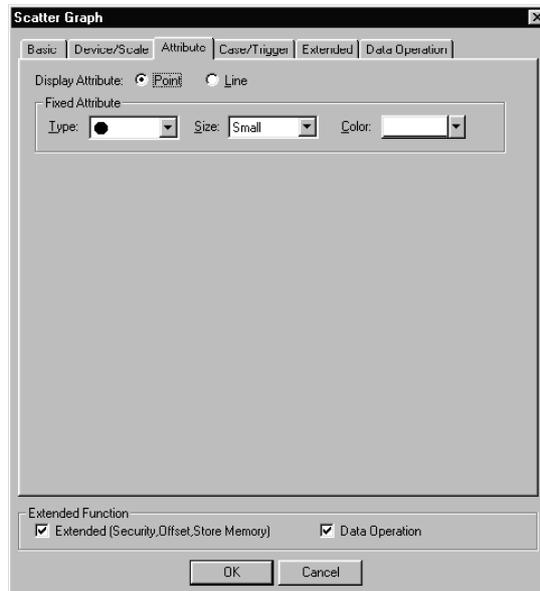
Set the devices to be monitored and the scale displayed in the graph.



| Items | | Description | A | F |
|--------|-----------------------|--|-----------------------|-------------------------------------|
| Device | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | Select the data type of the word device to be monitored. Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. Real : Treats word device value as floating point type real number. BCD : Treats word device value as BCD (binary decimal) value. (Only when selecting 32bit for data size) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Device Settings | Select the setting method for monitoring devices when [Batch] is used. Continue : The device to be monitored at the first point in the graph will be set as the head device. Random : Devices to be monitored are set at random. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | X-Device/ Y-Device | Input the device directly for each of X and Y axes, or click on the Dev button to set the monitor word device. (Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Scale | | Set the scale and scale values for the scatter graph. Example) Tick mark (Horizontal: 5, Vertical: 5) Tick mark (Horizontal: 3, Vertical: 3) Cascade both scale and tick mark. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Scale | Check this item to display the scale. After checking, set the number of scale points (i.e. tick marks) (2 to 11) and the scale color. Once this is set, the space between each scale tick is automatically defined. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Scale Value | Check this item to display the scale by using numeric values. Set the number of numeric values (2 to 11) in [Value Number], the color in [Color] and numeric size (0.5 to 8) in [Size]. The default numeric values for both X and Y axes are set within the range from -100 to 100. When changing the numeric values, set the upper limit/lower limit values for the scale value in the extended tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |

3 Attribute tab

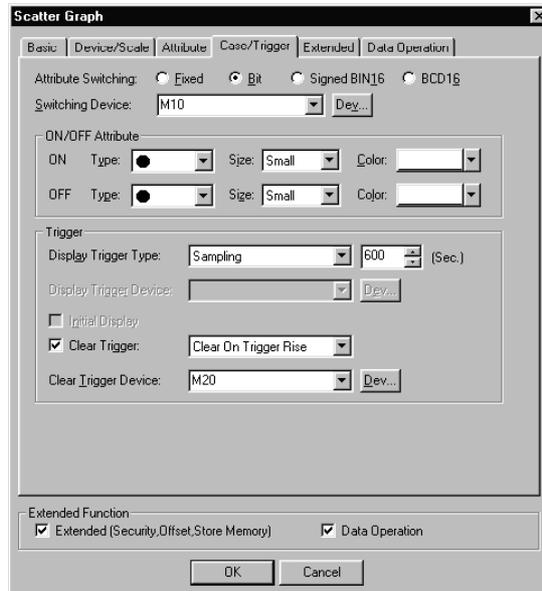
Set the display attribute (type of point/line) of scatter graph.

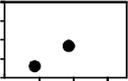
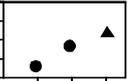
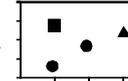


| Items | Description | A | F |
|-------------------|---|-----------------------|---|
| Display Attribute | Select the display attribute (point/line) of scatter graph. | <input type="radio"/> | × |
| Fixed Attribute | Set display attribute for the case that [Fixed] is selected for [Attribute Switching] on the Trigger tab. | <input type="radio"/> | × |
| Type | <p>Select the type of the point/line that indicates coordinate position.</p> <p>Type of point : ● ■ ▲ + ○ □ △ ×</p> <p>Type of line : </p> <p>When the line is set to a type other than the solid line, it may not be displayed properly if it is positioned close to other point/line.</p> | <input type="radio"/> | × |
| Size | Select the size of the point (large, medium, small)/line (1 to 7). | <input type="radio"/> | × |
| Color | Select the display color of the point/line. | <input type="radio"/> | × |

4 Trigger tab

Set the display attribute switching of scatter graph, updating of graph display and timing of erasure.



| Items | Description | A | F |
|---------------------|---|---|---|
| Attribute Switching | <p>Select the switching display attributes for the scatter graph (type, size and color of point/line)</p> <p>Fixed : The display attribute is not switched. The display attribute set on the Attribute tab is used.</p> <p>Bit : The display attribute is switched depending on the bit device conditions ON/OFF.</p> <p>Signed BIN16 : The display attribute is switched between multiple settings depending on the word device value (16-bit binary value).</p> <p>BCD16 : The display attribute is switched between multiple settings depending on the word device (16-bit BCD (Binary Coded Decimal)).</p> <p>When [Bit] is selected, set the display attribute in [ON/OFF Attribute] of this tab. When [Signed BIN16] or [BCD16] is selected, set it on the Case tab.</p> <p>Example1) Attribute switching: [Bit], Switching device: M10</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>M10: ON Points are displayed as ●.</p> </div> <div style="font-size: 2em;">→</div> <div style="text-align: center;">  <p>M10: OFF Points are displayed as ▲.</p> </div> </div> <p>Example2) Attribute switching : [Signed BIN16], Switching device : D10</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>D10 = 1 Points are displayed as ●.</p> </div> <div style="font-size: 2em;">→</div> <div style="text-align: center;">  <p>D10 = 10 Points are displayed as ▲.</p> </div> <div style="font-size: 2em;">→</div> <div style="text-align: center;">  <p>D10 < 100 Points are displayed as ■.</p> </div> </div> | ○ | × |
| Switching Device | <p>Set the device for display switching. ( Section 5.1 Device Setting)</p> | ○ | × |

| Items | Description | A | F | |
|----------------------|--|--|--------------------------|--------------------------|
| ON/OFF Attribute | Set the display attribute for ON/OFF statuses of the display-switching bit device. | <input type="radio"/> | <input type="checkbox"/> | |
| Type | <p>Select the type of the point/line that indicates coordinate position.</p> <p>Type of point : ● ■ ▲ + ○ □ △ ×</p> <p>Type of line : </p> <p>When the line is set to a type other than the solid line, it may not be displayed properly if it is positioned close to other point/line.</p> | <input type="radio"/> | <input type="checkbox"/> | |
| Size | Select the size of the point (large, medium, small) /line (1 to 7). | <input type="radio"/> | <input type="checkbox"/> | |
| Color | Select the display color of the point/line. | <input type="radio"/> | <input type="checkbox"/> | |
| Trigger | <p>Select the trigger for displaying the object.</p> <p>When [Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit.</p> <p>( Section 5.4 Trigger Setting)</p> <p> <input type="radio"/> Sampling <input type="radio"/> Fall <input type="radio"/> OFF sampling <input type="radio"/> Rise <input type="radio"/> ON sampling </p> | <input type="radio"/> | <input type="checkbox"/> | |
| | Device | Specify the device used for the trigger. | <input type="radio"/> | <input type="checkbox"/> |
| | Initial Display | When [Rise] or [Fall] is selected in [Trigger Type], check this item if the object needs to be displayed only at the initial time after screen switching even though the trigger is not satisfied. | <input type="radio"/> | <input type="checkbox"/> |
| | Clear Trigger | <p>Check this item to set the trigger for erasing the display of graphs.</p> <p>After checking, select the timing of erasing graph display.</p> <p>Rise : Erases the graph at rise (ON → OFF) of bit device.</p> <p>Fall : Erases the graph at fall (OFF → ON) of bit device.</p> <p>The clear trigger will clear graph display stored in memory and the accumulation frequency/average value.</p> | <input type="radio"/> | <input type="checkbox"/> |
| Clear Trigger Device | <p>Assigning a device to function as a clear trigger. ( Section 5.1 Device Setting)</p> <p>When the trigger type is set to [Sampling], [ON Sampling] or [OFF Sampling], make sure to hold the clear trigger device status for more than the sampling cycle set in [Trigger Type].</p> | <input type="radio"/> | <input type="checkbox"/> | |

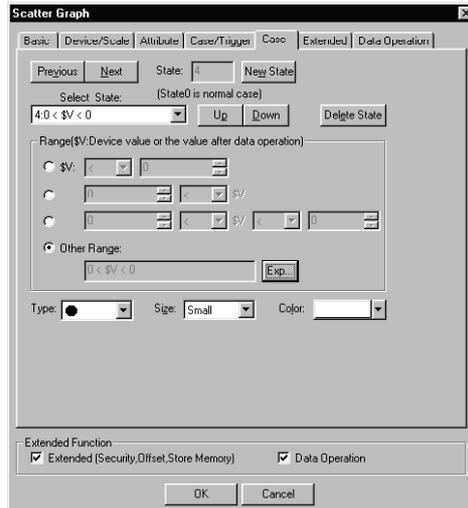
5 Case tab

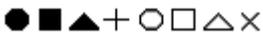
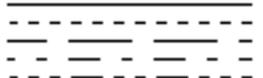
Set the attributes according to the state of device state condition.

This tab will be displayed only when [Attribute Switching] of the Trigger tab is set to [Signed BIN16] or [BCD16].

Refer to the following for details of state.

 Section 5.3 State Setting



| Items | Description | A | F |
|---------------|---|-----------------------|-------------------------------------|
| State *1 | Make the setting for display conditions and object display for each state. Up to 64 states can be set (including the normal case). (State No. 0 indicates the normal case) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| New State | Creates a new state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Delete State | Deletes a specified state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Range | Set the range of word device values for display change using a conditional expression. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Type | Select the type of the point/line that indicates coordinate position. Type of point :  Type of line :  When the line is set to a type other than the solid line, it may not be displayed properly if it is positioned close to other point/line. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Size | Select the size of the point (large, medium, small) /line (1 to 7). | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Color | Select the display color of the point/line. | <input type="radio"/> | <input checked="" type="checkbox"/> |

* For the details of *1, refer to the next page.

*1 About state

(1) Display for condition other than those set on the Case tab
 When the state is in condition other than those set on the Case tab, it is displayed with the display attribute set on the Basic tab.

(2) Display when conditions are overlapped
 When conditions are overlapped, a state with smaller No. has priority.

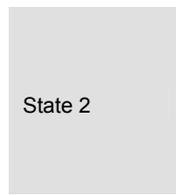
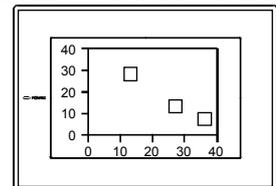
Example) Graph type : Sample,
 Switching device : D10

| Operation priority for setting overlap condition. | State No. | Display range | Type | Size | Color |
|---|--------------------|-----------------------|------|-------|-------|
| High | 1 | $8 \leq \$V \leq 12$ | □ | Big | White |
| ↓ | 2 | $13 \leq \$V \leq 18$ | ▲ | Small | Black |
| Low | Ordinary (State 0) | — | ● | Big | Black |

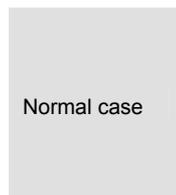
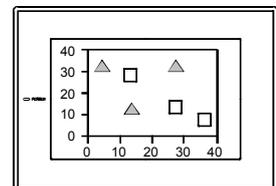
*\$V indicates the value of the monitor device.



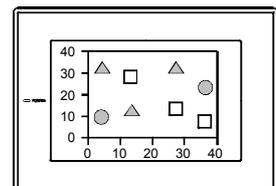
When the value of the switching device is between 8 and 12 ($8 \leq \$V \leq 12$), it will appear as big white quadrangle (□).



When the value of the switching device is between 13 and 18, it will appear as small black triangle (▲).



When other conditions except for the conditions of state 1 to 3 happen, it will appear as big black circle (●).

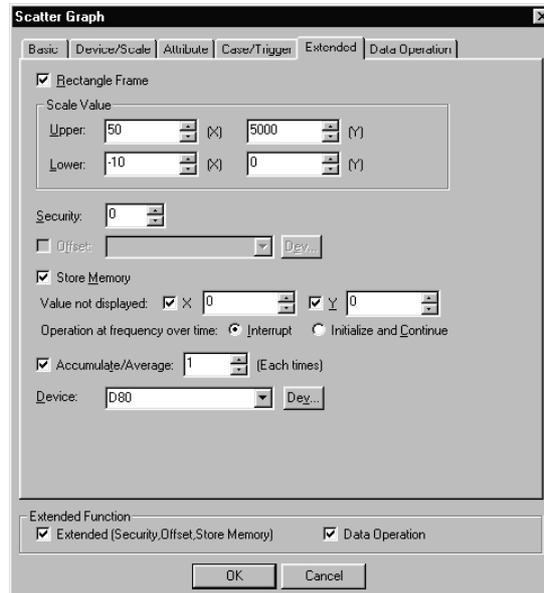


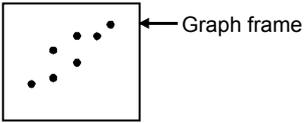
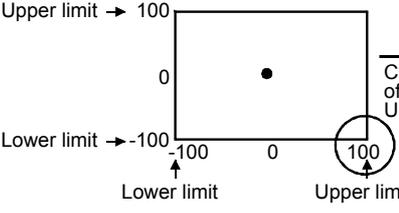
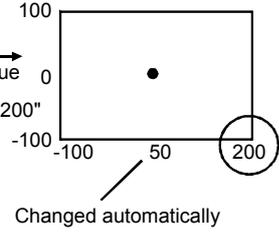
6 Extended tab

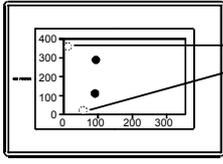
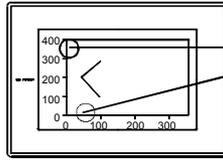
This tab allows the following attributes to be set:

Scale values, security, offset, and the write of collection data's accumulation data.

When the Extended Function at the bottom of the dialog box is checked, the tab is displayed.



| Items | | Description | A | F |
|-----------------|-------------|--|---|---|
| Rectangle Frame | | <p>Check this item to display the frame, i.e., shape for the graph.</p>  | ○ | × |
| Scale Value | Upper Limit | <p>When changing a scale value, set the upper/lower limit values. Set the scale value for vertical (Y axis) and/or horizontal (X axis) line. Example) Change the upper limit scale value on Y</p> | ○ | × |
| | Lower Limit | <p>Upper limit → 100</p>  <p>Lower limit → -100</p> <p>Lower limit Upper limit</p> <p>Change the scale value of the horizontal axis Upper limit: "100" to "200"</p>  <p>Lower limit Upper limit</p> <p>Changed automatically</p> | ○ | × |
| Security | | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (☞ Section 5.7 Security Function)</p> | ○ | × |
| Offset | | <p>Check this item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data length is fixed to 16 bits.</p> | ○ | × |

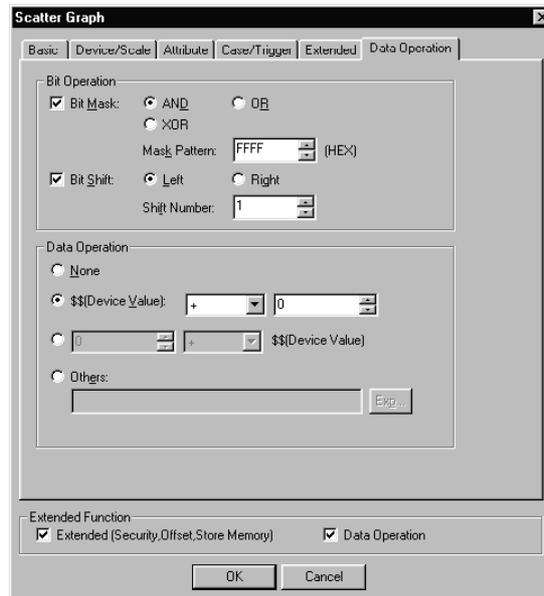
| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|--|---------------------------------------|--|------------------------|---|----------|---|-------|--------------|---------|-------|--------------|---------|-------|--------------|---|-------|--------------|---------|-------|----------------|---------|-------|----------------|---|---|
| Store Memory | Check this item to enable data collection during display of the screen without a scatter graph. Data of the points displayed in the graph are stored in the internal memory of GOT. | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | |
| Not-displayed Value | Check this item when setting the not-displayed value for X and/or Y of the scatter graph. Example) [0] is set as not-displayed value for X and Y <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Graph of [Point]</p> </div> <div style="text-align: center;">  <p>Graph of [Line]</p> </div> </div> | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation at frequency over time | Select the operation when the following functions exceed the maximum sampling number. <ul style="list-style-type: none"> ● Store memory : When exceeding the maximum display points (2000 points). ● Accumulation frequency : When accumulation frequency exceeds 65535 /average value/maximum/minimum (9999). <p style="margin-left: 40px;">Interrupt : Interrupts the data collection, and does not update the graph display.</p> <p style="margin-left: 40px;">Initialize and Continue: After erasing the graph display and initializing the memory and accumulation frequency/average value/maximum/minimum, continues data collection.</p> | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | |
| Accumulate/Average | Check this item when the accumulation frequency/average value/maximum/minimum of collected data needs to be written into devices. Not-displayed value set in the scatter graph display is not included. | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | |
| Write interval | Set the writing interval of the accumulation frequency/average value/maximum/minimum into device by specifying the number of update times. While the accumulation frequency/average value/maximum/minimum is written, the display of objects will be delayed, if the interval of the store memory and trigger is short. In this case, set a long Write interval. | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | |
| Write Device | Set the head bit device to which the accumulation frequency/average value is written. According to the data size (16bit/32bit) of the monitor device, the device range varies as follows. Example) The device that has been set: n <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Write contents</th> <th style="padding: 5px;">When setting 16 bit (using 7 word)</th> <th style="padding: 5px;">When setting 32 bit (using 14 word)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Accumulation frequency</td> <td style="padding: 5px;">n</td> <td style="padding: 5px;">n, n + 1</td> </tr> <tr> <td style="padding: 5px;">X</td> <td style="padding: 5px;">n + 1</td> <td style="padding: 5px;">n + 2, n + 3</td> </tr> <tr> <td style="padding: 5px;"> Maximum</td> <td style="padding: 5px;">n + 2</td> <td style="padding: 5px;">n + 4, n + 5</td> </tr> <tr> <td style="padding: 5px;"> Minimum</td> <td style="padding: 5px;">n + 3</td> <td style="padding: 5px;">n + 6, n + 7</td> </tr> <tr> <td style="padding: 5px;">Y</td> <td style="padding: 5px;">n + 4</td> <td style="padding: 5px;">n + 8, n + 9</td> </tr> <tr> <td style="padding: 5px;"> Maximum</td> <td style="padding: 5px;">n + 5</td> <td style="padding: 5px;">n + 10, n + 11</td> </tr> <tr> <td style="padding: 5px;"> Minimum</td> <td style="padding: 5px;">n + 6</td> <td style="padding: 5px;">n + 12, n + 13</td> </tr> </tbody> </table> | Write contents | When setting 16 bit (using 7 word) | When setting 32 bit (using 14 word) | Accumulation frequency | n | n, n + 1 | X | n + 1 | n + 2, n + 3 | Maximum | n + 2 | n + 4, n + 5 | Minimum | n + 3 | n + 6, n + 7 | Y | n + 4 | n + 8, n + 9 | Maximum | n + 5 | n + 10, n + 11 | Minimum | n + 6 | n + 12, n + 13 | ○ | × |
| Write contents | When setting 16 bit (using 7 word) | When setting 32 bit (using 14 word) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accumulation frequency | n | n, n + 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | n + 1 | n + 2, n + 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum | n + 2 | n + 4, n + 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum | n + 3 | n + 6, n + 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | n + 4 | n + 8, n + 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum | n + 5 | n + 10, n + 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum | n + 6 | n + 12, n + 13 | | | | | | | | | | | | | | | | | | | | | | | | | |

7 Data operation tab

Operational expression is set on this tab when monitoring the device by computing the device values. Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, please refer to the following.

 Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

5.25.4 Cautions

This section provides the cautions for using the scatter graph function.

1 Cautions for drawing

(1) The maximum number of scatter graph objects settable on one screen
GOT-A900 series: 24

(2) When using store memory

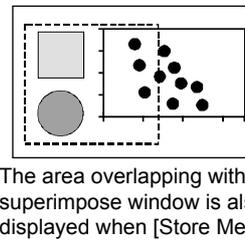
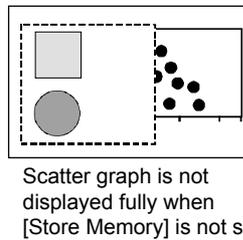
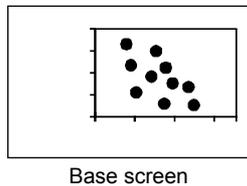
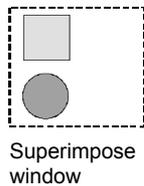
For the scatter graph with [Store Memory] set, up to 16 graph objects can be set in a whole project.

(3) Cautions when displaying superimpose window

Set the superimpose window not to overlap with a scatter graph.

The scatter graph area where the superimpose window is overlapped is not displayed.

Setting [Store Memory] enables full display of the scatter graph in such a case.





5.26 Sampling

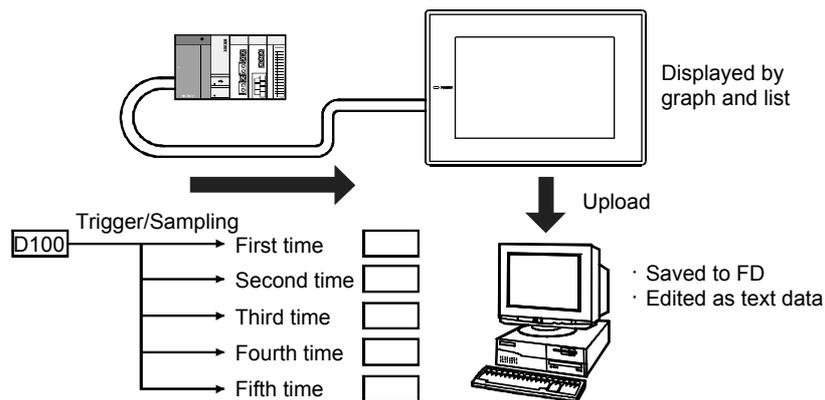


It is the function to collect PLC word device value according to clock function built-in GOT in a certain cycle or when the bit device turns ON/OFF.

The sampling results can be displayed in list or graph format on GOT.

They can be read to GT Designer2 and then stored into FD, or edited on PC as text data.

They can be printed using the printer that is connected to GOT.



5.26.1 Settings

- 1 Select [Common Settings] → [Sampling] from the menu.
- 2 As the setting dialog box is displayed, make the settings with reference to the following explanation.

Remark

When setting in the project workspace

The setting dialog box will be displayed by double clicking on  Sampling in the project workspace.

5.26.2 Setting items

Set the sampling function.

| Items | Description | A | F |
|--------------|--|---|---|
| Use sampling | Check this item to use sampling function. | × | ○ |
| Device | Set the device to be monitored. (☞ Section 5.1 Device Setting) | × | ○ |
| Trigger | The specified device data are collected when the trigger is satisfied. Device : Data are collected when the specified bit device rises (ON)/falls (OFF). Cycle : Data are collected at the specified interval. | × | ○ |
| Start/End | Set the timing to start or end sampling. Data is collected if the end trigger is not satisfied. | × | ○ |
| Device | Start : Starts sampling when the specified bit device rises (ON)/falls (OFF). End : Ends sampling when the specified bit device rises (ON)/falls (OFF). | × | ○ |
| Time | Start : Set the time to start sampling. End : Set the time to end sampling. | × | ○ |
| Frequency | End : Ends sampling after getting the data as specified times. | × | ○ |

5.26.3 Cautions

This section provides the cautions for using sampling function.

1 Maximum number of sampling function objects

Only one object can be set for each project.

2 Sampling operation

- (1) Even when the trigger is satisfied, sampling cannot be done if the start trigger has not been satisfied.
Also, sampling cannot be done after the end trigger is satisfied.
- (2) To restart sampling, make sure to clear the sampling data in GOT system menu.
- (3) Up to 2000 sampling results are stored even when other than [Frequency] is set as end trigger.
When sampling is performed more than 2000 times, the stored data will be cleared from the oldest one.
- (4) Starting sampling requires maximum 500ms after the trigger is satisfied
Therefore, sampling may not be performed normally if the time interval between triggers has been set to short.

3 Cautions about hardware

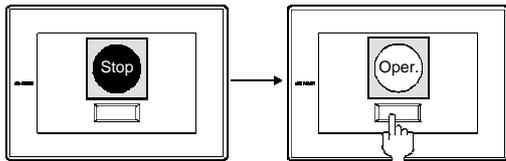
- (1) Incompatible GOT
Sampling function is not supported by F920GOT-K, F930GOT and F930GOT-K.

5.27 Touch Switch



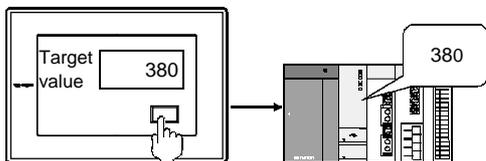
1 Bit switch (Section 5.27.2)

Turns bit device ON/OFF.



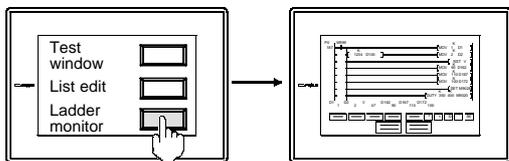
2 Data set switch (Section 5.27.3)

Changes word.



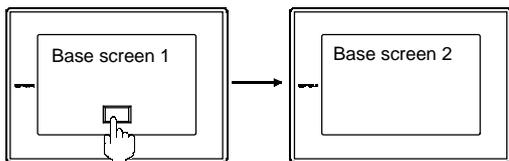
3 Special function switch (Section 5.27.4)

Switches to special function screen such as ladder monitor, test window, etc.



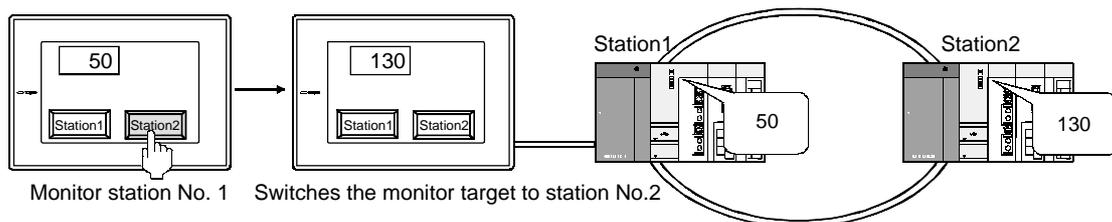
4 Goto screen switch (Section 5.27.5)

Switches base screen/window screen.



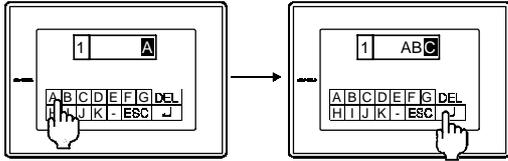
5 Change station No. switch (Section 5.27.6) (specific for GOT-A900 series)

Switches the object device being monitored to the same device of other station No.



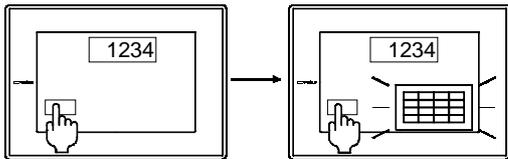
6 Key code switch  ( Section 5.27.7)

Operates as preset key code.



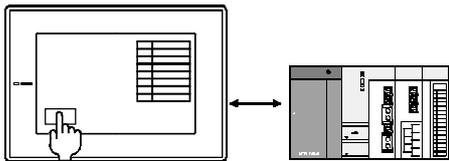
7 Data change switch  ( Section 5.27.8) (specific for GOT-F900 series)

Displays the window for numerical input/ASCII input and input data with keys. (The windows are provided within GOT.)



8 Recipe transfer switch  ( Section 5.27.9) (specific for GOT-F900 series)

The recipe value is written to the PLC data register.



9 Multi action switch  ( Section 5.27.10)

Sets the actions same with the switches described in **7** to **8**.

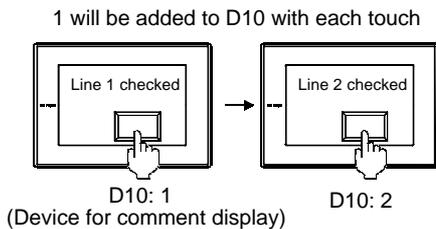
Touch switch extended function

| Switch type | Description | A | F |
|---------------------------|--|---|---|
| Bit Switch | <ul style="list-style-type: none"> ● Turns ON the specified bit device. (SET) ● Turns OFF the specified bit device. (RESET) ● Reverses (ON ← → OFF) the current status of specified bit device. (ALT) ● Turns ON the specified bit device. (Momentary) | ○ | ○ |
| Data Set Switch | <ul style="list-style-type: none"> ● Writes the set value to specified word device. (Fixed) ● Writes the set word device value to specified word device. (Indirect) ● Writes the set word device value + fixed value to specified word device. (Fixed + indirect) | ○ | ○ |
| Goto Screen Switch | <ul style="list-style-type: none"> ● Switches to the screen of which base screen No. that was displayed previously. ● Switches to the screen of which screen No. that is specified. ● Switches to the screen of which screen No. that is specified according to specified bit device ON/OFF. ● When the current value of specified word device corresponds to the specified comparison expression, switches to the specified station No. | ○ | ○ |
| Special Function Switch | Switches to special function screen of ladder monitor, test window, etc. | ○ | ○ |
| Change Station No. Switch | <ul style="list-style-type: none"> ● Switches to the station No. specified as monitor target. ● Switches to the specified station No. when the bit device (of which monitor target is specified) turns ON/OFF. ● When the current value of specified word device corresponds to the specified comparison expression, switches to the specified station No. | ○ | × |
| Key Code Switch | Controls numerical input, key input of ASCII input, alarm list and data list. | ○ | ○ |
| Data Change Switch | Displays the key window for numerical input/ASCTII input. (The windows are provided within GOT.) | × | ○ |
| Recipe Transfer Switch | <ul style="list-style-type: none"> ● Writes the recipe value to the specified data register. ● Writes the specified data register to recipe. | × | ○ |
| Multi Action Switch | The above operation can be set to this switch. | ○ | ○ |

Application Example

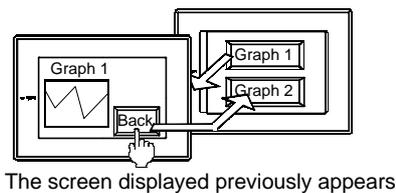
Comment display changes with each touch

Section 5.27.3 Setting items of data set switch



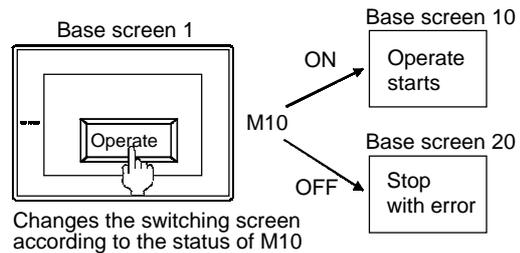
Return to the previously displayed screen

Section 5.27.5 Setting items of Go to Screen Switching



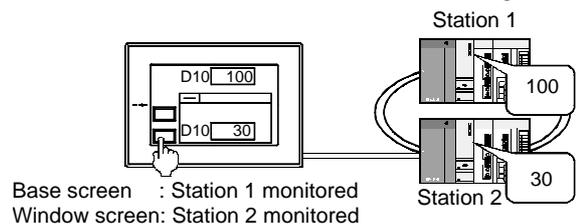
Change the switching screen according to device status

Section 5.27.3 Setting items of data set switch



Switches different station No. among different screen types

Section 5.27.6 Setting items of change station No. switching



5.27.1 Arrangement and settings

1 Carry out either of the following operations.

- Click on each touch switch icon.



Bit switch



Data set switch



Special function switch



Data change switch



Multi action switch



Goto screen switch



Key code switch



Change station No. switch



Recipe transfer switch

- Select a touch switch from the menu.

[Object] → [Switch] → [Bit Switch]
[Data Set Switch]
[Special Function Switch]
[Goto Screen Switch]
[Change Station No. Switch]
[Key Code Switch]
[Data Change Switch]
[Recipe Transfer Switch]
[Multi Action Switch]

2 Click on the position where the touch switch is to be located to complete the arrangement.
(After arrangement, release the arrangement mode by right-clicking the mouse or using ESC key.)

3 Double click on the arranged touch switch to display the setting dialog box. Make the settings with reference to the following explanation.



Hint!

Easier setting method

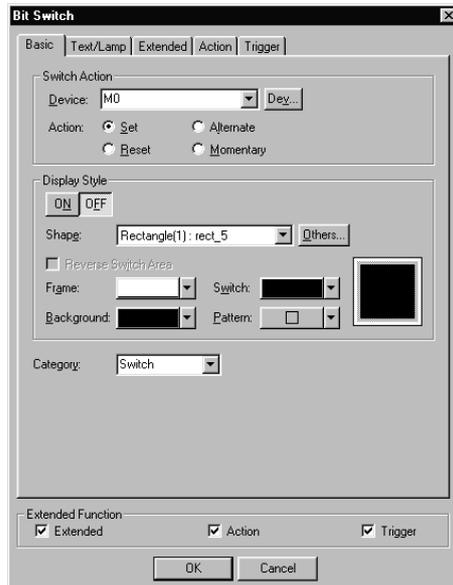
Using the property sheet enables direct on-screen object setting.



GT Designer2 Version1 Operating Manual

5.27.2 Setting items of bit switch

1 Basic tab



(Example: When setting in GOT-A900 series)

| Items | | Description | A | F |
|-------------|---------------------|--|---|---|
| Action | Device | Set bit device as write destination. (☞ Section 5.1 Device Setting) | ○ | ○ |
| | Action | Select the function corresponding to the bit device as write destination. Set : Turns ON bit when touched. Alternate : Switches bit ON/OFF with each touch. Reset : Turns OFF bit when touched. Momentary : Turns on bit only when being touched. | ○ | ○ |
| | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | ○ | ○ |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | ○ | ○ |
| View Format | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="button" value="Others"/> button, shapes other than those in the list box or library figures can be selected. (☞ Section 5.2.2 Object shape setting) | ○ | ○ |
| | Reverse Switch Area | Check this item to XOR-reverse the touch switch area in which shape is not set, according to the background color. | ○ | × |
| | Frame | Select the frame color of the touch switch. | ○ | ○ |
| | Switch | Select the touch switch color. | ○ | ○ |

| Items | | Description | A | F |
|----------------|------------|---|---|---|
| View Format | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. (Example) Background:  Pattern :  Switch :  | ○ | × |
| | Pattern | | | |
| Category | | When allocating category to the object, select a proper category.  GT Designer2 Version1 Operating Manual) | ○ | ○ |

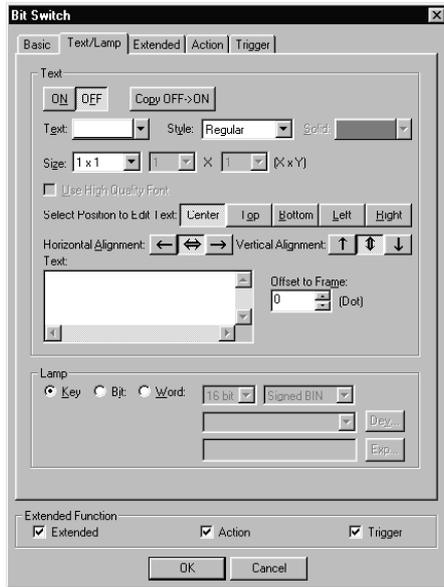
Remark

Touch switch operation when [Momentary] is set.

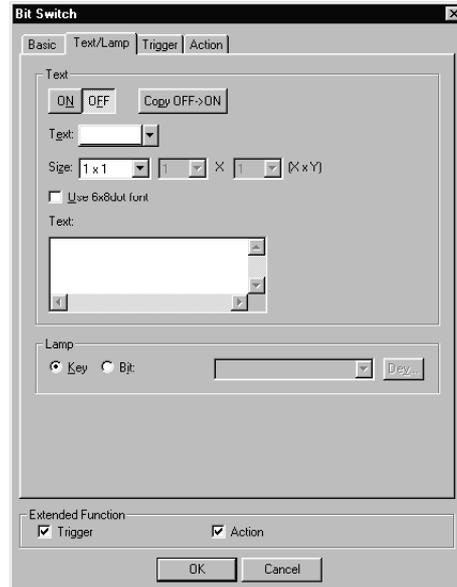
- (1) Even if GOT is powered off while the touch switch is being touched, bit device keeps ON.
- (2) The actual switching of the base screen will occur once the operators finger is released off the touch switch from the moment it is first touched.
- (3) If the GOT hardware error occurs and monitoring is interrupted while the touch switch is being touched, the bit device keeps ON even after the switch is released.

In this case, set a timeout period for the device being kept ON, and set the PLC CPU to forcibly reset the bit device when the timeout error occurs. This will then turn the bit device OFF.

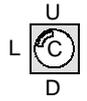
2 Text/Lamp tab

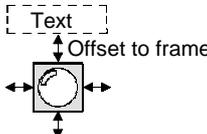


In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F |
|--------------------------------|---|--------------------------|--------------------------|
| ON | Click on this item to set the text to be displayed, positioning point and display position when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| OFF | Click on this item to set the text to be displayed, positioning point and display position when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| Copy ON → OFF Copy OFF → ON | This button is used to copy the set attribute. Copy OFF → ON : The set text and display position for the "OFF" attribute are copied to the "ON" attribute. Copy ON → OFF : The set text and display position for the "ON" attribute are copied to the "ON" attribute. | <input type="radio"/> | <input type="radio"/> |
| Text | Select the color of text to be displayed. | <input type="radio"/> | <input type="radio"/> |
| Style | Select the view format of text (regular/bold/raised) <div style="text-align: center;">  <p>Regular Bold Solid Raised</p> </div> | <input type="radio"/> | <input type="checkbox"/> |
| Solid | Select the solid color for the text when [Solid] or [Raised] is set in [Style]. | <input type="radio"/> | <input type="checkbox"/> |
| Size | Select the size of text to be displayed. (GOT-A900 series: 0.5 to 8, GOT-F900 series: 1 to 8 × 0.5 to 4) When (1 × 1) is set, the font size is 8 × 16 dots. | <input type="radio"/> | <input type="radio"/> |
| Use High Quality Font | Check this item when using high quality font to display touch switch text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | <input type="radio"/> | <input type="checkbox"/> |
| Select Position to Edit Text | Select the position where the object is to be displayed. (Center/Top/Bottom/Left/Right) <div style="text-align: center;">  </div> | <input type="radio"/> | <input type="checkbox"/> |
| Horizontal Alignment | Select the horizontal position of the text. | <input type="radio"/> | <input type="checkbox"/> |
| Vertical Alignment | Select the vertical position of the text. | <input type="radio"/> | <input type="checkbox"/> |
| Use 6 × 8dot font | Font is displayed in size of 6 × 8 dots. (Characters only) | <input type="checkbox"/> | <input type="radio"/> |

| Items | | Description | A | F |
|-------|-----------------|--|-----------------------|--------------------------|
| Text | Text | Input the text to be displayed. (Up to 32 characters) Press the <input type="text" value="Enter"/> key to input a new line at the end of the first line. (A line feed is counted as two characters.) | <input type="radio"/> | <input type="radio"/> |
| | Offset to Frame | Set the number of dots for the distance between the text and object shape, i.e., frame. (Up to 100 dots)  | <input type="radio"/> | <input type="checkbox"/> |
| Lamp | | Select the method of switching touch switch image (ON shape, OFF shape). | <input type="radio"/> | <input type="radio"/> |
| | Key | ON shape is displayed when the touch switch is touched. OFF shape is displayed when the touch switch is released. | <input type="radio"/> | <input type="radio"/> |
| | Bit | When the bit device set in [Device] is ON, OFF shape will be switched to ON shape. After selecting, set the device ( Section 5.1 Device Setting). | <input type="radio"/> | <input type="radio"/> |
| | Word | When the range of specified word device is set to [Range] in [Device], OFF shape will be switched to ON shape. After selecting, make the settings as follows: Device : Sets the word device. ( Section 5.1 Device Setting) Data size 16 bit/32 bit : Selects data size for word device. Data type Signed BIN : Treats the word device value as signed binary value. Unsigned BIN : Treats the word device value as unsigned binary value. Real : Treats the word device value as floating point type real. Display range Range : After setting the specified word device, click on <input type="text" value="Range"/> button to set the switch range for ON/OFF shape. ( Section 5.4 Trigger Setting) | <input type="radio"/> | <input type="checkbox"/> |



Lamp

Select the item according to the application of ON/OFF shape set for a touch switch.

(1) When "Key" is selected

Select this item to switch only the image when the touch switch is touched. With the setting, OFF shape appears when the touch switch is released, regardless of the device status. Therefore, select "Bit" or "Word" to show the device status.

ON shape appears when the touch switch is touched.

OFF shape appears when the touch switch is released regardless of the device status.

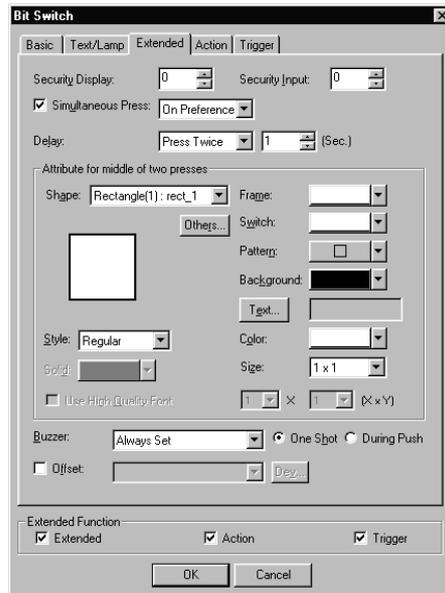
(2) When "Bit" or "Word" is selected

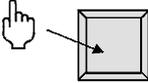
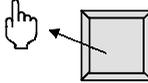
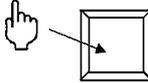
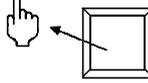
Select this item to switch the image according to the device status. By setting the same device set in the basic tab, the device status can be shown by touch switch (lamp function).

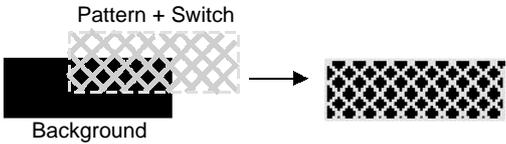
ON shape appears when M100 is ON.

OFF shape appears when M100 is OFF.

3 Extended tab (for GOT-A900 series only)



| Items | Description | A | F |
|---------------------------------|---|---|---|
| Security Display/Security Input | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". (Section 5.7 Security Function) The number for security input must be larger than that for security display.</p> | ○ | × |
| Simultaneous Press | <p>Check this item to disable simultaneous press of touch switch. On Preference: On status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside of the Touch key valid area in GOT by finger.</p>  <p>Touch switch: ON status</p> </div> </div> <p>OFF Preference: OFF status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: Won't be ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside fo the Touch key valid area in GOT by finger.</p>  <p>Touch switch: OFF</p> </div> </div> <p>Press the outside of touch switch valid area while valid area in GOT is pressed. (Two points are simultaneously pressed.)</p> <div style="text-align: center;">  <p>Touch switch: OFF</p> </div> | ○ | × |

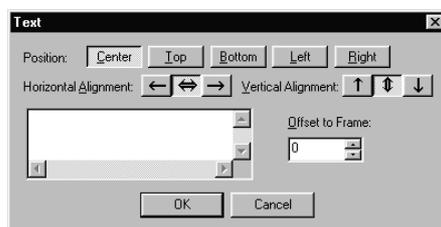
| Items | Description | A | F |
|-----------------------|---|-----------------------|---|
| Delay | <p>Set the time from the instance the touch switch is touched to start the operation, i.e., delay time in 1-second unit. (Minimum: 1 second, Maximum: 5 seconds.)</p> <p>None : No delay time will occur.</p> <p>ON : Select this item to carry out ON operation by pressing the touch switch during the set time. Set the delay time. This setting can prevent an incorrect operation from occurring.</p> <p>OFF : Select this item to carry out OFF operation in the set time after the touch switch is turned OFF. Touch switch is ON during the set time. After selecting, set the delay time.</p> <p>Press Twice : Select this item to carry out the operation when the touch switch is touched once and then touched for the second time within the set time.</p> | <input type="radio"/> | × |
| | Set the display attribute for the touch switch after touched once when [Press Twice] is set in [Delay]. | <input type="radio"/> | × |
| Shape | <p>Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the [Others] button, shapes other than those in the list box or library figures can be selected.</p> <p>( Section 5.2.2 Object shape setting)</p> | <input type="radio"/> | × |
| Frame | Select the frame color of the touch switch. | <input type="radio"/> | × |
| Switch | Select the touch switch color. | <input type="radio"/> | × |
| Pattern | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | <input type="radio"/> | × |
| Background | <p>(Example) Background:  Pattern:  Switch: </p> <p></p> | <input type="radio"/> | × |
| Text *1 | When displaying text on the touch switch, click on <input type="text"/> button, set the text to be displayed and positioning point and display position. | <input type="radio"/> | × |
| Style | <p>Select the view format of text (regular/bold/raised).</p> <p>   </p> <p>Regular Bold Solid Raised</p> | <input type="radio"/> | × |
| Color | Select the color of text to be displayed. | <input type="radio"/> | × |
| Solid | Select the solid color for the text when [Solid] or [Raised] is set in [Style]. | <input type="radio"/> | × |
| Size | Select the size of text on touch switch (0.5 to 8). | <input type="radio"/> | × |
| Use High Quality Font | Check this item when using high quality font to display touch switch text. (Only when display size X, Y is set to any of 2, 4, 6 or 8.) | <input type="radio"/> | × |

| Items | Description | A | F |
|-------------|--|-----------------------|---|
| Buzzer | Select the time the buzzer is on when the touch switch is touched. Always Set : The buzzer sound is on whenever the touch switch is touched. Set Only Fill Requirement : The sound is on only when the touch switch is touched and the trigger has been satisfied. Always Not Set : The buzzer sound is not on even when the touch switch is touched. | <input type="radio"/> | × |
| One Shot | Check this item to output volume at the moment the touch switch is touched when [Always Set] is set in [Buzzer Volume] and [Set Only Fill Requirement] is set. | <input type="radio"/> | × |
| During Push | Check this item to keep buzzer beeping while the touch switch is touched when [Always Set] is set in [Buzzer Volume] and [Set Only Fill Requirement] is set. | <input type="radio"/> | × |
| Offset | Check this item to operate the touch switch, based on the value by adding the set offset value to the device address specified by touch switch operation function (SET, RESET, ALT, Momentary, WordSET) After checking, set the offset device. Data length is fixed 16 bits. (☞ Section 5.6 Offset Function) | <input type="radio"/> | × |

For the details of *1, refer to the following.

*1 Set the text to be displayed on touch switch

When text is displayed on the touch switch when [Attribute for middle of two presses] is set, the settings must be made as follows.



| Items | Description | A | F |
|----------------------|---|-----------------------|---|
| Position | Select the position where the object is to be displayed. (Center/Top/Bottom/Left/Right) | <input type="radio"/> | × |
| Horizontal Alignment | Select the horizontal position of the text. | <input type="radio"/> | × |
| Vertical Alignment | Select the vertical position of the text. | <input type="radio"/> | × |
| Text | Input the text to be displayed. (Up to 32 characters) Press the <input type="text" value="Enter"/> key to input a new line at the end of the first line. | <input type="radio"/> | × |
| Offset to Frame | Set the number of dots for the distance between the text and object shape, i.e., frame. (Up to 100 dots) | <input type="radio"/> | × |

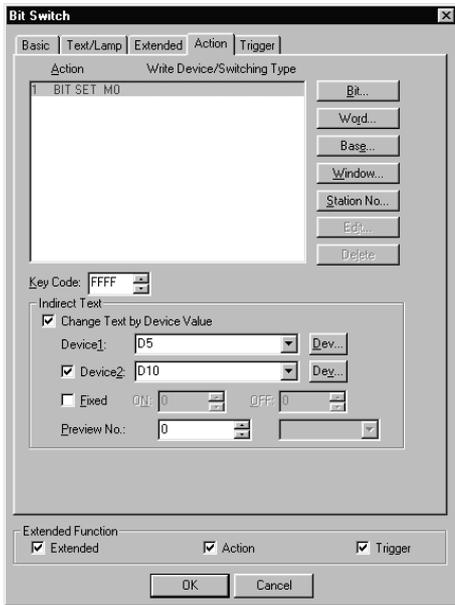


Displaying text on the top/bottom/left/right of touch switch

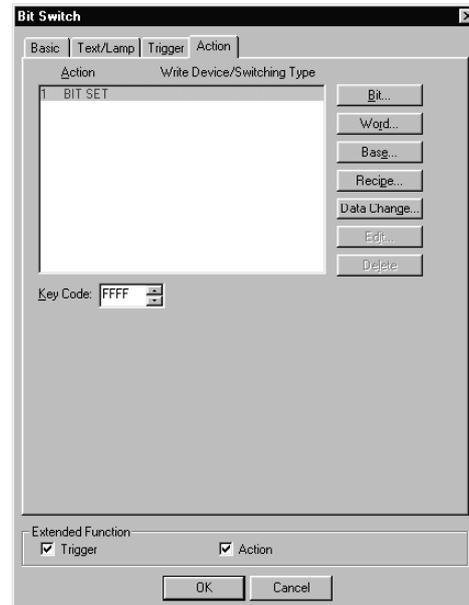
To display text on the top/bottom/left/right of touch switch, when [Attribute for middle of two presses] is set, set the text to be displayed when the device turns ON/OFF on the text/lamp tab.

If the settings are not made for the text display on the text/lamp tab, text will not be displayed based on the attribute for middle of two presses. (The display text at the time of ON/OFF may be blank.)

4 Action tab



In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F |
|---------------|---|----------------------------------|----------------------------------|
| Action | The set actions will be displayed in list format. | <input type="radio"/> | <input type="radio"/> |
| Key Code | Set the key code of the key for numeric value and ASCII input. ( Appendix 2 Key Code List) | <input type="radio"/> | <input type="radio"/> |
| Bit *1 | Click on this item to set the bit device ON/OFF operation for touch switch. | <input type="radio"/> | <input type="radio"/> |
| Word *2 | Click on this item to set the word device value change for touch switch. | <input type="radio"/> | <input type="radio"/> |
| Base *3 | Click on this item to make the settings in order the base screen will be switched by using touch switch. | <input type="radio"/> | <input type="radio"/> |
| Window *4 | Click on this item to make the settings in order the window screen will be switched by using touch switch. | <input type="radio"/> | <input checked="" type="radio"/> |
| Station No *5 | Click on this item to make the settings in order the station No. will be switched by using touch switch. | <input type="radio"/> | <input checked="" type="radio"/> |
| Recipe | Click on this item to make the settings in order the data of recipe value will be transmitted by using touch switch. | <input checked="" type="radio"/> | <input type="radio"/> |
| Data Change | Click on this item to set the display of key window for numeric/ASCII input by using touch switch. | <input checked="" type="radio"/> | <input type="radio"/> |
| Edit | When intending to edit a preset action, select the action from [Action] and then click on Edit button. As the corresponding setting dialog box will appear, edit the action on that dialog box. | <input type="radio"/> | <input type="radio"/> |
| Delete | When intending to delete a preset action, select the action from [Action] and then click on Delete button. As the corresponding setting dialog box will appear, delete the action on that dialog box. | <input type="radio"/> | <input type="radio"/> |

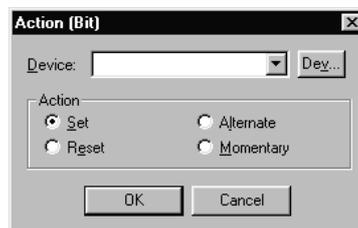
| Items | | Description | A | F |
|------------------|-----------------------------|--|-----------------------|-------------------------------------|
| Indirect Text *6 | Change Text by Device Value | Check this item to change the comment displayed on a touch switch according to the device value. After checking, click on <input type="text" value="Device"/> button and set the device that stores the value. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Device 1 | The comment of which No. is the same as the value stored in the set device appears. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Device 2 | Check this item to add other device value to the value set in <input type="text" value="Device1"/> . After checking, click on <input type="text" value="Device"/> button to set the device that stores the values to be added (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Fixed | Check this item to add other device value to the value set in <input type="text" value="Device1"/> according to the touch switch status (ON display /OFF display). After checking, set the value to be added for ON display /OFF display. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Preview No. | Set the comment to be displayed as touch switch text on GT Designer2 screen by the comment No. | <input type="radio"/> | <input checked="" type="checkbox"/> |

For the details of *1 to *6, refer to the following.

*1 Bit

The followings can be set as the touch switch actions taken when the bit device turns ON/OFF.

■ Setting of [Action (Bit)] dialog box

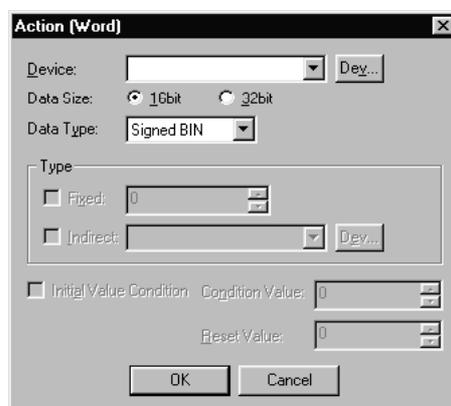


| Items | | Description | A | F |
|--------|--|---|-----------------------|-----------------------|
| Device | | Click on <input type="text" value="Device"/> button to set the bit device of write destination. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Action | | Select the corresponding function to the bit device as write destination when touched. Set : Turns ON bit when touched. Alternate : Switches bit ON/OFF when touched. Reset : Turns OFF bit when touched. Momentary : Turns ON bit when touched only. | <input type="radio"/> | <input type="radio"/> |

*2 Word

When changing the word device value with touch switch, set as show below.

■ Setting of [Action (Word)] dialog box



| Items | Description | A | F |
|-------------------------|---|-----------------------|-----------------------|
| Device | Set the device of write destination. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| Data Type | Select the data type of the value to be set in [Type] and [Initial Value Condition]. Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. Real : Treats word device value as floating point type real number. BCD : Treats word device value as BCD (binary decimal) value. | <input type="radio"/> | <input type="radio"/> |
| Type | Fixed : Check this item to write a fixed value into the word device set as write destination, and then set the value. (This item must be always set when GOT-F900 is used.) Indirect : Check this item to write the specified value into a word device, and then set the word device. (☞ Section 5.1 Device Setting) When [Fixed] and [Indirect] are both checked, the value (fixed value + indirect value) will be written into the word device. | <input type="radio"/> | <input type="radio"/> |
| Initial Value Condition | If the value becomes the condition value when [Fixed] and [Indirect] are both set in [Type], the reset value will be written into the specified word device. Condition Value : Set the value as condition for writing the reset value into the specified word device. Reset Value : Set the value written into the word device when the condition value is satisfied. | <input type="radio"/> | <input type="radio"/> |

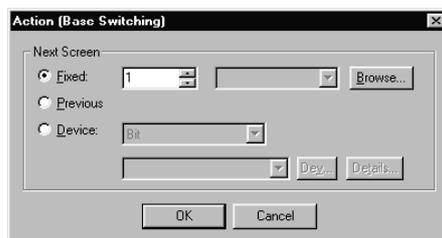
***3 Base**

When switching base screen with touch switch, set as shown below.

For the details of the base screen switching function, refer to the following.

 Section 5.27.5 Setting items of Go To screen switching (Basic tab)

■ Setting of [Action (Base Switching)] dialog box



| Items | Description | A | F |
|-------------|--|-----------------------|-----------------------|
| Next Screen | Select the action of switching screen. | <input type="radio"/> | <input type="radio"/> |
| Fixed | Select this item to switch to the base screen of the specified No. Set the base screen No. as switching destination. | <input type="radio"/> | <input type="radio"/> |
| Previous | Select this item to switch to the base screen of which screen No. was displayed previously. | <input type="radio"/> | <input type="radio"/> |
| Device | Select this item to switch to the base screen specified by the No. based on the ON/OFF status or current value of the specified device. Select the data type of the device to be monitored. Bit : Switches base screen when the bit device turns ON/OFF. Signed (BIN16) : Switches base screen based on the word device (BIN16) binary value. BCD16 : Switches base screen based on the word device (BCD16) binary decimal value. After setting the device, click on <input type="button" value="Details"/> button. As the corresponding dialog box will appear, set the action on that dialog box. | <input type="radio"/> | × |

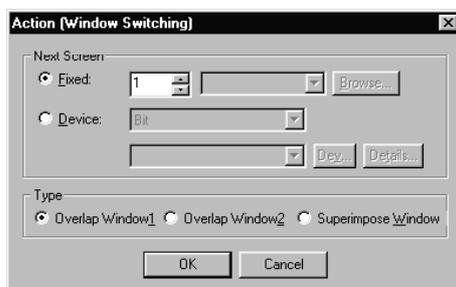
***4 Window**

Make the settings in order that window screen will be displayed or switched by using the touch switch, as shown below.

For the details of the window screen switching function, refer to the following.

 Section 5.27.5 Setting items of Go To screen switching (Basic tab)

■ Setting of [Action (Window)] dialog box



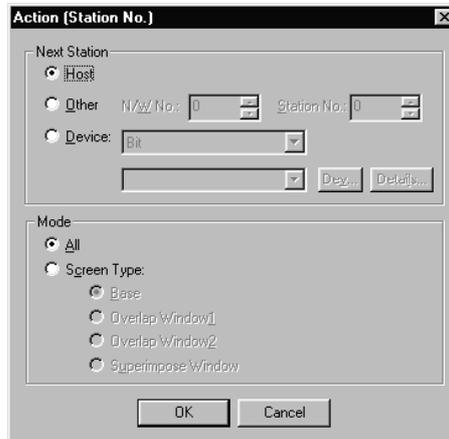
| Items | Description | A | F |
|-------------|--|-----------------------|---|
| Next Screen | Select the action of switching screen. | <input type="radio"/> | × |
| Fixed | Select this item to switch to the window screen of the specified No. Set the window screen No. as switching destination. | <input type="radio"/> | × |
| Device | Select this item to switch to the window screen specified by the No. based on the ON/OFF status or current value of the specified device. Select the data type of the device to be monitored. Bit : Switches window screen when the bit device turns ON/OFF. Signed (BIN16) : Switches window screen based on the word device (BIN16) binary value. BCD16 : Switches window screen based on the word device (BCD16) binary decimal value. After setting the device, click on <input type="button" value="Details"/> button. As the corresponding dialog box will appear, set the action on that dialog box. | <input type="radio"/> | × |
| Type | Select the window screen type to be displayed or switched to when the touch switch is touched. Overlap Window1: The specified window screen will be displayed/switched on the position that is set as overlap window 1 display position on base screen. Overlap Window2: The specified window screen will be displayed/switched on the position that is set as overlap window 2 display position on base screen. Superimpose: The specified window screen will be displayed/switched on the position that is set as superimpose window screen display position on base screen. | <input type="radio"/> | × |

***5 Station No.**

When setting the station No. switching function with the touch switch, set the following actions. For the details of the station No. switching function, refer to the following.

 Section 5.27.6 Setting items of change station No. switching (Basic tab)

■ Setting of [Action (Station No.)] dialog box



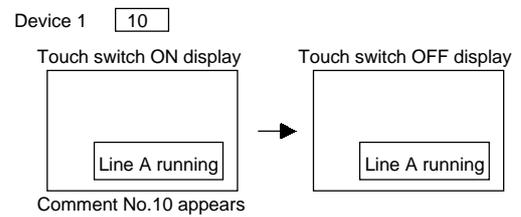
| Items | Description | A | F |
|--------------|--|-----------------------|---|
| Next Station | Select the action of switching station No. | <input type="radio"/> | × |
| Host | Select this item to monitor the station No. connected with GOT. | <input type="radio"/> | × |
| Other | Select this item to switch the monitor target to other station. Set the network No. and station No. that will be switched to in decimal. | <input type="radio"/> | × |
| Device | Select this item to switch to the station, specified by the No., based on the ON/OFF status of current value of the specified device. Select the data type of the device to be monitored. Bit : Switches base screen when the bit device turns ON/OFF. Signed (BIN16) : Switches base screen based on the word device (BIN16) binary value. BCD16 : Switches base screen based on the word device (BCD16) binary decimal value. After setting the device, click on <input type="button" value="Details"/> button. As the corresponding dialog box will appear, set the action on that dialog box. | <input type="radio"/> | × |
| Mode | All : Select this item to switch the whole project by station No. Screen type : Select this item to switch the specified screen by station No. | <input type="radio"/> | × |

*6 Indirect text

Set this item when changing the comment on a touch switch according to the device value.

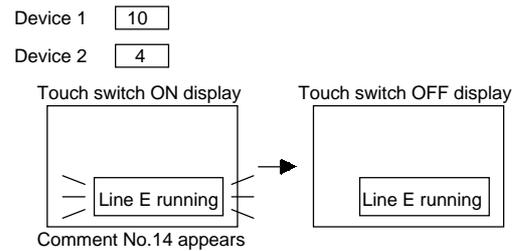
- (1) When only [Device 1] is set

The comment of which No. is the same as the value set in [Device 1] appears regardless of ON display/OFF display of the touch switch.



- (2) When [Device 1] and [Device 2] are set

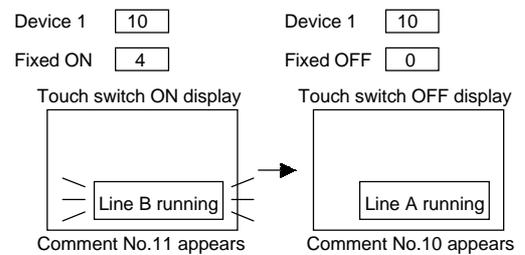
The comment of which No. is the same as the result of addition of values set in [Device 1] and [Device 2] appears regardless of ON display/OFF display of the touch switch.



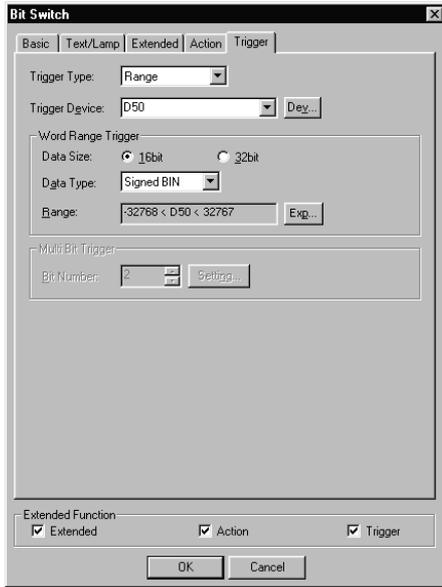
- (3) When [Device 1] and [Fixed] are set

The comment of which No. is the same as the result of addition of values set in [Device 1] and [Fixed ON] appears for ON display of the touch switch.

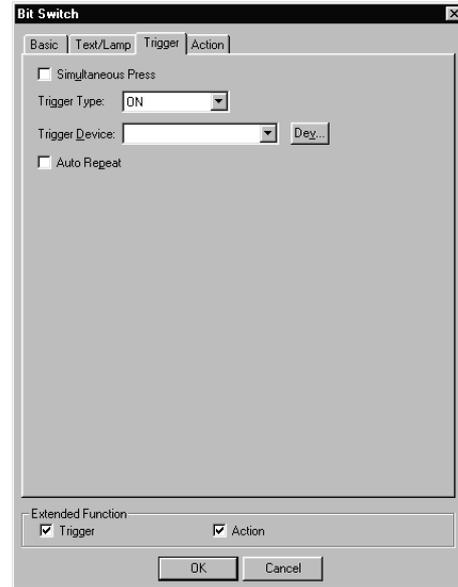
The comment of which No. is the same as the result of addition of values set in [Device 1] and [Fixed OFF] appears for OFF display of the touch switch.



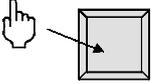
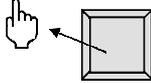
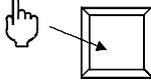
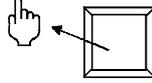
5 Trigger tab



In the case of GOT-A900 series



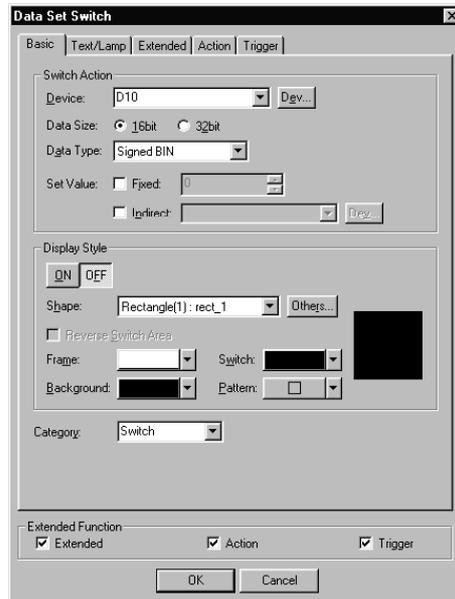
In the case of GOT-F900 series

| Items | Description | A | F |
|--------------------|--|---|---|
| Simultaneous Press | <p>Check this item to disable simultaneous press of touch switch. ON Preference: On status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: ON status</p> </div> </div> <p>OFF Preference: OFF status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: Won't be ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: OFF</p> </div> </div> <p>Press the outside of touch switch valid area while valid area in GOT is pressed. (Two points are simultaneously pressed.)</p> <div style="text-align: center;">  <p>Touch switch: OFF</p> </div> | × | ○ |
| Trigger Type | <p>Select the trigger for displaying the object. ( Section 5.4 Trigger Setting)</p> <p>In the case of GOT-A900 series:</p> <ul style="list-style-type: none"> ● Ordinary ● Range ON/OFF ● Bit Trigger <p>In the case of GOT-F900 series:</p> <ul style="list-style-type: none"> ● Ordinary ● ON/OFF | ○ | ○ |

| Items | Description | A | F |
|--------------------|---|-------------------------------------|-------------------------------------|
| Data Type | When [ON], [OFF] or [Range] is selected in [Trigger Type], click on <input type="button" value="Device"/> button to set bit device and word device (only when [Range] is selected). (Section 5.1 Device setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | When [ON] or [OFF] is selected in [Trigger Type], click on <input type="button" value="Device"/> button to set bit device. ( Section 5.1 Device setting) | <input checked="" type="checkbox"/> | <input type="radio"/> |
| Word Range Trigger | When [Range] is selected in [Trigger Type], set the following items for the word device set as trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type Signed BIN : Treats the word device value as signed binary value. Unsigned BIN : Treats the word device value as unsigned binary value. Real : Treats the word device value as floating point type real number. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range Click on the <input type="button" value="Range"/> button and set conditional expression for the word device range. ( Section 5.4 Trigger setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Multi Bit Trigger | Bit Number When selecting [Bit Trigger] in [Trigger Type], set the set bit device number (2 to 8) as multi bit trigger. After the setting, click on <input type="button" value="Setting"/> button to set bit device and trigger conditions. ( Section 5.4 Trigger setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Auto Repeat | The device repeatedly turns ON/OFF in a certain period, while the touch switch is being pressed. | <input checked="" type="checkbox"/> | <input type="radio"/> |

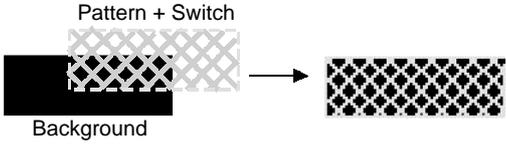
5.27.3 Setting items of data set switch

1 Basic tab



(Example: In the case of GOT-A900 series)

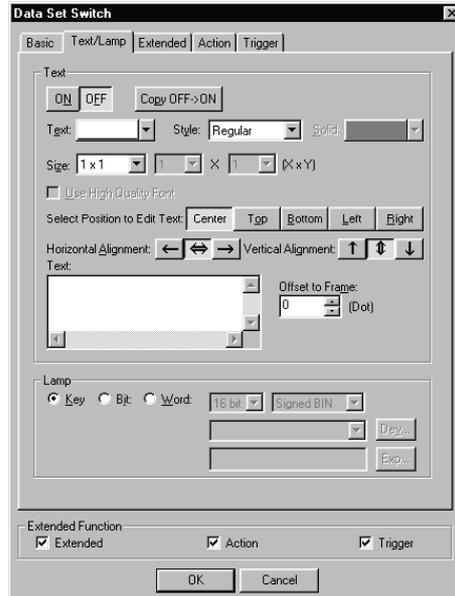
| Items | | Description | A | F |
|---------------|---------------------|---|-----------------------|----------------------------------|
| Switch Action | Device | Set the device of write destination. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | <input type="radio"/> |
| | Data Type | Select the data type of the value to be set in [Set Value]. Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. | <input type="radio"/> | <input type="radio"/> |
| | Set Value | Fixed : Check this item to write a fixed value into the word device set as write destination, and then set the value. (This item must be always set when GOT-F900 is used.) Indirect : Check this item to write the specified value into a word device, and then set the word device. (☞ Section 5.1 Device Setting) When [Fixed] and [Indirect] are both checked, the value (fixed value + indirect value) will be written into the word device. | <input type="radio"/> | <input type="radio"/> |
| Display Style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="button" value="Others"/> button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Frame | Select the frame color of the touch switch. | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|---------------|---|--|-----------------------|-----------------------|
| Display Style | Switch | Select the touch switch color. | <input type="radio"/> | <input type="radio"/> |
| | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | <input type="radio"/> | × |
| | Pattern | (Example) Background:  Pattern :  Switch :   | | |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version 1 Operating Manual) | <input type="radio"/> | <input type="radio"/> | |

2 Text/Lamp tab

The setting items of text/lamp tab are the same with those of bit switch. For the details of the set data, refer to the following.

 Section 5.27.2 Setting items of bit switch (Text/Lamp tab)

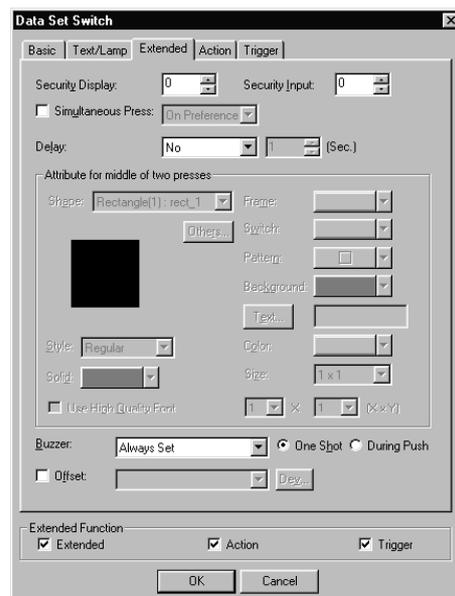


(Example: In the case of GOT-A900 series)

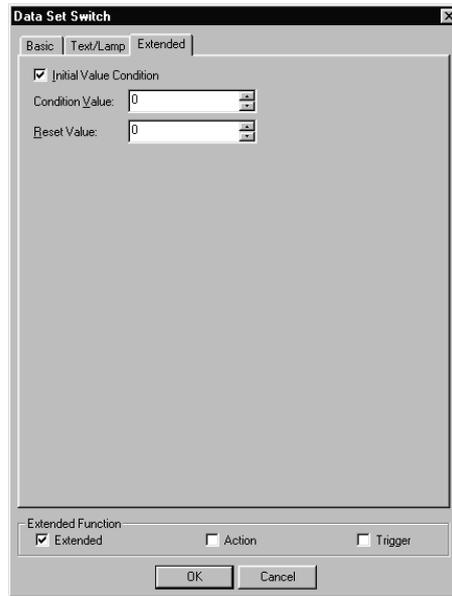
3 Extended tab (specific for GOT-A900 series)

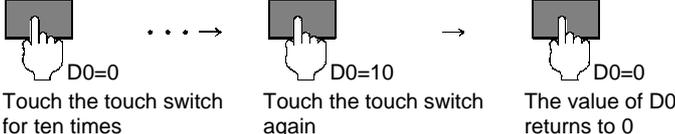
The setting items of extended tab are the same with those of bit switch. For the details of the set data, refer to the following.

 Section 5.27.2 Setting items of bit switch (Extended tab)



4 Extended tab (for GOT-F900 series only)

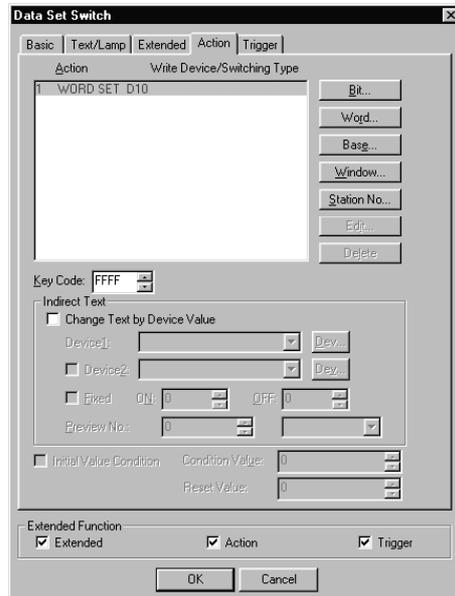


| Items | Description | A | F |
|-------------------------|--|---|---|
| Initial Value Condition | <p>If the value becomes the condition value when [Fixed] and [Indirect] are both set in [Type], the reset value will be written into the specified word device.</p> <p>(Example) Creating touch key that adds "1" to D0 when touched; and returns the value to "0" when it reached "10". Device : D0 (Initial value = 0) Fixed : 1 Indirect : D0 Condition value: 11 Reset value: 0</p>  <p>Touch the touch switch for ten times Touch the touch switch again The value of D0 returns to 0</p> | × | ○ |
| Condition Value | Set the condition value for writing the reset value to the specified word device. | × | ○ |
| Reset Value | Set the value that is written to the word device, when the condition value is satisfied. | × | ○ |

5 Action tab

The setting items of action tab are the same with those of bit switch. For the details of the set data, refer to the following.

 Section 5.27.2 Setting items of bit switch (Action tab)

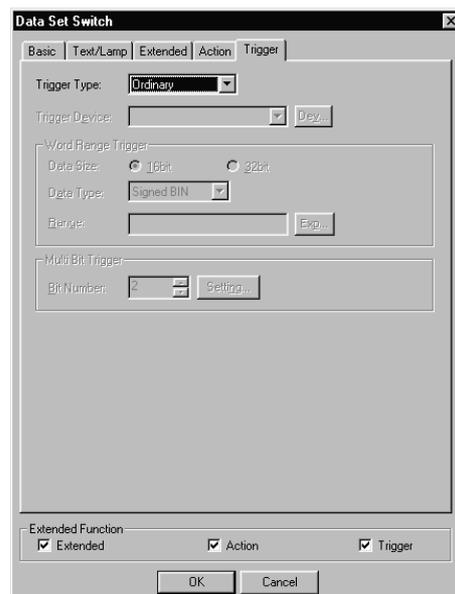


(Example: In the case of GOT-A900 series)

6 Trigger tab

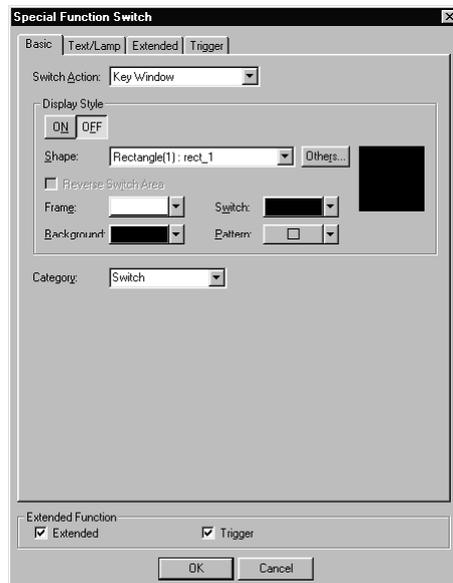
The setting items of action tab are the same with those of bit switch. For the details of the set data, refer to the following.

 Section 5.27.2 Setting items of bit switch (Trigger tab)

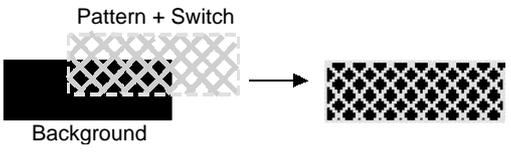


5.27.4 Setting items of special function switch

1 Basic tab



| Items | Description | A | F | | |
|---|--|---|---|---|---|
| Action | Select the screen type for the special function screen to be displayed. | | | | |
| | Utility* : Displays the utility screen. | | | | |
| | Ladder monitor* : Displays the screen of ladder monitor function. | | | | |
| | Key window* : Displays the key window for numerical/ASCII input function. | | | | |
| | System Monitor* : Displays the screen of system monitor function. | | | | |
| | Test window* : Displays the window for test function. ( Section 5.31 Test Function) | | | | |
| | Special function monitor* : Displays the screen of special function module monitor function. | | | | |
| | Hard copy start* : Starts hard copy function. (Starts to collect screen data) | | | ○ | ○ |
| | Hard copy interrupt* : Interrupts hard copy function. ( Section 5.35 Hard Copy) | | | | |
| | Password : Displays password screen. | | | | |
| | Clock setting : Displays clock setting screen. | | | | |
| | Screen clear* : Displays the screen for screen clear. | | | | |
| | Network monitor* : Displays the screen of network monitor function. | | | | |
| | Change brightness : Displays the change brightness screen. | | | | |
| | List editor : Displays the screen of list editor function. | | | | |
| Motion/CNC monitor* : Displays the screen of motion/CNC monitor function. | | | | | |
| Servo amplifier monitor* : Displays the screen of servo amplifier monitor function. | | | | | |
| * Not corresponding to GOT-F900 series. | | | | | |

| Items | | Description | A | F |
|---------------|--|--|-----------------------|--------------------------|
| Display Style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="text" value="Others"/> button, shapes other than those in the list box or library shapes can be selected. ( Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | <input type="radio"/> | <input type="checkbox"/> |
| | Frame | Select the frame color of the touch switch. | <input type="radio"/> | <input type="radio"/> |
| | Switch | Select the touch switch color. | <input type="radio"/> | <input type="radio"/> |
| | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | <input type="radio"/> | <input type="checkbox"/> |
| | Pattern | (Example) Background:  Pattern :  Switch :   Background | <input type="radio"/> | <input type="checkbox"/> |
| Category | When allocating category to the object, select a proper category. ( GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> | |

Remark

(1) Brightness Adjustment

In the GOT of which brightness can not be changed, settings can not be made although the corresponding screen is displayed.

(2) When using A95*GOT, A956WGOT

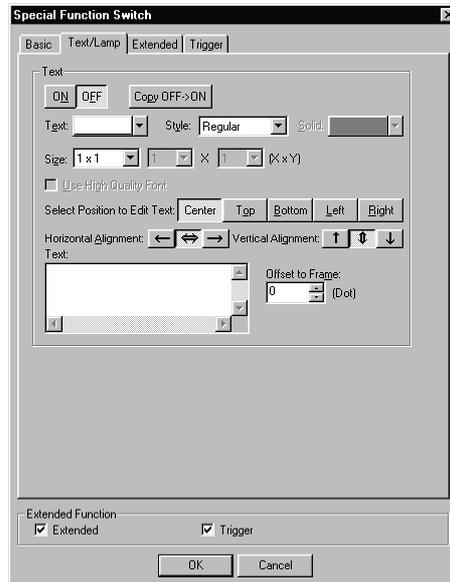
(a) In A95*GOT, [Ladder Monitor], [Test Window] and [Special Function Monitor] of special function can not be used.

(b) In A956WGOT, [Test Window] and [Special Function Monitor] of special function can not be used.

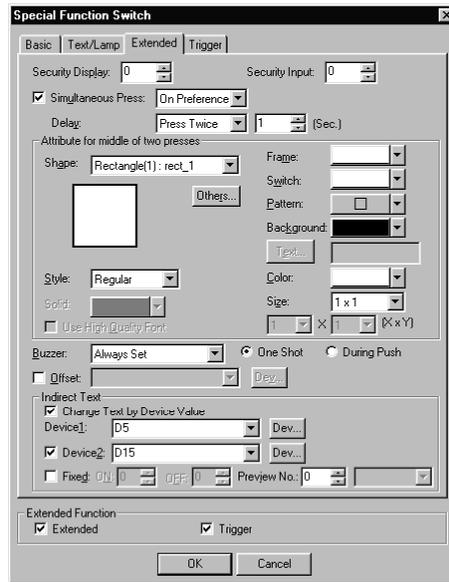
2 Text/lamp tab

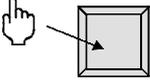
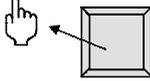
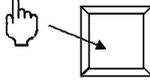
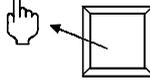
The setting items of text/lamp tab are the same with those of bit switch. For the details of the set data, refer to the following.

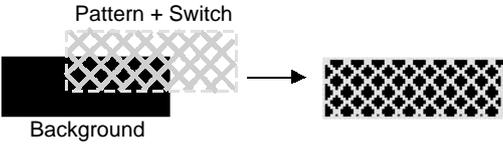
 Section 5.27.2 Setting items of bit switch (Text/lamp tab)



3 Extended tab (for GOT-A900 series only)



| Items | Description | A | F |
|---------------------------------|---|---|---|
| Security Display/Security Input | <p>When using the security function, set the security level (1 to 15). When not using the function, set it to "0". The number of security input must be larger than that for security display. (☞ Section 5.7 Security Function)</p> | ○ | × |
| Simultaneous Press | <p>Check this item to disable simultaneous press of touch switch. ON Preference: On status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside of the Touch key valid area in GOT by finger.</p>  <p>Touch switch: ON status</p> </div> </div> <p>OFF Preference: OFF status is handled with the priority as shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Follow from the outside to inside of the touch key valid area in GOT by finger.</p>  <p>Touch switch: Won't be ON</p> </div> <div style="text-align: center;"> <p>Follow from the inside to outside of the Touch key valid area in GOT by finger.</p>  <p>Touch switch: OFF</p> </div> </div> <p>Press the outside of touch switch valid area while valid area in GOT is pressed. (Two points are simultaneously pressed.)</p> <div style="text-align: center;">  <p>Touch switch: OFF</p> </div> | ○ | × |

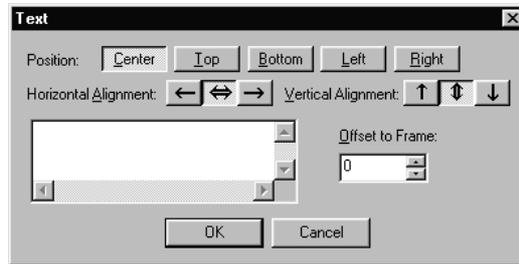
| Items | Description | A | F |
|-------------------------------------|---|---|---|
| Delay | <p>Set the time from the instance the touch switch is touched to start the operation, i.e., delay time in 1-second unit. (Minimum: 1 second, Maximum: 5 seconds.)</p> <p>None : No delay time will occur.</p> <p>ON : Select this item to carry out ON operation by pressing the touch switch during the set time. Set the delay time. This setting can prevent an incorrect operation from occurring.</p> <p>OFF : Select this item to carry out OFF operation in the set time after touch switch is turned OFF. Touch switch is ON during the set time. After selecting, set the delay time.</p> <p>Press Twice : Select this item to carry out the operation when the touch switch is touched once and then touched for the second time within the set time.</p> | ○ | × |
| Attribute for middle of two presses | Set the display attribute for the touch switch after touched once when [Press Twice] is set in [Delay]. | ○ | × |
| Shape | <p>Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="button" value="Others"/> button, shapes other than those in the list box or library shapes can be selected.</p> <p>( Section 5.2.2 Object shape setting)</p> | ○ | × |
| Frame | Select the frame color of the touch switch. | ○ | × |
| Switch | Select the touch switch color. | ○ | × |
| Pattern | <p>Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color.</p> | ○ | × |
| Background | <p>(Example) Background:  Pattern:  Switch: </p> <p></p> <p style="text-align: center;">Background</p> | ○ | × |
| Text *1 | When displaying text on the touch switch, click on <input type="button" value="Text"/> button, set the text to be displayed and positioning point and display position. | ○ | × |
| Style | <p>Select the view format of text (regular/bold/raised)</p> <p style="text-align: center;">     Regular Bold Solid Raised </p> | ○ | × |
| Color | Select the color of text to be displayed. | ○ | × |
| Solid | Select the solid color for the text when [Solid] or [Raised] is set in [Style]. | ○ | × |
| Size | Select the size of text on touch switch (0.5 to 8). | ○ | × |
| Use High Quality Font | Check this item when using high quality font to display touch switch text. (only when display size X, Y is set to any of 2, 4, 6 or 8.) | ○ | × |
| Buzzer | <p>Select the time the buzzer sound is on when the touch switch is touched.</p> <p>Always Set : The buzzer sound is on whenever the touch switch is touched.</p> <p>Set Only Fill Requirement : The buzzer sound is on only when the touch switch is touched and the trigger has been satisfied.</p> <p>Always Not Set : The buzzer sound is not on even when the touch switch is touched.</p> | ○ | × |

| Items | | Description | A | F |
|---------------|-----------------------------|--|---|---|
| One Shot | | Check this item to output volume at the moment the touch switch is touched when [Always Set] is set in [Buzzer Volume] and [Set Only Fill Requirement] is set. | ○ | × |
| During Push | | Check this item to keep buzzer beeping while the touch switch is touched when [Always Set] is set in [Buzzer Volume] and [Set Only Fill Requirement] is set. | ○ | × |
| Offset | | Check this item to operate the touch switch, based on the value by adding the set offset value to the device address specified by touch switch operation function (SET, RESET, ALT, Momentary, WordSET) After checking, set the offset device. Data length is fixed to 16 bits.  Section 5.1 Device Setting) | ○ | × |
| Indirect Text | Change Text by Device Value | Check this item to display the registered comment as touch switch text. The comment displayed by the touch switch will become the comment of which No. is the same with that of the value after adding the following "Device 1, Device 2" to the device value/fixed value set by "Fixed". | ○ | × |
| | Device1 | Click on <input type="text" value="Device"/> button to set the word device that stores the value to be added to the No. of comment, that will be displayed.  Section 5.1 Device Setting) | ○ | × |
| | Device2 | Check this item to add the value of second word device to the No. of comment to be displayed. Click on <input type="text" value="Device"/> button to set the device that stores the value to be added.  Section 5.1 Device Setting) | ○ | × |
| | Fixed | Check this item to add the fixed value set for ON/OFF status to the No. of comment to be displayed. Set the value (as fixed) to be added when the device turns ON/OFF. | ○ | × |
| | Preview No. | Set the No. of comment to be displayed as touch switch text on GT Designer2 screen. | ○ | × |

For the details of *1, refer to the next page.

***1 Setting text displayed on switch**

Make the following settings when displaying text on the switch based on the attribute for middle two presses.



| Items | Description | A | F |
|----------------------|---|-----------------------|---|
| Position | Select the position where the object is to be displayed. (Center/Top/Bottom/Left/Right) | <input type="radio"/> | × |
| Horizontal Alignment | Select the horizontal position of the text. | <input type="radio"/> | × |
| Vertical Alignment | Select the vertical position of the text. | <input type="radio"/> | × |
| Text | Input the text to be displayed. (Up to 32 characters) Press the on <input type="text" value="Enter"/> key to input a new line at the end of first line. (A line feed is counted as two characters.) | <input type="radio"/> | × |
| Offset to Frame | Set the number of dots for the distance between the text and object shape, i.e., frame. (Up to 100 dots) | <input type="radio"/> | × |

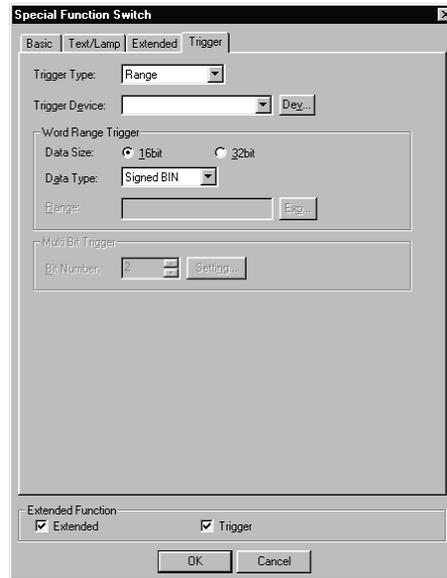


When the text is displayed on top/bottom/left/right of the touch switch
 When displaying the text on top/bottom/left/right of touch switch, based on the attribute for middle of two presses, set the text display on the text/lamp when the device is ON/OFF.
 If not set, the text of the attribute for middle of two presses will not be displayed.
 (The displayed text may be blank when the switch is ON/OFF.)

4 Trigger tab

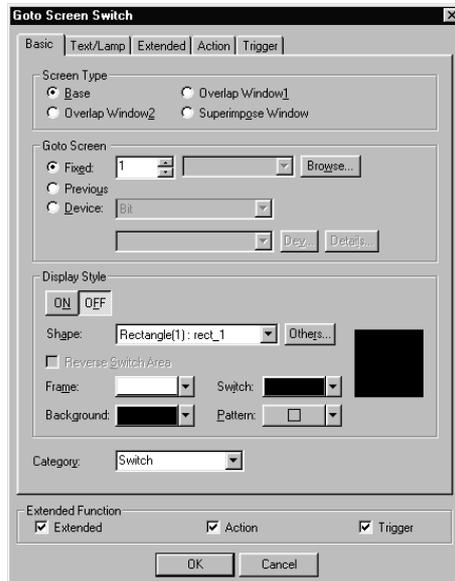
Action setting is available when [Key window] is set in [Action] on the basic tab. The setting items of trigger tab are the same with those of bit switch. Refer to the following for details of the set data.

 Section 5.27.2 Setting items of bit switch (trigger tab)



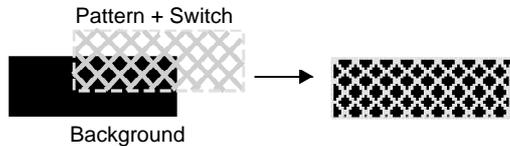
5.27.5 Setting items of Go to screen switch

1 Basic tab



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|-------------|--|-----------------------|----------------------------------|
| Screen Type | Select the screen type of switching destination. Base : Switches to base screen. Overlap Window1 : Switches to or display overlap window1 screen. Overlap Window2 : Switches to or display overlap window2 screen. Superimpose Window : Switches to or display superimpose window. | <input type="radio"/> | <input checked="" type="radio"/> |
| Goto Screen | Select the action of switching screen. | <input type="radio"/> | <input type="radio"/> |
| Fixed | Select this item to switch to the base screen/window screen specified by the screen No.. After selecting, set the base/window screen of switching destination. Click on Browse button to display the screen image dialog box. Make the settings while checking the image of the currently edited screen on that dialog box. | <input type="radio"/> | <input type="radio"/> |
| Previous*1 | Select this item to switch to the screen of base screen No. that was displayed previously. This item is available only when switching base screen. As GOT can store the displayed screen No. including the current base screen, up to 10 base screens can be switched based on the history. | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|-------------|--|---|---|---|
| Goto Screen | Device *2 | <p>Select this item to switch to the base/window screen specified by screen No., according to ON/OFF status/current value of the specified device.</p> <p>Before setting device, select data type of monitor device.</p> <p>Bit : Switch screens according to ON/OFF status of bit device. Word (BIN16) : Switch screens according to 16-bit binary value of word device. Word (BCD16) : Switch screens according to 16-bit BCD (binary coded decimal) value to switch screen.</p> <p>After setting device, click on <input type="button" value="Details"/> button to set action.</p> | ○ | × |
| View Format | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | ○ | ○ |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | ○ | ○ |
| | Shape | <p>Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="button" value="Others"/> button, shapes other than those in the list box or library shapes can be selected.</p> <p>(section 5.2.2 Object shape setting)</p> | ○ | ○ |
| | Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | ○ | × |
| | Frame | Select the shape, i.e., frame color of the touch switch | ○ | ○ |
| | Switch | Select the touch switch color. | ○ | ○ |
| | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | ○ | ○ |
| Pattern | <p>(E.g.) Background : </p> <p>Pattern : </p> <p>Switch : </p>  <p>Pattern + Switch</p> <p>Background</p> | ○ | × | |
| Category | <p>When allocating category to the object, select a proper category.</p> <p> GT Designer2 Version1 Operating Manual)</p> | ○ | ○ | |

Refer to the next page for the details of *1 to *2.

*1 Previous

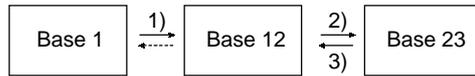
Select the hierarchy mode or history mode using the specific touching switch.

Hierarchy mode (Upper tier switch mode)

Pressing the touch switch display, i.e., switches to the base screen set as the upper tier.

This cycle can be repeated up to 10 times.

Example)



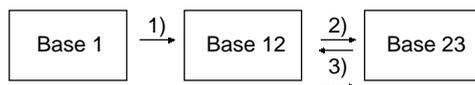
When the screens are switched as shown above, 1) → 2) → 3), and then the touch switch on the base screen 12 is pressed, the base screen1, that is set as the upper tier, will be displayed.

History mode (Previous screen switch mode)

Pressing the touch switch returns to the base screen that was previously displayed.

This cycle can be repeated up to 10 times.

Example)



When the screens are switched as shown above, 1) → 2) → 3), and then the touch switch on the base screen12 is pressed, the base screen23, that was previously displayed, will be displayed again. (After this, whenever the touch switch is pressed, the screen will return to base screen12•base screen1.)

Point

Hierarchy/history mode information

If GOT is powered off, the hierarchy/history information become invalid.

Therefore, once GOT is powered off, and then on again, the screen will not be switched based on the previous hierarchy/history. (The history information can be stored in a PC card as instructed in (2).)

(1) Method of switching between the hierarchy mode and history mode

The hierarchy mode is set as default.

When changing to history mode, turn on GOT internal device GS450.b14 by using status observation function.

For more information, refer to (2) (c).

(2) Storing the history information in a PC card

When history mode is used, up to 10 screens of history information can be stored into a PC card. (Mount a PC card to GOT in advance.)

By using the stored history information can return to the screen before GOT is powered off.

(a) How to store the history information

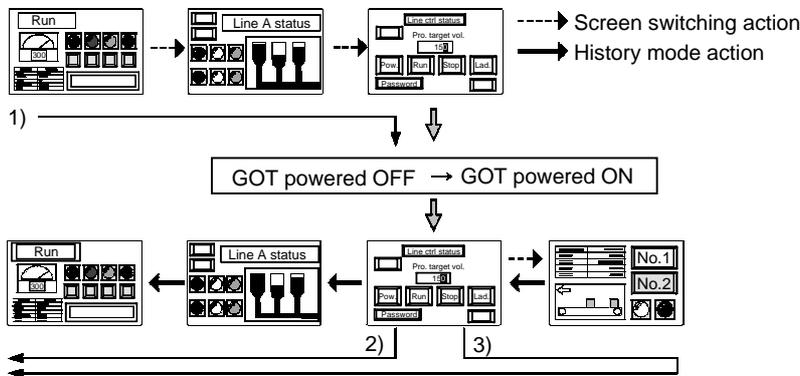
When the history mode is used (GS450.b14 is ON), turn on the GOT internal device GS450.b13. This enables the history information to be saved in a PC card.

Make sure to turn the above device on by using status observation function.

(b) Operation overview

Store the history information into a PC card when switching screen.

After powering on GOT, read the historical information stored in the PC card when switching the initial screen.



1) After switching the screen, turn power OFF.

2) After turning power ON, touch the Previous switch of history mode to return to the screen before power-OFF.

3) After turning power ON, screen can be switched to the 10th screen before power-OFF.

(c) Setting example

Set the history mode at the first line of status observation function.

(After GOT is powered ON, it switches to the history mode instantly.)

When switching from the hierarchy mode to the history mode during monitoring, if screen change has been done, the screen information within GOT might be lost. In this case, it is impossible to return to the previous screens as the history.

When the history mode is used, it is recommended to switch to the history mode instantly after powering GOT on.

Setting history mode

Setting for storing history information in a PC card

• Making the setting in the status observation function of project

• Set the trigger observation cycle as [Ordinary]

(4) Cautions

(a) If the history information has been stored into a PC card, do not change the screen switching device value in PLC CPU while GOT is off.

As the history information while GOT is off is not saved, it is impossible to switch back to the screen as controlled in PLC CPU.

(b) Once the hierarchy mode is switched to the history mode, it is impossible to switch to the hierarchy mode even by turning the above devices off. To switch to the hierarchy mode, power GOT off.

*2 Device (Switch base/window screen according to ON/OFF status/current value of specified device.)

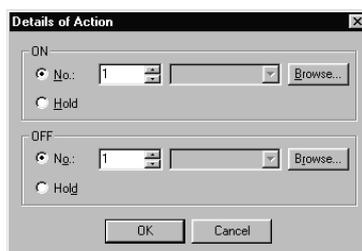
Set the following actions.

- Switch to the base/window screen specified by screen No. according to ON/OFF status of the specified device.
- When the current value of specified device corresponds to the set comparison expressions, switch to the base/window screen specified by screen No. (Up to 64 comparison expressions can be set.)

(1) When specifying bit device

After setting bit device, click on Details button, and set the action when switching screen on the following dialog box.

Setting of "Details of Action" dialog box

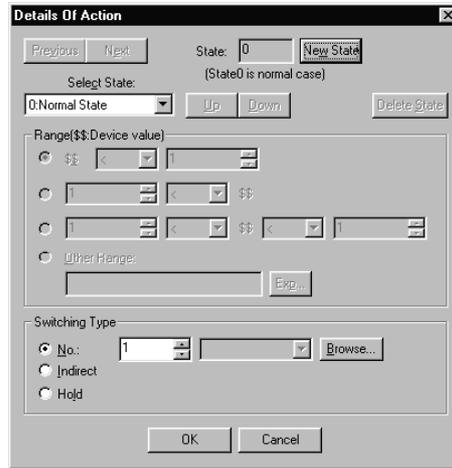


| Items | | Description | A | F |
|--------|------|---|-----------------------|---|
| ON/OFF | No. | Select this item when switching to base/window screen specified by screen No. when the specified devices turns ON/OFF. Set the screen No. of the switching destination screen. | <input type="radio"/> | × |
| | Hold | Select this item when making the settings in order the screen will not be switched when the specified device turns ON/OFF. | <input type="radio"/> | × |

(2) When specifying word device

After setting word device, click on **Details** button, and set the action when switching screen on the following dialog box.

Setting of Details of Action dialog box



| Items | Description | A | F |
|----------------|---|-----------------------|---|
| State | Set the conditions for change the operation and details of the changed operation for each state. Up to 64 states (including the normal case) can be set. (State No. 0 indicates the normal case). | <input type="radio"/> | × |
| New State | Creates a new state. | <input type="radio"/> | × |
| Delete State | Deletes a specified state. | <input type="radio"/> | × |
| Previous/Next | Switches the currently editing state to the previous or next state. | <input type="radio"/> | × |
| Up/Down | Changes the priority of the current state. | <input type="radio"/> | × |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | <input type="radio"/> | × |
| Range | Set the range of word device values for operation change using a conditional expression. | <input type="radio"/> | × |
| Switching Type | <p>No. : Switch to base/window screen specified by screen No. when the specified device value corresponds to the set condition. Set the screen No. of the target screen on the Spin box. Click on Browse button to display the screen image dialog box. Set the screen, while checking the image of the currently edited screen on that dialog box.</p> <p>Indirect : Switch to the screen No. corresponding to specified word device when specified device value corresponds to the set conditional expression.</p> <p>Hold : Do not switch screen when specified device value corresponds to the set conditional expression.</p> | <input type="radio"/> | × |

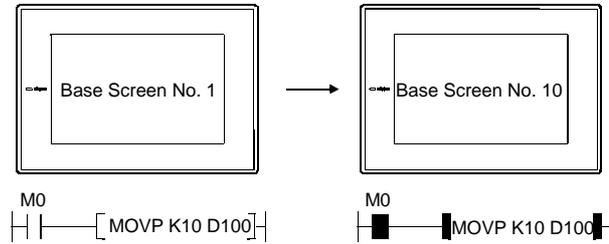


Methods of Switching Screen

Sequence program also can be used to switch screen.

Create the sequence program that writes value of the device for switching each screen No. by using the value of the screen No. to be switched.

By using this sequence program, the base/window screen can be switched without touch switch function.



No sequence program can be used to switch base/window screen when GOT internal devices (GB, GD, GS) are used as base/window screen switching device.

Remark

(1) Methods of erasing window screen

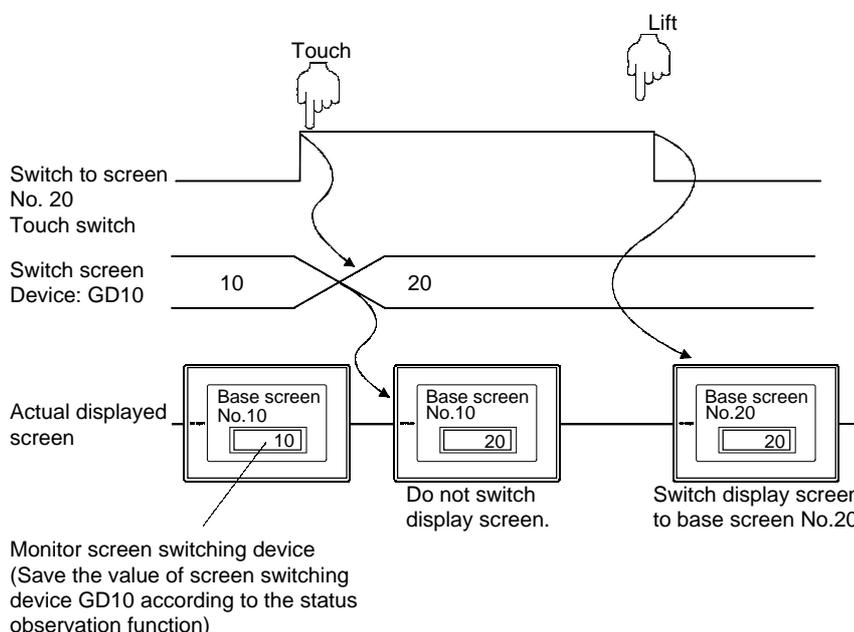
When erasing window screen, touch the Close button, or set the switching screen device value to "0" by using touch switch or sequence program. (Fixed: 0)

(2) Timing to switch screen

The base/window screen is switched at the moment when the touch switch is released.

If the touch switch is kept touched for a long time, this will delay the timing when the actual screen is displayed, and the screen may not appear as specified with the device value.

When using status observation function to monitor switching screen device, the value different from actually displayed screen No. may be stored, depending on the timing of scanning.



In this case, set the script function for each screen as shown below, in order that the screen will be displayed as specified by screen No..

Screen script function

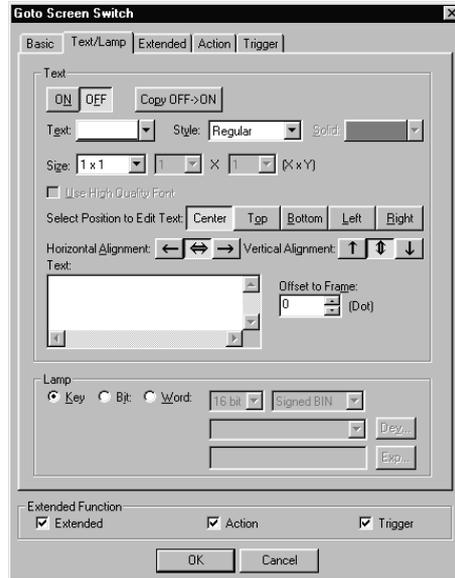
- Trigger : GB100 (Ordinary ON, Rise)
- Script : [W: GD87] = [W: GD10];

Make sure to set GOT special register GS386 (screen script initial action) to "0" to execute script function after switching screen.

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details of setting items.

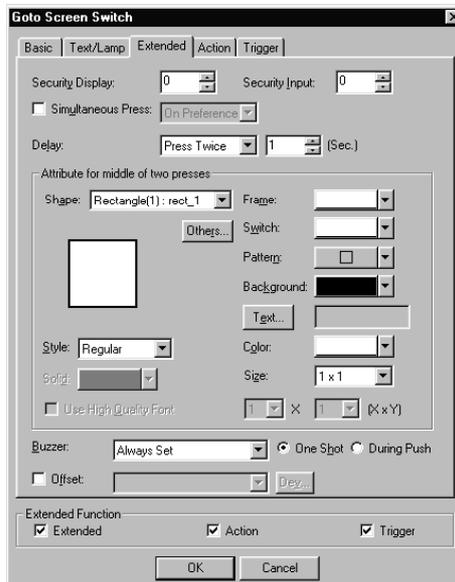
 5.27.2 Setting items of bit switch (Text/Lamp tab)



3 Extended tab (specific for GOT-A900 series)

The setting items of Extended tab are the same as the bit switch. Refer to the following for the details of setting items.

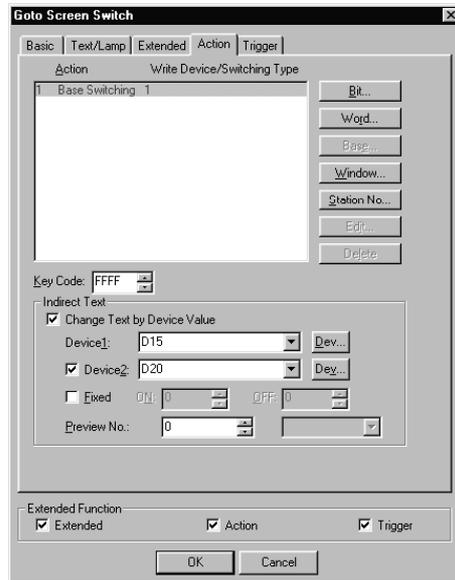
 5.27.2 Setting Items of Bit Switch (Extended tab)



4 Action tab

The setting items of Action tab are the same as the bit switch. Refer to the following for the details of setting items.

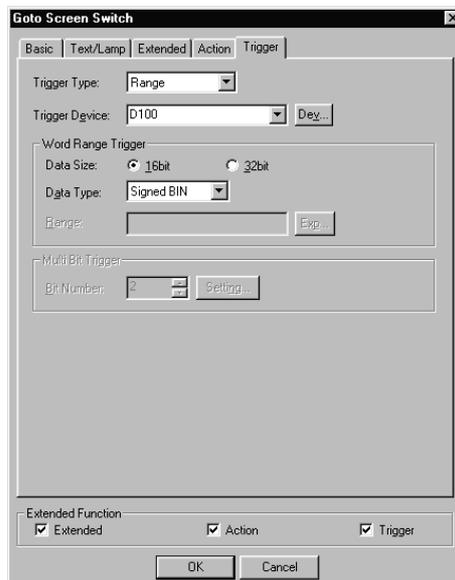
 5.27.2 Setting items of bit switch (Action tab)



5 Trigger tab

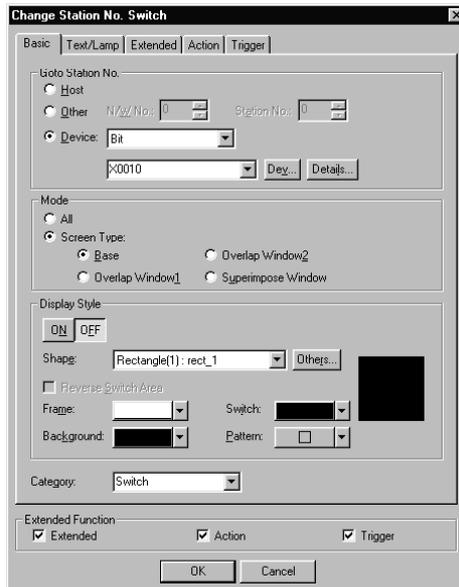
The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details of setting items.

 5.27.2 Setting items of bit switch (Trigger tab)

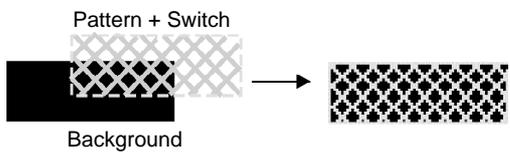


5.27.6 Setting items of change station No. switch

1 Basic tab



| Items | Description | A | F |
|------------------|--|-----------------------|---|
| Goto Station No. | Select the action of switching station No. | <input type="radio"/> | × |
| Host | Select this item to monitor the station No. connected with GOT. | <input type="radio"/> | × |
| Other | Select this item to switch the monitor target to other station. Set the network No. (in [N/W No.] and station No. (in [Station No.] of the PLC CPU as switch destination in decimal. | <input type="radio"/> | × |
| Device *1 | Select this item to switch to the station specified by the No. based on the ON/OFF status or current value of the specified device. Select the data type of the device to be monitored. Bit : Switches station No. when the bit device turns ON/OFF. Signed (BIN16) : Switches station No. based on the word device (BIN16) binary value. BCD16 : Switches station No. based on the word device (BCD16) binary decimal value. After setting the device, click on <input type="button" value="Details"/> button. As the corresponding dialog box will appear, set the action on that dialog box. | <input type="radio"/> | × |
| Mode | All : Select this item to switch the whole project by station No. Screen type : Select this item to switch the specified screen by station No. | <input type="radio"/> | × |

| Items | | Description | A | F |
|---------------|---|--|-----------------------|---|
| Display style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | <input type="radio"/> | × |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | <input type="radio"/> | × |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the <input type="text" value="Others"/> button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | × |
| | Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | <input type="radio"/> | × |
| | Frame | Select the shape, i.e., frame color of the touch switch. | <input type="radio"/> | × |
| | Switch | Select the touch switch color. | <input type="radio"/> | × |
| | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | <input type="radio"/> | × |
| | Pattern | (E.g.) Background :  Pattern :  Switch :   Pattern + Switch Background | <input type="radio"/> | × |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | × | |

Refer to the next page for the details about *1.



The required settings for switching station No.

- (1) To change station No., set whether station No. is to be switched for each screen.

Select [Screen] → [Property] from the menu. As the corresponding dialog box appears, set whether station No. will be changed on the screen dialog box (Auxiliary Setting tab).

- (2) To change station No., set device for switching station No..

☞ 3.3 Switching Station No. Device Setting.

*1 Device (Switch station No. to be monitored according to the ON/OFF status/current value of the specified device.)

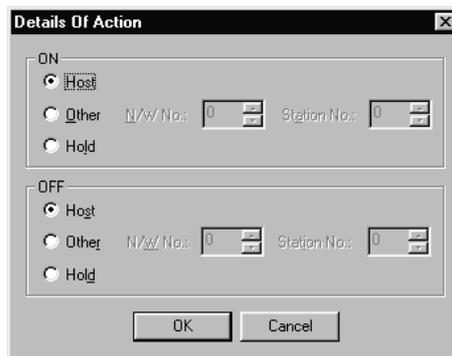
Set the following actions.

- Switch station No. according to the ON/OFF status of the specified bit device.
- Switch to the screen specified by station No. when current value of specified word device corresponds to the set condition. (Up to 64 conditions can be set.)

(1) When specifying bit device

After setting bit device, click on Details button to set action for switching station No. on the following dialog box.

Setting of "Details Of Action" dialog box



| Items | | Description | A | F |
|--------|-------|---|---|---|
| ON/OFF | Host | Select this item to monitor the station No. connected with GOT. | ○ | × |
| | Other | Select this item to switch monitoring destination to other station. Set the network No. (in [N/W No.]) and station No. (in [Station No.]) of the PLC CPU as switch destination in decimal. | ○ | × |
| | Hold | Select this item when making the settings in order that the screen will not be switched when the specified device turns ON/OFF. | ○ | × |

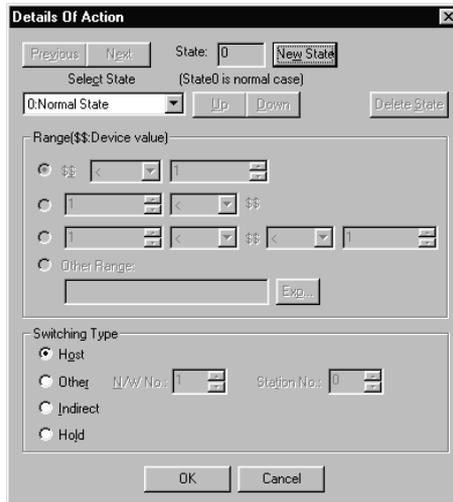
(2) When specifying word device

After setting word device, click on Details button to set action on switching screen according to device status.

Refer to the following for the details about setting method.

 5.3 State Setting

Setting of action (word) dialog box

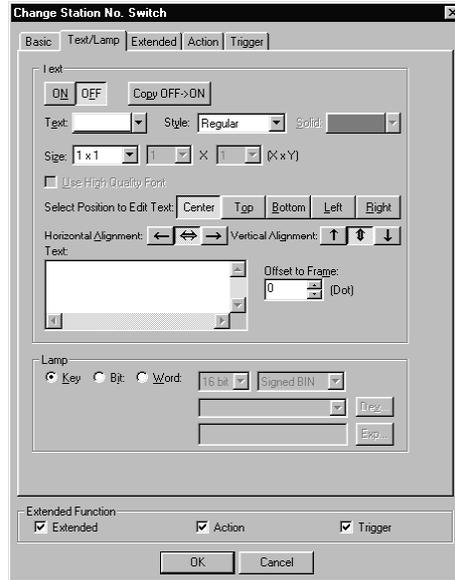


| Items | Description | A | F |
|----------------|--|---|---|
| State | Set the conditions for changing the operation and details of the changed operation for each state. Up to 64 states (including the normal case) can be set. (State No. 0 indicates the normal case.) | ○ | × |
| New State | Creates a new state. | ○ | × |
| Delete State | Deletes a specified state. | ○ | × |
| Previous/Next | Switches the currently editing state to the previous or next state. | ○ | × |
| Up/Down | Changes the priority of the current state. | ○ | × |
| Select State | Displays the list of preset states. Selecting any state from the list can make it active on the tab. | ○ | × |
| Range | Set the range of word device values for display change using a conditional expression. | ○ | × |
| Switching Type | Select the displaying method for switching station No. when the specified word device value corresponds to the condition set in "Range". ( Section 3.3 Switching Station No.) Device Setting) Host : Monitor the PLC connected with GOT when the specified device value corresponds to the set condition. Other : Switch the monitor destination to other station when the device value corresponds to the set condition. Set the network No. (in [N/W No.]) and station No. (in [Station No.]) of the PLC CPU as switch destination in decimal. Indirect : Switch to monitoring destination corresponding to the specified device when the specified device value corresponds to the set condition. Hold : Do not switch monitoring destination when the specified device value corresponds to the set condition. | ○ | × |

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details about setting items.

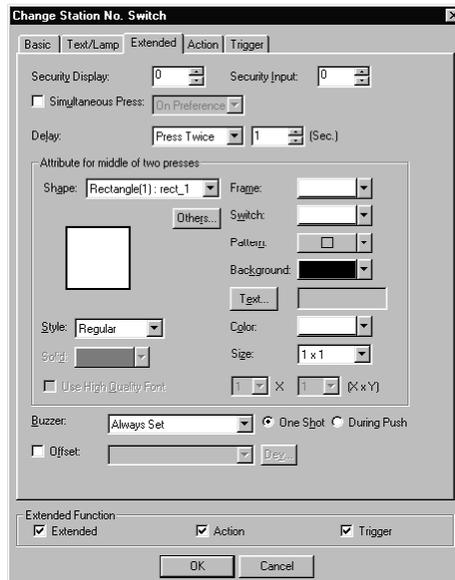
 5.27.2 Setting items of bit switch (Text/Lamp tab)



3 Extended tab

The setting items of Extended tab are the same as the bit switch. Refer to the following for the details about setting items.

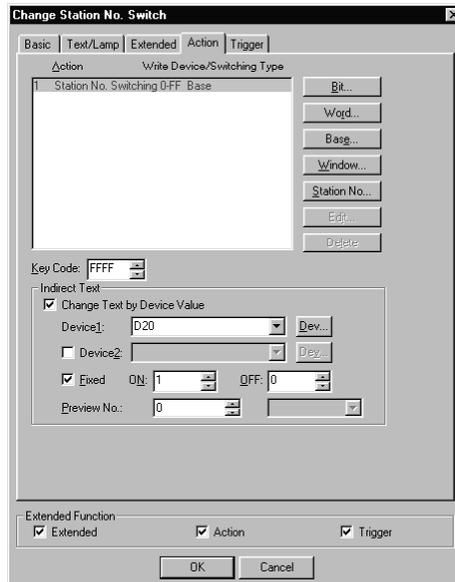
 5.27.2 Setting items of bit switch (Extended tab)



4 Action tab

The setting items of Action tab are the same as the bit switch. Refer to the following for the details about setting items.

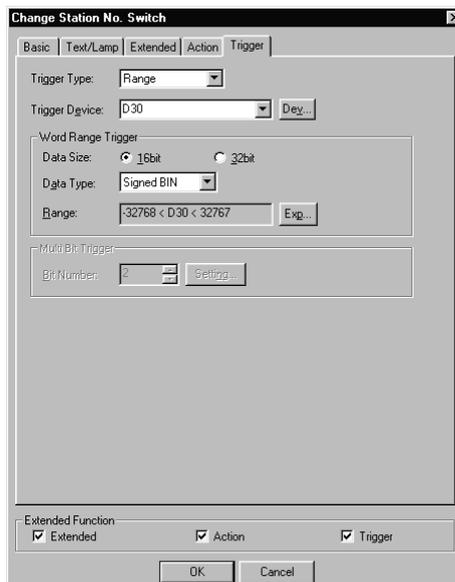
 5.27.2 Setting items of bit switch (Action tab)



5 Trigger tab

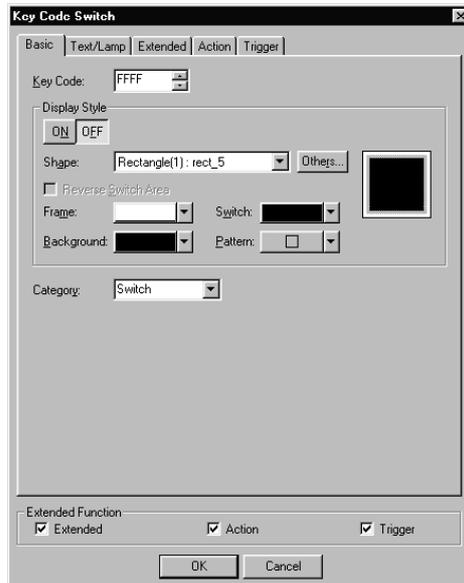
The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details about setting items.

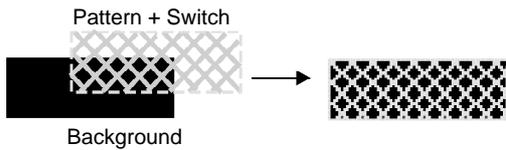
 5.27.2 Setting items of bit switch (Trigger tab)



5.27.7 Setting items of key code switch

1 Basic tab

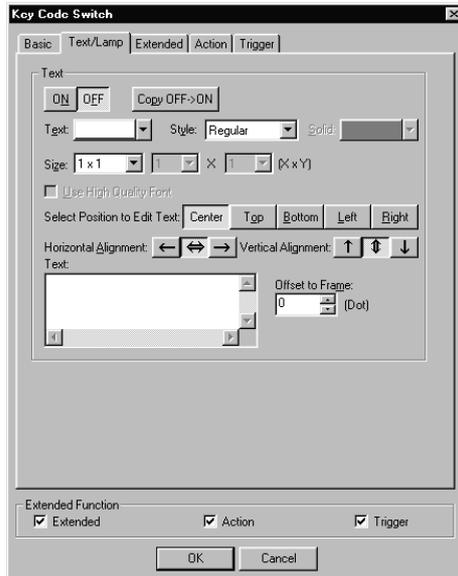


| Items | | Description | A | F |
|---------------|---|--|----------------------------------|----------------------------------|
| Key Code | | Set the key code of the key for numeric value and ASCII input. (☞ Appendix 2 Key Code List) | <input type="radio"/> | <input type="radio"/> |
| Display Style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | <input type="radio"/> | <input type="radio"/> |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | <input type="radio"/> | <input type="radio"/> |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the [Others] button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | <input type="radio"/> | <input type="radio"/> |
| | Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | <input type="radio"/> | <input checked="" type="radio"/> |
| | Frame | Select the shape, i.e., frame color of the touch switch. | <input type="radio"/> | <input type="radio"/> |
| | Switch | Select the touch switch color. | <input type="radio"/> | <input type="radio"/> |
| | Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | <input type="radio"/> | <input checked="" type="radio"/> |
| Pattern | (E.g.) Background:  Pattern:  Switch:   Background | <input type="radio"/> | <input checked="" type="radio"/> | |
| Category | | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | <input type="radio"/> | <input type="radio"/> |

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details about setting items.

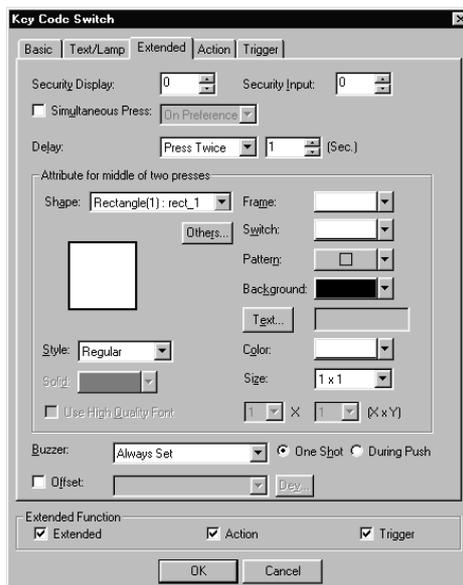
 5.27.2 Setting items of bit switch (Text/Lamp tab)



3 Extended tab (specific for GOT-A900 series)

The setting items of Extended tab are the same as the bit switch. Refer to the following for the details about setting items.

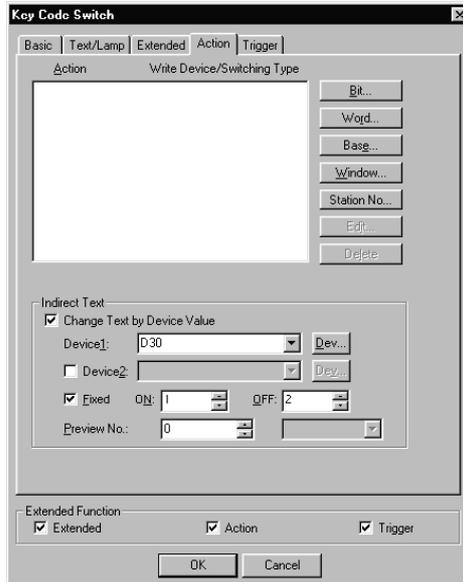
 5.27.2 Setting items of bit switch (Extended tab)



4 Action tab

The setting items of Action tab are the same as the bit switch. Refer to the following for the details about setting items.

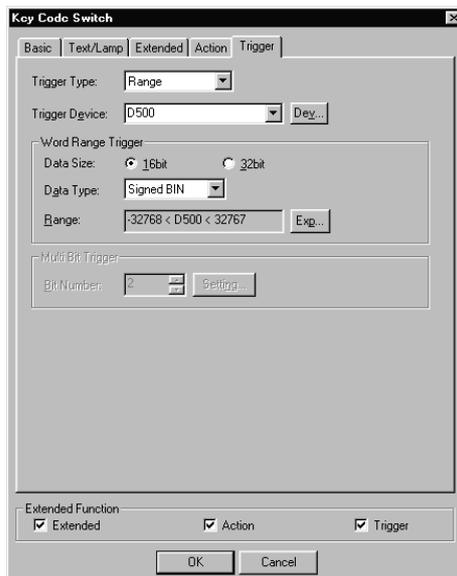
 5.27.2 Setting items of bit switch (Action tab)



5 Trigger tab

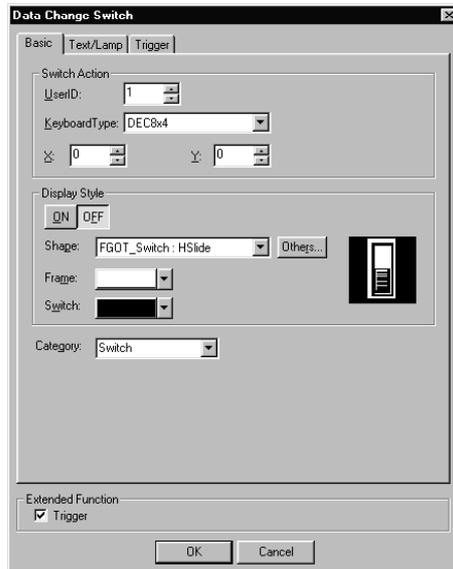
The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details about setting items.

 5.27.2 Setting items of bit switch (Trigger tab)



5.27.8 Setting items of data change switch

1 Basic tab



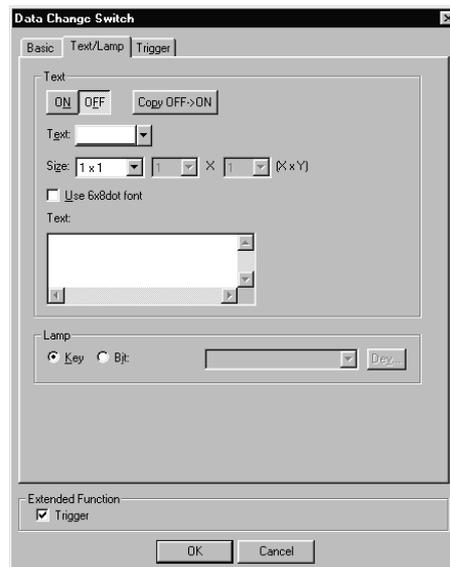
| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|--|-----|-----|-----|-----|-----|-----|---|---|---|---|---|---|---|---|-----|--|---|---|---|---|---|---|---|-----|---|---|---|---|---|--|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|-----|--|---|---|---|---|---|---|---|-----|---|---|---|---|---|--|---|-----|---|---|---|---|---|---|-----|---|---|---|---|---|---|--|---|---|---|---|---|---|-----|---|---|
| User ID | <p>Check this item when setting the user ID No. (1 to 65535). By setting the user ID for data change switch function, the following operations are available.</p> <ul style="list-style-type: none"> Changes data if the user ID set for this function is the same as that for numerical input function. Changes data if the user ID set for this function is the same as that for ASCII input function. | × | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Switch Action | <p>Select the keyboard displayed on window when touched.</p> <ul style="list-style-type: none"> F940GOT, F940WGOT, Handy GOT, ET-900 <ul style="list-style-type: none"> DEC: 8x4 <table border="1"> <tr><td>7</td><td>8</td><td>9</td><td>CLR</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>▲</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>▼</td></tr> <tr><td>0</td><td>-</td><td>ENT</td><td></td></tr> </table> DEC: 16x2 <table border="1"> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>-</td><td>▲</td><td>CLR</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td>▼</td><td>ENT</td></tr> </table> DEC: 10x4 <table border="1"> <tr><td>C</td><td>D</td><td>E</td><td>F</td><td>CLR</td></tr> <tr><td>8</td><td>9</td><td>A</td><td>B</td><td>▲</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>7</td><td>▼</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>ENT</td></tr> </table> Characters 1: 16x5 <table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>BS</td><td>CLR</td></tr> <tr><td>G</td><td>H</td><td>I</td><td>J</td><td>K</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>L</td><td>M</td><td>N</td><td>O</td><td>P</td><td>4</td><td>5</td><td>6</td></tr> <tr><td>Q</td><td>R</td><td>S</td><td>T</td><td>U</td><td>1</td><td>2</td><td>3</td></tr> <tr><td>V</td><td>W</td><td>X</td><td>Y</td><td>Z</td><td>0</td><td>-</td><td>ENT</td></tr> </table> In the case of F930GOT, F930GOT-K <ul style="list-style-type: none"> DEC <table border="1"> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>CLR</td></tr> <tr><td>2</td><td>3</td><td>4</td><td>5</td><td>▲</td></tr> <tr><td>0</td><td>1</td><td>-</td><td>ENT</td><td></td></tr> </table> DEC (H) <table border="1"> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>-</td><td>▲</td><td>CLR</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td>▼</td><td>ENT</td></tr> </table> HEX <table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>CLR</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>▲</td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>▼</td><td>ENT</td></tr> </table> In the case of F920GOT-K The data changes switch function is not provided. | 7 | 8 | 9 | CLR | 4 | 5 | 6 | ▲ | 1 | 2 | 3 | ▼ | 0 | - | ENT | | 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | C | D | E | F | CLR | 8 | 9 | A | B | ▲ | 4 | 5 | 6 | 7 | ▼ | 0 | 1 | 2 | 3 | ENT | A | B | C | D | E | F | BS | CLR | G | H | I | J | K | 7 | 8 | 9 | L | M | N | O | P | 4 | 5 | 6 | Q | R | S | T | U | 1 | 2 | 3 | V | W | X | Y | Z | 0 | - | ENT | 6 | 7 | 8 | 9 | CLR | 2 | 3 | 4 | 5 | ▲ | 0 | 1 | - | ENT | | 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | A | B | C | D | E | F | CLR | 5 | 6 | 7 | 8 | 9 | ▲ | | 0 | 1 | 2 | 3 | 4 | ▼ | ENT | × | ○ |
| 7 | 8 | 9 | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | ▼ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | - | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | D | E | F | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 9 | A | B | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | 7 | ▼ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | B | C | D | E | F | BS | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | H | I | J | K | 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | M | N | O | P | 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q | R | S | T | U | 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | W | X | Y | Z | 0 | - | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 7 | 8 | 9 | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 3 | 4 | 5 | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | - | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | B | C | D | E | F | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | 9 | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | ▼ | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X/Y | Set the start point position where keyboard window will be displayed. | × | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Items | | Description | A | F |
|---------------|---|--|---|---|
| Display Style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | × | ○ |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | × | ○ |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the [Others] button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | × | ○ |
| | Frame | Click on this item to set the display attribute to be displayed when the device turns OFF. | × | ○ |
| | Switch | Select the touch switch color. | × | ○ |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | × | ○ | |

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details about setting items.

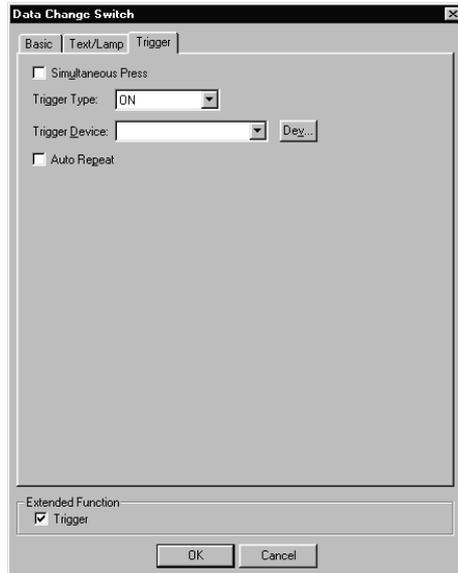
☞ 5.27.2 Setting items of bit switch (Text/Lamp tab)



3 Trigger tab

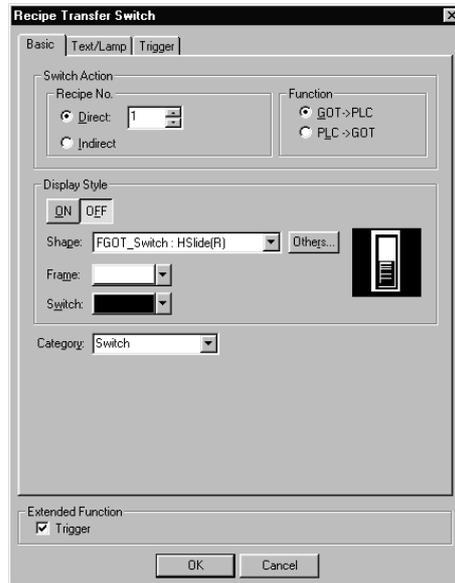
The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details about setting items.

 5.27.2 Setting items of bit switch (Trigger tab)



5.27.9 Setting items of recipe transfer switch

1 Basic tab

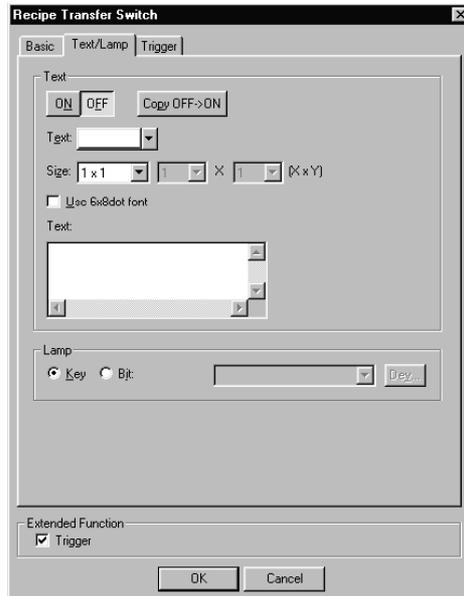


| Items | | Description | A | F |
|---------------|------------|---|---|---|
| Switch Action | Recipe No. | Select the recipe file No. (1 to 256) directly or indirectly (indirect specification using a device in the PLC). The reference destination of the recipe No. to be transferred can be set as follows by direct or indirect specification: <ul style="list-style-type: none"> ● Direct : The recipe file No. can be specified directly. ● Indirect : The recipe file No. to be referred to can be specified as the value stored in the data register of the PLC specified by "Read Device (D+1)" of "System Information". The number of recipe files, number of points and specification of transfer device should be set in advance in "Common"- "Recipe". | × | ○ |
| | Function | Select the direction to transfer the recipe data when touched. <ul style="list-style-type: none"> ● GOT → PLC: Data is written from the GOT to a data register of the PLC ● PLC → GOT: Data is read from a data register of the PLC to the GOT. | × | ○ |
| Display Style | ON | Click on this item to set the display attribute to be displayed when the device turns ON. | × | ○ |
| | OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | × | ○ |
| | Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the [Others] button, shapes other than those in the list box or library shapes can be selected. (Section 5.2.2 Object shape setting) | × | ○ |
| | Frame | Select the shape, i.e., frame color of the touch switch | × | ○ |
| | Switch | Select the touch switch color. | × | ○ |
| Category | | When allocating category to the object, select a proper category. (GT Designer2 Version1 Operating Manual) | × | ○ |

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details about setting items.

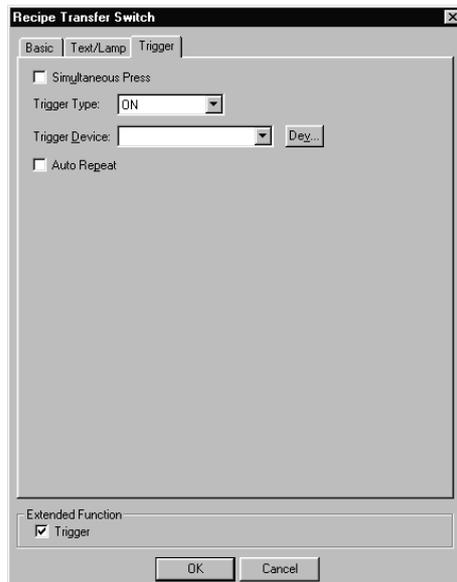
 5.27.2 Setting items of bit switch (Text/Lamp tab)



3 Trigger tab

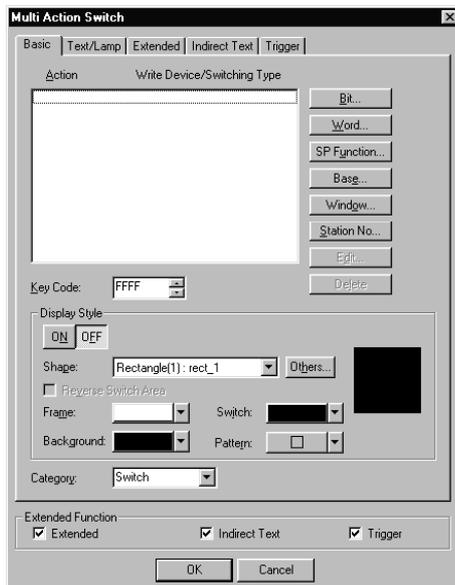
The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details about setting items.

 5.27.2 Setting items of bit switch (Trigger tab)

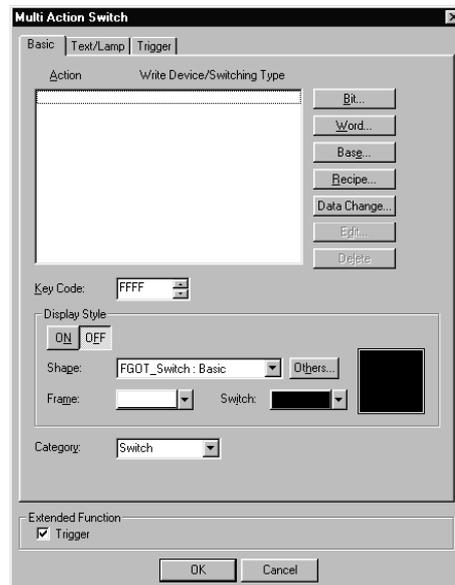


5.27.10 Setting items of multi action switch

1 Basic tab



In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F |
|----------------|---|----------------------------------|----------------------------------|
| Action | The set actions will be displayed in list format. | <input type="radio"/> | <input type="radio"/> |
| Key Code | Set the key code of the key for numeric value and ASCII input. (Appendix 2 Key Code List) | <input type="radio"/> | <input type="radio"/> |
| Bit *1 | Click on this item to set the bit device ON/OFF operation for touch switch. | <input type="radio"/> | <input type="radio"/> |
| Word *2 | Click on this item to set the word device value change for touch switch. | <input type="radio"/> | <input type="radio"/> |
| SP function | Click on this item to make the settings in order that the currently displayed screen will be switched to the specified extension function screen by using touch switch. | <input type="radio"/> | <input checked="" type="radio"/> |
| Base *3 | Click on this item to make the settings in order that the base screen will be switched by using touch switch. | <input type="radio"/> | <input checked="" type="radio"/> |
| Window *4 | Click on this item to make the settings in order that the window screen will be switched by using touch switch. | <input type="radio"/> | <input checked="" type="radio"/> |
| Station No. *5 | Click on this item to make the settings in order that the station No. will be switched by using touch switch. | <input checked="" type="radio"/> | <input type="radio"/> |
| Recipe | Click on this item to make the settings in order that the data of recipe value will be transmitted by using touch switch. | <input checked="" type="radio"/> | <input type="radio"/> |
| Data Change | Click on this item to set the display of key window for numeric/ASCII input by using touch switch. | <input type="radio"/> | <input type="radio"/> |
| Edit | When intending to edit a preset action, select the action from [Action] and then click on button. As the corresponding setting dialog box will appear, edit the action on that dialog box | <input type="radio"/> | <input type="radio"/> |
| Delete | When intending to delete a preset action, select the action from [Action] and then click on button. As the corresponding setting dialog box will appear, delete the action in that dialog box | <input type="radio"/> | <input type="radio"/> |

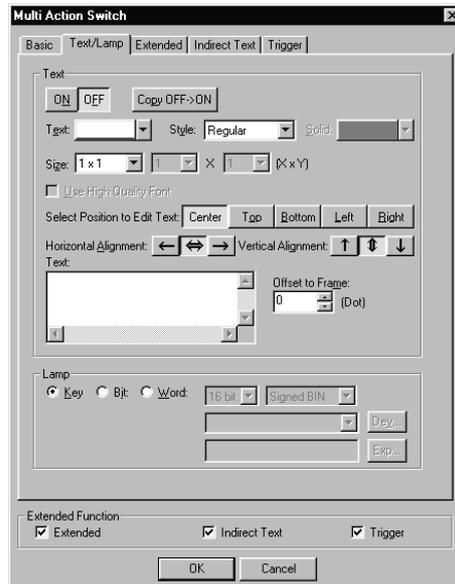
| Items | Description | A | F |
|---------------------|---|---|---|
| ON | Click on this item to set the display attribute to be displayed when the device turns ON. | ○ | ○ |
| OFF | Click on this item to set the display attribute to be displayed when the device turns OFF. | ○ | ○ |
| Shape | Select the shape for touch switch. When [None] is selected, no frame will be displayed. By clicking on the Others button, shapes other than those in the list box or library shapes can be selected. (☞ Section 5.2.2 Object shape setting) | ○ | ○ |
| Reverse Switch Area | When [None] is set in [Shape], check this item to XOR-reverse the touch switch (no shape) area according to the background color. | ○ | × |
| Frame | Select the shape, i.e., frame color of the touch switch. | ○ | ○ |
| Switch | Select the touch switch color. | ○ | ○ |
| Background | Select the pattern, background color and switch color for the touch switch. The selected pattern in the switch color is displayed on the background color. | ○ | × |
| Pattern | (E.g.) Background : Pattern : Switch : | | |
| Category | When allocating category to the object, select a proper category. (☞ GT Designer2 Version1 Operating Manual) | ○ | ○ |

As for the details of *1 to *5, refer to *1 to *5 in 5.27.2 Setting items of bit switch.

2 Text/Lamp tab

The setting items of Text/Lamp tab are the same as the bit switch. Refer to the following for the details about setting items.

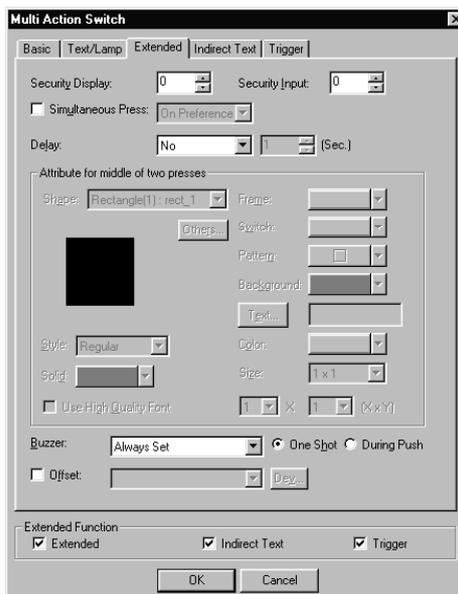
 5.27.2 Setting items of bit switch (Text/Lamp tab)



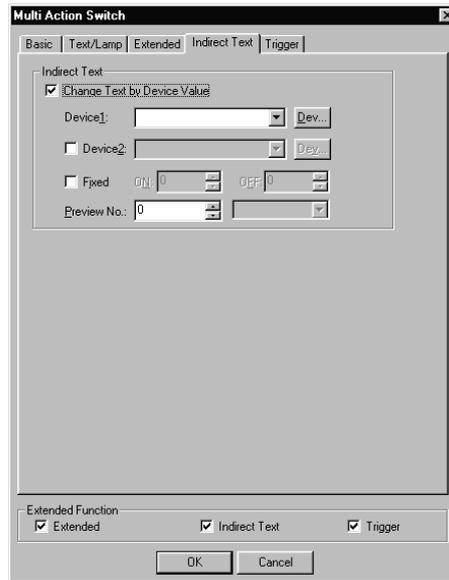
3 Extended tab (specific for GOT-A900 series)

The setting items of Extended tab are the same as the bit switch. Refer to the following for the details about setting items.

 5.27.2 Setting items of bit switch (Extended tab)



4 Indirect Text tab (specific for GOT-A900 series)

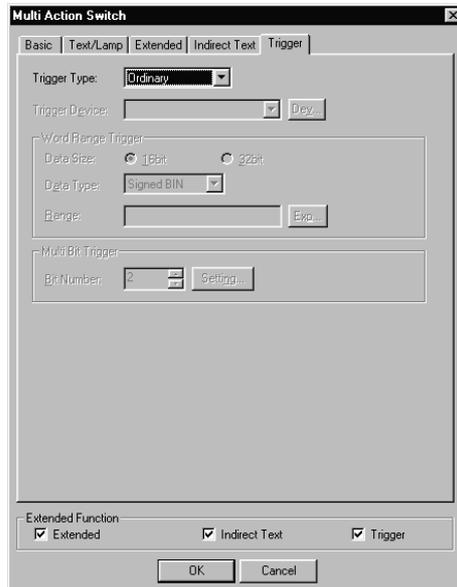


| Items | | Description | A | F |
|---------------|-----------------------------|--|---|---|
| Indirect Text | Change Text by Device Value | Check this item to change text according to the specified device value. The registered comment will be displayed as text on the touch switch. The comment, of which No. is the same as the value as a result of adding the device value/fixed values set in [Device 1], [Device 2] and [Fixed], will be displayed on the touch switch. | ○ | × |
| | Device1 | Click on Device button to set the word device that stores the value to be added to the No. of comment, that will be displayed. (☞ Section 5.1 Device Setting) | ○ | × |
| | Device2 | Check this item to add the value of second word device to the No. of comment to be displayed. Click on Device button to set the device that stores the value to be added. (☞ Section 5.1 Device Setting) | ○ | × |
| | Fixed | Check this item to add the fixed value set for ON/OFF status to the No. of comment to be displayed. Set the value (as fixed) to be added when the device turns ON/OFF. | ○ | × |
| | Preview No. | Set the comment to be displayed as touch switch text on GT Designer2 screen by the comment No. | ○ | × |

5 Trigger tab

The setting items of Trigger tab are the same as the bit switch. Refer to the following for the details about setting items.

 5.27.2 Setting items of bit switch (Trigger tab)



5.27.11 Keyboard function

In the GOT-F900 series, a keyboard built in the GOT can be always displayed.

Eight types of keyboards are provided for inputting numeric values only or inputting both numeric values and ASCII codes.

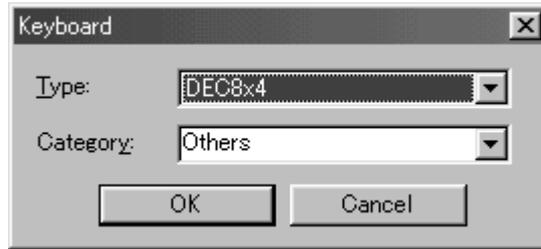
| Material setting | | | | | | | |
|--------------------|---|---|---|---|---|----|-----|
| Material 1 JY34534 | | | | | | | |
| Material 2 JZ12345 | | | | | | | |
| Material 3 EX23561 | | | | | | | |
| A | B | C | D | E | F | BS | CLR |
| G | H | I | J | K | 7 | 8 | 9 |
| L | M | N | O | P | 4 | 5 | 6 |
| Q | R | S | T | U | 1 | 2 | 3 |
| V | W | X | Y | Z | 0 | - | ENT |

1 Setting

- (1) Select [Object] → [Keyboard] from the menu.
- (2) When the setting dialog box appears, set required items while referring to the explanation below.

2 Set items

Set the keyboard function..



| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|-----|-----|-----|-----|----|-----|---|---|---|---|---|---|---|---|-----|--|---|---|---|---|---|---|---|-----|---|---|---|---|---|--|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|-----|--|---|---|---|---|---|---|---|-----|---|---|---|---|---|--|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|--|----|---|----|----|----|----|----|----|--|-----|--|--|--|--|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--|---|---|---|---|---|---|---|-----|---|---|---|---|---|--|---|-----|--|--|--|--|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--|--|
| Type | <p>Select the keyboard to be always displayed on the screen among the eight types below. In the F940GOT, F940WGOT or F94* handy GOT.</p> <p> DEC: 8x4 <table border="1"> <tr><td>7</td><td>8</td><td>9</td><td>CLR</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>▲</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>▼</td></tr> <tr><td>0</td><td>-</td><td>ENT</td><td></td></tr> </table> </p> <p> DEC: 16x2 <table border="1"> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>-</td><td>▲</td><td>CLR</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td>▼</td><td>ENT</td></tr> </table> </p> <p> DEC: 10x4 <table border="1"> <tr><td>C</td><td>D</td><td>E</td><td>F</td><td>CLR</td></tr> <tr><td>8</td><td>9</td><td>A</td><td>B</td><td>▲</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>7</td><td>▼</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>ENT</td></tr> </table> </p> <p> Characters 1: 16x5 <table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>BS</td><td>CLR</td></tr> <tr><td>G</td><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>L</td><td>M</td><td>N</td><td>O</td><td>P</td><td>4</td><td>5</td><td>6</td></tr> <tr><td>Q</td><td>R</td><td>S</td><td>T</td><td>U</td><td>1</td><td>2</td><td>3</td></tr> <tr><td>V</td><td>W</td><td>X</td><td>Y</td><td>Z</td><td>0</td><td>-</td><td>ENT</td></tr> </table> </p> <p> DEC: 8x8 <table border="1"> <tr><td>7</td><td>8</td><td>9</td><td>CLR</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>▲</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>▼</td></tr> <tr><td>0</td><td>-</td><td>ENT</td><td></td></tr> </table> </p> <p> DEC: 16x4 <table border="1"> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>-</td><td>▲</td><td>CLR</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td>▼</td><td>ENT</td></tr> </table> </p> <p> DEC: 10x8 <table border="1"> <tr><td>C</td><td>D</td><td>E</td><td>F</td><td>CLR</td></tr> <tr><td>8</td><td>9</td><td>A</td><td>B</td><td>▲</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>7</td><td>▼</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>ENT</td></tr> </table> </p> <p> Characters 2: 16x5 <table border="1"> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>CLR</td></tr> <tr><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td><td>N</td><td>BS</td></tr> <tr><td>O</td><td>P</td><td>Q</td><td>R</td><td>S</td><td>T</td><td>U</td><td>▲</td></tr> <tr><td>V</td><td>W</td><td>X</td><td>Y</td><td>Z</td><td></td><td>SP</td><td>▼</td></tr> <tr><td>英大</td><td>英小</td><td>数字</td><td>記号</td><td>加1</td><td>加2</td><td></td><td>ENT</td></tr> </table> </p> <p> In the F930GOT or F930GOT-K DEC <table border="1"> <tr><td></td><td></td><td></td><td></td><td>CLR</td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>▲</td></tr> <tr><td>2</td><td>3</td><td>4</td><td>5</td><td>▼</td></tr> <tr><td>0</td><td>1</td><td>-</td><td>ENT</td><td></td></tr> </table> </p> <p> DEC (H) <table border="1"> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>-</td><td>▲</td><td>CLR</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td>▼</td><td>ENT</td></tr> </table> </p> <p> HEX <table border="1"> <tr><td></td><td></td><td></td><td></td><td>F</td><td>CLR</td></tr> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>▲</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>▼</td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>ENT</td></tr> </table> </p> | 7 | 8 | 9 | CLR | 4 | 5 | 6 | ▲ | 1 | 2 | 3 | ▼ | 0 | - | ENT | | 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | C | D | E | F | CLR | 8 | 9 | A | B | ▲ | 4 | 5 | 6 | 7 | ▼ | 0 | 1 | 2 | 3 | ENT | A | B | C | D | E | F | BS | CLR | G | H | I | J | K | L | 7 | 8 | 9 | L | M | N | O | P | 4 | 5 | 6 | Q | R | S | T | U | 1 | 2 | 3 | V | W | X | Y | Z | 0 | - | ENT | 7 | 8 | 9 | CLR | 4 | 5 | 6 | ▲ | 1 | 2 | 3 | ▼ | 0 | - | ENT | | 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | C | D | E | F | CLR | 8 | 9 | A | B | ▲ | 4 | 5 | 6 | 7 | ▼ | 0 | 1 | 2 | 3 | ENT | A | B | C | D | E | F | G | CLR | H | I | J | K | L | M | N | BS | O | P | Q | R | S | T | U | ▲ | V | W | X | Y | Z | | SP | ▼ | 英大 | 英小 | 数字 | 記号 | 加1 | 加2 | | ENT | | | | | CLR | 6 | 7 | 8 | 9 | ▲ | 2 | 3 | 4 | 5 | ▼ | 0 | 1 | - | ENT | | 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | | | | | F | CLR | A | B | C | D | E | ▲ | 5 | 6 | 7 | 8 | 9 | ▼ | 0 | 1 | 2 | 3 | 4 | ENT | | |
| 7 | 8 | 9 | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 英大 | 英小 | 数字 | 記号 | 加1 | 加2 | | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 7 | 8 | 9 | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 3 | 4 | 5 | ▼ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | - | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | 9 | - | ▲ | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | | ▼ | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | F | CLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | B | C | D | E | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | 9 | ▼ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | ENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Category | Select a category to be assigned to object. (Section 6.1 Category) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

3 Cautions

The cautions on using the keyboard function are as follows:

(1) Caution on screen creation

Only one keyboard can be set for one screen.

(2) Unavailable GOT type

The keyboard function is not available in the F920GOT-K because the touch switch function is not provided in it.

5.27.12 Cautions

This section provides the cautions for using touch switch.

1 Cautions for drawing

(1) Maximum number of touch switch objects set in one screen

- GOT-A900 series: 256 objects
- GOT-F900 series: 50 objects (Up to 50 overlapped screens)

(2) Action of touch switch

(a) Multiple functions can be set for one touch switch. (Multiple functions cannot be set if extension key is set.)

| GOT-A900 series | | GOT-F900 series | | Action sequence for multi setting |
|-------------------------|--------|-----------------------------|------|-----------------------------------|
| Momentary | : 20 | Momentary *1 | : 50 | High |
| Set | : 20 | Set | : 50 | |
| Reset | : 20 | Reset | : 50 | |
| Alternate | : 20 | Alternate | : 50 | |
| Word Set | : 20 | Word Set | : 50 | |
| Base screen switching | : 1 | Base screen switching *1: 1 | | |
| Window screen switching | : 1 | Recipe | : 50 | ↓ |
| Overlap Window1 | : 1 | Data change | : 50 | |
| Overlap Window2 | : 1 | | | |
| Superimpose | : 1 | | | |
| Station No. switching | : 1 | | | Low |
| ----- | | ----- | | |
| Total | : -105 | Total | : 50 | |

(b) When setting multiple functions for one touch switch, some functions cannot work according to the combination of the set functions.

○: Available ×: N/A

| Key Type | High → Action sequence for multi setting → Low | | | |
|--|--|------------------|---|---|
| Function | Extension Function | Key Code Setting | Key Code Setting Numerical value/ ASCII input confirmation | Word set Set Reset Alternate Momentary Basic Screen switch Window Screen switch Station No. switch |
| Extension Function | ○ | × | × | × |
| Key Code Setting | × | ○ | × | × |
| Key Code Setting (Numerical value/ ASCII input confirmation key) | × | × | ○ | ○ |

Only in the following case, the key code of GOT-F900 series can be set simultaneously.

- Muffle function that does not output the sound when the touch switch is touched: FFFEh

(3) Size of touch switch

- GOT-A900 series: minimum 16 dots (Y) × 16 dots (X)
- GOT-F900 series: minimum 16 dots (Y) × 20 dots (X)

- (4) Valid range of touch switch
- (a) GOT-A900 series
The setting unit of switch shape is 1 dot. The setting unit of valid range is 16 dots.
 - (b) GOT-F900 series
The setting unit of switch shape is 1 dot.
The valid area is workable in the more than half of 16 dots x 20 dots.
- (5) Cautions for using comment (specific for GOT-A900 series)
- (a) Only one line of comment can be displayed as touch switch text.
When text size is larger than touch switch shape size, the comment part outside of the shape will not be displayed.
 - (b) To use comment as touch switch text, make sure to install the currently used OS of GT Designer2 (basic function OS) into GOT.
- (6) Key code setting
For key code setting, directly input the key to be used.
Even though invalid key code is set for touch switch, it cannot be checked in GT Designer2.
- (7) Cautions in using the F920GOT-K
The touch switch function is not available because touch switches are not provided on the screen.
Set the switch function to the function switches by setting the operation panel.
In this case, however, key codes cannot be set.

2 Cautions for using

- (1) Simultaneously press is enabled.
When three switches are simultaneously touched, the third one will not work.
- (2) When multiple actions including either of bit Set/Reset/Alternate and either of screen switching/station No. switching are set for a touch switch
When multiple actions including either of bit Set/Reset/Alternate and either of screen switching/station No. switching are set for a touch switch, the timing when the screen or station No. changes will vary depending on the standard monitor OS version in GOT, as shown below.

| Setting item | Standard monitor version 9.0.7 or earlier | Standard monitor version 9.1.1 or later |
|--|---|---|
| Screen switching/Station No. Switching + Set | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Reset | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Alternate | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Momentary | When the touch switch is released | |
| Screen switching/Station No. Switching + Word | When the touch switch is touched | When the touch switch is touched |

Standard monitor version 9.0.7: Stored in GT Designer Version5 30G edition

Standard monitor version 9.1.1: Stored in GT Designer Version5 31H edition or GT Designer2 Version1 00A edition

Example) When multiple actions including followings are set for a touch switch.

When multiple actions including both screen switching and bit Alternate are set for a touch switch, the device status after screen change is reversed between standard monitor version 9.0.7 or earlier and 9.1.1 or later.

(However, when bit Momentary is set with other actions for a touch switch, the same operation as standard monitor version 9.0.7 or earlier is performed.)

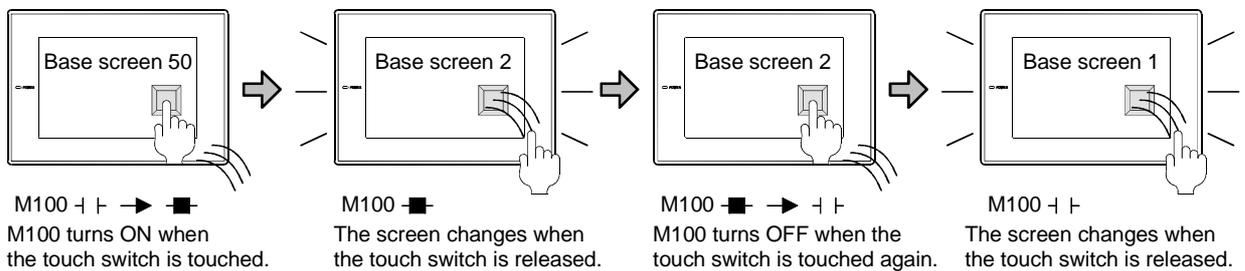
Bit Alternate : M100

Screen switching : Screen changes to base screen 2 when M100 turns ON.

Screen switching : Screen changes to base screen 1 when M100 turns OFF.

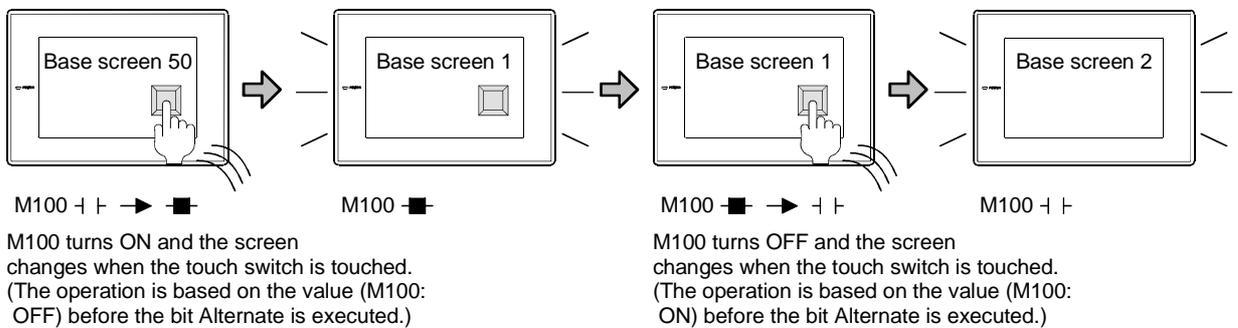
(a) Action when standard monitor version 9.0.7 or earlier is used.

For standard monitor version 9.0.7 or earlier, the screen or station No. changes simultaneously when the specified bit device has turned ON/OFF/ON↔OFF. The GOT operates based on the value after the bit Set/Reset/Alternate is executed.



(b) Action when standard monitor version 9.1.1 or later is used.

For standard monitor version 9.1.1 or later, the screen or station No. changes simultaneously when the specified bit device has turned ON/OFF/ON↔OFF. The GOT operates based on the value before the bit Set/Reset/Alternate is executed.



<Corrective action>

The same operation as standard monitor version 9.0.7 or earlier is preformed by turning the GOT internal device (GS450.b12) ON before pressing the touch switch.

| Setting item | GS450.b12 | |
|--|-----------------------------------|----------------------------------|
| | ON | OFF |
| Screen switching/Station No. Switching + Set | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Reset | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Alternate | When the touch switch is released | When the touch switch is touched |
| Screen switching/Station No. Switching + Momentary | When the touch switch is released | |
| Screen switching/Station No. Switching + Word | When the touch switch is touched | When the touch switch is touched |

The following example shows how to make the settings so that the status observation function will work to automatically turn GS450.b12 ON after the GOT is powered ON.

<Example of setting the status observation function>

Make the following settings in the "Status Observation" screen.

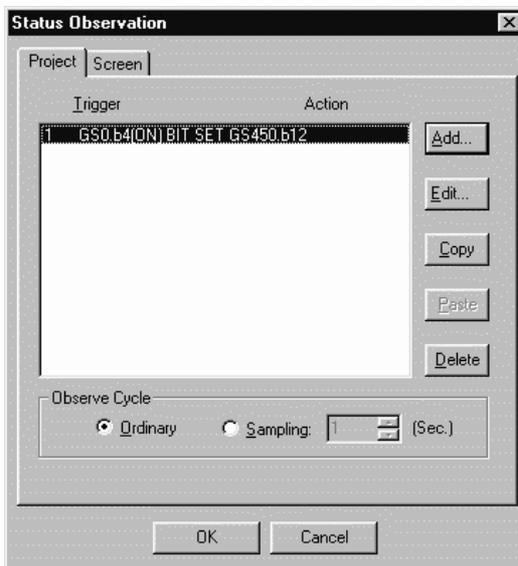
The GOT internal device (device that is always ON: GS0.b4) functions as a trigger.

GS450.b12 turns ON when the trigger is ON.

With this settings, the status observation function works and GS450.b12 turns ON after the GOT is powered ON.

For details of observation function, refer to the following.

 Section 5.28 Status Observation Function



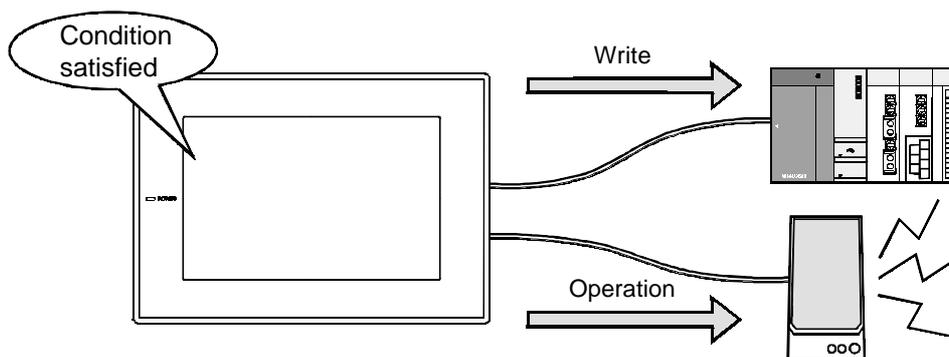
- Make the settings in the "Project" tab within the "Status Observation" screen
- Put the settings in the first line (GS450.b12 turns ON right after the GOT is powered ON)
- Set "Observe Cycle" to "Ordinary"



5.28 Status Observation Function



This function enables operations such as turning a device ON/OFF, writing a value and outputting a sound when the specified conditions are satisfied.



1 Settable conditions

Up to 2 settings are available for the following conditions.

- Bit device ON/OFF
- The range specification of word device values (GOT-A900 series only)

2 Write or other operations allowed when conditions are satisfied

- Turning ON a bit device when the condition is satisfied
- Turning ON/OFF a bit device
- Reversing a bit device status
- Writing a value into a word device
- Outputting sounds through the external speaker (GOT-A900 series only)

3 Types of status observation functions

The status observation functions can be set with the following two types of monitoring methods

- Status observation common to the entire project
As the specified condition is satisfied, devices are always monitored.
- Status monitor for each screen
As the specified condition is satisfied, devices are monitored only when GOT displays the corresponding screen



Remark

About the sounds output through status observation.

Sounds to be output through status monitor needs to be registered at first.

☞ Section 5.38 Sound.

5.28.1 Settings

- 1 Select [Common Settings] → [Status Observation] from the menu.
- 2 The setting dialog box will appear. Make the settings with reference to the following explanation.



Remark

When making the setting on the project work space

The setting dialog box can be displayed by double-clicking on  on the project work space.

5.28.2 Setting items

Project tab.....Setting the status observation function common to the entire project

Screen tab.....Setting the status observation function for each screen



(Example: In the case of GOT-A900 series)



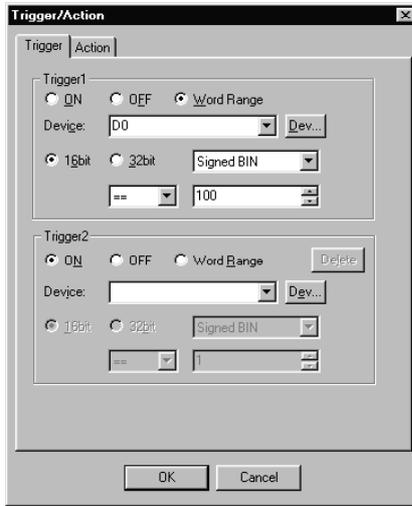
(Example: In the case of GOT-F900 series)

| Items | Description | A | F |
|--|--|---|---|
| Screen type (for Screen tab only) | Select a screen for setting the status observation function. Then select a screen No. Base screen : Select this when setting the status observation function on a base screen. Window screen : Select this when setting the status observation on a window screen. | ○ | × |
| Screen No. (for Screen tab only) | Set the screen No. where the status observation function is set. Click on the Browse button to confirm the screen image. | ○ | ○ |
| List of Status Observation Function data | Displays status observation function data (Trigger/Action) | ○ | ○ |
| Add | Adds new status observation function data. GOT-A900 series : Setting of up to 512 data is available GOT-F900 series : Setting of up to 40 data is available Click on this button, and a dialog box for setting trigger/action appears. (☞ This section 7 Trigger/ Action setting dialog box) In GOT-A900 series, the device NW No. and station No. set in trigger must be set as the same when setting plural status observation function data. | ○ | ○ |
| Edit | Changes the selected status observation function data. Click on the button, and a dialog box for setting trigger/ action appears. (☞ This section 7 Trigger/ Action setting dialog box) | ○ | ○ |
| Copy | Copies the selected status observation function data. | ○ | ○ |
| Paste | Pastes the copied status observation function data to the end of the list. | ○ | ○ |
| Delete | Deletes the selected status observation function data. | ○ | ○ |
| Observe Cycle | Select the observation cycle for the status observation function. Ordinary (In the case of GOT-A900 series): The status of the device set from the Trigger tab is monitored when END processing is completed of the sequence program scan time/link scan time. Ordinary (In the case of GOT-F900 series case): Monitors the trigger device status every 200ms to 300ms. Sampling: The status of the device set from the Trigger tab is monitored at the set sampling cycle (1 to 60 sec). | ○ | ○ |

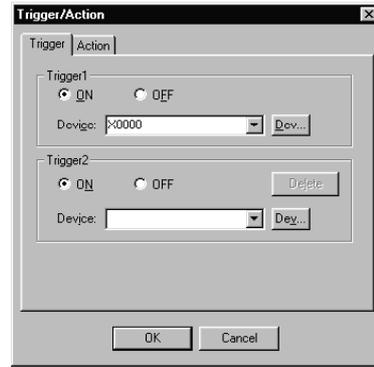
1 [Trigger/Action] dialog box

(1) Trigger tab

Set the trigger to execute the status observation function.



In the case of GOT-A900 series

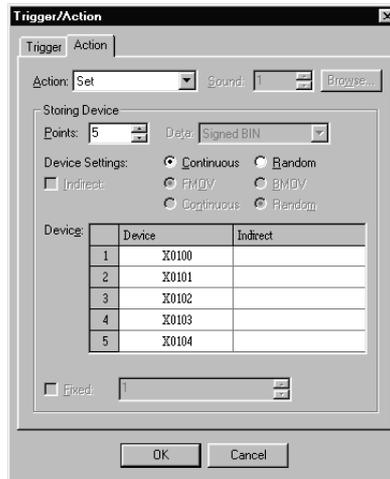


In the case of GOT-F900 series

| Items | Description | A | F |
|---|---|---|---|
| Trigger1/Trigger2 | <p>Set the trigger to execute the status observation function. Up to 2 triggers can be set. (Setting 1 trigger only is allowed) In the case of 2 triggers, when both of triggers are satisfied, the status observation function is executed.</p> <p>ON : Operation is executed when bit device turns ON. OFF : Operation is executed when bit device turns OFF. Word range : Operation is executed when the word device value is within the set range (GOT-A900 series only).</p> <p>After setting the trigger, assign the device that is used as a trigger. (☞ Section 5.1 Device Setting) In the case of a word device, set the data size, data type and specified range of values.</p> | ○ | ○ |
| Data Size | Select the word device data size (16bit, 32bit). | ○ | × |
| Data Type | <p>Select the data type of the word device to be monitored.</p> <p>Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. Real : Treats the word device value as floating point type real number. BCD : Treats the word device value as a BCD value.</p> | ○ | ○ |
| Specified Range of Word Device Value | <p>Set the word device value range for trigger conditions. To the word device value, set the [operator] in the left, and the [fixed value] in the right. (Example): [$<$], [100]..... Executes operation when the word device value is less than 100. [$=$], [100]..... Executes operation when the word device value is equal to 100. [$!$ =], [100]..... Executes operation when the word device value is not equal to 100.</p> | ○ | × |
| Delete (Only for Trigger2) | Deletes the set data of Trigger2. | ○ | ○ |
| Offset (Only allowed in setting of status observation function for each screen) | <p>Check the item when switching the devices to be monitored by adding a certain value set as an offset value. (☞ Section 5.6 Offset Function) After checking, set the offset device. (☞ Section 5.1 Device Setting) Data size is fixed as 16 bits.</p> | ○ | ○ |

(2) Action tab

Setting the action data for the status observation function



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|-----------------|---|-----------------------|-------------------------------------|
| Action | Type of action settings for the status observation function. Momentary : Momentary triggers the bit device ON for an instance. SET : The bit device is turned ON RST : The bit device is turned OFF ALT : The current bit device status is inverted (OFF ↔ ON). Data SET (16bit) : Writes a value into the word device (16bit). Data SET (32bit) : Writes a value into the word device (32bit). Sound : Outputs sounds. (GOT-A900 series only) Set the file No. of output sounds. Sound can be selected from the list by clicking on the Browse button. | <input type="radio"/> | <input type="radio"/> |
| Storing Device | Set the target device that will result from the action type when the status observation function trigger is satisfied. | <input type="radio"/> | <input type="radio"/> |
| Points | Set the number of action devices (Points) when the trigger is satisfied. The maximum points of devices depend on the setting of [Action]. Momentary, SET, RST, ALT : 40 points DataSET(16bit) : 20 points. DataSET(32bit) : 10 points. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Data | Select the data type in which data are written into devices when [DataSET (16bit/32bit)] is set in [Action]. Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. BCD : Treats the word device value as a BCD value. (GOT-A900 series only) Real : Treats the word device value as a floating point type real number. (GOT-A900 series only) | <input type="radio"/> | <input type="radio"/> |
| Device Settings | Select the device setting methods Continuous : Select this item to set the specified number of devices continuously and starting from the set device automatically Random : Select this item to randomly set the specified number of devices.. | <input type="radio"/> | <input type="radio"/> |

| Items | | Description | A | F |
|----------------|------------|---|-----------------------|-----------------------|
| Storing Device | Indirect*1 | Check this item to enable writing other word device value into this word device when the trigger is satisfied. When 2 or more points are set in [Points], select the action (FMOV/BMOV) of the word device to which the current value is written. | <input type="radio"/> | <input type="radio"/> |
| | Device | Set the target device for when the trigger is satisfied. (☞ Section 5.1 Device Setting) GOT-A900 series : Setting of the head devices will automatically set the subsequent devices when [Continuous] is set in [Device Settings] and [Indirect]. When [Random] is set, click on each column to set the device. GOT-F900 series : Setting of the head devices will automatically set the subsequent devices. | <input type="radio"/> | <input type="radio"/> |
| | Fixed *1 | Check this item to enable writing a fixed value into the word device when the trigger is satisfied. | <input type="radio"/> | <input type="radio"/> |

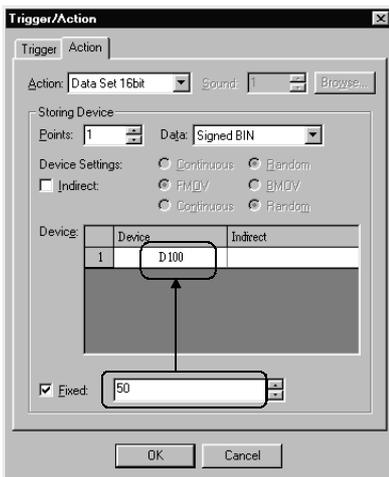
For details about *1, refer to the following.

*** 1 Fixed and Indirect**

If [Fixed] and [Indirect] are set, the fixed value or other word device value can be written into the preset device.

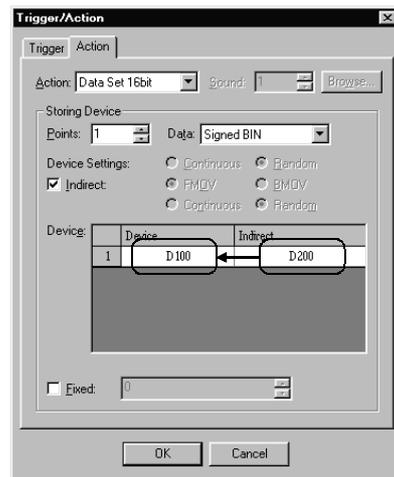
Both of the [Fixed] and [Indirect] settings can be set concurrently.

(1) Fixed



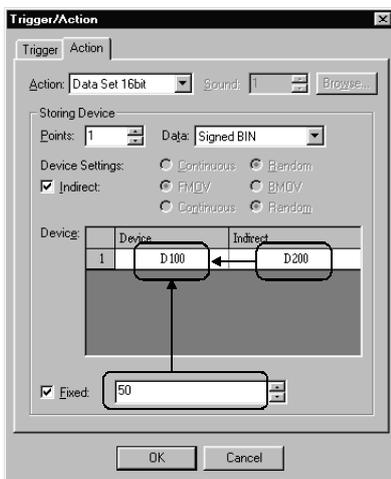
Write fixed value(50) into D100 when trigger is satisfied.

(2) Indirect



Write value of D200 into D100 when trigger is satisfied.

(3) Fixed + Indirect



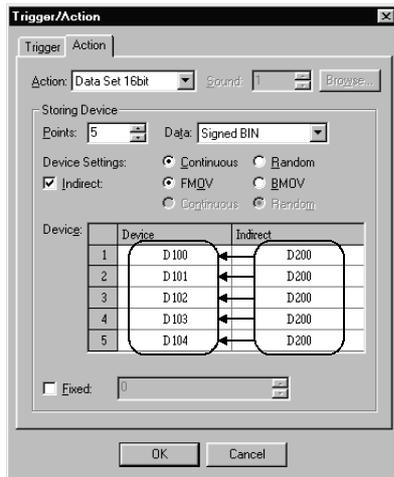
Write value of D200 + fixed (50) into D100 when trigger is satisfied.

When 2 or more setting device points are set under the indirect setting (as shown in above (2), (3)), select the write action to the device. (When [Fixed] is set, the fixed value is added to the written value.)

FMOV : When the trigger is satisfied, writes the current value of the word device specified in [Indirect] to the set device.

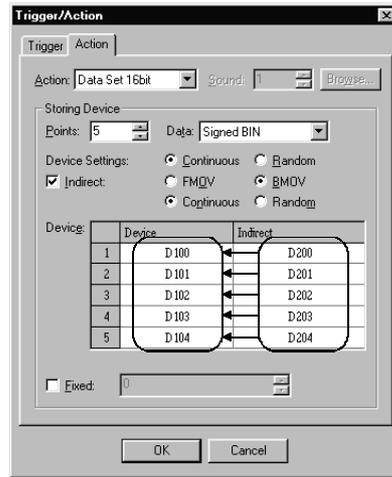
BMOV : When the trigger is satisfied, writes the current values of multiple word devices specified in [Indirect] to the set device.

(1) FMOV



When trigger is satisfied, writes D200 value into D100 to D104.

(2) BMOV



When trigger is satisfied, writes values of D200 to D204 into D100 to D104 respectively.

5.28.3 Cautions

This section provides the cautions for using status observation function.

1 Cautions for drawing

- (1) The maximum number of status observation function data that is settable for the whole project
 - GOT-A900 series : 512
 - GOT-F900 series : 40

- (2) The maximum number of status observation function data that is settable for one screen.
 - GOT-A900 series : 512
 - GOT-F900 series : 40

- (3) The maximum number of write action data
 - Momentary, RST, SET, ALT : 40
 - DataSET (16bit) : 20
 - DataSET (32bit) : 10

- (4) Cautions for setting

When data size exceeds 64k bytes, the status observation function setting becomes disabled. In this case, [Data size exceeds restriction] message is displayed at the end of the setting. Change the settings to make the data size less than 64k bytes.

- (5) When the setting of the observe cycle is not correct, (e.g. incomplete data collection owing to timing delay)

And the object with the offset function specified is set on the screen, trigger device monitored in the status observation function will be delayed.

If this happens, the observe cycle setting may not function normally owing to data collection omission resulting from timing delay.

Set the observe cycle to [Ordinary] to execute normal data collection.

- (6) Trigger device

The status of the device executing the status observation function (trigger device) must be held for the time of the status observation cycle or longer.

(7) Influence on GOT response time (specific for GOT-F900 series)

When many points are set (applicable to the following conditions) and/or multiple status observation functions are activated, GOT response time may be prolonged.

- (a) When a bit device write with only one condition, especially [Momentary] is set, and when the number of the write points or the set triggers for the momentary action are too many.
- (b) When many triggers are satisfied and multiple writings are frequently being executed. (Especially when the watch cycle is set to [Ordinary] or the cycle interval is short.)

Influence on GOT

- (a) Influence on the parts and functions operated in fixed cycle
Periodically operating functions may not be operated as set.
For example, the Observe cycle (status observation), sampling function, alarm history, list function, current time and trend graph function may be affected.
- (b) Influence on screen data transfer
[Errors in main unit processing] message may appear in the drawing software when the screen is automatically switched to the PC transfer screen to execute the screen data transfer.
In this case, switch to the [PC transfer] screen through key operation to enable the screen data transfer.
- (c) Influence on monitor, screen switch and key operation
For the screen switch, monitor and key operation, the operation may be delayed as well.

(8) Influence to 2-port interface function (specific for GOT-F900 series)

A communication error may occur on a peripheral device when the ladder monitor, device batch or monitor registration, etc. is executed on the peripheral device.



5.29 Recipe Function

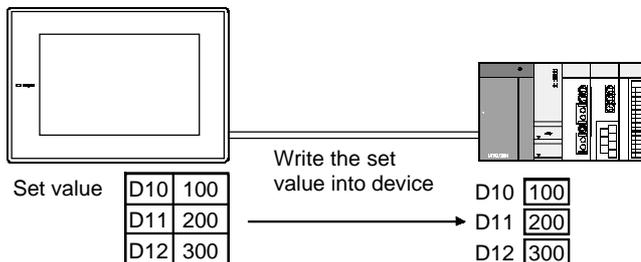


This function enables reading/writing of a value from/to the specified device according to the operation status of the device.

1 Writing to device (without PC card)

The values set with GT Designer2 are saved in the built-in Memory (user area) of GOT and then written to the PLC CPU according to the operation status of the device. Conditions required for production can be set or changed easily.

X10(write trigger) OFF → ON

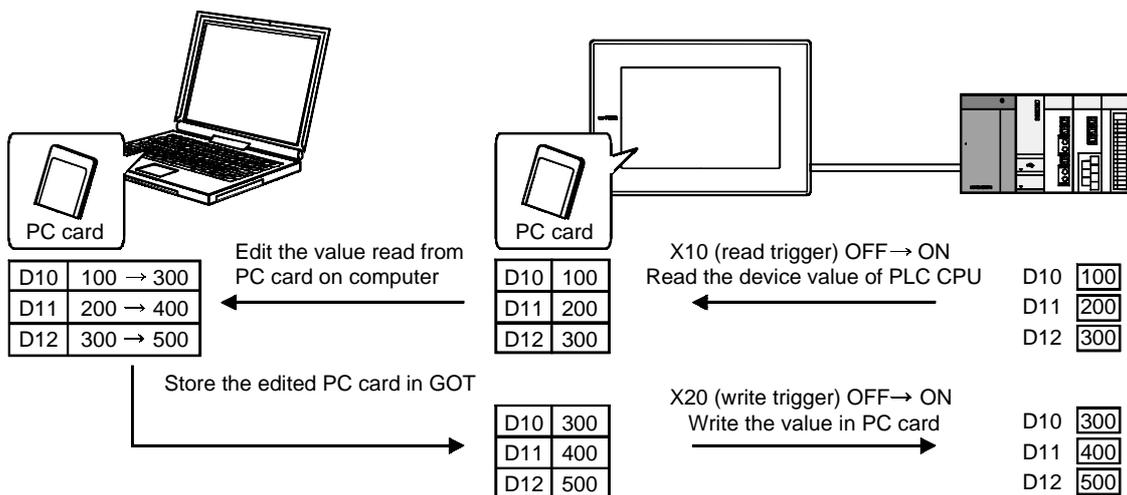


2 Read from/Write to device (with PC card)

The values read from the PLC CPU device are saved on a PC card as a CSV file. (For GOT-F900 series, they are saved in GOT.)

The saved CSV file is useful for project management and production management, because it can be edited on a computer.

Data of PC card (e.g. data edited on a computer) can also be written into the PLC.



Remark

CSV file saved on PC card (specific for GOT-A900 series)

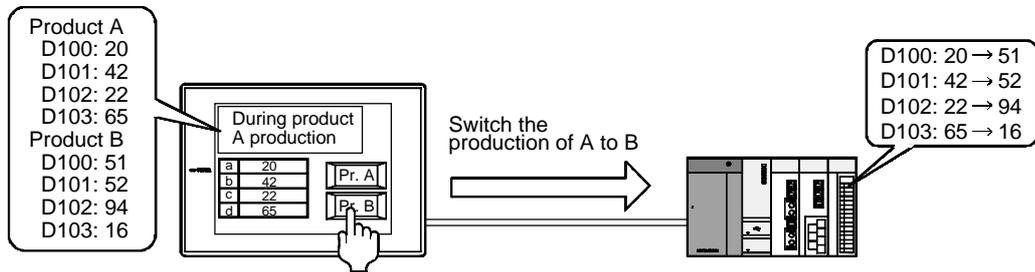
Every time the recipe is set, the CSV file will be created inside the PC card.

| | |
|--------------------|-------------------------------------|
| Recipe name | File name (can be randomly changed) |
| Recipe operation 1 | RECIP001.CSV |
| Recipe operation 2 | RECIP002.CSV |
| Recipe operation 3 | RECIP003.CSV |

Example

Change the quantity of used materials according to the products

☞ Make setting in the recipe setting dialog box



5.29.1 Settings

- 1 Select [Common Settings] → [Recipe] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.

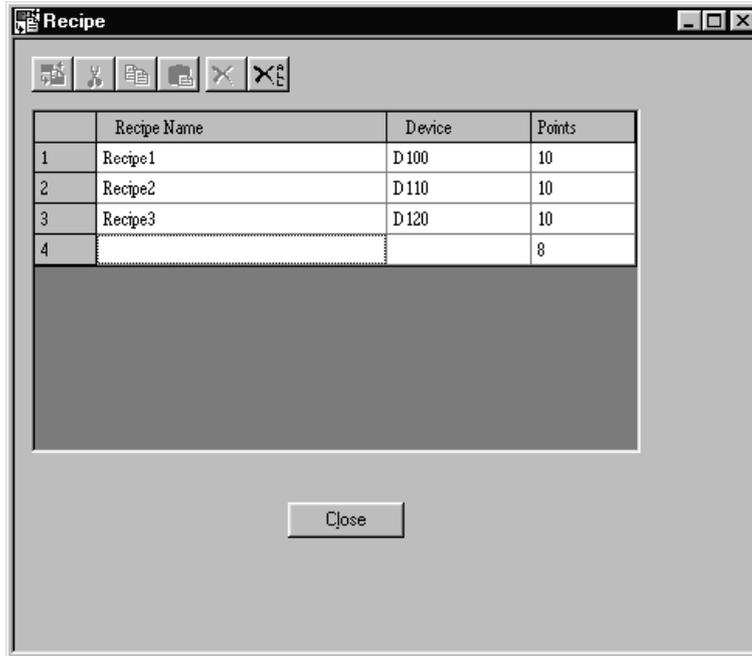
Remark

When making the setting on the project work space

The setting dialog box can be displayed by double-clicking on  in the project work space.

5.29.2 Setting items

Set the operation details of each recipe function.



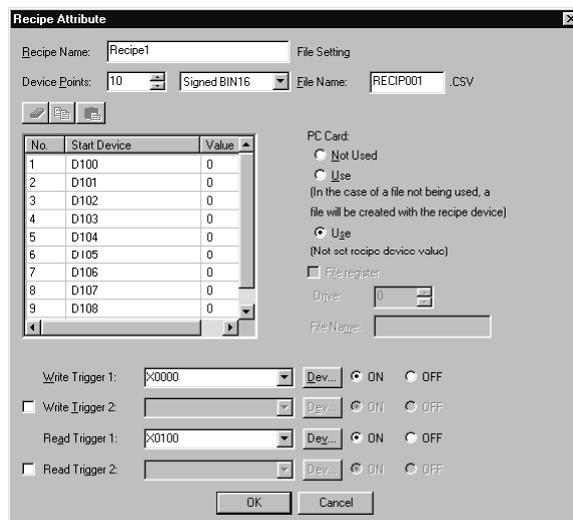
In the case of GOT-A900 series

| Items | Description | A | F |
|-----------------------|---|-----------------------|-----------------------|
| Recipe operation View | <p>Displays the list of the preset recipe function data. If plural recipe functions are set, a recipe function data can be selected by clicking on the No. on the left. The preset recipe function data can be edited using the following icons.</p> <p> (Edit)*1 : Edits the operation details of the selected recipe function data</p> <p> (Cut) : Cuts the selected recipe function data</p> <p> (Copy) : Copies the selected recipe function data</p> <p> (Paste) : Pastes the cut/copied recipe function data in the end of the view display</p> <p> (Delete) : Deletes the selected recipe function data</p> <p> (Delete all) : Deletes all the set recipe functions data</p> | <input type="radio"/> | <input type="radio"/> |

For details about *1, refer to the next page.

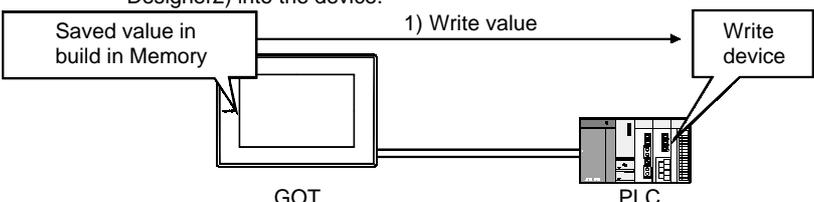
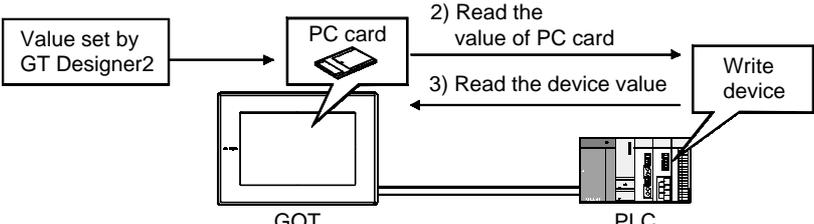
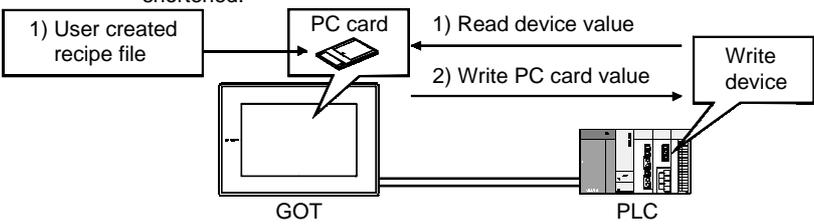
***1 Recipe setting**

Set the operation details of the recipe function.



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|-----------------|--|-----------------------|-----------------------|
| Points | Set data type and points of the device to be read and written when executing the recipe function. | <input type="radio"/> | <input type="radio"/> |
| Device points | Set the points of device to be read and written. Set the specified number of devices consecutively starting from the head device. The points that can be set depend on the data types of devices as follows: GOT-A900 series: 16bit (signed/unsigned) : Up to 8192 points 32bit (signed/unsigned) : Up to 4096 points GOT-F900 series: 16bit (signed/unsigned) : Up to 4000 points | <input type="radio"/> | <input type="radio"/> |
| Data type | Select the data type of the devices. GOT-A900 series : Signed 16bit : Process the word device value of 16bit in signed way Unsigned 16bit : Process the word device value of 16bit in unsigned way Signed 32bit : Process the word device value of 32bit in signed way Unsigned 32bit : Process the word device value of 32bit in unsigned way GOT-F900 series : Signed 16bit : Process the word device value of 16bit in signed way Unsigned 16bit : Process the word device value of 16bit in unsigned way | <input type="radio"/> | <input type="radio"/> |
| Device View | A list of the devices that are set to read or write the recipe function data is displayed. | <input type="radio"/> | <input type="radio"/> |
| Head Bit Device | Set the head device that executes read/write the recipe function data. (Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Value | Input the device value to be written to the PLC when the condition is satisfied. Click on the column of No. and then the set values can be edited using each icon () (erase), () (copy) () (paste)). | <input type="radio"/> | <input type="radio"/> |
| Write Trigger1 | Set a device that will execute data write and its trigger condition (ON/OFF) for the recipe function. (Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |

| Items | Description | A | F |
|----------------|---|---|---|
| Write Trigger2 | <p>Check this item to enable data write when both of two conditions are satisfied. Set the device and its trigger conditions (ON/OFF) (☞ Section 5.1 Device Setting) With Write Trigger 1 and 2 set, data write is executed only when the both device conditions are satisfied.</p> | ○ | × |
| Read Trigger1 | <p>Set a device that will execute data read for the recipe function. (☞ Section 5.1 Device Setting) After setting, select its trigger conditions (ON/OFF).</p> | ○ | ○ |
| Read Trigger2 | <p>Check this item to enable data read when both of two conditions are satisfied. Set the device and its trigger conditions (ON/OFF). (☞ Section 5.1 Device Setting) With Read Trigger 1 and 2 set, data read is executed only when the both device conditions are satisfied.</p> | ○ | × |
| File Setting | <p>Set the file name saved in PC card when using a PC card. (Up to 8 alpha-numerical characters can be used.) The default is set to "RECIP*.CSV". (*: No. of recipe setting)</p> | ○ | × |
| PC card | <p>Select to use or not use a PC card for the recipe function.</p> <p>Not use: Writes the value saved in the built-in Memory of GOT (the value set in GT Designer2) into the device.</p>  <p>Use (In the case of a file not being used, a file will be created with the recipe device) : Create a recipe file with the value setting in GT Designer when there is not any recipe file in the PC card at starting up. Initially, writing by the set value can be executed. 1) Write value when starting GOT</p>  <p>Use (not set recipe device value) : Does not create any recipe file if there is no recipe files in PC card when starting GOT. Because the value setting in GT Designer2 is not needed, data volume transferred to GOT can be decreased and the download time can be shortened.</p>  | ○ | × |

| Items | Description | A | F |
|---------------|---|---|---|
| File register | Check this item to specify a file register name when a device executing read/write is set in the file register (R, ER, ZR). (Only when the PLC type is set as [MELSEC-QnA, Q]/[MELSEC-Q (multi.)] in GT Designer2) When no file register has been specified, the file register with the file name specified by QCPU in the "END" process. | ○ | × |
| Drive | Select the drive No. of the PLC CPU. | ○ | × |
| File Name | Set a file name. (Up to 8 characters can be input.) | ○ | × |



(1) Setting items of PC card

Available operation of the recipe function depends on the selected item.
Select the item corresponding to a desired operation of the recipe function.

<Operation of recipe function according to the selected items> ○: Applicable ×: N/A

| Items | Recipe function operation to be used | | |
|---|--------------------------------------|-----------|------------|
| | Write only | Read only | Read/Write |
| Not used | ○ | × | × |
| Use (In the case of a file not being used, a file will be created with the recipe device) | ○*2 | △*1*2 | ○*2 |
| Use (Not set recipe device value) | ○*3 | ○*3 | ○*3 |

*1: It is advisable to select "Use (not set recipe device value)" when executing read operation only.

*2: Since value setting is necessary, GOT memory capacity for the set values is required.

*3: It is necessary for the user to create a recipe file.

(After initially reading the PLC CPU device, reuse the recipe file created in PC card in GOT.)

(2) PC card check when using recipe function

GOT executes the following operation according to the status of the PC card.

(a) When recipe file is not valid or corrupted

The recipe processing is interrupted.

(b) When no PC card is installed in the GOT

An error is displayed as a system alarm.



Cautions when executing recipe function

- (1) When many read/write devices are set, other processing such as monitoring of other object function or key input will not be executed until the completion of the recipe function.

- (2) While the recipe function with the file register name specified is being executed (Accessed to the file register in the CPU), other recipe function is not available.
To activate other recipe function, complete the one with the file name specified.

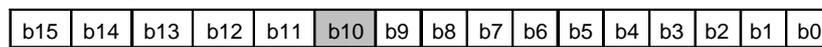
<Confirmation method of recipe execution> (specific for GOT-A900 series)

It is possible to confirm whether the recipe function is in execution or not if the lamp monitoring the recipe processing signal of System signal 2 is set on GOT screen.

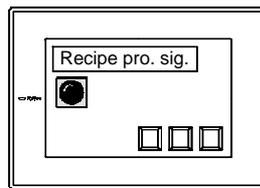


Section 3.5 System Information Setting

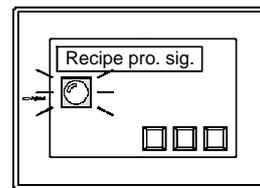
System signal 2



└─ Signal in recipe processing



Lamp ON in recipe function execution



Lamp OFF when recipe function execution is completed

5.29.3 Cautions

This section provides the cautions for using the recipe function.

1 Cautions for drawing

- (1) The maximum recipe points settable in the whole project
 - GOT-A900 series: 256 points
 - GOT-F900 series: 256 points
- (2) The maximum number of write action data
 - GOT-A900 series: 8192 points (Data type of device: 16bit)
4096 points (Data type of device: 32bit)
 - GOT-F900 series: 4000 points (Data type of device: 16bit)

2 Cautions for OS

- (1) Extended function OS (specific for GOT-A900 series)
Be sure to install the extended function OS (recipe) to GOT when using the recipe function.
Be sure to install the extended function OS (CSV) to GOT when using the CSV format file.

3 Cautions for hardware

- (1) GOT operating restrictions
Read operation is not available for the A95* handy GOT as it does not accept the PC card.
- (2) Required optional devices and GOT
The following are needed when using the recipe function.

| GOT | | Required accessories |
|---------------------------|--------------------|--|
| A985GOT, A97*GOT, A960GOT | | Memory board |
| A956WGOT | | Memory board |
| | When using PC card | SRAM type : Memory card interface module Compact flash PC card : NO additional devices required |
| A95*GOT | | GOT of memory extension type (A95*GOT-*BD-M3) |
| | When using PC card | SRAM type : Memory card interface module Compact flash PC card : N/A |

4 Cautions for use

- (1) CSV file saved in PC card
Only one CSV file can be stored in PC card for one recipe function.
For the CSV file data, only the read data are saved and historical data are not saved. (Old data will be overwritten.)
When historical data are necessary, save data in the computer every time the recipe function is executed.

- (2) Number of recipe files that can be saved in PC card (When using A985GOT/A97*GOT/A960GOT/A956WGOT/A95*GOT)

The maximum number of recipe files (including other object files) that can be set in a PC card differs with memory capacity as follows:

| PC card memory capacity | Number of files |
|--|-----------------|
| 1M, 2M | 128 |
| 4M | 256 |
| 16M (A9GTMEM-10MF), 32M (A9GTMEM-20MF), 48M (A9GTMEM-40MF) | 512 |

*1 Memory capacity differs according to the hardware versions of flash PC card.

The memory can be checked on the rated plate of flash card.



5.30 Time Action Function

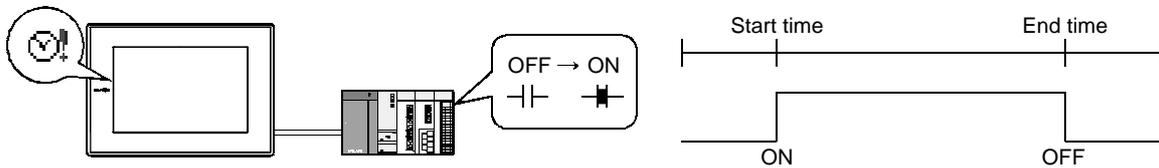


This function is designed to perform the following operation at a preset day-of-the-week and time. The operation initialization of the GOT-A900 series is determined by the PLC CPU clock settings (day-of-the-week and time).

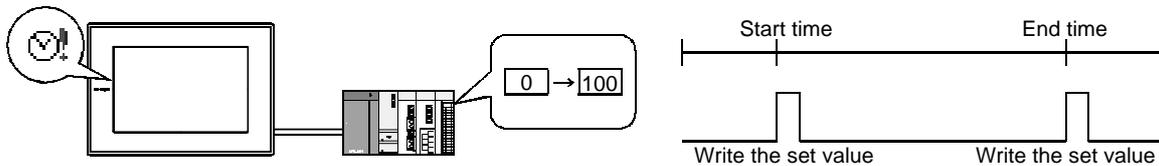
When the GOT is connected to a network, the initialization is determined by the data and time in master station or control station.

The operation initialization for the GOT-F900 series (except F920GOT-K) is determined by its own internal clock settings.

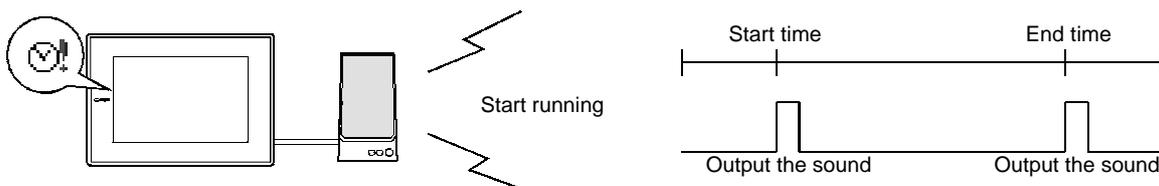
1 Turns bit device ON/OFF.



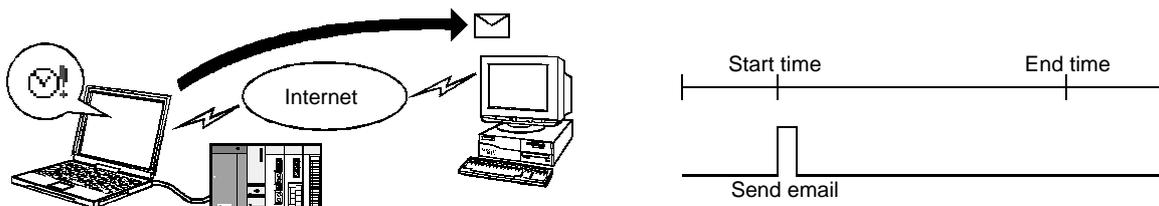
2 Writes value to word device. (specific for GOT-A900 series)



3 Outputs sound. (An external speaker is required) (specific for GOT-A900 series)



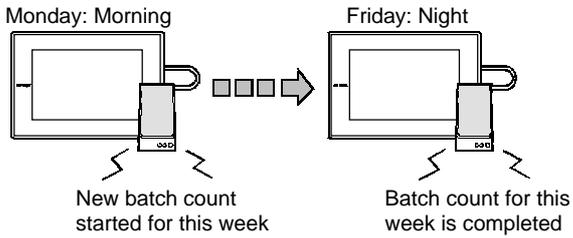
4 Sends various data such as alarm history data/recipe file/screen image by email (specific GT SoftGOT2)



Example

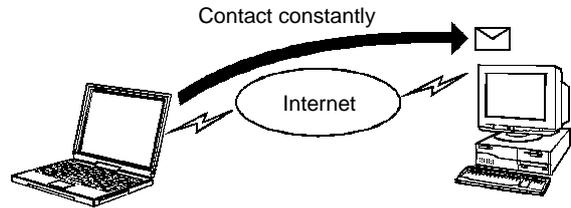
Play sound1 on Monday morning and sound2 on Friday evening

☞ Set on the Time tab and Action tab



Send alarm history data by email every evening

☞ Set on the Time tab and Action tab



5.30.1 Settings

- 1 Select [Common Settings] → [Time Action] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.

Remark

When making the setting on the project work space

The setting dialog box can be displayed by double-clicking on  in the project work space.

5.30.2 Setting items

Set the action, start time and end time for the time action.

| | Action | Start Time | End Time | Day | Mode |
|---|-----------|------------|----------|---------------------|-------|
| 1 | Bit:X0000 | 10:00 | 10:05 | Mon,Tue,Wed,Thu,Fri | Daily |
| 2 | Bit:X0001 | 12:00 | 12:05 | Mon,Tue,Wed,Thu,Fri | Daily |
| 3 | Bit:X0002 | 17:00 | 17:05 | Mon,Tue,Wed,Thu,Fri | Daily |
| 4 | | | | | |

In the case of GOT-A900 series

| | Device | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Start Time | End Time |
|---|--------|-----|-----|-----|-----|-----|-----|-----|------------|----------|
| 1 | X0000 | | x | x | x | x | x | | 10:00:00 | 10:05:00 |
| 2 | X0001 | | x | x | x | x | x | | 12:00:00 | 12:05:00 |
| 3 | X0002 | | x | x | x | x | x | | 17:00:00 | 17:05:00 |
| 4 | X0003 | | | | | | | | 00:00:00 | 00:00:00 |
| 5 | X0004 | | | | | | | | 00:00:00 | 00:00:00 |

In the case of GOT-F900 series

| Items | Description | A | F | |
|---------------------|---|---|---|---|
| Delete | Time action setting will be deleted by clicking on the Delete button after selecting the time action to be deleted on the list. | ○ | × | |
| Delete All | All the time action settings will be deleted by clicking the Delete All button. | ○ | ○ | |
| Edit *1 | Time action setting is available by clicking on the Edit button after clicking (selecting) the No. of the row to be set/edited on the list. | ○ | × | |
| Common Settings | Set the head device (occupying 8 points) to be turned ON/OFF in the time action function. Clicking on the Dev. button to set the head bit device. Clicking on the Update button register the common settings. | × | ○ | |
| Individual Settings | Set the day-of-the-week and time when the time action function is selected. Setting the start time and end time to different days (exceeding 24 hours) is not allowed. Clicking on the Update button to register the settings. Clicking on the Clear button to delete the settings of the currently selected row (channel). | × | ○ | |
| | Weekdays | Select the days from Sunday through Saturday to be set. | × | ○ |
| | Start Time | The bit device is turned ON corresponding to the selected No. at the set time. | × | ○ |
| | End Time | The bit device is turned OFF corresponding to the selected No. at the set time. | × | ○ |

For details about *1, refer to the next page.

*1 Edit settings (GOT-A900 series only)

■ Time tab

Set the day-of-the-week and time when the time action function is to be used.



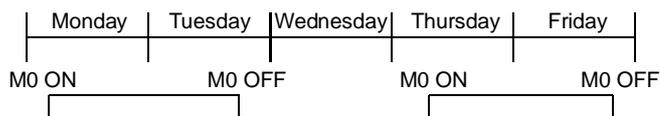
| Items | Description | A | F |
|-----------|---|-----------------------|----------------------------------|
| Mode | Set the mode type for the time action function. Daily : Time action is executed only on the specified day-of-the-week/time. Through : Time action is executed continuously for the specified number of days. | <input type="radio"/> | <input checked="" type="radio"/> |
| Start/End | Select the day-of-the-week and time when the time action function starts/ends. Start : Set the day/time when the time action starts. When the mode is set as [Daily], multiple days can be set. End : Set the day/time when the time action ends. Only when the mode is set as [Through], the day-of-the-week setting is available. | <input type="radio"/> | <input checked="" type="radio"/> |



Setting the same time action twice a week

When Through is set, a single action only can be executed once in a week. To set a single action executed twice a week by Through, please set the time function with different start/end time twice (■ Mode of Time tab: set in Day).

- Turn M0 ON in AM of Monday, and turn M0 OFF in PM of Tuesday (Set this in time action1)
- No action on Wednesday
- Turn M0 ON in AM of Thursday, and turn M0 OFF in PM of Friday (Set this in time action2)

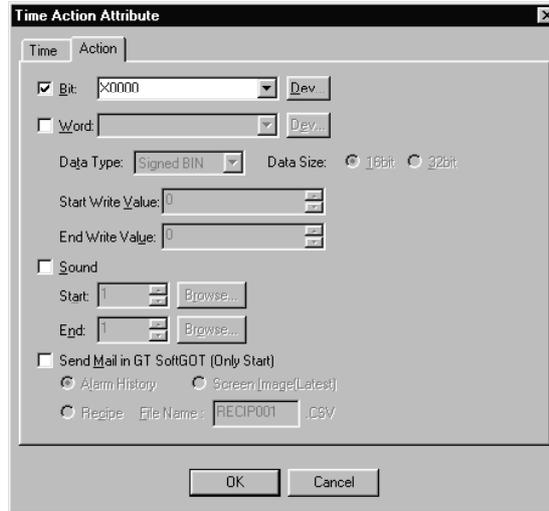


When actual day-of-the-week does not match the date controlled by PLC CPU

Even if the day-of-the-week data of the PLC CPU is incorrect, GOT will calculate the correct day of the week from the date data of the PLC CPU and execute the time action function on the day.

■ Action tab

Set the condition trigger executing the time action function.



| Items | Description | A | F |
|--------------------------------------|---|-----------------------|---|
| Bit | Check this item to turn bit device ON/OFF at the start/end time. Set the bit device to be turned ON/OFF. | <input type="radio"/> | × |
| Word | Check this item to write the specified value to word device. Set the word device to which the value is written. | <input type="radio"/> | × |
| Data Type | Select the data type of the word device for value write. Signed BIN : Treats word device value as a signed binary value. Unsigned BIN : Treats word device value as an unsigned binary value. Real : Treats word device value as floating point type real number. BCD : Treats word device value as BCD (binary decimal) value. | <input type="radio"/> | × |
| Data Size | Select the data size (16 bits/32 bits) of the word device. | <input type="radio"/> | × |
| Start Write Value | Set the value to be written to the specified word device at the start time. | <input type="radio"/> | × |
| End Write Value | Set the value to be written to the specified word device the at end time. | <input type="radio"/> | × |
| Sound | Check this item to output sound at the start/end time. The sound is not output when the sound No. is set to 0. Click on the Browse button to select the sound to be played from the list. | <input type="radio"/> | × |
| Start | Set the sound No. of the sound file to be played at the start time | <input type="radio"/> | × |
| End | Set the sound No. of the sound file to be played at the end time | <input type="radio"/> | × |
| Send Mail in GT SoftGOT (Only Start) | Check this item to send the following data by e-mail at the start time. Select the contents to be sent by e-mail. One type of data can be sent for each time action. Alarm history : Sends alarm history data (CSV file). Recipe : Sends recipe data (CSV file). Screen image : Sends screen image (BMP file). Refer to the following manual for the details of send data.  GT SoftGOT2 Version1 Operating Manual | <input type="radio"/> | × |

5.30.3 Cautions

This section provides the cautions for using the time action function.

1 Cautions for drawing

- (1) Number of points settable for the time action function

GOT-A900 series: 32

GOT-F900 series: 8

- (2) Cautions for multiple time action function settings

Do not set different time actions to the same day-of-the-week and time. Otherwise GOT may work abnormally.

2 Cautions about hardware

- (1) System configuration not applicable for the time action function

The time action function is not applicable if there are no time data in the connected PLC CPU. As GT SoftGOT2 and GOT-F900 series (except F920GOT-K) do not use the time data of PLC CPU, the time action function can be used even if there are no time data in the connected PLC CPU.

 Section 2.4.2 PLC CPU with clock function (specific for GOT-A900 series)



Remark

Communication board with built-in clock function (specific for GOT-A900 series)

If the communication board (A9GT-RS2T) with built-in clock function is installed in GOT-A900 (except A95*GOT/A956WGOT), the time action function can be executed when PC is connected.

(The clock function of the communication board is not available in the case of computer link connection (including connection with the PLC made by other company))

- (2) Mail sending

The mail sending in the time action function is applicable for GT SoftGOT2 only.

3 Cautions for use

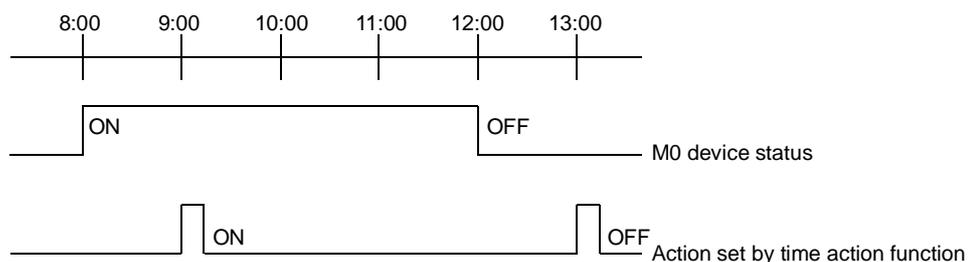
- (1) During operation of time action function

Time action function may be affected if the clock setting on the PLC CPU or the preset device status is changed.

Attention must be paid to change the clock setting and the set device status.

Example1: When the set bit device (M0) is turned ON before the time action is executed

The action is not executed at the time set by the time action function



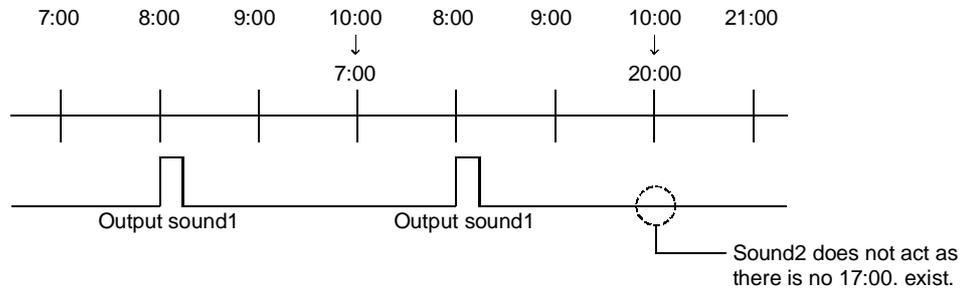
Example2: When the time of PLC CPU is changed

The action is executed at the next start time.

It will not be executed if the change is made after the start/end action time.

Start action : 8:00 Output sound1

End action :17:00 Output sound2



(2) When outputting sound

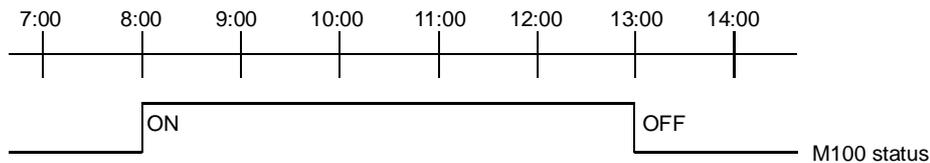
Refer to the cautions for the sound function when outputting sound.

 Section 5.38 Sound

(3) Time action of GOT-F900 series

[SET] (sets) the specified bit device when the time of the clock built in GOT-F900 series comes to the preset start time.

It [RST] (resets) the specified bit device if it comes to the preset end time.



Remark

Action lasting more than one day (24 hours)

Assign ON action of the device to time action No.1 and OFF action to No.2 by programming with sequence program combining No.1 and No.2 (totally 2 points) time actions.

Example) Turn ON at 09:00 on Monday and OFF at 17:00 on Friday

- For No.1 (M100), check only Monday. Set the start time to 09:00 and the end time to 09:01.
- For No.2 (M101), check only Friday. Set the start time to 17:00 and the end time to 17:01
- Program by sequence program so that the device to be turn ON will be SET (set) by M100 and RST(reset) by M101.

(4) When the screen data of the software DU-WIN is read

Comments on time action set by the software DU-WIN are deleted.

5.31 Test Function



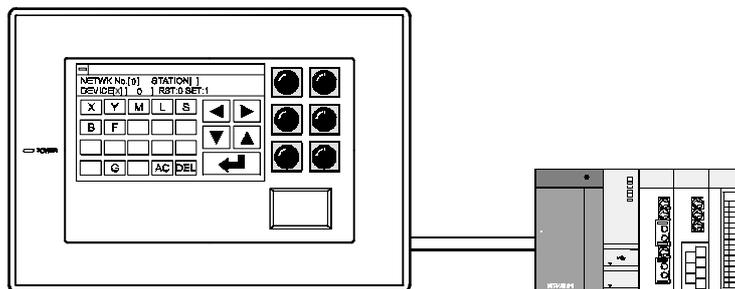
This section explains the test function that displays test window on monitor screen and changes device value.

This function is applicable for maintenance and inspection using monitor screen, providing the following functions.

Test function provides following operations.

- Bit device ON/OFF
- Change the current value of word device
- Change the set value of timer/counter
- Change the current value of buffer memory

Arrange touch switch (special function switch) to set the test function.



Remark

Test except when the monitor screen is displayed

The test window can be displayed to change the device value, as well when the ladder monitor function, system monitor function or special function module monitor function is used.

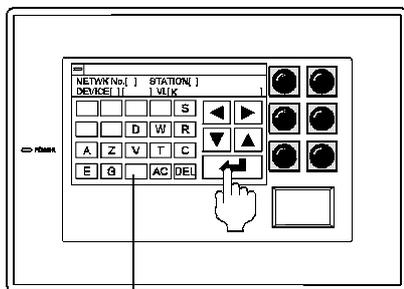
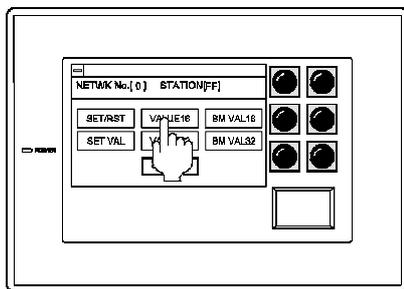
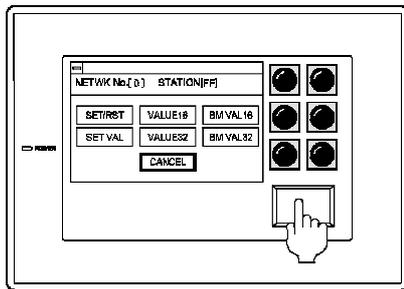
Refer to the following manuals for the test methods of various functions.



GOT-A900 series Operating Manual (GT Works2 Version1/GT Designer2 Version1 Compatible Extended · Option Functions Manual)

1 Method of operating test window

This section explains how to operate the test window.



Change keys according to input area.

1 Touch the touch switch to display the test window.

2 Select the device type to be changed

- SET/RST : Set/reset the bit device.
- Current value 16/Current value 32 : Change the current value of word device.
- Set value : Change the set value of T.C.
- BIN Value 16/BIN Value 32 : Change the current value of buffer memory.

3 Specify the network No., device and value of the device of which value is to be changed.

◀, ▶ Change the input area by keys.

- In the case of data link system
 Network No. : 0
 Station No. : FF (host), 0 (master station)
 1 to 64 (local station)
- In the case of network system
 Network No. : 0 (self loop), 1 to 255 (specified loop)
 Station No. : FF (host), 0 (control station),
 1 to 64 (normal station)

4 Define the value change by the definition key

5.31.1 Arrangement and settings

Refer to the following section for arrangement and settings of the touch switch.

☞ Section 5.27.1 Arrangement and settings

5.31.2 Setting items

Refer to the following section for setting items of the touch switch.

☞ Section 5.27.4 Setting items of special function switch

5.31.3 Cautions

This section provides the cautions for using test function.

Refer to the following section for the cautions other than described in this section .

 Section 5.27.11 Cautions

1 Cautions for drawing

- (1) When setting line graph
When locus type line graph has been set on base screen, the test window cannot be displayed.

2 Cautions for hardware

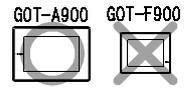
- (1) Inapplicable GOT
The test function cannot be used in GT SoftGOT2, A95*GOT, A956WGOT, A950 Handy GOT and GOT-F900 series.

3 Cautions for use

- (1) PLC CPU control
Executing test function may affect the control of PLC CPU.
Make sure to fully confirm the security before executing the test function.

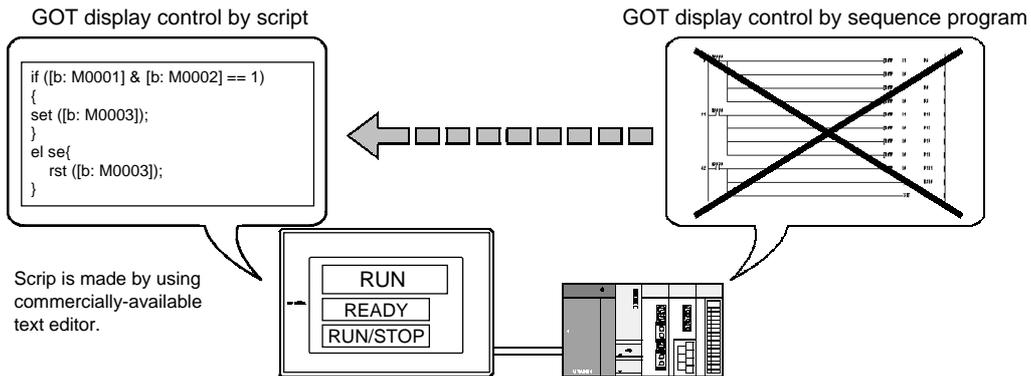


5.32 Script Function



Script function is the original program (script) of GOT.

It can drastically reduce the load of program for system (PLC CPU, PC) display by executing display control of GOT with script.



Following describes two types of script function.

1 Project script

Project script is the script applicable for the whole projects.
It can be always executed while monitoring by GOT.

2 Screen script

Screen script can be executed only when the object screen is displayed.



Required knowledge for setting the script function

Refer to [Chapter 6 Script Function] for the details about script function.
It explains the specification of script function, program example and troubleshooting.

5.32.1 Settings

- 1 Select [Common settings] → [Script] from the menu.
- 2 The setting dialog box will appear. Make the settings with reference to the following explanation.



Remark

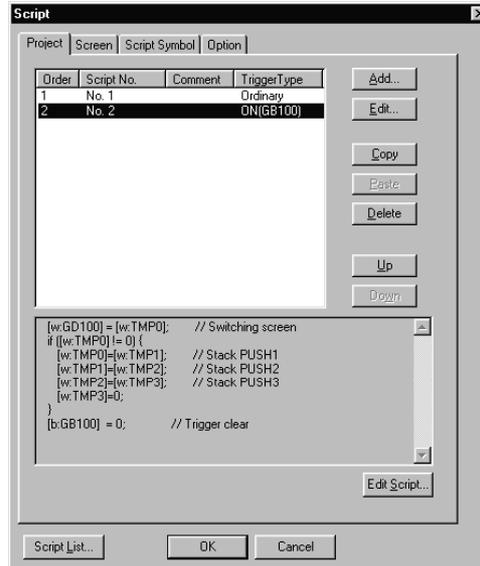
When making the setting on the project work space.

The setting dialog box can be displayed by double-clicking on  [Script] on the project work space.

5.32.2 Setting items

1 Project tab

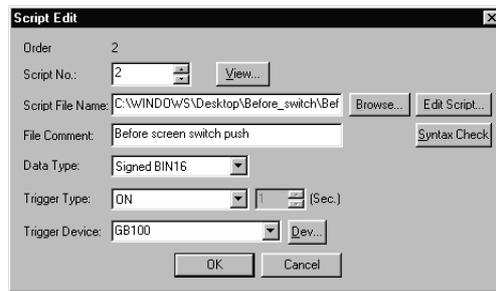
Set the script function applicable for the whole projects.



| Items | Description | A | F |
|----------------------|---|-----------------------|---|
| Script Function List | Display the set script functions in list format. The script for the selected script function is shown below the function list. | <input type="radio"/> | × |
| Add*1 | Adds a new script function. Click on this item to display [Edit Script] dialog box. The order of executing script functions will be set according to the order in which they are added. | <input type="radio"/> | × |
| Edit*1 | Edits the selected script function. | <input type="radio"/> | × |
| Copy | Copies the selected script function. | <input type="radio"/> | × |
| Paste | Pastes the copied script function to the last line of the script function list. | <input type="radio"/> | × |
| Delete | Delete the selected script function | <input type="radio"/> | × |
| Up | Changes the order of executing selected script functions. | <input type="radio"/> | × |
| Down | | <input type="radio"/> | × |
| Edit Script | This is used to open the selected script file by text editor, and then edit the script. Select the text editor type in [Select Script Editor] on the extended tab. | <input type="radio"/> | × |
| Script List | Displays the registered script files in list format. Script files can be added, registered and edited on the list. (☞ This section 5 Script file list) | <input type="radio"/> | × |

Refer to the next page for the details of *1.

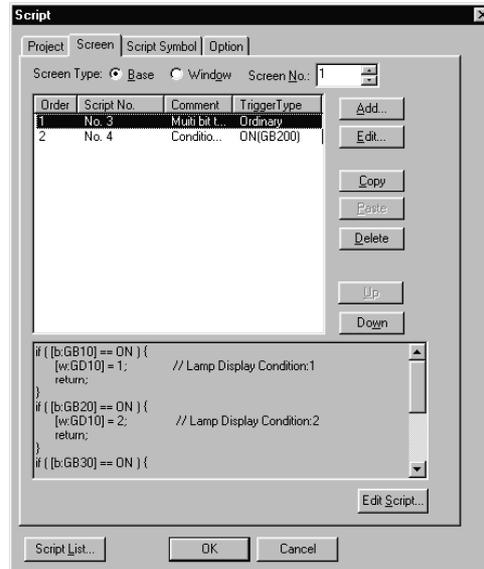
*1 Script Edit



| Items | Description | A | F |
|------------------|--|-----------------------|-------------------------------------|
| Order | Display the order of the script function under editing. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Script No. | Register the script No. for the current script which is being edited. Click on the View button to confirm the registration No. of other script files.  Script file list) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Script File Name | Display the drive and folder that include the script file to be executed. If the script file is not registered, click on the Browse button to specify the script file to be executed. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Edit Script | This is used to open the script file selected in [File Name] by text editor, and then edit the script. Select the text editor type in [Select Script Editor] on the extended tab. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| File Comment | Input the comment of the script function being edited. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Syntax Check | Checks the validity of the syntax for the script selected in [Script File Name]. The applicable device type and device range are also checked.  Section 5.3.2.4 Messages displayed during syntax check) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Data Type | Select the data type of script to be executed. 16/32 bit signed BIN : Treats script data as 16/32 bits signed binary value. 16/32 bit unsigned BIN : Treats script data as 16/32 bits unsigned binary value. 16/32 bit BCD : Treats script data as 16/32 bits BCD (binary coded decimal) value. 32 bit real number : Treats script data as floating decimal point real number. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Type | Select the trigger for operating the script. When [Sampling], [ON Sampling] or [OFF Sampling] is selected, set the cycle (1 to 3600 seconds) in 1-second unit.  Section 5.4 Trigger Setting) <ul style="list-style-type: none"> ● Ordinary ● ON ● OFF ● Rise ● Fall ● Sampling ● ON Sampling ● OFF Sampling | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger Device | When [ON], [OFF], [Rise], [Fall], [ON Sampling] or [OFF Sampling] is selected, click on the Device button to set the device to be used for the trigger.  Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |

2 Screen tab

Set the script to be executed for each screen.



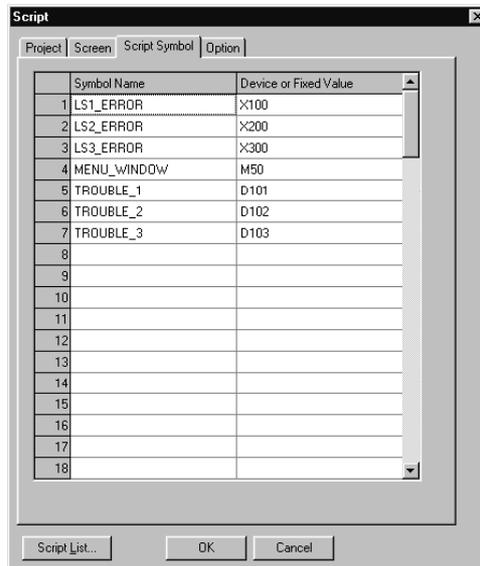
| Items | Description | A | F |
|----------------------|--|-----------------------|---|
| Screen Type | Set the screen (Base/Window) on which the script function will operate and the screen No. | <input type="radio"/> | × |
| Script Function List | Displays the set script functions in list format. The script for the selected script function is shown below the function list. | <input type="radio"/> | × |
| Add *1 | Adds a new script function. Click on this item to display [Edit Script] dialog box. The order of executing script functions will be set according to the order in which they are added. | <input type="radio"/> | × |
| Edit *1 | Edits the selected script function. | <input type="radio"/> | × |
| Copy | Copies the selected script function. | <input type="radio"/> | × |
| Paste | Pastes the copied script function to the last line of the script function list. | <input type="radio"/> | × |
| Delete | Deletes the selected script function. | <input type="radio"/> | × |
| Up | Changes the order of executing selected script functions. | <input type="radio"/> | × |
| Down | | <input type="radio"/> | × |
| Edit Script | This is used to open the selected script file by text editor, and then edit the script. Select the text editor type in [Select Script Editor] on the extended tab. | <input type="radio"/> | × |
| Script List | Displays the registered script files in list format. Script files can be added, registered and edited on the list. ( This section 5 Script file list) | <input type="radio"/> | × |

Refer to the next page for the details of *1.

 This section **1** *1 Script Edit

3 Script Symbol tab

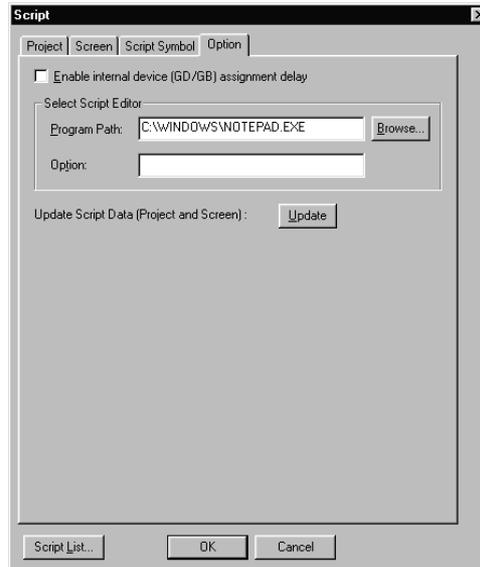
A script file (text file) can be described using the character string, instead of the device or fixed value. This method is available by setting a device or fixed value to each character string in this tab screen. (Even when a script file is described using character strings, the scrip operates on GOT.) This setting is made for all scripts.



| Items | Description | A | F |
|-----------------------|--|-----------------------|-------------------------------------|
| Symbol Name | Input the character string to be described in script files (Up to 32 characters). Up to 100 words can be set. "#" cannot be used. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Device or Fixed Value | Input the device or character string for the symbol name, i.e., character string (Up to 32 characters). Up to 100 words can be set. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Script List | Displays the registered script files in list format. Script files can be added, registered and edited on the list. (This section 5 Script file list) | <input type="radio"/> | <input checked="" type="checkbox"/> |

4 Option tab

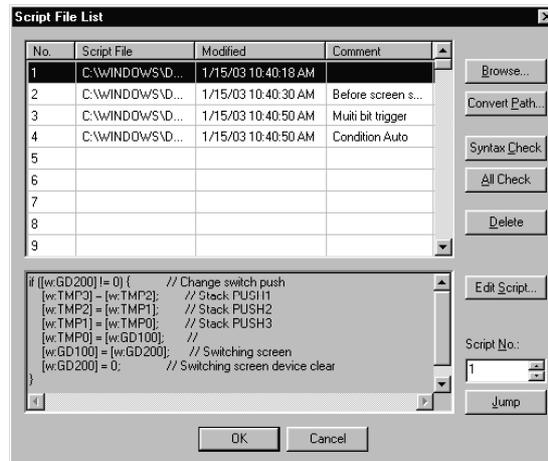
Set the text editor for editing script file and the processing when internal device is used.



| Items | Description | A | F |
|---|---|-----------------------|---|
| Enable internal device (GD/GB) assignment delay | Check this item to avoid substitution delay, which occurs when script function is used, by using the GOT internal device (GD, GB). Refer to the following for cautions about substitution delay.  Section 6.2.1  Cautions for use | <input type="radio"/> | × |
| Select Script Editor | Select the text editor to be started for editing script file in GT Designer2. Specify the text editor (WINDOWS [®] NOTEPAD.EXE and word pad (WORDPAD.EXE etc.) to be started by [Program Path]. The text editors that require startup options can be registered in [Option]. | <input type="radio"/> | × |
| Update Script Data | Update the script data that is read by GT Designer2. | <input type="radio"/> | × |
| Script List | Displays the registered script files in list format. Script files can be added, registered and edited on the list.  This section  Script file list) | <input type="radio"/> | × |

5 Script list

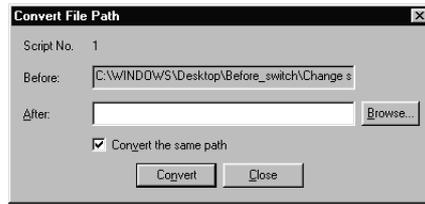
The registered script files to be executed are displayed in list format. They can be added, registered and edited on this list.



| Items | Description | A | F |
|------------------|---|-----------------------|---|
| Script File List | Displays the registered script files in list format (path name, modification date/time, and comment). The files specified in [Script Edit] dialog box can be displayed in this dialog box. Comment can be directly input in the list. The details of script file contents are shown below this list. | <input type="radio"/> | × |
| Browse | Registers the selected script. | <input type="radio"/> | × |
| Convert Path*1 | Changes the path name of the selected script file. Click on <input type="button" value="Convert Path"/> button to specify the path name to be changed. | <input type="radio"/> | × |
| Syntax Check | Checks the validity of the syntax for the selected script file or all the registered script files. When an error occurs, the error line No. and its details are displayed. | <input type="radio"/> | × |
| All Check | The applicable device type and device range are also checked.  Section 5.32.4 Message displayed during syntax check | <input type="radio"/> | × |
| Delete | Deletes the selected script file. | <input type="radio"/> | × |
| Edit Script | This is used to open the selected script file by text editor, and then edit the script. Select the text editor type in [Select Script Editor] on the extended tab. | <input type="radio"/> | × |
| Jump | Makes the script set in [Script No.] selectable. | <input type="radio"/> | × |

Refer to the next page for the details of *1.

*1 Convert File Path



| Items | Description | A | F |
|-----------------------|--|-----------------------|---|
| Before | Display the old path name of the script file. | <input type="radio"/> | × |
| After | Clicking on the <input type="button" value="Browse"/> button to specify the path name of the script file after the conversion. | <input type="radio"/> | × |
| Convert the same path | Check this item to convert all the files that have the same path name except for the file to be changed. | <input type="radio"/> | × |



Registered script path name

Register script file into the project data folder of GT Designer2. This will update the script path name automatically when the project data folder is moved to other drive/path, which eliminates the necessity to modify the path name.

5.32.3 Cautions

This section provides the cautions for using script function.

1 Cautions for drawing

- (1) Maximum objects of the script function that is settable on one project/screen
 - 256 objects

- (2) Number of script file that can be registered
 - 32767 files

- (3) When editing script file

GT Designer2 cannot be operated when editing the script file from the text editor by clicking on the **Edit Script** button from the setting dialog box.

Even if GT Designer2 seems to be in freeze status, it can be operated once the text editor is exited.

- (4) Automatically creation of script file

If the project, in which script function has been set, is used and there is no script file in the set path, GT Designer2 will create the script file automatically.

The auto-created script file can be confirmed from the project tab and [Edit Script] dialog box within the screen tab.

To change path, select the copied script file in [Edit Script] dialog box after the script is copied to the intended path.

For details of [Edit Script] dialog box, refer to the following.

 Section 5.32.2 **1** *1 Edit Script

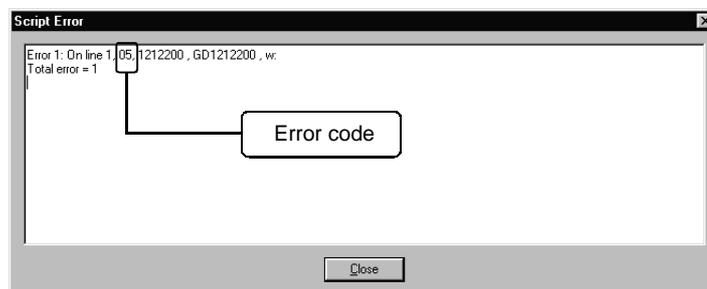
5.32.4 Message displayed during syntax check

1 The dialog box displayed during syntax check

The following dialog box will be displayed during syntax check.

If there is an error in script, the error code will be displayed in the dialog box.

When the error code is displayed, refer to **2** Error code list for the troubleshooting.



2 Error code list

The following list provides the error codes that may be displayed in the script error dialog box.

| Error code | Error occurrence causes |
|------------|--|
| 0 | The configuration error of script |
| 1 | The address of device is not an even number |
| 2 | Extended file register (ER) setting error (inter-block settings) |
| 3 | Word access of bit device |
| 4 | Out of the range of device No. (displayed in HEX. number) |
| 5 | Out of the range of device No. (displayed in DEC. number) |
| 6 | Out of the range of device No. (displayed in OCT. number address) |
| 7 | The setting is not executed with the multiple of 16 when specifying the bit device word. |
| 8 | The setting is not within the range of 0 to 15 when specifying word device bit. |
| 9 | The set device is out of the range or does not exist. |
| 11 | Out of the range of device No. |
| 14 | Access to the device disabling bit accessibility by using bit. |
| 15 | Access to the device disabling word accessibility by using bit. |
| 16 | Octal device are set with odd number. |
| 17 | The setting is not executed with the multiple of 16 when specifying the bit device word. |
| 20 | The specified CPU does not exist. |
| 21 | The specified Word type does not exist. |
| 22 | A CPU not included with network settings has been specified. |
| 25 | No expression exit between {and} |
| 26 | The operator type of expressions table flow |
| 27 | Control type table flow |
| 28 | The switch statement includes no "case". |
| 29 | "Default" exist although there is no switch statement. |
| 30 | There are multiple "default" settings in switch statements. |
| 31 | There are too many switch "case" statements. |
| 32 | There are too many "switch break" statements. |
| 33 | Switch nest is deep. |
| 34 | System memory is insufficient. |
| 35 | Parenthesis nest is deep |
| 36 | Regarded as invalid statement. |
| 37 | No semicolon |
| 38 | There are invalid characters. |
| 39 | File input is not specified. |
| 40 | The specified input file does not exist. |
| 41 | The nest of if/while is deep. |
| 45 | The CPU incompatible with multi-CPU is specified as multi-CPU. |
| 46 | The multi-specified station No. is incorrect. |
| 47 | Network specification or station No. specification is incorrect. |
| 48 | Set network in GOT internal devices. |
| 101 | No closed parenthesis. |
| 111 | The bit device is specified for the device with indirect specification. |



5.33 Set Overlay Screen Function

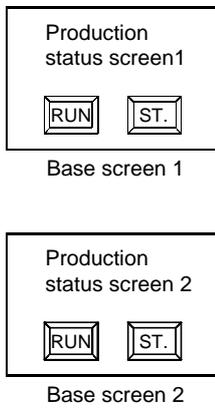


Other base screens or window screens can be called on the base screen and displayed as a single screen by using this function.

Setting the same objects onto multiple screens can save memory capacity.

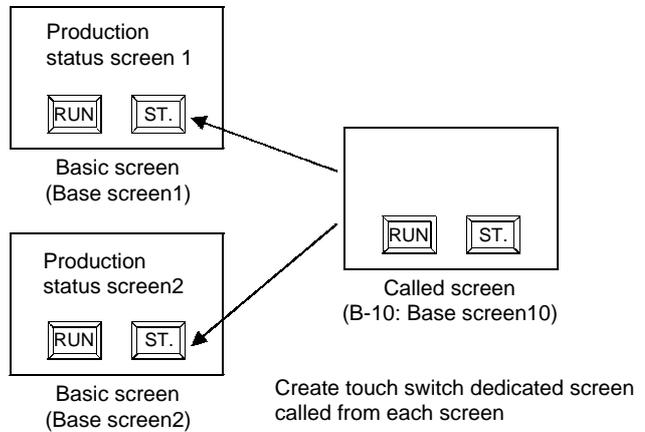
<When not using the set overlay screen function>

Set four touch switches. (2 on production status screen1 and 2 on production status screen2)



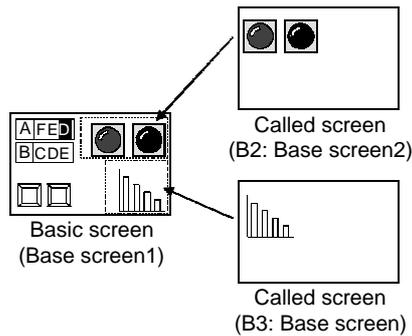
<When using set overlay screen function>

Set two touch switches. (2 on the set overlay screen)
Touch switch setting is not required for production status screen1 and 2 because these touch switches have already been registered on the called screen.



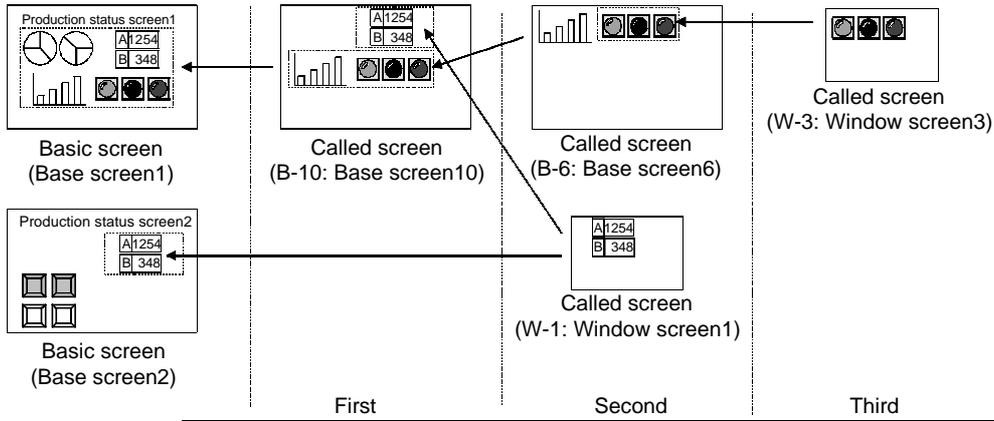
1 Multiple called screens can be displayed

Multiple called screens can be displayed on one basic screen.



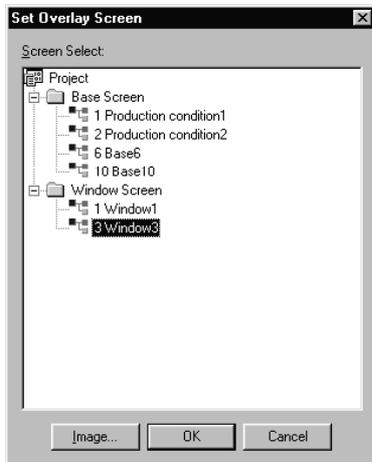
2 Up to the 16th nesting can be called (specific for GOT-A900 series)

As up to the 16th nesting can be set, screen setting with high flexibility can be realized.

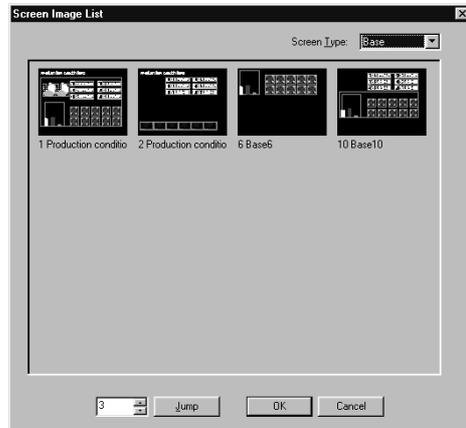


5.33.1 Arrangement and settings

- 1 Activate the basic screen.
- 2 Select [Object] → [Set Overlay Screen] from the menu.
- 3 In the Set Overlay Screen dialog box, select the screens to call up and click on the [OK] button. (Click on the [Image] button to display the Screen Image List dialog box.)

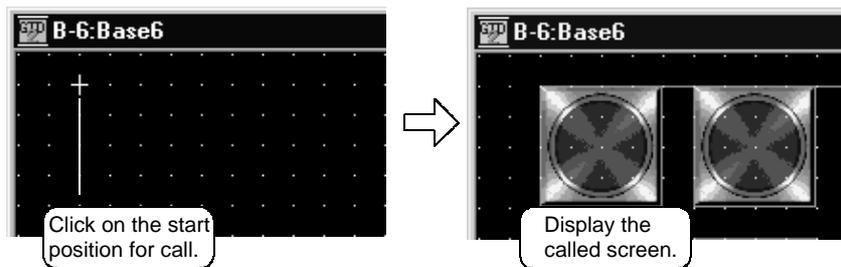


Set Overlay List



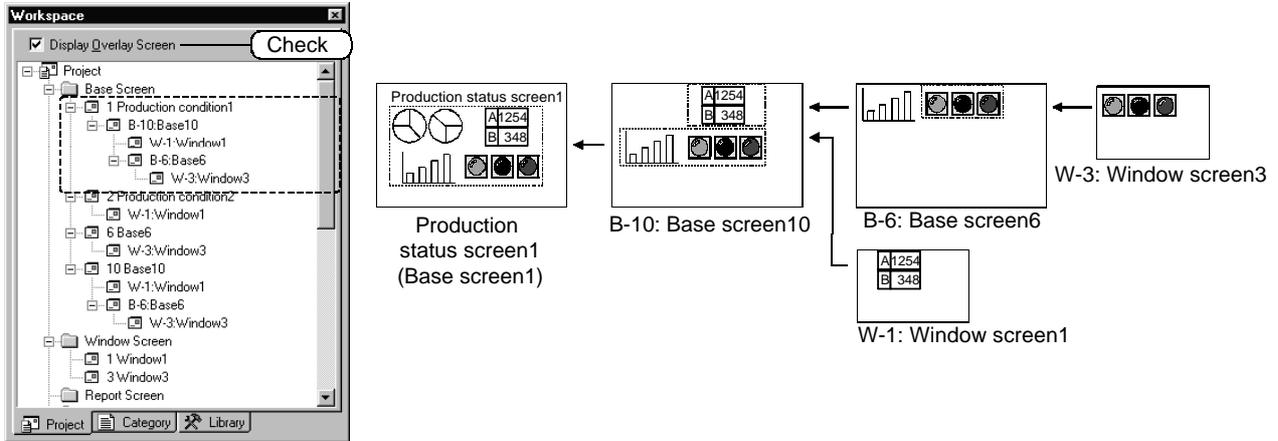
Screen Image List

- 4 Arrange the called screen on the basic screen. (It will be arranged in the front for GOT-F900 series.)



5.33.2 Check of the settings

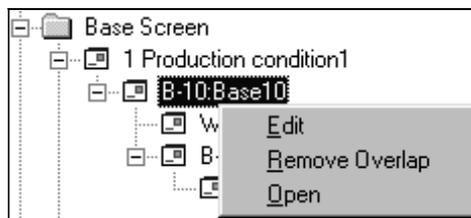
The setting details of the call function can be checked in the project work space.



| Items | Description | A | F |
|--------------------|--|-----------------------|----------------------------------|
| Set Overlay Screen | <p>Check this item to display the setting of the set overlay screen.</p> <p>When this is set, the called screen names will be displayed in a tree structure.</p> <p>Click on <input type="checkbox"/>+ or <input type="checkbox"/>- to display or hide the called screen of the lower level.</p> <p>Right click on the called screen name to display the right-click menu*1.</p> <p>When the screen name is enclosed with "<>", the set overlay screen is set as a functional loop; therefore any screens after this point will not be called.</p> | <input type="radio"/> | <input checked="" type="radio"/> |

*1 Right-click menu

The following table explains the menu items displayed when right clicking the called screen name.



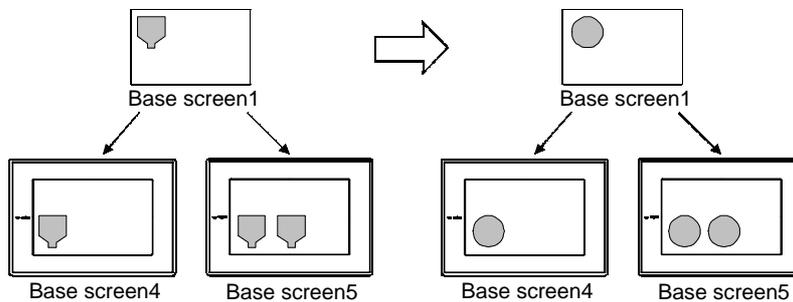
| Items | Description | A | F |
|----------------|--|-----------------------|-----------------------|
| Edit | The setting of set overlay screen can be changed in the Set Overlay Screen dialog box. | <input type="radio"/> | <input type="radio"/> |
| Remove Overlay | Deletes the setting of the Set Overlay Screen. | <input type="radio"/> | <input type="radio"/> |
| Open | Opens the screen. | <input type="radio"/> | <input type="radio"/> |

5.33.3 Cautions

This section provides the cautions for using the set overlay screen function.

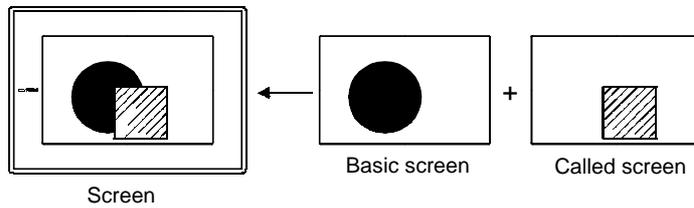
1 Caution for drawing

- (1) Screen that can be called
GOT-A900 series: Base screen, window screen
GOT-F900 series: Base screen
- (2) Maximum number of called screens (The number of screens that can be called and displayed on the basic screen)
GOT-A900 series: 2047 screens
GOT-F900 series: 5 screens
- (3) Maximum nesting number (nesting of further call to the called screen)
GOT-A900 series: 16 (Not including the basic screen)
GOT-F900 series: Nesting is not available.
- (4) Edit of called screen
 - (a) The called screen cannot be edited on the basic screen.
Edit must be done on the called screen.
 - (b) Once the called screen is edited, it will be reflected to all of the basic screens where the edited screen is called.



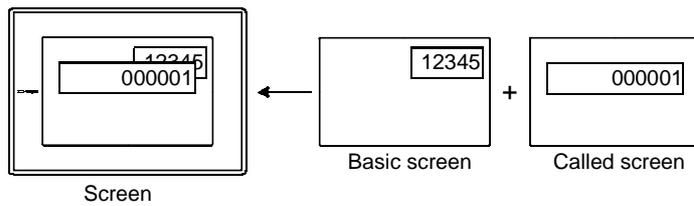
(5) When cascading shapes and objects
GOT-A900 series

Figure data



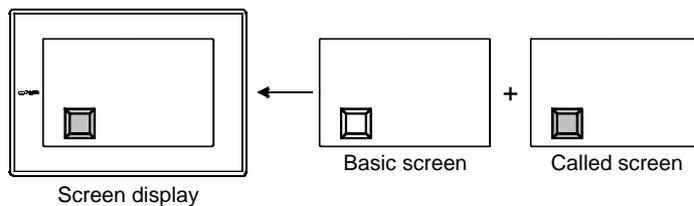
The figure of called screen is displayed in the front.

Object data



Among the objects of basic screen and called screen, the one whose value is changed will be displayed in the front.

Touch switch



Initially, the touch switch corresponding to the latest screen will be displayed in the front.
After, the screen where touch switch trigger has changed will be displayed.

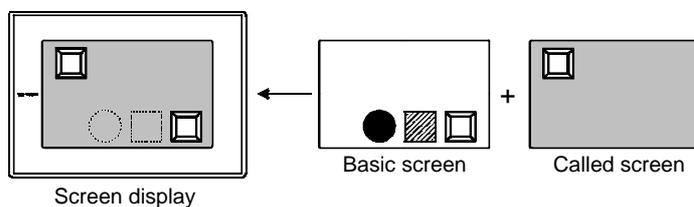
The touch switches on the called screen has different validity of display and action according to the number of called screens and their overlapping state.
(Even if the touch switch is displayed in the front, it may not function properly.)

 This section (9) Touch switch operation

Screen background

The background color of the called screen will be displayed in the front.

When the background color and the basic screen shape color are overlapped, the shape will not be displayed.



The shape of basic screen will not be displayed



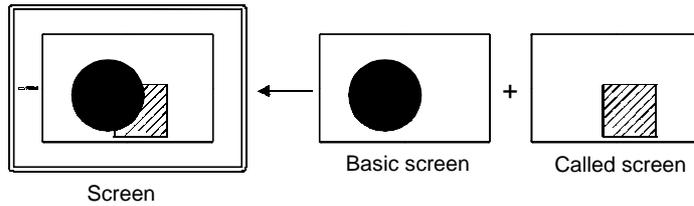
In GT Designer2, even if the background color is set to the called screen, it will not be displayed on the basic screen

Also, it will not be displayed in GT Designer preview.

To check the called screen's background color, use GT Simulator2 or GOT.

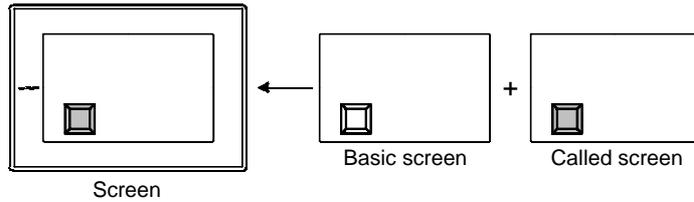
GOT-F900 series

Figure



The figure of called screen is displayed at the back.

Touch switch



Touch switch of called screen is displayed at the back. When touch switches are overlapped, only the touch switch of basic screen will function by touching.

(6) When exclusive objects (which only one setting is allowed per each screen) are overlapped Do not cascade such objects created by the data list function and the alarm history function. Otherwise, the set numbers of objects are displayed, however, they cannot be displayed correctly because of the function restrictions.

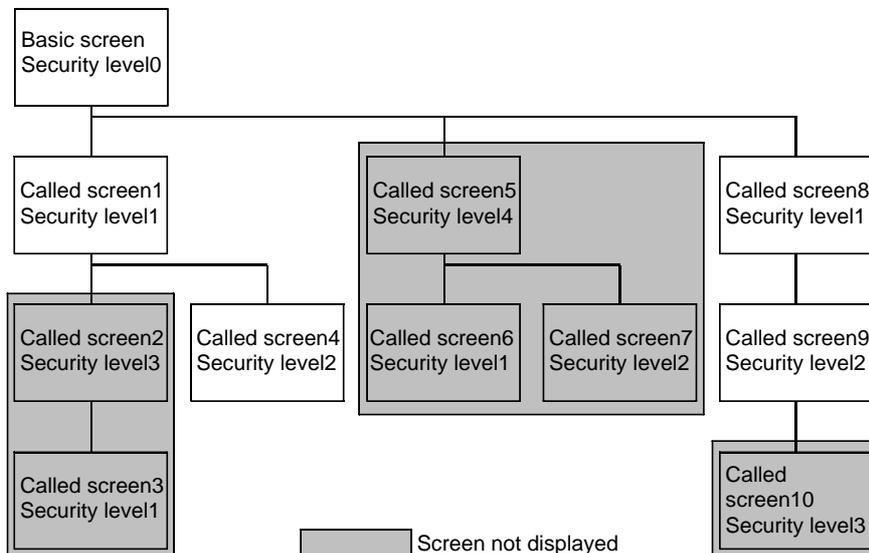
(7) Display/hide called screen according to the security level and nesting of called screen (GOT-A900 series only)

The security level set in each called screen is valid.

The cautions for security setting in each called screen are as follows.

- (a) The called screen will not be displayed when the security level of the called screen is higher than that of the password input on the basic screen.
- (b) The screen display using the nesting structure cannot be called from the screen with security settings enabled.
- (c) The status observation function and the script function set to the called screen that is not displayed cannot be executed.

(Example) Called screens that can be displayed by password of security level2



(8) Displaying order for calling multiple screens (specific for GOT-A900 series)

When multiple called screens have been set on one screen, they are displayed in the order of setting in GT Designer2 or called screen nesting.

Since the current screen is displayed on the previous screen, the screen with the lowest order will be displayed in the front most.

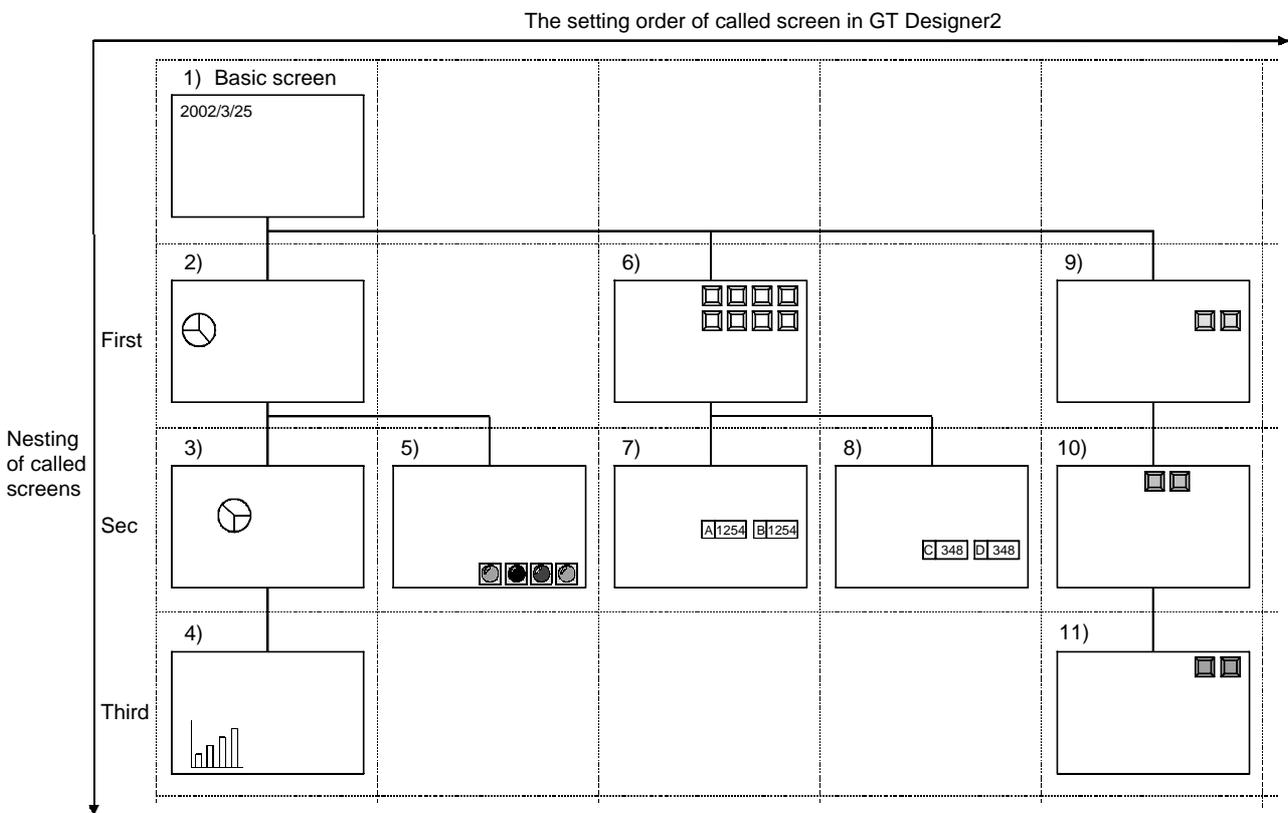
- Precedence for display priority

1. When multiple called screens are set, they are displayed in the order set in GT Designer2.

2. For called screens that have been nested, the screen with deeper nesting will be displayed in the front most.

3. If the above conditions 1 and 2 are both applied, priority is given to the nested called screen.

Example: When setting multiple called screens including nested called screens (1) to 11): Display order)



(1) Security function, status observation function and script function of called screen

The security function, status observation function and script function set for each called screen are processed in the same order as the called screen display.

(2) Check methods of nesting and setting order

Nesting can be checked in the project workspace.



Section 5.33.2 Check of the settings

The set order can be checked in the data view. (Data are displayed in the order of setting in the data view.)

Refer to the following manual for the data view.

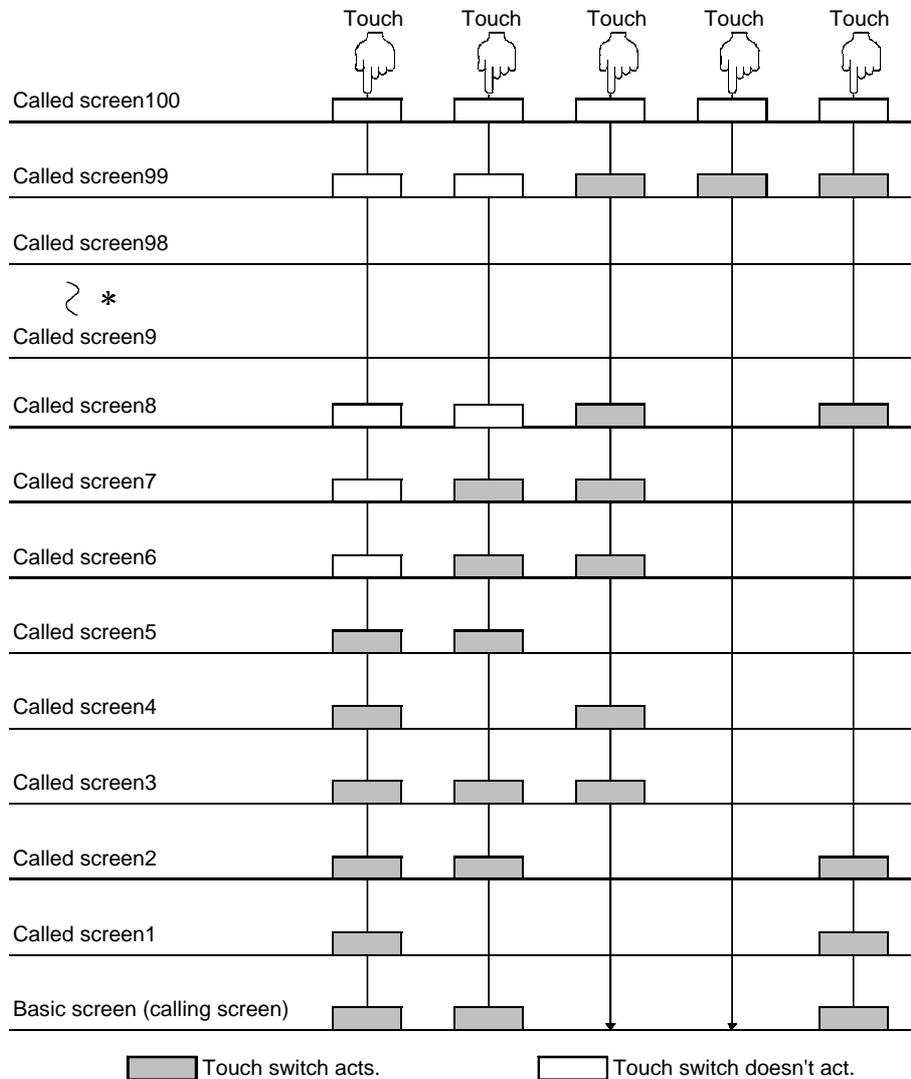


GT Designer2 Version1 Operating Manual

(9) Touch switch operation

When screens are called up to the same screen, operable touch switches are those set on called screen 1 to 99. (The touch switches set on called screen later than 100*1 are not available.)

Note that, when touch switches are overlapped, up to touch switches on the sixth screen from the basic screen will function.



*1: The called screen number of GOT-F900 series is 1 to 5.

*2: Indicates no overlapping of touch switches are observed in the called screens 9 to 98.

- When touch switches of different called screens are overlapping one another, the upper most touch switch will be executed. Therefore, touching it in short time may not be enough to activate all of them. (Make an appropriate setting such as lamp display so that a lamp will light up when the touch switch on the bottom is activated.)
- If the simultaneous press keys are overlapping one another, then they will not be functioning, even if the upper most key is touched.

Remark

Touch switch overlapping

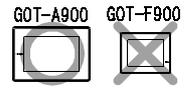
Multiple actions can be set for one touch switch even if the set overlay function is not used.



Section 5.3 State Setting



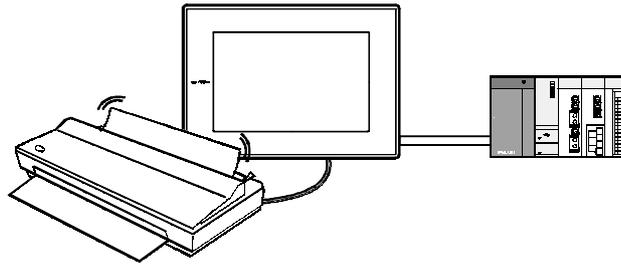
5.34 Report Function



It is the function that collects and prints the data of production management and status. Following information can be printed with this function.

- Word device value
- Comment corresponding to the device status

| Line | Operation status | Production volume |
|------|------------------|-------------------|
| MC-1 | RUN | 10 |
| | RUN | 20 |
| MC-2 | RUN | 60 |
| | RUN | 80 |
| MC-1 | HALT | 10 |
| | RUN | 80 |
| | RUN | 90 |



Comment corresponding to device status Word device value



Remark

Comment to be printed

The comment must be registered in advance



Section 4.1 Comment Registration

Select the timing for printing the collected data from the following two options.

1 Real/Cont

The data are printed as soon as they are collected.

It is selectable whether to print on the changed (next) page or not.

2 Log/Page

Data collection timing and print timing can be specified. This function collects and prints data at the specified timing.

The collected data are stored in PC card. The stored data will be printed based on the change page setting at the specified timing.



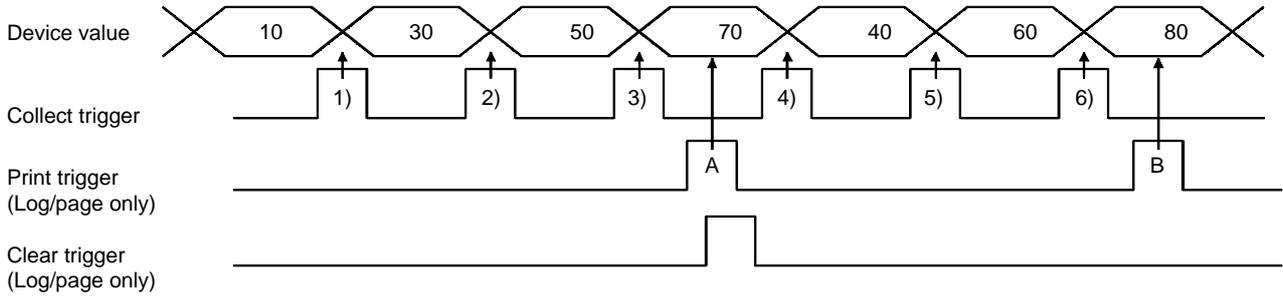
Point

When using Log/Page

PC card is required for using [Log/Page].

3 [Real/Cont] and [Log/Page]

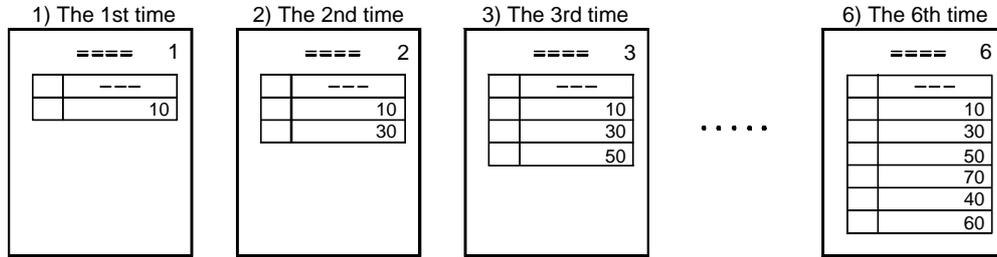
Following shows the comparison between operations of [Real/Cont] and [Log/Page] settings.



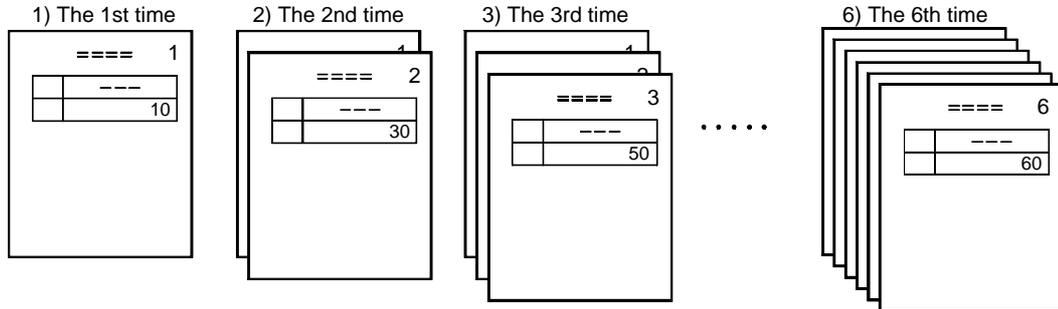
Real/Cont

Data are printed at each collect trigger.

Change page: Never



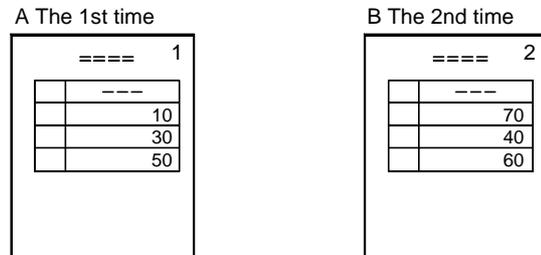
Change page: Done



Log/Page

Data stored in PC card are printed at each print trigger.

Those data are deleted at each delete trigger.



Print the remained data after clearing the collected data with clear trigger.

5.34.1 Arrangement and settings

1 Print format

Create the print format on the report screen. Up to 8 formats (8 screens) can be registered. This section provides the general procedure for print format setting.

1 Create report screen (☞ Section 5.34.2 Report screen creation (screen properties))

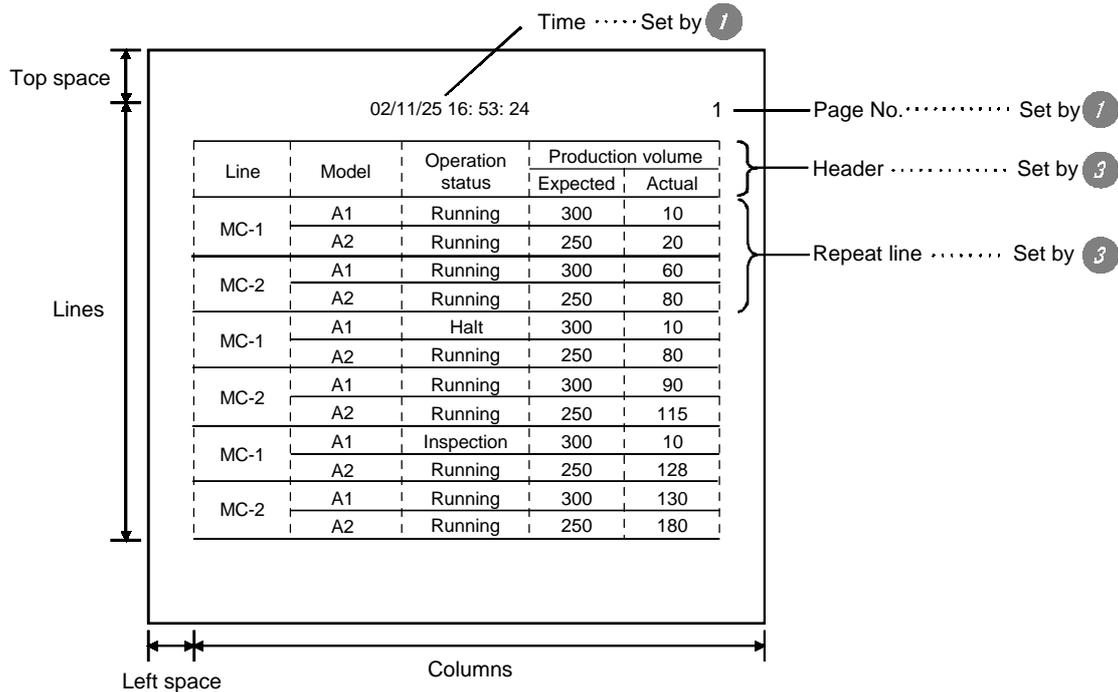
Create a report screen and make the report function settings on that screen.

| Screen property dialog box setting | | Real/Cont | Log/Page |
|------------------------------------|---|-----------|----------|
| Basic tab | Screen No., title etc. | ○ | ○ |
| Type/Trigger tab | Report style (Real/Cont/Log/Page) Collect trigger, Print trigger, Page No., Time | ○ | ○ |
| Logging tab | Method of storing data to PC card, Print operation, Delete trigger | — | ○ |

○: Required —: Not required

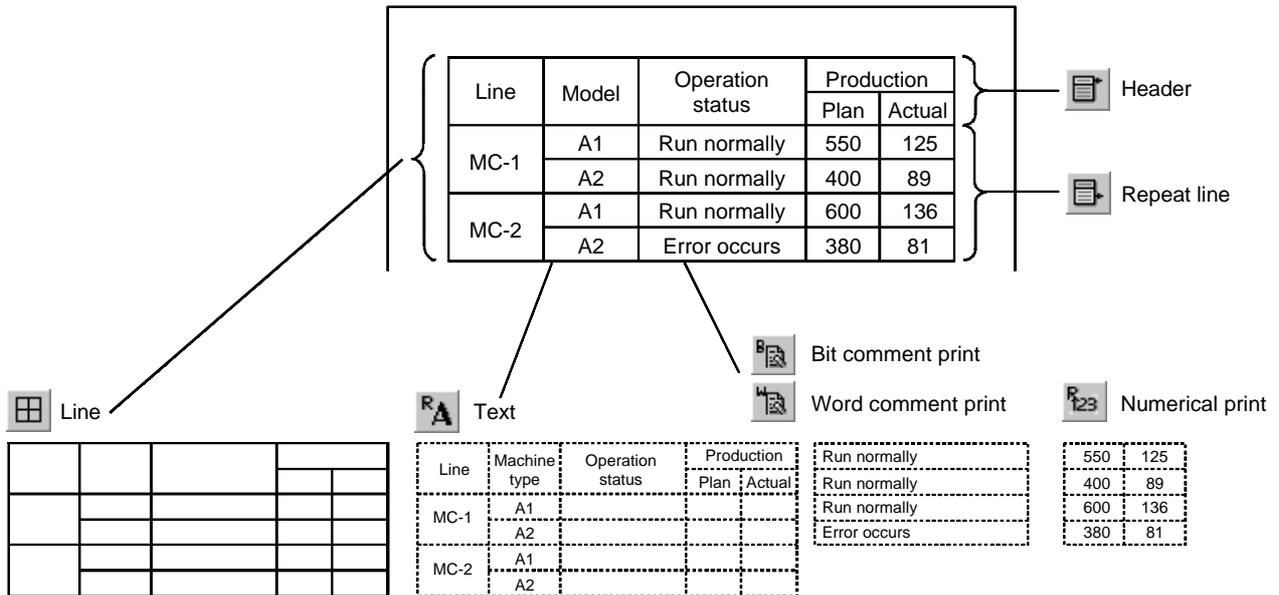
2 Set print range (☞ Section 5.34.3 Setting common to each report (report setting))

Set on the report setting dialog box the number of lines and columns, margin, according to the printable area of the printer to be used.



3 Set print layout ( Section 5.34.4 Print layout setting)

Open the created report screen to set the print layout.



-  Line Used to draw a report table.  Section 5.34.4 2
-  Text Used to draw fixed texts in the table.  Section 5.34.4 3
-  Numerical print Used to arrange the object that prints the word device value.  Section 5.34.4 4
-  Bit comment print Used to arrange the comment to be changed according to the ON/OFF status of bit device.  Section 5.34.4 5
-  Word comment print Used to arrange the comment to be changed according to word device value.  Section 5.34.4 6
-  Header Used to set the header part of the report table.  Section 5.34.4 7
-  Repeat line Used to set the part to be repeatedly printed in the report table.  Section 5.34.4 7

 **Hint!**

Edit of created report screen

As the base screen, the created report screen can be copied and deleted for each screen.

Refer to the following manual for screen editing operation.

 GT Designer2 Version1 Operating Manual

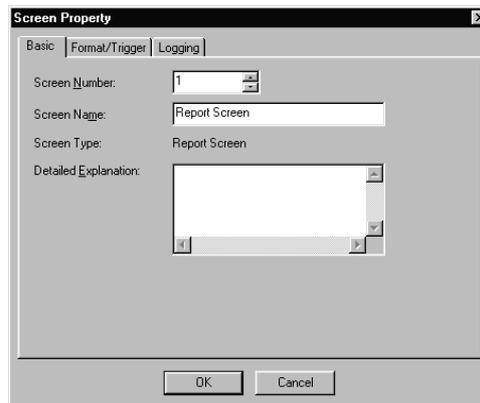
5.34.2 Report screen creation (screen properties)

This section explains how to create a report screen.

- 1 Select [Screen] → [New Screen] → [Report Screen] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.
- 3 Click on button to display the set report screen.

1 Basic tab

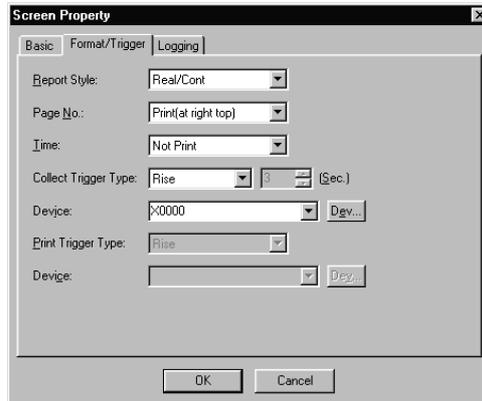
Set the screen No. and screen name.



| Items | Description | A | F |
|----------------------|---|-----------------------|-----------------------|
| Screen Number | Select the report screen No. | <input type="radio"/> | <input type="radio"/> |
| Screen Name | Enter the title of report screen as necessary. Up to 32 characters can be entered. | <input type="radio"/> | <input type="radio"/> |
| Detailed Explanation | Enter the explanation of the newly created report as necessary. Up to 512 characters can be entered. | <input type="radio"/> | <input type="radio"/> |

2 Format/Trigger tab

Select the report style (Real/Cont and Log/Page) to set collect trigger and print trigger.



| Items | Description | A | F |
|-------------------------|--|-----------------------|---|
| Report Style | Select the report style (Real/Cont and Log/Page). | <input type="radio"/> | × |
| Page No. | Select whether to print page No. (upper right) on the paper. | <input type="radio"/> | × |
| Time *1 | Select whether to print time (at upper center/upper left/upper right). Time is displayed using the format of yy(year)/mm(month)/dd(day)/hh(hour): mm(minute): sec(second). 02/11/24 17: 38: 04 (fixed 17 digits) └ Space | <input type="radio"/> | × |
| Collect Trigger Type *2 | Select the timing to collect data. Rise : Collect when the bit device turns ON. Fall : Collect when the bit device turns OFF. Sampling : Collect at a fixed interval and store the data into PC card. Then, set the data sampling (data collecting) interval (3 to 3600 sec.). This setting is available only when report style is set as [Log/Page]. Set the bit device to be collect trigger when [Rise] or [Fall] is selected. (Section 5.1 Device Setting) | <input type="radio"/> | × |
| Print Trigger Type *2 | Select the timing to print the data stored in PC card. This setting is available only when report style is set as [Log/Page]. Rise : Print when the bit device turns ON. Fall : Print when the bit device turns OFF. Then, set the bit device to be print trigger. (Section 5.1 Device Setting) | <input type="radio"/> | × |

*1 Time printing

Time printing may be unavailable according to the connection method or the PLC CPU.

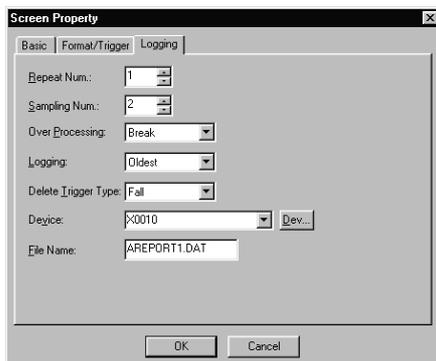
(Section 2.4 Clock Function)

*2 Devices to be set as collect trigger or print trigger

Make sure to set different devices as collect trigger or print trigger for each report screen.

3 Logging tab

Make the setting of report style [Log/Page] (method of storing data to PC card, print action).



| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|-----------------------|-------------------------------------|--------------|-----------|--|-----------|--------------|-----------|--|-----------|--------------|-----------|--|-----------|-----------------|--|------|------|--------|----|--------|----|--------|----|--------|----|--------|----|--------|----|-----------------------|-------------------------------------|
| Repeat Num. | <p>Set the number of times (0 to 499) for repeated printing. Repeat line can be set in report screen. (☞ Section 5.34.4 Print layout setting) When printing all the data stored in PC card, set the number, that is the result of subtracting 1 from [Sampling Num.], to [Repeat Num.]. Example) when the settings are [Sampling Num.: 3] and [Repeat Num.: 2]</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>PC card</p> <table border="1" style="margin: 5px;"> <tr><td colspan="2">Collect data</td></tr> <tr><td>1st sampling</td><td>Line 1 10</td></tr> <tr><td></td><td>Line 2 50</td></tr> <tr><td>2nd sampling</td><td>Line 1 15</td></tr> <tr><td></td><td>Line 2 82</td></tr> <tr><td>3rd sampling</td><td>Line 1 20</td></tr> <tr><td></td><td>Line 2 78</td></tr> </table> <p>Sampling times: 3</p> </div> <div style="text-align: center;"> <p>Print result</p> <table border="1" style="margin: 5px;"> <tr><td colspan="2">Production list</td></tr> <tr><td>Line</td><td>Vol.</td></tr> <tr><td>Line 1</td><td>10</td></tr> <tr><td>Line 2</td><td>50</td></tr> <tr><td>Line 1</td><td>15</td></tr> <tr><td>Line 2</td><td>82</td></tr> <tr><td>Line 1</td><td>20</td></tr> <tr><td>Line 2</td><td>78</td></tr> </table> <p>Print repeat lines and repeat times (2 lines)</p> </div> </div> <p style="text-align: center;">Repeated times: 2</p> | Collect data | | 1st sampling | Line 1 10 | | Line 2 50 | 2nd sampling | Line 1 15 | | Line 2 82 | 3rd sampling | Line 1 20 | | Line 2 78 | Production list | | Line | Vol. | Line 1 | 10 | Line 2 | 50 | Line 1 | 15 | Line 2 | 82 | Line 1 | 20 | Line 2 | 78 | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Collect data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1st sampling | Line 1 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Line 2 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2nd sampling | Line 1 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Line 2 82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3rd sampling | Line 1 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Line 2 78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production list | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line | Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 2 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 1 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 2 | 82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 1 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line 2 | 78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampling Num. | <p>Set the number of times (1 to 500) to collect data. Make settings according to capacity of the PC card. (☞ Section 2.3 Specifications of Available Object Functions)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Over Processing | <p>Select the processing method when sampling data was executed more than the number of times set in [Sampling Num.].</p> <p>Overwrite : Continue the sampling and overwrite the data in the order collected (sampled). Break : Interrupt the data sampling. When restarting data sampling, clear all the data stored in PC card by clear trigger.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging | <p>Select the order of printing the data stored in PC card.</p> <p>Oldest : Print from the oldest data. Latest : Print from the latest data.</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Delete Trigger Type | <p>Select the timing to delete all the data stored in PC card.</p> <p>Rise : Delete when bit device turns ON. Fall : Delete when bit device turns OFF. Power ON : Delete when GOT starts. Print : Delete after printing.</p> <p>Set the bit device as clear trigger when [Rise] or [Fall] is selected. (☞ Section 5.1 Device Setting)</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| File Name | <p>Enter the file name of collected data to be stored in PC card. Files can be created on each report screen. Name the file using alphabets (upper case) and/or numerals (0 to 9). Example) AREPORT.DAT [Name (up to 8 characters). Extension (up to 3 characters)]</p> | <input type="radio"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

5.34.3 Setting common to each report (report setting)

Set the common information of report function.

The setting items are common to all the report screens.

- 1 Select [Common] → [Report Settings] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.
- 3 Click on button to complete the setting of report function.



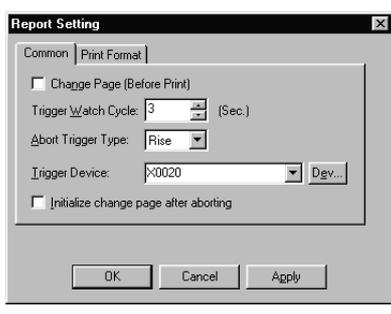
Remark

When making the setting on the project work space

The setting dialog box can be displayed by double-clicking on  in the project workspace.

1 Common tab

Set the trigger watch cycle; abort trigger type and action for changing page during printing.



| Items | Description | A | F |
|-----------------------------------|---|---|---|
| <p>Change Page (Before Print)</p> | <p>Check this item in order that change page will be always executed before printing when [Real/Cont] is set. Otherwise, change page print will not be executed after printing each object function (report function, alarm history function and hardcopy function etc.) This setting is not relevant to [Log/Page], change page is always executed before printing.</p> <p>Checked</p> <p>Print report on the changed (next) page.</p> <p>Hard copy print</p> <p>Not checked</p> <p>Print report without changing the page.</p> <p>Hardcopy print</p> | ○ | × |
| <p>Trigger Watch Cycle</p> | <p>Set the cycle for GOT to monitor the device ON/OFF status that has been set in each trigger (collect trigger/abort trigger/print trigger/delete trigger).</p> <p>Make the settings in order that the device set for each trigger will keep the ON/OFF status longer than the period set by trigger watch cycle.</p> <p>GOT may not recognize the device ON/OFF status, if the period of device ON/OFF is shorter than the trigger sampling.</p> <p>Bit device of collect trigger (trigger action: Rise)</p> <p>Trigger watch cycle (3s)</p> <p>Unrecognized (OFF → OFF)</p> <p>Recognized (OFF → ON)</p> <p>Unrecognized (OFF → OFF)</p> <p>Recognized (OFF → OFF)</p> | ○ | × |

| Items | Description | A | F |
|--|---|---|---|
| Abort Trigger Type | <p>Select the method of interrupting the printing operation.</p> <p>Rise : Interrupt printing when the set device turns ON.</p> <p>Fall : Interrupt printing when the set device turns OFF.</p> <p>None : Abort trigger is not set.</p> <p>After selecting, set the device to be trigger.</p> <p>( Section 5.1 Device Setting)</p> | ○ | × |
| Initialize change page after aborting *1 | <p>Check this item to clear the print lines counted by GOT.</p> <p>Check this item to restart printing from the changed (next) page after printing operation is interrupted once.</p> <p>It is unnecessary to check this item to continue printing from the interrupted position.</p> <p>This setting is invalid if the following setting is made.</p> <ul style="list-style-type: none"> ● When [Change Page (Before Print)] in report setting dialog box is checked ( Section 5.34.2 Report screen creation (screen properties)) ● When report style [Log/Page] in the screen property dialog box is checked ( Section 5.34.3 Setting common to each report (report setting)) | ○ | × |

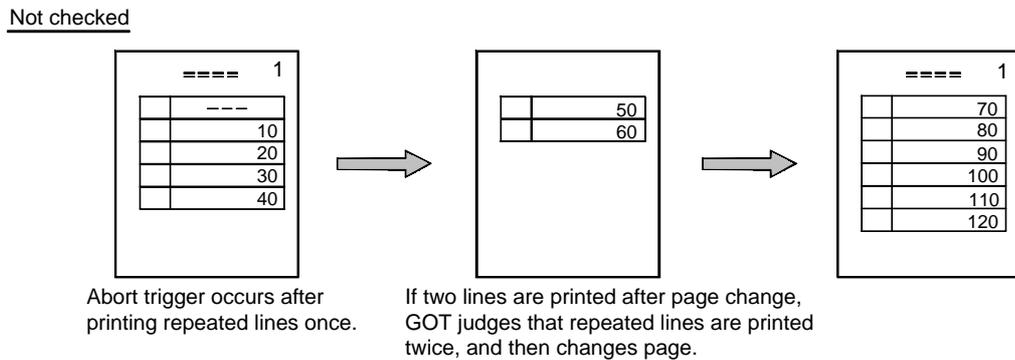
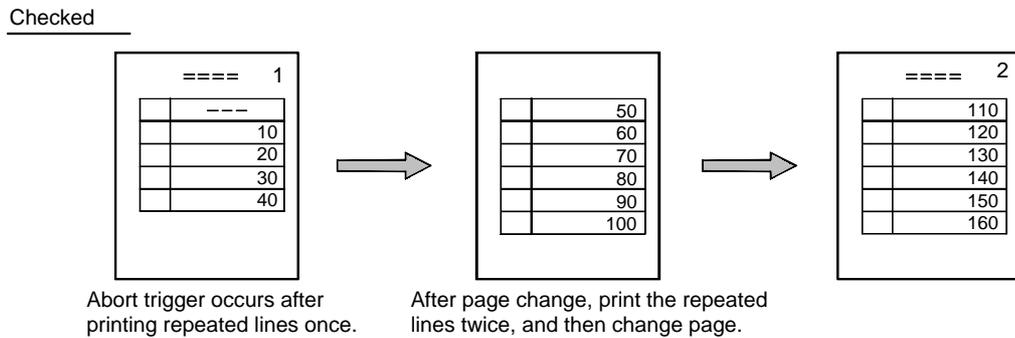
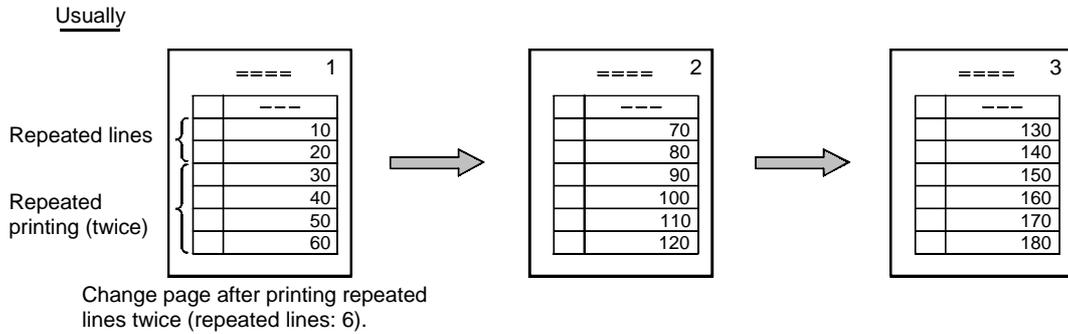
Refer to the next page for the details of *1.

*1 Initialize change page after aborting (Effective example when report print is interrupted)

When printing operation is interrupted once, and then printing is started from the changed (next) page, the print line shift can be avoided by checking [Initialize change page after aborting] in advance.

Example) Operation example after interrupting report print

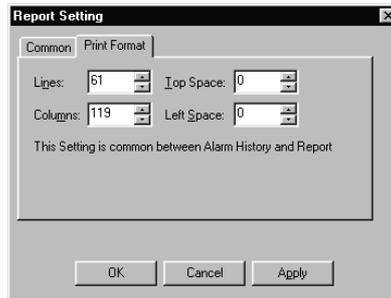
Number of first print lines : 2
 Repeated frequency : Twice



2 Print Format tab

Set print format (number of lines and columns, top margin, left margin), according to the printable area of the printer.

This setting defines the size of created report screen.



| Items | Description | A | F |
|------------------------------------|---|---|---|
| Lines/Columns/Top Space/Left Space | <p>Set the number of lines (1 to 127) and columns (1 to 255), and the space for the top (the number of lines) and the left (the number of characters) of the printout.</p> <p>Print area</p> <p>Print sheet</p> | ○ | × |



Print format setting

Refer to the following for the methods to calculate the width (number of columns + maximum set value of left margin) and length (Number of lines + maximum set value of top margin) based on the printable area of the printer.



Section 3.6 Print Format Setting

5.34.4 Print layout setting

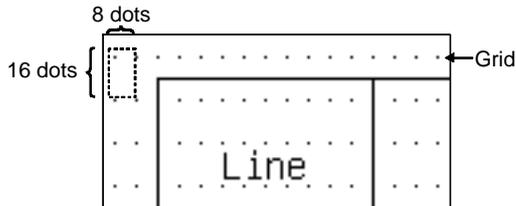
Arrange figures and objects to be printed on the created report screen.

1 Before creating report screen

Arrange figures and objects on report screen based on grid.

Grid : Displayed in the fixed unit of 16 dots (vertical) x 8 dots (horizontal).

Space between figures/objects : Arranged in the unit of 16 dots (vertical) and 8 dots (horizontal).



Hint!

(1) Grid display

Set the grid color as black when the grid is indistinct.

Grid color can be changed on the [View] tab in [Preferences] dialog box (Select [Project] → [Preferences] from the menu).

(2) Arrange the figures and objects to be printed

By using toolbar, report screen can be created more efficiently.

Report function toolbar can be displayed in [Toolbars] of [Preferences] dialog box (Select [Project] → [Preferences] from the menu).

2 Draw lines and quadrangle

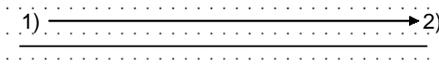
(1) Drawing method

1 Carry out either of the following operations.

- Click on  (Line)
- Select [Shape] → [Line] from the menu.

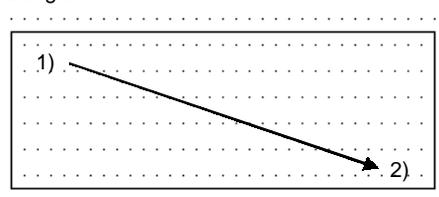
2 Drag from the starting point (1)) to the end point (2)) of line/quadrangle, release the left key on mouse, and line/ quadrangle will be displayed.

Draw line



Draw by dragging from starting point vertically/horizontally.

Draw quadrangle



Draw by dragging from starting point sideways.



Point!

Arranging the line/quadrangle

Make sure not arrange text and line/quadrangle in order they will overlap.

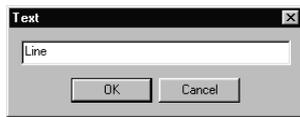
(2) Cautions

- (a) Line attributes cannot be changed. (Style: Full line, Width; 1 dot, Color: Black)
- (b) Vertical line will be printed as broken line.

3 Text arrangement

(1) Arrangement method

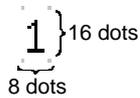
- 1 Carry out either of the following operations.
 - Click on  (text)
 - Select [Shape] → [Text] from the menu.
- 2 Click on the position to arrange text.
- 3 As [Text] dialog box will appear, enter text there.



- 4 Click on  button, and the entered text will be arranged in the screen.

(2) Cautions

- (a) Page change cannot be done for text arranged on report screen.
- (b) Text attributes (style, text color, etc.) cannot be changed.
- (c) Character is displayed in the unit of 16 × 8 dots.



- (d) Up to 255 characters can be printed. (When [Columns] is set to the maximum value)

4 Numerical print arrangement

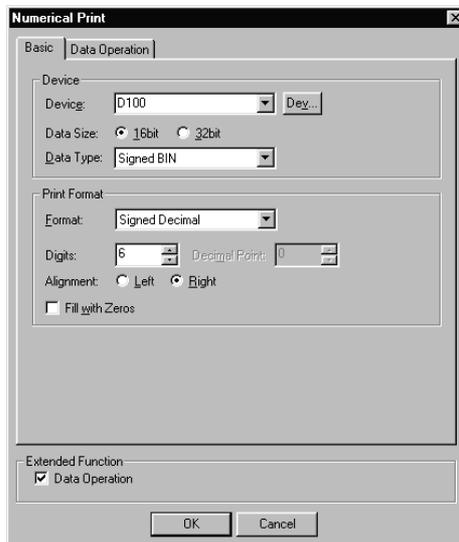
(1) Arrangement method

- 1 Carry out either of the following operations
 - Click on the  (Numerical print)
 - Select [Object] → [Numerical Print] from the menu
- 2 Click on the position to arrange numerical print object.
- 3 Double click on the arranged numerical print object to display [Numerical Print] dialog box. Make settings with the reference to the following explanation.

(2) Numerical print dialog box

(a) Basic tab

Set the print format and the device for printing value.



| Items | | Description | A | F |
|--------------|-----------|---|-----------------------|-------------------------------------|
| Device | Device | Set the word device for printing device value. ( Section 5.1 Device Setting) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Size | Select the data size (16 bits/32 bits) of the word device for printing. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data Type | Select the data type of device. Signed BIN: Treats word device value as a signed binary value. Unsigned BIN: Treats word device value as an unsigned binary value. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Print Format | Format | Select the print format of word device for printing. Signed Decimal : Print the value in signed decimal. Unsigned Decimal : Print the value in unsigned decimal. Real : Print the value in floating point type real. Binary : Print the value in binary. Hexadecimal : Print the value in hexadecimal. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Digits | Set the number of digits for numeric value to be printed. The following are the number of digits that can be set in [Form]. Real : 1 to 32 digits (minus (—), decimal point and decimal part are included) Hexadecimal : 1 to 8 digits Binary : 1 to 32 digits Unsigned Decimal : 1 to 13 digits (minus (—) is included) | <input type="radio"/> | <input checked="" type="checkbox"/> |

| Items | | Description | A | F |
|--------------|-----------------|--|-----------------------|---|
| Print Format | Decimal Point | When REAL is selected in [Print Format], set the number of digits (1 to 32) for the decimal part. | <input type="radio"/> | × |
| | Alignment | Select how to align objects within the print area. Left Alignment : Align to the left of the print area. Right Alignment : Align to the right of the print area. | <input type="radio"/> | × |
| | Fill with Zeros | When [Right Alignment] is selected in [Alignment] and displaying zeros on the left to the numeric value is needed, check this item. Example (In the case of five digits) <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px dashed black; padding: 2px;">5</div> <p>Zero not suppressed</p> </div> <div style="text-align: center;"> <div style="border: 1px dashed black; padding: 2px;">00005</div> <p>Zero suppressed</p> </div> </div> | <input type="radio"/> | × |

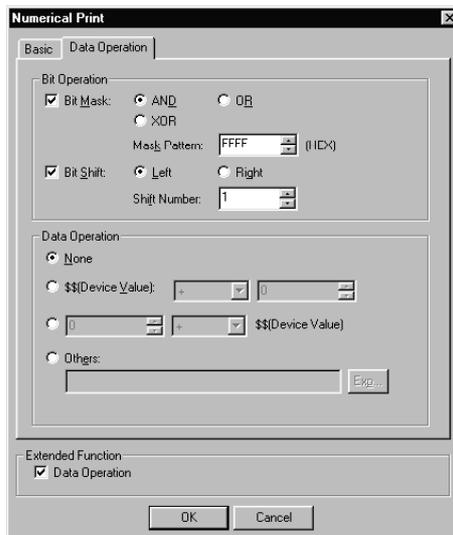
(b) Data Operation tab

Operational expression is set on this tab when monitoring the device by operating the device values.

Setting on this tab is displayed by checking the corresponding extended function at the bottom of the dialog box.

For the details of data operation, refer to the following.

Section 5.5 Data Operation Function



| Items | | Description | A | F |
|----------------|-----------|--|-----------------------|---|
| Bit Operation | Bit Mask | Check this item to enable the bit mask operation. Select the bit mask type and set the bit mask pattern value in hexadecimal format. AND : Carries out logical AND. OR : Carries out logical OR. XOR : Carries out exclusive logic OR. | <input type="radio"/> | × |
| | Bit Shift | Check this item to enable the bit shift operation. Select the shift direction and set the number of bits to shift in [Shift Number]. Left : Left shift Right : Right shift | <input type="radio"/> | × |
| Data Operation | | Select an operational expression format for data operation. | <input type="radio"/> | × |

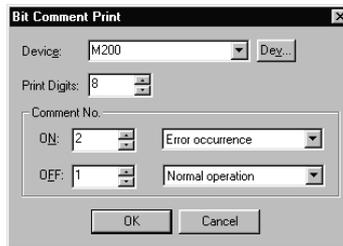
5 Bit comment print arrangement

(1) Arrangement method

- 1 Carry out either of the following operations
 - Click on  (bit comment print)
 - Select the [Object] → [Comment Print] → [Bit Comment] from the menu.
- 2 Click on the position to arrange the comment print object.
- 3 Double click on the arranged comment print object.
- 4 As the setting dialog box will appear, make the settings with reference to the following explanation.

(2) Bit Comment Print dialog box

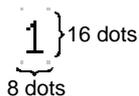
Set the print format and the device for printing comment.



| Items | | Description | A | F |
|--------------|--------|---|---|---|
| Device | | Set the bit device for printing comments ( Section 5.1 Device Setting) | ○ | × |
| Print Digits | | Set the number of digits for the comment to be printed Up to 255 digits can be set. | ○ | × |
| Comment No. | ON/OFF | Set the comment No. (0 to 32767) to be printed when the bit turns ON/OFF. The comment will not be printed when setting comment No. to 0. (To print comment only when the bit turns ON, set the comment No. when the bit turns OFF to 0) | ○ | × |

(3) Cautions

- (a) Only the first line of multi-line comment is printed.
- (b) The text attribute (style, text color etc.) cannot be changed.
- (c) Character is displayed in the size of 16 dots × 8 dots.



- (d) Up to 255 characters can be printed. (When [Columns] is set to the maximum value)

6 Word comment print arrangement

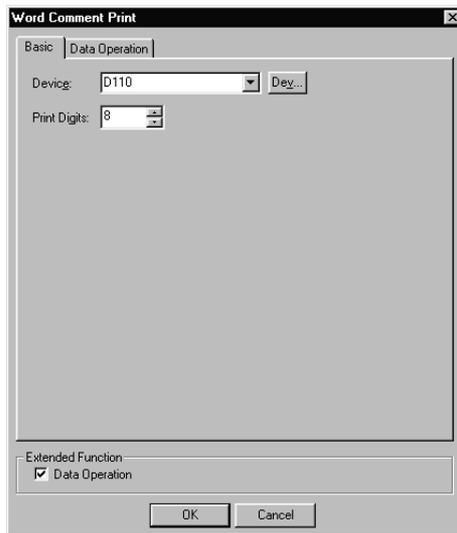
(1) Arrangement method

- 1 Carry out either of the following operations
 - Click on  (word comment print)
 - Select the [Object] → [Comment Print] → [Word Comment] from the menu.
- 2 Click on the position to arrange the comment print object.
- 3 Double click on the arranged comment print object.
- 4 As the setting dialog box will appear, make the settings with reference to the following explanation.

(2) Word Comment Print dialog box

(a) Basic tab

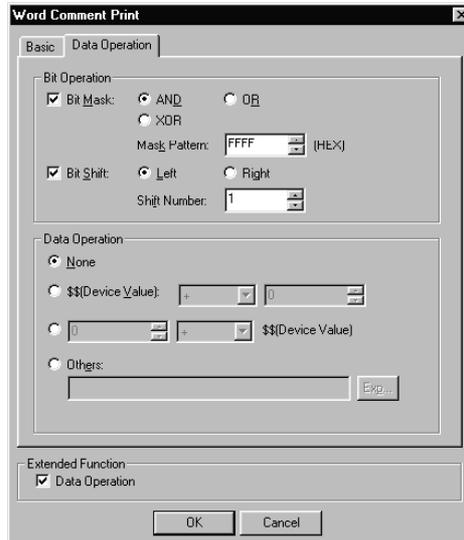
Set the print format of comment and the device to print comment.



| Items | Description | A | F |
|--------------|--|---|---|
| Device | Set the word device for printing comment. Print the comment of which No. corresponding to the set word device value. ( Section 5.1 Device setting) | ○ | × |
| Print Digits | Set the number of digits for the comment to be printed Up to 255 digits can be set. | ○ | × |

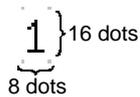
- (b) Data Operation tab
The setting items of data operation tab are the same as numerical print.
Refer to the following for the details of the setting items.

 4 Set numerical print



(3) Cautions

- (a) Only the first line of multi-line comment is printed.
- (b) The text attribute (style, text color etc.) cannot be changed.
- (c) Character is displayed in the size 16 dots × 8 dots.



- (d) Up to 255 characters can be printed. (When [Columns] is set to the maximum value)

7 Set header/repeat line

Set print range (header/repeat line) on the report screen.

| Line | Model | Operation Status | Production vol. | |
|------|-------|------------------|-----------------|--------|
| | | | Expected | Actual |
| MC-1 | A1 | Running | 300 | 10 |
| | A2 | Running | 250 | 20 |
| MC-2 | A1 | Running | 300 | 60 |
| | A2 | Running | 250 | 80 |

[Print example]

Header Maximum 10 lines
The range for the header of each page that can be printed only once.

Repeat line Maximum 20 lines
Lines repeatedly printed when collect trigger acts.

| Line | Model |
|------|-------|
| MC-1 | A1 |
| | A2 |
| MC-2 | A1 |
| | A2 |
| MC-1 | A1 |
| | A2 |
| MC-2 | A1 |
| | A2 |

[Print repeatedly]

Remark

Printable area

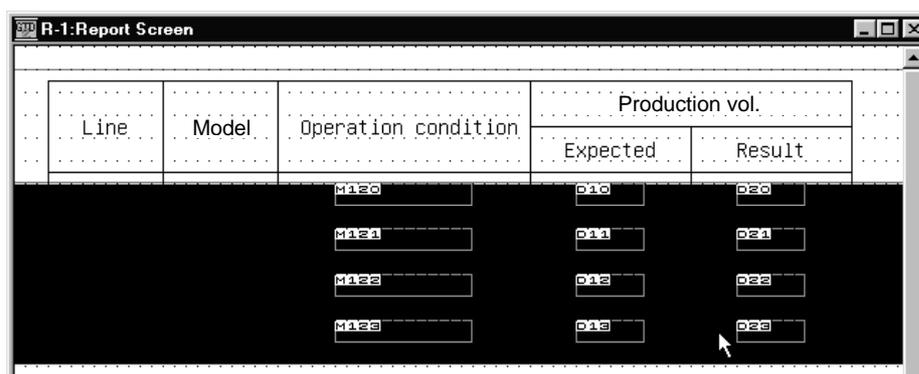
- Number of Lines : Up to 30 lines can be printed/collected for 1 timing.
- Number of Columns : Columns as many as the number set in the "Columns" of print format can be printed.



Section 5.34.3 Setting common to each report (report setting)

(1) Setting method

- Carry out either of the following operations.
 - Click on the  (Report Line) on the tool bar
 - Select [Edit] → [Object of Selection] → [Report Line] from the menu.
- Drag and select the area specified for the header and repeat line on the report screen.



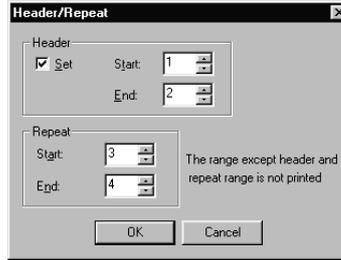
- Carry out either of the following operations.
 - When setting the header : Click on the  (Header) on the tool bar
 - When setting the repeat line : Click on the  (Repeat lines) on the tool bar
- The selected range for header and repeat line will be set.
The header area is shown by cyan frame, and repeat line area is shown by yellow frame.

Remark

Set the header/repeat line on the dialog box.

Header/repeat line can be set on the dialog box too.

Select the [Screen] → [Header/Repeat] to display the setting dialog box. Make the settings with reference to the following explanation.



| Items | | Description | A | F |
|--------|-----|--|-----------------------|---|
| Header | Set | Check this item to set the header in the report screen. Uncheck it to cancel the header. Set the start line and end line. Up to 10 lines can be set as the header in the range of 1 to 30 lines (for whole screen). | <input type="radio"/> | × |
| Repeat | | Set the start line and end line of the repeat lines. Up to 20 lines can be set as the repeat lines in the range of 1 to 30 lines (for whole screen). | <input type="radio"/> | × |

(2) Cautions

- (a) Numerical print and comment print objects cannot be set within header.

5.34.5 Cautions

This section provides the cautions for using report function.

1 Cautions for drawing

- (1) Maximum number of the report screens that can be set for 1 project
8 screens
- (2) Maximum number of numerical print and comment print objects on report screen
256 objects

2 Cautions for OS

- (1) Extended function OS
Make sure to install the extended function OS in GOT when using report function.

3 Cautions for hardware

- (1) Incompatible GOT
 - (a) A95* handy GOT is incompatible.
 - (b) [Log/Page] setting is not available because A95* handy GOT is not compatible with the printer and PC card.

- (2) Required extended devices and GOT

Following devices or GOT are required when using report function.

| GOT | Required devices |
|----------------------------------|--|
| A985GOT(-V), A97*GOT, A960GOT | None |
| A956WGOT | Printer interface module |
| A95*GOT | Memory expansion type GOT (A95*GOT-*BD-M3) Printer interface module |

4 Cautions for use

- (1) When the print trigger of other object/other report screen occurs during report print.
After a report print is completed once, the other object/other report screen will be printed.
However, if the same print trigger occurs before the report print, that was executed when the former report trigger occurred, is completed, the latter print trigger will be handled as invalid.



Check the report function operation

The printing status by report function and the printed report screen can be checked using the system information.

Controlling the relevant signals by PLC CPU prevents the overlap of print trigger occurrence timing.



Section 3.5 System Information Setting

(1) Report function-relevant signals of system information

(a) Report output signal (system signal2 (b8))

ON : Report function is printing

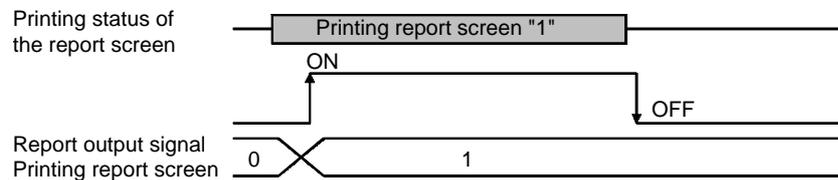
OFF : Printing by report function is completed or interrupted

(b) Report screen in printing (write device)

Write the report screen No. being printed to PLC CPU.

After printing, the written report screen No. is kept until the next report screen will be printed, instead of being cleared.

(2) Operation of the system information function when printing the report screen.



(2) When data collection timing is overlapped (Log/Page only)

After a data collection is completed once, the data of other report screen, that was delayed because its collection timing overlapped with the completed one, will be collected.

However, when the same collect trigger occurs before the data collection, that was executed when the former collect trigger occurred, is completed, the latter collect trigger will be handled as invalid.

(3) The number of collected data stored in PC card

(A985GOT/A97*GOT/A960GOT/A956WGOT/A95*GOT)

The maximum number of object files (including other object files) that can be set in a PC card differs with the memory capacity as follows:

| PC card memory capacity | Number of files |
|--|-----------------|
| 1M, 2M | 128 |
| 4M | 256 |
| 16M (A9GTMEM-10MF), 32M (A9GTMEM-20MF), 48M (A9GTMEM-40MF) | 512 |

*1 Memory capacity differs according to the hardware versions of flash PC card.

The memory can be checked on the rated plate of flash card.



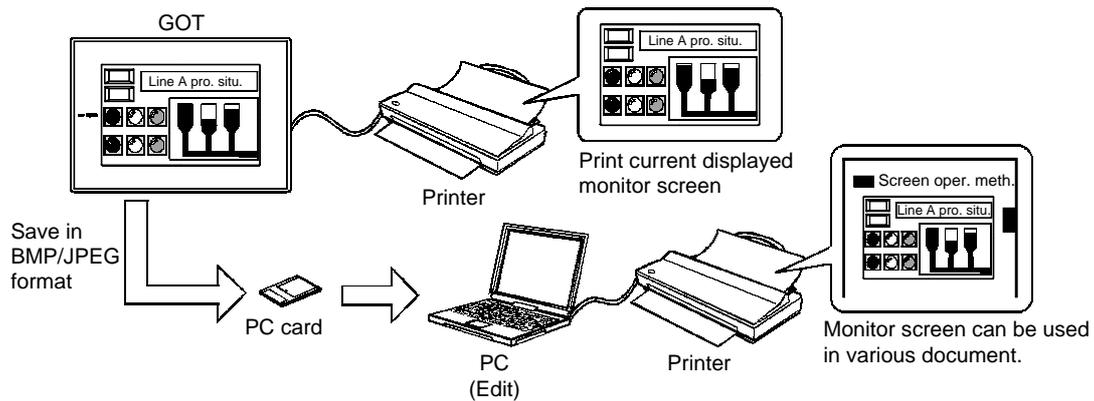
5.35 Hard Copy



This function is used to save the currently displayed GOT monitor screen to PC card in BMP/JPG file format or print it out with a printer.

This function can be executed by bit device's ON/OFF or touching the touch switch (extension: Hard copy).

The BMP/JPEG files saved in PC card can be used for various documents on the computer. (Specific for GOT-A900 series)



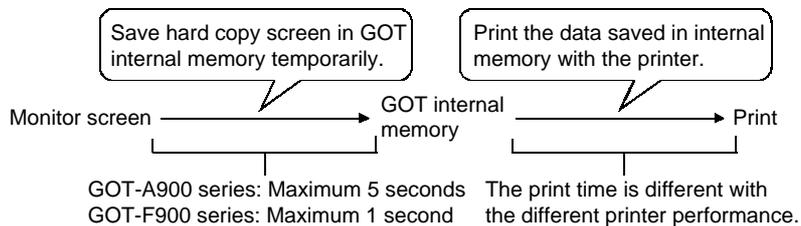
GOT status during execution of hard copy function

When the hard copy function is executed, GOT will interrupt the monitor screen display for approx. 5 seconds or less.

Also, print time will be displayed because more priority is given to the monitor screen display. (In the case of bus connection, print delay time will be much longer.)

Appendix 4 Printing Time of Hard Copy Function (Reference Value)

The hard copy function is executed as shown below.



5.35.1 Settings

- 1 Select [Common Settings] → [Hard Copy] from the menu.
- 2 The setting dialog box will appear. Make the settings with reference to the following explanation.



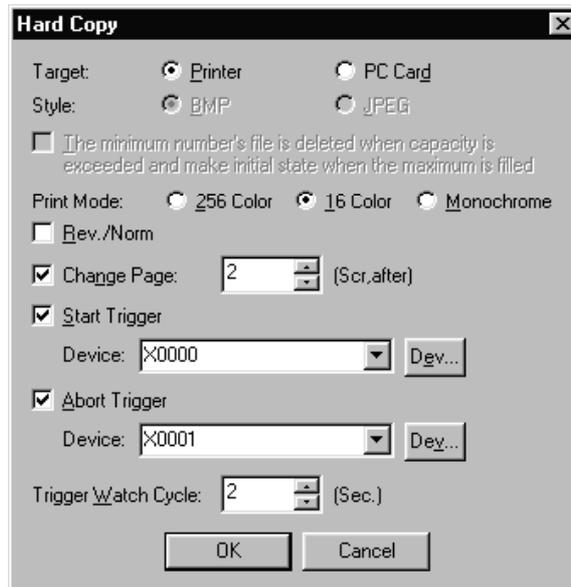
Remark

When making the setting on the project work space

The setting dialog box can be displayed by double-clicking on  on the project work space.

5.35.2 Setting items

Set the output target and the style of the hard copy.



| Items | Description | A | F | | | | | | | | | |
|--|---|--|---|------------------------------------|------------------------------------|----------------------------------|-------------------------------------|--|--|---------------------------|--|--|
| Target *1 | Select the output target (Printer/PC card) | ○ | × | | | | | | | | | |
| Style | Select the format (BMP/JPEG) of the saved file when [PC card] is selected in [Target]. ([JPEG] is not available for GOT-A960 series.) | ○ | × | | | | | | | | | |
| The minimum No.'s file is deleted when capacity is exceeded and make initial state when the maximum is filled *2 | Select the processing method for the case that PC card capacity is insufficient or the number of saved files exceeds the maximum (file No.: 9999). Not checked : New monitor screen will not be saved in PC card when PC card capacity is insufficient or the more than the max. number files (9999) exists. Checked : Execute the following operation according to the PC card status. | ○ | × | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>With spare capacity in the PC card</th> <th>No spare capacity in the PC card</th> </tr> </thead> <tbody> <tr> <td>Less than 9998 files in the PC card</td> <td>Creates the file with the number next to the existing largest file number in the PC card</td> <td>Overwrite the file with minimum file No.</td> </tr> <tr> <td>9999 files in the PC card</td> <td colspan="2">Deletes all the data in PC card and create a new No.1 file. (Data-deletion timing can be confirmed in the system information (system signal 2 area).)</td> </tr> </tbody> </table> | | | | With spare capacity in the PC card | No spare capacity in the PC card | Less than 9998 files in the PC card | Creates the file with the number next to the existing largest file number in the PC card | Overwrite the file with minimum file No. | 9999 files in the PC card | Deletes all the data in PC card and create a new No.1 file. (Data-deletion timing can be confirmed in the system information (system signal 2 area).) | |
| | | | | With spare capacity in the PC card | No spare capacity in the PC card | | | | | | | |
| Less than 9998 files in the PC card | Creates the file with the number next to the existing largest file number in the PC card | Overwrite the file with minimum file No. | | | | | | | | | | |
| 9999 files in the PC card | Deletes all the data in PC card and create a new No.1 file. (Data-deletion timing can be confirmed in the system information (system signal 2 area).) | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Print Mode *3 | Select the print color (256 colors/16 colors/monochrome). | ○ | × | | | | | | | | | |
| Rev./Norm *3 | Check this item to reverse and print monochrome area of the monitor screen. | ○ | ○ | | | | | | | | | |
| Change page | Check this item to move to the next page after the monitor screen is printed out. Set the number of printing screens before changing the page. | ○ | ○ | | | | | | | | | |

| Items | Description | A | F |
|---------------------|--|-----------------------|-----------------------|
| Start Trigger | Set the device to start the hard copy. | <input type="radio"/> | <input type="radio"/> |
| Abort Trigger | Set the device to interrupt print. | <input type="radio"/> | <input type="radio"/> |
| Trigger Watch Cycle | Set the watch cycle of start trigger and abort trigger in the unit of second within a range from 2 to 60 seconds. Set the bit device of the start trigger and the abort trigger to remain ON for 2 seconds or more. | <input type="radio"/> | <input type="radio"/> |

Refer to the following for the details about *1 to *3.

*1 Target

Files will be automatically created under the following file names when BMP/JPEG files are output to PC card.

The BMP/JPEG files saved in the PC card can be retrieved with image processing software for computers.

| The number of screens saved in PC card | File name | |
|--|---------------|----------------|
| | In BMP format | In JPEG format |
| Screen 1 | SNAP0001.BMP | SNAP0001.JPG |
| Screen 2 | SNAP0002.BMP | SNAP0002.JPG |
| Screen 3 | SNAP0003.BMP | SNAP0003.JPG |
| : | : | : |
| Screen 9999 | SNAP9999.BMP | SNAP9999.JPG |

*2 The minimum No.'s file is deleted when capacity is exceeded and make initial state when the maximum is filled.

When this item has been checked, whether the number of file saved in PC card is close to the upper limit or not can be checked by the following bit device status of the system information function. (Specific for GOT-A900 series)

- Hard copy sub-signal (system signal2 "b12")
The file number of screen data (file No.) is ON from 9900 to 9999.

 Section 3.5 System Information Setting

*3 Print Mode and Rev./Norm

The [Print Mode]/[Rev./Norm] setting can be online-changed by the following bit device status of the system information function. (Specific for GOT-A900 series)

- Hard copy setting enable signal (system signal 1 "b10")
The output setting of hard copy can be changed by turning ON this signal in the system information. Turn ON this signal before executing the hard copy function.
In this case, it must be turned ON earlier than the time (about 300ms) of identifying the GOT internal processing.
- Hard copy black-white print signal (system signal 1 "b11")
ON : Changes hard copy print mode into [Monochrome]
OFF : Changes hard copy print mode into [Color (256 colors/16 colors)]
- Hard copy black-white inversion signal (system signal 1 "b12")
ON : Reverses and outputs the monochrome area of monitor screen.
OFF : Keeps the original monochrome display of monitor screen and outputs as it is.

 Section 3.5 System Information Setting

5.35.3 Cautions

This section provides the cautions for using the hard copy function.

1 Cautions for drawing

- (1) Number of settable points for the hard copy function
Only one hard function is available for one project.
- (2) Start/Interrupt setting of the hard copy
When using a touch switch to turn ON the device used for start trigger/abort trigger, the device must be kept ON for five seconds or more.
For the touch switch (bit momentary), make the delay (OFF delay) settings in order that the device will remain ON for five seconds or more.

2 Cautions for OS

- (1) Extended function OS
Install the extended function OS (ESC printer/PLC printer/Chinese (Big5/GB) printer) in GOT when using hard copy function. (It is not required when using GT SoftGOT2, GOT-F900 series)

3 Cautions for hardware

- (1) GOT inapplicable for this function
F920GOT-K, A950 handy GOT and F940 handy GOT are not applicable.

4 Cautions for use

- (1) Bit devices of start trigger and abort trigger
Ensure the bit device of start trigger and interrupt trigger set in trigger watch cycle are set to remain ON for 2 seconds or more.
- (2) 256-color print
 - (a) Only the GOT (A985GOT, A975GOT, A956GOT) with 256 color monitor display (TFT type) is capable of printing with 256 colors.
The 256-color type A95*GOT will choose the 16 nearest colors for printing.
 - (b) PC card is required for the 256-color print (470K free space required).
PC card is not required for the print other than the 256-color print.
- (3) Printer
The print of monitor screen cannot be executed when the hard copy starts with the printer power OFF.
Ensure that the printer is powered ON.
Otherwise, a system alarm will occur (340 (A printer error occurs or the power supply is OFF)).
(Starts printing when the printer turns ON.)
- (4) Timing of hard copy execution
While the hard copy function (saving or printing the monitor screen into GOT internal memory or saving it to PC card) is being executed, another hard copy function cannot be activated.
Execute the next hard copy after printing the previous one or saving it to PC card.
The completion of the operation can be confirmed in the system information (system signal2)



Section 3.5 System Information Setting

(5) Video window, RGB screen

- (a) The image displayed in the video window is printed in 256 colors
RGB screen cannot be printed.
- (b) When GOT is in the screen save condition, the video image cannot be hard-copied correctly.
Confirm that GOT is not in the screen save condition before hard-copying the monitor screen displaying video image.

(6) When using GOT-F900 series

- (a) Only the user-created screen (the screen displayed in the screen mode) is available for hard copy.
The system screen (in the HPP mode, alarm mode, sampling mode, other mode) cannot be printed.
- (b) GOT-F900 series are capable of monochrome print only.
Other display colors are printed as follows:
Black, red, blue, green : Black
White, purple, yellow, cyan : White
(In the case of 256-color display, colors similar to each of the above 8 colors are printed as white or black)

(7) The number of files that can be saved in PC card
(A985GOT/A97*GOT/A956WGOT/A95*GOT)

The maximum number of object files (including other object files) that can be set in a PC card differs with the memory capacity as follows:

| Memory capacity of PC card | File number |
|--|-------------|
| 1M, 2M | 128 |
| 4M | 256 |
| 16M (A9GTMEM-10MF*1), 32M (A9GTMEM-20MF*1), 48M (A9GTMEM-40MF*1) | 512 |

*1 Memory capacity differs according to the hardware versions of flash PC card.
It can be checked on the rated plate of flash card.

5.36.1 Required knowledge for operation panel setting

1 Available operation panels

- (1) In the case of GOT-A900 series

Refer to the following manuals for the operation panels that can be used.

 GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual).

- (2) In the case of GOT-F900 series

In GOT-F900 series, function switches of F920GOT-K, F930GOT-K, or ET-900 are set through the operation panel.

Refer to the following manuals for the details.

 GOT-F900 Series HARDWARE MANUAL (Connection)

2 Description about settings of keys on the operation panel

To the operation panel keys, actions and key codes can be set.

- (1) Action

More than one setting as shown below can be assigned to one key on the operation panel.

| GOT-A900 series | | GOT-F900 series | | Precedence for multiple settings |
|---------------------------|-------|-----------------------|------|----------------------------------|
| Momentary*1 | : 20 | Momentary*1 | : 50 | High |
| Set | : 20 | Set | : 50 | |
| Reset | : 20 | Reset | : 50 | |
| Alternate | : 20 | Alternate | : 50 | |
| Word set | : 20 | Word set | : 50 | |
| Base screen switching*1 | : 1 | Base screen switching | : 1 | |
| Window screen switching*1 | : 1 | Recipe transfer | : 50 | ↓ |
| (Overlap window1) | : | Data change | : 50 | |
| Window screen switching*1 | : 1 | | | |
| (Overlap window2) | : | | | |
| Window screen switching*1 | : 1 | | | |
| (Superimpose) | : | | | |
| Station number switch | : 1 | | | Low |
| Total | : 105 | Total | : 50 | |

*1 If the momentary function and the window switch function are set to one operation panel key, switching the screen is not available while the key is being pressed.

After the operation panel key is released (bit OFF output), the screens will be switched.

(2) Key code (specific for GOT-A900 series)

The key code can be set for each object.

- The key codes for alphanumeric input (numerical input, ASCII input)
- The key codes for object functions (the numerical input, ASCII input, data list, alarm list, alarm history functions)



Appendix 2 Key Code List

Remark

When the above (1) Action and (2) Key code are set at the same time

(1) Available key codes

The following are the key codes that can be set together with action setting.

- "FFFFH (no key code)"
- "000DH (write execution key)"

(2) Precedence for operation

The key codes take precedence over to the action settings.

(3) In the case of GOT-F900 series

The key code setting is not available for GOT-F900 series.

5.36.2 Settings

- 1 Select [Common Settings] → [Operation Panel] in the menu.
- 2 The Setting dialog box will appear. Make the settings reference to the following explanation.

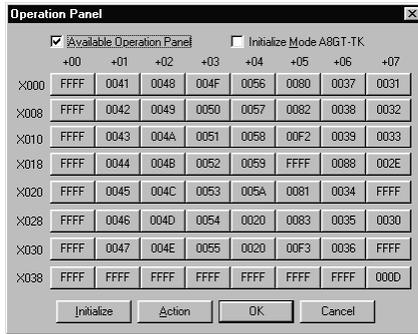
Remark

When making the setting on the project workspace

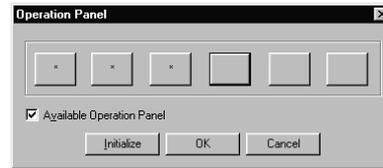
The setting dialog box can be displayed by double-clicking on  in the project workspace.

5.36.3 Setting items

The actions and key code can be set to operation panel keys.



In the case of GOT-A900 series



In the case of GOT-F900 series

| Items | Description | A | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|----|----|----|----|----|----|----|----|-----------|----|----|----|----|----|----|----|----|--------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|---|---|
| Action/key code setting*1 | <p>Set actions which are executed at ON and key codes to the input signals. When an input signal button is clicked, the action/key code setting dialog box will be displayed. Set the action, trigger and key code.</p> <p>[Arrangements of the input signal buttons] The following shows the arrangement of input signal buttons used in GT Designer2. The key codes for the operation panel produced by Kanaden are preset in the initial state. When using the ten-key panel of the A8GT-TK type, check [Initialize Mode A8GT-TK], and initialize the state, to change it to the one suitable for the A8GT-TK ten-key panel. Make the setting referring to the user-created arrangement of input signals. *2, *3</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th></th> <th>+00</th> <th>+01</th> <th>+02</th> <th>+03</th> <th>+04</th> <th>+05</th> <th>+06</th> <th>+07</th> </tr> </thead> <tbody> <tr> <td>X000</td> <td>X0</td> <td>X1</td> <td>X2</td> <td>X3</td> <td>X4</td> <td>X5</td> <td>X6</td> <td>X7</td> </tr> <tr> <td>X008</td> <td>X8</td> <td>X9</td> <td>XA</td> <td>XB</td> <td>XC</td> <td>XD</td> <td>XE</td> <td>XF</td> </tr> <tr> <td>X010</td> <td>X10</td> <td>X11</td> <td>X12</td> <td>X13</td> <td>X14</td> <td>X15</td> <td>X16</td> <td>X17</td> </tr> <tr> <td>X018</td> <td>X18</td> <td>X19</td> <td>X1A</td> <td>X1B</td> <td>X1C</td> <td>X1D</td> <td>X1E</td> <td>X1F</td> </tr> <tr> <td>X020</td> <td>X20</td> <td>X21</td> <td>X22</td> <td>X23</td> <td>X24</td> <td>X25</td> <td>X25</td> <td>X27</td> </tr> <tr> <td>X028</td> <td>X28</td> <td>X29</td> <td>X2A</td> <td>X2B</td> <td>X2C</td> <td>X2D</td> <td>X2E</td> <td>X2F</td> </tr> <tr> <td>X030</td> <td>X30</td> <td>X31</td> <td>X32</td> <td>X33</td> <td>X34</td> <td>X35</td> <td>X36</td> <td>X37</td> </tr> <tr> <td>X038</td> <td>X38</td> <td>X39</td> <td>X3A</td> <td>X3B</td> <td>X3C</td> <td>X3D</td> <td>X3E</td> <td>X3F</td> </tr> </tbody> </table> | | +00 | +01 | +02 | +03 | +04 | +05 | +06 | +07 | X000 | X0 | X1 | X2 | X3 | X4 | X5 | X6 | X7 | X008 | X8 | X9 | XA | XB | XC | XD | XE | XF | X010 | X10 | X11 | X12 | X13 | X14 | X15 | X16 | X17 | X018 | X18 | X19 | X1A | X1B | X1C | X1D | X1E | X1F | X020 | X20 | X21 | X22 | X23 | X24 | X25 | X25 | X27 | X028 | X28 | X29 | X2A | X2B | X2C | X2D | X2E | X2F | X030 | X30 | X31 | X32 | X33 | X34 | X35 | X36 | X37 | X038 | X38 | X39 | X3A | X3B | X3C | X3D | X3E | X3F | ○ | × |
| | | +00 | +01 | +02 | +03 | +04 | +05 | +06 | +07 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X000 | X0 | X1 | X2 | X3 | X4 | X5 | X6 | X7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X008 | X8 | X9 | XA | XB | XC | XD | XE | XF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X010 | X10 | X11 | X12 | X13 | X14 | X15 | X16 | X17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X018 | X18 | X19 | X1A | X1B | X1C | X1D | X1E | X1F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X020 | X20 | X21 | X22 | X23 | X24 | X25 | X25 | X27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X028 | X28 | X29 | X2A | X2B | X2C | X2D | X2E | X2F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X030 | X30 | X31 | X32 | X33 | X34 | X35 | X36 | X37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X038 | X38 | X39 | X3A | X3B | X3C | X3D | X3E | X3F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p>Displays the input signals of ET-900 series (F920GOT-K, F930GOT-K) function switches and the actions set to each operation panel key. Click on the input signal button, the action/key code setting dialog box will be displayed. Set the action and trigger in this dialog box. After the setting, "*" will be displayed on the key.</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>F920GOT-K</td> <td>F1</td> <td>F2</td> <td>F3</td> <td>F4</td> <td>F5</td> <td>F6</td> <td>—</td> <td>—</td> </tr> <tr> <td>F930GOT-K</td> <td>F1</td> <td>F2</td> <td>F3</td> <td>F4</td> <td>F5</td> <td>F6</td> <td>F7</td> <td>F8</td> </tr> <tr> <td>ET-900</td> <td>F0</td> <td>F1</td> <td>F2</td> <td>F3</td> <td>F4</td> <td>F5</td> <td>—</td> <td>—</td> </tr> </tbody> </table> | | | | | | | | | | F920GOT-K | F1 | F2 | F3 | F4 | F5 | F6 | — | — | F930GOT-K | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | ET-900 | F0 | F1 | F2 | F3 | F4 | F5 | — | — | × | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F920GOT-K | F1 | F2 | F3 | F4 | F5 | F6 | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F930GOT-K | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ET-900 | F0 | F1 | F2 | F3 | F4 | F5 | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Initialize *2 | <p>GOT-A900 series :Initializes the action/key code setting of the operation panel to be suitable for the key arrangement/input signal of kanaden operation panel. GOT-F900 series :Deletes all of the actions of the operation panel for initialization.</p> | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Action | Clicking this to switch the display on the input signal button between the action and key code. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Key code | <p>When displaying key code : Displays the key code set to the key. <input style="width: 50px;" type="text" value="0042"/></p> <p>When displaying action : Display "*" on the key to which an action is set. <input style="width: 50px;" type="text" value="*"/></p> | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Available operation panel | Check this item to make the setting of the currently editing operation panel available. After setting the function of the operation panel, make sure to check this box. | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Initialize mode A8GT-TK*3 | Check this item when initializing the setting of operation panel according to the key arrangement of A8GT-TK ten-key panel. After checking this box, click on the <input style="width: 50px;" type="text" value="Initialize"/> button. | ○ | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

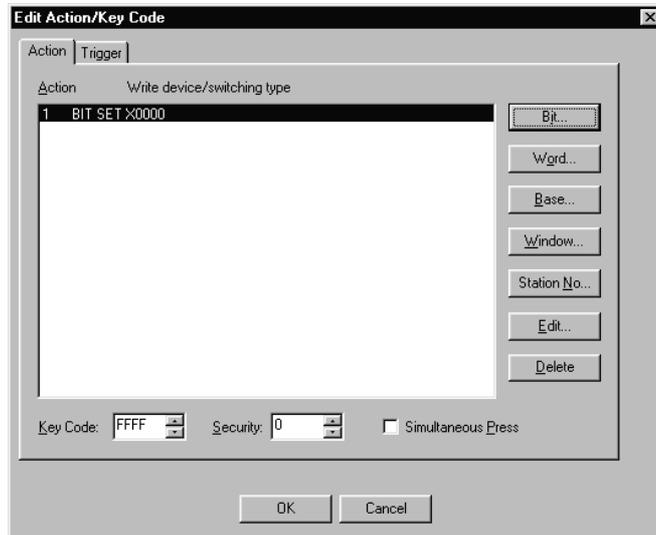
Refer to the next page for the details about *1 *2 *3.

***1 Settings of operation panel key**

Set the action and trigger for the operation panel key.

(1) Action tab

Set the action data (action, key code) of each operation panel key.



(Example: In the case of GOT-A900 series)

| Items | Description | A | F |
|--------------------|---|---|---|
| Action | Set the action to be set to the operation panel key. The set action data are displayed in the list. The setting method and action contents of each action (bit, word, etc.) are the same as the touch switch. (Section 5.27 Touch Switch) | ○ | ○ |
| Bit | Set the ON/OFF action of the bit device. | ○ | ○ |
| Word | Set the value change of the word device. | ○ | ○ |
| Base | Click on this to set the base screen switch to an operation panel key. | ○ | ○ |
| Windows | Click on this to set the window screen switch to an operation panel key. | ○ | × |
| Station No. | Click on this to set the station No. switch to an operation panel key. ([Switch Type] of the station No. switch function of the touch switch cannot be set.) | ○ | × |
| Edit | Edits the set action data. | ○ | ○ |
| Delete | Deletes the set action. | ○ | ○ |
| Key code | Set the key code to be set to the operation panel key. (Appendix 2 key Code List) | ○ | × |
| Security | When using the security function, set the security level (1 to 15). When not using the security function, set it to "0". (Section 5.7 Security Function) | ○ | × |
| Simultaneous press | Check this item to disable other operation panel key while an operation panel key is pressed. | ○ | × |

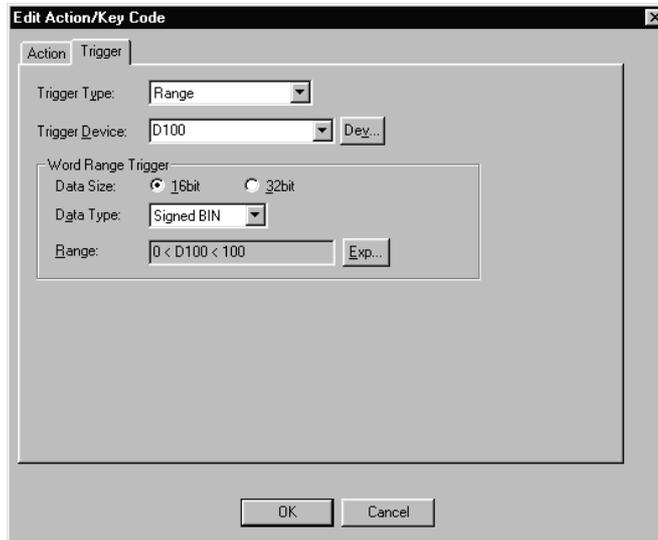
(2) Trigger tab

Set the action trigger for the operation panel key.

Check the Extended Function at the bottom of the dialog box to display this tab.

Refer to the following for the details of trigger.

 Section 5.4 Trigger Setting

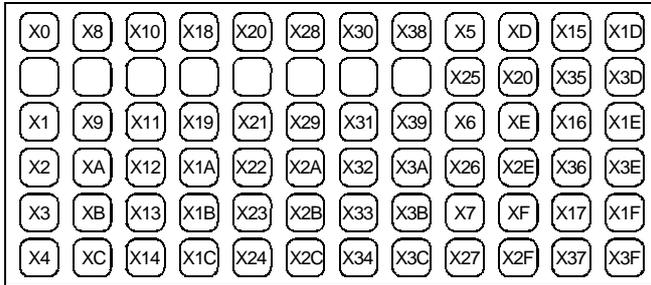


| Items | | Description | A | F |
|--------------------|-----------|---|-----------------------|-------------------------------------|
| Trigger type | | Select the trigger to activate the operation panel key. <input checked="" type="radio"/> Ordinary <input checked="" type="radio"/> ON <input checked="" type="radio"/> OFF <input checked="" type="radio"/> Range (specific for GOT-A900 series) | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Trigger | | Specify the device used for the trigger. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | | When [Range] is selected in [Trigger Type], set the following items | <input type="radio"/> | <input checked="" type="checkbox"/> |
| Word range trigger | Data size | Select the data size (16 bit/32bit) of the word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Data type | Select the data type (signed BIN/unsigned BIN/Real) of word device. | <input type="radio"/> | <input checked="" type="checkbox"/> |
| | Range | Click on the <input type="text" value="Range"/> button to set conditional expression for the word device range. | <input type="radio"/> | <input checked="" type="checkbox"/> |

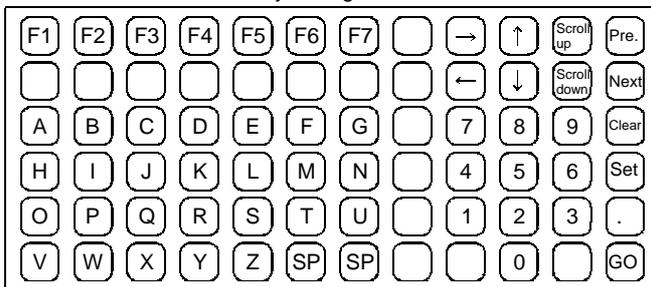
***2 Initialize (GOT-A900 series only)**

Initializes the set data of the operation panel to be suitable for the key arrangement of the Kanaden operation panel.

The arrangement of input signal



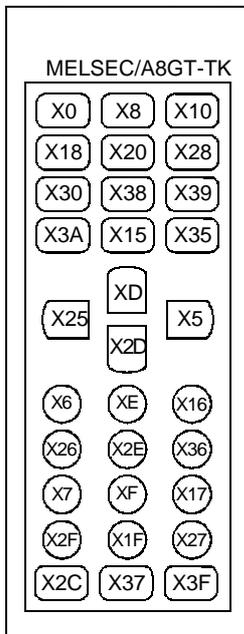
Key arrangement



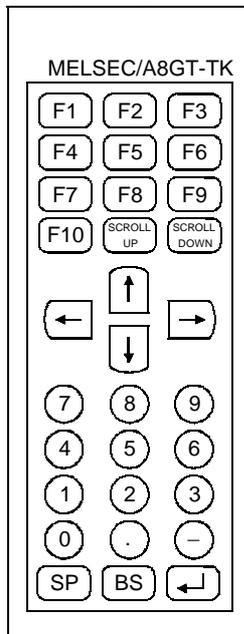
***3 Initialize mode A8GT-TK (GOT-A900 series only)**

Initialize the set data of the operation panel to be suitable for the key arrangement of the A8GT-TK ten-key operation panel.

Arrangement of input signal



Key arrangement



5.36.4 Cautions

This section provides the cautions for using the operation panel function.

1 Cautions for drawing

- (1) The maximum number of the operation panel function settable for the whole project
 - GOT-A900 series : 1
 - GOT-F900 series : 1

2 Cautions for OS

- (1) Extended function OS (specific for GOT-A900 series)
When the operation panel function is used, install the extended function OS to GOT.

3 Cautions for hardware

- (1) Required optional device (specific for GOT-A900 series)
The following devices are needed when using the operation panel function.

| GOT used | Required device |
|--|-------------------------------|
| A985GOT, A97* GOT, A960GOT, A956WGOT, A95*GOT | External I/O interface module |

- (2) GOT with key pad/function keys (specific for GOT-F900 series)
The key pad/function keys are provided for F920GOT-K (key pad), F930GOT-K (key pad) and ET-900 (function key).

4 Cautions for use

- (1) The operation panel function cannot be applied to:
The utility, system monitor function, ladder monitor function, special function module monitor function, list editor function, motion monitor function, servo amplifier monitor function.
- (2) Action of operation panel function
 - (a) Each key executes the set operation with no relation with GOT screen display.
 - (b) When a touch switch on the GOT screen and a key on the operation panel are pressed simultaneously, both instructions are valid. In this case, the operation detected first will be executed first.

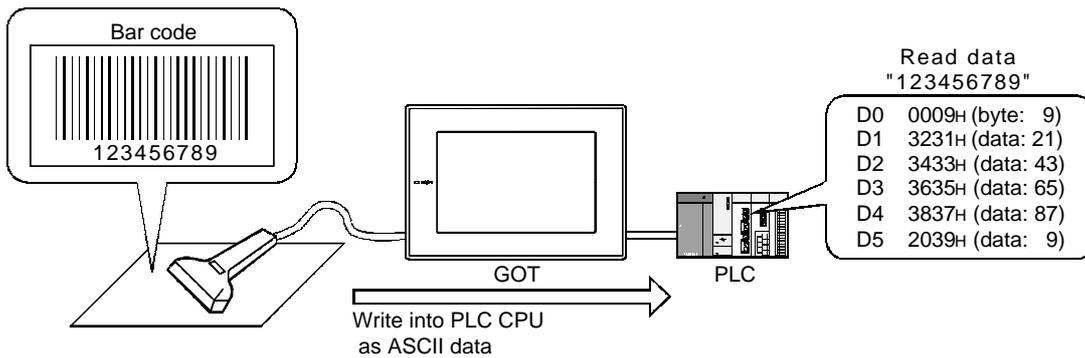


5.37 Bar Code Function



This function is to connect the bar code reader to GOT and write the data read by the bar code reader into PLC CPU.

Bar code reader is connected to the RS-232C interface at the bottom of GOT which is generally used for download of the monitor screen data.



5.37.1 Settings

- 1 Select [Common Settings] → [Bar Code] from the menu.
- 2 As the setting dialog box will appear, make settings with reference to the following explanations.



Remark

When making the setting in the project workspace

The setting dialog box can be displayed by double-clicking on  in the project workspace.

5.37.2 Setting items of bar code function

Set the device in which the data read by the bar code reader is stored.

| Items | Description | A | F |
|---------------|---|-----------------------|-----------------------|
| Device | Set the head device of those used for storing the data read by the bar code reader. (☞ Section 5.1 Device Setting) | <input type="radio"/> | <input type="radio"/> |
| Device Points | Set the points of device used for storing the read data (2 to 32) | <input type="radio"/> | <input type="radio"/> |



Data stored in the device

Data read by the bar code reader is written into PLC CPU devices as ASCII data.

(Example) When the read data is "123456789"

- (1) When the number of read data is less than the set device points
Setting (Storage device: D0, Data points: 8)

| Write device | Stored data | ASCII data | |
|--------------|-------------|------------|--|
| D0 | 0009H | — | ...Writes the bytes that have been read |
| D1 | 3231H | 21 | ...Writes the read data in the order of increasing bytes |
| D2 | 3433H | 43 | |
| D3 | 3635H | 65 | |
| D4 | 3837H | 87 | |
| D5 | 2039H | ␣9 | ...When the number of the bytes for the read data is an odd, writes space (20H) to the higher byte of the last data. |
| D6 | 2020H | ␣␣ | Besides, writes 20H to the device beyond the read data. |
| D7 | 2020H | ␣␣ | |

␣.....Space

- (2) When the number of the read data is more than the set device points
Setting (Storage device: D0, Data points: 4)

| Write device | Stored device | ASCII data | |
|--------------|---------------|------------|--|
| D0 | 0009H | — | ...Writes the data that have been read |
| D1 | 3231H | 21 | ...Writes the read data in order of increasing bytes |
| D2 | 3433H | 43 | |
| D3 | 3635H | 65 | |
| | | | ...Discard the data beyond the set device points |

5.37.3 Cautions

This section provides the cautions for using bar code function.

1 Cautions for drawing

- (1) Number of settable bar code function
Only one bar code function can be set for each project.
- (2) Usage of bar code function based on GOT connection type
 GOT-A900 series :
 The bar code function is applicable for any connection type of GOT.
 However, the bar code function is not available when the transparent function or the servo amplifier monitor function is used.
 GOT-F900 series :
 The bar code function is available when the built-in RS-232C interface is not used.



Precedence of bar code function, servo amplifier monitor function and transparent function

Only one of the bar code function, servo amplifier monitor function and transparent function can be used. The precedence is as follows:

| High | ← Precedence → | Low |
|---|---|----------------------|
| Bar code function | Servo amplifier monitor function | Transparent function |
| Bar code setting in monitor screen data | Extended function OS for servo amplifier monitor function is installed in GOT | No data item |

For example, the servo amplifier monitor function cannot be used even though the extended function OS for the servo amplifier monitor function is installed in GOT, when the bar code setting has been made in the monitor screen data downloaded to GOT.

- (3) System information setting
System information must be set to use the bar code function.



3.5 Systems Information Setting

2 Cautions for OS

- (1) Extended function OS (specific for GOT-A900 series)
To use the bar code function, install the extended function OS (bar code) in GOT.

3 Cautions for hardware

- (1) GOT that can not use the bar code function
The bar code function is not available for the GT SoftGOT2, A950 handy GOT, F920GOT-K and F940 handy GOT.
- (2) System configuration
Refer to the following manuals for the system configuration for using the bar code reader.
 - GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 Compatible Connection System Manual)
 - GOT-F900 Series Hardware Manual (Connection)

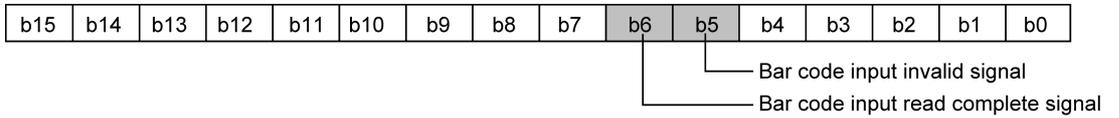
4

System information

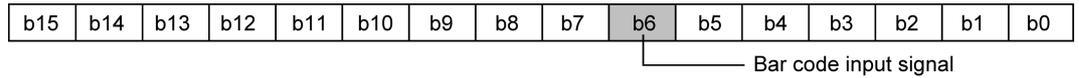
(1) If the following system signals are ON, the data read by the bar code reader is not written to PLC CPU.

(a) GOT-A900 series

System signal 1

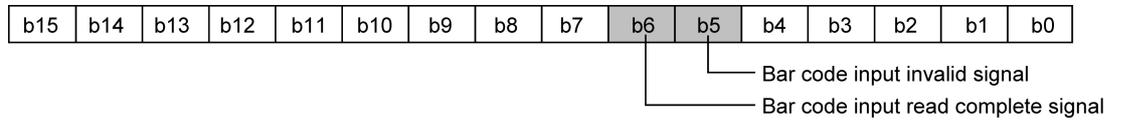


System signal 2

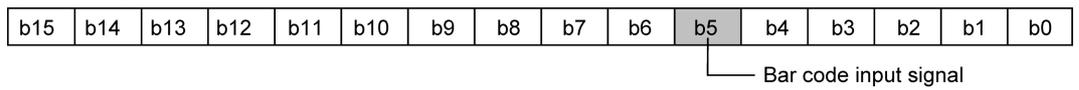


(b) GOT-F900 series

System signal 1



System signal 2





Timing of input signal and input read complete signal

(1) Bar code input signal (system signal2: b6)

When the data read by the bar code reader are stored in the specified device, this signal is turned ON.

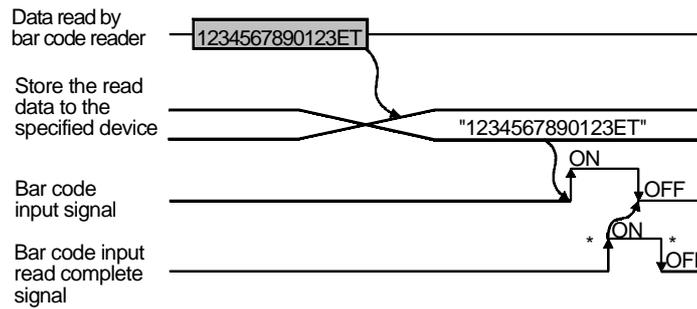
To turn it OFF, turn the bar code input read complete signal ON.

(2) Bar code input read complete signal (system signal1 b6)

Turning ON this signal turns OFF the bar code input signal.

This signal is to be turned OFF by users.

<Relation between bar code input and signals>



* Turn the bar code input signal and the bar code input complete signal OFF after reading bar codes.

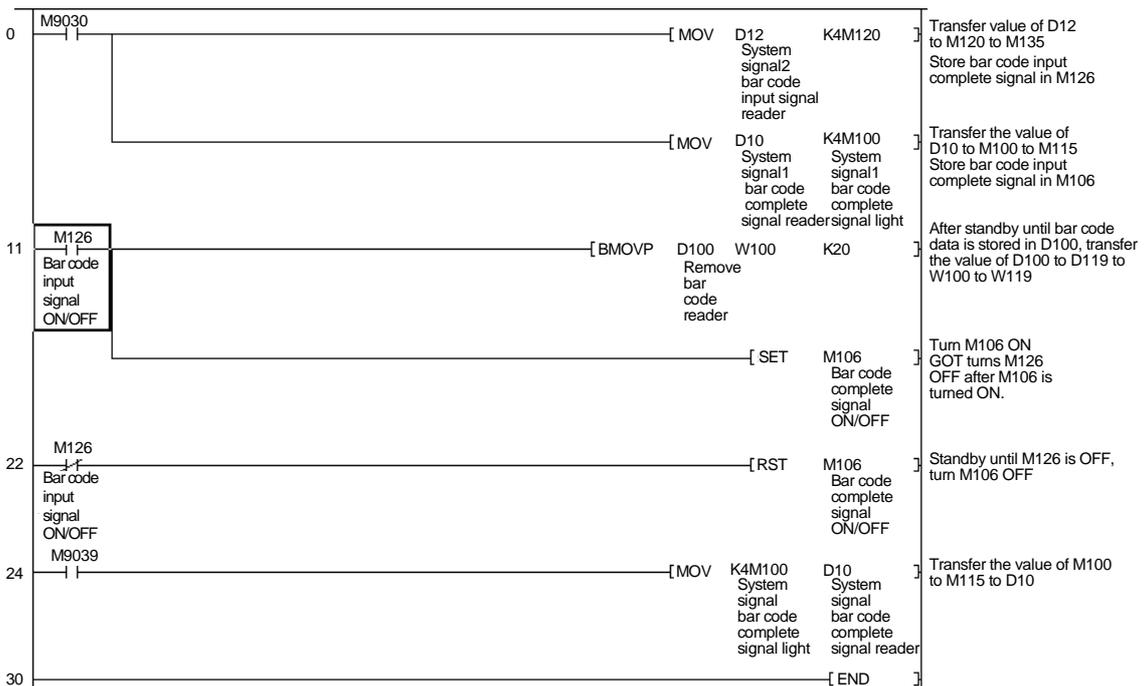
Otherwise, the bar code reader will not read data next time.

<Sequence program example>

It is advisable to create a sequence program so that the bar code input read complete signal will turn OFF when the bar code input signal is turned OFF.

GT Designer2 setting

- System signal 1 D10 ● Device D100
- System signal 2 D12 ● Device points 20





5.38 Sound



This section explains the function to output sound from the speaker connected to GOT.
Sound output is available for the following functions

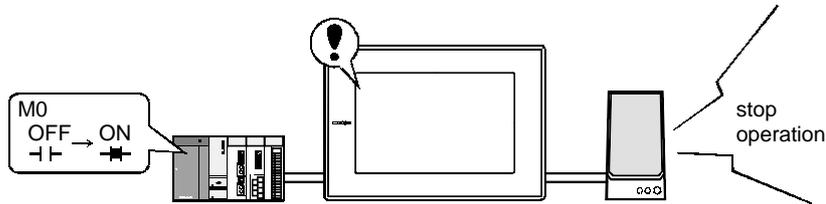
- Touch switch function
- Status observation function
- Time action function

To output sounds from GOT, it is required to specify the output sound file in the setting.

Example

If the set conditions are satisfied, sounds are output.

Set with status observation function



If the set conditions are enabled, (M0 changes from OFF to ON), output the specified sound file.

5.38.1 Settings

- 1 Select [Common Settings] → [Sound] from the menu.
- 2 As the setting dialog box will appear, make the settings with reference to the following explanation.

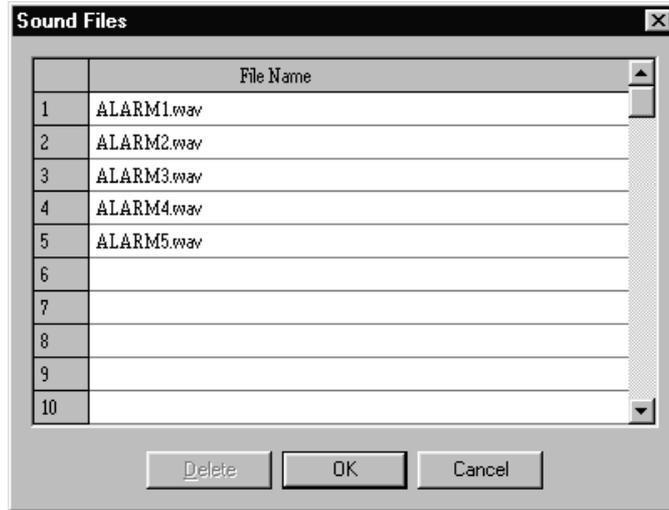
Remark

When making the settings in the project workplace

The setting dialog box can be displayed by double-clicking on in the project workplace.

5.38.2 Setting items

Set the sound files to be output from GOT.



| Items | Description | A | F |
|-------------|---|-----------------------|---|
| Sound Files | Click on the column of file names to select a sound file to be output. Up to 100 sound files can be set. | <input type="radio"/> | × |
| Delete | Deletes the selected sound file. | <input type="radio"/> | × |

5.38.3 Cautions

This section provides the cautions for using the sound function.

1 Cautions for drawing

- (1) The number of sound function data that can be set
Up to 100 sound function data can be set for one project.
- (2) When executing sound output with touch switch
Make the settings in the auxiliary setting to play WAV sound files by touching the touch switch.
 4.5 Auxiliary Setting

(3) Sound files:

- (a) The sound files data that can be played in GOT are limited within 8 seconds.
Extra sound part exceeding the limit of 8 seconds will be cut.
- (b) Any change in data of WAV files that have been set as sound files will not be updated.
To update the change in data, reset it again as WAV sound file in the sound function setting.
- (c) Sound files available for GOT are in the audio format of "8.000KHz, 16 bits, and mono"; while most of sound files are generally created in different format.
Therefore, in order to use the general sound files for GOT, it is necessary to convert the audio format to "8.000KHz, 16-bit and mono" with general sound editing software such as the sound recorder in Windows® 98.



Hint!

Sound files conversion method with Window® 98 sound recorder

- 1 In Windows®, select [Start] → [Program] → [Accessory] → [Entertainment] → [Sound Recorder] to start the sound recorder. (If there is no Sound Recorder, add it from Windows® 98 Add/Remove Programs)
- 2 Select [File] → [Open], and then select the sound file to be converted.
- 3 Select [File] → [Property], and then click on [Convert Now].
- 4 In the [Sound Selection] dialog box, set the attribute to [8.000KHz, 16-bit, and mono] in the list box.
- 5 Save (Save or Save as) the converted file

2 Cautions for OS

(1) Extended function OS

Make sure that the extended function OS (sound) is installed in GOT when using the sound function. (The installation is not required when using GT SoftGOT2)

3 Cautions for hardware

(1) Unusable GOT

The sound function is not available for A95*GOT and A956WGOT.

(2) Required optional devices

The following device is required when using the sound output function

| GOT | Required device |
|--------------------------------|-----------------|
| A985GOT (-V), A97*GOT, A960GOT | Memory board |

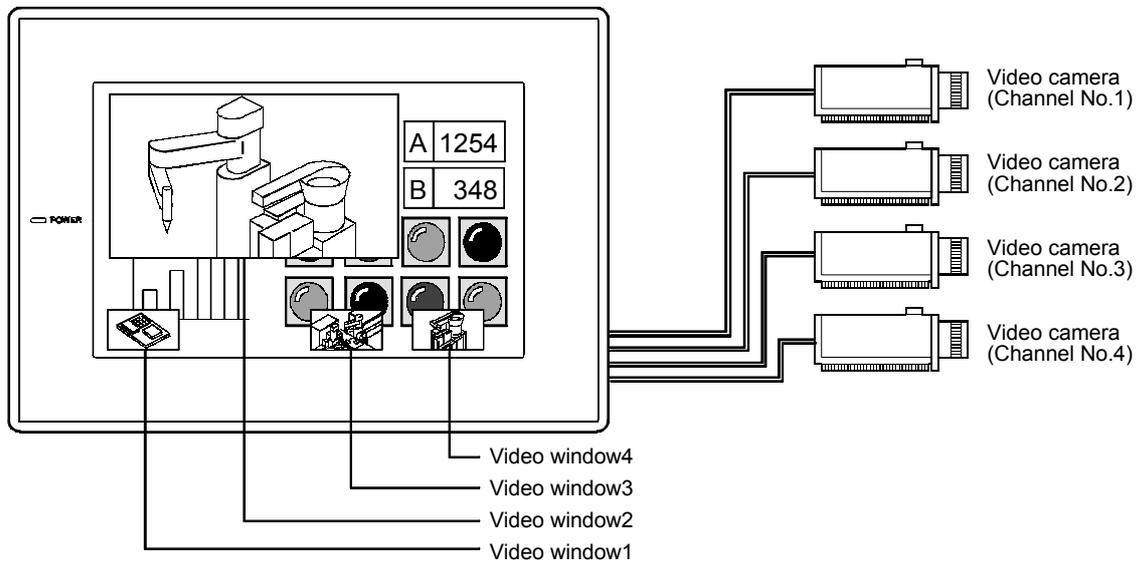
(3) Other devices

The external speaker is required for sound output.

5.39 Video



This section explains the function that displays the image taken by video camera on the video window. As the video window operates independently of other screens, base screen can be switched while the video window is opened.



Video operates in full mode (☞ This section **5**) or clip mode (☞ This section **6**).

<Difference between full mode and clip mode>

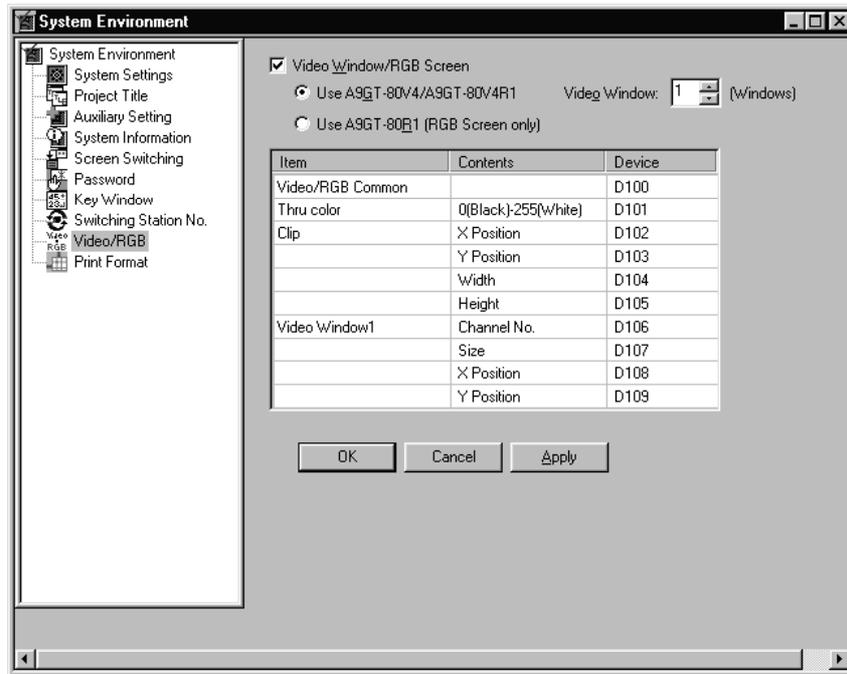
| Items | Full mode | Clip mode |
|--------------------------------|-------------------------------------|---|
| Overview | Display the total image. | Display a part of the image in its original size. |
| Video window resolution (dots) | 720 × 480 or 640 × 480 | 64 × 64 to 720 × 480 |
| Display size change | 100%, 50%, 25% of the original size | Unchangeable |
| Number of screens | 4 | 1 (video window only) |

1 Method of displaying video window

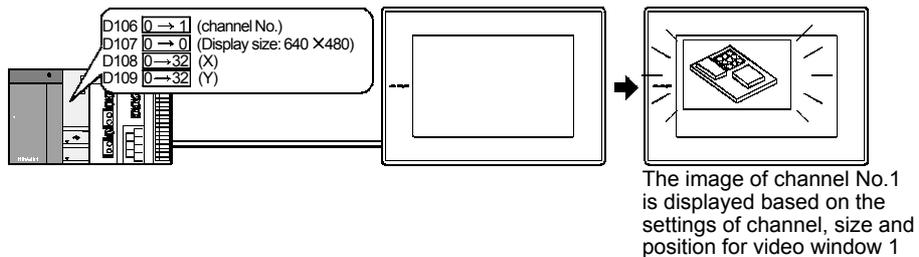
Video window is displayed when 1 to 4 is stored into the video window channel No. device.
 Video window is closed when 0 is stored into the video window channel No. device.
 (There is no close button on video window)

(Example) When the image of channel No.1 is displayed on video window1.

<GT Designer2 setting>



<Operation>

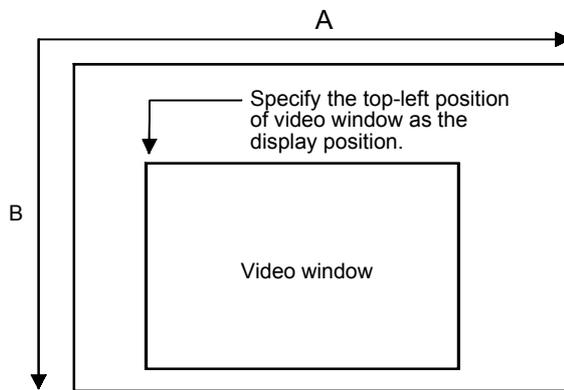


The size and position of video window

The size and position of video window can be controlled based on the device (video window device, video window X/Y device) value.

2 Position of video window

Video window can be arranged on the base screen and overlap window1.
The position of video window can be specified within the following range.



| Range | A [Dot] | B [Dot] |
|-----------------|----------|----------|
| Base screen | 0 to 736 | 0 to 528 |
| Overlap window1 | 0 to 784 | 0 to 464 |

Point

Display of video screen

(1) Setting of display position

Set the display position with the multiple of 16 (dot).

Even if display position is not set with the multiple of 16 (dot), the screen will be displayed automatically with the multiple of 16.

(2) Video window on base screen

Even if video window is displayed out of the base screen, it will be arranged to fit to the base screen automatically.

(3) Video window on window screen

If video window is displayed out of the overlap window1, the video image cannot be displayed.

(4) Order of laying video screen

Video window can be displayed over or under overlap window (1, 2) or test window according to the video/RGB common device settings.

(☞ Section 5.39.2 Setting items of video)

However, the followings will be displayed over video window.

- Floating alarm
- Key window
- Comment window
- Confirmation or similar message displayed on GOT

3 Method of moving video window

There are no move buttons in video window.

To move video window, change the device value set in display position (X-coordinate, Y-coordinate).

If overlap window is touched to move while multiple windows are being moved frequently, the overlap window may not be moved.

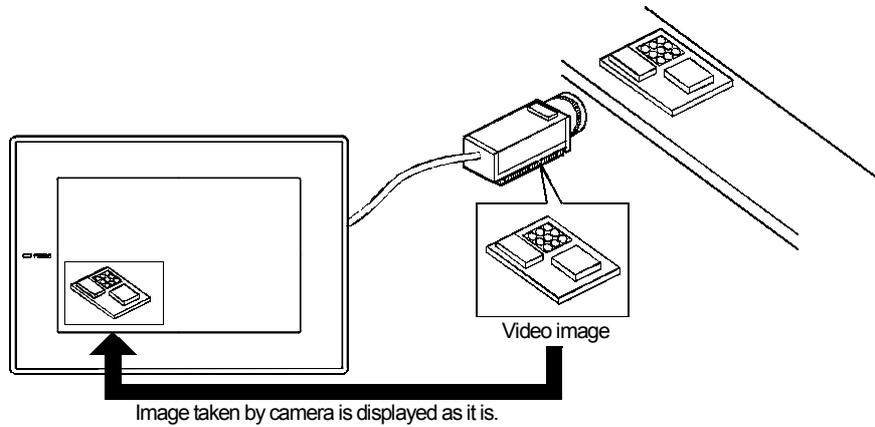
In this case, make sure to move the overlap window by device, or move it after the video window is moved.

4 Arranging video window on overlap window

- (1) Video window can be arranged on overlap window1 only.
- (2) The windows displayed over the overlap window1 will appear over the video window.
- (3) When video window is arranged on overlap window1, the video window will automatically execute transparent processing. (Refer to 8 for transparent processing.)
Pictures or objects on the overlap window may be displayed visible in the background of video window.
- (4) When video window is displayed, if arrangement setting (base screen/overlap window1) is changed, the video window may be closed temporarily and it will be opened at the specified position (base screen/overlap window1).

5 Full mode

In full mode, the image taken by video camera will be displayed on GOT as it is.
When full mode is applied, up to 4 screens can be displayed simultaneously on a video window.
The image can be switched to other one on one video screen by switching the channel No.



(1) Resolution (number of valid pixels) and display size

In full mode, image can be displayed in 720×480 dots or 640×480 dots. And the size of each image can be changed in 3 levels (100%, 50% and 25%).

| Display size | Resolution of 720×480 dots | Resolution of 640×480 dots |
|--------------|-------------------------------------|-------------------------------------|
| 100% | 720×480 dots | 640×480 dots |
| 50% | 360×240 dots | 320×240 dots |
| 25% | 180×120 dots | 160×120 dots |

*1 The resolution is based on the same setting as channel.

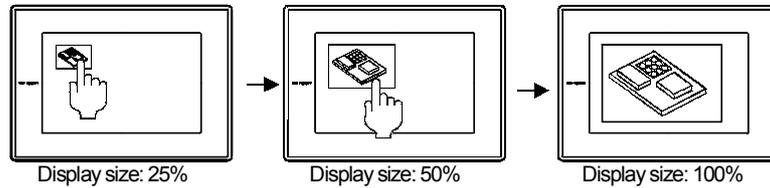
(2) Change display size

The video window size can be changed by the following methods.

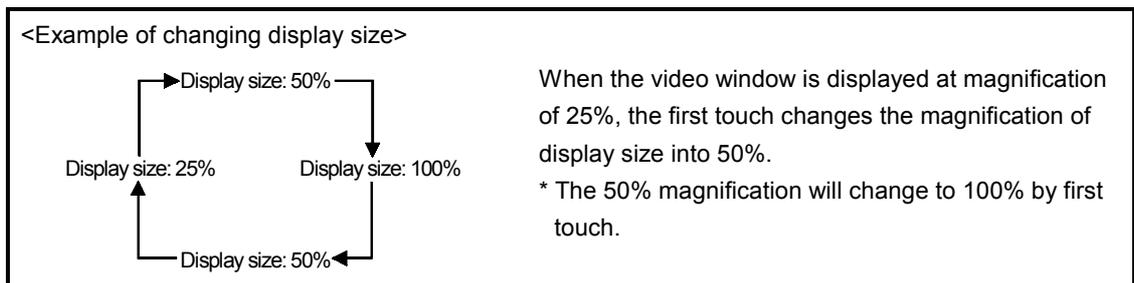
(a) Change by touching video window

(Size change by touching can be disabled by turning [Video/RGB Common] device b4 ON.

(Refer to Section 4.6.1 (2))

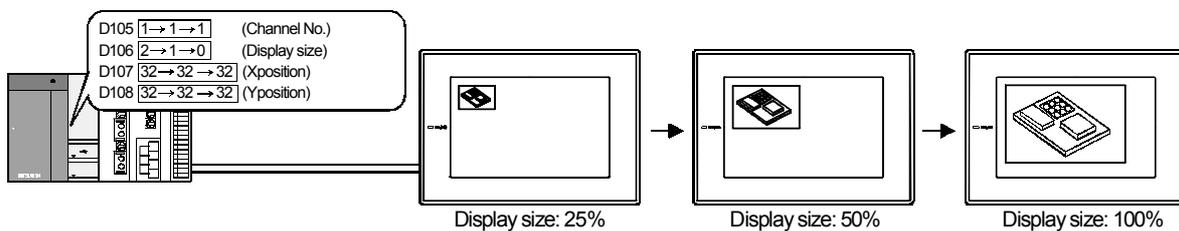


When video window display size is changed by touching, the window will change as follows.



(b) Change by writing value to the display size device

(The magnification will differ according to the written value ...0: 100% 1: 50% 2: 25%)

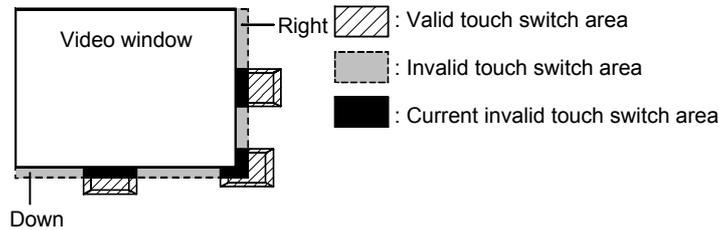


(3) Display of multiple video windows

- (a) The most lately displayed video window is located in the front.
- (b) The video window, of which display position or size is changed, will be located in the front.
- (c) As for overlapped video windows, the hidden one will be brought to the front by touching.
- (d) If it is intended to display the image of the same channel on multiple video windows, it will be displayed on the currently specified video window only.
Other video windows will be displayed in blue.

(4) Invalid area of the touch switch around video window

According to the size of displayed video window, the following areas are invalid for touch switches.



| Display size | Resolution 720 × 480 dots | Resolution 640 × 480 dots |
|--------------|---|---|
| 100% | 720 × 480 dots (No invalid area) | 640 × 480 dots (No invalid area) |
| 50% | 360 × 240 dots (Invalid area Right: 8 dots) | 320 × 240 dots (No invalid area) |
| 25% | 180 × 120 dots (Invalid area Right: 12 dots, Down: 8 dots) | 160 × 120 dots (Invalid area Down: 8 dots) |

Point

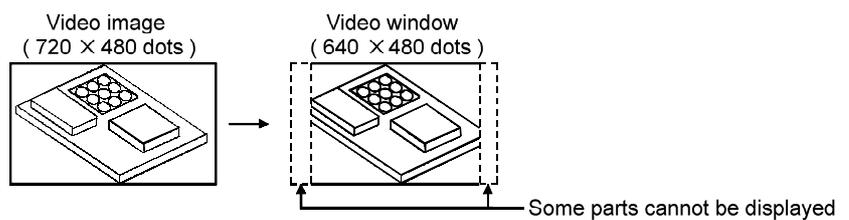
Cautions for full mode

- When returning the display size to the video window display size by touch operation, the display position will be returned to the video window display position.
- Confirm that the resolution of video image input from video camera is the same as that of video window display on GOT.
If the resolution of video image is different from that of video window, the following problems occur.

(Example 1)

Resolution of video image : 720 × 480 dots

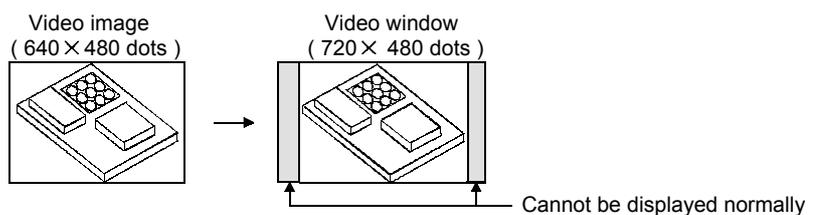
Resolution of video window: 640 × 480 dots



(Example 2)

Resolution of video image : 640 × 480 dots

Resolution of video window: 720 × 480 dots



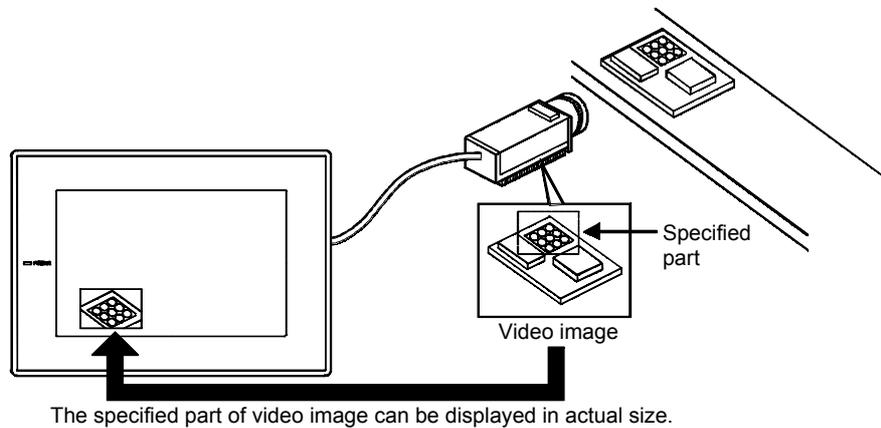
For the method of selecting video window resolution, refer to Section 4.1.6.

6 Clip mode

This mode is used to specify one part (clip area) of the image taken by video camera to display it in actual size on GOT.

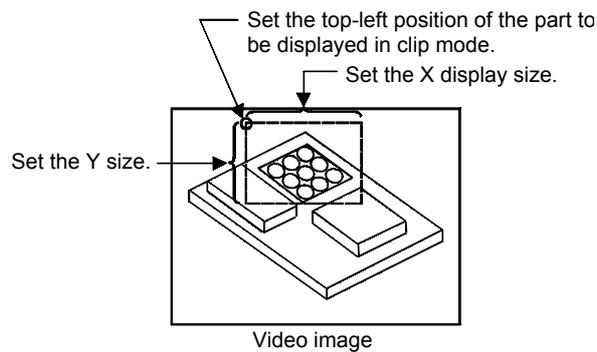
With this mode, the image can be displayed in actual size on the reduced display area of video window.

It is applicable for video window 1; inapplicable for video window 2 to 4.



(1) Select clip area

When setting the clip area, specify the top-left position to be displayed on the video image, and Y (64 to 720 dots) and X (64 to 480 dots) size.



Point

Operations of video window 2 to 4 in clip mode

(1) Switched from "Full mode" to "Clip mode"

If full mode is switched to clip mode while video windows 2 to 4 are all opened, these windows will be erased forcibly.

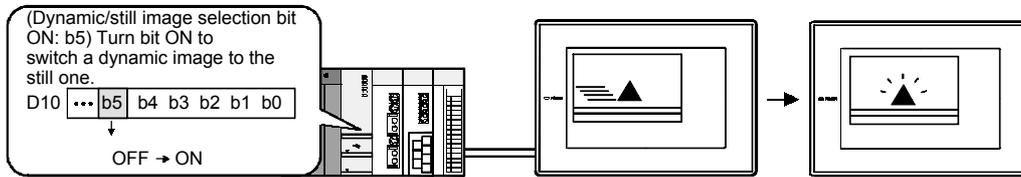
(2) Switched from "Clip mode" to "Full mode"

If clip mode is switched to full mode, video windows 2 to 4 will be displayed based on the set channel No., display position and display size.

7 Still image

The video image displayed in full mode and clip mode can be switched to still image.

When displaying multiple video windows in full mode, all the screens are switched to still image.



Point

Cautions for using still image

(1) Invalid operations for still image

The following operations are invalid for still image.

To validate the operations, switch to animated image at first.

- Change of video window channel
- Change of display position
- Video window display
- Size change
- Erase of video window

(2) Video window on overlap window

Make sure not to move the overlap window, when the video window image arranged on the overlap window is set to still image.

Otherwise, the video image will not be displayed.

(3) When GOT is powered ON

When still image (when animated/still image selection bit is ON) is used, make sure not to power the GOT ON.

If powered ON, the video image will not be displayed.

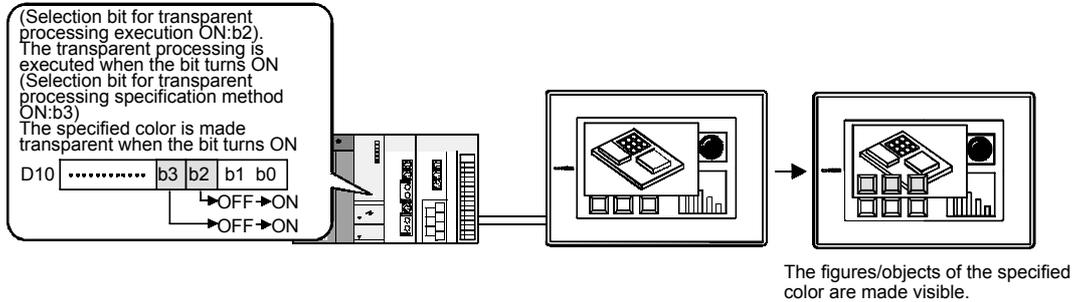
8

Transparent processing

Specify the thru color to display the objects and shapes under the video window.

There are two processing methods: [Other Color Transparent] and [Specified Color Transparent].

When multiple video windows are displayed, all the windows execute transparent processing.



(Example)

| Selection bit for Thru color specification method: b3 | Thru color | Display |
|---|------------|--|
| OFF (make other color transparent) | 0 (Black) | The shape and object of color other than black are visible on video window |
| ON (make the specified color transparent) | 0 (Black) | Black shape and object are visible on video window |

Point

When video window is arranged on overlap window

When video window is arranged on overlap window, even if the transparent processing selecting bit (b2) is OFF, the transparent processing will be executed automatically.

Hint!

Touch switch and numerical/ASCII input under the video window

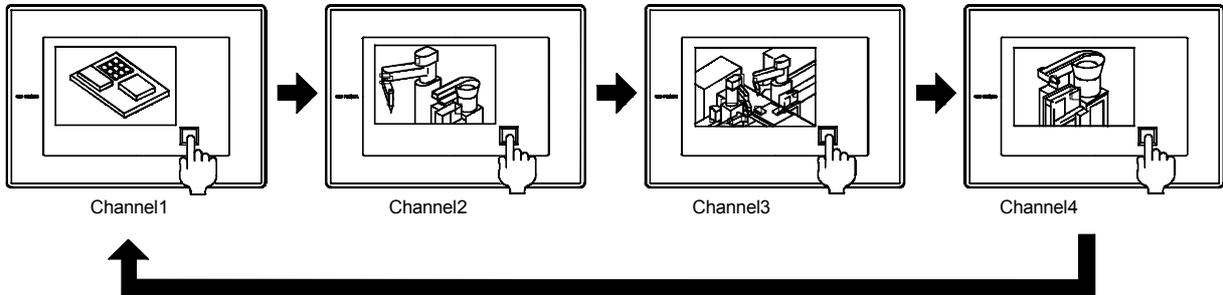
By executing the transparent processing, touch switch and numerical/ASCII input function under the video window will be usable.

9 Application example of video window

The following are examples of using video window.

(1) Switching channel by touch switch

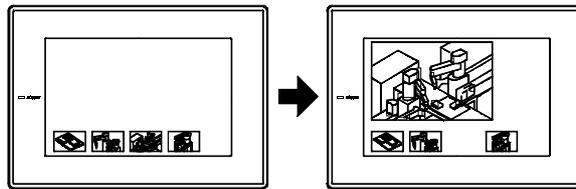
The channel on overlap window1 is switched whenever the touch switch is touched.



| Device | Setting | Device | Setting | Device | Setting |
|--------|--------------------------------------|--------|---|--------|-------------------|
| D100 | Set video input signal (NTSC or PAL) | D106 | 1 → 2 → 3 → 4 → 1..Repeat (Channel No.) | D108 | 32 (X-coordinate) |
| | | D107 | 0 (size) | D109 | 32 (Y-coordinate) |

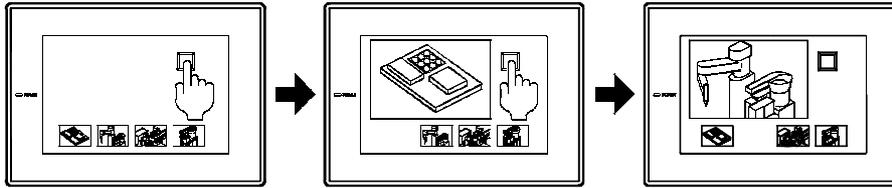
(2) Enlarging screen as necessary

(a) Display the windows in small size at the bottom of screen usually, and enlarge them as necessary. (The size can be changed by sequence program or touch switch)



| Device | Setting | Device | Setting | Device | Setting |
|--------|--------------------------------------|--------|--------------------|--------|-------------------------|
| D100 | Set video input signal (NTSC or PAL) | D106 | 1 (Channel No.) | D114 | 3 (Channel No.) |
| | | D107 | 2 (Size) | D115 | 2 → 0 (Size) |
| | | D108 | 32 (X-coordinate) | D116 | 384 → 32 (X-coordinate) |
| | | D109 | 480 (Y-coordinate) | D117 | 480 → 0 (Y-coordinate) |
| | | D110 | 2 (Channel No.) | D118 | 4 (Channel No.) |
| | | D111 | 2 (Size) | D119 | 2 (Size) |
| | | D112 | 208 (X-coordinate) | D120 | 560 (X-coordinate) |
| | | D113 | 480 (Y-coordinate) | D121 | 480 (Y-coordinate) |

(b) Display windows in small size at the bottom of screen, and enlarge them in order as necessary. (The size can be enlarged by touch switch or script)

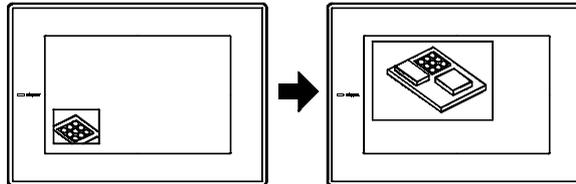


| Device | Setting | Device | Setting | Device | Setting |
|--------|--------------------------------------|--------|-------------------------------|--------|--------------------|
| D100 | Set video input signal (NTSC or PAL) | D106 | 1 (Channel No.) | D114 | 3 (Channel No.) |
| | | D107 | 2 → 0 → 2 (Size) | D115 | 2 (Size) |
| | | D108 | 32 → 32 → 32 (X-coordinate) | D116 | 384 (X-coordinate) |
| | | D109 | 480 → 0 → 480 (Y-coordinate) | D117 | 480 (Y-coordinate) |
| | | D110 | 2 (Channel No.) | D118 | 4 (Channel No.) |
| | | D111 | 2 → 2 → 0 (Size) | D119 | 2 (Size) |
| | | D112 | 208 → 208 → 32 (X-coordinate) | D120 | 560 (X-coordinate) |
| | | D113 | 208 → 480 → 0 (Y-coordinate) | D121 | 480 (Y-coordinate) |

Create the script that repeats the following operations whenever the touch switch is touched.

- 1) Window1 Small → Big
- 2) Window2 Big → Small
Window2 Small → Big
- 3) Window3 Big → Small
Window3 Small → Big

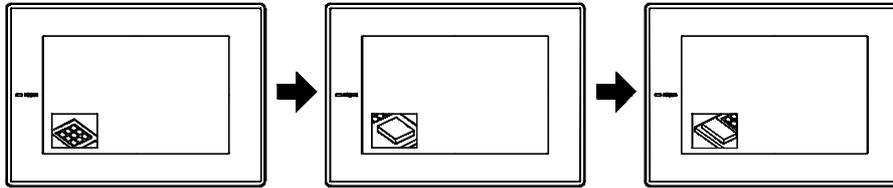
(c) Display only one part of video image at the bottom of screen usually, and display the whole video image as necessary. (The full mode and clip mode can be switched by sequence program or touch switch)



| Device | Setting | Device | Setting | Device | Setting |
|--------|---|--------|------------------------|--------|-------------------------|
| D100 | Full mode/Clip mode selection D100.b0 ON → OFF | D101 | 70 (Clip X-coordinate) | D105 | 1 (Channel No.) |
| | | D102 | 50 (Clip Y-coordinate) | D106 | 0 (Size) |
| | | D103 | 256 (Clip width) | D107 | 32 (X-coordinate) |
| | | D104 | 256 (Clip height) | D108 | 400 → 32 (Y-coordinate) |

(3) Changing display target part of video image

Display the specified part of video image at the bottom of screen usually, and change the display target part as necessary. (The X/Y-coordinate used in clip mode can be changed by sequence program or touch)



| Device | Setting | Device | Setting | Device | Setting |
|--------|------------------|--------|-------------------------------------|--------|--------------------|
| D100 | Select clip mode | D101 | 70 → 90 → 80 (Clip X-coordinate) | D105 | 1 (Channel No.) |
| | | D102 | 50 → 60 → 20 (Clip Y-coordinate) | D106 | 0 (Size) |
| | | D103 | 256 (Clip width) | D107 | 112 (X-coordinate) |
| | | D104 | 256 (Clip height) | D108 | 112 (Y-coordinate) |

5.39.1 Settings

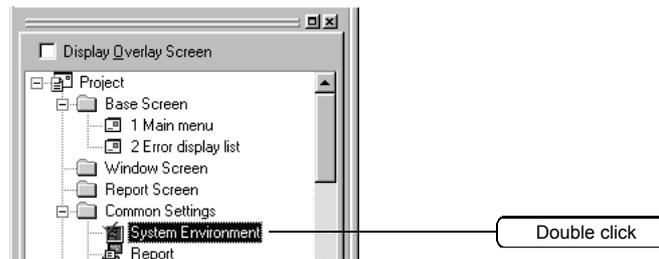
- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 Select [Video/RGB] on the system environment dialog box.
- 3 As the setting dialog box is displayed, make the setting according to the following explanation.



Remark

Setting in project workplace

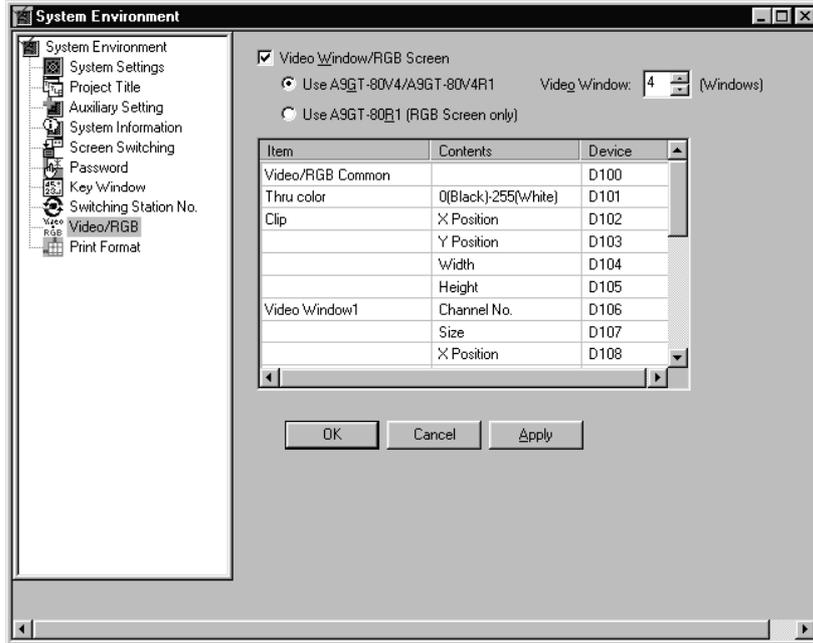
Double click on [System Environment] to display the system environment dialog box. And then, double click on Video/RGB.



5.39.2 Setting items of video

Set the device used for video.

This dialog box is common to Video/RGB.



| Items | Description | A | F |
|-------------------------|--|---|---|
| Video window/RGB Screen | <p>Check this item to use video window or RGB screen.</p> <p>In the case of A9GT-80V4/ A9GT-80V4R1: Check this item to use video window only or use both video window and RGB screen. Then, set the number of video windows to be video-displayed.</p> <p>In the case of A9GT-80R1 (specific for RGB screen) Check this item to use RGB screen.</p> | ○ | × |
| Video/RGB | <p>Set the device that displays video window/RGB screen.</p> <p>If video/RGB common device is set, the devices will be set in the following items automatically.</p> <p>(When [Use A9GT-80R1 (RGB Screen Only)] is selected, only video/RGB common device is set)</p> <p>The value of the device used for displaying video/RGB screen is handled as 16-bit binary value.</p> <p>For the details about Video/RGB setting list, refer to 1 and 2 in this item.</p> | ○ | × |

1 Device setting items of GT Designer2

Following table explains the device setting items in video/RGB setting list.

| Items | Description | Settings |
|---------------------|--------------------------|--|
| Video/RGB Common *1 | — | This device is to control video window and RGB screen operation. (Refer to 2 for details of the device) |
| Thru Color | 0 (Black)—255 (White) | Specify color when executing transparent processing. |
| Clip | X position | Specify the X-coordinate to display video image in clip mode |
| | Y position | Specify the Y-coordinate to display video image in clip mode |
| | Width | Specify the width of clip image |
| | Height | Specify the height of clip image |
| Video Window1 *2 | Channel No. | Specify the channel No. to be displayed in video window1. (0 to 4) |
| | Size *3 | Specify the size of video window. (0: 100% display, 1: 50% display, 2: 25% display) |
| | X position | Specify the X-coordinate to be displayed on video window |
| | Y position | Specify the Y-coordinate to be displayed on video window |

*1 When displaying RGB screen, the settings other than [Video/RGB Common] device are not required.

*2 Set video window 2 to 4 for multiple video windows setting. (The settings are the same as video window1.)

*3 When the display size is changed by touching video window, the set device value will not be changed.

2 Setting items of [Video/RGB Common] device

The following information will be stored in the device specified in [Video/RGB Common].
Control the operation of video window/RGB screen by turning each bit device ON/OFF.

The settings for video window are common to video window 1 to 4.

| Bit position | Description | Bit status | Remarks |
|--------------|---|---|--|
| b0 | Full/Clip mode selection | ON : Select clip mode OFF: Select full mode | Valid when displaying video window Changeable when video window is displayed |
| b1 | Video window arrangement screen selection | ON : Select overlap window1 OFF: Select base screen | Execute transparent processing automatically when b1 turns ON |
| b2 | Transparent processing selection | ON : Execute transparent processing OFF: Do not execute transparent processing |  Section 5.36  Transparent processing |
| b3 | Thru color specifying method selection | ON : Make specified color transparent OFF: Make other color transparent | |
| b4 | Select whether to change/keep display size when touching video window | ON : Do not change size OFF: Change size | Valid when opening video window Changeable when video window is displayed |
| b5 | Animated/still image selection *1 | ON : Still image OFF: Animated image |  Section 5.36  Still image |
| b6 | Display priority selection of video windows | ON : Display video window in front of overlap window and test window OFF: Display video window behind the overlap window and test window | Valid when video window is opened Changeable when video window is displayed |
| b7 | Disabled | — | — |
| b8 | Video input signal (type) selection | ON : Input by PAL OFF: Input by NTSC | Valid when opening video window is displayed for the first time after GOT power is turned ON Unchangeable after the above operation |
| b9 | Video image resolution selection | ON : Select 720 × 480 dots OFF: Select 640 × 480 dots | Valid when video window is displayed for the first time after GOT power is turned ON Unchangeable after the above operation |
| b10 to b14 | Disabled | — | — |
| b15 | Display/hide RGB screen *2 | ON : Display RGB screen OFF: Display GOT monitor screen |  Section 5.37 RGB |

*1 When it is ON with other bits, the operations of other bits will not be reflected. (b5 has a higher priority than other bits)

*2 When the screens of utility function, system monitor function, ladder monitor function, special function module monitor function, network monitor function and list editor function are displayed on GOT, they cannot be switched to the RGB screen even if the bit turns ON.

Switch to the RGB screen after all the functions are completed.

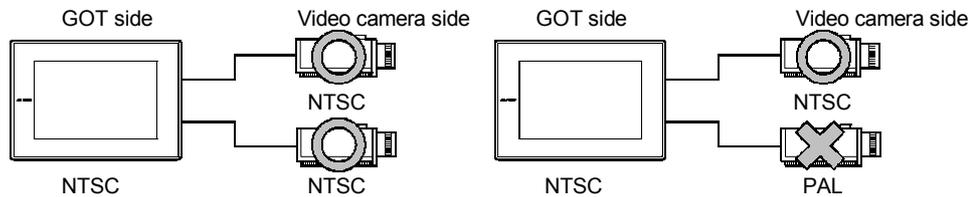
5.39.3 Cautions

This section provides the cautions for using video function.

1 Cautions for drawing

- (1) The number of video function objects that can be set.
Only one object can be set for one project.
- (2) Cautions for setting
 - (a) Objects cannot be arranged on video window
 - (b) When using multiple video cameras, make the same video signal (NTSC/PAL) setting for them.
If the video signal is different from that specified in GOT, the video image may not be displayed correctly.

Example)



2 Cautions for hardware

- (1) Required extended device
To use video function, the following device is required.

| GOT | Required device |
|-----------|---|
| A985GOT-V | Video input interface module Video/RGB hybrid interface module |

3 Cautions for use

- (1) Display video image
If cable is disconnected or camera is powered OFF and video signal is not input to the specified channel, video image cannot be displayed. (Video window area is displayed in blue.)

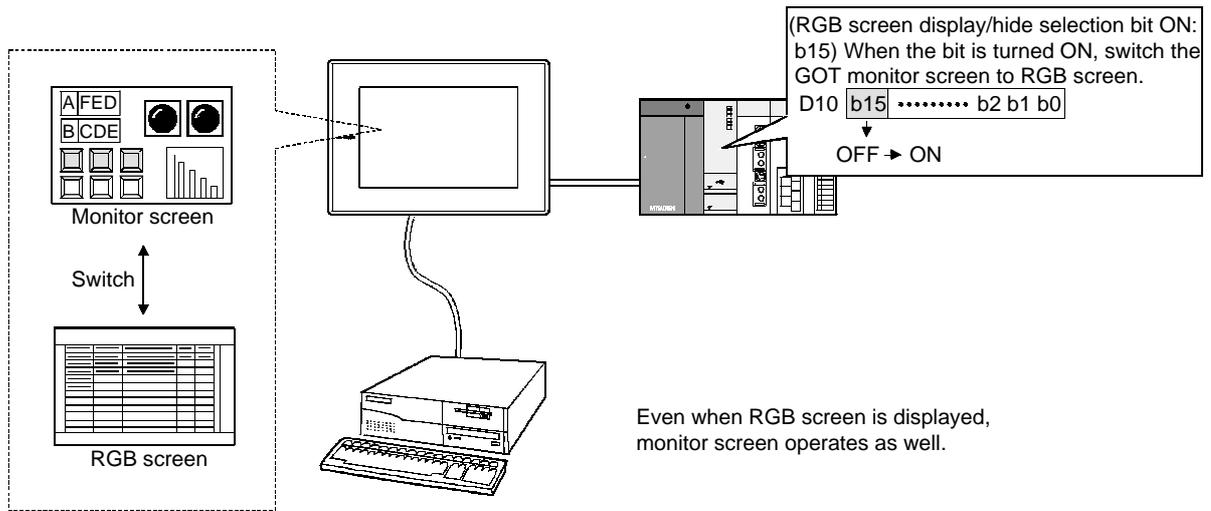
5.40 RGB



This function is used to display PC screen on GOT.
 When using RGB screen, select SVGA (800 × 600 dots) or VGA (640 × 480 dots).

1 Method of displaying RGB screen

RGB screen is switched to/from GOT monitor screen on PC according to the ON/OFF status of RGB screen display/hide selection bit (the bit device within word device).
 (GOT monitor screen and RGB screen cannot be displayed simultaneously.)

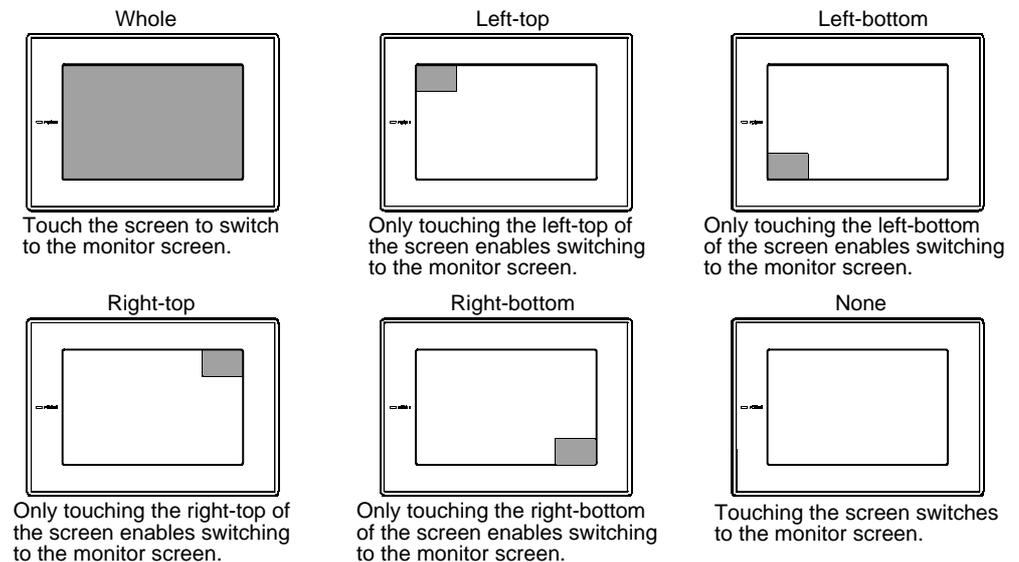


(1) Method of switching the RGB screen to the monitor screen

The monitor screen can be called by touching RGB screen.
 Select the valid touch area within the GOT utility.
 Refer to the following manual for GOT utility



GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 Compatible Extended · Option Functions Manual)



(2) Cautions for switching to GOT monitor screen by touching RGB screen

When switching to GOT monitor screen by touching RGB screen, the selection bit status of RGB screen display/hide will not turned OFF.

This keeps the selection bit of RGB screen display/hide ON, and RGB screen cannot be called.

Therefore, when switching to GOT monitor screen by touching RGB screen, make sure to turn OFF the selection bit of RGB screen display/hide.

Using the script function enables the selection bit status of RGB screen display/hide to turn OFF, when the RGB screen is switched to the GOT monitor screen by touching the screen.

The following shows the setting of the above mentioned script function.

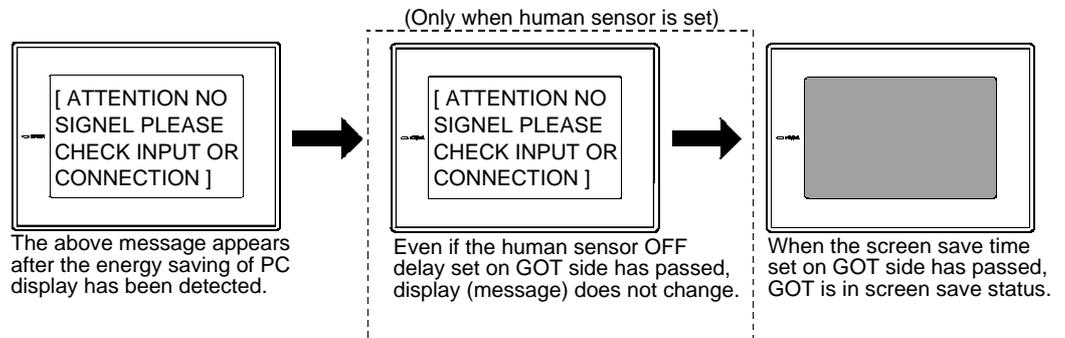
| Setting items | Setting data |
|---------------------------------|--|
| Screen switching device setting | Video/RGB common device: D100 (RGB screen display/hide selection bit: D100. b15) |
| System information setting | Write device: set 15 devices starting from D33 |
| Script function setting | Type : Project script |
| | Trigger : Ordinary |
| | Data type : 16-bit signed BIN |
| | Script description: <pre> if(([[b:D100.b15]==ON) //If the selection bit of RGB screen display/hide is ON &&[[w:D35]==1)){ //And the base screen No. storage area of system information is -1 (RGB screen) [b:TMP0000.b0]=ON; //Turn ON the flag displayed on RGB screen. } else{ if([[b:TMP0000.b0]=ON]{ //When switching the RGB screen to the monitor screen [b:D100.b15]=OFF; //Turn OFF the selection bit of RGB screen display/hide [b:TMP0000.b0]=OFF; //Turn OFF the flag displayed on RGB screen } } </pre> |

2 The screen save of RGB screen

When RGB screen is displayed, GOT screen save function will operate after energy saving function of PC monitor.

While energy saving function of PC monitor is not active, screen save function is disabled even if it has been set for GOT.

Execute RGB screen save is executed as follows.



<Relation between PC status and validity of GOT screen save>

| PC status | Validity of GOT screen save |
|---|---|
| PC screen | Invalid (It is still PC screen) |
| Screen save action | |
| Energy saving function operation of the display | Valid (PC screen → Above message → GOT screen save status) |

Remark

(1) Screen save operation during monitoring

Screen save function operates when GOT monitor screen is displayed. Energy saving function of PC display is not relevant.

For the details of GOT screen save function, refer to GOT-A900 series Operating Manual (GT Works2 Version1/GT Designer2 Version1 Compatible Extended · Option Functions Manual).

(2) No RGB signal is input to GOT

When no RGB signal is input to GOT due to cable disconnection or other accident, the same screen as the energy saving PC display appears on the GOT display.

3 VGA Display

When using VGA (640 × 480 dots) for display, since the resolution is different from that of A985GOT-V (800 × 600 dots), the margin parts will be displayed in black.

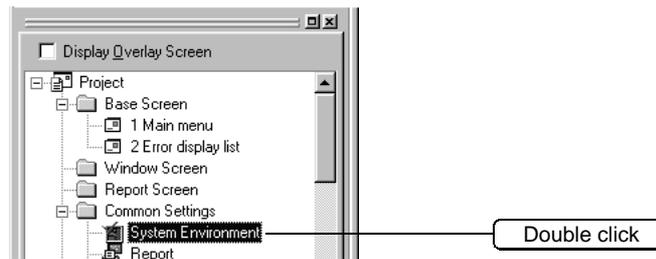
5.40.1 Settings

- 1 Select [Common Settings] → [System Environment] from the menu.
- 2 Select [Video/RGB] from the tree on the system environment dialog box.
- 3 As the setting dialog box is displayed, make the setting according to the following explanation.

Remark

Setting in object workplace

Double click on System Environment to display the system environment dialog box.
And then, double click on Video/RGB.



5.40.3 Cautions

This section provides the cautions for using RGB function.

1 Cautions for drawing

- (1) The number of RGB function objects that can be set.
Only one object can be set for each project.

2 Cautions for hardware

- (1) Required extended device

To use RGB function, the following device is required.

| GOT | Required devices |
|-----------|---|
| A985GOT-V | RGB input interface module Video/RGB hybrid interface module |

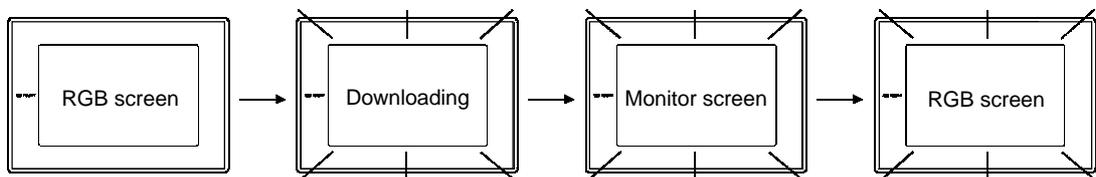
3 Cautions for use

- (1) Offline display

GOT screen is displayed offline (when downloading monitor screen data from GT Designer2)

If bit for RGB control is ON when GOT goes from offline to online, the RGB screen will appear after monitor screen is displayed once.

<Example of screen during download>



- (2) Object function when RGB screen is displayed

All the objects will operate even when RGB screen is displayed.

- (3) Hard copy function when RGB screen is displayed

Even though the hard copy function is used when RGB screen is displayed, printing RGB screen or storing BMP file to PC card is disabled.

(When hard copy is executed, the message, ATTENTION NO SIGNAL PLEASE CHECK INPUT OR CONNECTION will be hard-copied.)

(3) Expanded applicable fields

- (a) The date is calculated by entering the start date (month, day and year) and the duration (number of days) after that date.

What is the date 345 days after May 20, 2000? → April 30, 2001

- (b) The day of the week is calculated by entering the corresponding date (month, day and year).

Which day of the week falls on February 21, 1961? → Tuesday

3 Easy programming language

Script can be created with entry-level programming knowledge, as it is C language-like program.

4 Compatibility with commercially-available programming editors

Commercially-available text editors (e.g. Microsoft® Windows® -standard memo pad, Wordpad) are applicable for programming to improve program productivity.

5 Execution condition selectable for each script

Any of various conditions (any time, periodic, bit OFF to ON/ON to OFF, during bit ON/OFF, periodic during bit ON/OFF) can be selected as a trigger to execute each script, which enables script execution scheduling.

6 Fully useful debugging functions

Since a script is C language-like program, the general C language compiler or debugger (e.g. Microsoft® Visual C++) can be used for its simulation by making slight corrections. This is effective for debugging a complicated script that includes many control statements.

The system monitor function is useful for hardware debugging using GOT.

The test and device monitor functions are available to check conditional branching in a script. By monitoring the GOT special registers (GS), error information and a script in execution can be easily confirmed.

7 Check the validity of the syntax for the created scripts

The validity of the syntax for the created scripts can be checked using GT Designer2 before executing on GOT, which increases the programming efficiency.

8 The script language created on Digital package is convertible

It is possible to convert the script language (D script/global D script) created on Digital package "GP-PRO/PBIII for Windows 95 (Ver. 3.0)" in order to operate it on GOT.



- (1) Execution condition setting and syntax validity check

Make "execution condition setting" and "syntax validity check" on GT Designer2 at the time of monitor screen creation.

For details, refer to the following.

 Section 5.32 Script Function

- (2) Converting script language created on Digital package

Convert the script language created on Digital package using GT Converter. Refer to the GT Converter help for details on convertible data and converting method.

6.1.2 Cautions for Use

This section provides the cautions required for using script function.

1 Applicable range of the script functions

Since script functions are designed to control the GOT display, do not use them for machine control that requires the severe timing for execution.

When changing the data within PLC from GOT, create an interlock circuit in a sequence program to ensure that the whole system will operate safely.

2 Stop of the script processing

Any of the following cases disables the corresponding script to be processed, resulting in an error.

- A numerator is divided by a denominator of 0
- A monitor device value cannot be handled as BCD when "16-bit BCD" or "32-bit BCD" is selected as a script data format.
Example) [D0]=[D1]: Current value of D1 is "0x991A"
- An operation result is outside the BCD range when "16-bit BCD" or "32-bit BCD" is selected as a script data format.
Example) 16-bit: Other than 0 to 9999
32-bit: Other than 0 to 99999999
- As the write target device of the while statement, a temporary device area (TMP) is not used but the PLC CPU device or GOT internal device (GD) is used.

For details, refer to the following.

- Applicable data range
 Section 6.2.3 Applicable data and representation methods
- Details of while statement
 Section 6.2.2 Control structure
- Corrective actions to be taken when script processing has stopped
 Section 6.5 Troubleshooting

3 Differences in processing result between data formats

Note that any of the following cases will result in an unintended processing.

- When other than "16-bit BCD" and "32-bit BCD" has been selected as script data format, the constant is described that is outside the selected format range.
- When "16-bit unsigned BIN" or "32-bit unsigned BIN" has been selected as the script data format, the negative constant is described.
- When other than "real number" has been selected as script data format, the constant with a decimal point is described.

For details on data format, refer to the following.

-  Section 6.2.3 Applicable data and representation methods

4 Instructions for monitor device description

Some PLC CPU includes the monitor devices of which Nos. have to be described in the specific number of digits.

Failure to observe this instruction may cause a malfunction.

For details on describing method, refer to the following.

 Section 6.2.3 Applicable data and representation methods

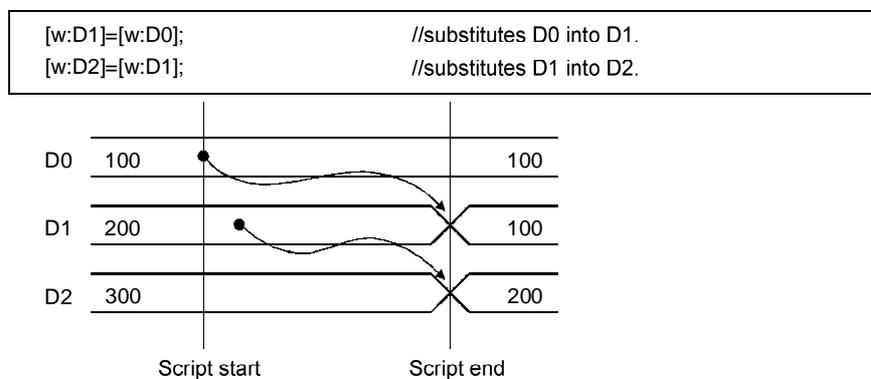
5 Instructions for assignment delay

The script function writes the operation result to the PLC CPU at the end of one script.

Therefore, performing assignment processing as "Example 1" causes a write delay.

Describe a script as "Example 2" and "Example 3" to reduce the frequency of communications with the PLC CPU and avoid influence on monitor processing.

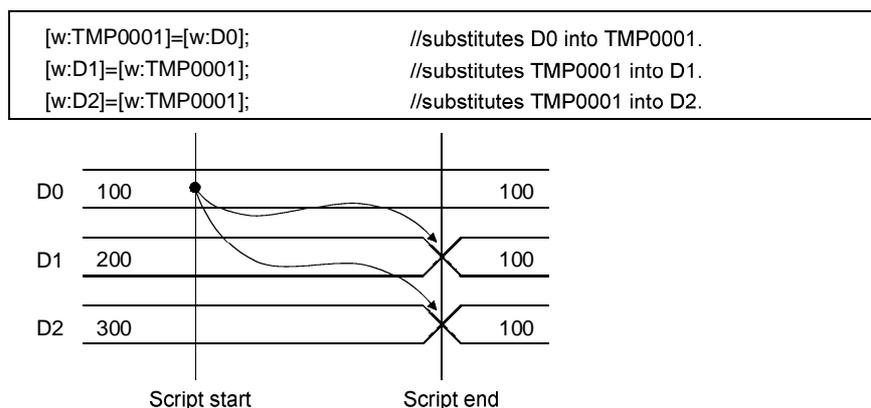
Example 1) Assignment processing using PLC CPU devices



In this script, the D0 value is not reflected on D2 immediately, causing a write delay. This status persists until this script is processed.

Note that using the GOT internal devices (GD, GB) as the assignment devices will give the same result.

Example 2) Assignment processing using temporary device areas



Using the temporary device areas designed for script functions prevents a write delay. For details on temporary device areas, refer to the following.

 Section 6.2.3 Applicable Data and Representation Methods

Example 3) Assignment processing using GOT internal devices (GD, GB)

| | |
|-----------------|----------------------------|
| [w:GD1]=[w:D0]; | //substitutes D0 into GD1 |
| [w:D1]=[w:GD1]; | //substitutes GD1 into D1. |
| [w:D2]=[w:GD1]; | //substitutes GD1 into D2. |

Using GOT internal devices (GD, GB) enables the same processing timing as temporary device areas and prevents a write delay.

When using the GOT internal devices to prevent an assignment delay, cancel the GOT internal device assignment delay in the script setting of GT Designer2.



When GOT internal device is used.

When GOT internal device (GD, GB) assignment delay is cancelled, a link scan will be made on each line including the GOT internal device (GD, GB).

Note that the monitor processing of the GOT may delay when GOT internal devices (GD, GB) are used in many places.

6 Cautions for converting script language created using Digital package

The LS devices described within the script language that is created using Digital package are designed to be free from an assignment delay.

Therefore, when Digital-based script language including LS devices as shown in "Example 1" in (5) is converted, this may result in different operation on GOT.

As shown in "Example 2" in (5), use temporary device areas in Digital-based script language including LS devices to prevent an assignment delay.

6.2 Specifications

This section explains the specifications of the script functions.

6.2.1 Type

Script functions can be classified into following types.

1 Project script function

This type of script operates for the whole project created using GT Designer2. The project script function is always executable during online processing of GOT. A script is executed when its preset execution condition is satisfied. Up to 256 scripts can be set for one project.



Hint!

Project script application

As operating for the whole project, a project script is useful for the following case:
Example) At the same time when the alarm list (system alarm) function detects an error, the troubleshooting screen is displayed automatically.



Point

Cautions for setting project script

The project script monitor devices are always operating. Therefore, note that increasing the number of monitor points will make the monitor screen slower to appear.

2 Screen script function

This type of script operates for each screen created on GT Designer2. The screen script function is executable only while the corresponding screen appears during online processing of GOT. A script is executed when its preset execution condition is satisfied. These scripts can be set on base screens/window screens (superimpose window, overlap window 1, overlap window 2). Screens called by the screen calling function will also be the targets of script processing. However, screens shown by the part display function will not be the target of script processing. Up to 256 scripts can be set for one screen (including the screen called by the screen calling function).



Point

Cautions for setting screen script

Note that increasing the number of screen script monitor device points will make the monitor screen slower to appear.

6.2.2 Control structure

This section explains the control structure of the script functions.

The following commands (control statements, operators, functions, etc.) are used to program scripts.

Nesting is allowed in if, while and switch statements.

A return statement is used to end a script.

| Item | Command | Description |
|-------------------|------------------------------------|--|
| Control statement | if | <p>[Statement example] if(conditional expression){set of expressions}</p> <p>[Function]</p> <p>[Point]</p> <p>Exercises judgment control. Evaluates the (conditional expression), and if its result is true (other than 0), executes the {set of expressions}. An if statement is the most basic judgment control, which is used to perform specific processing for a given value or to change a program sequence.</p> |
| | if to else | <p>[Statement example] if(conditional expression){set of expressions 1}else{set of expressions 2}</p> <p>[Function]</p> <p>[Point]</p> <p>Exercises judgment control. Evaluates the (conditional expression), and if its result is true (other than 0), executes the {set of expressions 1}, or if false (0), executes the {set of expressions 2}. An if statement is the most basic judgment control, which is used to perform specific processing for a given value or to change a program sequence.</p> |
| | while | <p>[Statement example] while(continuous conditional expression){set of expressions}</p> <p>[Function]</p> <p>[Point] specific</p> <p>Evaluates the (continuous conditional expression), and if its result is true (other than 0), repeats execution of the {set of expressions}. If the "continuous conditional expression" is false (0), escapes from the while statement without execution.</p> <ul style="list-style-type: none"> ● A while statement is used to perform given processing for up to a purpose. (For example, waiting for touch key input) Making the continuous conditional expression always true (other than 0) results in an infinite loop. ● A temporary device area must be used as the write target device. |
| | switch case default break | <p>[Statement example] switch(term) { case constant: set of expressions;break; case constant: set of expressions; break; default: set of expressions; }</p> <p>[Function]</p> <p>[Point]</p> <p>Creates a control statement using four reserved words of switch, case, break and default. In either of the following cases, executes the "sets of expressions" following the case and default statements.</p> <ul style="list-style-type: none"> ● The (term) value matches the "constant" ● It does not match the case statement and there is a default statement <p>In either of the following cases, escapes from { } of switch without execution.</p> <ul style="list-style-type: none"> ● There is a break statement within a script ● There are no case statements including the "constants" corresponding to the (term) and no default statement. <p>Note that there may be no break and default statements in the control statement.</p> <p>The switch statement is used when a given variable value requires different processings to be performed.</p> |
| | return | <p>[Statement example] return;</p> <p>[Function]</p> <p>[Point]</p> <p>Ends a script. A single script can have multiple returns.</p> |
| | ; | <p>[Statement example] ;</p> <p>[Function]</p> <p>Represents the end of a single statement. This symbol is necessary at the end of a single statement.</p> |

| Item | Command | | Description |
|----------|------------|----|---|
| Operator | Logical | && | [Statement example] if ((relational operation expression)&&(relational operation expression)){.....} [Function] If two (relational operation expressions) are both true, resulting in 1; if either is false, resulting in 0. (Logical AND operator) |
| | | | [Statement example] if ((relational operation expression) (relational operation expression)){.....} [Function] If either of relational operation expressions is true, resulting in 1; if both are false, resulting in 0. (Logical OR operator) |
| | | ! | [Statement example] if (!(relational operation expression)){.....} [Function] If the relational operation expression is 0, resulting in 1; otherwise, resulting in 0. (Logical NOT operator) |
| | Relational | < | [Statement example] <Term 1> < <term 2> [Function] <Term 1> is less than <term 2>. (Left inequality operator) |
| | | <= | [Statement example] <Term 1> <= <term 2> [Function] <Term 1> is less than or equal to <term 2>. (Equivalence left inequality operator) |
| | | > | [Statement example] <Term 1> > <term 2> [Function] <Term 1> is greater than <term 2>. (Right inequality operator) |
| | | >= | [Statement example] <Term 1> >= <term 2> [Function] <Term 1> is greater than or equal to <term 2>. (Equivalence right inequality operator) |
| | | != | [Statement example] <Term 1> != <term 2> [Function] <Term 1> is not equal to <term 2>. (Non-equivalence operator) |
| | | == | [Statement example] <Term 1> == <term 2> [Function] <Term 1> is equal to <term 2>. (Equivalence operator) |
| | Arithmetic | + | [Statement example] <Term> + <factor> [Function] Adds <factor> to <term>. (Addition operator) |
| | | - | [Statement example] <Term> - <factor> [Function] Subtracts <factor> from <term>. (Subtraction operator) |
| | | * | [Statement example] <Term> * <factor> [Function] Multiplies <term> by <factor>. (Multiplication operator) |
| | | / | [Statement example] <Term> / <factor> [Function] Divides <term> by <factor>. (Division operator) [Point] If <factor> is 0, script operation stops. |
| | | % | [Statement example] <Term> % <factor> [Function] Finds a remainder derived from division of <term> by <factor>. (Remainder operator) [Point] If <factor> is 0, script operation stops. |
| | Bit device | & | [Statement example] <Term> & <factor> [Function] Finds the logical product (AND) of <term> and <factor>. (Bit accumulation operator) |
| | | | [Statement example] <Term> <factor> [Function] Finds the logical add (OR) of <term> and <factor>. (Bit addition operator) |

| Item | Command | | Description |
|----------|----------------------------------|------|--|
| Operator | Bit device | ~ | [Statement example] ~ <bit> [Function] Negates (inverts) <bit>. (Complement operator) |
| | | ^ | [Statement example] <Term> ^ <factor> [Function] Finds the exclusive logical add (XOR) of <term> and <factor>. (Bit difference operator) |
| | | << | [Statement example] <Term> << <factor> [Function] Shifts <term> to the left by <factor>. (Left shift operator) |
| | | >> | [Statement example] <Term> >> <factor> [Function] Shifts <term> to the right by <factor>. (Right shift operator) |
| | Assignment | = | [Statement example] <Device> = <term> [Function] Stores <term> into <device>. (Assignment operator) |
| Operator | Device operation | set | [Statement example] set(<bit device>) [Function] SETs <bit device>. |
| | | rst | [Statement example] rst(<bit device>) [Function] RSTs <bit device>. |
| | | alt | [Statement example] alt(<bit device>) [Function] Inverts <bit device>. |
| | Continuous device operation | bmov | [Statement example] bmov(<word device 1>, <word device 2>, <integer>) [Function] Batch-transfers the number of devices specified at <integer>, starting from <word device 1>, to the number of devices specified at <integer>, starting from <word device 2>. |
| | | fmov | [Statement example] fmov(<word device 1>, <word device 2>, <integer>) [Function] Transfers <word device 1> to the number of devices specified at <integer>, starting from <word device 2>. |
| Function | Application arithmetic operation | sin | [Statement example] sin(<word device or constant>) [Function] Calculates the sine of the specified <word device or constant>. (Sine) |
| | | cos | [Statement example] cos(<word device or constant>) [Function] Calculates the cosine of the specified <word device or constant>. (Cosine) |
| | | tan | [Statement example] tan(<word device or constant>) [Function] Calculates the tangent of the specified <word device or constant>. (Tangent) |
| | | asin | [Statement example] asin(<word device or constant>) [Function] Calculates the arcsine of <word device or constant>. (Arcsine) |
| | | acos | [Statement example] acos(<word device or constant>) [Function] Calculates the arccosine of <word device or constant>. (Arccosine) |
| | | atan | [Statement example] atan(<word device or constant>) [Function] Calculates the arctangent of <word device or constant>. (Arctangent) |
| | | abs | [Statement example] abs(<word device or constant>) [Function] Calculates the absolute value of <word device or constant>. (Absolute value) |

| Item | Command | | Description |
|----------|----------------------------------|-------|---|
| Function | Application arithmetic operation | log | [Statement example] log(<word device or constant> [Function] Calculates the power (base e) of <word device or constant>. (Natural logarithm) |
| | | log10 | [Statement example] log10(<word device or constant> [Function] Calculates the logarithm (base 10) of <word device or constant>. (Common logarithm) |
| | | exp | [Statement example] exp(<word device or constant> [Function] Calculates the power (base e) of <word device or constant>. (Exponent) |
| | | 1dexp | [Statement example] 1dexp(<word device 1 or constant 1>, <word device 2 or constant 2> [Function] Multiplies <word device 1 or constant 1> by 2 to the power of <word device 2 or constant 2>. (Exponential product) |
| | | sqrt | [Statement example] sqrt (<word device or constant> [Function] Calculates the square root of <word device or constant>. (Square root) |
| Others | Constant | | [Statement example] Constant [Function] Represents a constant (decimal/hexadecimal/BCD/real number). Refer to Section 7.2.3 for details of constants. |
| | Device and temporary device area | | [Statement example] [Device type: device No.] [Function] Represents a PLC CPU device, GOT internal device or temporary device area. Refer to Section 7.2.3 for details of the devices and temporary device area. |
| | Comment | // | [Statement example] //(comment) [Function] A comment for a script can be described in (comment). |

6.2.3 Applicable data and representation methods

1 Script data formats

Any of the following seven different data formats can be selected for the script functions.

Note that the selected data format is fixed for each script.

Select the data format using GT Designer2 when the monitor screen is created.

- 16-bit, signed BIN
- 16-bit, unsigned BIN
- 32-bit, signed BIN
- 32-bit, unsigned BIN
- 16-bit BCD
- 32-bit BCD
- 32-bit real number



Hint!

To operate different types of data

Device value of integral number can be calculated as real number by using integral number ↔ real number conversion function for each script.

This section  Integral number ↔ real number conversion function.

2 Applicable constants and representation methods

The following four different constants are applicable for the script functions.

| Constant | Representation Method |
|--------------------|-----------------------|
| Decimal number | 124 |
| Hexadecimal number | 0xFF12, 0x14AC67F1 |
| Real number | 32.124, 3.2124e + 10 |
| BCD | 344 |

Note that the data format of each script determines the applicable constants and data ranges as shown below.

| Data Format | Usable Constant | Applicable Data Range |
|----------------------|--------------------|---------------------------|
| 16-bit, signed BIN | Decimal number | -32768 to 32767 |
| | Hexadecimal number | 0 to 7FFF |
| 16-bit, unsigned BIN | Decimal number | 0 to 65535 |
| | Hexadecimal number | 0 to FFFF |
| 32-bit, signed BIN | Decimal number | -2147483648 to 2147483647 |
| | Hexadecimal number | 0 to 7FFFFFFF |
| 32-bit, unsigned BIN | Decimal number | 0 to 4294967295 |
| | Hexadecimal number | 0 to FFFFFFFF |
| 16-bit BCD | BCD | 0 to 9999 |
| | Hexadecimal number | 0 to 270F |
| 32-bit BCD | BCD | 0 to 99999999 |
| | Hexadecimal number | 0 to 5F5E0FF |
| 32-bit real number | Real number | — |
| | Hexadecimal number | 0 to FFFFFFFF |

3 Applicable devices and representation methods

The devices available for the script functions are the same as those of the other monitor functions. The following table shows the device representations by device type; a station No.-specified device is represented differently from others.

| Device Type | Statement Example | Representation Example |
|---------------------------------|---|------------------------|
| Word device | [w: device No. *2] | [w: D100] |
| Bit device | [b: device No. *2] | [b: X100] |
| Specified bit of word device | [b: device No. *2. bit position] | [b: D100.01] |
| Specified word of bit device | [w: device No. *2] | [w: X100] |
| Station No.-specified device *1 | [Network No.-station No.: w: device No. *2] | [0-FF: w: D100] |

*1: When the QCPU, QnACPU or ACPUC is used, omitting the network No. and station No. monitors the devices of the host station (0-FF).

*2: Depending on the PLC CPU device monitored, the device No. must be described in the following number of digits.

| PLC CPU | Device Name | Number of Described Digits (Digits) | | Representation Example | Remarks |
|-------------------|--------------------|-------------------------------------|---------------|------------------------------|--|
| | | Word specified | Bit specified | | |
| OMRON PLC | .. | — | 2 | [b:..2303] | As the channel + relay format is used, the relay part is described in 2 digits. |
| | LR, AR, HR, WR | — | 2 | [b: HR207] | |
| Allen-Bradley PLC | B | 6 | 7 | [w: B000003] [b: MB02343] | The file No. is described in 3 digits, the element No. in 3 digits, and the bit position in 1 digit. |
| | N, TP, TA, CP, CA | 6 | — | [w: N007255] | The file No. is described in 3 digits, and the element No. in 3 digits. |
| | TT, TN, CU, CD, CN | — | 6 | [b: TT004255] | |
| SIEMENS PLC | D | — | 9 | [w: D000100000] | The data block (DB) is described in 4 digits, and the data word (DW) in 5 digits. |



Remark

Devices that can be monitored on the GOT

Devices that can be monitored on the GOT depend on the monitor target PLC CPU.



Section 2.6 Supported Devices

4 Applicable temporary device areas and representation methods

Up to 1024 points of temporary device areas can be used with global variables (double word type) without initial values.

The temporary device area representation changes with the specified device type as indicated below.

| Device Type | Statement Example | Representation Example |
|-------------|---|------------------------|
| Word device | [w: temporary device area No.] | [w:TMP0001] |
| Bit device | [b: temporary device area No. bit position] | [b:TMP1023.01] |

Temporary device areas are used in the following cases.

Example 1) Prevention of a write delay in assignment processing of the PLC CPU (refer to Section 7.1.2)

Example 2) Write target device of while statement (refer to Section 7.2.2)

Example 3) Variable for operation

When assigning a D0 + 1 value to D1 and assigning a D1 + 1 value to D2

```
[w:TMP0001]=[w:D0]+1;           //substitutes D0+1 into TMP0001.
[w:D1]=[w:TMP0001];           //substitutes TMP0001 into D1.
[w:D2]=[w:TMP0001]+1;         //substitutes TMP0001+1 into D2.
```



Temporary device area

The temporary device area is a 32-bit global variable.

Note that a correct value cannot be read in either of the following cases.

- A value is read in the script of which data format is different from that of the script used to write the value to the temporary device area.

(Example) Script A (data format: 16-bit unsigned)

```
[w: TMP0000] = 0x1234;
```

Script B (data format: 32-bit unsigned)

```
[w: GD0000] = [w: TMP0000]
```

- A value is read in the script represented (as word device/bit device) differently from the script used to write the value to the temporary device area.

(Example) Script C (data format: 16-bit unsigned)

```
[w: TMP0000] = 0x3;
```

```
if( [b: TMP0000.b0] == ON {• • •
```

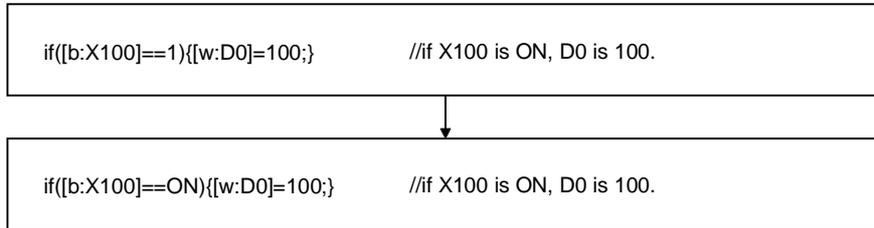
Make sure to write and read a value to and from one temporary device area in the same data format and representation.

5 Representing bit device (system define)

Bit devices can be represented as indicated below.

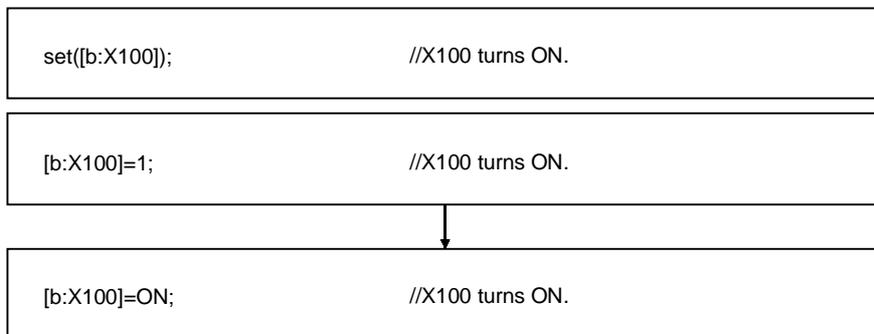
(1) When performing relational operation of bit device

A device value, which is normally represented as "1" or "0", can also be represented as "ON" or "OFF".



(2) When performing assignment processing of bit device

A bit device, which is normally represented by assigning "1" or "0", can be also represented by assigning "ON" or "OFF".



6 Replacing devices and constants (user define)

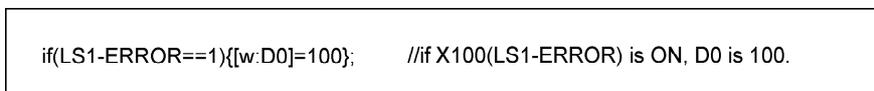
A device or constant used in a script can be replaced with any character string.

Make user define setting in the script symbol setting of GT Designer2.

For details of the setting method, refer to the following.

 Section 5.32 Script Function

Example: When replacing "X100" with "LS1-ERROR" using GT Designer2



7 Device offset

The device offset can be specified.

This specification is allowed only in screen script.

(1) Format

Example: When D200 is 5, store 48 in D105.



(2) Applicable device

(a) Base device

The PLC CPU device, GOT internal device, gateway device, and temporary device area can be specified.

Only word device is applicable. (Word specification by bit device is not applicable)

(b) Offset device

The PLC CPU device, GOT internal device, gateway device, and temporary device area can be specified.

Only word device is applicable. (Word specification by bit device is applicable*)

* Please set device as the multiple of 16.

(3) Example

Switch the parameter according to operation mode.

- D10 : for switching operation mode
- GD500 : base device
- D100 to D900 : for storing parameter value
- TMP100 : offset device

(a) Script 1 (specify parameter value)

```
[w:GD500]=10;           //parameter value of operation mode1
[w:GD501]=11;
[w:GD502]=12;
:
[w:GD600]=20;           //parameter value of operation mode2
[w:GD601]=21;
[w:GD602]=22;
:
[w:GD700]=30;           //parameter value of operation mode3
[w:GD701]=31;
[w:GD702]=32;
:
```

(b) Script 2 (offset value is determined by the device value for switching operation mode)

```
switch( [w: D10] ){
  case1:[w:TMP100]=0;break; //when D10 is 0, offset value is 0.
  case2:[w:TMP100]=100;break; //when D10 is 2, offset value is 100
  case3:[w:TMP100]=200;break; //when D10 is 3, offset value is 200
}
```

(c) Script 3 (write parameter according to offset value)

```
bmov([w:GD500[w:TMP100]], [w:D100], 10); //write the device value of (GD500+TEM100) to D100 to D109.
```

* When script (b) and script (c) are executed simultaneously or in a single script, the offset switching is delayed, causing the system to operate abnormally.

(4) Cautions

- (a) Install Standard Monitor OS(GT Desiner2 Version1 00A or later) in GOT before using. If old-version Standard Monitor OS is installed in GOT, script error will occur, resulting in script stop.
([-10] will be stored in script error data ( Section 6.5.2 Errors and Corrective Actions for Script Execution on GOT))
- (b) When PLC CPU device is used as base device, even if offset device value is changed, the processing will be delayed, causing the system to operate abnormally. When offset cannot be performed normally, use temporary device area or GOT internal device.
When GOT internal device is used, check [Enable internal device (GD/GB) assignment delay].
( Section 5.32 Script Function)

8 Integer ↔ Real number conversion function

In script function, the data type is selected for each script. Once it is set, it cannot be changed (fixed). However, the integer device value can be calculated as real number by using integer ↔ real number conversion function.

(1) Conversion method

Integer ↔ real number conversion is executed by taking GOT internal device (GD) as conversion target.

Integer ↔ real number conversion can be executed by specifying the following devices.

Maximum 4096 devices can be converted once.

For details about GOT internal device, refer to the following.

 Section 2.6.1 GOT internal device



Device that can be the target of integer ↔ real number conversion

Integer ↔ real number conversion can only be executed by GOT internal devices (GD).

To convert the device value of PLC CPU, transmit the device value of PLC CPU to GOT internal device (GD) by script (bmov instruction).

(a) Read device

| Device | Function | Description |
|--------|--|---|
| GS460 | Conversion start instruction | Specify the conversion start and conversion method by each bit. b0 : 16 bit unsigned BIN → 32 bit real number b1 : 16 bit signed BIN → 32 bit real number b2 to b3 : Disabled b4 : 32 bit real number → 16 bit unsigned BIN b5 : 32 bit real number → 16 bit signed BIN b6 to b14: Disabled b15 : Execute conversion when it is turned ON. |
| GS461 | Number of devices | Number of devices |
| GS462 | Conversion source head device No. | Specify the head device No. of GOT internal device (GD) that stores the value before conversion. |
| GS463 | Conversion destination head device No. | Specify the head device No. of GOT internal device (GD) that stores the value after conversion. |
| GS464 | Storage error value | When error occurs, specify the device value to be stored in the conversion source device. (Useful for error recognition) |

(b) Write device

| Device | Function | Description |
|--------|---------------|---|
| GS260 | Status | Store the conversion completion notification and error occurrence status into each bit. When conversion start instruction (GS460.b15) is turned OFF (0), each bit becomes 0. b0 to b13: Disabled b14 : It is turned ON when error occurs during conversion processing by GOT. (Store error code in GS261) b15 : It is turned ON when conversion is completed by GOT. |
| GS261 | Error code *1 | Store the error during conversion. Store 0 when the conversion is completed normally. |

Refer to the next page for *1.

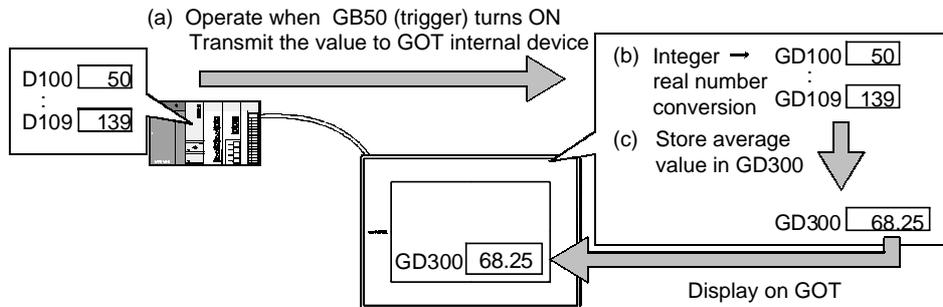
***1 Error code**

Error codes stored in GS261 and the error information are as follows:

| Error code | Description | Remark |
|------------|---|--|
| 1 | Conversion start instruction is not initialized | Conversion processing is not executed. |
| 2 | Conversion start instruction is not set correctly. | |
| 3 | Number of devices is set out of the range. | |
| 4 | Device is out of range. | |
| 5 | Conversion source overlaps with conversion destination. | |
| 6 | Not used | — |
| 7 | Conversion error (overflow, ect.) | Conversion processing continues. |

(2) Example

Display the average value of the data (16 bit signed BIN) stored in PLC CPU device as real number on GOT.



(a) Script 1 (conversion start processing)

Transmit the devices (D100 to D109) value of PLC CPU to GOT internal devices (GD100 to GD109) and execute integer → real number conversion. After conversion is started, script 2 starts.

- Data type: 16 bit signed BIN
- Trigger: GB50 is ON

```

bmov ([w: D100], [w: GD100], 10;
[w: GS461]=10; //Number of object devices to be converted
[w: GS462]=100; //Conversion source head device No.
[w: GS463]=200; //Conversion destination head device No.
[w: GS460]=0X8002; //Conversion starts
set ([b: GB1001]; //Script 2 starts

```

(b) Script 2 (conversion completion monitor processing)

Wait the completion of integer → real number conversion. If error does not occur after conversion is completed, clear the conversion start instruction device simultaneously when starting script 3.

- Data type: 16 bit signed BIN
- Trigger: GB100 is ON

```

if ([b: GS260.15]=1)
{
    //Conversion completed
    if ([b: GS260.14]=0)
    [
        set([b: GB101]); //Conversion is completed normally (script 3 starts)
    ]
    [w: GS460]=0; //Clear conversion start
    rst([b: GB100]; //Clear the start of script 2
}

```

(c) Script 3 (Average calculating processing)

After converting to real number, calculate the average value of GOT internal device and store in GD300.

- Data type: 32 bit real number
- Trigger: GB101 is ON

```
[w: TMP001]=0
[w: TMP001]=[w: TMP001] + [w: GD200];
[w: TMP001]=[w: TMP001] + [w: GD202];
[w: TMP001]=[w: TMP001] + [w: GD204];
[w: TMP001]=[w: TMP001] + [w: GD206];
[w: TMP001]=[w: TMP001] + [w: GD208];
[w: TMP001]=[w: TMP001] + [w: GD210];
[w: TMP001]=[w: TMP001] + [w: GD212];
[w: TMP001]=[w: TMP001] + [w: GD214];
[w: TMP001]=[w: TMP001] + [w: GD216];
[w: TMP001]=[w: TMP001] + [w: GD218];
[w: GD300]=[w:TMP001]/10 //Store the average in GD300 (real number)
rst([b: GB101]); //Clear start of script 3.
```

(3) Cautions

- (a) Turn the conversion start instruction (GS460) OFF after conversion completion.
When the device is ON, the conversion cannot be executed even if conversion start instruction is executed.
- (b) During integer → real number conversion, figures after the decimal point will be rounded off.(1.53 → 1)
(When it is out of the real number range, error code will be displayed during operation and the conversion cannot be executed.)

6.2.4 Script execution

This section explains how to execute the script functions.

1 Execution conditions

When an execution condition is satisfied, the script function executes the corresponding script and writes the result to the PLC CPU.

Execution condition is set when the monitor screen is created using GT Designer2.

There are following execution conditions.

- Ordinary
- Rise/Fall
- ON/OFF
- ON/OFF Sampling
- Sampling (1s increments)

2 Execution unit

The script function executes scripts one by one.

If the execution conditions of multiple scripts are satisfied, they are not processed concurrently.

3 Execution sequence

The script functions are executed in the following order.

| Function executing Order | Screen Setting Order | Screen Calling Function Laying Order | Script Executing Order Set with GT Designer2 | Max. Execution Count | Execution Sequence | |
|--------------------------|----------------------|--------------------------------------|--|----------------------|--------------------|---------|
| Project script function | — | — | Script A | 256 | 1) ↓ | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| Screen script function | Base | Base | Script A | 256 | 2) ↓ | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| | | First called screen | Script A | | | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| | ⋮ | Script A | | | | |
| | | Script B | | | | |
| | | ⋮ | | | | |
| | Superimpose window | Superimpose window | Superimpose window | Script A | 256 | 3) ↓ |
| | | | | Script B | | |
| | | | | ⋮ | | |
| First called screen | | | Script A | | | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| ⋮ | Script A | | | | | |
| | Script B | | | | | |
| | ⋮ | | | | | |
| Overlap window 1 | Overlap window 1 | Overlap window 1 | Script A | 256 | 4) ↓ | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| | | First called screen | Script A | | | |
| | | | Script B | | | |
| | | | ⋮ | | | |
| ⋮ | Script A | | | | | |
| | Script B | | | | | |
| | ⋮ | | | | | |
| 16th called screen | Script A | | | | | |
| | Script B | | | | | |
| | ⋮ | | | | | |

| Function executing Order | Screen Setting Order | Screen Calling Function Laying Order | Script Executing Order Set on GT Designer2 | Max. Execution Count | Execution Sequence |
|--------------------------|----------------------|--------------------------------------|--|----------------------|--------------------|
| Screen script function | Overlap window 2 | Overlap window 2 | Script A | 256 | 5) ↓ |
| | | | Script B | | |
| | | | ⋮ | | |
| | | First called screen | Script A | | |
| | | | Script B | | |
| | | | ⋮ | | |
| | | ⋮ | | | |
| | | 16th called screen | Script A | | |
| | | | Script B | | |
| | | | ⋮ | | |

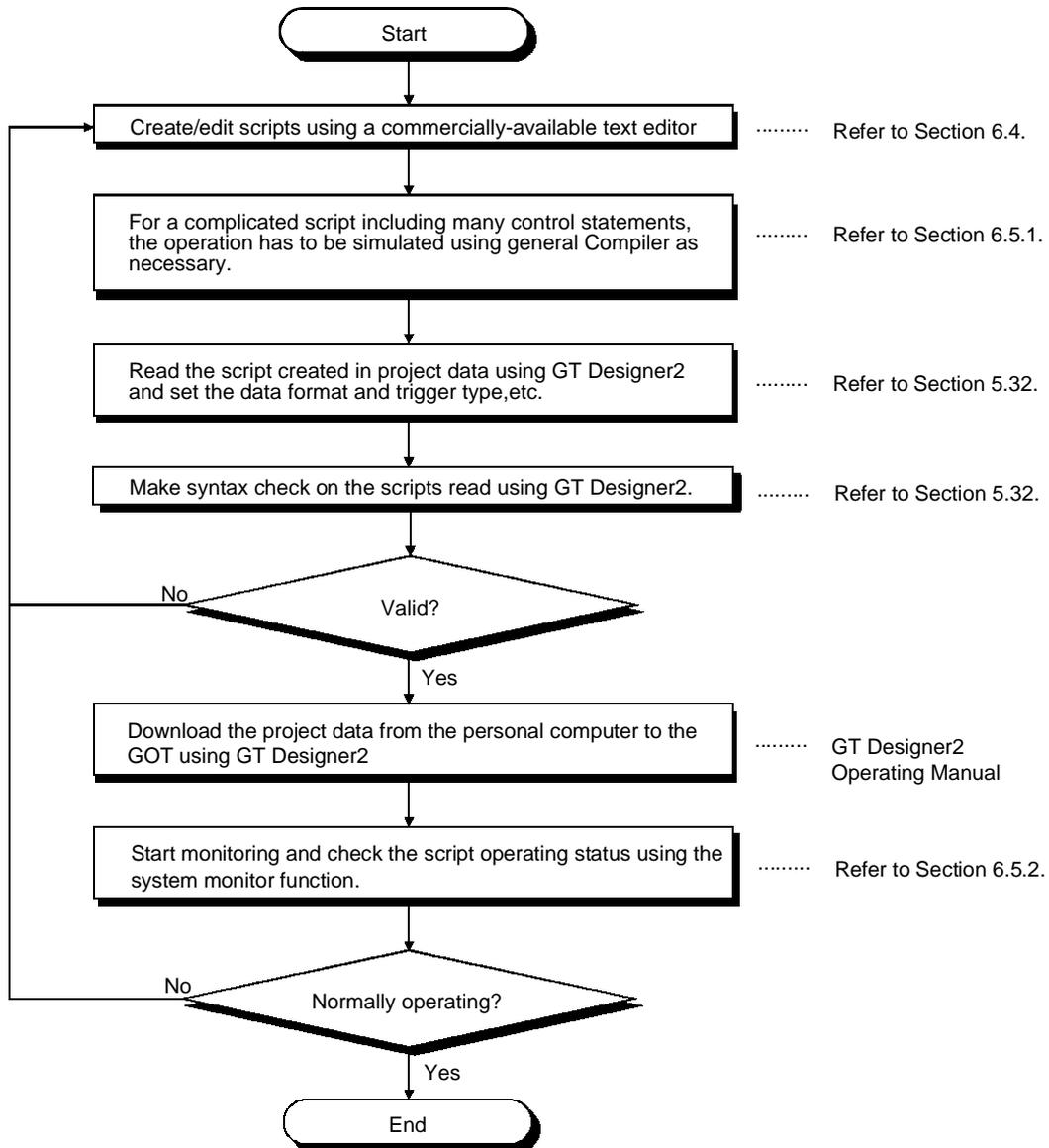
4 Execution status

The following table describes the script statuses and the corresponding processings to be performed.

| Script Status | Processing |
|-----------------------|---|
| Waiting for turn | <ul style="list-style-type: none"> ● A script waits its processing turn in accordance with the execution sequence. ● When its turn has come, the script "waits for execution". |
| Waiting for execution | <ul style="list-style-type: none"> ● Processing changes depending on the execution condition status. Enabled: The corresponding script is "executed". Disabled: The corresponding script "waits its turn" and the next script "waits for execution". |
| Execution | <ul style="list-style-type: none"> ● When the script ends, the processing result is written to the PLC CPU and the corresponding script "waits its turn". And, the next script "waits for execution". ● If an error occurs, the corresponding script "stops" and the next script "waits for execution". ● If a screen is changed when the screen script function is used, the scripts set on the corresponding screen are all "executed" and then the next script "waits for execution". |
| Stop | <ul style="list-style-type: none"> ● The script is kept "stopped" until the error history is cleared. |

6.3 Settings and Procedure for Execution

This section provides the settings and procedure for executing the script functions.



6.4 Program Examples

This section explains script program with examples.

6.4.1 Touch switches with interlock function

1 Operation

When the and keys turn ON, the lamp is lit.
The system operation is controlled synchronously with the lamp.

| Screen Image | Part Operation Definition |
|--------------|---|
| | <p><input type="button" value="Running"/> lamp : Indicates the operating status of the system.</p> <p><input type="button" value="Ready"/> key : Acts as an interlock for the <input type="button" value="Run/Stop"/> key.</p> <p><input type="button" value="Run/Stop"/> key : Used to switch the operating status (run/stop) of the system.</p> |

2 Monitor screen settings

| Part Name | Object Type | Setting Item | Setting |
|---|--------------------------------|-------------------|--|
| <input type="button" value="Ready"/> key | Touch key function (bit) | Monitor device | M0001 |
| | | Operation setting | Bit ALT |
| <input type="button" value="Run/Stop"/> key | Touch key function (bit) | Monitor device | M0002 |
| | | Operation setting | Bit ALT |
| <input type="button" value="Running"/> lamp | Lamp indication function (bit) | Monitor device | M0003 (System operation controlling device) |

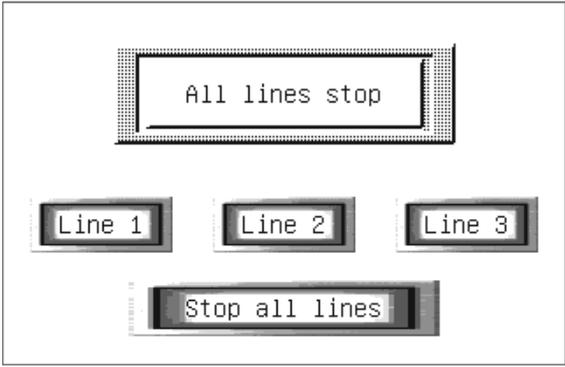
3 Program example

| Item | Description |
|--------------|--|
| Data format | 16-bit, signed BIN |
| Trigger type | Ordinary |
| Script | <pre> if ([b: M0001]&[b: M0002]==1) //if the ready and run/stop keys both turn ON { set([b: M0003]); //the running lamp is lit and the system starts operating. } else{ //if not rst([b: M0003]); //the running lamp turns off and the system is stopped. } </pre> |

6.4.2 Lamps which change the display attributes under multiple conditions

1 Operation

The operation of each line is controlled with a touch key and the control statuses of three lines are represented by one lamp.

| Screen Image | Part Operation Definition |
|---|---|
|  | <p>Control status lamp : The lamp color and comment are changed according to the operating statuses of the lines.</p> <p>Line 1 key : Used to control the operation of line 1.</p> <p>Line 2 key : Used to control the operation of line 2.</p> <p>Line 3 key : Used to control the operation of line 3.</p> <p>Stop all lines key : Used to stop all lines.</p> |

2 Monitor screen settings

| Part Name | Object Type | Setting Item | Setting |
|--|------------------------------|--------------------------|---|
| Control status lamp | Lamp display function (word) | Monitor device | D10 |
| | | Display method (word) | Display range : \$V==0 Lamp color: 182 Text : All lines stop |
| | | | Display range : \$V==1 Lamp color: 3 Text : Line 1 running |
| | | | Display range : \$V==2 Lamp color: 224 Text : Line 2 running |
| | | | Display range : \$V==3 Lamp color: 227 Text : Line 3 running |
| | | | Display range : \$V==4 Lamp color: 28 Text : Lines 1, 2 running |
| | | | Display range : \$V==5 Lamp color: 31 Text : Lines 1, 3 running |
| | | | Display range : \$V==6 Lamp color: 252 Text : Lines 2, 3 running |
| Display range : \$V==7 Lamp color: 162 Text : Lines 1, 2, 3 running | | | |
| Line 1 key | Touch key function (bit) | Monitor device | X1 |
| | | Operation setting | Bit ALT |
| Line 2 key | Touch key function (bit) | Monitor device | X2 |
| | | Operation setting | Bit ALT |
| Line 3 key | Touch key function (bit) | Monitor device | X3 |
| | | Operation setting | Bit ALT |
| Stop all lines key | Touch key function (bit) | Monitor device | X0 |
| | | Operation setting | Bit SET |

3 Program example

| Item | Description |
|--------------|--|
| Data format | 16-bit, signed BIN |
| Trigger type | Ordinary |
| Script | <pre> if(((b: X1]==OFF)&&(b: X2]==OFF)&&(b: X3]==OFF)) //if line 1, 2 and 3 are all OFF {w:D10]=0;} //stores 0 into D10. if(((b: X1]==ON)&&(b: X2]==OFF)&&(b: X3]==OFF)) //if line 1 is ON and line 2 and 3 are OFF. {w: D10]=1;} //stores 1 into D10 if(((b: X1]==OFF)&&(b: X2]==ON)&&(b: X3]==OFF)) //if line 2 is ON and line 1 and 3 are OFF. {w: D10]=2;} //stores 2 into D10 if(((b: X1]==OFF)&&(b: X2]==OFF)&&(b: X3]==ON)) //if line 3 is ON and line 1 and 2 are OFF. {w: D10]=3;} //stores 3 into D10 if(((b: X1]==ON)&&(b: X2]==ON)&&(b: X3]==OFF)) //if line 1 and 2 are ON and line 3 is OFF. {w: D10]=4;} //stores 4 into D10 if(((b: X1]==ON)&&(b: X2]==OFF)&&(b: X3]==ON)) //if line 1 and 3 are ON and line 2 is OFF. {w: D10]=5;} //stores 5 into D10 if(((b: X1]==OFF)&&(b: X2]==ON)&&(b: X3]==ON)) //if line 2 and 3 are ON and line 1 is OFF. {w: D10]=6;} //stores 6 into D10 if(((b: X1]==ON)&&(b: X2]==ON)&&(b: X3]==ON)) //if line 1, 2 and 3 are ON. {w: D10]=7;} //stores 7 into D10 if ((b: X0]==ON) //if all lines stop turns ON { rst(b: X1); //turns OFF line 1. rst(b: X2); //turns OFF line 2. rst(b: X3); //turns OFF line 3. rst(b: X0); //turns OFF all lines stop. } </pre> |

6.4.3 Password input screen with time limit function

1 Operation

The password enter screen returns to the previous screen if a correct password is not entered within 10 seconds after it appeared.

| Screen Image | Part Operation Definition |
|--|--|
| <p>Screen with Manager key (base screen 3)</p> <p>Screen change ↓ Returns in 10 seconds ↑</p> <p>Enter the manager password</p> <p>0 1 2 3 4 5</p> <p>1 2 3 4 5 Clear</p> <p>6 7 8 9 0 Confirm</p> <p>↓ Password match</p> <p>Manager screen</p> <p>Line 1 Line 2 Line 3</p> <p>Manager screen (base screen 5) appears.</p> | <p>Manager button : Used to shift to the password enter screen (base screen 4).</p> <p>Password enter : Password entered with 1 to 0 keys appears.</p> <p>1 to 0 keys : Used to enter a value.</p> <p>Clear key : Used to clear the entered value.</p> <p>Confirm key : Used to confirm the entered value.</p> |

2 Monitor screen settings

| Part Name | Object Type | Setting Item | Setting |
|-----------------------|--------------------------|-------------------|----------------------------|
| Manager button | Touch key function | Operation setting | Switching to base screen 4 |
| Password enter | Numerical input function | Monitor device | D10 |
| 1 key | Touch key function | Operation setting | Key code [0031H] |
| 2 key | Touch key function | Operation setting | Key code [0032H] |
| 3 key | Touch key function | Operation setting | Key code [0033H] |
| 4 key | Touch key function | Operation setting | Key code [0034H] |
| 5 key | Touch key function | Operation setting | Key code [0035H] |
| 6 key | Touch key function | Operation setting | Key code [0036H] |
| 7 key | Touch key function | Operation setting | Key code [0037H] |
| 8 key | Touch key function | Operation setting | Key code [0038H] |

| Part Name | Object Type | Setting Item | Setting |
|-------------|--------------------|-------------------|------------------|
| 9 key | Touch key function | Operation setting | Key code [0039H] |
| 0 key | Touch key function | Operation setting | Key code [0030H] |
| Clear key | Touch key function | Operation setting | Key code [0088H] |
| Confirm key | Touch key function | Operation setting | Key code [000DH] |

3 Program example

| Item | Description |
|--------------|---|
| Data format | 16-bit, signed BIN |
| Trigger type | Ordinary |
| Script | <pre> if([b: GS1.01]==ON){ [w: TMP0001]=[w:GS7]; } if([w: D10]==3238){ [w:D0]=5; [w: D10]=0; } if([w: GS7]-[w: TMP0001]>=10){ [w: D0]=3; } </pre> <p>//only when the password input screen has appeared //assigns GS7 to TMP0001.</p> <p>//when the correct password is entered //switches to the manager screen (base screen 5). //clears the password.</p> <p>//if more than 10 seconds have elapsed after the password enter screen had appeared //returns to the screen with manager button (base screen 3).</p> |



About this program example.

This program example uses GOT special registers (GS).

The GOT special registers (GS) store the GOT's internal data, communication status, script error data and others.

A wide variety of operations can be achieved by correctly using the GOT special registers (GS) together with the script functions.

For details on GOT special registers (GS), refer to the following.



Section 2.6.1 GOT's Internal Devices

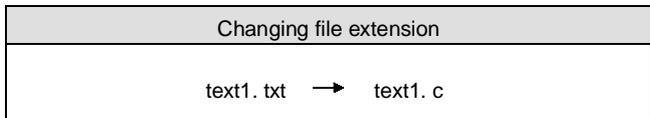
6.5 Troubleshooting

The script function does not display an error message at the time of error. It stops the script in error to prevent the other scripts and various monitor functions from stopping. Therefore, each script must be debugged without fail by reference to the followings.

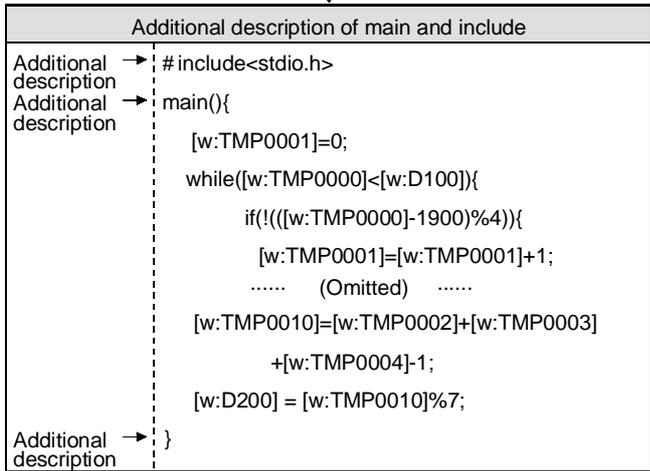
6.5.1 Simulation using general C language compiler or debugger

Since a script is C language-like program, the general C language compiler or debugger (e.g. Microsoft® Visual C++) can be used for its simulation by making slight corrections. This is effective for debugging a complicated script that includes many control statements.

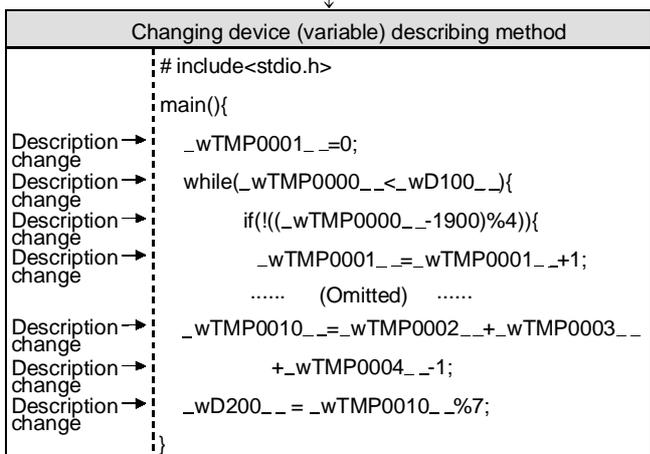
Observe the following procedure to perform simulation using the general C language compiler or debugger.



1 Change the script file (extension ".txt") created for the GOT into a C language source file (extension ".c").



2 Open the C language source file with a commercially-available text editor and create a frame with "main(){}". Also, describe "# include<stdio.h>" at the beginning.



3 Change the device (variable) describing method from that for script function to that for C language. Changing the variables into for C language based on the following definition enables smooth restoration to the GOT script.

- Definition 1 "[w:" → "_w"
- Definition 2 "[b:" → "_b"
- Definition 3 "]" → "_"

Using the batch replacement function of the commercially available text editor is convenient to make changes.

↓
(To the next page)

(From the preceding page)

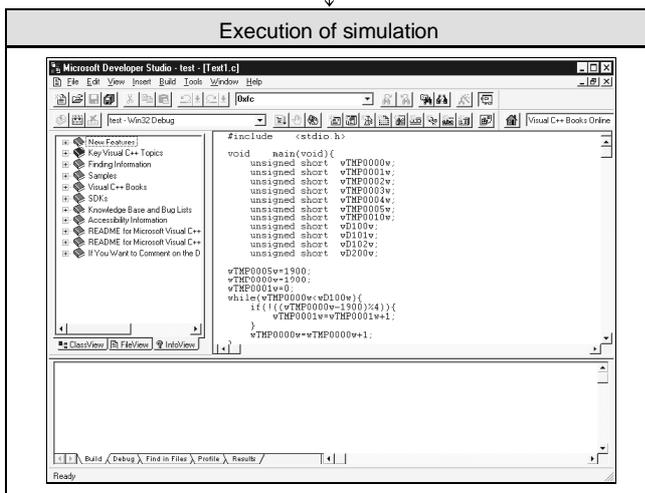
| Variable definition (auto variable declaration) | |
|---|--|
| Description change | <code># include<stdio.h></code> |
| | <code>void main(void){</code> |
| Addition | <code>unsigned short _wTMP0000__;</code> |
| Addition | <code>unsigned short _wTMP0001__;</code> |
| Addition | <code>unsigned short _wTMP0002__;</code> |
| Addition | <code>unsigned short _wD100__;</code> |
| | <code>..... (Omitted)</code> |
| | <code>_wTMP0001__=0;</code> |
| | <code>while(_wTMP0000__<_wD100__){</code> |
| | <code>if(!((_wTMP0000__-1900)%4)){</code> |
| | <code>_wTMP0001__=_wTMP0001__+1;</code> |
| | <code>..... (Omitted)</code> |
| | <code>_wTMP0010__=_wTMP0002__+_wTMP0003__</code> |
| | <code>+_wTMP0004__-1;</code> |
| | <code>_wD200__=_wTMP0010__%7;</code> |
| | <code>}</code> |

4 For C language, the variables must be defined prior to use.

As only one data format can be selected for one script, the variable types of the C language must be set all the same. Being conscious of the script data format, assign the variables as indicated below.

| Script Data Format | Variable Type |
|-------------------------|----------------|
| 16-bit, signed BIN | short |
| 16-bit, unsigned BIN | unsigned short |
| 32-bit, signed BIN | long |
| 32-bit, unsigned BIN | unsigned long |
| 32-bit real number | float |
| 32-bit BCD/16-bit BCD * | — |

*: Selecting "32-bit BCD/16-bit BCD" as the script data format disables simulation with the general C language compiler or debugger.



5 Perform simulation with the general C language compiler or debugger.

(The example shown on the left uses Microsoft® Developer Studio.)

The step run, variable watch and other functions specific to debugger are usable.

On completion of debugging, execute the steps 1 to 4 in reverse order to restore the GOT script file.



- (1) Selecting "32-bit BCD/16-bit BCD" as the script data format disables simulation with the general C language compiler or debugger.
- (2) As dedicated for the script functions, the set, rst, alt, bmov and fmov statements cannot be simulated with the general C language compiler or debugger. Use assignment of 1 or 0 instead of the set or rst statement.
- (3) When the system define (ON, OFF description) of the GOT is used unchanged, the define must be added to the C language source file.
- (4) The assignment delay does not occur during simulation with the general C language compiler or debugger, although it occurs when a script is executed on GOT. Therefore, take the possibility of assignment delay occurrence into consideration when performing simulation.
- (5) By applying the above, a new program created using C language can be used as a GOT script after being debugged.

6.5.2 Errors and corrective actions for script execution on GOT

1 Error checking method

The error data of the script functions is stored into the GOT special registers (GS).

Check the stored data using the system monitor function and various object functions (numerical display, lam indication and others) of the GOT.

- Details of GOT special registers

 Section 2.6.1 GOT's Internal Devices

- Details of system monitor function

 GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 Corresponding Extended Functions and Option Functions)

The following types are all items related to GOT special register (GS) script function.

| Address | Item Name | Description |
|-------------|--|--|
| GS14 | Script common information (read only) | Stores the data of error occurrence. GS14.00: Turns ON at error occurrence. GS14.07: Turns ON at BCD error occurrence. GS14.08: Turns ON at zero division error occurrence. GS14.12: Turns ON at communication error occurrence (including access to out-of-range device). |
| GS15 | Script error pointer | Stores the pointer value (16 to 46) that indicates the address where the script error data (GS16 to 47) is stored. (Default: -1) Every time error data is stored, the pointer value changes as indicated below. "-1" → "16" → "18" → "20" → → "46" → "16" The pointer value indicates the address of the script error data (GS16 to 47) as indicated below. Example 1) When GS15 is 16, error data is stored into GS16, 17. Example 2) When GS15 is 46, error data is stored into GS46, 47. |
| GS16 to 47* | Script error data | Stores the script No. of error occurrence and the corresponding error codes in due order, starting from the higher addresses of the storage area. When an error occurs, the script No. and error code are stored in 2-word unit as a history. Note that if 15 or more errors occur, the higher addresses are overwritten in order. |
| GS48 | Script execution pointer | Stores the pointer value (49 to 79) that indicates the address where a script execution No. (GS49 to 79) is stored. (Default: -1) Every time an execution No. is stored, the pointer value changes as indicated below. "-1" → "49" → "50" → "51" → → "79" → "49" The pointer value indicates the address of the script execution No. (GS49 to 79) as indicated below. Example 1) When GS48 is 49, the execution No. is stored into GS49. Example 2) When GS48 is 79, the execution No. is stored into GS79. |
| GS49 to 79 | Script execution number | Stores the script Nos. of the scripts executed as a history. |
| GS384 | Script common information (write only) | Turning ON GS384.0 clears the script error data (GS16 to 47). |

* According to the error, script No. may be "0".
For the script function error, refer to the following.
Error code list (this section [2](#))

| Address | Item Name | Description | | | | | | | | | | | | | | | | |
|-----------------|---------------------------------|--|-------------------|--------------|----------------------|-------------------|---|----------|----|------------|------|------------|--------------|------|----|---------------|------|-----|
| GS385 | Script monitor time | <p>Set the monitor time of one script in second unit. If a script does not end the preset time after its start, script processing is stopped. (Error code: 15) The initial setting of "0" is processed as 10 seconds.</p> <table border="1"> <thead> <tr> <th>Setting Example</th> <th>Monitor Time</th> </tr> </thead> <tbody> <tr> <td>0 (default)</td> <td>10 seconds</td> </tr> <tr> <td>1</td> <td>1 second</td> </tr> <tr> <td>10</td> <td>10 seconds</td> </tr> <tr> <td>11</td> <td>11 seconds</td> </tr> </tbody> </table> | Setting Example | Monitor Time | 0 (default) | 10 seconds | 1 | 1 second | 10 | 10 seconds | 11 | 11 seconds | | | | | | |
| Setting Example | Monitor Time | | | | | | | | | | | | | | | | | |
| 0 (default) | 10 seconds | | | | | | | | | | | | | | | | | |
| 1 | 1 second | | | | | | | | | | | | | | | | | |
| 10 | 10 seconds | | | | | | | | | | | | | | | | | |
| 11 | 11 seconds | | | | | | | | | | | | | | | | | |
| GS386 | Screen script initial operation | <p>Set whether initial operation will be performed or not when any of the following conditions is satisfied.</p> <ul style="list-style-type: none"> ● The screen script function is used. ● The execution condition (trigger type) selected is "Rise/Fall". ● Switched to the screen including scripts. <table border="1"> <thead> <tr> <th>Setting Example</th> <th>Trigger Type</th> <th>Bit Value of Trigger</th> <th>Initial Operation</th> </tr> </thead> <tbody> <tr> <td rowspan="2">0</td> <td>Rise</td> <td>ON</td> <td rowspan="2">Performed</td> </tr> <tr> <td>Fall</td> <td>OFF</td> </tr> <tr> <td rowspan="2">Other than 0</td> <td>Rise</td> <td>ON</td> <td rowspan="2">Not performed</td> </tr> <tr> <td>Fall</td> <td>OFF</td> </tr> </tbody> </table> | Setting Example | Trigger Type | Bit Value of Trigger | Initial Operation | 0 | Rise | ON | Performed | Fall | OFF | Other than 0 | Rise | ON | Not performed | Fall | OFF |
| Setting Example | Trigger Type | Bit Value of Trigger | Initial Operation | | | | | | | | | | | | | | | |
| 0 | Rise | ON | Performed | | | | | | | | | | | | | | | |
| | Fall | OFF | | | | | | | | | | | | | | | | |
| Other than 0 | Rise | ON | Not performed | | | | | | | | | | | | | | | |
| | Fall | OFF | | | | | | | | | | | | | | | | |

2 Error code list

| Error Code | Error Definition | Corrective Action |
|------------|---|---|
| 1* | Initialization of project script functions failed. | <ul style="list-style-type: none"> ● Reduce the number of monitor device points for scripts. ● Reduce the number of times to execute the project script function. |
| 2* | Initialization of screen script functions (base) failed. | <ul style="list-style-type: none"> ● Reduce the number of monitor device points for scripts and base screens. ● Reduce the number of times to execute screen script function (base). |
| 3* | Initialization of screen script functions (superimpose window) failed. | <ul style="list-style-type: none"> ● Reduce the number of monitor device points for scripts and superimpose screens. ● Reduce the number of times to execute the screen script function (superimpose window) . |
| 4* | Initialization of screen script functions (overlap window 1) failed. | <ul style="list-style-type: none"> ● Reduce the number of monitor device points for scripts and overlap window screens 1. ● Reduce the number of times to execute the screen script function (overlap window 1) . |
| 5* | Initialization of screen script functions (overlap window 2) failed. | <ul style="list-style-type: none"> ● Reduce the number of monitor device points for scripts and overlap window screens 2. ● Reduce the number of times to execute the screen script function (overlap window 2) . |
| 6 | The operation result is a value outside the usable data range specified by the data format of the script. | <ul style="list-style-type: none"> ● Check the processing of the device that was brought outside the data range of the corresponding script, and correct the script. |
| 7* | The number of times to execute scripts exceeded the limit. And some scripts were left unexecuted. | <ul style="list-style-type: none"> ● Change the number of times to execute scripts in one project to 256 or less. ● Change the number of times to execute scripts on one screen to 256 or less. |
| 8 | When "16-bit BCD" or "32-bit BCD" was selected as the script data format, the monitor device value could not be handled as BCD. | <ul style="list-style-type: none"> ● Check whether the device to be monitored is correct. ● Check the processing of the device which could not be handled as BCD, and correct the script and sequence program. |
| 9 | When "16-bit BCD" or "32-bit BCD" was selected as the script data format, the operation result was outside the BCD data range. | <ul style="list-style-type: none"> ● Check the processing of the device that was brought outside the BCD data range. |
| 10 | The numerator was divided by the denominator of 0. | <ul style="list-style-type: none"> ● Check the factor that caused zero division in the corresponding script, and correct the script. |
| 11* | Write to a device failed. | <ul style="list-style-type: none"> ● Check the device description of the corresponding script. |
| 12 | Reservation of an internal area for device write failed. | <ul style="list-style-type: none"> ● Reduce the number of write device points in the corresponding script. |
| 13 | The while statement includes the description of a device other than a temporary device area. | <ul style="list-style-type: none"> ● Replace the write device in the while statement with a temporary device area. |
| 14 | An expression was too complicated to process. | <ul style="list-style-type: none"> ● Simplify or divide the operation expression in the corresponding script. |
| 15 | A script did not end within the script monitor time. | <ul style="list-style-type: none"> ● Check whether the corresponding script has gone into an endless loop. ● Increase the value of script monitor time (GS385). |
| 16 | Access to GOT internal device failed, resulting in error (BCD conversion out of device range) occurrence. | <ul style="list-style-type: none"> ● Check the corresponding processing to GOT internal device and check the script and PLC program. ● Check the object script description. |
| | Access to gateway device failed. | <ul style="list-style-type: none"> ● Check whether Extended Function OS of gateway function is installed in GOT. ● Check the cable. |

* Script No. "0" is stored to GOT special register (GS).

APPENDICES

Appendix1 Object Display Speed (Reference Value)

The display speeds (reference values: GOT-A900 series) of each object are as listed below.

The actual display speeds depend on the number of objects set on a screen, the shape of a figure drawn, and the frequencies of transient transmission.

| Object name | | | Numerical display | ASCII display | Comment display (Bit) | User alarm | Parts display (Bit) | Lamp display (Bit) | Trend graph display | Line graph display | Level display | Touch key (Bit momentary) | | |
|--|---|--|--------------------|-------------------|-----------------------|---------------|---------------------|--------------------|---------------------|-----------------------|----------------------------------|---------------------------|------|------|
| | | | Setting condition | 6 digits, 16 bit | 6 digits | 10 characters | — | 48x48 dots | 48x48 dots | 240x120 dots, 8 lines | 240x120 dots, 8 lines, 10 points | 160x160 dots | — | |
| Display speed (Unit : s) | QnA CPU ACPU | Bus connection | Consecutive device | 0.1 | 0.15 | 0.15 | 0.1 | 0.2 | 0.2 | 0.15 | 0.35 | 0.1 | 0.15 | |
| | | | Random device | 0.1 | 0.15 | 0.15 | 0.1 | 0.2 | 0.2 | 0.15 | 0.35 | 0.1 | 0.15 | |
| | | CPU direct connection | Sequential device | 0.2 | 0.2 | 0.25 | 0.25 | 0.5 | 0.25 | 0.2 | 0.8 | 0.2 | 0.2 | |
| | | | Random device | 0.2 | 0.2 | 0.35 | 0.5 | 0.5 | 0.3 | 0.2 | 0.8 | 0.2 | 0.2 | |
| | | Computer link connection | Sequential device | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.2 | 0.8 | 0.2 | 0.3 | |
| | | | Random device | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.2 | 0.8 | 0.2 | 0.3 | |
| | | MELSECNET /10 connection | Cyclic | Sequential device | 0.1 | 0.1 | 0.25 | 0.2 | 0.2 | 0.2 | 0.15 | 0.4 | 0.1 | 0.15 |
| | | | | Random device | 0.1 | 0.1 | 0.25 | 0.2 | 0.2 | 0.2 | 0.15 | 0.4 | 0.1 | 0.15 |
| | | | Transient | Sequential device | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 2.0 | 0.4 | 0.4 |
| | | | | Random device | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 2.0 | 0.4 | 0.4 |
| | | CC-Link connection (Remote device station) | Sequential device | | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 |
| | | | Random device | | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 |
| | CC-Link connection (Intelligent device station) | Cyclic | Sequential device | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 | |
| | | | Random device | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 | |
| | | Transient | Sequential device | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.35 | 0.3 | 1.0 | 0.4 | 0.4 | |
| | | | Random device | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.35 | 0.3 | 1.0 | 0.4 | 0.4 | |
| | Ethernet connection | Sequential device | | 0.2 | 0.2 | 0.25 | 0.25 | 0.25 | 0.2 | 0.2 | 0.5 | 0.2 | 0.3 | |
| | | Random device | | 0.2 | 0.2 | 0.25 | 0.5 | 0.25 | 0.25 | 0.2 | 0.5 | 0.2 | 0.4 | |
| | QCPU | Bus connection | Sequential device | 0.1 | 0.15 | 0.15 | 0.1 | 0.2 | 0.2 | 0.15 | 0.35 | 0.1 | 0.15 | |
| | | | Random device | 0.1 | 0.15 | 0.15 | 0.1 | 0.2 | 0.2 | 0.15 | 0.35 | 0.1 | 0.15 | |
| | | CPU direct connection | Sequential device | 0.2 | 0.2 | 0.25 | 0.25 | 0.5 | 0.25 | 0.2 | 0.7 | 0.2 | 0.2 | |
| | | | Random device | 0.2 | 0.2 | 0.35 | 0.5 | 0.5 | 0.3 | 0.2 | 0.7 | 0.2 | 0.2 | |
| | | Computer link connection | Sequential device | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.2 | 0.7 | 0.2 | 0.3 | |
| | | | Random device | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.2 | 0.7 | 0.2 | 0.3 | |
| MELSECNET /10 connection | | Cyclic | Sequential device | 0.1 | 0.1 | 0.25 | 0.2 | 0.2 | 0.2 | 0.15 | 0.4 | 0.1 | 0.15 | |
| | | | Random device | 0.1 | 0.1 | 0.25 | 0.2 | 0.2 | 0.2 | 0.15 | 0.4 | 0.1 | 0.15 | |
| | | Transient | Sequential device | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 2.0 | 0.4 | 0.4 | |
| | | | Random device | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 2.0 | 0.4 | 0.4 | |
| CC-Link connection (Remote device station) | | Sequential device | | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 | |
| | | Random device | | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 | |

| Object name | | | | Numerical display | ASCII display | Comment display (Bit) | User alarm | Parts display (Bit) | Lamp display (Bit) | Trend graph display | Line graph display | Level display | Touch key (Bit momentary) | |
|------------------------------------|--|---|-------------------|-------------------|------------------|-----------------------|---------------|---------------------|--------------------|---------------------|-----------------------|----------------------------------|---------------------------|------|
| | | | | Drawing condition | 6 digits, 16 bit | 6 digits | 10 characters | — | 48×48 dots | 48×48 dots | 240×120 dots, 8 lines | 240×120 dots, 8 lines, 10 points | 160×160 dots | — |
| Display speed (Unit : s) | QCPU | CC-Link connection (Intelligent device station) | Cyclic | Sequential device | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 |
| | | | | Random device | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.3 | 0.25 | 0.3 | 0.2 | 0.25 |
| | | | Transient | Sequential device | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.35 | 0.3 | 1.0 | 0.4 | 0.4 |
| | | | | Random device | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.35 | 0.3 | 1.0 | 0.4 | 0.4 |
| | | Ethernet connection | Sequential device | 0.2 | 0.2 | 0.25 | 0.25 | 0.25 | 0.2 | 0.2 | 0.5 | 0.2 | 0.3 | |
| | | | Random device | 0.2 | 0.2 | 0.25 | 0.5 | 0.25 | 0.2 | 0.2 | 0.5 | 0.2 | 0.4 | |
| | FXCPU | CPU direct connection | Sequential device | 0.3 | 0.3 | 0.5 | 0.5 | 1.0 | 0.4 | 0.5 | 1.0 | 0.5 | 0.5 | |
| | | | Random device | 0.3 | 0.3 | 0.5 | 0.5 | 1.0 | 0.4 | 0.5 | 1.20 | 0.22 | 1.06 | |
| | Programmable controller by Omron | Sequential device | 0.20 | 0.20 | 0.20 | 0.50 | 0.30 | 0.30 | 0.25 | 0.60 | 0.26 | 0.35 | | |
| | | Random device | 0.20 | 0.20 | 0.20 | 0.50 | 0.36 | 0.30 | 0.30 | 0.80 | 0.27 | 0.35 | | |
| | Programmable controller by Yasukawa | Sequential device | 0.21 | 0.30 | 0.35 | 0.70 | 0.35 | 0.35 | 0.27 | 0.8 | 0.2 | 0.3 | | |
| | | Random device | 1.09 | 0.68 | 2.34 | 10.40 | 2.42 | 2.20 | 0.53 | 5.72 | 0.46 | 2.50 | | |
| | Programmable controller by Allen-Bradley | Sequential device | 0.3 | 0.3 | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 1.0 | 0.5 | 0.5 | | |
| | Programmable controller by SHARP | Sequential device | 0.3 | 0.5 | 0.6 | 0.5 | 0.7 | 0.5 | 0.5 | 1.0 | 0.5 | 0.5 | | |
| Programmable controller by Toshiba | Sequential device | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.9 | 0.4 | 0.4 | | | |
| Programmable controller by SIEMENS | Sequential device | 0.3 | 0.3 | 0.4 | 0.7 | 0.4 | 0.4 | 0.5 | 1.2 | 0.3 | 0.4 | | | |
| Programmable controller by Hitachi | Sequential device | 0.3 | 0.3 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.8 | 0.3 | 0.3 | | | |
| Matsushita Electric Works | Sequential device | 0.3 | 0.3 | 0.3 | 0.8 | 0.4 | 0.4 | 0.4 | 0.8 | 0.3 | 0.3 | | | |

App

Appendix2 Key Code List

(1) List of key code for numerical and ASCII input

| Key | Key code ^(H) | Key | Key code ^(H) | Key | Key code ^(H) | Key | Key code ^(H) |
|-----|-------------------------|-----|-------------------------|-----|-------------------------|---------|-------------------------|
| SP | 0020 | @ | 0040 | ` | 0060 | → | 0080*1 |
| ! | 0021 | A | 0041 | a | 0061 | ← | 0081*1 |
| " | 0022 | B | 0042 | b | 0062 | ↑ | 0082 |
| # | 0023 | C | 0043 | c | 0063 | ↓ | 0083 |
| \$ | 0024 | D | 0044 | d | 0064 | (Clear) | 0088 |
| % | 0025 | E | 0045 | e | 0065 | | |
| & | 0026 | F | 0046 | f | 0066 | | |
| , | 0027 | G | 0047 | g | 0067 | | |
| (| 0028 | H | 0048 | h | 0068 | | |
|) | 0029 | I | 0049 | i | 0069 | | |
| * | 002A | J | 004A | j | 006A | | |
| + | 002B | K | 004B | k | 006B | | |
| , | 002C | L | 004C | l | 006C | | |
| - | 002D | M | 004D | m | 006D | | |
| . | 002E | N | 004E | n | 006E | | |
| / | 002F | O | 004F | o | 006F | | |
| 0 | 0030 | P | 0050 | p | 0070 | | |
| 1 | 0031 | Q | 0051 | q | 0071 | | |
| 2 | 0032 | R | 0052 | r | 0072 | | |
| 3 | 0033 | S | 0053 | s | 0073 | | |
| 4 | 0034 | T | 0054 | t | 0074 | | |
| 5 | 0035 | U | 0055 | u | 0075 | | |
| 6 | 0036 | V | 0056 | v | 0076 | | |
| 7 | 0037 | W | 0057 | w | 0077 | | |
| 8 | 0038 | X | 0058 | x | 0078 | | |
| 9 | 0039 | Y | 0059 | y | 0079 | | |
| : | 003A | Z | 005A | z | 007A | | |
| ; | 003B | [| 005B | { | 007B | | |
| < | 003C | \ | 005C | | 007C | | |
| = | 003D |] | 005D | } | 007D | | |
| > | 003E | ^ | 005E | ~ | 007E | | |
| ? | 003F | _ | 005F | ! | 007F | | |

*1: Cannot be set when the GOT-F900 series is used.

(2) List of key code for objects

(a) Key code for numerical input

| Key code ^(H) | Application |
|-------------------------|---|
| 0008* | Deletes the least signification digit and shifts the entire digits to the right by one. |
| 000D | Write to the destination device (Execute)/Move the cursor |
| 001B* | Delete cursor |
| 002D | “_” |
| 002E* | “.” |
| 0030 to 0046 | Input value |
| 0080* | Move cursor to the right |
| 0081* | Move cursor to the left |
| 0082 | Move cursor upward |
| 0083 | Move cursor downward |
| 0088 | Delete value being input |

* Cannot be set when the GOT-F900 series is used.

(b) Key code for ASCII input

| Key code ^(H) | Application |
|-------------------------|---|
| 0008* | Deletes the first character and shifts the entire characters to the right by one character. |
| 000D | Write to the destination device (Execute)/Move the cursor |
| 001B* | Delete cursor |
| ASCII code | Input characters |
| 0080* | Move cursor to the right |
| 0081* | Move cursor to the left |
| 0082 | Move cursor upward |
| 0083 | Move cursor downward |
| 0088 | Delete value being input |

* Cannot be set when the GOT-F900 series is used.

(c) Key code for data list display function

| Key code ^(H) | Application |
|-------------------------|-------------------------|
| 00F2* | Scroll up by one line |
| 00F3* | Scroll down by one line |

* Cannot be set when the GOT-F900 series is used.

(d) Key code for alarm list display function

| Key code ^(H) | Application |
|-------------------------|--|
| 00F2* | Scroll up by one line |
| 00F3* | Scroll down by one line |
| FFB0 | Show cursor |
| FFB1 | Hide cursor |
| FFB2 | Move cursor upward (Insert page break when cursor is hidden) |
| FFB3 | Move cursor downward (Insert page break when cursor is hidden) |
| FFB8 | Display detail information |
| FFBC* | Display ladder |

* Cannot be set when the GOT-F900 series is used.

(e) Key code for alarm history function

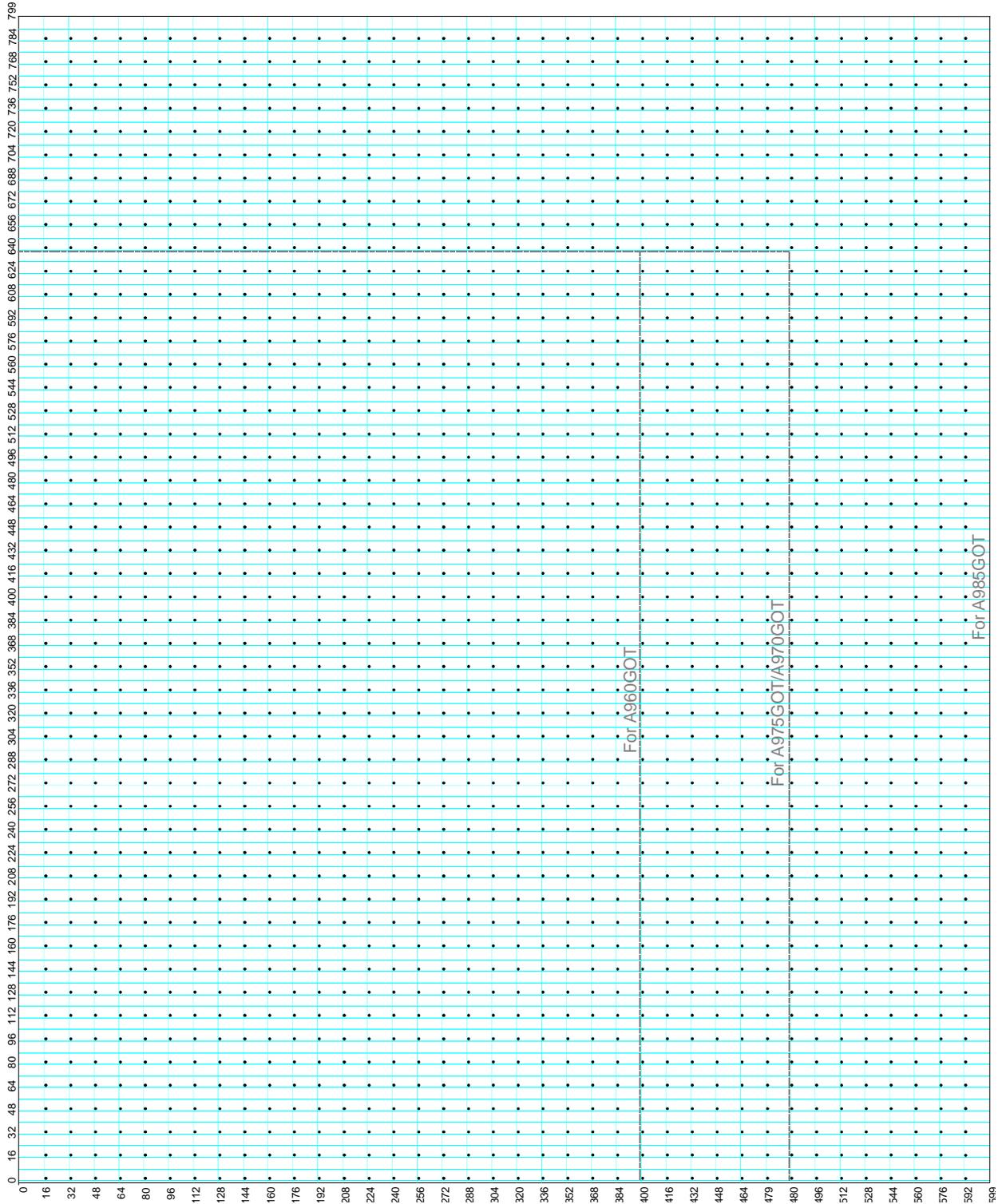
| Key code ^(H) | Application |
|-------------------------|---|
| FFB0 | Show cursor |
| FFB1 | Hide cursor |
| FFB2 | Move cursor upward (Insert page break when cursor is hidden) |
| FFB3 | Move cursor downward (Insert page break when cursor is hidden) |
| FFB4* | Display date/time of selected data |
| FFB5* | Display date/time of all data |
| FFB6 | Clear the selected alarm data |
| FFB7 | Clear all alarm data |
| FFB8 | Display detail information |
| FFB9* | Reset designated device |
| FFBB | When using GOT-A900 series: Save alarm contents to PC card When using GOT-F900 series: Reset designated device |
| FFBC* | Display ladder |

* Cannot be set when the GOT-F900 series is used

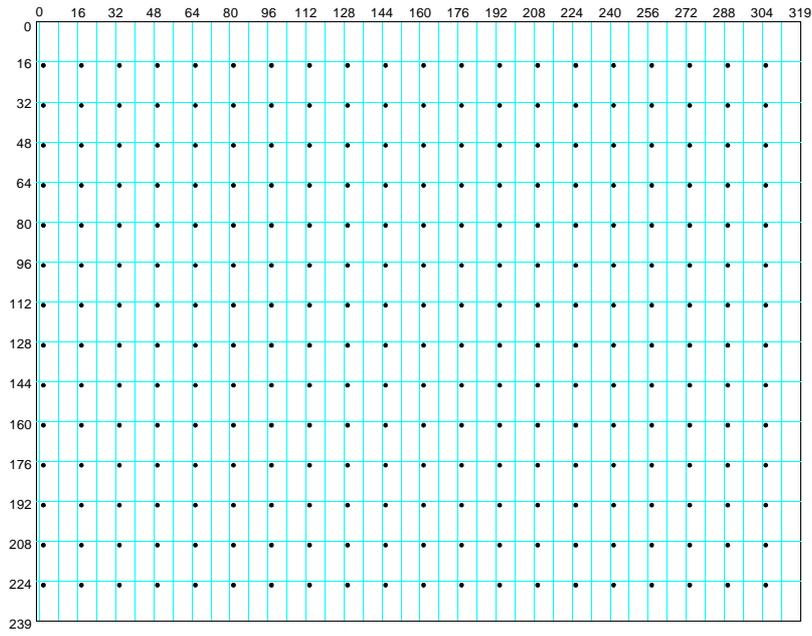
FFB6 and FFB7 are supported by GOT-F900 series OS version 3.0 or higher.

Appendix3 Drawing Sheet

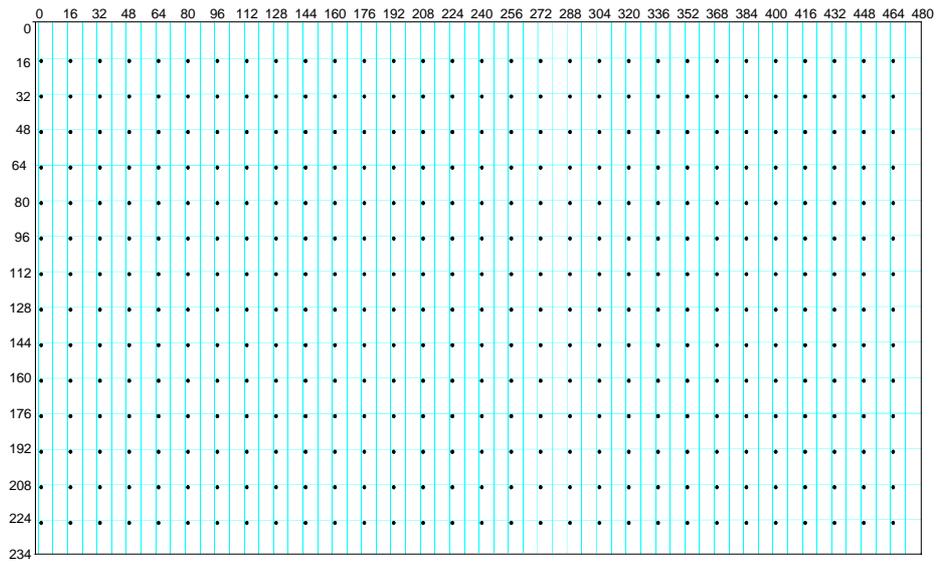
(1) For A985GOT/A975GOT/A970GOT/A960GOT



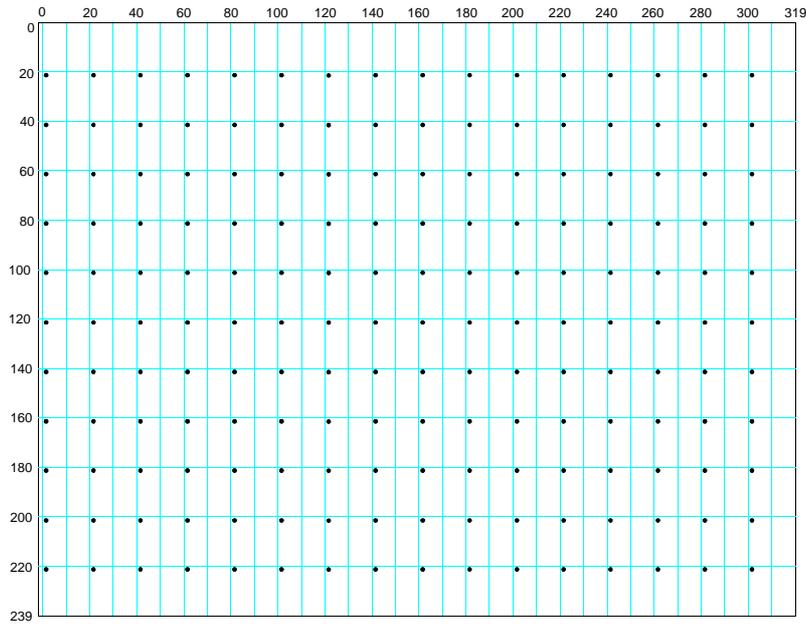
(2) For A95*GOT



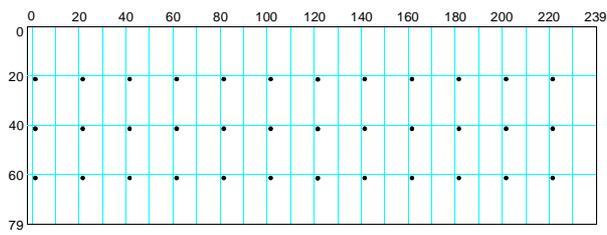
(3) For A956WGOT



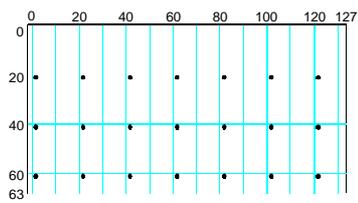
(4) For F940GOT



(5) For F930GOT



(6) For F920GOT



* There is no touch switch.

Appendix4 Printing Time of Hard Copy Function (Reference Value)

During printing, it is recommended that a monitor screen with fewer object functions is displayed. When a screen with object functions (e.g. value display function) which are changed very fast is displayed on the GOT, the GOT gives priority to display of object functions. Therefore, the printouts take longer.

The following table shows the print out time (reference value) using the hard copy function while the monitor screen with value display function for 50 points is displayed.

| GOT main unit | Connection | Type of printer to be used* ¹ | | |
|---------------------|---|--|--|------------------------------------|
| | | Printer applicable for ESC/P command (16 colors) | Printer applicable for ESC/P command (black and white) | Printer applicable for PCL command |
| A985GOT | CPU direct connection | 1min.40 sec. | 40.9sec. | 31.3sec. |
| | Bus connection | 1min.39 sec. | 40.9sec. | 30.9sec. |
| | Computer link | 1min.39sec. | 39.1sec. | 30.6sec. |
| | MELSECNET connection (data link system) | 1min.42sec. | 42.4sec. | 32.2sec. |
| | MELSECNET connection (network system) | 1min.37sec. | 40.1sec. | 33.5sec. |
| A975GOT | CPU direct connection | 1min.08sec. | 33.4sec. | 27.9sec. |
| | Bus connection | 1min.09sec. | 31.0sec. | 27.0sec. |
| | Computer link | 1min.07sec. | 33.4sec. | 26.7sec. |
| | MELSECNET connection (data link system) | 1min.09sec. | 31.1sec. | 28.2sec. |
| | MELSECNET connection (network system) | 1min.09sec. | 31.5sec. | 28.0sec. |
| A970GOT | CPU direct connection | 1min.10sec. | 32.3sec. | 27.1sec. |
| | Bus connection | 1min.08sec. | 30.4sec. | 28.1sec. |
| | Computer link | 1min.07sec. | 33.1sec. | 26.8sec. |
| | MELSECNET connection (data link system) | 1min.08sec. | 30.4sec. | 28.1sec. |
| | MELSECNET connection (network system) | 1min.08sec. | 33.5sec. | 28.0sec. |
| A95*GOT -SBA/SBD | CPU direct connection | 30.5sec. | 20.3sec. | 22.9sec. |
| | Bus connection | 30.3sec. | 21.2sec. | 23.0sec. |
| | Computer link | 30.7sec. | 21.5sec. | 22.8sec. |
| | MELSECNET connection (data link system) | 31.5sec. | 19.5sec. | 22.5sec. |
| | MELSECNET connection (network system) | 33.6sec. | 19.3sec. | 23.0sec. |
| A95*GOT -LBA/LBD | CPU direct connection | 19.3sec. | 20.6sec. | 23.7sec. |
| | Bus connection | 20.9sec. | 20.9sec. | 23.2sec. |
| | Computer link | 19.1sec. | 20.2sec. | 23.1sec. |
| | MELSECNET connection (data link system) | 22.1sec. | 21.9sec. | 22.6sec. |
| | MELSECNET connection (network system) | 21.6sec. | 19.8sec. | 23.0sec. |
| A956WGOT | CPU direct connection | 37.2sec. | 22.8sec. | 22.7sec. |
| | Bus connection | 36.0sec. | 23.1sec. | 22.5sec. |
| | Computer link | 36.9sec. | 23.1sec. | 22.8sec. |
| | MELSECNET connection (data link system) | 35.7sec. | 23.1sec. | 23.1sec. |
| | MELSECNET connection (network system) | 36.7sec. | 23.1sec. | 22.5sec. |

*1 Either of the following printers was used to measure printing time.

- ESC/P command-ready printer : Canon BJC-600J
- PCL command-ready printer : HEWLETT PACKARD Laser Jet6L

Appendix5 Synthesized Colors Available for XOR

The following table indicates the colors and corresponding numbers available when using the parts display function XOR drawing mode.

(1) GOT having 256 display colors

When using the XOR for any colors other than the following, preview them in the preview of GT Designer.

| | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Dark black 109 |
|-----------------------|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Black 0 | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Dark black 109 |
| Blue 3 | Blue 3 | Black 0 | Purple 227 | Red 224 | Cyan 31 | Green 28 | White 255 | Yellow 252 | — | — | — | — | — | — | — | — |
| Red 224 | Red 224 | Purple 227 | Black 0 | Blue 3 | Yellow 252 | White 255 | Green 28 | Cyan 31 | — | — | — | — | — | — | — | — |
| Purple 227 | Purple 227 | Red 224 | Blue 3 | Black 0 | White 255 | Yellow 252 | Cyan 31 | Green 28 | — | — | — | — | — | — | — | — |
| Green 28 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Black 0 | Blue 3 | Red 224 | Purple 227 | — | — | — | — | — | — | — | — |
| Cyan 31 | Cyan 31 | Green 28 | White 255 | Yellow 252 | Blue 3 | Black 0 | Purple 227 | Red 224 | — | — | — | — | — | — | — | — |
| Yellow 252 | Yellow 252 | White 255 | Green 28 | Cyan 31 | Red 224 | Purple 227 | Black 0 | Blue 3 | — | — | — | — | — | — | — | — |
| White 255 | White 255 | Yellow 252 | Cyan 31 | Green 28 | Purple 227 | Red 224 | Blue 3 | Black 0 | — | — | — | — | — | — | — | — |
| Dark blue 2 | Dark blue 2 | — | — | — | — | — | — | — | Black 0 | Dark purple 162 | Dark red 160 | Dark cyan 22 | Dark green 20 | Dark white 182 | Dark yellow 180 | — |
| Dark red 160 | Dark red 160 | — | — | — | — | — | — | — | Dark purple 162 | Black 0 | Dark blue 2 | Dark yellow 180 | Dark white 182 | Dark green 20 | Dark cyan 22 | — |
| Dark purple 162 | Dark purple 162 | — | — | — | — | — | — | — | Dark red 160 | Dark blue 2 | Black 0 | Dark white 182 | Dark yellow 180 | Dark cyan 22 | Dark green 20 | — |
| Dark green 20 | Dark green 20 | — | — | — | — | — | — | — | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Black 0 | Dark blue 2 | Dark red 160 | Dark purple 162 | — |
| Dark cyan 22 | Dark cyan 22 | — | — | — | — | — | — | — | Dark green 20 | Dark white 182 | Dark yellow 180 | Dark blue 2 | Black 0 | Dark purple 162 | Dark red 160 | — |
| Dark yellow 180 | Dark yellow 180 | — | — | — | — | — | — | — | Dark white 182 | Dark green 20 | Dark cyan 22 | Dark red 160 | Dark purple 162 | Black 0 | Dark blue 2 | — |
| Dark white 182 | Dark white 182 | — | — | — | — | — | — | — | Dark yellow 180 | Dark cyan 22 | Dark green 20 | Dark purple 162 | Dark red 160 | Dark blue 2 | Black 0 | — |
| Dark black 109 | Dark black 109 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | Black 0 |

(2) GOT having 16 display colors

| | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Dark black 109 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Black 0 | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Dark black 109 |
| Blue 3 | Blue 3 | Black 0 | Dark purple 162 | Dark red 160 | Dark cyan 22 | Dark green 20 | Dark white 182 | Dark yellow 180 | Dark black 109 | Purple 227 | Red 224 | Cyan 31 | Green 28 | White 255 | Yellow 252 | Dark blue 2 |
| Red 224 | Red 224 | Dark purple 162 | Black 0 | Dark blue 2 | Dark yellow 180 | Dark white 182 | Dark green 20 | Dark cyan 22 | Purple 227 | Dark black 109 | Blue 3 | Yellow 252 | White 255 | Green 28 | Cyan 31 | Dark red 160 |
| Purple 227 | Purple 227 | Dark red 160 | Dark blue 2 | Black 0 | Dark white 182 | Dark yellow 180 | Dark cyan 22 | Dark green 20 | Red 224 | Blue 3 | Dark black 109 | White 255 | Yellow 252 | Cyan 31 | Green 28 | Dark purple 162 |
| Green 28 | Green 28 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Black 0 | Dark blue 2 | Dark red 160 | Dark purple 162 | Cyan 31 | Yellow 252 | White 255 | Dark black 109 | Blue 3 | Red 224 | Purple 227 | Dark green 20 |
| Cyan 31 | Cyan 31 | Dark green 20 | Dark white 182 | Dark yellow 180 | Dark blue 2 | Black 0 | Dark purple 162 | Dark red 160 | Green 28 | White 255 | Yellow 252 | Blue 3 | Dark black 109 | Purple 227 | Red 224 | Dark cyan 22 |
| Yellow 252 | Yellow 252 | Dark white 182 | Dark green 20 | Dark cyan 22 | Dark red 160 | Dark purple 162 | Black 0 | Dark blue 2 | White 255 | Green 28 | Cyan 31 | Red 224 | Purple 227 | Dark black 109 | Blue 3 | Dark yellow 180 |
| White 255 | White 255 | Dark yellow 180 | Dark cyan 22 | Dark green 20 | Dark purple 162 | Dark red 160 | Dark blue 2 | Black 0 | Yellow 252 | Cyan 31 | Green 28 | Purple 227 | Red 224 | Blue 3 | Dark black 109 | Dark white 182 |
| Dark blue 2 | Dark blue 2 | Dark black 109 | Purple 227 | Red 224 | Cyan 31 | Green 28 | White 255 | Yellow 252 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Blue 3 |
| Dark red 160 | Dark red 160 | Purple 227 | Dark black 109 | Blue 3 | Yellow 252 | White 255 | Green 28 | Cyan 31 | Dark purple 162 | Black 0 | Dark blue 2 | Dark yellow 180 | Dark white 182 | Dark green 20 | Dark cyan 22 | Red 224 |
| Dark purple 162 | Dark purple 162 | Red 224 | Blue 3 | Dark black 109 | White 255 | Yellow 252 | Cyan 31 | Green 28 | Dark red 160 | Dark blue 2 | Black 0 | Dark white 182 | Dark yellow 180 | Dark cyan 22 | Dark green 20 | Purple 227 |
| Dark green 20 | Dark green 20 | Cyan 31 | Yellow 252 | White 255 | Dark black 109 | Blue 3 | Red 224 | Purple 227 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Black 0 | Dark blue 2 | Dark red 160 | Dark purple 162 | Green 28 |
| Dark cyan 22 | Dark cyan 22 | Green 28 | White 255 | Yellow 252 | Blue 3 | Dark black 109 | Purple 227 | Red 224 | Dark green 20 | Dark white 182 | Dark yellow 180 | Dark blue 2 | Black 0 | Dark purple 162 | Dark red 160 | Cyan 31 |
| Dark yellow 180 | Dark yellow 180 | White 255 | Green 28 | Cyan 31 | Red 224 | Purple 227 | Dark black 109 | Blue 3 | Dark white 182 | Dark green 20 | Dark cyan 22 | Dark red 160 | Dark purple 162 | Black 0 | Dark blue 2 | Yellow 252 |
| Dark white 182 | Dark white 182 | Yellow 252 | Cyan 31 | Green 28 | Purple 227 | Red 224 | Blue 3 | Dark black 109 | Dark yellow 180 | Dark cyan 22 | Dark green 20 | Dark purple 162 | Dark red 160 | Dark blue 2 | Black 0 | White 255 |
| Dark black 109 | Dark black 109 | Dark blue 2 | Dark red 160 | Dark purple 162 | Dark green 20 | Dark cyan 22 | Dark yellow 180 | Dark white 182 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Black 0 |

(3) GOT having 8 display colors

| | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Black 0 | Black 0 | Blue 3 | Red 224 | Purple 227 | Green 28 | Cyan 31 | Yellow 252 | White 255 |
| Blue 3 | Blue 3 | Black 0 | Purple 227 | Red 224 | Cyan 31 | Green 28 | White 255 | Yellow 252 |
| Red 224 | Red 224 | Purple 227 | Black 0 | Blue 3 | Yellow 252 | White 255 | Green 28 | Cyan 31 |
| Purple 227 | Purple 227 | Red 224 | Blue 3 | Black 0 | White 255 | Yellow 252 | Cyan 31 | Green 28 |
| Green 28 | Green 28 | Cyan 31 | Yellow 252 | White 255 | Black 0 | Blue 3 | Red 224 | Purple 227 |
| Cyan 31 | Cyan 31 | Green 28 | White 255 | Yellow 252 | Blue 3 | Black 0 | Purple 227 | Red 224 |
| Yellow 252 | Yellow 252 | White 255 | Green 28 | Cyan 31 | Red 224 | Purple 227 | Black 0 | Blue 3 |
| White 255 | White 255 | Yellow 252 | Cyan 31 | Green 28 | Purple 227 | Red 224 | Blue 3 | Black 0 |

Appendix6 Comparison between GT Designer terms and GT Designer2 terms

The following terms are different between GT Designer and GT Designer2.

| GT Designer terms | GT Designer2 terms | Remarks |
|-------------------|------------------------------------|--|
| Edit key group | Two tracker mode Enable/Disable | The operation for editing the touch switch valid key area and changing the figure/frame size of the object with frame set. |
| Case | State | Settings for change the object display attributes according to the device status (condition). |
| Parts library | Library | Generic term for system libraries and user defined libraries. |
| Panel kit | Template | Generic term for objects and figures registered in each library. |

Appendix7 Functions Added with Upgrade from GT Designer to GT Designer2

1 Added functions

This section shows the functions added to GT Designer2 Version1 with each upgrade (edition 00A through 17T).

The symbols in each table show the relevant restrictions and information as indicated below.

| Symbols in tables | Description |
|-------------------|--|
| ● | Applicable for GOT-A900 series and GOT-F900 series |
| ○ | Applicable for GOT-A900 series |
| △ | Applicable for GOT-F900 series |
| × | Inapplicable |
| 02C to 17T | Indicates the edition No. of GT Designer2 |

(1) Added target GOTs

| Target models | 00A | 02C | 05F | 08J | 09K | 13P | 14Q | 17T |
|--|-----|-----|-----|-----|-----|-----|-----|-----|
| A950GOT-SBD-B, A950GOT-SBD-M3-B, A951GOT-QSBD-B, A951GOT-QSBD-M3-B, A951GOT-SBD-B, A951GOT-SBD-M3-B, A953GOT-SBD-B, A953GOT-SBD-M3-B, A956GOT-SBD-M3, A956GOT-SBD-M3-B | × | × | × | × | × | × | × | ○ |

(2) Added functions for GOT (extended functions and option functions)

| Items | Description | 02C | 05F | 09K | 13P | 14Q | 17T |
|------------------------------|---|-----|-----|-----|-----|-----|-----|
| Ladder monitor | Support monitoring of redundant system (QCPU). | × | × | × | × | ○ | ○ |
| System monitor | Support monitoring of redundant system (QCPU). | × | × | × | × | ○ | ○ |
| | Support monitoring of MELSECNET/H network system remote I/O station (CPU direct connection/computer link connection). | × | × | × | × | ○ | ○ |
| Network monitor | Support monitoring of QCPU and QnACPU (only when using A9GT-QJ71LP23 or A9GT-QJ71BR13) | × | × | ○ | ○ | ○ | ○ |
| | Support monitoring of redundant system (QCPU). | × | × | × | × | ○ | ○ |
| Special module monitor | Support monitoring of QCPU and QnACPU (only when using A9GT-QJ71LP23 or A9GT-QJ71BR13) | × | × | ○ | ○ | ○ | ○ |
| Screen save | Set the time for screen save by GOT internal device (GS451) | ○ | ○ | ○ | ○ | ○ | ○ |
| CNC monitor function | A function is added that supports MELDAS C6/64 monitoring. | × | ○ | ○ | ○ | ○ | ○ |
| | Support monitoring of MELSECNET/10 connection (only when using A9GT-QJ71LP23 or A9GT-QJ71BR13) | × | × | ○ | ○ | ○ | ○ |
| Font change function | Change fonts. (Chinese (simplified characters) font) | × | × | ○ | ○ | ○ | ○ |
| Station observation function | Check the communication status with PLC CPU in the Ethernet connection. | × | × | ○ | ○ | ○ | ○ |

(3) Added connection style

| Items | Description | 02C | 05F | 09K | 13P | 14Q | 17T |
|--|--|-----|-----|-----|-----|-----|-----|
| Bus connection | Support transparent function | ○ | ○ | ○ | ○ | ○ | ○ |
| CPU direct connection | Support monitoring by FXCPU via link Interface (FX2NC-232ADP) | △ | ● | ● | ● | ● | ● |
| | Support the connection to MELSDAS C6/C64. | × | ○ | ○ | ○ | ○ | ○ |
| | Support the connection to FX3UC series. | △ | △ | △ | ● | ● | ● |
| | Support the connection to MELSECNET/H network system remote I/O station. | × | × | × | × | ○ | ○ |
| | Support the connection to redundant system (QCPU) via MELSECNET/H network system remote I/O station. | × | × | × | × | ○ | ○ |
| Computer link connection | Support monitoring of QJ71C24N and QJ71C24N-R2, QJ71C24N-R4. | × | × | ○ | ○ | ○ | ○ |
| | Support the connection to serial communication module/modem interface module mounted to MELSECNET/H network system remote I/O station. | × | × | × | × | ○ | ○ |
| | Support the connection to redundant system (QCPU) via serial communication module/modem interface module mounted to MELSECNET/H network system remote I/O station. | × | × | × | × | ○ | ○ |
| MELSECNET/10 connection | Support the QCPU, QNACPU device range. (only when using A9GT-QJ71LP23 or A9GT-QJ71BR13) | × | × | ○ | ○ | ○ | ○ |
| | Support the connection to MELDAS C6/C64. (only when using A9GT-QJ71LP23 or A9GT-QJ71BR13) | × | × | ○ | ○ | ○ | ○ |
| | Support the connection to redundant system (QCPU). | × | × | × | × | ○ | ○ |
| CC-Link connection (ID) | Support the connection to MELSDAS C6/C64. | × | ○ | ○ | ○ | ○ | ○ |
| | Support the connection to redundant system (QCPU). | × | × | × | × | ○ | ○ |
| CC-Link connection (RD) | Support the connection to MELSDAS C6/C64. | × | ○ | ○ | ○ | ○ | ○ |
| CC-Link connection(G4) | Support the connection to redundant system (QCPU). | × | × | × | × | ○ | ○ |
| Ethernet connection | Support the connection to MELSDAS C6/C64. | × | ○ | ○ | ○ | ○ | ○ |
| | Support the connection to redundant system (QCPU). | × | × | × | × | ○ | ○ |
| Omron PLC connection | Support the connection to CS1D, CJ1M, CPM1, CPM1A, CPM2A, CPM2C and CQM1H. | × | ○ | ○ | ○ | ○ | ○ |
| Sharp PLC connection | Support the connection to JW-100CU and Z-512J. | × | ○ | ○ | ○ | ○ | ○ |
| Toshiba PLC connection | Support the connection to S2T. | × | × | ○ | ○ | ○ | ○ |
| Matsushita Electric Works PLC connection | Support the connection to FP2SH. | △ | △ | ● | ● | ● | ● |
| | Special data registers (DT90000 to DT90511) are added to the devices that can be monitored. | × | × | × | ○ | ○ | ○ |
| Barcode connection | Support the connection to NEC barcode reader. | × | ○ | ○ | ○ | ○ | ○ |

(4) Added functions for GT Designer2

| Items | Description | 02C | 05F | 09K | 13P | 14Q | 17T |
|--------------------------------------|---|-----|-----|-----|-----|-----|-----|
| Read data of DU/WIN drawing software | Read and edit data (file and GOT) of drawing GOT-F900 in FX-PCS-DU/WIN. For details, refer to GOT-F900 series Operation Manual [GT Designer2]. | △ | △ | △ | △ | △ | △ |
| Batch change | Add the function that enables batch changing object and figure device devices, color, and switch/lamp figure. | ● | ● | ● | ● | ● | ● |
| Multi-language input | Multiple languages of Windows® 2000 Professional, Windows® XP Professional, Windows® XP Home Edition. | ● | ● | ● | ● | ● | ● |
| OS version check | Message will be displayed when old version of GOT basic function OS is downloaded. | ○ | ○ | ○ | ○ | ○ | ○ |
| Display again | Add the function of refreshing the drawing screen. | ● | ● | ● | ● | ● | ● |
| Operation environment | Corresponds to Windows® XP Professional, Windows® XP Home Edition. | ● | ● | ● | ● | ● | ● |
| GOT type change | GOT type can be changed between GOT-A900 series and GOT-F900 series | × | ● | ● | ● | ● | ● |
| Print | Following print functions are added. Parts image list Library image list Common setting Device list Voice file list Category list Script file/script symbol list | × | ● | ● | ● | ● | ● |
| Data size display | A function is added that displays data size for each screen or project. | × | ● | ● | ● | ● | ● |
| Comment list | Shortcut key operation and key operation within the list are available. | × | ● | ● | ● | ● | ● |
| Basic figure | GOT-F900 series basic figures are added to GOT-A900 series. | × | ○ | ○ | ○ | ○ | ○ |
| DXF data import | Import a DXF format file as a figure into a screen. | × | × | ● | ● | ● | ● |
| Other project import | Import the data created for other project into the currently edited project. | × | × | ● | ● | ● | ● |
| Parts registration | Add the function that displays high quality font. | ● | ● | ● | ● | ● | ● |

(5) Added common settings/object functions

| Items | Description | 02C | 05F | 09K | 13P | 14Q | 17T |
|--------------------------|---|-----|-----|-----|-----|-----|-----|
| System information | Add signal (system signal2 b0) during screen save | ○ | ○ | ○ | ○ | ○ | ○ |
| | "Numeric Value Input Number", "Cursor Position's Numeric Value Input" and "Numeric Value Input Signal" are now compatible with ASCII input. (GOT special register GS450.b2) | × | ○ | ○ | ○ | ○ | ○ |
| | A function is added that stores "0" in "Cursor Position's Numeric Value Input", "Current Cursor Position" and "Previous Cursor Position" when a cursor is deleted. (GOT special register GS450.b3) | × | ○ | ○ | ○ | ○ | ○ |
| Numeric input | Add the function that enables displaying confirmation message after confirming input. (GOT special register GS450.b0) | ○ | ○ | ○ | ○ | ○ | ○ |
| | Add the function for selecting displaying method of message when inputting value out of range. (GOT special register GS450.b1) | ○ | ○ | ○ | ○ | ○ | ○ |
| ASCII input | Add the function that enables displaying confirmation message after confirming input. (GOT special register GS450.b0) | ○ | ○ | ○ | ○ | ○ | ○ |
| Comment display function | Add the display rows. | ○ | ○ | ○ | ○ | ○ | ○ |
| Alarm list function | Add the displaying start row and number of displaying rows. | ○ | ○ | ○ | ○ | ○ | ○ |
| Alarm history | A function is added that interrupt the file storage using alarm history if an error is detected in the alarm information file to be stored. | × | ○ | ○ | ○ | ○ | ○ |
| Parts display | Add the function that uses the BMP files stored on PC card as parts. | × | × | × | ○ | ○ | ○ |
| Parts movement | Add the function that uses the BMP files stored on PC card as parts. | × | × | × | ○ | ○ | ○ |
| Touch switch | Add the switch for displaying previous screen. | ○ | ○ | ○ | ○ | ○ | ○ |
| | Add the function that controls the timing when the screen/station No. switches. This applies when the bit Set/Reset/Alternate and screen switching/station No. switching have been set to a touch switch. | × | × | ○ | ○ | ○ | ○ |
| Script function | Add offset specification of script. | ○ | ○ | ○ | ○ | ○ | ○ |
| | Add the function of integer ↔ real number data conversion. | ○ | ○ | ○ | ○ | ○ | ○ |

2 Functions not supported

Compared with GT Designer, GT Designer2 does not support the following functions.

| Functions | Deleted contents |
|--------------------|--|
| Object list | Delete the function that enables displaying by list and editing each object type. |
| Set overlay screen | Delete the function that enables changing in batch the screen No. for setting overlay screen. |
| Print | (1) Outputs object information (details) to printer (2) Outputs images of set devices only or object ID only. |

INDEX

- [A]
 Alarm History 5-160
 Alarm List..... 5-137
 Auxiliary Setting..... 4-40
 ASCII Display 5-100
 ASCII Input 5-100
- [B]
 Bar Code Function 5-496
 Bar Graph 5-301
 Base screens specifications 2- 2
- [C]
 Case.....App-13
 Changing the registered comment's settings
 4- 9
 Changing the registered parts settings 4-26
 Changing property of the registered parts.... 4-27
 Clock Function..... 2-31
 Clock function for monitoring by GOT 2-31
 Clock Display..... 5-112
 Comment Display..... 5-118
 Comment Registration 4-1
 Copying the registered comments..... 4- 7
 Copying the registered parts 4-24
- [D]
 Data List 5-85
 Data Operation Function..... 5-41
 Deleting the registered comments..... 4- 8
 Deleting the registered parts..... 4-25
 Device range available for GOT-A900 Series
 2-44
 Device range available for GOT-F900 Series
 2-60
 Device Setting 5-1
 Drawing Sheet App- 6
- [E]
 Edit key group.....App-13
 Editing the comment as text/csv file 4-13
- [F]
 Figures and Data Capacity 2-8
 Floating Alarm 5-186
- [G]
 GOT internal devices2-37
 GOT/PLC Type Setting.....3- 1
- [H]
 Hard Copy5-482
- [K]
 Key Code List..... App- 3
 Key Window4-54
- [L]
 Lamp Display5-238
 Level.....5-264
 Line Graph5-289
- [N]
 Numerical Display.....5-61
 Numerical Input.....5-61
- [O]
 Object arrangement5-19
 Object shape setting5-20
 Object Display Speed (Reference Value)
 App- 1
 Object size change5-22
 Offset Function.....5-48
 Operation Panel.....5-488
 Overlap between figure and object2-35
 Overlap between objects2-35
 Overlap Setting2-35
- [P]
 Panel kit..... App-13
 Panelmeter.....5-252
 Parts Display5-191
 Parts Library..... App-13
 Parts Movement.....5-209
 Parts Registration4-17
 Password Setting.....3-17
 PLC CPU with clock function (GOT-A900 series
 only)2-33
 Print Format Setting3-40
 Printing Time of Hard Copy Function (Reference
 Value) App- 9

[R]
Recipe Function 5-421
Registering Gaiji 4-37
Registrating BMP Files for Parts..... 4-37
Report Function..... 5-459
RGB 5-523

[S]
Sampling..... 5-341
Scatter Graph 5-323
Script Function..... 5-440
Security Function..... 5-52
Set Overlay Screen Function..... 5-451
Specifications of Available Object Functions
..... 2-14
Sound 5-501
State Setting 5-25
Statistics Graph 5-313
Status Observation Function 5-412
Storing/reading a comment as file 4-10
Switching Screen Device Setting..... 3- 5
Switching Station No. Device Setting 3-11
Synthesized Colours Available for XOR... App-10
System Information Setting..... 3-23

[T]
Test Function..... 5-437
Time Action Function 5-430
Touch Switch 5-344
Trend Graph 5-276
Trigger Setting..... 5-32

[V]
Video..... 5-505

[W]
Whole screens specifications 2- 6
Window screens specifications..... 2- 2

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VS-FlexGrid Pro

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GT Designer2 Version1

Reference Manual

| | |
|--------------------------|--------------|
| MODEL | SW1-GTD2-R-E |
| MODEL CODE | 1DM204 |
| SH(NA)-080251-F(0409)MEE | |

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