MITSUBISHI

GPP Function software for Windows
SW2D5C-GPPW-E
SW2D5F-GPPW-E

Operating Manual

MELSEC

Mitsubishi Programmable Controller

● SAFETY PRECAUTIONS ●

(Read these precautions before using.)

When using Mitsubishi equipment, thoroughly read this manual and the associated manuals introduced in this manual. Also pay careful attention to safety and handle the module properly.
These precautions apply only to Mitsubishi equipment. Refer to the CPU module user's manual for a description of the PLC system safety precautions.

These ● SAFETY PRECAUTIONS ● classify the safety precautions into two categories: "DANGER" and "CAUTION".

⚠ DANGER	Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.
⚠ CAUTION	Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by ⚠**CAUTION** may also be linked to serious results.

In any case, it is important to follow the directions for usage.

Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

[Caution on Design]

⚠ DANGER
• For data change, program change, and status control made to the PLC which is running from a peripheral device, configure the interlock circuit externally so that the system safety is ensured.The action to be taken for the system at the occurrence of communication errors caused by such as loose cable connection must be determined for online operation of PLC from peripheral devices.

[Caution on Design]

⚠ CAUTION
• Before connecting a peripheral device to a CPU module in the RUN status and carrying out online operation (particularly program changes, forced output, and changing the operating status), read the manual carefully and confirm safety. Failure to do this could result in damage to the machine and accidents due to misoperation.

Revisions

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

Print Date	*Manual Number	Revision
Oct,1998	IB(NA)-66877-A	First edition

Introduction

Thank you for purchasing the Mitsubishi general-purpose MELSEC series sequencer.
Read this manual and make sure you understand the functions and performance of MELSEC series sequencer thoroughly in advance to ensure correct use.
Please make this manual available to the end user.

CONTENTS

How the manual describes the explanation is shown below.

This table indicates the applicable items for A series, QnA series and FX series

5.8 Adding Data to a Project

A	QnA	FX
•	•	•

[Purpose]

Adds a program, common comment, comments by program, or device memory data to the project.

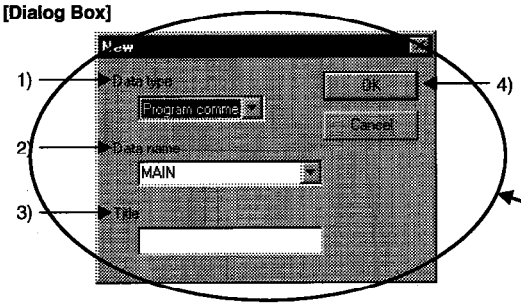
Items which are set in the section are explained.

The desired window opens by selecting the items in the specified order.

[Operating Procedure]

Select [Project] → [Edit data] → [New]

[Dialog Box]



The dialog boxes set in the section are explained.

The contents of the items and buttons are explained. The numbers correspond to those specified in the window shown under the title of [Dialog box].

[Description]

1) Data type

Designates the type of the data to be added (program, common comment, comments by program, or device memory).

2) Data name

Designates the name of the data to be added.

If one of A series PLCs is set as the PLC type of the active project, the name is fixed as SUB1, SUB2, or SUB3. (If the PLC type is A4UCPU, comments by program, named SUB4, can also be added.)

Name of subprograms can be designated after completing memory capacity setting for parameters.

For QnA series, the name should be designated within 8 characters.

For FX series, MAIN is designated as the name.

3) Title

Designates the title of the data in up to 32 characters.

4) [OK] button

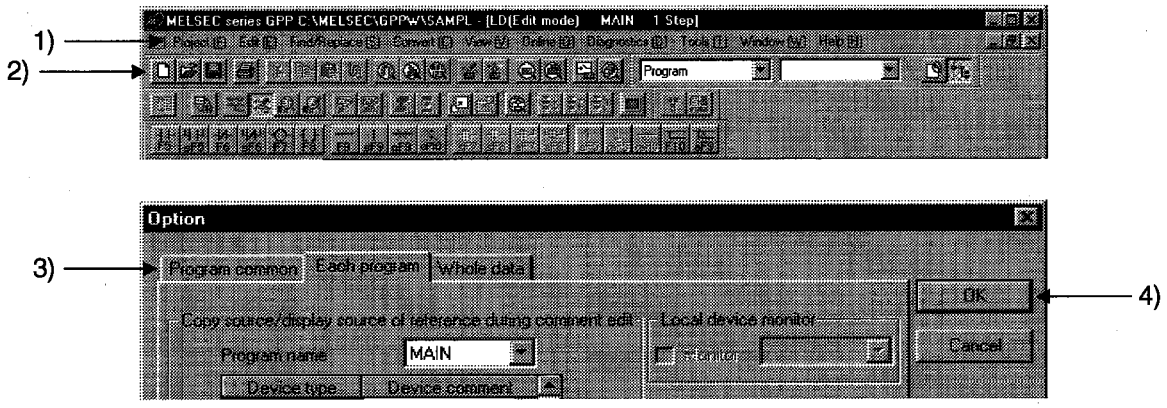
Click this button after setting necessary settings.

POINT

- Number of data allowed in one project is as follows.
  A series
  The number of data allowed differs depending on the PLC type designated for the project.
  See CPU User's manual (detailed information) of each CPU for details.
  QnA series
  Up to 124 data can be contained in a project.
  FX series
  Only one data can be contained in a project.

This gives the information related to the topic discussed and also the helpful information.

Symbols used in this manual, and the contents and examples of them are shown below.



No.	Symbol	Contents	Example
1)	[ ]	Menu name of menu bar	[Project]
2)		Icon in toolbar	
3)	<< >>	Tab name of dialog box	<<Program common>>
4)		Command button in dialog box	OK button

About Manuals

The following lists the manuals for this software package.
Refer to the following table when ordering manuals.

Related Manuals

Manual Name	Manual No. (Model Code)
GPP Function software for Windows SW2D5C-GPPW SW2D5F-GPPW SW2D5C-LLT SW2D5F-LLT Operating Manual (INSTALLATION). Describes the system configuration, installation procedure, and start-up procedure of the SW2D5□-GPPW and SW2D5□-LLT software packages. (Packed with the product)	IB-66878 (13J938)
GPP Function software for Windows SW2D5C-GPPW SW2D5F-GPPW SW2D5C-LLT SW2D5F-LLT Starting GPPW. Describes the following using illustrations for persons who use SW2D5□-GPPW and SW2D5□-LLT for the first time: installation procedure, start-up procedure, basic information, ladder creating and editing procedure, printing out procedure, monitoring procedure, and debugging procedure. (Sold separately)	SH-4006 (13J939)
Ladder Logic Test Function Software for Windows SW2D5C-LLT SW2D5F-LLT Operating Manual. This manual gives a product summary, device memory monitoring and setting/operating methods for machine simulation. (Packed with the product)	IB-66876 (13J936)

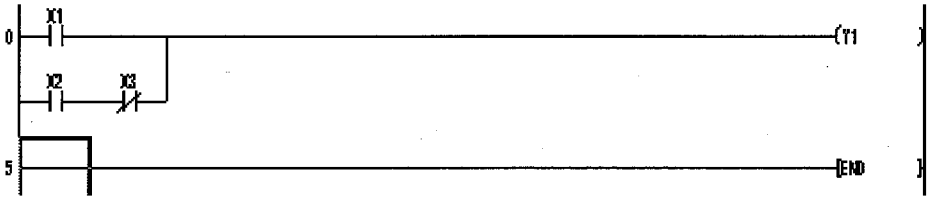
1. GENERAL DESCRIPTION

Product Outline and Features

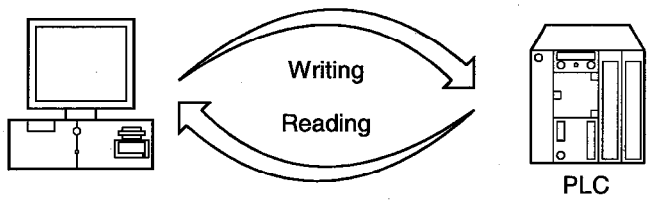
Outline

This section explains the type SW2D5C-GPPW/SW2D5F-GPPW GPP Function Software Package (called GPPW).
GPPW is a software package having the following functions.

1. **Program creation**



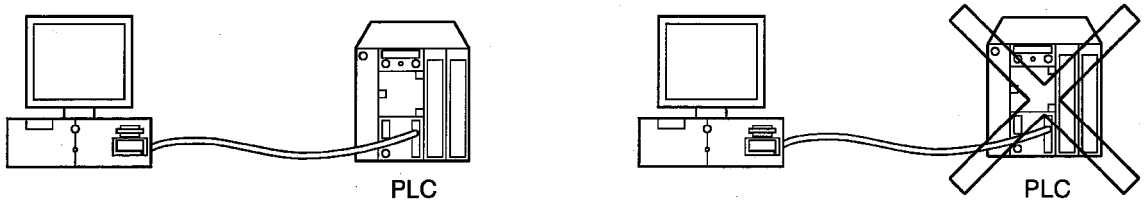
2. **Writing and reading to/from PLC**



3. **Monitoring (example: device batch monitoring)**
The circuit monitor, device monitor, and device registration monitor can be used for monitoring.

Device	+F E D C	+B A 9 8	+7 6 5 4	+3 2 1 0	
D01	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0
D02	0 0 0 0	0 0 0 0	0 0 1 0	0 1 0 1	37
D03	0 0 0 0	0 0 0 0	1 0 0 1	0 0 0 0	144

4. **Debugging**
The created sequence program is written into PLC to test that the written sequence program operates normally.
In addition, the newly developed SW2D5C/SW2D5F-LLT ladder logic test tool function software package*1 (called the logic test function (LLT)) can be used to debug the program with a single personal computer.



5. **Diagnostics PLC**
The current error status, error status or error log can be displayed to shorten the time required for error recovery.

*: The logic test function (LLT) is an independent function and may be purchased separately.

Features

The following summarizes the GPPW features.

1. GPPW can create A, QnA and FX series data. Setting operations are common.

2. Enhanced programming tools
   • Instruction list • Function key
   • Tools button • Menu bar
   Programs can be created using the tools the user wishes to use.

3. Data created by GPPW is converted into files for the SW -GPPA GPP Function Software Package (simply called GPPA, but exclude the software package for A6GPP/A6PHP) or SW□ -GPPQ GPP Function Software Package (simply called GPPQ so that they can be edited by GPPA or GPPQ.
   In addition, when FX series has been selected, data created by GPPW is converted into files for the DOS Programming Software (called FXGP(DOS) simply) or SW0PC-FXGP/WIN-E Programming Software called FXGP(WIN) so that they can be edited by FXGP(DOS) or FXGP(WIN).

4. Comment data created by Excel or Word can be copied or pasted for efficient creation.

5. Windows data can be easily used (cut, copied or pasted).

6. When an error occurs during data creation, the error cause is displayed and the time required for data creation can be reduced greatly.

7. The helpfile contains the descriptions of CPU errors, special relays and special registers so that they can be referenced to check the causes at online error occurrence or the contents of the special relays or special registers during program creation.

8. An access range has been extended (i.e., the other stations can be accessed via the Ethernet board or AJ65BT-G4 when A or QnA series is used).

9. The logic test function (LLT) can be used for ease of debugging.
   (1) Connection to PLC is not required.
   (2) Dummy sequence programs (programs for debugging) need not be created.

1.1 Functions List

This section lists the GPPW functions.
The listed functions are classified into two categories: fixed common functions (project, online, diagnostics, tool, window and help) and editing/setting functions (edit, search/replace, conversion and display).
In addition, GPPW contains some functions which can be executed independently by A series, QnA series or FX series.

(1) List of common functions
Fixed functions independent of the type of the object being edited or set

Project

- New project ..... Creates a new project.
- Open project ..... Opens an existing project.
- Close project ..... Closes an open project.
- Save project ..... Saves the project.
- Save As ..... Names and saves the project.
- Delete project ..... Deletes an existing project.
- Compare ..... Compares data between projects.
- Copy ..... Copies data between projects.
- Edit data
  - New ..... Adds data to a project.
  - Copy ..... Copies data in a project.
  - Delete ..... Deletes data in a project.
  - Rename ..... Renames data in a project.
- Change PLC type ..... Changes the PLC type.
- Import file
  - Import from GPPQ format file ..... Read a GPPQ file (QnA only)
  - Import from GPPA format file ..... Read a GPPA file (A only)
  - Import from FXGP(WIN) format file .... Read a FXGP(WIN) file (FX only)
  - Import from FXGP(DOS) format file .... Read a FXGP(DOS) file (FX only)
- Export file
  - Export to GPPQ format file ..... Write a GPPQ files (QnA only)
  - Export to GPPA format file ..... Write a GPPA files (A only)
  - Export to FXGP(WIN) format file ..... Write a the FXGP(WIN) files(FX only)
  - Export to FXGP(DOS) format file ..... Write a the FXGP(DOS) files(FX only)
- Macro
  - Macro reference path ..... Changes reference target of the macro instruction (QnA only).
- Printer setup ..... Changes the printer settings.
- Print ..... Prints data.
- Start new GPPW session ..... Restarts GPPW.
- End GPPW ..... Exits GPPW.

Online

- Transfer setup ..... Designates a PLC destination from GPPW.
- Read from PLC ..... Reads data from PLC.
- Write from PLC ..... Writes data to PLC.
- Compare with PLC ..... Compares data with PLC data.
- Delete PLC data ..... Deletes PLC data (QnA only).
- Change PLC data attributes ..... Changes PLC data attributes (QnA only).
- Monitor
  - Monitor mode ..... Places the circuit edit screen in monitor mode.
  - Monitor (Write mode) ..... Sets the circuit (monitor write) mode.
  - Start monitor (All windows) ..... Starts monitoring all open windows.
  - Stop monitor (All windows) ..... Stops monitoring all open windows.
  - Start monitor ..... Restarts the stopped monitor.
  - Stop monitor ..... Stops the monitor.
  - Change current value monitor (Decimal) ..... Displays the current device value of the circuit monitor in decimal form.
  - Change current value monitor (Hexadecimal) ..... Displays the current device value of the circuit monitor in hexadecimal form.
  - Device batch ..... Monitors devices in batch mode.
  - Device registration ..... Monitors device registration in batch mode.
  - Buffer memory batch ..... Monitors the buffer memory in batch mode.
  - monitor condition setup ..... Sets the monitor execution conditions (QnA only).
  - monitor stop condition setup ..... Sets the monitor stop conditions (QnA only).
  - Program monitor list ..... Monitors a program list.
  - Interrupt program monitor list ..... Lists the interrupt programs.
  - Scan time measurement ..... Measures the scan time.
- Debug
  - Device test ..... Turns on or off the device or changes the value.
  - Skip execution ..... Makes settings for skip (QnA, FX).
  - Partial execution ..... Makes settings for partial operation.
  - Step execution ..... Makes settings for step execution.
- Trace
  - Sampling trace ..... Execute a sampling trace.
- Remote operation ..... Operates the PLC remotely.
- Keyword setup
  - Register keyword ..... Registers or changes the keyword.
  - Delete keyword ..... Cancels the keyword.
  - Disable keyword ..... Unlocks access by keywords.
- Clear PLC memory ..... Clears the PLC memory cassette or device memory.
- Format PLC memory ..... Formats the PLC memory (QnA only).
- Arrange PLC memory ..... Arranges the data area within the PLC memory (QnA only).
- Set clock ..... Sets the internal timer of the PLC.

Diagnostics

- Diagnostics PLC ..... Diagnoses the PLC.
- Diagnostics PLC ..... Diagnoses the network (A, QnA)

Tools

- Check program ..... Checks the program.
- Marge data ..... Links data.
- Check parameter ..... Checks the parameter.
- Transfer ROM
  - Read ..... Reads data from ROM (A,FX).
  - Write ..... Writes data to ROM (A,FX).
  - Compare ..... Compares data with ROM data (A,FX).
  - Write to file ..... Writes ROM data to files (A,FX).
- Clear all parameters ..... Deletes parameters.
- Start ladder logic test ..... Starts the ladder logic test.
- Customize keys ..... Changes key assignments for circuit symbol input.
- Options ..... Sets the options.
- Create start-up settings file ..... Creates a file to save initial settings of the project.

Window

- Cascade ..... Cascades windows.
- Tile vertically ..... Tiles the windows vertically.
- Tile holizontally ..... Tiles the windows horizontally.
- Arrange icons ..... Arranges the icons in the lower part of the window.

Help

- CPU error ..... Displays the description of each CPU error code.
- Special relay/register ..... Displays the description of special relays or registers.
- Key operation list ..... Displays the description of each key operation.
- Product information ..... Displays product information (such as version number).

(2) List of circuit edit functions
The following table summarizes the circuit edit functions.

Edit

- Undo ..... Reverses the last operation.
- Cut ..... Moves the selected data to the Clipboard.
- Copy ..... Copies the selected data to the Clipboard.
- Paste ..... Pastes the contents of the Clipboard at the cursor position.
- Insert line ..... Inserts a row at the cursor position.
- Delete line ..... Deletes a row at the cursor position.
- Insert row ..... Inserts a column at the cursor position.
- Delete row ..... Deletes a column at the cursor position.
- Insert NOP batch ..... Inserts NOP before a circuit block at the cursor position.
- Delete NOP batch ..... Deletes all NOPs in the program at a time.
- Draw line ..... Inserts a line.
- Delete line ..... Deletes a line.
- Change TC setting ..... Changes the setting value of the timer or counter.
- Read mode ..... Places the circuit screen in the read mode.
- Write mode ..... Places the circuit screen in write mode.
- Ladder symbol
  - Open contact ..... Inserts  at the cursor position.
  - Close project contact ..... Inserts  at the cursor position.
  - Open branch ..... Inserts  at the cursor position.
  - Close project branch ..... Inserts  at the cursor position.
  - Coil ..... Inserts  at the cursor position.
  - Application instruction ..... Inserts  at the cursor position.
  - Vertical line ..... Inserts  at the cursor position.
  - Horizontal line ..... Inserts  at the cursor position.
  - Delete vertical line ..... Inserts  at the cursor position.
  - Delete horizontal line ..... Inserts  at the cursor position.
  - Rising pulse ..... Inserts  at the cursor position. (QnA, FX)
  - Falling pulse ..... Inserts  at the cursor position. (QnA, FX)
  - Rising pulse Open branch ..... Inserts  at the cursor position. (QnA, FX)
  - Falling pulse Close branch ..... Inserts  at the cursor position. (QnA, FX)
  - Invert operation results ..... Inserts  at the cursor position. (QnA, FX)
  - Convert operation results to rising pulse ..... Inserts  at the cursor position. (QnA only)
  - Convert operation results to falling pulse ..... Inserts  at the cursor position. (QnA only)

Find/Replace

- Find device ..... Searches for a device.
- Find instruction ..... Searches for an instruction.
- Find step No. ..... Searches for a step number.
- Find character string ..... Searches for a character string in comment, note, or statement.
- Replace device ..... Searches for and replaces a device.
- Replace instruction ..... Searches for and replaces an instruction.
- Change open/close contact ..... Searches for and replaces a contact a with a contact b.
- Replace character string ..... Searches for and replaces a character string in comment, note, or statement.
- Replace statement/note type ..... Searches for and replaces the type of a character string between statement and note (QnA only).
- List of used coils ..... Displays the device step number and the type to be used.
- List of used devices ..... Displays the device use status by device type.

Convert

- Convert ..... Converts the program.
- Convert (All programs being edited) ..... Converts the programs (not converted yet) in all windows.
- Convert (Online change) ..... Converts the program and writes it during run.

View

- Comment ..... Displays or hides comments.
- Statement ..... Displays or hides statements.
- Note ..... Displays or hides notes.
- Device Label ..... Displays or hides device names.
- Toolbar ..... Displays or hides the toolbar.
- Status bar ..... Displays or hides the status bar.
- Zoom
  - 50% ..... Displays a circuit reduced to 50%.
  - 75% ..... Displays a circuit reduced to 75%.
  - 100% ..... Displays a full-size circuit.
  - 150% ..... Displays a circuit magnified to 150%.
  - Auto ..... Displays a circuit according to the screen size.
- Project data list ..... Displays or hides the project data list.
- Instruction list ..... Switches program circuit display and list display.

(3) List of device comment edit functions
The following table summarizes the device comment edit functions.

Edit

Cut	Moves the selected data to the Clipboard.
Copy	Copies the selected data to the Clipboard.
Paste	Pastes the contents of the Clipboard at the cursor position.
Clear all (all devices)	Deletes the comments or device names of all devices.
Clear all (displayed devices)	Deletes the displayed comments or device names.
Setup comment	Sets the common comments or comments by program.
Setup comment range	Sets a comment range.

Find/Replace

Find character string	Searches for a character string.
Replace character string	Searches for and replaces a character string.

Convert

Convert (All programs being edited)	Converts the programs (not converted yet) in all windows.

View

Toolbar	Displays or hides the toolbar.
Status bar	Displays or hides the status bar.
Project data list	Displays or hides the project data list.

(4) List of network parameter setting functions
(Only available for A series and QnA series)
The following table summarizes the network parameter setting functions.

Edit

Undo	Reverts the last operation.
Cut	Move the selected data to the Clipboard.
Copy	Copies the selected data to the Clipboard.
Paste	Pastes the contents of the Clipboard at the cursor position.

Convert

Convert (All programs being edited)	Converts the programs (not converted yet) in all windows.

View

Toolbar	Displays or hides the toolbar.
Status bar	Displays or hides the status bar.
Project data list	Displays or hides the project data list.

(5) List of device memory setting functions
The following table summarizes the device memory setting functions.

Edit

Cut	Moves the selected data to the Clipboard.
Copy	Copies the selected data to the Clipboard.
Paste	Pastes the contents of the Clipboard at the cursor position.
Clear all (all devices)	Deletes data of all devices.
Clear all (displayed devices)	Deletes the data of displayed devices.
FILL	Sets all data to the specified value.

Find/Replace

Find data	Searches for a device.
Replace data	Searches for a character string.

Convert

Convert (All programs being edited)	Converts the programs (not converted yet) in all windows.

View

Toolbar	Displays or hides the toolbar.
Status bar	Displays or hides the status bar.
Project data list	Displays or hides the project data list.

1.2 Abbreviations and Terms in This Manual

This manual uses the abbreviations and terms listed in the following table to discuss the GPP Function Software Package and PLC module. In addition, the following table lists the names of modules whose names must be indicated explicitly.

Abbreviation/Generic Term	Description/Target Module
ACPU	Generic term for PLC available with MELSEC-A (However, GPPW does not support A1, A2, A3, A3H, A3M, A52G, A73, A0J2 and A3V.)
QnACPU	Generic term for PLC available with MELSEC-QnA
FXCPU	Generic term for PLC available with MELSEC-F (The target PLCs are FX0, FX0S, FX0N, FX1, FX, FX2, FX2C, FX2N and FX2NC.)
GPPA	SW□SRXV-GPPA SW□NX-GPPA SW□IVD-GPPA
GPPQ	SW□IVD-GPPQ SW□NX-GPPQ
FXGP(DOS)	SW1PC-FXGPEE/AT
FXGP(WIN)	SW0PC-FXGP/WIN-E
GPPW	SW2D5C-GPPW-E, SW2D5F-GPPW-E
Logic test function (LLT)	SW2D5C-LLT-E, SW2D5F-LLT-E
A series	For GPPW PLC type selection by ACPU
QnA series	For GPPW PLC type selection by QnACPU
FX series	For GPPW PLC type selection by FXCPU
Peripheral device	Personal computer compatible with Windows 95
E71	AJ71AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3 A1SJ71E71-B2, A1SJ71E71-B5
QE71	AJ71QE71(B5), A1SJ71QE71-B2, A1SJ71QE71-B5
Ethernet board	Ethernet PLC card, Ethernet I/F board
C24	A1SJ71C24-R2, A1SJ71C24-R4, A1SJ71C24-PRF A2CCPUC24(-PRF), A1SCPUC24-R2
UC24	AJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF
QC24	AJ71QC24, AJ71QC24-R2, AJ71QC24-R4, AJ71QC24N, A1SJ71QC24, A1SJ71QC24-R2, AJ71QC24N-R2, AJ71QC24N-R4, A1SJ71QC24N, A1SJ71QC24N-R2
MEDOC	MELSEC-MEDOC
CC-Link	Control & Communication Link
PLC	PROGRAMMABLE LOGIC CONTROLLER

1.3 FX Series Programming

This section describes the main differences between the GPPW operating environment and FX-dedicated programming software (DOS version, Windows version) operating environment and the points to be noted.

Target PLC:
FX_0, FX_{0S}, FX_{0N}, FX_1, FX_2, FX_{2C}, FX_{2N}, and FX_{2NC} series
In the selection of PLC type, select FXU/FX2C for FX,FX2 and FX2C
See Section 17.1.1(2) for details on the system configuration and connection method.

Operating Environment
- Differences of main terms
  - Program file handling
    GPPW programming data is created in units of folders (directories) called the projects.
    FXGP(DOS) and FXGP(WIN) do not have the concept of project, and program files are created in any folders (directories) for management.
    For this reason, the program file names in FXGP(DOS) and FXGP(WIN) are project names in GPPW.
    For details on project specification, see Section 3.2.

  - Comments
    (1) The number of characters that can be input may be different (see Appendix 11).
    (2) The circuit comment is called the statement.
    (3) The coil comment is called the note.

  - Parameter settings
    Some setup screens have different names (see Section 13.3).

- Differences in operations
  - Step ladder instructions (STL, RET) are displayed in different ways (see Section 6.2.2).

  - Monitor display may be partially different (see Appendix 11).

  - Application instructions using the FNC. No. are not available.

  - Although FX PLC operates in the sequence program with no End instructions, END instructions are forceful input in GPPW.

- Common items and others
  - Items that are available for only A series or QnA series are disabled and displayed in gray in the GPPW operation screens.

  - Partial execution, step run, and step run debug functions cannot be used when FXCPU is connected. However, these debug functions can be used for debugging with a single personal computer when the ladder logic test function (LLT) is connected (see Chapter 19 for details).

  - The program conversion function is provided for conversion from A to FX series and vice versa (see Section 5.12 and Appendix 4 for details).

  - The GPPW FX series allows users to create only one program file. Because A series or QnA series allows users to create multiple program files, this manual may use screen examples including multiple program files when describing the function. However, when FX series is selected, only the main program is displayed on the screen.

  - The connection cable and RS-232C/RS-422 converter for FX PLC may be different from those for A or QnA series PLC (see Subsection 17.1.1(2) for details).

  - GPPW is cable of reading from or writing to FXGP(DOS) and FXGP(WIN) files basically. However, note that there are some exceptions (see Sections 5.13 and 5.14 and Chapter 9 for details).

    SFC program of FX series is displayed as STL and RET instructions on the GPPW since the program is described as the step ladder instructions.
    It is possible to edit a ladder (see Section 6.2.2.).

1.4 Basic Key Specifications

The following table summarizes the purposes of the keys used with the GPP function.

Key Name	Purpose
Esc	Closes the window, interrupts execution, and selects instructions.
Tab	Enters a tab code and switches the target to which the cursor must be moved quickly.
Ctrl + Tab	
Ctrl	Used in a combination with a alphanumeric key or a function key.
Shift	Selects a character at the Shift position.
Caps Lock	Switches upper-case and lower-case letters.
Alt	Selects the menu.
Back space	Deletes a character to the left of the cursor position.
Enter	Enters a carriage return.
Page Up	Scrolls down the circuit or list by page. (Scrolls a screen in minus direction.)
Page Down	Scrolls up the circuit or list by page. (Scrolls a screen in plus direction.)
Insert	Enters a space character at the cursor position.
Delete	Deletes a character at the cursor position. (Clears all settings.)
Home	Moves the cursor to the home position.
↑ ↓ ← →	Moves the cursor or scrolls the circuit or list in unit of lines. (↑ ↓)
Ctrl + Home	Moves circuit the cursor to step 0 in the mode.
Ctrl + End	Moves the cursor to the End instruction in the circuit mode.
Scroll Lock	Inhibits scroll-up and scroll-down.
Num Lock	Uses the Ten-key pad for numeric key input only.

2. MENU INDEX

2.1 Menu Index

This section lists the GPPW menus in alphabetical order.

How to read the menu index table
<Example>

Menu	Operation	Target PLC type	Reference section
Delete	[Project]-[Edit data]	O	5.5

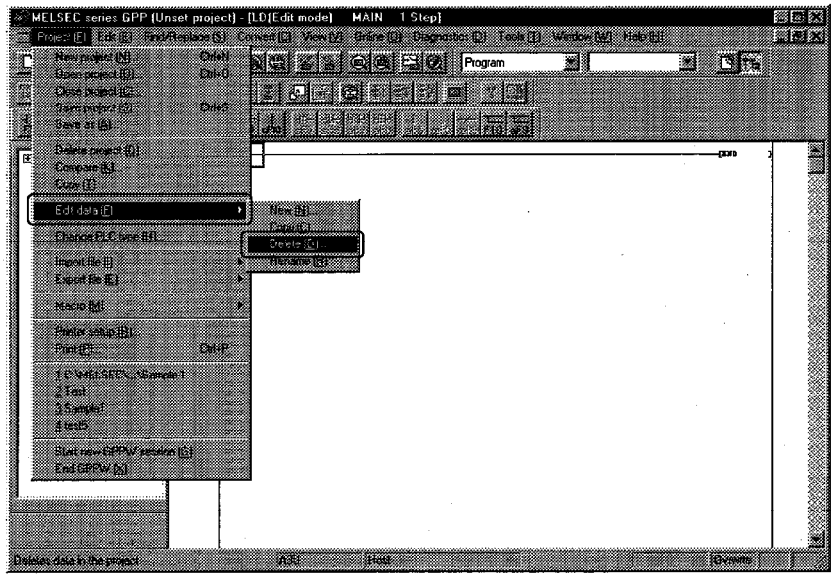
Menu name

Sequence of menus to be selected

Availability depending on PLC series
O : Common for A and QnA series

Reference in this manual

The above operation indicates that the submenu is displayed before reaching to the menu item.



Menu Index Table

Menu	Operation	Target PLC Series	Reference Section
Arrange icons	Window	O	16.8
Arrange PLC memory	Online	QnA series	21.3
Buffer memory batch	Online - Monitor	O	18.5
Cascade	Window	O	16.8
Change current value monitor (Decimal)	Online - Monitor	O	18.4
Change current value monitor (Hexadecimal)	Online - Monitor	O	18.4
Change open/close contact	Find/Replace	O	6.4.7
Change PLC data attributes	Online	QnA series	17.6
Change PLC type	Project	O	5.12
Change TC setting	Edit	O	6.7
Check parameter	Tools	O	16.3
Check program	Tools	O	16.1
Clear all(All devices)	Edit	O	11.3.1
Clear all(displayed devices)	Edit	O	11.3.2
Clear all parameters	Tools	O	16.4
Clear PLC memory	Online	O	21.1
Close project	Project	O	5.2
Comment	View	O	6.5.1
Compare	Project	O	5.6
	Tools – Transfer ROM	A, FX series	16.5.1
Compare with PLC	Online	O	17.4
Convert	Convert	O	8.1
Convert (All programs being edited)	Convert	O	8.2
Convert (Online change)	Convert	O	17.7
Copy	Project	O	5.7
	Project - Edit data	O	5.9
	Edit	O	3.3
CPU error	Help	O	16.11
Create start-up setting file	Tools	O	16.9
Customize keys	Tools	O	16.6
Cut	Edit	O	3.3
Delete	Project - Edit data	O	5.10
	Project	O	5.5
Delete line	Edit	O	6.3.11
Delete line	Edit	O	6.3.4
Delete NOP batch	Edit	O	6.3.13
Delete PLC data	Online	QnA series	17.5
Delete row	Edit	O	6.3.5
Device batch	Online - Monitor	O	18.5
Device label	View	O	6.5.4
Device registration	Online – Monitor	O	18.6
Device test	Online - Debug	O	19.1
Diagnostics network	Diagnostics	O	22.2

Menu	Operation	Target PLC Series	Reference Section
Diagnostics network	Diagnostics	O	22.2
Diagnostics PLC	Diagnostics	A, QnA series	22.1
Disable keyword	Online - Keyword setup	O	20.3
Draw line	Edit	O	6.3.2
End GPPW	Project	O	5.17
Export to FXGP(DOS) format file	Project - Export file	FX series	5.14
Export to FXGP(WIN) format file	Project - Export file	FX series	5.14
Export to GPPA format file	Project - Export file	A series	5.14
Export to GPPQ format file	Project - Export file	QnA series	5.14
FILL	Edit	O	11.4
Find character string	Find/Replace	O	6.4.4
Find device	Find/Replace	O	6.4.1
Find instruction	Find/Replace	O	6.4.2
Find step No.	Find/Replace	O	6.4.3
Format PLC memory	Online	QnA series	21.2
Import from FXGP(DOS) format file	Project - Import file	FX series	5.13
Import from FXGP(WIN) format file	Project - Import file	FX series	5.13
Import from GPPA format file	Project - Import file	A series	5.13
Import from GPPQ format file	Project - Import file	QnA series	5.13
Insert line	Edit	O	6.3.10
Insert NOP batch	Edit	O	6.3.12
Insert row	Edit	O	6.3.5
Instruction list	View	O	6.5.5
Interrupt program monitor list	Online - Monitor	QnA series	18.9
Key operation list	Help	O	16.11
List of used coils	Find/Replace	O	6.4.10
List of used devices	Find/Replace	O	6.4.11
Macro reference path	Project - Macro	QnA series	5.15
Marge data	Tools	O	16.2
Monitor (Write mode)	Online - Monitor	O	18.3
Monitor condition setup	Online - Monitor	QnA series	18.7
Monitor mode	Online - Monitor	O	18.1
Monitor stop condition setup	Online - Monitor	QnA series	18.7
New	Project - Edit data	O	5.8
New project	Project	O	4.1
Note	View	O	6.5.3
Open project	Project	O	5.1
Options	Tools	O	16.7
Partial execution	Online – Debug	O	19.2
Paste	Edit	O	3.3
Print	Project	O	15
Printer setup	Project	O	15.1
Product information	Help	O	16.11
Program monitor list	Online – Monitor	QnA series	18.8

Menu	Operation	Target PLC Series	Reference Section
Project data list	View	O	3.7
Read	Tools– Transfer ROM	A,FX series	16.5.1
Read from PLC	Online	O	17.3
Read mode	Edit	O	6.6.1
Register keyword	Online - Keyword setup	O	20.1
Remote operation	Online	O	19.5
Rename	Project - Edit data	O	5.11
Replace character string	Find/Replace	O	6.4.8
Replace device	Find/Replace	O	6.4.5
Replace instruction	Find/Replace	O	6.4.6
Replace statement/note type	Find/Replace	QnA series	6.4.9
Sampling trace	Online - Trace	O *1	18.11
Save as	Project	O	5.4
Save project	Project	O	5.3
Scan time measurement	Online - Monitor	QnA series	18.10
Set time	Online	O	21.4
Set up comment	Edit	O	9.8
Setup comment range	Edit	O	9.9
Skip execution	Online - Debug	QnA series	19.4
Special relay/register	Help	O	16.11
Start ladder logic test	Tools	O	16.10
Start monitor	Online - Monitor	O	18.1
Start monitor (All windows)	Online - Monitor	O	18.2
Start new GPPW session	Project	O	5.16
Statement	View	O	6.5.2
Status bar	View	O	3.5
Step execution	Online - Debug	O	19.3
Stop monitor	Online - Monitor	O	18.1
Stop monitor (All windows)	Online - Monitor	O	18.2
Tile horizontally	Window	O	16.8
Title vertically	Window	O	16.8
Toolbar	View	O	3.4
Transfer setup	Online	O	17.2
Undo	Edit	O	6.3.8
Write	Tools- Transfer ROM	A,FX series	16.5.1
Write mode	Edit	O	6.6.2
Write to file	Tools- Transfer ROM	A,FX series	16.5.2
Write to PLC	Online	O	17.3
Zoom	View	O	3.6

*1: Excludes A1NCPU

3. COMMON OPERATIONS

This chapter describes the common key operations and screen operations in GPPW and the common function operations in some modes.

3.1 List of Shortcut Keys and Access Keys

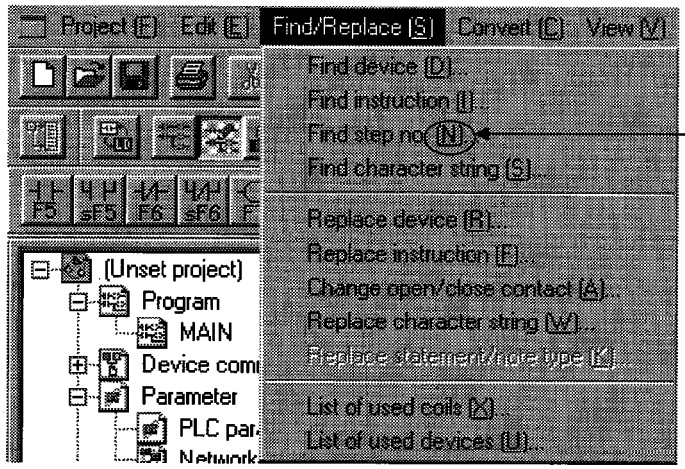
(1) List of shortcut keys
The following table lists the shortcut keys available with GPPW.

Shortcut Key		Tool Button	Function			Description
Alt + F4		—	Close			Closes the active window.
Ctrl + F6		—	Next window			Activates the next window.
Ctrl + N			Project		Create project	Creates a new project.
Ctrl + O					Open project	Opens an existing project.
Ctrl + S					Save project	Saves the project.
Ctrl + P					Print	Prints the project.
Ctrl + Z			Edit		Undo	Reverts the previous operation.
Ctrl + X					Cut	Moves the selected data to the Clipboard.
Ctrl + C					Copy	Copies the selected data to the Clipboard.
Ctrl + V					Paste	Copies the contents of the Clipboard to the cursor position.
Ctrl + A		—			Select all	Selects all the edit objects.
Shift + Ins		—			Insert row	Inserts a row at the cursor position.
Shift + Del		—			Delete row	Deletes a row at the cursor position.
Ctrl + Ins		—			Insert column	Inserts a column at the cursor position.
Ctrl + Del		—			Delete column	Deletes a column at the cursor position.
Shift + F2					Read mode	Sets the read mode.
F2					Write mode	Sets the write mode.
GPPA GPPQ	F5			Circuit symbol	Open contact	Inserts the contact a at the cursor position.
MEDOC	1					
GPPA	Shift + F5				Close contact	Inserts the contact b at the cursor position.
GPPQ	F6					
MEDOC	2					
GPPA	F6				Open branch	Inserts the contact a (open branch) at the cursor position.
GPPQ	Shift + F5					
MEDOC	3					
GPPA GPPQ	Shift + F6				Close branch	Inserts the contact b (close branch) at the cursor position.
MEDOC	4					

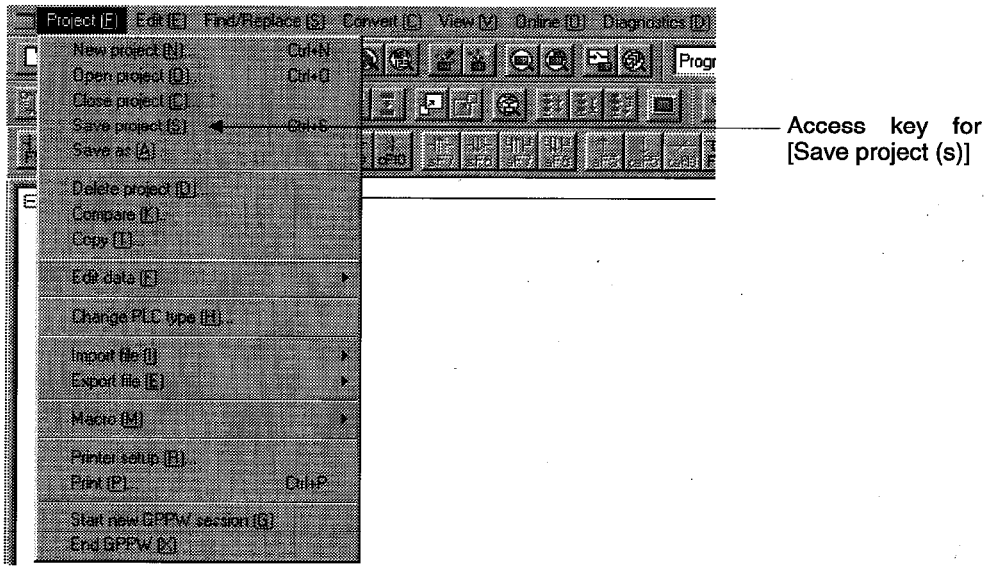
Shortcut Key		Tool Button	Function			Description
GPPA GPPQ	F7		Edit	Circuit symbol	Coil	Inserts the coil (OUT) at the cursor position.
MEDOC	7					
GPPA GPPQ	F8				Application instruction	Inserts an applcation instruction at the cursor position.
MEDOC	8					
GPPA	F10				Vertical line	Inserts a vertical line at the cursor position.
GPPQ	Shift + F9					
MEDOC	5					
GPPA GPPQ	F9				Horizontal line	Inserts a horizontal line at the cursor position.
MEDOC	6					
GPPA GPPQ	Ctrl + F10				Delete vertical line	Deletes a vertical line at the cursor position.
MEDOC	0					
GPPA GPPQ	Ctrl + F9				Delete horizontal line	Deletes a horizontal line at the cursor position.
MEDOC	9					
Shift + F7					Leading pulse	Inserts a leading pulse at the cursor position.
Shift + F8					Trailing pulse	Inserts the trailing pulse at the cursor position.
Alt + F7					Leading pulse open branch	Inserts the leading pulse (open branch) at the cursor pulse.
Alt + F8					Trailing pulse open branch	Inserts the trailing pulse (open branch) at the cursor position.
Ctrl + Alt + F10					Op result invert	Inserts the inverted Op result at the cursor position.
Alt + F5					Op result leading pulse	Inserts the inverted Op result at the cursor position.
Ctrl + Alt + F5					Op result trailing pulse	Inserts the Op result trailing pulse at the cursor position.
GPPA	Alt + F10				Insert line	Inserts a line.
GPPQ MEDOC	F10					
Alt + F9					Delete line	Deletes a line.
F4			Convert		Convert	Converts the program.
Ctrl + Alt + F4					Convert (all edit programs)	Converts all programs being edit at a time.
Shift + F4		—			Convert (online change)	Converts the program and writes it to the CPU during running.

Shortcut Key	Tool Button	Function			Description
Ctrl + F5	—	View	Comment		Displays or hides comments.
Ctrl + F7	—		Statement		Displays or hides statements.
Ctrl + F8	—		Note		Displays or hides notes.
Ctrl + Alt + F6	—		Device name		Displays or hides device names.
Alt + O			Project data list		Displays or hides the project data list.
Alt + F1			Instruction list		Switches circuit screen and list screen.
F3		Online	Monitor	Monitor	Monitors the screen.
Ctrl + F3	—			Monitor (all windows)	Monitors all circuits of the programs currently open.
Shift + F3				Monitor (write mode)	Sets the write mode during circuit monitoring.
F3				Start monitor	Starts (restarts) circuit monitoring.
Alt + F3				Stop monitor	Stops circuit monitoring.
Ctrl + Alt + F3	—			Stop monitor (all windows)	Stops monitoring of all circuits of the program currently open.
Alt + 1			Debug	Device test	Forcibly turns on or off the device and changes the current value.
Alt + 2				Skip	Performs a skip operation for a sequence program for which a range has been specified.
Alt + 3				Partial operation	Partially executes the sequence program.
Alt + 4				Run step	Performs step operation for the PLC.
Alt + 6	—		Remote operation		Performs remote operation.

(2) Access key
An access key is indicated by an alphabetic character shown at the end of each menu title to enable the user to select the menu with the keyboard.



Press [Alt] and [→] key in order to highlight the [Project] menu.
Press [↓] key, then the drop-down menu will be displayed.



Press [S] key to save the project.

3.2 Project Designation

GPPW sets a drive/path and a project name, but does not set the system name set like GPPA and GPPQ.
This section compares and describes the differences between GPPW and GPPA/GPPQ.

- Designation in GPPA
  ..\GPP\USR\system-name\machine-name
  Path name

- Designation in GPPQ
  ..\GPPQ\SYS\system-name\machine-name\file-name
  Path name

- Designation in GPPW
  ..\project-name
  Path name
  Corresponds to the machine name in GPPA or GPPQ.

  · The GPPW project path and project names can be designated as follows:
  Example
  1.C:\GPPW-program\main \data-1
  Project path Project name

  2.C:\factory-A \line-1
  Project name
  Project path

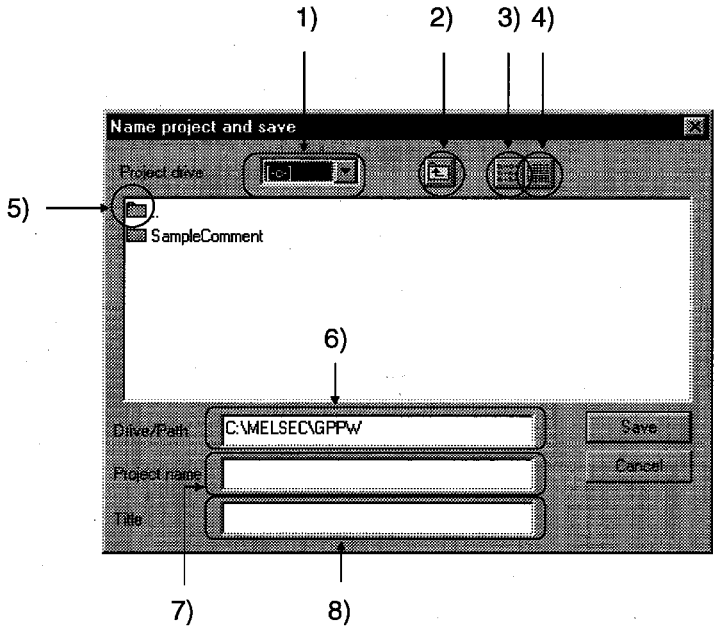
  As shown above, the project can be saved in a desired folder.

3.2.1 Saving a project

[Purpose]

Designate a project name to read, save or delete a project, or to create a new project.

[Dialog Box]



[Description]

1) Project drive
Designates a drive in which the project has been saved or is to be saved.

2) button
Click this button to move to the folder one level upper than the current folder.

3) button
Click this button to list the names of folders and projects contained in the current folder.

4) button
Click this button to display the details of the folders and projects contained in the current folder such as the PLC types, creation dates, and title.

5) ..
Double-click the icon to move to the folder one level upper than the current folder.

6) Drive/path
Designates the path of the folder where the project has been saved or is to be saved.

7) Project name
Designates a project name.
The project name should be designated within 8 characters.
The following shows the characters and the number of characters that can be used to designate a drive path, project name, or data name.

- Number of characters
  The total number of characters used for designating both the project path and the project name is 150.

- Available characters
  The following lists the characters available in A series.
  Alphanumeric characters
  - (Hyphen)
  _ (Underline)
  The leading character must be an alphabetic character. (Numeric characters cannot be used.)
  <Example>
  SUB1 can be set. 1SUB cannot be set.
  ↑
  Numeric characters cannot be used as the leading character.

  Characters available in QnA, FX series
  Alphanumeric characters, _, ^, $, ~(Tilde), !, #, %, &, (,), -, { }, @, ' (apostrophe), ` (single quotation)

- Characters not available in A, QnA and FX series
  /, \, >, <, *, ?, " ", |, :, ;

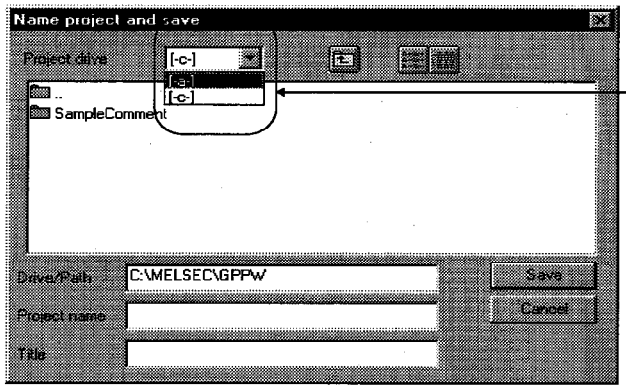
8) Title
Sets the title for the project in up to 32 characters.

[Example]

Project name to be saved	: TEST1
Title	: Test program
Project location	: A:\GPPW\
GPPW installation location	: C:\MELSEC\GPPW

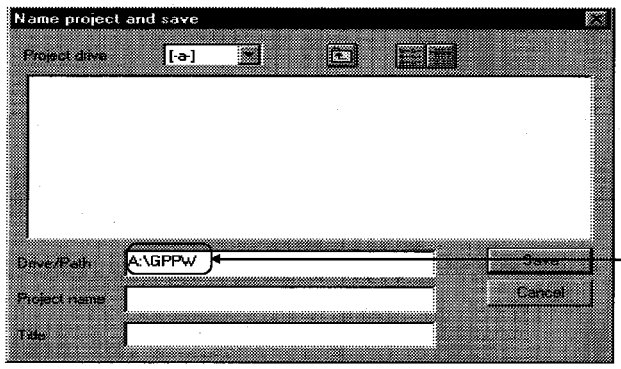
[Operating Procedure]

1. Select [Project] → [Save as].
2. Change the project drive from [-c-] to [-a-].



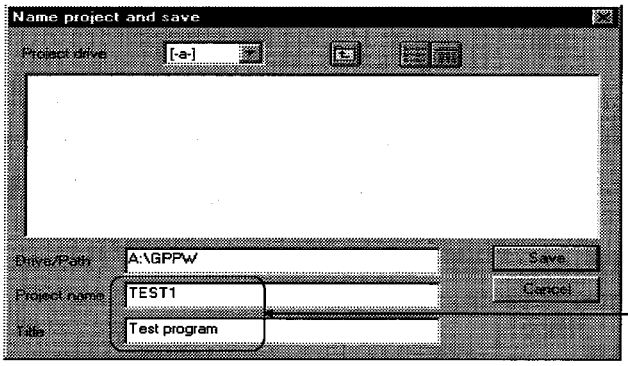
Change from [-c-] to [-a-]

3. Type "GPPW" as the project path.



Type "GPPW" in the project path text box.

4. Type "TEST1" as a project name. Then, type "Test program" as the project title. Click the Save button, and the project will be saved in the designated folder.



Type "TEST1" in the project name text box, then type "Test program" in the project title text box.

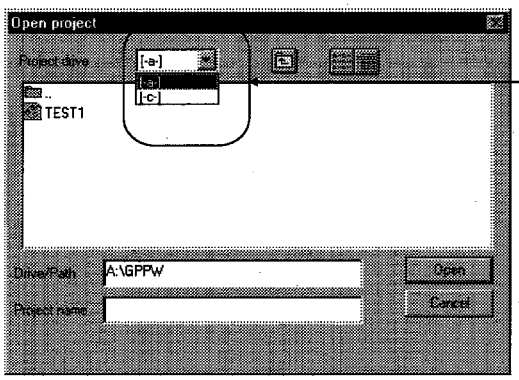
3.2.2 Opening a project

[Example]

Name of project to be read : TEST1
Project save location : A:\GPPW\
GPPW installation location : C:\MELSEC\GPPW

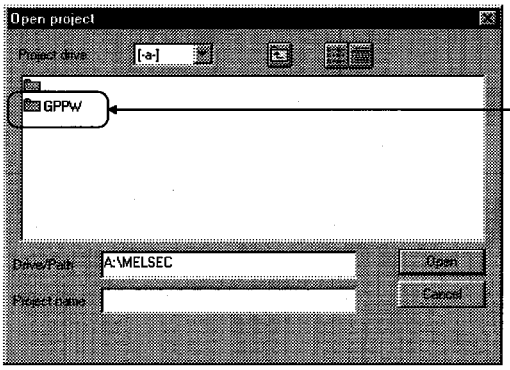
[Operating Procedure]

1. Select [Project] → [Open project].
2. Change the project drive from [-c-] to [-a-].



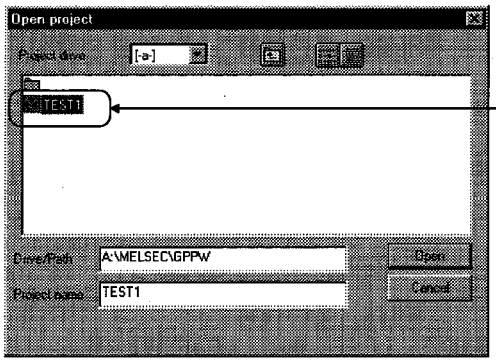
Change from [-c-] to [-a-]

3. Double-click the "GPPW" folder icon in the list box to designate a project path.



Double-click the "GPPW" folder icon.
- Selectable folders are displayed in blue.
- Other folders are displayed in gray.

4. Click the "TEST1" project icon in the list box to designate the name of a project to be read.
   Click the Open button, and the designated project will be opened.



Designate "TEST1" as the project name and click the Open button.

3.3 Cut, Copy, and Paste

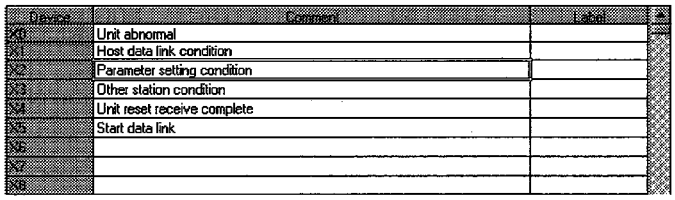
This section describes the common operations such as cutting, copying and pasting table data such as comments, parameters, etc.
For details on how to cut, copy and paste the circuits, see Section 6.3.9.

3.3.1 Cut and paste

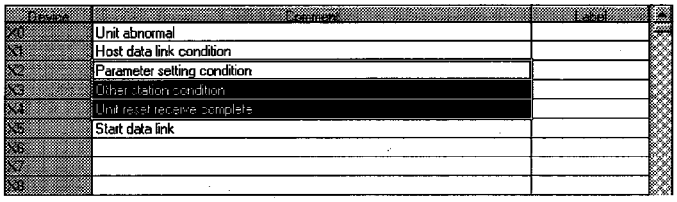
- Cutting and pasting the data
  The following example shows how to cut and paste the comments.
  Comments, parameters, and device memory can be cut and pasted through the same procedure.

[Operating Procedure]

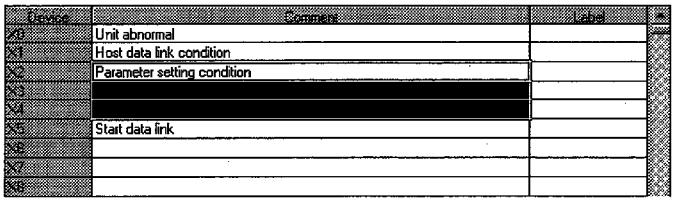
1. Click the first cell of the comments to be cut, and the cursor will be positioned there.



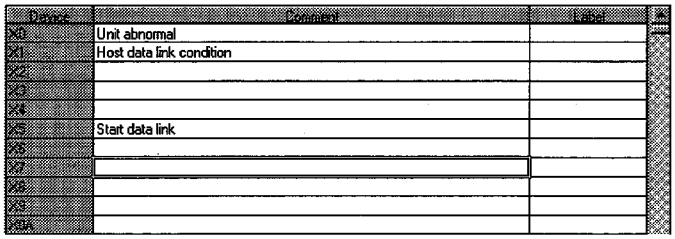
2. Confirm that the cursor (▭) is displayed, then drag the mouse over the range of the comments to be cut.
   The dragged comment cells are highlighted (the first cell in the range is not highlighted).
   To change the designated range, click any cell in the comment column.



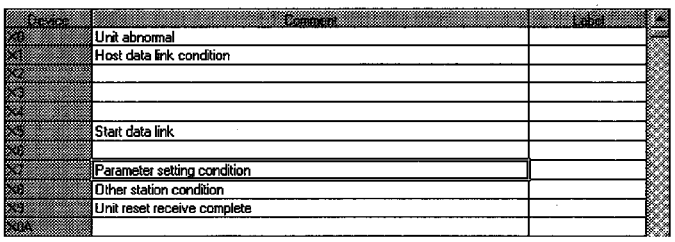
3. Select [Edit] → [Cut] or click ✂ (Ctrl + X), and the designated range of comments will be cut.



4. Click the first cell in the comment column where the comments are to be pasted, and the cursor will be positioned there.



5. Confirm that the cursor (▭) is displayed, then select [Edit] → [Paste] or click 📋 (Ctrl + V).
The cut comments are pasted into the cells in the comment column starting from the designated cell.



POINT

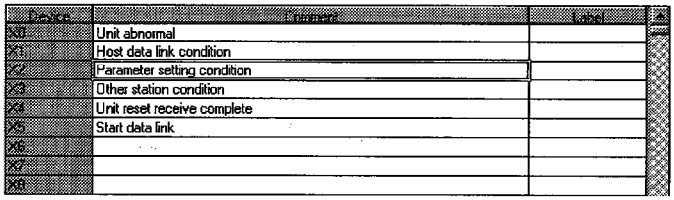
- The cut, copy, and paste menus can also be selected from the popup menu displayed by clicking the right mouse button.

3.3.2 Copy and paste

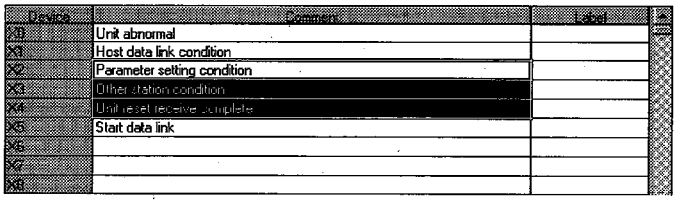
- Copying and pasting the data
  The following example shows how to copy and paste comments.
  Comments, parameters, and device memory can be copied and pasted through the same procedure.

[Operating Procedure]

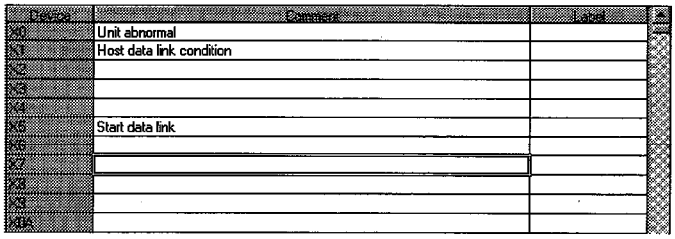
1. Click the first cell of the comments to be copied, and the cursor will be positioned there.



2. Confirm that the cursor (▭) is displayed, then drag the mouse over the range of the comments to be copied.
   The dragged comment cells are highlighted (the first cell in the range is not highlighted).
   To change the designated range, click any cell in the comment column.



3. Click the first cell in the comment column where the comments are to be pasted, and the cursor will be positioned there.



4. Confirm that the cursor (▭) is displayed, then select [Edit] → [Paste] or click 📋 (Ctrl + V).
   The copy comments are pasted into the cells in the comment column starting from the designated cell.

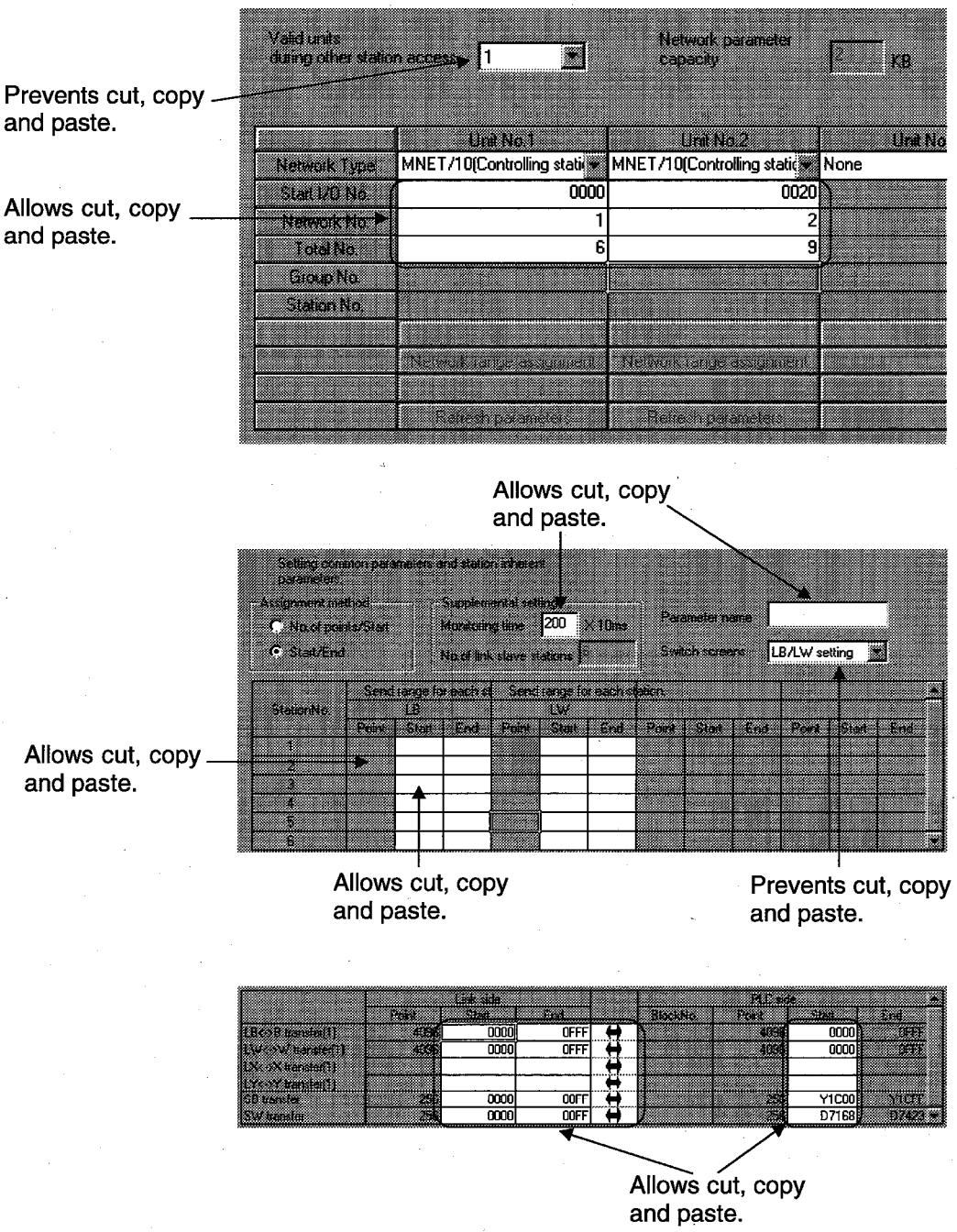
Device	Comment	Input
X0	Unit abnormal	
X1	Host data link condition	
X2		
X3		
X4		
X5	Start data link	
X6		
X7	Parameter setting condition	
X8	Other station condition	
X9	Unit reset receive complete	
XA		

POINTS

- The cut, copy, and paste menus can also be selected from the popup menu displayed by clicking the right mouse button.
- Notes on cut, copy and paste operations of parameters
  1. Only numeric characters can be pasted. (Alphabetic characters cannot be pasted.)
  2. The format conversion of the numeric value does not take place at a destination for pasting.
     <Example>
     Even when the network number (decimal) "10" is copied and pasted at the first I/O number (hexadecimal), it is not converted to "A."

3.3.3 Notes on cutting, copying and pasting network parameters

The following shows the areas in which you can cut, copy and paste network parameters and also the areas that prevent these operations.



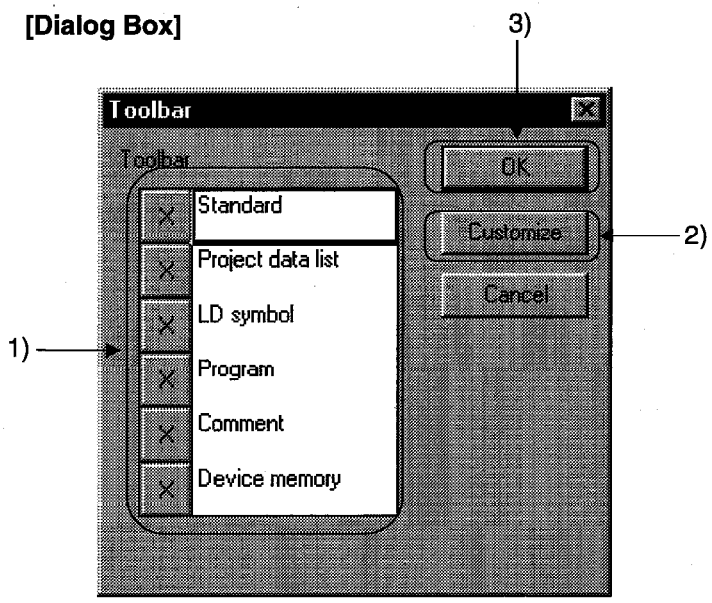
POINTS

- When used together with MELSECNET(II), the L/R type is not changed even if lines in a local station are copied and pasted to a remote station (or vice versa).
- When some destination items allow paste but some prevent paste, parameter paste takes place only in the items allowing paste.
- When the data types of copy source and destination are not the same, an abnormal paste operation may result.
  For example, this problem occurs when data in the Point column is pasted in the Start column of the destination.
- Only numeric characters can be copied and pasted.
- Even when decimal data is cut, copied, and pasted in a hexadecimal column, it is not converted into hexadecimal data.
  However, when a decimal number "16" is copied into a hexadecimal column, it is handled as a decimal number "22."

3.4 Toolbar

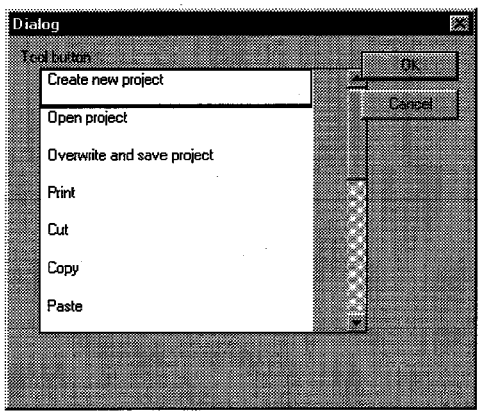
The toolbar contains the menu items or the attributes of data types. To execute a menu item, move the cursor onto the icon, then click there.
To display or hide the tool bar, select [View] → [Toolbar].

[Dialog Box]



1) Toolbar
Click here to display or hide the toolbar.
Click to display the toolbar and click ▩ to hide the tool bar.

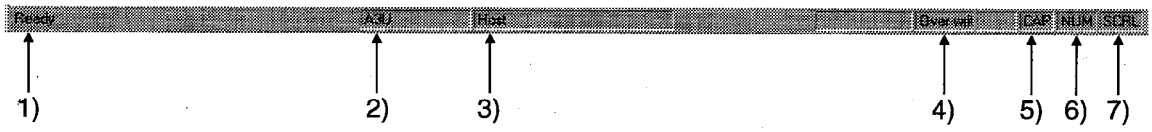
2) Customize
Click this button to add/delete a tool button to/from the toolbar.
By default, all the tool buttons are displayed on the toolbar.



3) OK button
Click this button after making necessary settings.

3.5 Status Bar

The status bar is displayed at the bottom of the application window to indicate GPPW status information.
To display or hide the status bar, select [View] → [Status bar].



[Description]

1) Indicates the status of the mouse cursor position.
2) Indicates the CPU type.
3) Indicates the destination CPU.
4) Indicates the current mode.
5) Indicates the status of the Caps Lock key.
6) Indicates the status of the Num Lock key.
7) Indicates the status of the Scroll Lock key.

3.6 Zooming in on or out of the Edit Screen

This section describes how to magnify (zoom in) or reduce (zoom out) the edit screen. The edit screen can be resized as necessary.

[Operating Procedure]

1. Select [View] → [Zoom], then select a magnification factor.
   Or click  or  to get the same result.

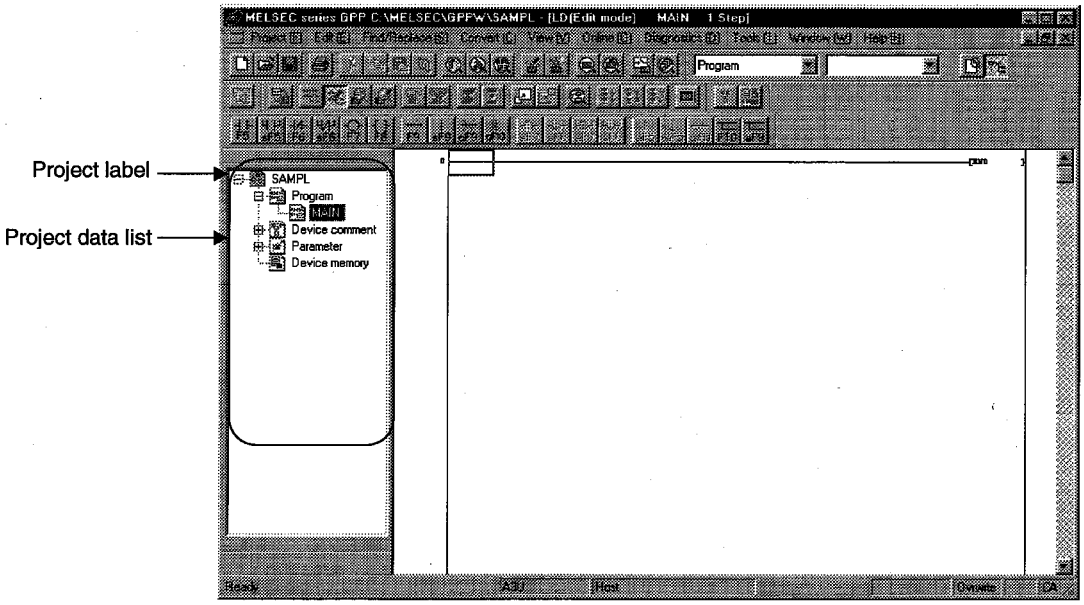
2. The edit screen is displayed according to the selected magnification factor.
   In addition, when Auto is selected, the width of the view of a circuit is automatically adjusted so that the entire circuit can be displayed on the window.

   When  on the tool bar is selected, the edit screen is magnified.
   In contrast, when  is selected, the edit screen is reduced.

3.7 Project Data List

A project data list contains project data according to the data types.
To directly display the edit screen, double-click on project data.
To display or hide the project data list, select [View] → [Project data list] or click  ([Alt] + [O]).

To add, copy, delete or rename project data, click the target project data with the right mouse button.
See Sections 5.8 to 5.11 for details on each operation.
Data names except the parameters can also be deleted with the [Delete] key.



4. INITIALIZATION

4.1 Creating a Project

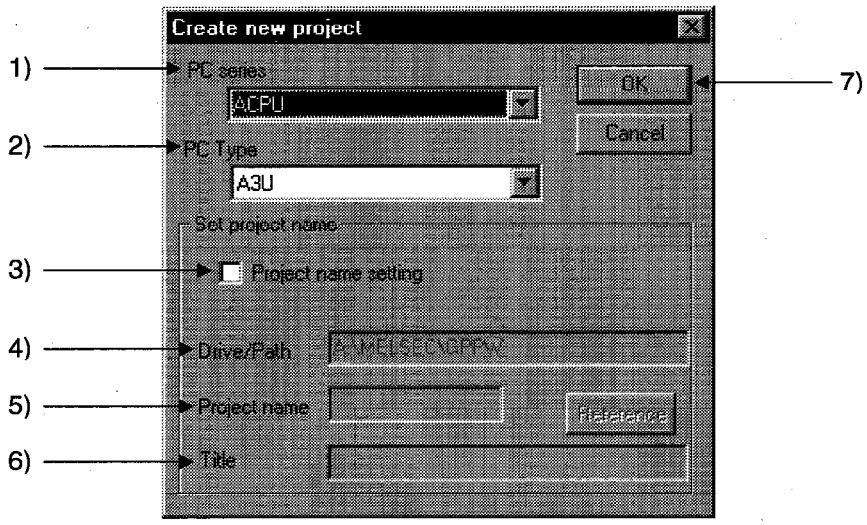
[Purpose]

Designates the information required to create a project such as PLC series, PLC type and project name.

[Operating Procedure]

Select [Project] → [New project] or click (Ctrl + N).

[Dialog Box]



[Description]

1) PLC series
Designates the PLC series of the project by selecting from QnA series, A series, and FX series.

2) PLC type
Designates the CPU type to be used by selecting from the list.
For FX and FX2, select FXU.

3) Set project name
Designate a project name to save the created data.
When designating a project name before creating a program, check the checkbox.
The project name can be designated before and after program creation.
When designating the project name after data creation, use the [Save As] menu.

See Section 5.4 "Naming and Saving a Project."

4) Drive/path
5) Project name
6) Title

} See Section 3.2 for setting these fields.

7) OK button
Click this button after making necessary settings.

POINTS

- The following lists the data and data names in new project creation.

Program : MAIN
Comment : COMMENT (common comment)
Parameter : PLC parameter
: Network parameter (A series and QnA series only)

- In addition, see Sections 5.8 and 11.2 for device memory, and Section 5.8 and Chapter 12 for device initial values (QnA series only).

5. HANDLING PROJECT FILES

This chapter describes how to add project files or read and write the other types of files (GPPA, GPPQ, and FXGP).

5.1 Opening the Existing Project File

A	QnA	FX
•	•	•

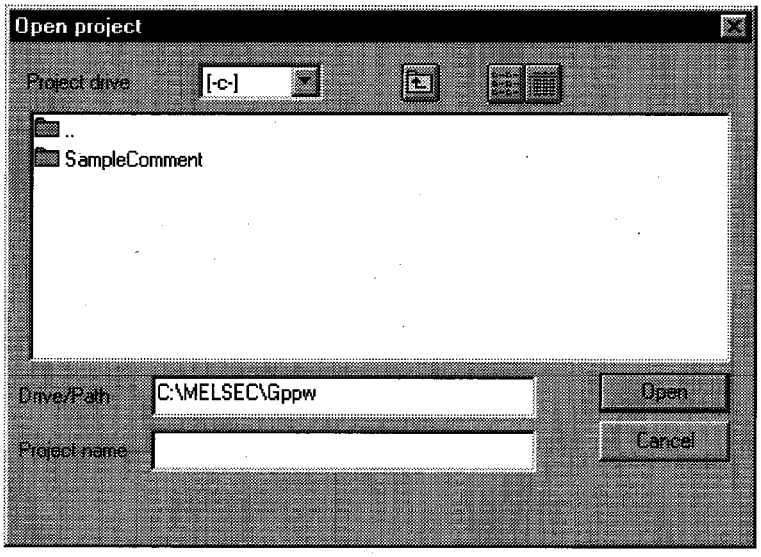
[Purpose]

Reads the saved project file.

[Operating Procedure]

Select [Project] → [Open project] or click  (Ctrl + O).

[Dialog Box]



For details on how to designate the drive/path, project name, and project title, see Section 3.2.2.

5.2 Closing a Project File

A	QnA	FX
•	•	•

[Purpose]
Closes the active project file.

[Operating Procedure]
Select [Project] → [Close project].

[Description]
When no project name has been designated or data has been edited, you will be prompted to save change to the project when you select [Close project].
To save the change to the project, click the Yes button.
To close the project without saving it, click the No button.

5.3 Saving a Project

A	QnA	FX
•	•	•

[Purpose]
Saves the active project file with the designated name.

[Operating Procedure]
Select [Project] → [Save project] or click  (Ctrl + S).

[Description]
Selecting [Save project] causes data to be written onto the existing project file.

5.4 Saving a Project with a New Name

A	QnA	FX
•	•	•

[Purpose]
Saves the active project with a new name.

[Operating Procedure]
Select [Project] → [Save as].

[Description]
Designate the project path, project name, and project title before saving the project.
For details, see Section 3.2.1.

5.5 Deleting a Project

A	QnA	FX
•	•	•

[Purpose]
Deletes the unnecessary project files.

[Operating Procedure]
Select [Project] → [Delete project].

[Description]
Select the project to be deleted, then click the Delete project button.

5.6 Comparing Data in Projects

A	QnA	FX
•	•	•

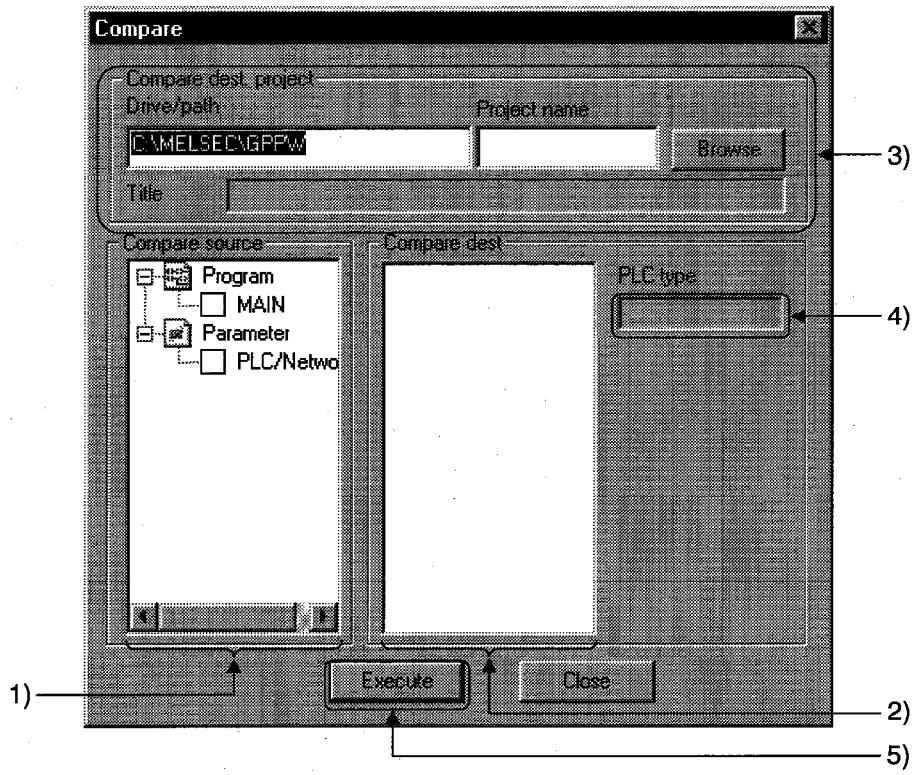
[Purpose]

Compares data between the PLC projects of the same PLC type.

[Operating Procedure]

Select [Project] → [Compare].

[Dialog Box]



[Description]

1) List of source compare source data for comparison
   Lists the current project data.
   Check the checkbox of a data name to select it.

2) List compare dest
   Lists the project data of a destination.
   Check the checkbox of a data name to select it.

3) Drive/path, Project name
   Sets a drive path for the project data to be compared.
   See Section 3.2 for details on how to set the path.

4) PLC type
   Displays the PLC type of the project.

5) Execute button
   Click this button after making necessary settings.

[Operating Procedure]

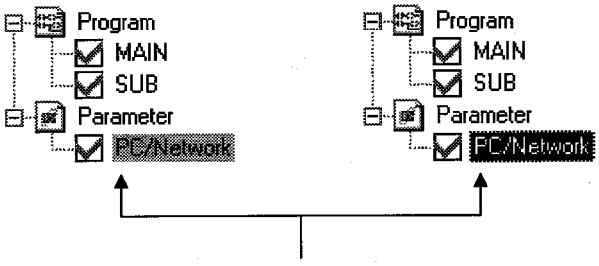
1. Select a project name in the dialog box displayed by clicking the Browse button to designate a destination drive/path name and a project name.

2. Check a checkbox for source data name and a checkbox for destination data name to be compared.

3. Click the Execute button after making necessary settings.

POINT

- Multiple data can be selected in source and destination data for comparison as shown below.



Check the checkbox of a data name to select it.

5.7 Copying a Project

A	QnA	FX
•	•	•

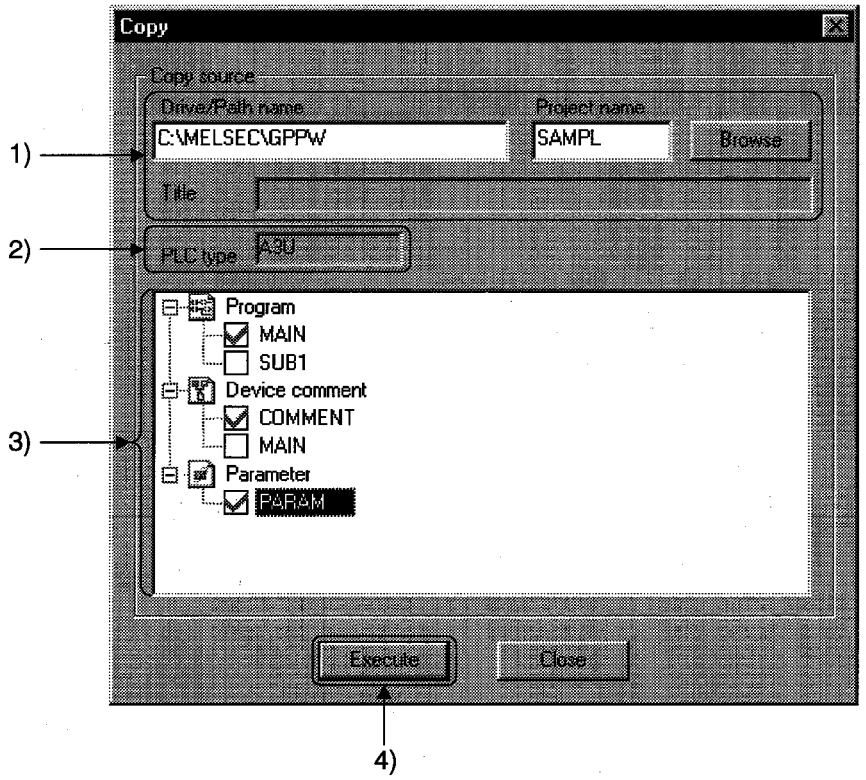
[Purpose]

Copies data between projects.
When the selected source data is already in the destination, the existing data in the destination is overwritten with the source data.

[Operating Procedure]

Select [Project] → [Copy].

[Dialog Box]



[Description]

1) Drive/path name, Project name
   Designates a drive path for project data to be copied.

2) PLC type
   Displays the PLC type of the source project.

3) Source data list
   Lists source data.

4) [Execute] button
   Click this button after setting necessary settings.

[Operating Procedure]

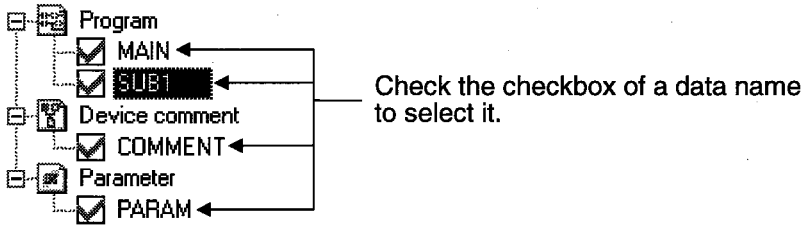
1. Select a project in the dialog box displayed by clicking the Browse button to designate a source data drive/path name and a project name.

2. Check a checkbox for source data name.

3. Click the Execute button after making necessary settings.

POINT

- All the selected data will be copied.
  Source



5.8 Adding Data to a Project

A	QnA	FX
•	•	•

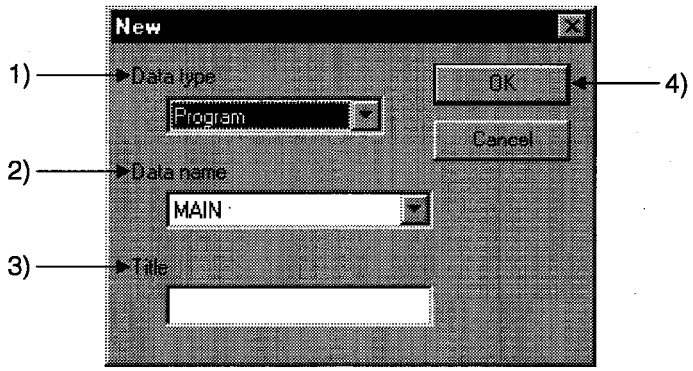
[Purpose]

Adds a program, common comment, comments by program, or device memory data to the project.

[Operating Procedure]

Select [Project] → [Edit data] → [New]

[Dialog Box]



[Description]

1) Data type
Designates the type of the data to be added (program, common comment, comments by program, or device memory).

2) Data name of the data to be added
Designates the name of the data to be added.
If one of A series PLCs is set as the PLC type of the active project, the name is fixed as SUB1, SUB2, or SUB3. (If the PLC type is A4UCPU, comments by program, named SUB4, can also be added.)
Name of subprograms can be designated after completing memory capacity setting for parameters.
For QnA series, the name should be designated within 8 characters.
For FX series, MAIN is designated as the name.

3) Title
Designates the title of the data in up to 32 characters.

4) OK button
Click this button after setting necessary settings.

POINT

- Number of data allowed in one project is as follows.
  A series
  The number of data allowed differs depending on the PLC type designated for the project.
  See User's manual (detailed information) of each CPU for details.
  QnA series
  Up to 124 data can be contained in a project.
  FX series
  Only one data can be contained in a project.

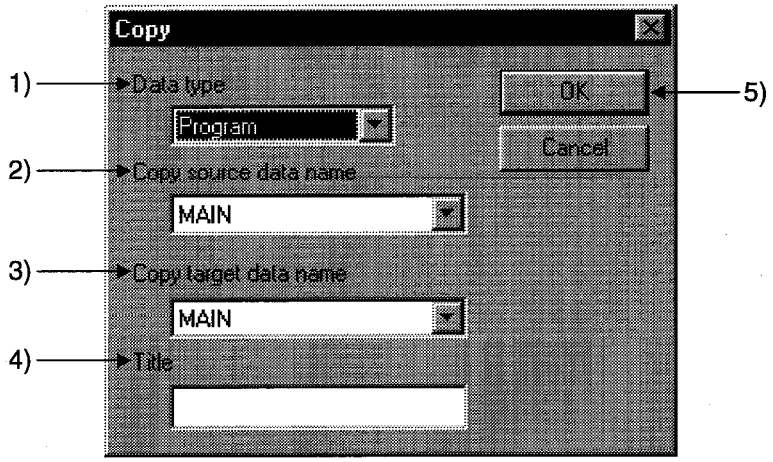
5.9 Copying Data within a Project

A	QnA	FX
•	•	•

[Purpose]
Copies the existing data within a project.

[Operating Procedure]
Select [Project] → [Edit data] → [Copy].

[Dialog Box]



[Description]

1) Data type
Designates the data type (program, common comment, comments by program, device memory).

2) Source data name
Designates the name of source data.

3) Destination data name
Designates the new data name.
If necessary, source data can also be overwritten onto an existing data.
The data name must be designated in up to 8 characters.

4) Title
Displays the set title of the data.
If necessary, the title can be edited and stored.
It must be designated in up to 32 characters.

5) OK button
Click this button after making necessary settings.

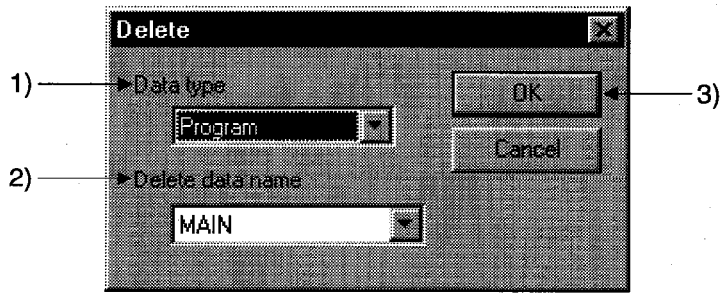
5.10 Deleting Data in a Project

A	QnA	FX
•	•	•

[Purpose]
Deletes an existing data in a project.

[Operating Procedure]
Select [Project] → [Edit data] → [Delete].

[Dialog Box]



[Description]

1) Data type
Designates the data type (program, common comment, comments by program, device memory).

2) Data to be deleted
Designates the name of the data to be deleted.

3) OK button
Click this button after making necessary settings.

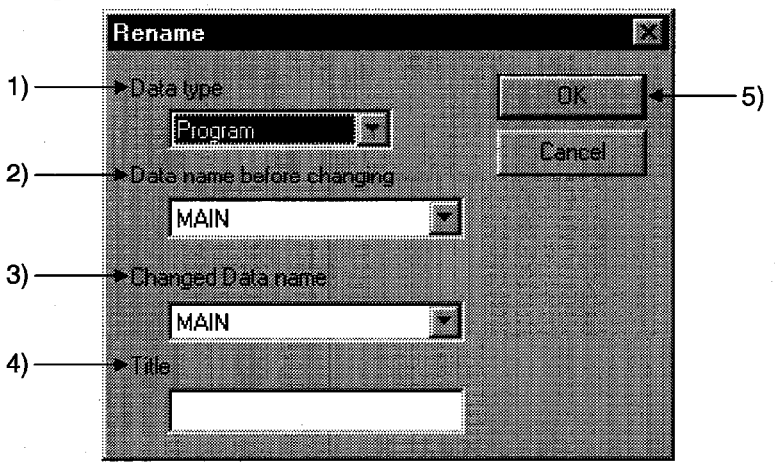
5.11 Renaming Data in a Project

A	QnA	FX
•	•	•

[Purpose]
Renames the exiting data in a project.

[Operating Procedure]
Select [Project] → [Edit data] → [Rename].

[Dialog Box]



[Description]

1) Data type
Designates the data type (program, common comment, comments by program, device memory).

2) Data name before renaming
Designates the data name before renaming.

3) Renamed data name
Designates the new data name after renaming.
The data name must be designated in up to 8 characters.

4) Title
Displays the set title of the data.
If necessary, the title can be edited and stored.
It must be designated in up to 32 characters.

5) OK button
Click this button after making necessary settings.

5.12 Changing the PLC Type of a Project

A	QnA	FX
•	•	•

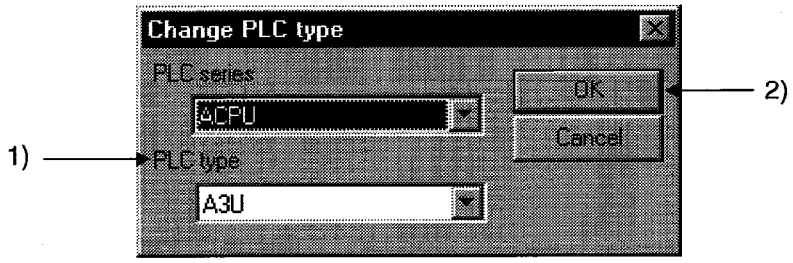
[Purpose]

Changes the type of the existing data or the data being edited so that it can be used with another type or PLC series.
See Appendix.4 for details on the PLC parameters and network parameters after PLC type change.

[Operating Procedure]

Select [Project] → [Change PLC type].

[Dialog Box]



[Description]

1) PLC type
Designates the PLC series or PLC type to be changed.

2) OK button
Click this button after making necessary settings.

POINT

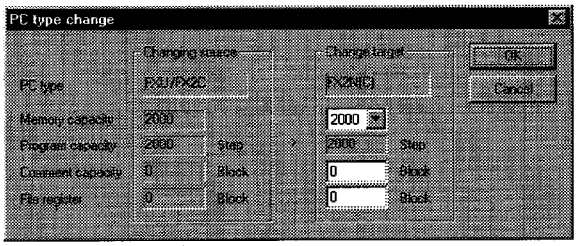
- Notes on PLC type change (change from A series to A series)
(1) Note that the settings of parameters vary as shown in the following table when the PLC type is changed.

Parameter	Settings after PLC Type Change	
Memory size setting	Keeps the settings before change so long as they are within the new PLC type specifications.	
Latch range setting	Sets the default values of the new PLC type.	
Network/link setting	AnU to AnU change	Keeps the settings before change.
	Other change	Keeps the settings before change.
I/O assignment	Clears all settings.	
Auxiliary function	Sets the default values of the new PLC type.	

(2) When the maximum memory size of each PLC type is smaller than that of the PLC type before change, the maximum memory size of the PLC type after change is set.
When it is larger than that of the PLC type before change, the size before change is set.
Please note that the excess part of program is deleted when the maximum memory size of the new PLC type is smaller than that of the PLC type before change.

POINT

- Notes on PLC type change (change from FX series to FX series)
  (1) When the FX series PLC type is changed, the following dialog box is displayed for confirmation.
  When the settings of a source PLC are not accepted by a destination PLC, they are replaced with the initial values or the maximum values of the destination PLC.
  In addition, the size change can be made on the dialog box when the memory size, comment size, or file register size can be changed.



  (2) Please note that the excess part is deleted when the specified size of a destination PLC is smaller than that of the source PLC.
  (3) When the specified destination is an FX_0 or FX_{0S} PLC, the memory size is set to 2,000, but the part exceeding the actual number of steps (800) of this PLC is deleted.
  (4) Even when a source PLC program contains element numbers and application instructions not available in the destination PLC, the contents of the program are not changed.
  Be sure to modify these element numbers and application instructions into a proper program before or after PLC type change. (If the program not modified yet is transferred, a program error occurs.)
  (5) File registers and RAM file registers remain the same device numbers.

POINTS

Notes on A series and QnA series

- PLC type change during subprogram editing
  (1) When a destination PLC type does not allow subprograms, the subprograms are deleted when they are transferred to the destination PLC.
  (2) When the A4UCPU subprogram 2 or 3 is being edited, the PLC type cannot be changed.
- PLC type change when the devices X, Y are out of setting range
  Even when the device numbers of devices X, Y in the sequence program (including the SFC operation output and shift condition) are not within a setting range of the CPU after type change, PLC type change can be made, but an instruction code error occurs and no circuit/list can be displayed.
  In addition, when online PLC write operation is performed for sequence program check, this instruction code error is also displayed. Set a device number within an allowable range.

POINT

- PLC type change when network/link settings have been made
  PLC type change takes place as follows when MELSECNET/II or MELSECNET/10 network/link settings have been made.

AnN	→ AnN	Keeps the settings.
	→ AnA	Keeps the settings.
	→ AnU	Keeps the settings. However, the unit starting I/O number is 00H.
AnA	→ AnN	Keeps the settings of AnA for network type, MELSECNET master/local, MELSECNET-mixed and master/local settings. The other settings are not made.
	→ AnA	Keeps the settings.
	→ AnU	Keeps the settings. However, the unit starting I/O number is 00H.
AnU	→ AnN	Keeps the settings of AnA for network type, MELSECNET master/local, MELSECNET-mixed and master/local settings. The other settings are not made.
	→ AnA	Keeps the settings of AnU for network type, MELSECNET master/local, MELSECNET-mixed master/local, and MELSECNETII settings. The other settings are not made.
	→ AnU	Keeps the settings.

POINTS

- Restrictions on change between A series and QnA series

	A to QnA Change	QnA to A Change
Program	All programs are converted.	When the data name created by GPPQ is MAIN, SUB1, SUB2, or SUB3, the other data is deleted. Because ACPU has more steps even in the same instruction, the maximum number of steps may be exceeded during conversion. In this case, the program exceeding the size specified in the parameter is deleted.
Comment	When a device comment exceeds a device range of the destination or the device of the comment does not exist, it is deleted. Other comments are held.	
Device memory		
Parameter	See Appendix.4.2 for details.	
Device initial value	Device initial values are ignored because they are not present in A series.	Device initial values are deleted because they are not present in A series.

The devices and instructions that cannot be handled by A to QnA change are replaced with M9255/D9255 (QnA to A change) or M1255/D1255(A to QnA change). Correct them by device search.

- PLC type change to A1FXCPU and PLC type change from A1FX

	PLC type change to A1FXCPU	PLC type change from A1FX
Parameter	The default is set.	The contents are held except A2CCPU, A2CJCPU, AnACPU, and AnUCPU.
Program	Unavailable devices and instructions are displayed. Errors are detected by program check.	
Comment	The internal relay (S) is deleted.	—
Device memory	The internal relay (S) is deleted.	—

Even though A2NCPU-equivalent instructions can be input when A1FXCPU is selected, some instructions may not be used by A1FXCPU.
Unavailable instructions are LRDP, LWTP, RFRP, and RTOP.

POINT

- Restrictions on change between A series and FX series

		Change from A to FX	Change from FX to A
PLC parameter	Memory size	The maximum memory size of the specified destination CPU is set.	
	File register size	0 block	The default of the specified destination CPU is set.
	Comment size		
	Network parameter	Not changed when this parameter is not present in FX series.	The default of the specified destination CPU is set.
Sequence program		• AnA and AnU special instructions are not changed. • Only the main program is changed. Subprograms are not changed. • The excess part of the program after conversion is deleted. • Devices not present in A series are all replaced with M9255/D9255. Devices not present in FX series are all replaced with M8255/D8255. • Instructions not present in A series are replaced with OUT M9255. However, LDP, LDF, ORP, ORF, ANDP, and ANDF instructions are contact instructions without P or F and devices are replaced with M9255. In addition, INV is replaced with AND M9255 and STL with LD M9255. • Instructions not present in FX series are all replaced with OUT M8255. • Devices changed to M9255/D9255 or M8255/D8255 must be corrected into proper device numbers by device search.	
Statement (circuit comment) Note (Coil comment)		The statements and notes are changed as they are. The part exceeding the upper size is deleted.	
Device comment, device memory		The device comments and device memory are changed as they are. Devices not present in the destination PLC and data exceeding the range are all deleted.	

5.13 Reading GPPQ, GPPA, FXGP(DOS) or FXGP(WIN) Files

A	QnA	FX
•	•	•

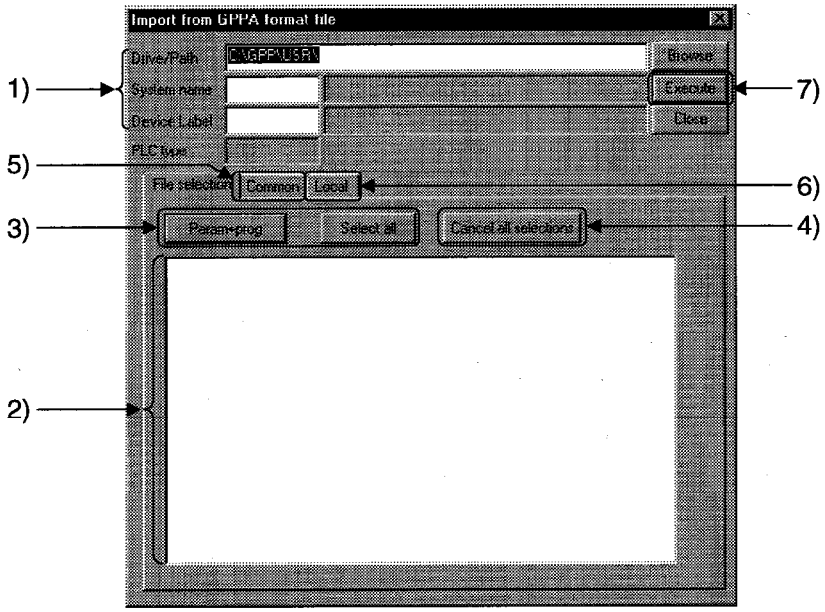
[Purpose]

Reads the existing GPPQ, GPPA, FXGP(DOS), and FXGP(WIN) data into GPPW. These data can be read according to the following procedure immediately after GPPW is started.

[Operating Procedure]

Select [Project] → [Import file] → [Import from GPPQ format file]
→ [Import from GPPA format file]
→ [Import from FXGP(WIN) format file]
→ [Import from FXGP(DOS) format file]

[Dialog Box]



[Description]

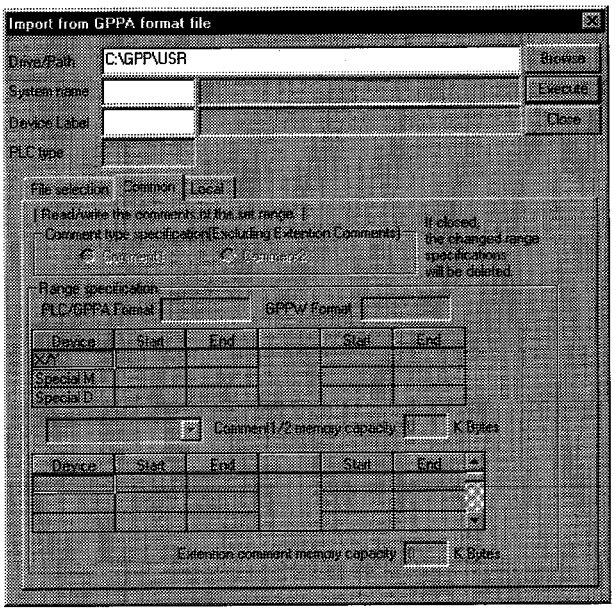
1) Drive/path, System name, Machine name
   Designates0 the location of data created by GPPQ, GPPA, FXGP(DOS) or FXGP(WIN).
   Enter a system name and a machine name for the data specified in the drive path.
   When FXGP(DOS) or FXGP(WIN) data is read, a folder name is specified as the system name and a file name as a machine name.
   Also, specifying a file name from a root directory, the system name is left blank.
   For details, see Subsection 3.2.2.

2) Source data list
   Displays data created by GPPQ, GPPA, FXGP(DOS), and FXGP(WIN).
   Check the checkbox of data names to be selected.
   The selected comments can be edited in the program common tab or the program tab.

3) [Param+prog] button/ [Select all] button
   - [Param+prog] button
     Selects only the parameter data and program data of a source.
   - [Select all] button
     Selects all data in a source data list.
     Comment 2 is selected as comments in A series and the first data name is selected for device memory.
     The first data name is selected for comments and file registers in QnA series.

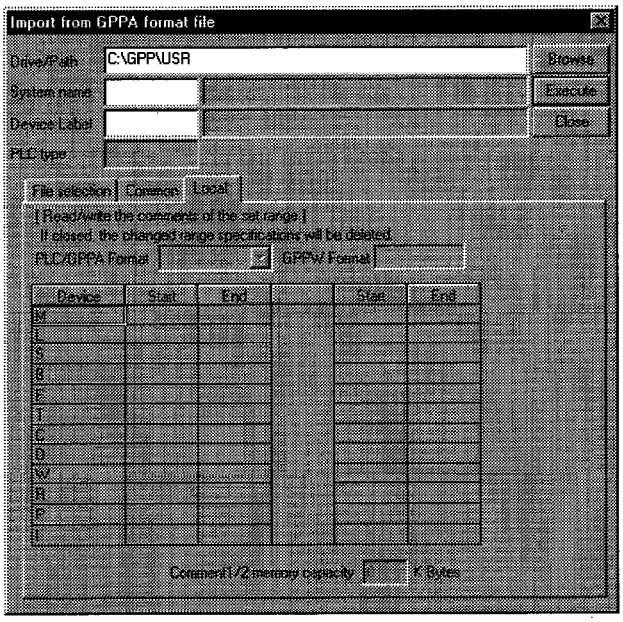
4) [Cancel all selections] button
   Cancels all the selected data.

5) <<Common for programs>> sheet (A series)
   Click <<Common for programs>> tab to set a range for common comments and read data.



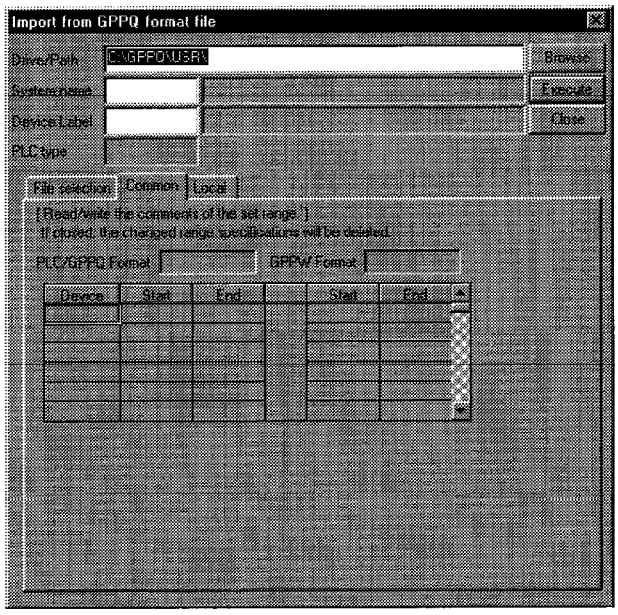
See Chapter 9 for details on setting methods.

6) <<For each program>> sheet (A series)
Click <<For each program>> tab to set a range for comments by program and read data.



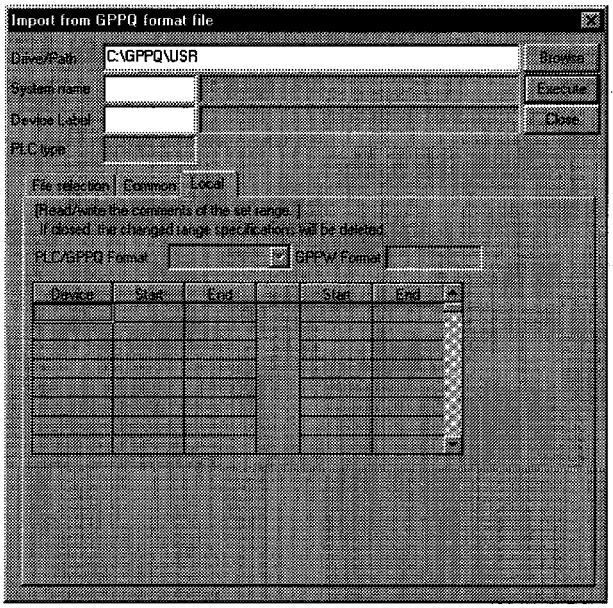
See Chapter 9 for details on setting methods.

5) <<Common for programs>> sheet (QnA series)
Click <<Common for programs>> tab to set a range for common comments and read data.



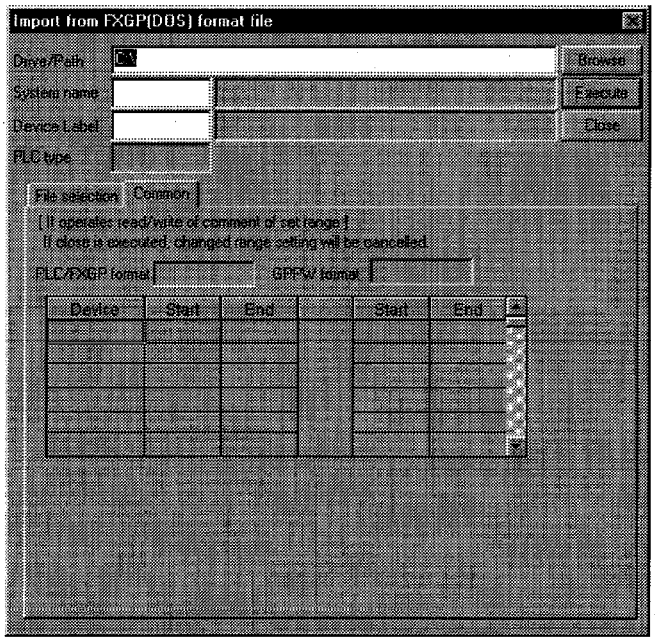
See Chapter 9 for details on setting methods.

6) <<For each program>> sheet (QnA series)
Click <<For each program>> tab to set a range for comments by program and read data.



See Chapter 9 for details on setting methods.

5) <<Common for programs>> sheet (FX series)
Click <<Common for programs>> tab to set a range for comments and read data.



See Chapter 9 for details in setting methods.

6) <<For each program>> tab
Not available for FX series.

7) Execute button
Click this button after making necessary settings.

[Setting Procedure]

- Data selection
  1. Set a drive/path for reading by GPPQ, GPPA, FX(DOS), or FX(WIN).
  2. Select a project name in the dialog box displayed by clicking the Browse button to designate a system name and machine name for the project to be read.
  3. Check the checkbox of data to be selected by using Param+prog button, Select all button, or the mouse.
  4. Click the Execute button after making necessary settings.

- Canceling data selection
  (1) When canceling the selected data arbitrarily:
  - Clear the checkmark (✓) in the checkbox with the mouse or space key.

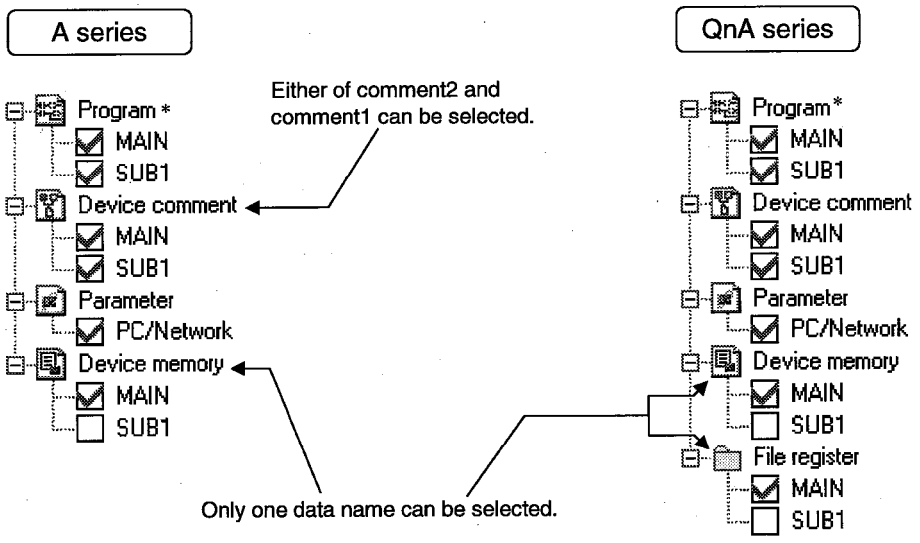
  (2) When canceling all the selected data:
  - Click the Cancel all selection button.

POINTS

For A series and QnA series

- In reading A6GPP or SWOS-GPPA format data, A6GPP or SWOS-GPPA format conversion by GPPA must be performed before data reading by GPPW.
  For details on operating methods, refer to the type SW □SRXV/NX/IVD-GPPA GPP Function Operating Manual (GPP).

- Notes on data selection



*: If a statement and note have been created, both of them are read out at the same time when a program is selected.

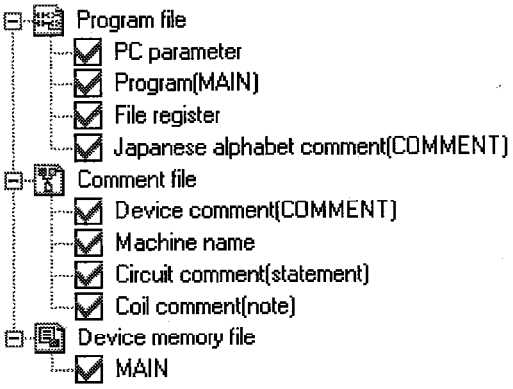
POINTS

For FX series

- Notes on data selection
  The following items are displayed in reading FXGP(DOS) and FXGP(WIN) files.

FXGP(DOS)

FXGP(WIN)



- Range and notes in reading the other types of files
  - Reading FXGP(DOS) files

  (1) Files to be read

Program file (.PMC)	: Parameter, program, Kana comment, file register
Kanji comment file (.COK)	: Kanji comment
Device memory file (.DMD,.DME,.DMF,.DMG)	: Data register, special register, file register, RAM file register

  (2) Files not to be read
  Circuit comment file (.COL)
  Sampling trace file (.STA)
  Printer title file (.PTL)
  Kana comment file (.COH)
  Shared circuit file (.DAT)

  (3) Restrictions
  There is no restriction in reading FXGP(DOS) files.

POINTS

- Reading FXGP(WIN) files
  (1) Files to be read
  Program file (.PMW) : Parameter, program, Kana comment, file register
  Comment file (.COW) : Device comment, circuit comment, coil comment, device name
  Device memory file (.DMW) : Data register, special register, RAM file register
  (2) Files not read
  Sampling trace file (.STW)
  Printer title file (.PTW)
  Registration monitor file (.RMW)
  (3) Restrictions
  Device comment:
  Up to 50 characters can be input for FXGP(WIN) device comments, but only the first 32 characters are read because the maximum number of characters is 32 in GPPW.
  Statement (circuit comment):
  Any number of characters can be input for FXGP(WIN) circuit comments, but only the first 64 characters are read because the maximum number of characters is 64 in GPPW.
  Note (coil comment):
  Any number of characters can be input for FXGP(WIN) coil comments, but the first 32 characters are read because the maximum number of characters is 32 in GPPW.
- In reading A6GPP files, file conversion must be performed in advance by FXGP(DOS) software.
  For details on file conversion, refer to the type SW1PC-FXGPEE/AT,Software Operation Manual.

5.14 Exporting GPPQ, GPPA, FXGP(DOS) or FXGP(WIN) Files

A	QnA	FX
•	•	•

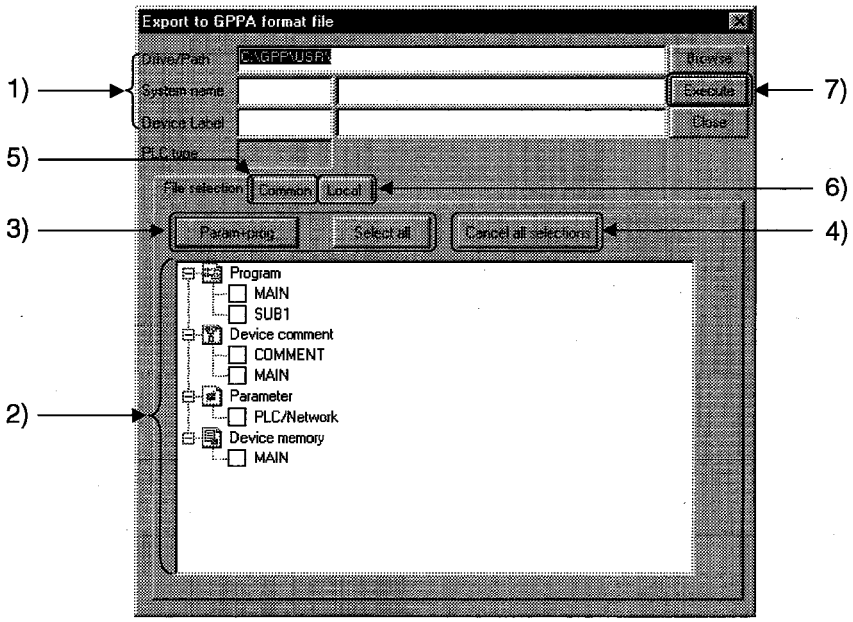
[Purpose]

Saves GPPW data in a GPPQ, GPPA, FXGP(DOS) or FXGP(WIN) file so that it can be read and edited as a GPPQ, GPPA, FXGP(DOS), or FXGP(WIN) file.

[Operating Procedure]

Select [Project] → [Export file] → [Export to GPPQ format file]
→ [Export to GPPA format file]
→ [Export to FXGP(WIN) format file]
→ [Export to FXGP(DOS) format file]

[Dialog Box]



[Description]

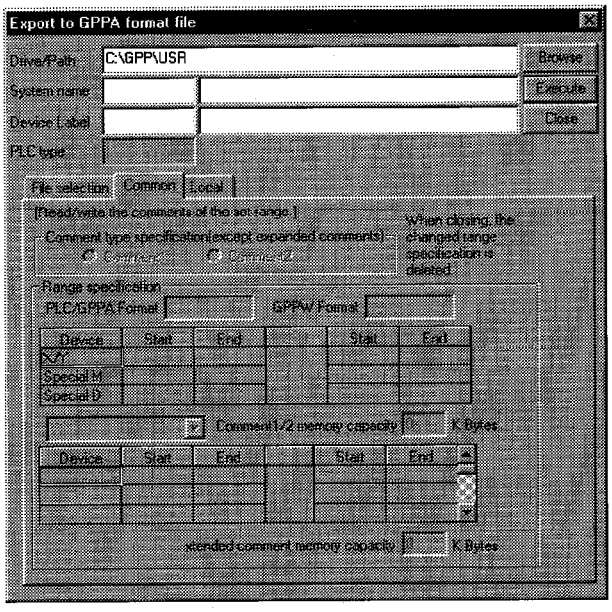
1) Drive/path, System name, Machine name
Designates a drive/path for writing a GPPQ, GPPA, FXGP(DOS), or FXGP(WIN) file.
Enter a system name and a machine name for data specified in the project path.
When data is written to an FXGP(DOS) or FXGP(WIN) file, a folder name must be designated as a system name and a program file name as a machine name.
See Section 3.2 for details on operating methods.

2) Source data list
Selects data to be written to a GPPQ, GPPA, FXGP(DOS) or FXGP(WIN) file.
Check a checkbox of the data name to be selected.

3) [Param+Prog] button/ [Select all] button
   - [Param+Prog] button
     Selects only the source parameter data and program data.
   - [Select all selection] button
     Selects all the listed source data.

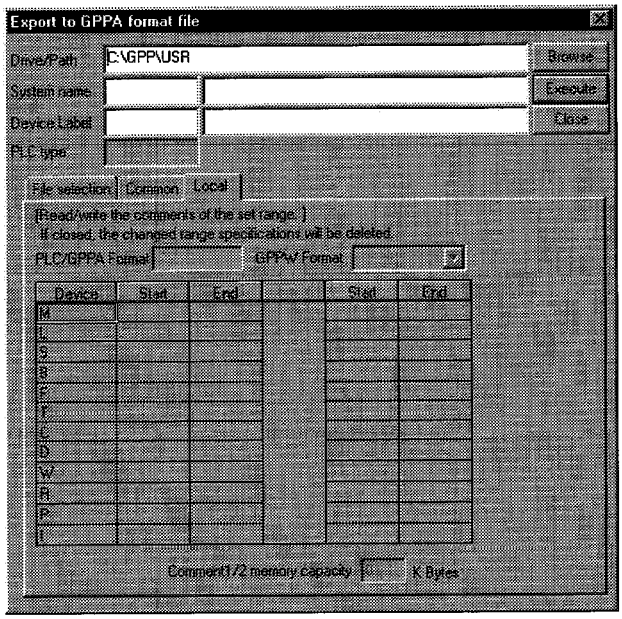
4) [Cancel all selection] button
   Cancels all the selected data.

5) <<Common>> sheet (A series)
   Click <<Common>> tab to set a range for common comments and write data.



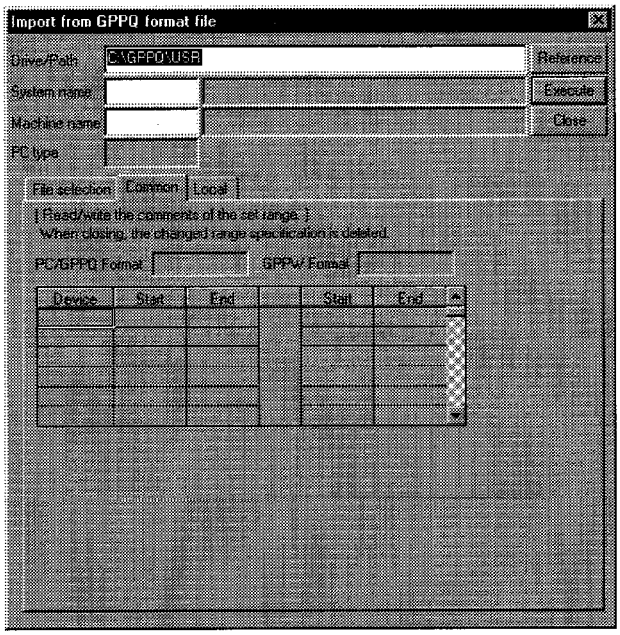
   See Chapter 9 for details on setting methods.

6) <<Local>> sheet (A series)
   Click <<Local>> tab to set a range for comments by program and write data.



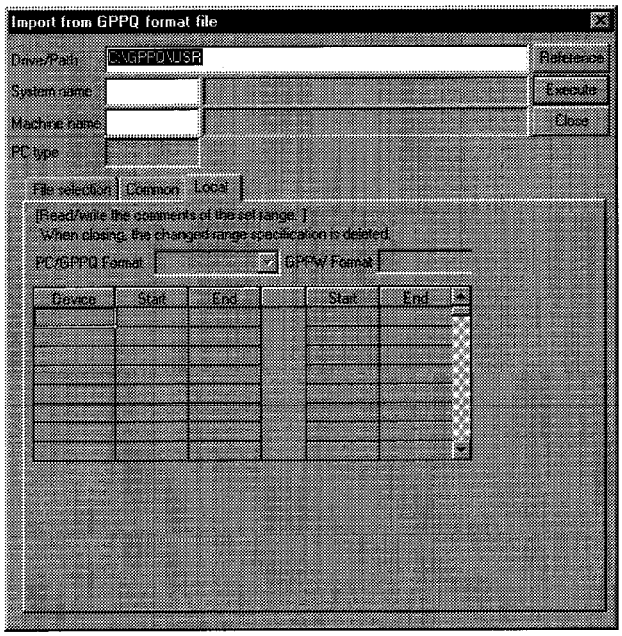
   See Chapter 9 for details on setting methods.

5) <<Common>> sheet(QnA series)
Click <<Common>> tab to set a range for common comments and write data.



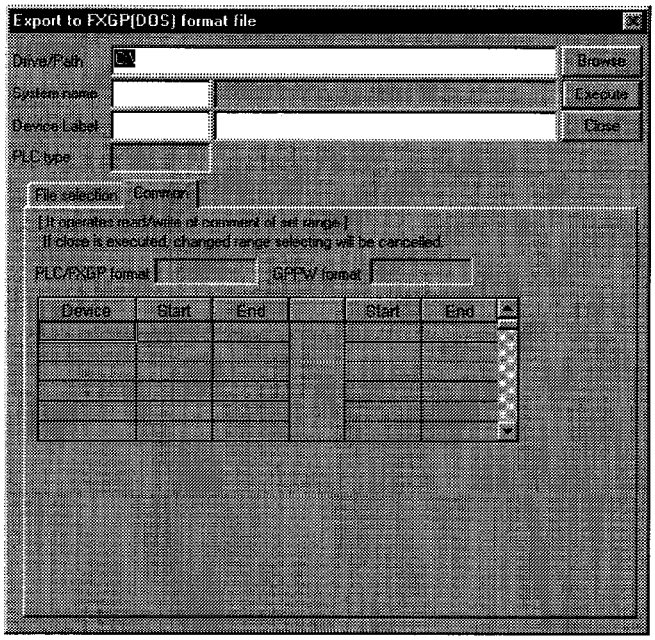
See Chapter 9 for details on setting methods.

6) <<Local>> sheet(QnA series)
Click <<Local>> tab to set a range for comments by program and write data.



See Chapter 9 for details on setting methods.

5) <<Common>> sheet (FX series)
Click <<Common>> tab to set a range for comments and write data.



See Chapter 9 for details on setting methods.

6) <<Local>> sheet
When FX series is selected, comments by program cannot be written to the other file formats. (See Section 9.5.)

(7) Execute button
Click this button after making necessary settings.

[Operating Procedure]

- Data selection
  1. Designate a drive/path for the project to be written.
  2. Select a project name in the dialog box displayed by clicking the [Browse] button to designate a system name and machine name for the project to be written.
  3. Check the checkbox of data to be selected by using [Param+Prog] button, [Select all selection] button, or the mouse.
  4. When setting a range for comments to be written, set the details of the comment range. (See Chapter 9 for details on setting methods.)
  5. Click the [Execute] button after making necessary settings.

- Canceling data selection
  (1) Canceling the selected data arbitrarily
    - Clear the checkmark [✓] in the checkbox with the mouse or space key.

  (2) Canceling all the selected data
    - Click the [Clear all selection] button.

POINTS

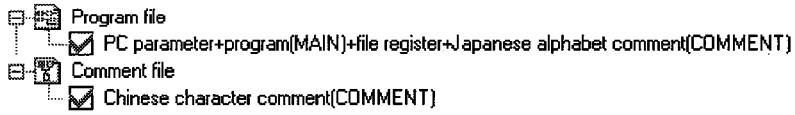
- When writing programs in the GPPA format in A series, the program names other than MAIN, SUB1, SUB2, and SUB3 cannot be designated.
- When statement notes are created in A and QnA series, they are written at the same time by selecting programs.
- When writing A1S,A2SHCPU data,the actual data format corresponds to A2N(S1),A3NCPU type.
  (GPPA recognizes PLC type:A2N(S1),A3NCPU instead of A1S,A2SHCPU)
  when use this data file with GPPA,please change PLC type to A1S,A2SH after reading the data file.

POINTS

For FX series

- Notes on data selection
  The following items are displayed as items to be written for FXGP(DOS) and FXGP(WIN).

(FXGP(DOS))



(FXGP(WIN))

- Range and restrictions in writing to other types of files
  - Data input to FXGP(DOS) files

(1) Files to be written

Program file (.PMC)	: Parameter, program, comment1, file register
Comment2 file	: (.COK) comment2
Device memory file (.DMD, .DME, .DMF, .DMG)	: Data register, special register, file register, RAM file register

(2) Files not written
Circuit comment file (.COL)
Sampling trace file (.STA)
Printer title file (.PTL)
Comment1 file (.COH)
Shared circuit file (.DAT)

(3) Restrictions
Device comment (comment2):
Up to 32 characters can be input for GPPW device comments, but only the first 16 characters are read because the maximum number of characters is 16 in FXGP(DOS).
In addition, the maximum number of comments is 3,400.
P, I statement is not input.

POINT

- Data input to FXGP(WIN) files
  (1) Files to be written
  Program file (.PMW) : Parameter, program, comment1, file register
  Comment file (.COW) : Device comment, circuit comment, coil comment, device name
  Device memory file (.DMW) : Data register, special register, RAM file register
  (2) Files not written
  Sampling trace file (.STW)
  Printer title file (.PTW)
  Registration monitor file (.RMW)
  (3) Restrictions
  A GPPW device name can be input in up to 8 characters, but only the alphanumeric characters and symbols(¥ + - * / = . ? # $ % & : ; _) can be used in FXGP(WIN) (see Section 9.6.1.).
  When a device name contains double byte characters, the device name is deleted when writing the data.
  P, I statement is not input.

5.15 Displaying Macro References

A	QnA	FX
×	•	×

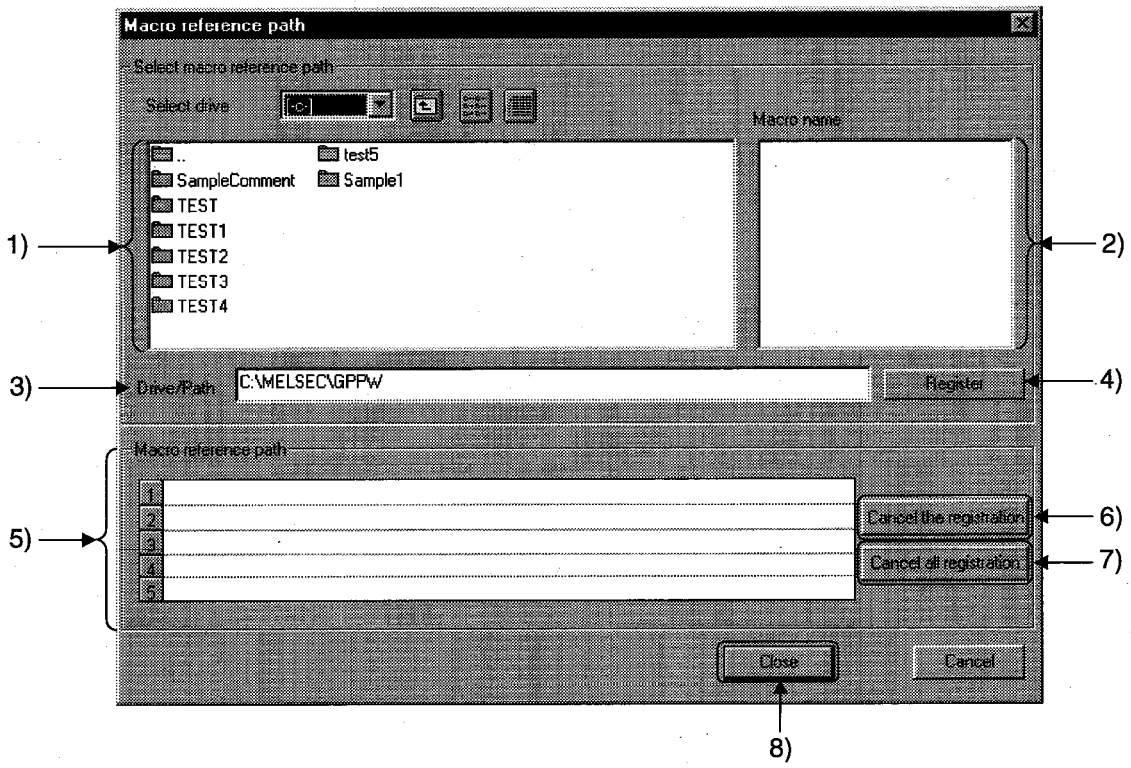
[Purpose]

Enables GPPW to use the macro data created by GPPQ.
For A series or FX series, this function cannot be used.

[Operating Procedure]

Select [Project] → [Macro] → [Macro reference path].

[Dialog Box]



[Description]

1) Folder name list
Displays the macro names of a project designated in the Drive/path.

2) Macro file name list
Displays the macro files that can be referenced when the current drive/path is set for macro reference.

3) Drive/Path
Designates a drive/path for the macro to be referenced. (The machine name folder created by GPPQ must be designated here.)
Even though the folder name list contains the entries MAC, MAC.ACT and MAC.TRN, they cannot be designated because there is no macro file in them.

4) [Register] button
Click this button to register macros in Macro reference path.
The macros cannot be used unless they are registered in this field.

5) Macro reference path
Up to five macro names with different drives/paths can be registered in this field.
A maximum of 255 characters can be used to designate a drive/path. The number of characters of a drive/path listed in this reference field is 94 characters in large fonts and 103 characters in small fonts. Even when a macro name consists of more characters, it can be used though it cannot be displayed in this field.

6) [Cancel the registration] button
Cancels the drive/paths displayed in Macro reference one by one.

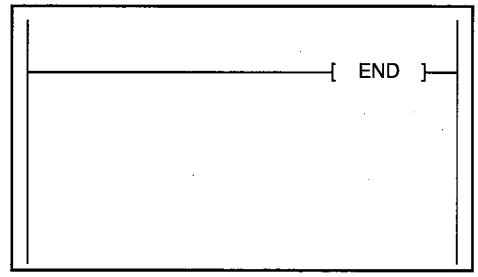
7) [Cancel all registration] button
Cancels all the drives/paths displayed in Macro reference at a time.

8) [Close] button
Click this button after making necessary settings.

POINTS

- Once a macro reference is registered, its settings are not cleared even when GPPW is terminated.
- About macro instruction input

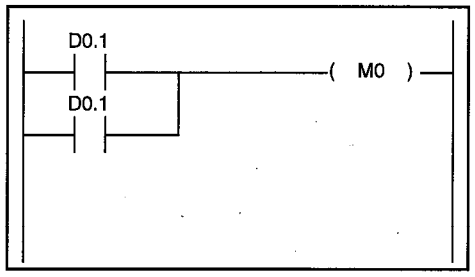
Normal macro



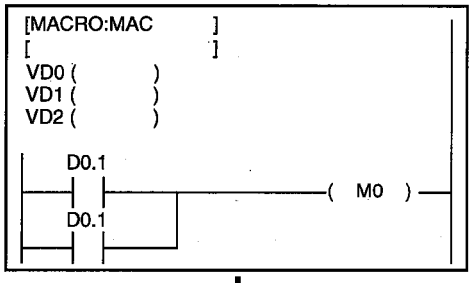
M. **** VD0 VD1 .....

Macro name / Variable device setting

Enter → F4



Ctrl + F7 (Statement display)



First I/O number designation

U. **** UX VD0 VD1 ···

Max. 8 characters

→ Max. 10 variable devices (MAX:VD9)

→ First input I/O number (MAX:1FF)

5.16 Starting Multiple Projects

A	QnA	FX
•	•	•

[Purpose]
Starts and reads multiple projects so that data can be edited (cut, copied and pasted) among the projects.

[Operating Procedure]
Select [Project] → [Start new GPPW session].

[Description]
Once the window is displayed, open the projects and edit data.

5.17 Existing GPPW

A	QnA	FX
•	•	•

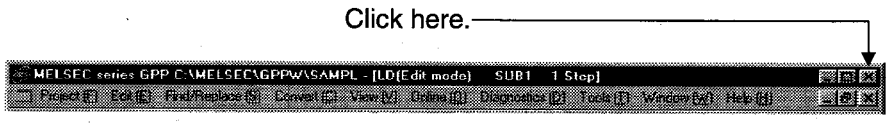
[Purpose]
Exits GPPW.

[Operating Procedure]
Select [Project] → [End GPPW] or click  .

[Description]
When no project name has been designated, clicking [End GPPW] causes a dialog box to be displayed for project name confirmation.
Click the [Yes] button to save the changes to the project.
For details on designating the project path and project name, see Section 3.2.
Click the [No] button not to save the changes to the project.

POINTS

- When exiting GPPW by clicking  , click the button shown below.



- When closing only the open data without exiting GPPW, click  on the menu bar.