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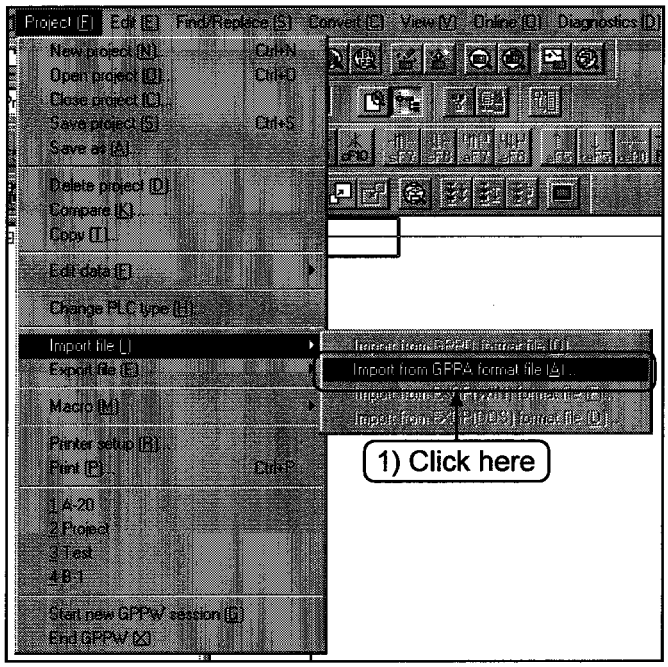
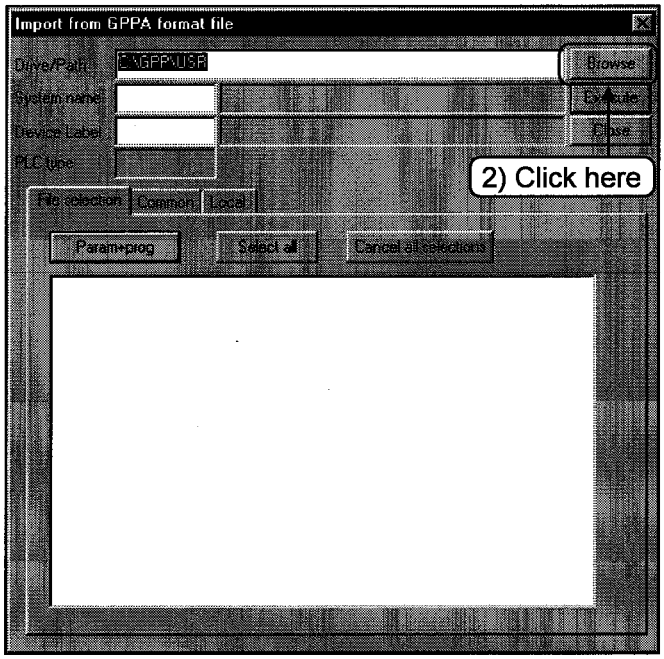
1.4 Converting files from GPPA format to GPPW format

This section explains converting files from GPPA format to GPPW format.



1) Click the [Project]-[Import file]-[Import from GPPA format file] menu.



2) Click Browse. (Use Browse to check the drive/path name, system name and machine name. If these information are known, input them directly.)

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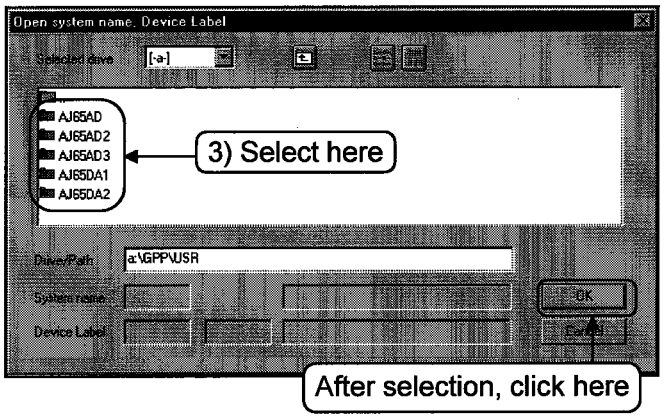
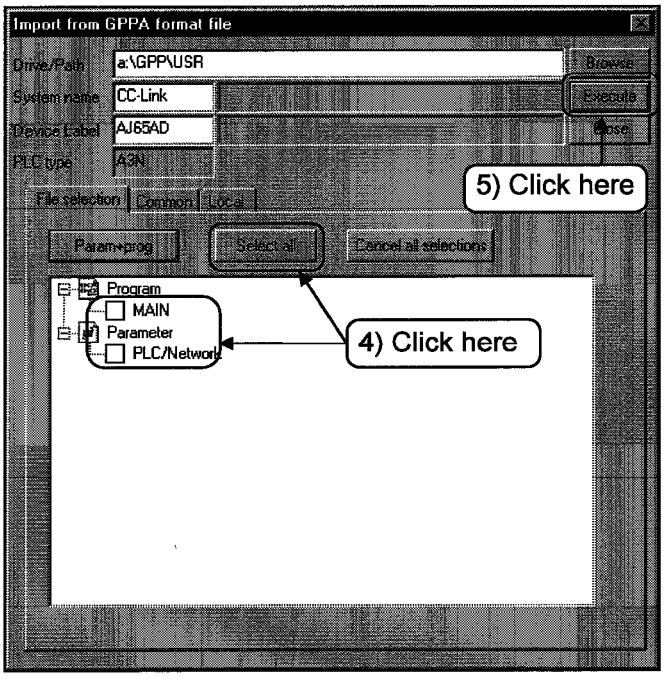


3) Select drive/path name, system name, and machine name. After selection, click [OK]



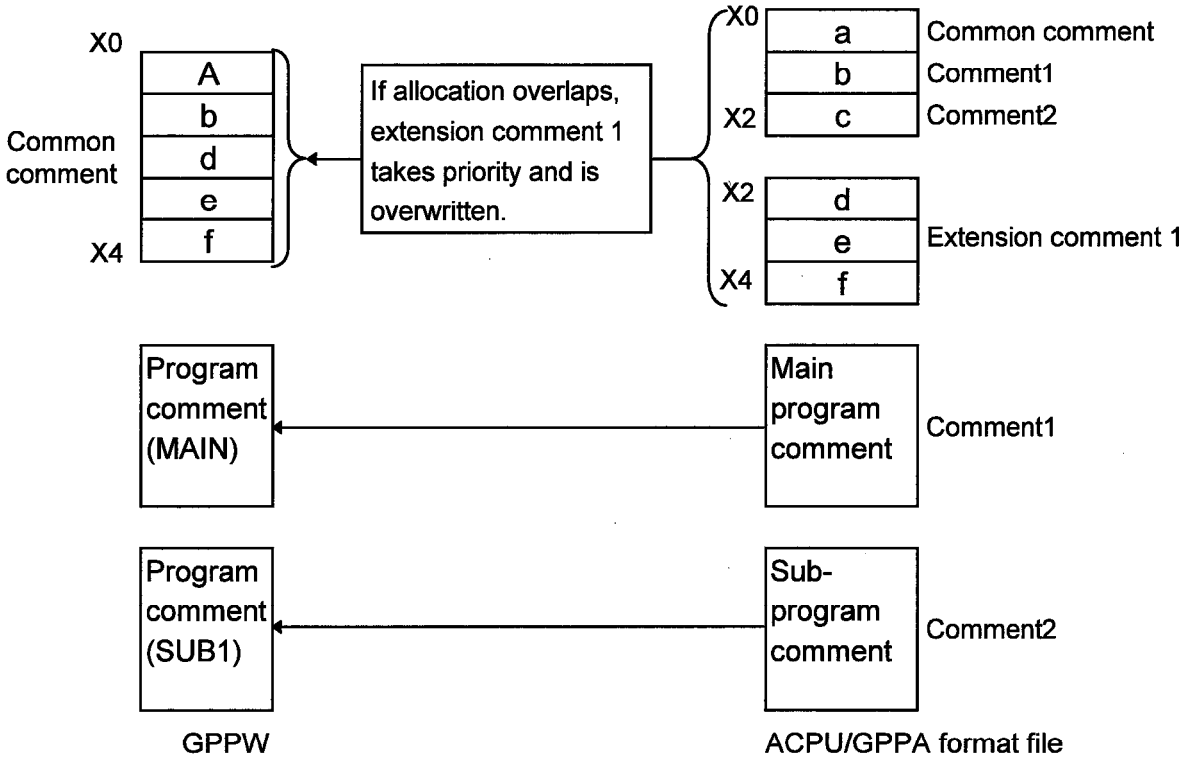
4) Select if all ([Select all]) or part of GPPA data is converted to GPPW.

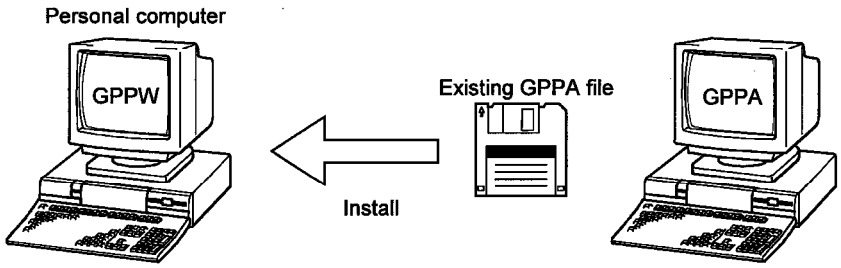
5) After selection, click [Execute] to execute conversion.
When message 「Completed」 appears, conversion is completed.

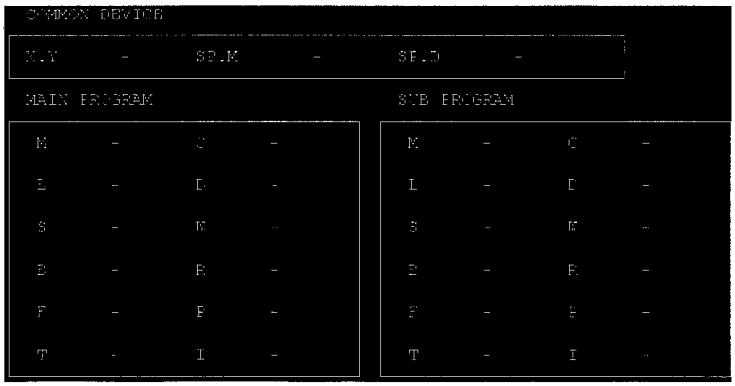
——Notes for converting GPPA comment files to GPPW comment files——

If comments in comment1 and comment2 and extension comments are attached to the existing data, the comment data are converted to GPPW common comments.

If the comments in comment1 and comment2 and extension comments overlap, extension comment 1 takes priority and is converted first.

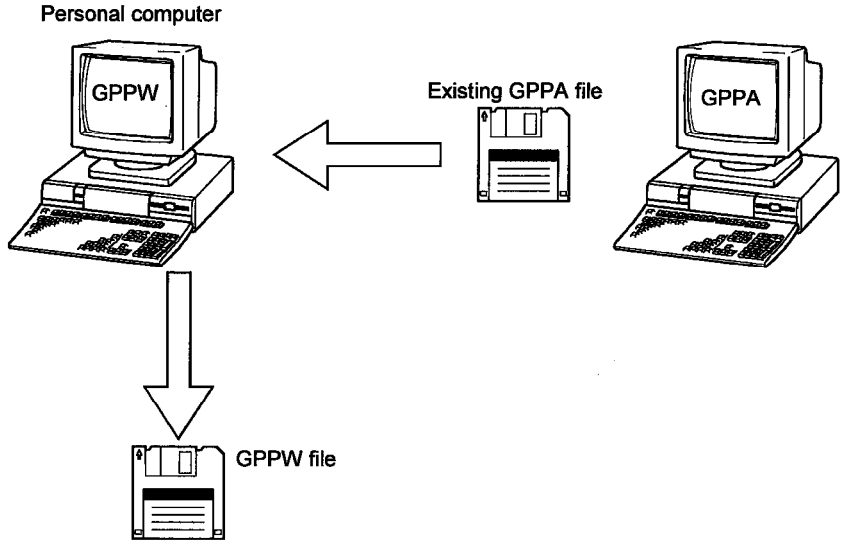


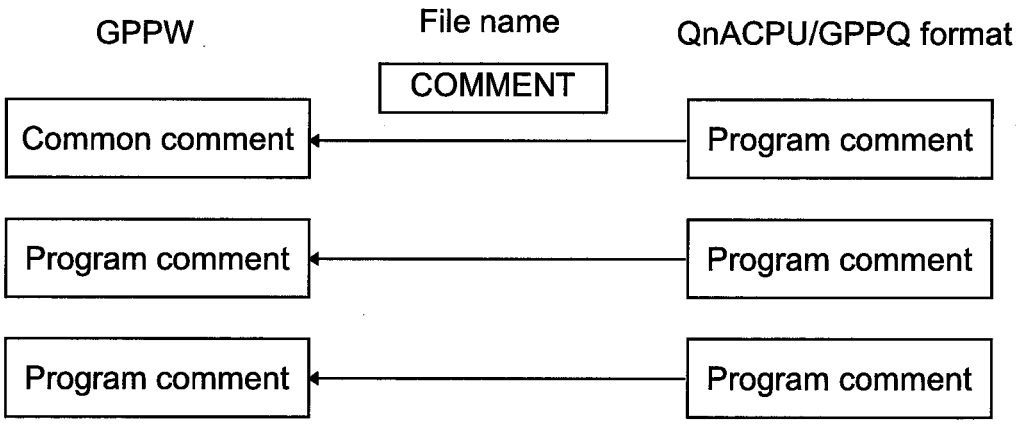




——Notes for converting GPPQ comment files to GPPW files——

Program comments created by GPPQ are converted as they are.
Since GPPQ does not have a concept of common comment as GPPW does, common comments of GPPQ can be converted to common comment of GPPW by changing the file name to "COMMENT".



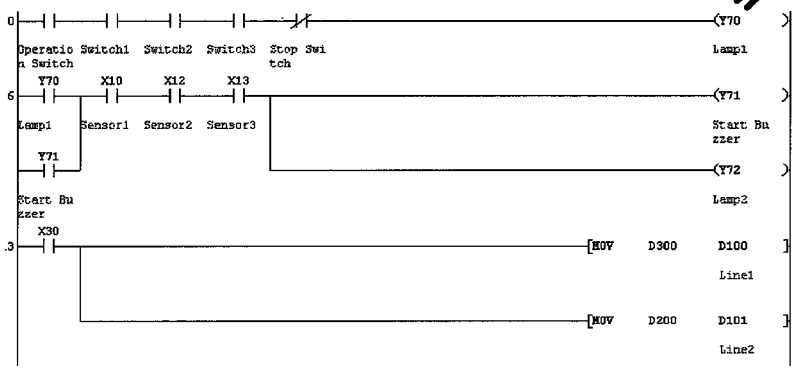


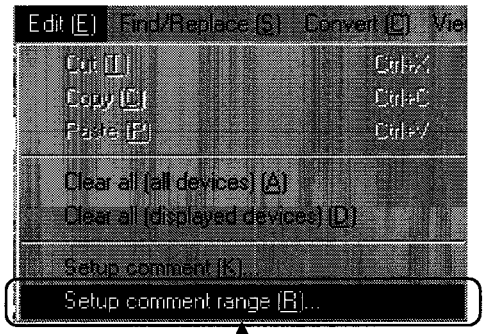
——Notes for writing GPPW data to ACPU/GPPA format files——

Before writing data created by GPPW to ACPU, or to a floppy disk as a GPPA file, specify the memory capacity of the PC parameter (comment and extension comment) and the comment range for writing.

Operations for setting the device comment are explained by using the following circuit.

Circuit indicating device comment





1) Display the device comment edit screen.

☞ *Part 3, 5.1.* ☜

2) Select [Edit]-[Setup comment change].

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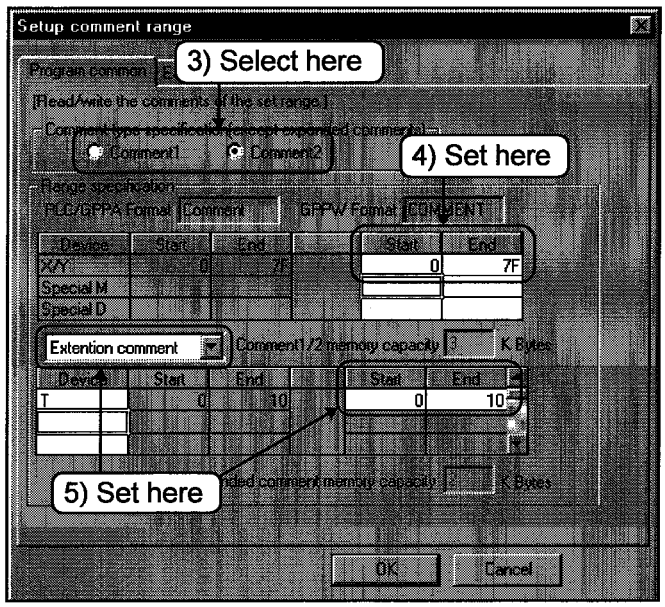
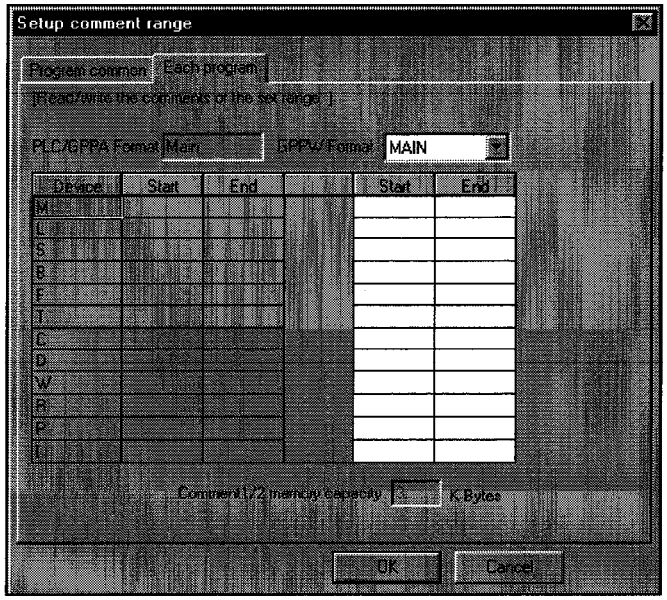


3) Select comment type 「Comment2」 by using the 「Program common」 tab.
4) Set X, Y device range from "0" to "7F".
5) Select "T" for the extension comment, and set the range from "0" to "10".
6) After setting, click [OK].



7) By selecting the 「Each program」 tab, other ranges such as M, L, and S can be set for the main program and sub-programs.
Since "X and Y" in the example circuit here are allocated to the common device, and "T" to extension comment 1, the devices are not set in each program screen.
Now, setting of comment range is completed.

Go to setting operation of comment memory capacity.

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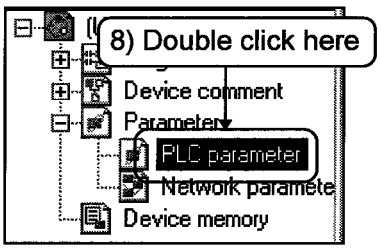
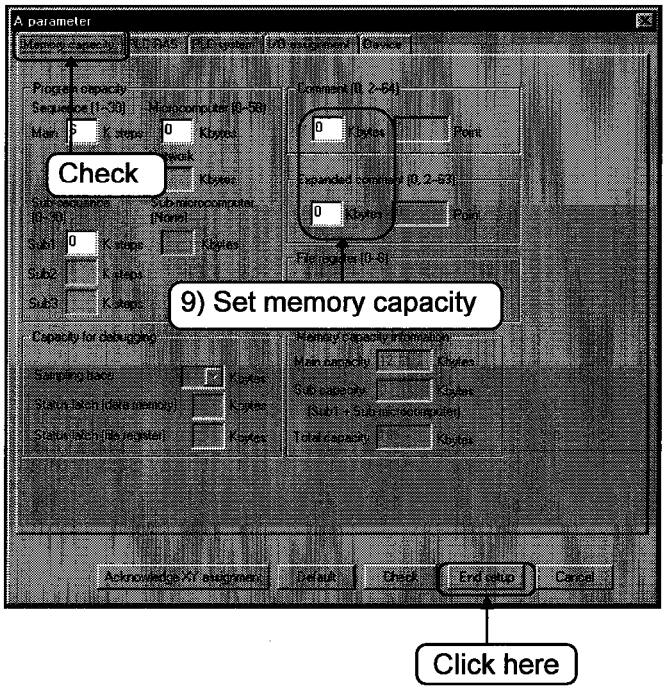
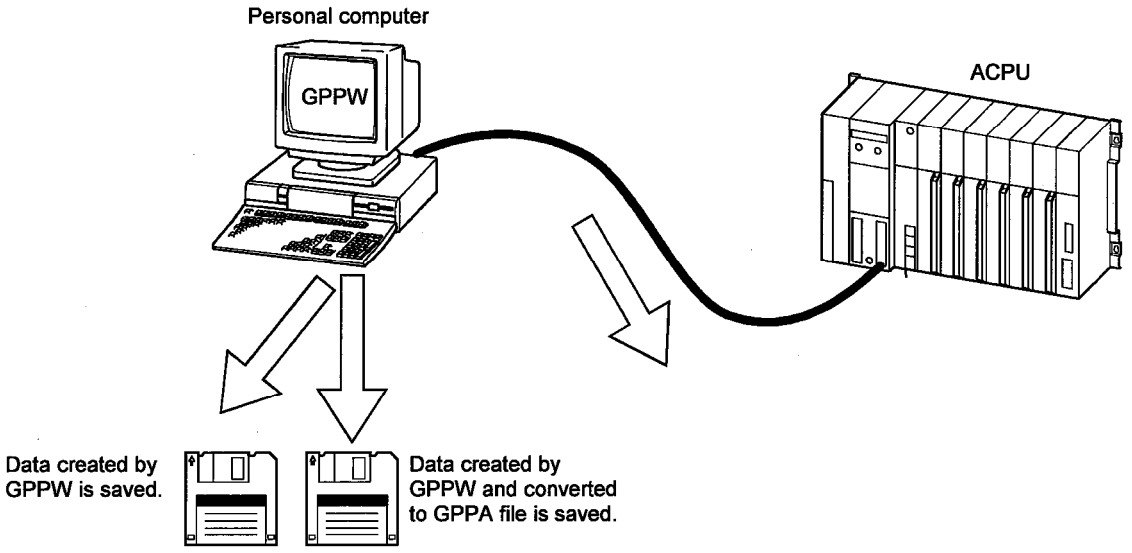


8) Double click 「PLC parameter」 and open the 「parameter」 dialog box.



9) Set the comment memory capacity to "4" and extension comment memory capacity to "2".
After setting, click End setup.



Hint!

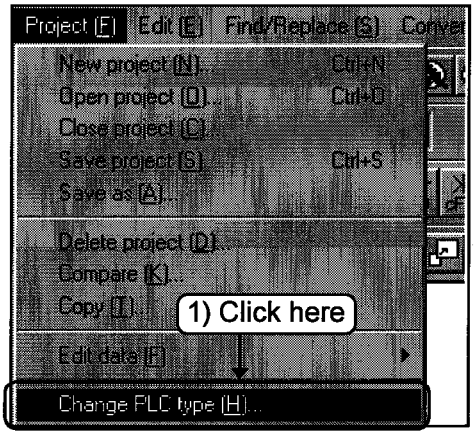
By converting files created by GPPW to GPPA format and saving them in floppy disks, the files can be used if the user has GPPA.

1.5 Changing project PLC type

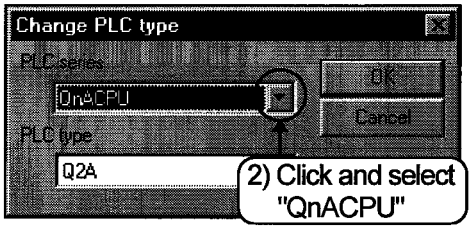
This section explains changing project PLC type set in project creation.

Here, operations for changing PLC type "A3A" to "Q3A" are described.

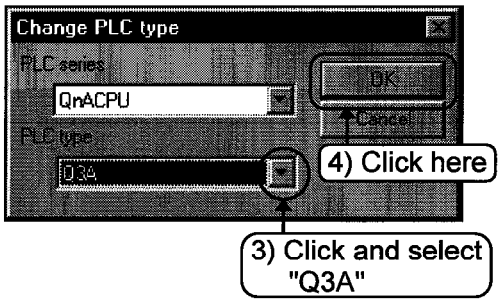
(Changing PLC type from A series to QnA series and vice versa involves restrictions. For detail, refer to the GPPW operating manual.)



1) Click the [Project]-[Change PLC type] menu.



2) Click the ⌈PLC series⌋ list button, and select PLC series to change. Here, select "QnACPU".



3) Click the ⌈PLC type⌋ list button, and select PLC type to change. Here, select "Q3A".

4) Click the OK button.

To the following page

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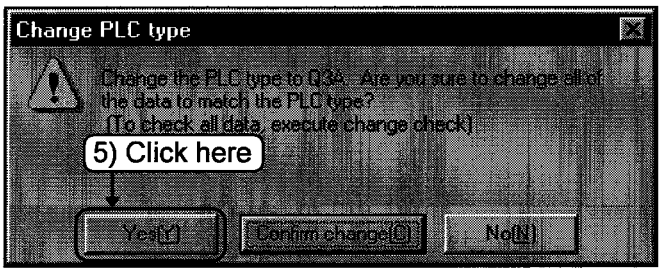
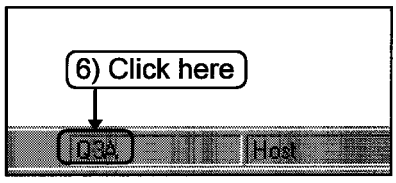


5) A dialog box to confirm change is displayed. Click the [Yes] button.



6) Confirm that the PLC type on the status bar at the bottom of the screen is changed to "Q3A".

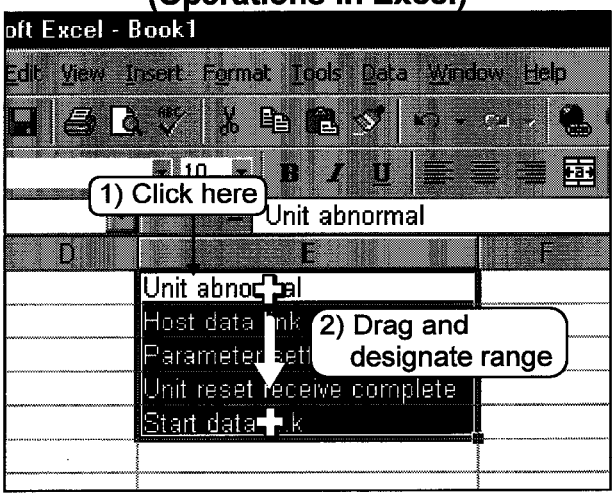
2 Operations with Windows functions

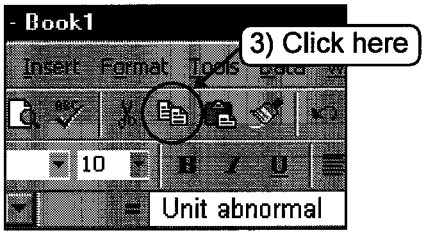
Windows is a well-known OS that is used worldwide.
This section explains using Windows functions.

2.1 Using Excel files as device comment

This section explains using Excel files to create device comments.
The following explanation assumes that Excel and GPPW are running.

(Operations in Excel)



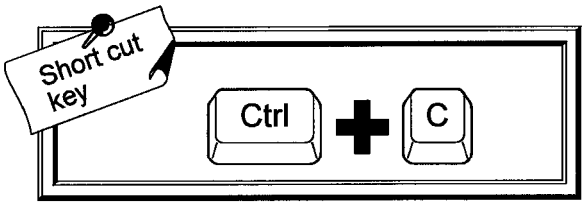


To the following page

1) Click the cell containing the comment created.

2) Drag the mouse to designate the range to be used as comments. The designated area is highlighted.

3) Click on the tool bar of Excel. The comments in the designated range are copied.



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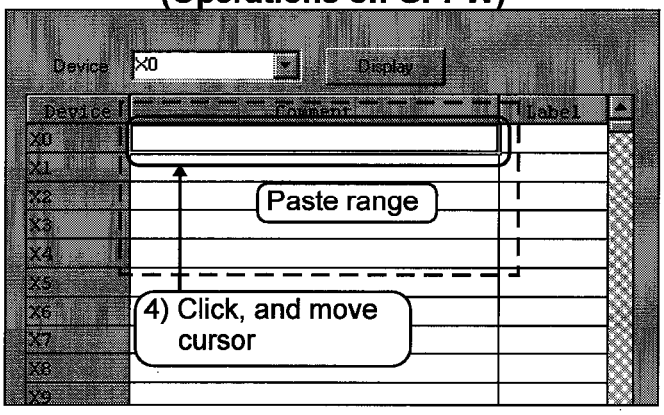
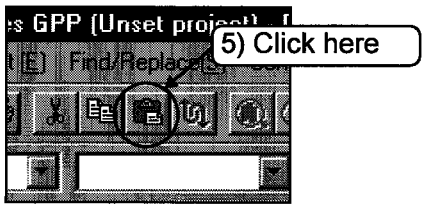
(Operations on GPPW)



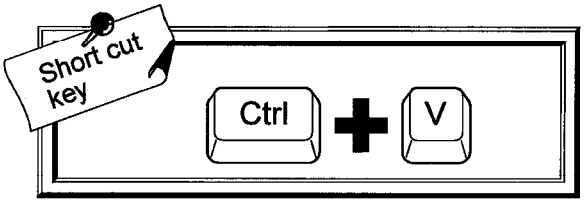
4) Click the position to paste the comment and move the cursor.

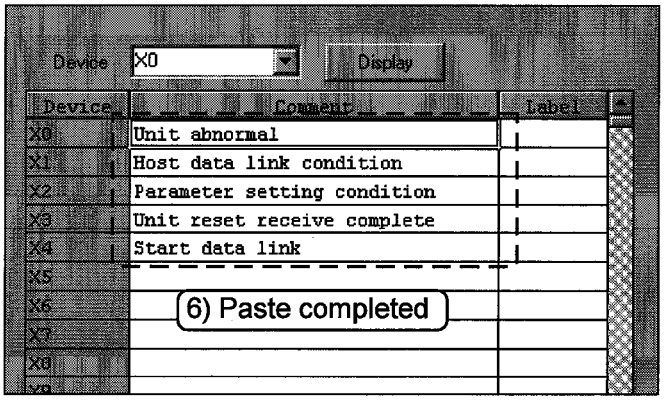
Point

Set the cursor position at the top of the paste range.
When pasted, the data is overwritten.



5) Click on the tool bar.





6) Now the comments are created.

Hint!

For comment...

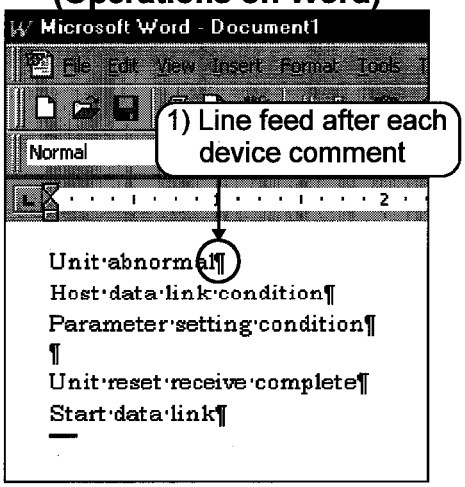
☞ *Part 3, 5.1.* ☜

2.2 Using Word files as device comment

This section explains using documents created by Word as device comments.

The following explanation assumes that Word and GPPW are running.

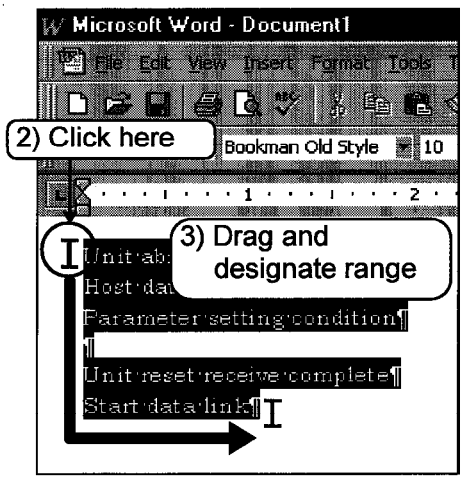
(Operations on Word)



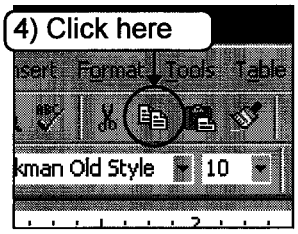
1) Input comments in Word.
Press the Enter key and feed line after each device comment.

Point

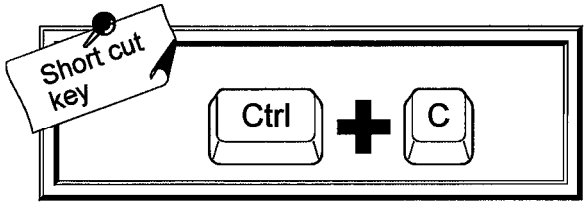
If comments are input without line feed, the data is considered as one device comment.
Be sure to feed line for each device comment.



2) Click the top of the comment created.
3) Drag the mouse to designate the range to be used as comments. The designated area is highlighted.



4) Click on the tool bar of Word.
The comments in the designated range are copied.



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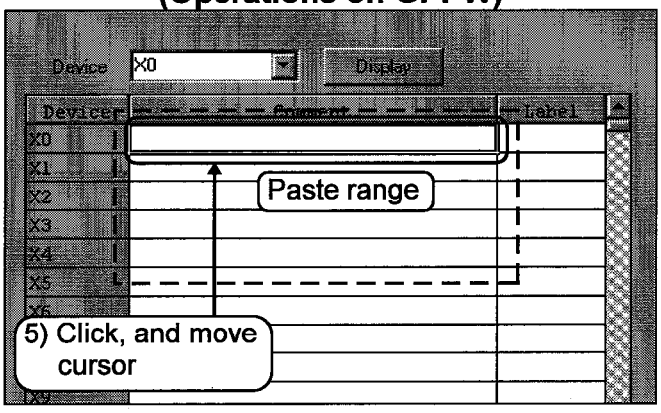
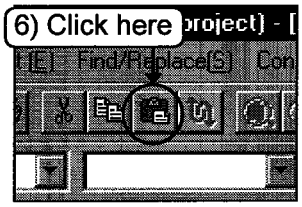
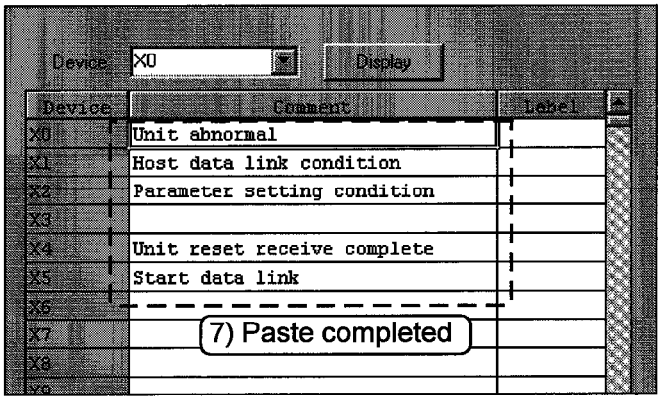
(Operations on GPPW)





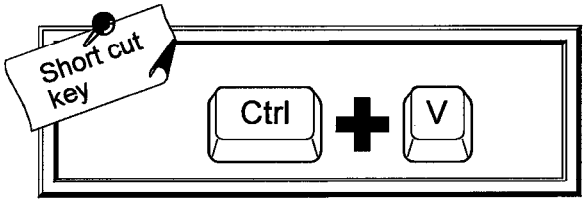


5) Click the position to paste the comment and move the cursor.

Point

Set the cursor position at the top of the paste range.

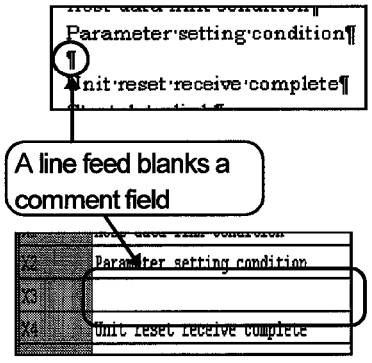
6) Click on the tool bar.



7) Now the comments are created.

Hint!

If a line feed is input between comments, a comment column is blanked.



For comment...

☞ *Part 3, 5.1.* ☜

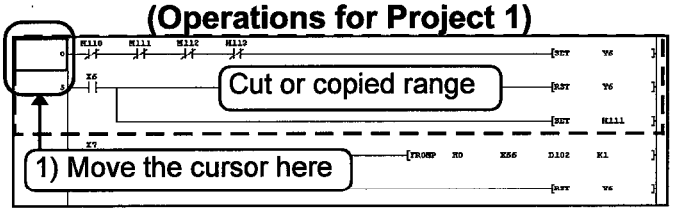
2.3 Opening and editing multiple projects

Since the GPPW can edit only one project at a time, multiple GPPWs must be run to edit multiple projects simultaneously. Running multiple GPPWs allows cutting, copying, and pasting operations for programs and comments among different projects.

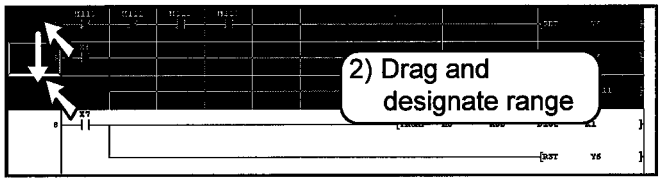
This section explains inserting a circuit block copied in Project 1 to Project 2.

The following explanation assumes that Projects 1 and 2 are already running.

(Operations for Project 1)



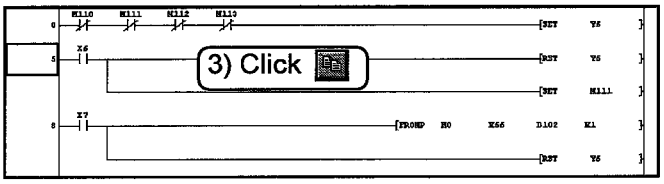
1) Move the cursor to step No. of the circuit block in Project 1 which is to be copied.



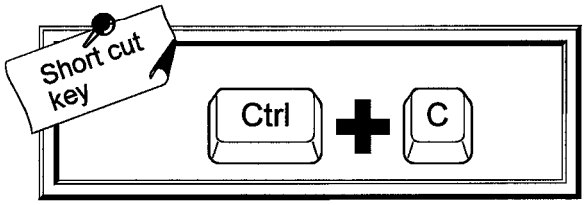
2) Drag the mouse vertically to designate the range to be cut or copied. The designated area is highlighted.

Hint!

To designate a single-line circuit block, drag horizontally for easier range designation.

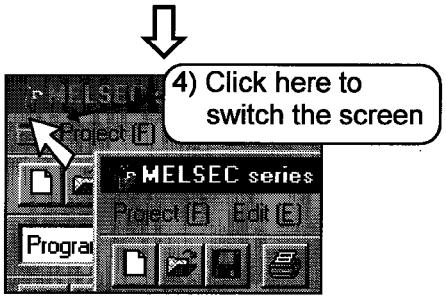


3) Click on the tool bar. The highlighted area is released, and the circuit of the designated range is copied.



To the following page

From previous page

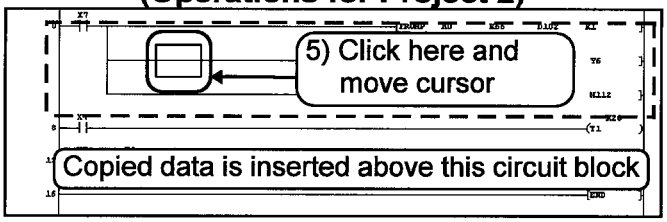


4) Move the cursor to the screen of Project 2, and click.

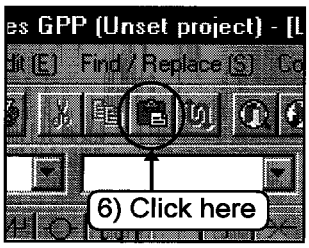
Hint!

Projects can be switched by using the task bar.

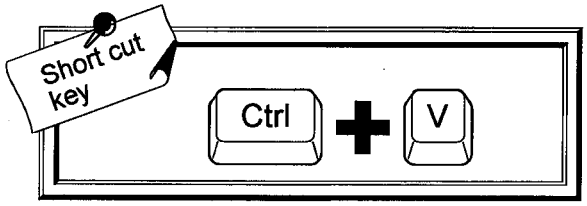
(Operations for Project 2)

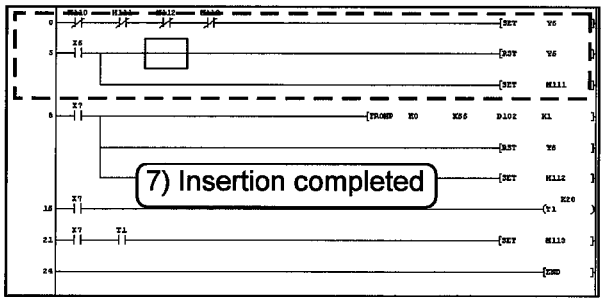


5) Click the circuit block (any position) under the insert position, and move the cursor.



6) Click on the tool bar.





7) The copied circuit block is inserted to the Project 2 circuit.

Hint!

Editing operations for circuits and comments between projects are same as editing within a project.

For methods of editing circuits...

☞ *Part 3, Chapter 2.* ☜

For methods of editing comments...

☞ *Part 3, Chapter 6.* ☜

3 Using Logic Test functions

The Logic Test function (option) is a tool that enables debugging the sequence programs created by users without connecting PLC CPU.

This function allows debugging by using a personal computer without a debugging equipment such as PLC CPU.

This section explains the operations of the Logic Test function.

——Outline of Logic Test function (LLT)——

Installing the Logic Test function (LLT) additionally to the personal computer installed with GPPW enables debugging of the sequence programs in off-line status (when GPPW is not connected to external devices such as PLC).
It also allows quick development of sequence programs because program creation and debugging can be performed on the same personal computer.
Debugging by the Logic Test function (LLT) is performed by writing sequence programs created with GPPW to the LLT. Writing is executed automatically with start-up of the Logic Test function.

——Functions supported by Logic Test function (LLT)——

♦When the Logic Test function (LLT) is installed, the online menu of GPPW becomes available in the same way as it is connected to PLC CPU. (PLC CPU emulation)

「Online」menu	Description
Circuit monitor, device monitor	Monitors operating status.
Device test	Overwrites the device value positively during monitoring.
PLC writing	Writes parameter files and program files.
Step execution	Operates the sequence program step by step.
Partial operation	Executes the designated steps or pointer range of the program.
Remote operation	Operates the status of the Logic Test function (LLT).

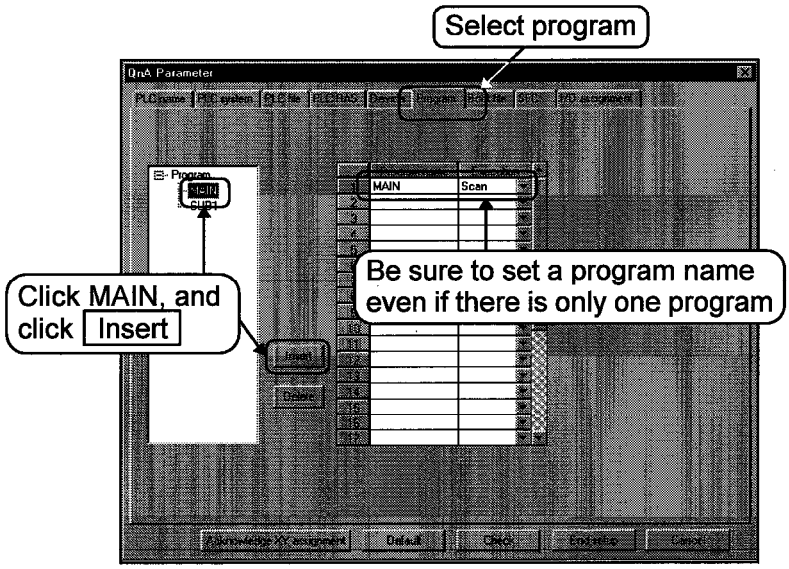
♦Functions performed by Logic Test function (LLT)

Function	Description	Refer to
Monitor test	Monitors the condition of device memory, and tests the positive ON/OFF of devices and the change of present values.	3.3
I/O system setting	Simulates machine operations by simple setting.	3.2

Note: Other than the above functions, the Logic Test function supports the "Tool function" which allows temporal storage of LLT device data and buffer memory data of special function unit.

——Note for start-up of Logic Test function (LLT)——

♦If QnACPU is selected for PLC series, set the ⌈Program⌋ tab of the PLC parameter for GPPW as follows. (For A series, no setting is required.)



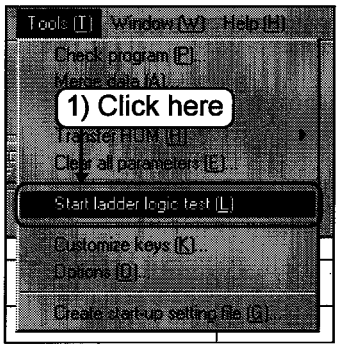
——Processing time of sequence program in Logic Test function——

The actual processing time of the sequence program depends on the performance of the personal computer and the operation environment of other applications.

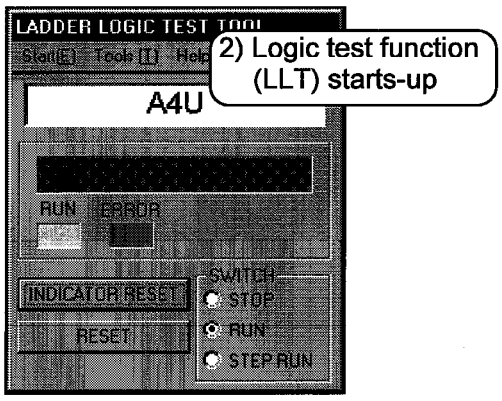
3.1 Learning operation procedures

This section explains debugging with the Logic Test function (LLT).

The following explanation assumes that GPPW and the Logic Test function are installed.



1) Confirm that the project is open, and click the [Tools]-[Start ladder logic test] menu.



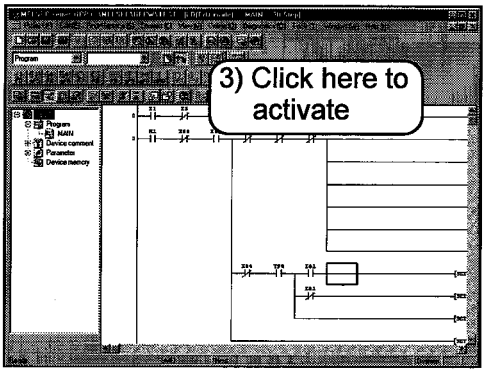
2) The Logic Test function starts-up.

Hint!

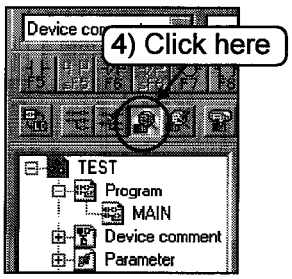
- When the Logic Test function (LLT) starts-up, the parameter and program are written simultaneously (equivalent to PLC write).
- If QnACPU is used, program setting of the PLC parameter is required.

To the following page

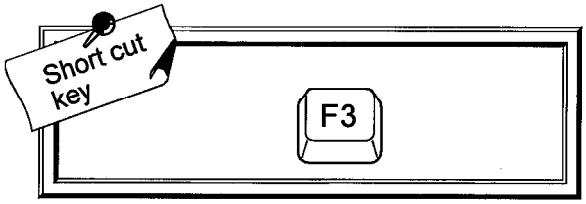
From previous page

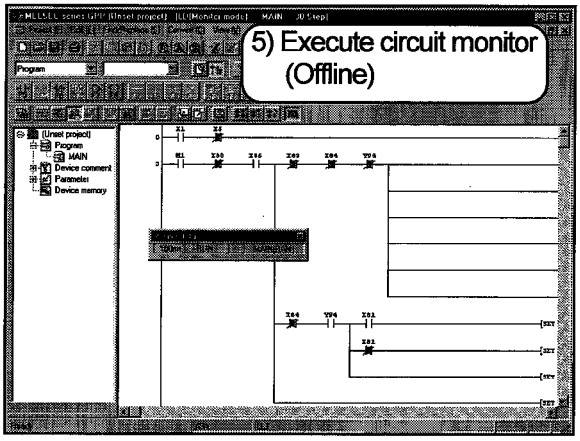


3) Click on the GPPW screen to activate the screen.

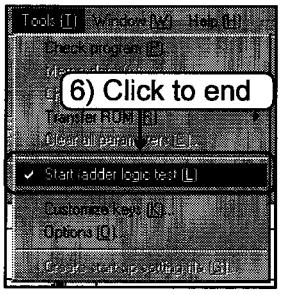


4) Click the button and set the screen to the monitor mode.





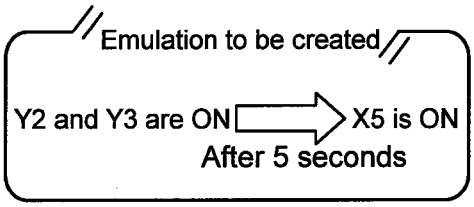
5) Circuit monitoring is executed while PLC is not connected (Offline).
Now offline debugging can be performed.



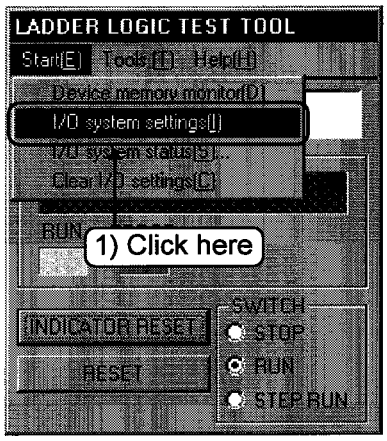
6) Click the [Tools]-[Start ladder logic test] menu of GPPW to end the Logic Test function (LLT).

3.2 Creating emulation of I/O and special unit

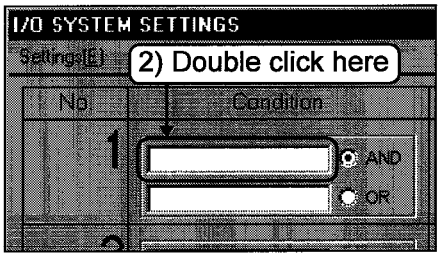
This section explains creating emulation of I/O and special unit such as "turning X0 ON when Y5 and Y7 are ON."



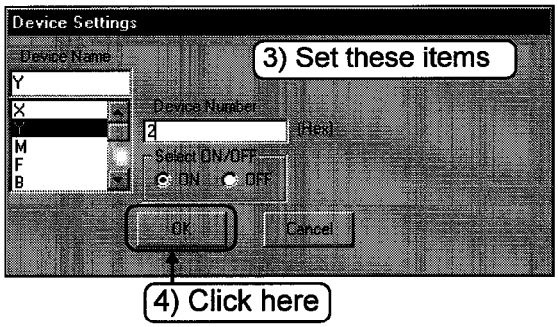
Operations for creating the emulation as shown on the left are explained.
(I/O system is set in setting No.1.)



1) Click the [Start]-[I/O system settings] menu of the Logic Test function (LLT).



2) Double click the upper text box of the setting No.1 「Condition」.

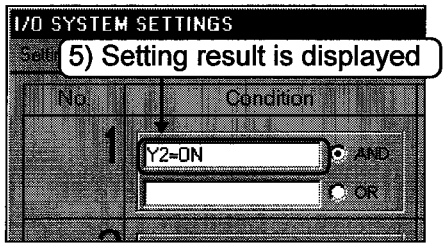


3) Set the device name (Y), device number (2), and ON/OFF designation (ON).

4) Click the OK button.

To the following page

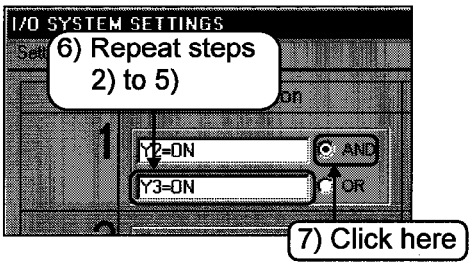
From previous page



5) The setting result is displayed.

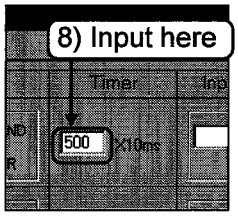
Hint!

Setting can also be done by inputting "Y2=ON".

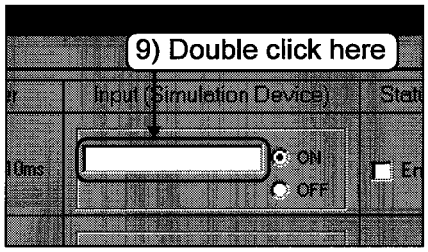


6) Repeat steps 2) to 5) for setting the lower text box.

7) Click the「AND」radio button.



8) Input "500" (5 sec) to the「Timer」text box.



9) Double click the「Input(Simulation Device」text box.

To the following page

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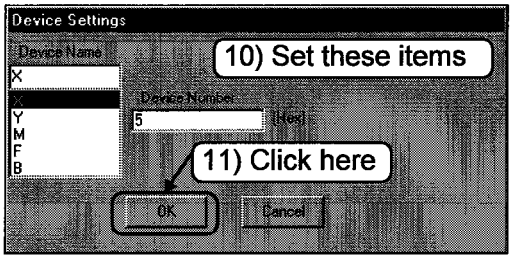
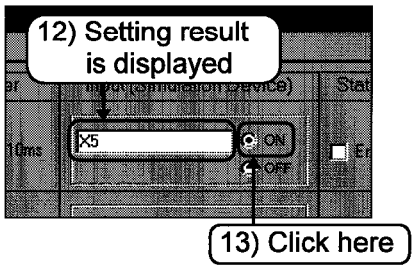


10) Set the device name (X) and the device number (5).

11) Click the OK button.

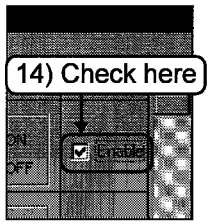


12) The setting result is displayed.

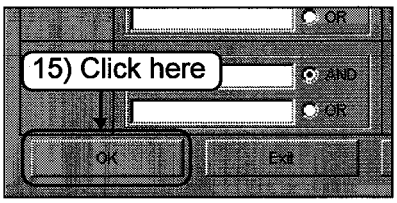
Hint!

Setting can also be done by inputting "X5".

13) Click the ⌈ON⌋ radio button.



14) Click the check to put a check mark to validate the setting.



15) Click the OK button at the lower-left of the screen.

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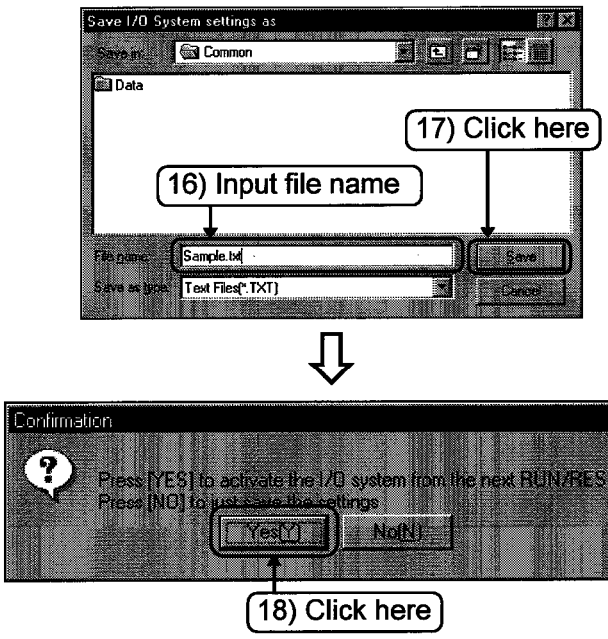


16) Input the file name to save the created emulation.
(Input "Sample.txt" here.)

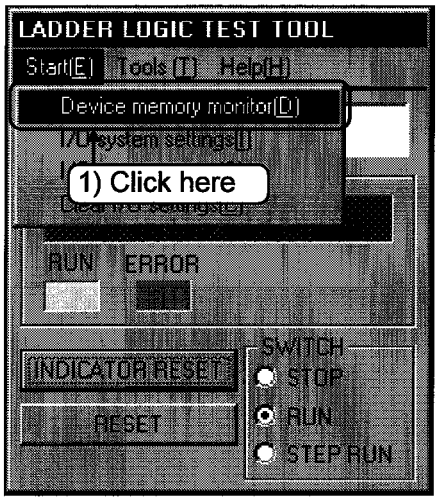
17) Click the Save button.

18) Click the Yes button.

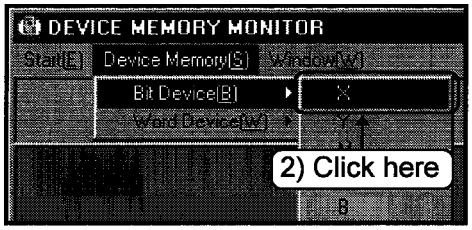
3.3 Monitoring device status

Operations such as monitoring devices, turning ON/OFF bit devices positively, and changing word device values are described.

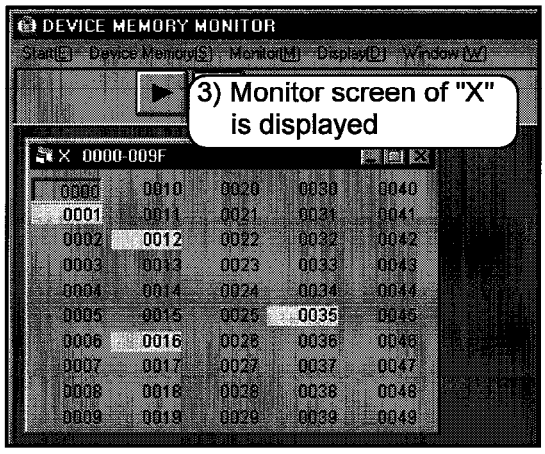
This section explains monitoring bit device "X" and word device "D".



1) Click the [Start]-[Device memory monitor] menu of the Logic Test function (LLT).



2) Click the [Device Memory]-[Bit Device]-[X] of the device memory monitor.



3) The status of the bit device "X" is displayed.

Point

Bit devices that are turned ON is displayed in yellow.

To the following page

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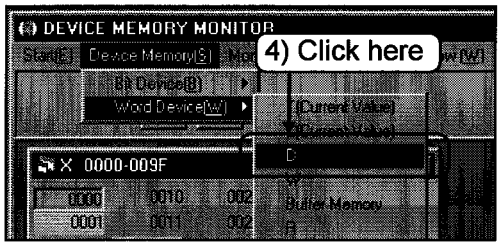
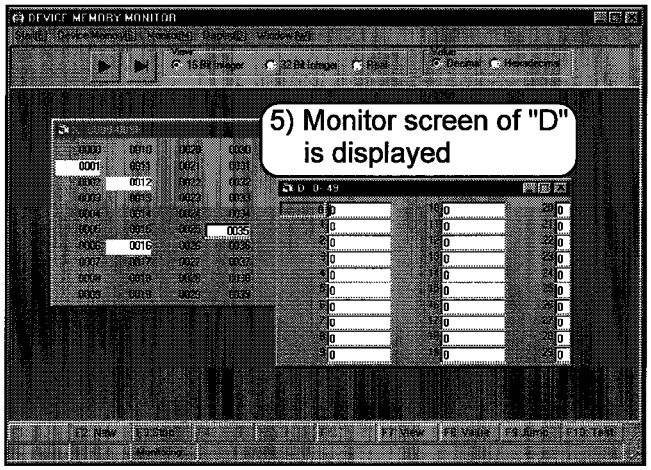
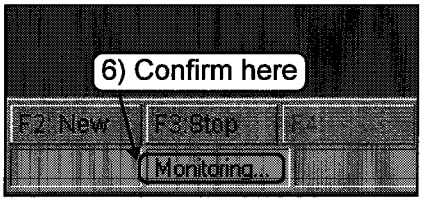


4) Click [Device Memory]-[Word Device]-[D] of the device memory monitor.



5) Status of word device "D" is displayed.

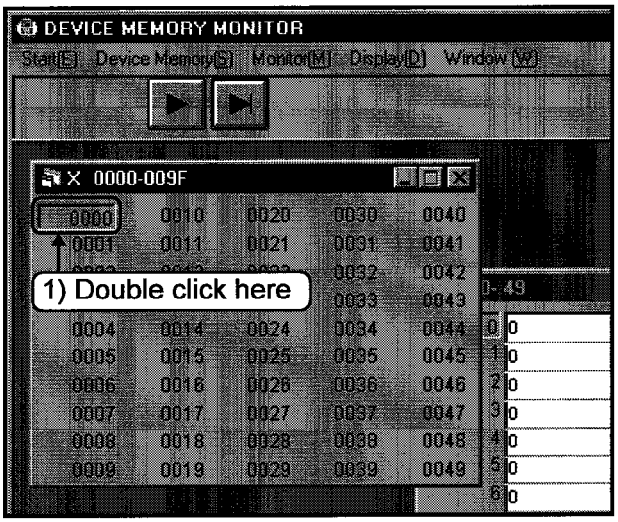


6) Confirm that monitoring is ON.

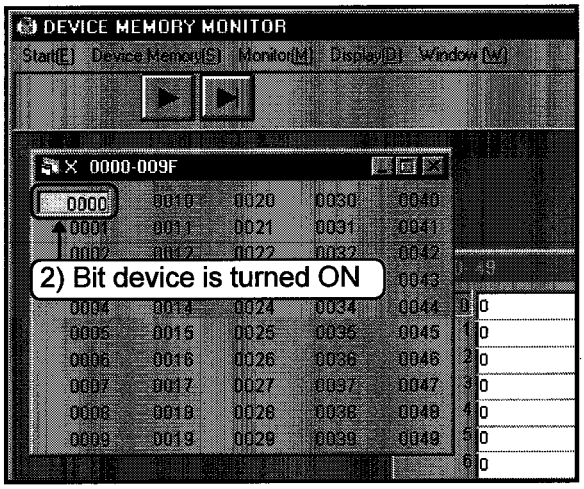
Hint!

If the monitoring is OFF, click the F3:START/STOP button to start monitoring.

——Turning ON/OFF bit device positively——

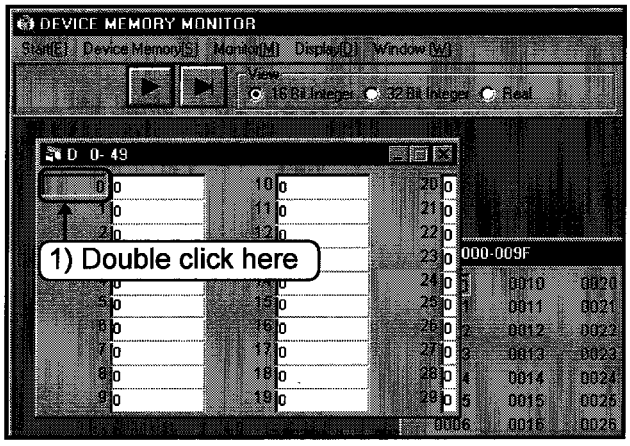


1) Double click the device No. to be turned ON/OFF positively.

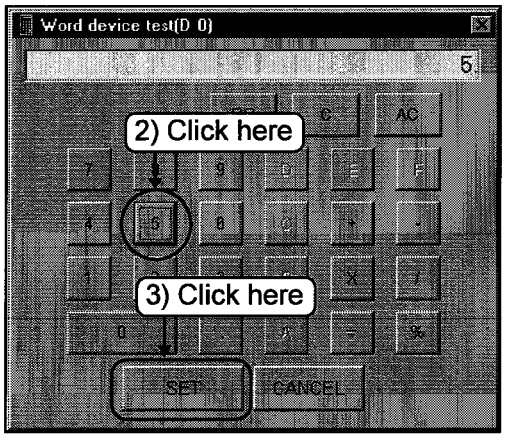


2) The designated bit device No. is turned ON and displayed in yellow.

——Changing device value of word device——

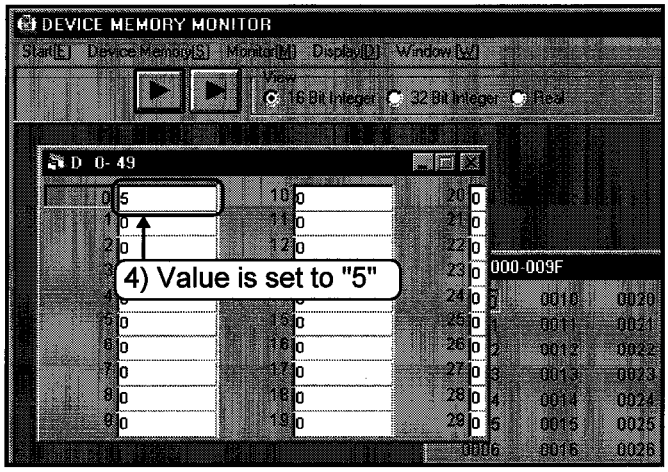


1) Double click the device number for changing device value.



2) Click the number and symbol buttons to set the device value. (Here, set the value to "5".)

3) Click the [SET] button.



4) The device value is set to "5".

MEMO

Appendix

Appendix

Appendix

App. 1 Short cut key list ····· A- 1
App. 2 Circuit creation list ····· A- 7

Appendix

App. 1 Short cut key list

Short cut key	Tool button	Function		
Alt + F4	——	Close		
Ctrl + F6	——	Next window		
Ctrl + N		Project	New project	
Ctrl + O		Project	Open project	
Ctrl + S		Project	Overwrite project	
Ctrl + P		Project	Print	
Ctrl + Z		Edit	Undo	
Ctrl + X		Edit	Cut	
Ctrl + C		Edit	Copy	
Ctrl + V		Edit	Paste	
Ctrl + A	——	Edit	Select all	
Shift + Ins	——	Edit	Insert row	
Shift + Del	——	Edit	Delete row	
Shift + F2		Edit	Read mode	
Ctrl + Ins	——	Edit	Insert column	
Ctrl + Del	——	Edit	Delete column	
F2		Edit	Write mode	
GPPA GPPQ: F5		Edit	Circuit symbol	Open contact
MEDOC: 1		Edit	Circuit symbol	Open contact
GPPA: Shift + F5		Edit	Circuit symbol	Close contact
GPPQ: F6		Edit	Circuit symbol	Close contact
MEDOC: 2		Edit	Circuit symbol	Close contact

	Description
	Close the active window.
	Open the next window.
	Save project as a new file.
	Open an existing project file.
	Overwrite the project file.
	Print the project.
	Undo the previous operation.
	Move the selected data to the clipboard.
	Copy the selected data to the clipboard.
	Paste the data on the clipboard to the cursor position.
	Select all items.
	Insert a row to the cursor position.
	Delete a row at the cursor position.
	Set to read mode.
	Insert a column to the cursor position.
	Delete a column at the cursor position.
	Set to write mode.
	Write an open contact to the cursor position.
	Write a close contact to the cursor position.

Appendix

Short cut key		Tool button			Function	
GPPA	F6		Edit	Circuit symbol	Open branch	
GPPQ	Shift + F5					
MEDOC	3					
GPPA GPPQ	Shift + F6				Close branch	
MEDOC	4					
GPPA GPPQ	F7				Coil	
MEDOC	7					
GPPA GPPQ	F8				Application instruction	
MEDOC	8					
GPPA GPPQ	F9				Horizontal line	
MEDOC	6					
GPPA	F10				Vertical line	
GPPQ	Shift + F9					
MEDOC	5					
GPPA GPPQ	Ctrl + F9				Delete horizontal line	
MEDOC	9					
GPPA GPPQ	Ctrl + F10				Delete vertical line	
MEDOC	0					
	Shift + F7				Rising pulse	
	Shift + F8				Falling pulse	
	Alt + F7				Rising pulse open branch	
	Alt + F8				Falling pulse close branch	
	Alt + F5				Convert operation results to rising pulse	
Ctrl + Alt + F5					Convert operation results to falling pulse	

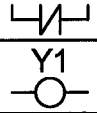
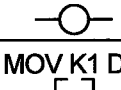
	Description
	Write an open branch to the cursor position.
	Write a close branch to the cursor position.
	Write a coil (OUT) to the cursor position.
	Write an application instruction to the cursor position.
	Write a horizontal line to the cursor position.
	Write a vertical line to the cursor position.
	Delete a horizontal line at the cursor position.
	Delete a vertical line at the cursor position.
	Write a rising pulse to the cursor position.
	Write a trailing pulse to the cursor position.
	Write a rising pulse open branch to the cursor position.
	Write a trailing pulse close branch to the cursor position.
	Write a convert operation results to rising pulse to the cursor position.
	Write a convert operation results to falling pulse to the cursor position.

Appendix

Short cut key	Tool button	Function			
Ctrl + Alt + F10		Edit	Circuit symbol	Invert operation results	
GPPA: Alt + F10		Edit	Circuit symbol	Write horizontal rule	
GPPQ MEDOC: F10		Edit	Circuit symbol	Write horizontal rule	
Alt + F9		Edit	Circuit symbol	Delete horizontal rule	
F4		Convert		Convert	
Ctrl + Alt + F4		Convert		Convert (all program being edited)	
Shift + F4	—	Convert		Convert (write during run)	
Ctrl + F5	—	Display		Display comment	
Ctrl + F7	—	Display		Display statement	
Ctrl + F8	—	Display		Display note	
Ctrl + Alt + F5	—	Display		Display system name	
Alt + 0		Display		Project data list	
F3		Online	Monitor	Monitor	
Ctrl + F3	—	Online	Monitor	Monitor (all windows)	
Shift + F3		Online	Monitor	Monitor (write mode)	
F3		Online	Monitor	Monitor start	
Alt + F3		Online	Monitor	Monitor stop	
Ctrl + Alt + F3	—	Online	Monitor	Monitor stop (all windows)	
Alt + 1		Online	Debug	Device test	
Alt + 2		Online	Debug	Skip	
Alt + 3		Online	Debug	Partial operation	
Alt + 4		Online	Debug	Execute step	
Alt + 6	—	Online		Remove operation	
Alt + F1		Online		Switch circuit/list	

	Description
	Write the reversed operation result to the cursor position.
	Write a ruled line.
	Delete a ruled line.
	Convert program.
	Convert all programs being edited in batch.
	Convert program and write to the running CPU.
	Switch ON/OFF the comment display.
	Switch ON/OFF the statement display.
	Switch ON/OFF the note display.
	Switch ON/OFF the system name display.
	Switch ON/OFF the project data list display.
	Execute circuit monitoring.
	Execute circuit monitoring for all open programs.
	Set to write mode during circuit monitoring.
	Start (restart) circuit monitoring.
	Stop circuit monitoring.
	Stop circuit monitoring for all open programs.
	Turn ON/OFF devices positively or change the present values.
	Skip the sequence program in the designated range.
	Execute part of sequence program.
	Run PLC CPU step by step.
	Carry out remote operation.
	Switch between circuit screen and list screen.

App. 2 Circuit creation list

Example	List expression	Tool button	Function	
	"LD X1"	F5 +"X1"	F5 +"X1"	
	"LDI X1"	sF5 +"X1"	Shift + F5 +"X1"	
	"OR X1"	F6 +"X1"	F6 +"X1"	
	"ORI X1"	sF6 +"X1"	Shift + F6 +"X1"	
	"OUT Y1"	F7 +"Y1"	F7 +"Y1"	
	"MOV K1 D0"	F8 +"MOV K1 DO"	F8 +"MOV K1 DO"	
	—	F9 +Number of lines	F9 +Number of lines	
	—	F10 +Number of lines	F10 +Number of lines	
	—	cF9 +Number of lines	Ctrl + F9 +Number of lines	
	—	cF10 +Number of lines	Ctrl + F10 +Number of lines	
	"ANDP X1"	sF7 +"X1"	Shift + F7 +"X1"	
	"ANDF X1"	sF8 +"X1"	Shift + F8 +"X1"	
	"ORP X1"	aF7 +"X1"	Alt + F7 +"X1"	
	"ORF X1"	aF8 +"X1"	Alt + F8 +"X1"	
	"MEP"	sF5	Alt + F5	
	"MEF"	caF5	Ctrl + Alt + F5	
	"INV"	caF10	Ctrl + Alt + F10	
	—	aF10 +Drag	Alt + F10 +Drag	
	—	sF9 +Drag	Alt + F9 +Drag	

*1 After inputting instructions, press the Enter key or click the OK button.

*2 This table shows operations for keys customized for GPPA.

	Menu
	[Edit]-[Ladder symbol]-[Open conact]+"X1"
	[Edit]-[Ladder symbol]-[Close contact]+"X1"
	[Edit]-[Ladder symbol]-[Open branch]+"X1"
	[Edit]-[Ladder symbol]-[Close branch]+"X1"
	[Edit]-[Ladder symbol]-[Coil]+"Y1"
	[Edit]-[Ladder symbol]-[Application instruction]+"MOV K1 DO"
	[Edit]-[Ladder symbol]-[Horizontal line]+Number of lines
	[Edit]-[Ladder symbol]-[Vertical line]+Number of lines
	[Edit]-[Ladder symbol]-[Delete horizontal line]+Number of lines
	[Edit]-[Ladder symbol]-[Delete vertical line]+Number of lines
	[Edit]-[Ladder symbol]-[Rising pulse]+"X1"
	[Edit]-[Ladder symbol]-[Falling pulse]+"X1"
	[Edit]-[Ladder symbol]-[Rising pulse open branch]+"X1"
	[Edit]-[Ladder symbol]-[Falling pulse close branch]+"X1"
	[Edit]-[Ladder symbol]-[Convert operation results to rising pulse]
	[Edit]-[Ladder symbol]-[Convert operation results to falling pulse]
	[Edit]-[Ladder symbol]-[Invert operation results]+"X1"
	[Edit]-[Draw line]+Drag
	[Edit]-[Delete line]+Drag

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

MODEL	SW2D5-GPPW-HOW-E
MODEL CODE	13J939
SH(NA)-4006-B(9810)MEE	

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