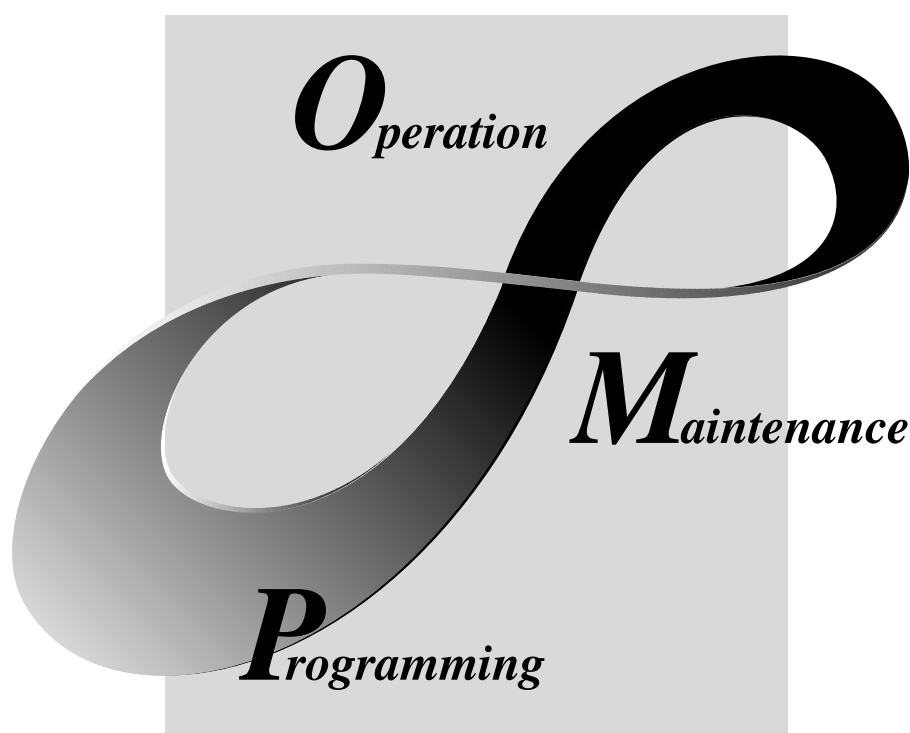


GX Explorer Version 1

Operating Manual

mitsubishi



MELSOFT
Integrated FA Software

SW1D5C-EXP-E

• SAFETY PRECAUTIONS •

(Always read these instructions before using this equipment.)

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

The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.

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




DANGER

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



CAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the  CAUTION level may lead to a serious consequence according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[Design Instructions]

DANGER

- For data change, program change, and status control made to the PLC which is running from a Personal computer, 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 Personal computers.

[Design Instructions]

CAUTION

- Be sure to read the manual carefully and exercise an appropriate amount of caution connecting to PLC CPU and performing online operations (PLC CPU program change during RUN, forced input/output operation, RUN-STOP or other operation condition changes, remote control operation) while the personal computer is operating.
Regarding the PLC CPU program change during RUN (Write during RUN), the program may be corrupted or have other problems depending on operation conditions. Exercise the appropriate amount of caution with regard to the Caution points in section 16.9.

REVISIONS

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

Print Date	* Manual Number	Revision
Aug., 2001	SH(NA)-080170-A	First edition
Sep., 2001	SH(NA)-080170-B	Partial correction Chapter 4

Japanese Manual Version SH-080164-C

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SOFTWARE USER REGISTRATION

After agreeing to the terms of the Software License Agreement included in the package, make the necessary entries in the Software User Registration Card and mail it to us to receive the following services. We register users according to the received Software Registration Card and send the user ID and registration confirmation. (User registration is free of charge.)

(1) Software Registration

Fax or mail the "Software User Registration Card" packed with the product, and we will provide you by direct mail with the latest information such as the new product release, updating information and event information.

(2) Notes on Contact

Call our GX Developer telephone center and tell us your product ID before asking questions.

* Please ask questions concretely and clearly using terms listed in the manual.

When requesting us to solve a problem, provide us with detailed information for reproducing the problem. In addition, contact the respective manufacturers when asking questions about the operating system (OS) or the other vender's software products

User registration is valid only in Japan.

INTRODUCTION

Thank you for choosing the Mitsubishi MELSOFT series comprehensive Factory Automation software. Read this manual and make sure you understand the functions and performance of MELSEC series PLC thoroughly in advance to ensure correct use.

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About Manuals

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

Related Manuals

Manual Name	Manual Number (Model Code)
GX Developer Version7 Operating Manual Explains the functions of the programing, printout, monitoring and debugging methods and so on GX Developer. (Sold separately.)	SH-080166 (13JU14)

Generic Terms and Abbreviations Used in This Manual

Unless otherwise specified, the following generic terms and abbreviations are used in this manual.

Generic Term/Abbreviation	Description
GX Explorer	Abbreviation of the GX Explorer Version 1 project management tool.
GX Developer	Generic product name of GX Developer Version 7 (product types SW7D5C-GPPW, SW7D5C-GPPW-A, SW7D5C-GPPW-V, SW7D5C-GPPW-VA).
Personal computer	Generic term of the personal computers on which Windows [®] 95/98/Me, Windows NT [®] Workstation 4.0 and Windows [®] 2000 Professional operate.
DOS/V personal computer	IBM PC/AT or its compatible DOS/V personal computer.
MELSECNET/10(H)	Generic term of the MELSECNET/10 network system and MELSECNET/H network system.
CC-Link	Abbreviation of the CC-Link (Control & Communication Link) system.
MELSECNET/10(H) board	Generic term of the A70BDE-J71QLP23/A70BDE-J71QBR13/A70BDE-J71QLP23GE A70BDE-J71QLR23 MELSECNET/10 interface board and Q80BD-J71LP21-25/Q80BD-J71BR11 MELSECNET/H interface board.
CC-Link board	Abbreviation of the A80BDE-J61BT11/A80BDE-J61BT13 CC-Link interface board.
QCPU (Q mode)	Generic term of the MELSEC-Q series PLC CPUs (Q00J, Q00, Q01, Q02(H), Q06H, Q12H, Q25H) and MELSECNET/H remote I/Os supported by GX Developer.
QnACPU	Generic term of the MELSEC-QnA series PLC CPUs (Q2A, Q2AS(H), Q2AS1, Q2AS(H)S1, Q3A, Q4A, Q4AR) supported by GX Developer.
QCPU (A mode)	Generic term of the Q02(H)-A and Q06H-A.
ACPU	Generic term of the MELSEC-A series PLC CPUs (A0J2H, A1FX, A1S, A1SJ, A1SH, A1SJH, A1N, A2C, A2CJ, A2N(S1), A2N(S1), A2S, A2SH, A3N, A2A(S1), A3A, A2U(S1), A2US(S1), A2AS(S1), A2AS-S30, A2AS-S60, A2USH-S1, A3U, A4U) and motion controllers (SCPU) supported by GX Developer.
Motion controller (SCPU)	Generic term of the A171SH(N), A172SH(N), A173UH(S1) and A273UH(S3).
Q series	QCPU or modules usable with the QCPU.
QnA series	QnACPU or modules usable with the QnACPU.
A series	ACPU or modules usable with the ACPUs/QCPUTs (A mode).

Product Makeup

GX Explorer is made up of the following products.

Product Name	Quantity
GX Explorer product (CD-ROM)	1
End-user software license agreement	1
Software registration Card	1
License agreement	1

1 OVERVIEW

1

This manual provides the system configuration, functions, installation procedure and operations of the GX Explorer project management tool that operates on Windows[®] 95/98/Me, Windows NT[®] Workstation 4.0 or Windows[®] 2000 Professional.

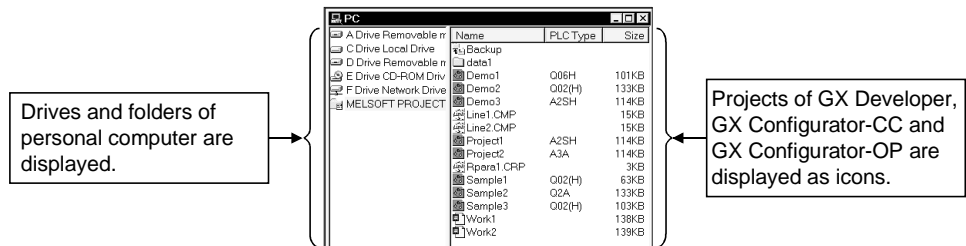
1.1 Features

(1) Centralized management of project data

The project data (parameters, programs, comments, device data, etc.) of GX Developer in a personal computer can be displayed as a list. (On Windows, projects are displayed as folders.)

The projects of GX Configurator-QP and GX Configurator-CC are displayed as icons.

Projects in the personal computer can be moved, copied, deleted and renamed, for example, easily from GX Explorer as if you are operating Windows Explorer, without the need to run the created application, to ensure centralized management of various projects.

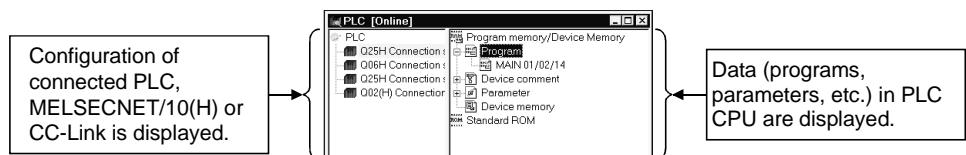


(2) Display of network configuration and data

The PLC type, station type and station number information of each station (network configuration information) is gathered from MELSECNET/H, MELSECNET/10 and/or CC-Link via the PLC connected with the personal computer, and the configuration of each network is displayed on GX Explorer from that information.

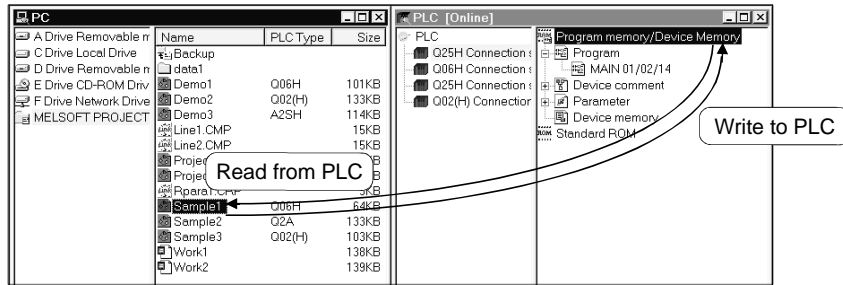
Selecting the PLC CPU in the displayed network configuration lists the data (programs, parameters, etc.) in that PLC CPU.

Merely double-clicking the listed data starts GX Developer, allowing you to read those data onto the personal computer and edit and save them without specifying the network number and station number.



(3) Read/write from/to PLC CPU

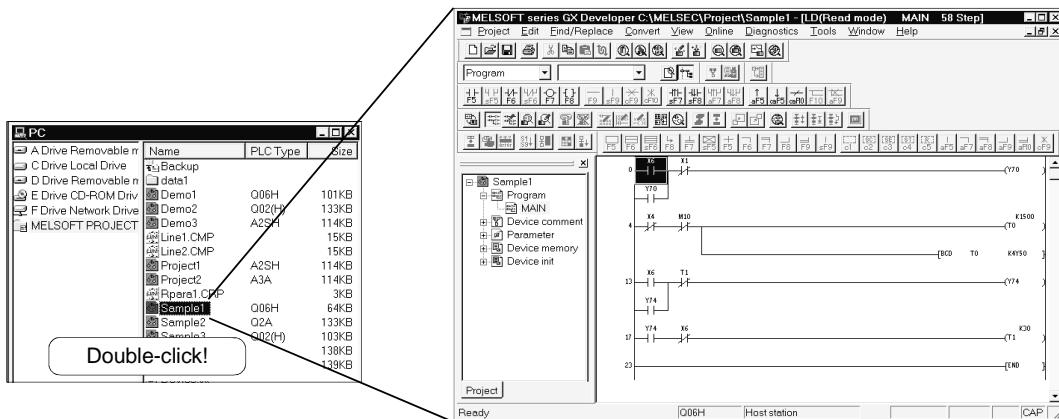
Read from PLC and write to PLC can be done easily by performing drag and drop operation to the displayed PLC CPU. When performing write/read to/from multiple PLC CPUs continuously, for example, the operations of starting GX Developer and opening/closing a project are not needed, ensuring efficient operations.



(4) Starting the related application

Double-clicking the project selected on GX Explorer starts the application used to create that project, enabling you to edit and save the project.

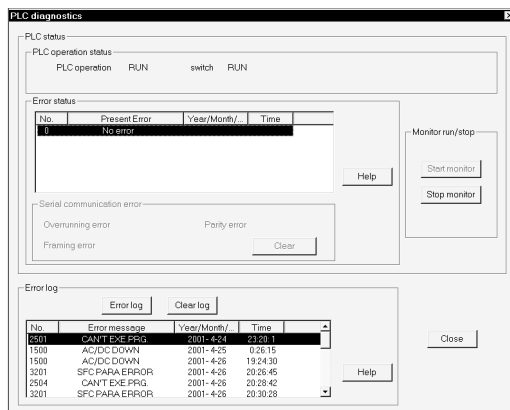
Double-clicking a general file other than a project can also start the related application.



(5) Diagnostic functions

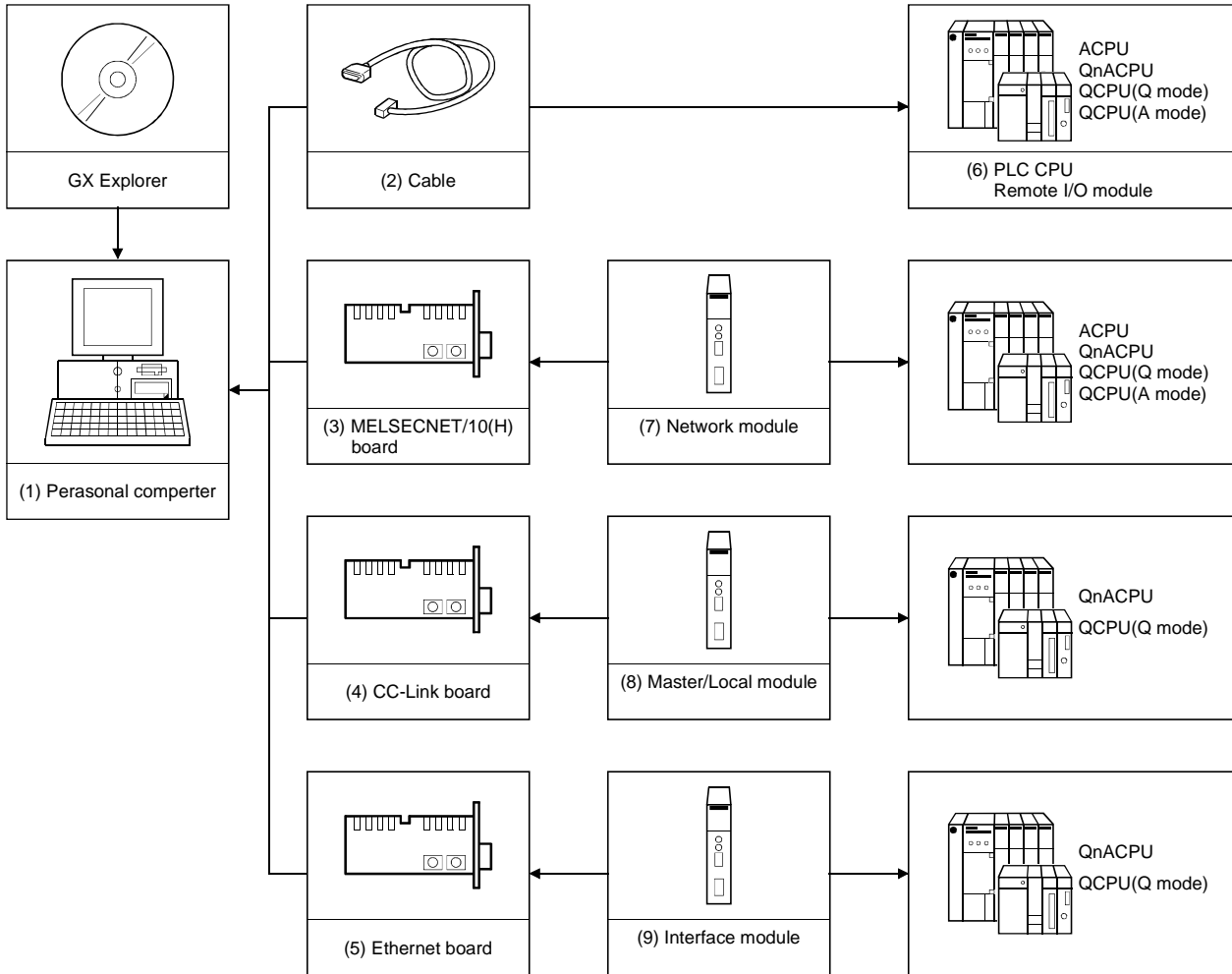
By choosing the required PLC CPU from a list display, you can perform PLC diagnostics, network diagnostics, CC-Link diagnostics, Ethernet diagnostics or system monitor.

You can display the error status, fault history or like of the PLC CPU and check the network-based system status or like.



2 SYSTEM CONFIGURATION

2.1 System Configuration



(1) Personal computer

Use the one that satisfies the operating environment given in Section 2.2.

(2) Connection cables

(a) About the USB cable (QCPU (Q mode) compatible)

- 1) Usable when Windows[®] 98 and USB driver have been installed.
- 2) Unusable for Windows[®] 95, Windows NT[®], Workstation 4.0.
- 3) Use of the USB cable allows only one PLC CPU to be connected.
- 4) Use the USB cable which conforms to the USB Standard Rev. 1.1.

(b) About the cable (QCPU (Q mode), QCPU (A mode) compatible)

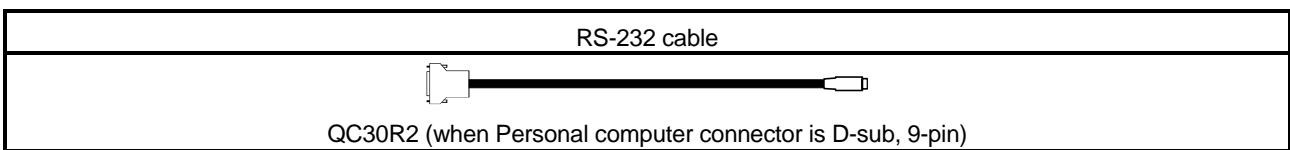
For communication in 115.2/57.6 kbps

Fast communication cannot be made if the Personal computer used is not compatible with the communication speed of 115.2/57.6 kbps.

If a communication error occurs, reduce the baud rate setting and restart communication.




The following cable has been confirmed by Mitsubishi Electric that it will work properly.

Using the cable of Mitsubishi Electric make.



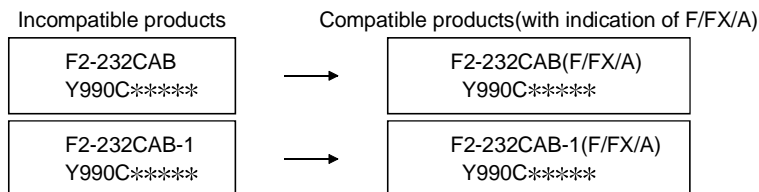
(c) About the converter/cable (ACPU, QnACPU compatible)

1) Using the products of Mitsubishi Electric make

Personal computer Side (RS-232C cable)	RS-232C/RS-422 Converter	PLC CPU Side (RS-422 cable)
 F2-232CAB-1 (when Personal computer connector is D-sub, 9-pin)	 FX-232AW(C)	For ACPU, QnACPU, FX1/FX2CPU/FX2cCPU  FX-422CAB (0.3m) FX-422CAB-150 (1.5m)

- How to identify compatibility of the F2-232CAB and F2-232CAB-1 cables with the ACPU and QnACPU

Check the indication of the model label attached to the cable.



(3) MELSECNET/10(H) boards

The following are the compatible drivers.

Refer to the manual of the corresponding board for the board connection and driver installation methods.

Type	Driver
A70BDE-J71QLP23	SW3DNF-MNET10 *1*2
A70BDE-J71QLP23GE	
A70BDE-J71QBR13	
A70BDE-J71QLR23	
Q80BD-J71BR11	SW0DNC-MNETH-B *1
Q80BD-J71LP21-25	

*1: Unusable with Windows® Me.

*2: Unusable with Windows® 2000 Professional.

(4) CC-Link boards

The A80BD-J61BT11 allows setting of the master/local station.

The A80BD-J61BT13 is accessible only at the setting of a local station.

The following are the compatible drivers.

Refer to the manual of the corresponding board for the board connection and driver installation methods.

Type	Driver
A80BE-J61BT11	SW4DNF-CCLINK-B*
A80BE-J61BT13	

*: Unusable with Windows® Me.

(5) Ethernet boards

Use the driver provided for an Ethernet board available on the market.

The following are the Ethernet boards/cards that have been confirmed by Mitsubishi Electric to operate properly.

Refer to the manual of the corresponding board for the board connection and driver installation methods.

	Maker Name	Type
Ethernet board/card	3COM make	Ethernet Link III LAN PC Card
	Allied Telesis make	Centre COM LA-PCM Ethernet PC Card LAN Adapter
	TDK make	10BASE-TLAN Card (model: LAN-CD021BX)
Ethernet board	Allied Telesis make	RE2000 (ISA)

(6) Modules connectable for serial port/USB communication

(a) Modules connectable for serial port

PLC Series	Module Name	Module Type
Q series	PLC CPU	Q00J, Q00, Q01, Q02(H), Q06H, Q12H, Q25H
	MELSECNET/H remote I/O	QJ72LP25, QJ72BR15
QnA series	PLC CPU	Q2A, Q2AS(H), Q2AS1, Q2AS(H)S1, Q3A, Q4A, Q4AR
A series	PLC CPU	A0J2H, A1S, A1FX, A1SJ, A1SH, A1SJH, A1N, A2C, A2CJ, A2N(S1), A2S, A2SH, A171SH, A172SH, A3N, A2A(S1), A3A, A2U(S1), A2US(S1), A2AS(S1), A2AS-S30, A2AS-60, A2USH-S1, A3U, A4U, A173UH(S1), A273UH, Q02(H)-A, Q06H-A

(b) Modules connectable for USB communication

PLC Series	Module Name	Module Type
Q series	PLC CPU	Q02H, Q06H, Q12H, Q25H

(7) MELSECNET/10(H) network modules connectable for MELSECNET/10(H) board

PLC Series	Module Type
Q series	QJ71LP21, QJ71LP21-25, QJ71BR11
QnA series	AJ71QLP21, AJ71QBR11, A1SJ71QLP21, A1SJ71QBR11, A1SJ71QLP21GE
A series	AJ71LP21, AJ71BR11, A1SJ71LP21, A1SJ71BR11, A1SJ71LP21GE

(8) CC-Link master/local modules connectable for CC-Link board

PLC Series	Module Type
Q series	QJ61BT11
QnA series*	AJ61QBT11, A1SJ61QBT11

*: Function version B or later only

(9) Ethernet interface modules connectable for Ethernet board

PLC Series	Module Type
Q series	QJ71E71, QJ71E71-B2, QJ71E71-100
QnA series*	AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2, A1SJ71QE71-B5

*: Only function version B or later of QnACPU and Ethernet interface module

2.2 Operating Environment

The following is the operating environment of GX Explorer.

Item	Description	
Computer	200MHz or more (recommended) Pentium [®] personal computer on which Windows [®] operates	
Operating System	Microsoft [®] Windows [®] 95 operating system Microsoft [®] Windows [®] 98 operating system Microsoft [®] Windows [®] Me operating system Microsoft [®] Windows NT [®] Workstation 4.0 operating system Microsoft [®] Windows [®] 2000 Professional operating system	
Necessary memory	64MB or more recommended	
Free hard disk area	For installation	100MB or more
	For operation	100MB or more
Disk drive	CD-ROM disk drive	
Display resolution	800 × 600 dots or more	
Required software	GX Developer Version 7 or later (SW7D5C-GPPW or later)	

Do not use USB with Windows[®] 95.

POINT
<ul style="list-style-type: none"> • Instruction for use of the online manual Addition of memory ensures more comfortable use. • Instruction for use of the PDF data Use with addition of personal computer memory ensures comfortable operation.

3 FUNCTION LISTS

3.1 Function Lists

(1) Common

Function	Description	Refer To	
View	Display/arrangement of windows	Displays and arranges the personal computer side window and PLC side window.	Section 5.2.1
New	Creation of new system data	Creates (registers) new system data.	Section 6.8
Options	GX Developer setting	Makes setting at start of related application.	Section 7.1.2 Section 7.2
	Backup setting	Sets the drive or system data to be backed up.	Section 6.9
	Network check setting	Sets the getting of the network configuration information at start of GX Explorer, at switching to the online mode, or at changing the transfer setup.	Section 5.1.1
Others	Help	Displays Help.	Chapter 9

(2) Management of projects in personal computer

Function	Description	Refer To	
View	Tree display/list display	Displays the objects (projects, folders, files).	Section 5.3.1
	Switching between list display and detail display	Switches between list display and detail display of the objects (projects, folders, files).	
	Arrangement of icons	Changes the display in name order, type order, size order or date order.	
	Refresh	Updates information on the objects (projects, folders, files) in the personal computer.	
	Display of properties	Displays the information on the object (project, folder, file).	Section 6.4
Object operation	Rename	Changes the names of the object (project, folder, file).	Section 6.3
	Delete	Deletes the object (project, folder, file).	Section 6.2
	Cut	Cuts the object (project, folder, file).	Section 6.5
	Copy	Copies the object (project, folder, file).	Section 6.6
	Paste	Pastes the object (project, folder, file).	Section 6.5 Section 6.6
	Creation of new folder	Creates a new folder.	Section 6.1
	Creation of new project	Creates a new project of GX Developer.	
	Start of application	Starts an application to open the selected project.	Section 6.7

(3) Management of data inside PLC












Function	Description	Refer To	
View	Tree display/list display	Displays the PLC CPU data/network configuration.	Section 5.4.2
	List display/detail display	Displays the network configuration list/PLC CPU data details.	
	Arrangement of icons	Changes between the ascending sequence and descending sequence in network number, order or station order.	
	Refresh	Updates the connected stations or whole network configuration information.	
Online (When personal computer and PLC are connected)	Delete PLC data	Deletes the PLC CPU file.	Section 7.3
	Write to PLC	Writes the programs, parameters and/or like to the PLC CPU.	Section 7.1.1 to Section 7.1.7
	Read from PLC	Reads the programs, parameters and/or like from the PLC CPU.	Chapter 8
	Diagnostics	Displays the PLC CPU or network status.	Section 7.2
Save/read	Save of network configuration information	Saves the read network configuration information.	Section 5.4.1 Section 5.4.3
	Read of network configuration information	Reads the saved network configuration information.	
Others	Transfer setup	Specifies the interfaces and types to be connected with the PLC CPU.	Section 5.4.4
	Offline mode	Displays the network configuration information already gotten when the network is not connected with the PLC CPU.	

3.2 Menu Lists

(1) Drop-down menus

The drop-down menus are indicated on the PC side window or PLC side window selection status basis.

(a) When PC side window is selected

Menu Name		Description	Button	Refer To	
File	New System data			Section 6.8	
	New	Folder	Creates a new folder.	—	Section 6.1
		GX Developer project		Creates a new project of GX Developer.	
	Delete		Deletes the selected object.		Section 6.2
	Rename		Changes the name of the selected object.	—	Section 6.3
	Properties		Displays the properties of the selected object.		Section 6.4
	Exit GX Explorer		Exits GX Explorer.		Section 5.1.2
Edit	Cut			Section 6.5	
	Copy			Section 6.6	
	Paste		Pastes the cut or copied object to the selected position.		Section 6.5, Section 6.6
	Select All		Selects all objects in the window.	—	Section 6.2, Section 6.5, Section 6.6
	Move up		Displays the data one layer above the current one.		Section 5.3.1
View	Toolbar		—	Section 5.2.1	
	Status bar		—		
	List		Displays a list of the objects in the window.		Section 5.3.1
	Details		Displays details of the objects in the window.		
	Arrange Icons	by Name	Displays the objects in the window in name order.	—	
		by Type	Displays the objects in the window in type order.	—	
		by Size	Displays the objects in the window in size order.	—	
by Date		Displays the objects in the window in date order.	—		
Refresh		Updates the personal computer side window.	—		
Tools	Options	Opens the Options dialog box.	—	Section 5.1.1, Section 6.9, Section 7.1.2, Section 7.2	
Window	Open PLC side window		—	Section 5.2.1	
	Close				
	Close All		—		
	Cascade		Displays the windows one over another partially.		—
	Tile Vertically		Displays the windows side by side.		—
	Tile Horizontally		Displays the windows top to bottom.		—
Help	Key operation list		—	Chapter 9	
	Product information		—		
	Connect to MELFANSweb		Connects to MELFANSweb.		—

(b) When PLC side window is selected

Menu Name		Description	Button	Refer To	
File	Read Network configuration information	Reads the saved network configuration information.	—	Section 5.4.3	
	Save Network configuration information	Saves the acquired network configuration information.	—		
	Offline mode	Switches between the online and offline modes.	—	Section 5.4.4	
	Exit GX Explorer	Exits GX Explorer.		Section 5.1.2	
Edit	Copy	Performs read from the selected PLC CPU.		Section 7.1.1 to Section 7.1.7	
	Paste	Performs write to the selected PLC CPU.			
	Move up	Displays the data one layer above the current one.		Section 5.4.2	
View	Toolbar	Switches between displaying and hiding the toolbar.	—	Section 5.2.1	
	Status bar	Switches between displaying and hiding the status bar.	—		
	List	Displays a list of the objects in the window.		Section 5.4.2	
	Details	Displays details of the objects in the window.			
	Arrange Icons	by Name	Displays the objects in the window in name order.		—
		by Station No.	Displays the objects in the window in station number order.		—
	Network configuration information refresh	Updates the network configuration information.	—		
Online	Transfer setup	Specifies the interface and like for connection to the PLC CPU.		Section 5.4.1	
Tools	Options	Opens the Options dialog box.	—	Section 5.1.1, Section 6.9, Section 7.1.2, Section 7.2	
Window	Open PC side window	Displays the personal computer side window.	—	Section 5.2.1	
	Close	Closes the active window.			
	Close All	Closes all open windows.	—		
	Cascade	Displays the windows one over another partially.	—		
	Tile Vertically	Displays the windows side by side.	—		
	Tile Horizontally	Displays the windows top to bottom.	—		
Help	Key operation list	Displays the key operations.	—	Chapter 9	
	Product information	Displays the product information.	—		
	Connect to MELFANSweb	Connects to MELFANSweb.	—		

(c) When PC side and PLC side windows are not being displayed

Menu Name		Description	Button	Refer To
File	Exit GX Explorer.	Exits GX Explorer.		Section 5.1.2
View	Toolbar	Switches between displaying and hiding the toolbar.	—	Section 5.2.1
	Status bar	Switches between displaying and hiding the status bar.	—	
Tools	Options	Opens the Options dialog box.	—	Section 5.1.1, Section 6.9, Section 7.1.2, Section 7.2
Window	Open PC side window	Displays the personal computer side window.	—	Section 5.2.1
	Open PLC side window	Displays the PLC side window.	—	
Help	Key operation list	Displays the key operations.	—	Chapter 9
	Product information	Displays the product information.	—	
	Connect to MELFANSweb	Connects to MELFANSweb.	—	

(2) Shortcut menus

The following are the shortcut (right-click) menu on a PC side window or PLC side window selection basis.

(a) When PC side window is selected

Menu Name		Description	Refer To
Run a related application		Starts the application with which the project or file has been created.	Section 6.8
View	List	Displays a list of the objects in the window.	Section 5.3.1
	Details	Displays details of the objects in the window.	
Arrange Icons	by Name	Displays the objects in the window in name order.	
	by Type	Displays the objects in the window in type order.	
	by Size	Displays the objects in the window in size order.	
	by Date	Displays the objects in the window in date order.	
Cut		Moves the selected object to the clipboard (temporary storage memory in personal computer).	Section 6.5
Copy		Copies the selected object to the clipboard (temporary storage memory in personal computer).	Section 6.6
Paste		Pastes the cut or copied object to the selected position.	Section 6.5, Section 6.6
Delete		Deletes the selected object.	Section 6.2
Rename		Changes the name of the selected object.	Section 6.3
New	Folder	Creates a new folder.	Section 6.1
	GX Developer project	Creates a new project of GX Developer.	
Properties		Displays the properties of the selected object.	Section 6.4

(b) When PLC side window is selected

Menu Name		Description	Refer To
Run a related application		Starts GX Developer.	Section 7.2
Network configuration information refresh		Updates the network configuration information.	Section 5.4.2
View	List	Displays a list of the objects in the window.	
	Details	Displays details of the objects in the window.	
Arrange Icons	by Name	Displays the objects in the window in name order.	
	by Station No.	Displays the objects in the window in station number order.	
Copy		Performs read from the selected PLC CPU.	Section 7.1.1 to Section 7.1.7
Paste		Performs write to the selected PLC CPU.	
Delete PLC data		Deletes the selected file from the PLC CPU.	Section 7.3
Diagnostics	PLC diagnostics	Diagnoses the selected PLC CPU.	Section 8.1
	Network diagnostics	Diagnoses the selected network.	Section 8.2
	CC-Link diagnostics	Diagnoses the selected CC-Link system.	Section 8.3
	System monitor	Monitors the configuration of the selected station.	Section 8.5
	Ethernet diagnostics	Diagnoses selected Ethernet.	Section 8.4
Offline mode		Switches between the online and offline modes.	Section 5.4.4
Read Network configuration information		Reads the saved network configuration information.	Section 5.4.3
Save Network configuration information		Saves the acquired network configuration information.	

4 INSTALLATION AND UNINSTALLATION

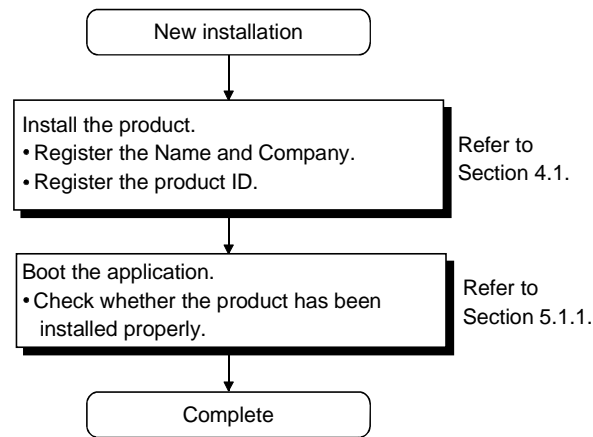
This chapter describes the installation and uninstallation of GX Explorer.

4.1 Installation

This section explains the installation procedure and operation of GX Explorer.

(1) Installation procedure

Install GX Developer in the following procedure.

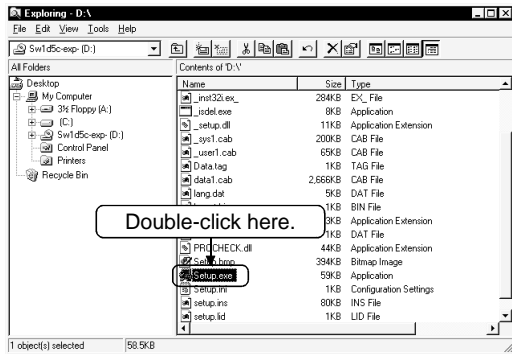


(2) Installation operation

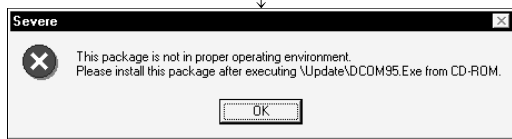
Check the following before starting installation.

POINT
<ul style="list-style-type: none"> • Before starting installation, close all other applications that are running on Windows[®]. • When using Windows NT[®] Workstation 4.0 or Windows[®] 2000 Professional, log on as a user who has the attributes of an administrator (for computer management). • If GX Developer Version 7 or later has not been installed, GX Explorer can be installed but cannot be booted. When using GX Explorer, install GX Developer Version 7 or later.

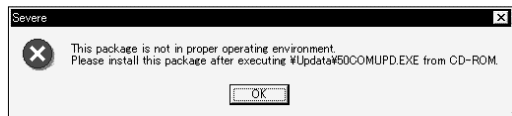
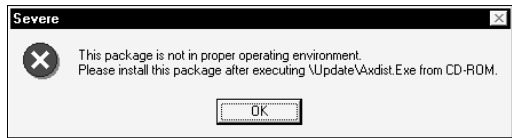
(a) Installing the product (The screen is that of Windows® 95.)



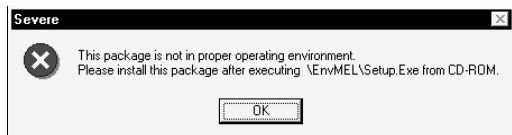
- 1) Boot Windows® Explorer and click the drive where the disk is inserted.
Double-click "Setup.exe".
To display Windows® Explorer, choose [Start] - [Programs] - [Windows Explorer].



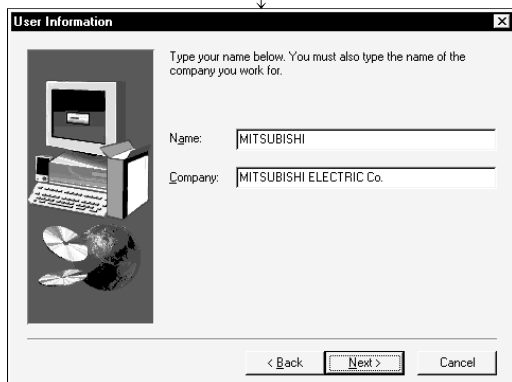
- 2) If either of the left screens appears, perform operation in accordance with the instructions given in (b).
After the operation is over, restart installation operation.



If the left screen appears, perform operation in accordance with the instructions given in (c).
After the operation is over, restart installation operation.



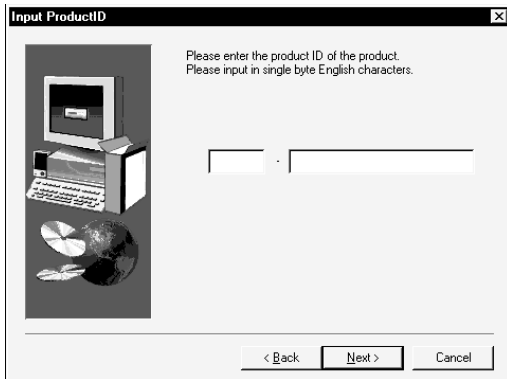
If the left screen appears, perform operation in accordance with the instructions given in (d).
After the operation is over, restart installation operation.



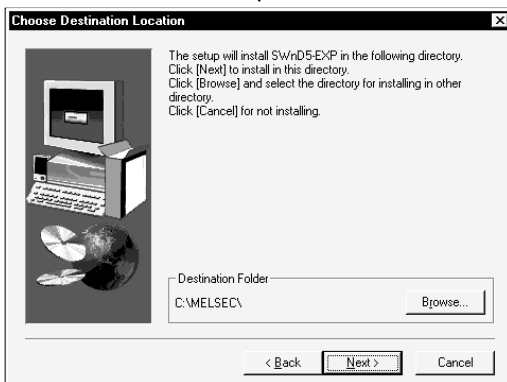
- 3) Type the name and company, and click **Next>**.
As the confirmation dialog box appears, follow the message and perform operation.

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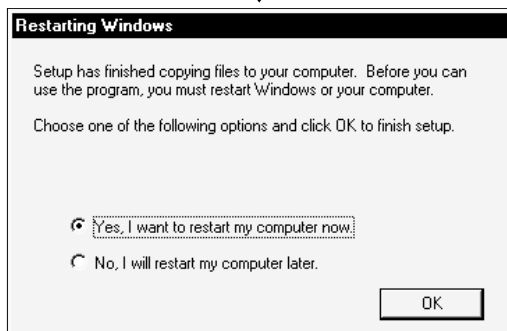
- 4) Enter the product ID and click **Next>**.
The product ID is given in the "Software Registration Card" packed with the product.



- 5) Specify the installation destination folder.
Click **Next>** if the destination folder displayed is OK.
To change the folder, click **Browse** and specify a new drive and folder.



- 6) This completes installation.
Click **OK**.



- 7) If the screen shown on the left appears, you need to reboot Windows®.

(b) Installation of dcom95.exe or Axdist.exe

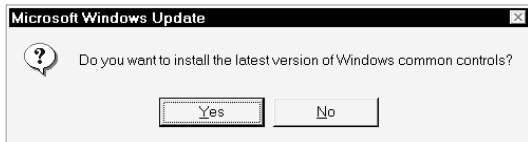
This section explains the updating operation of Windows® using "Update\dcom95.exe" or "Update\Axdist.exe" on the CD-ROM. Execute dcom95.exe or Axdist.exe provided for GX Explorer. Install GX Explorer after executing the exe file and restarting the IBM-PC/AT compatible. The exe file to be executed on the corresponding operating system is indicated below.

OS	File name
Microsoft® Windows® 95 Operating System	dcom95.exe
Microsoft® Windows® 98 Operating System	Axdist.exe
Microsoft® Windows NT® Workstation Operating System Version 4.0	Axdist.exe

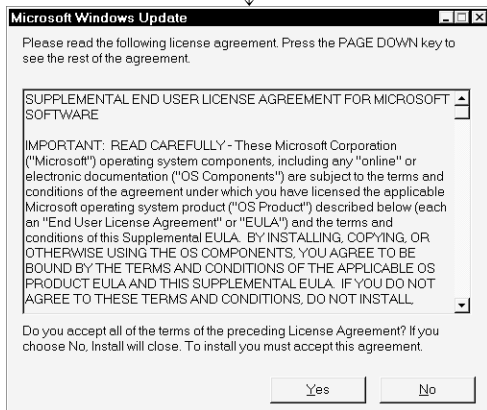
(dcom95.exe and Axdist.exe are in the "Update" folder on CD-ROM.)

(c) Installation of 50comupd.exe

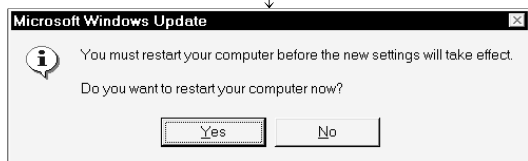
This section explains the updating operation of Windows® using "Update\50comupd.exe" on the CD-ROM.



1) Click the **Yes** button to start updating Windows.



2) Accept the agreement on the left screen and click the **Yes** button.



3) Click **Yes** to restart. After a restart, perform the installation operation in (a).

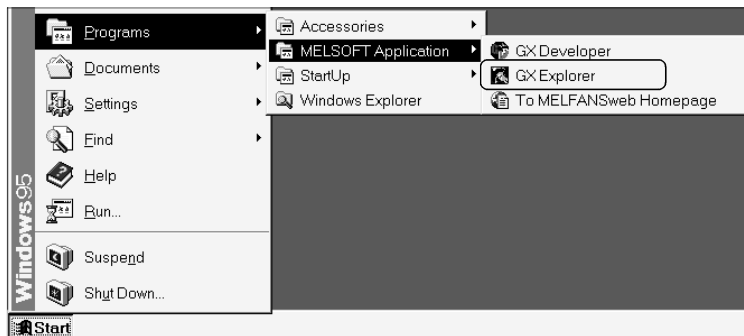
(d) Installation of EnvMEL

Execute Setup.exe in the "EnvMEL" folder on this product CD-ROM.
Install GX Explorer after executing the "Setup.exe".

*: After executing the above exe file, install the product again. If this product is not installed properly at this time, reboot the personal computer.

(e) Registered icon

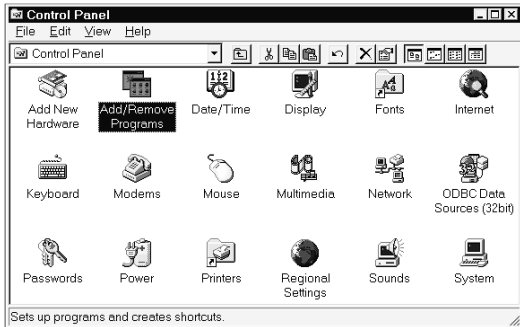
The following icon is registered by installing GX Explorer.



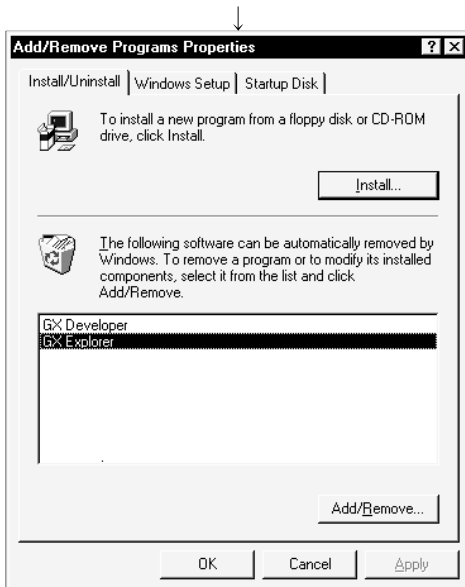
4.2 Uninstallation

This section provides the operation to delete GX Explorer from the hard disk.

Uninstalling the product



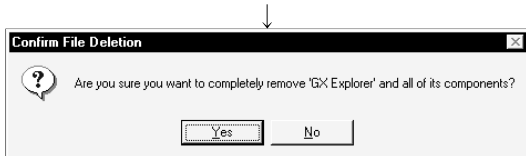
- 1) Choose and double-click "Add/Remove Programs" in the Control Panel.
To display the Control Panel, choose [Start] - [Setting] - [Control Panel].



- 2) Choose "GX Explorer".
After making selection, click **Add/Remove**.
The screen shown on the left is that of Windows[®] 95.
The displayed screen varies with the OS.

When using Windows[®] 2000 Professional, perform the following operation.

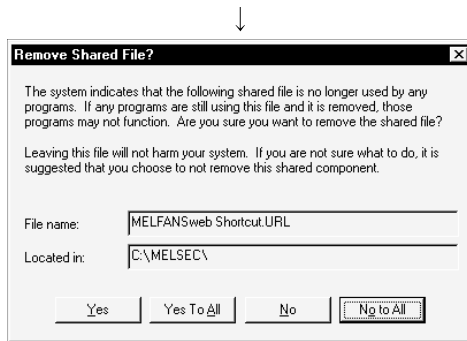
- (a) Click "Change or Remove Programs".
- (b) Choose "GX Explorer"
- (c) Click **Change/Remove**.



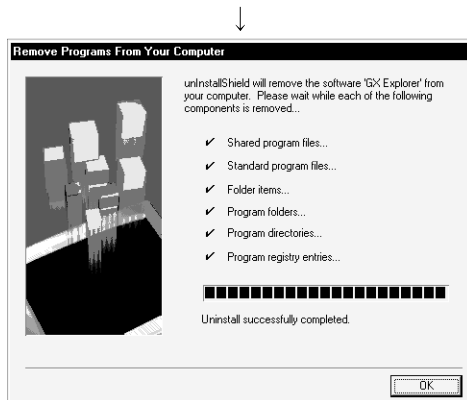
- 3) Check whether you will remove the software package or not.
When uninstalling it, click **Yes**.
Uninstallation starts.
When not uninstalling it, click **No**.
This returns to the preceding screen.
* Components indicate the icons and files installed.

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- 4) If the left screen has appeared, click the **No To All** button. If you click the **Yes** or **Yes To All** button, the shared file of the Windows® compatible MELSOFT software is removed. Therefore, click the **No To All** button when removing GX Explorer only.

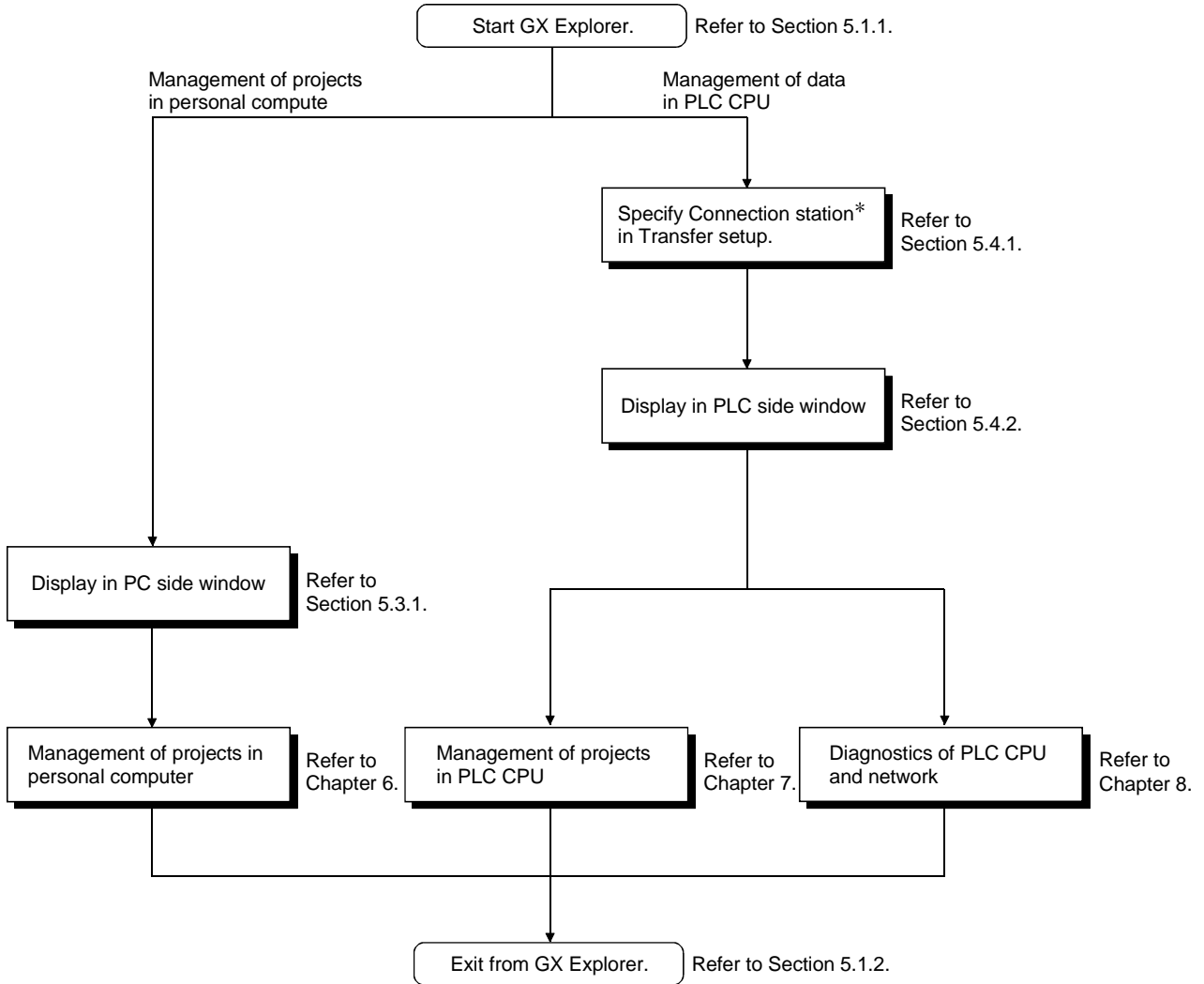


- 5) Click **OK** when the message indicating that removing operation is finished appears.

When the finished message appears, uninstallation is complete.

5 BASIC OPERATIONS

The following is the overview of GX Explorer operations.

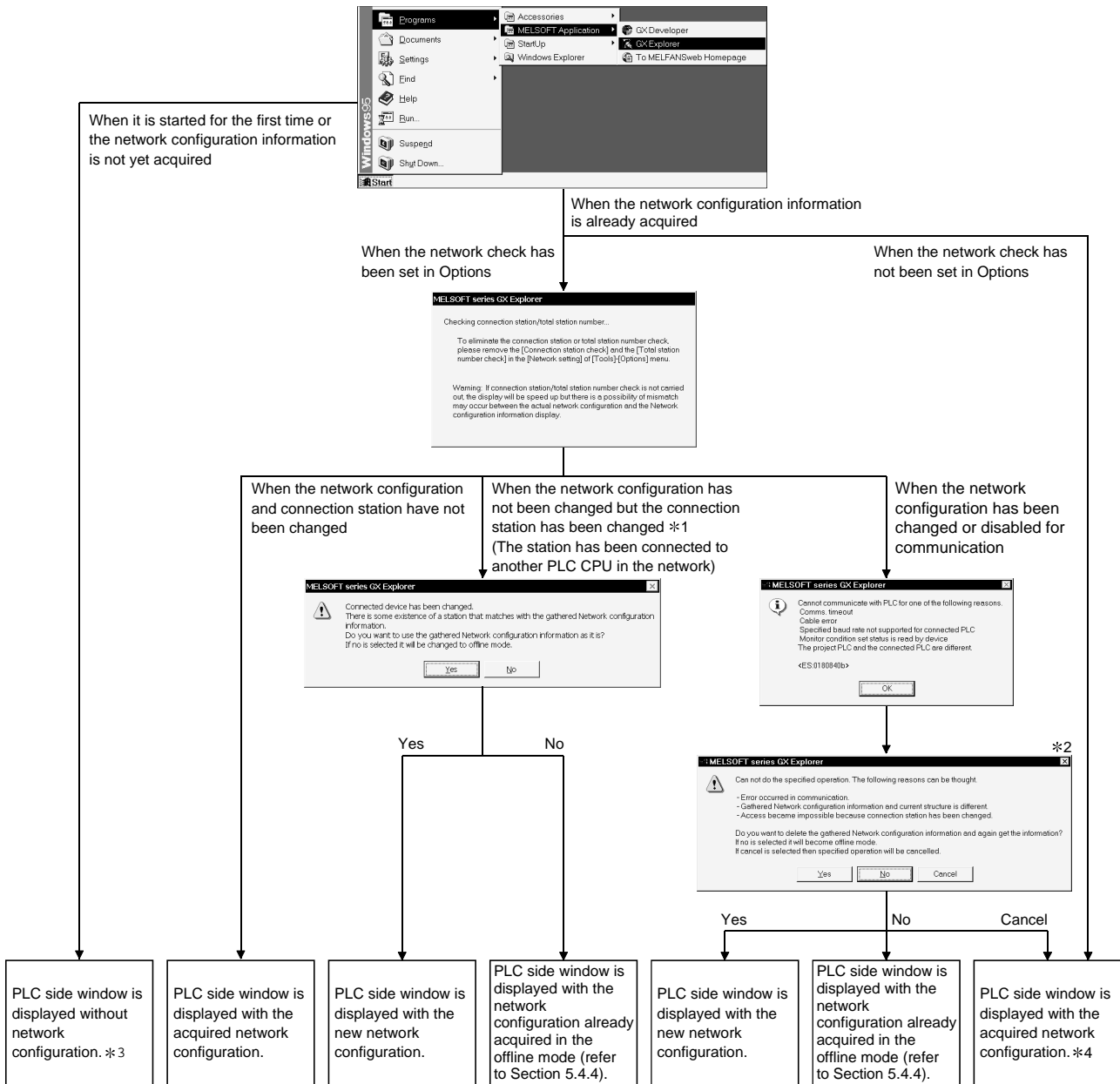


*: A connection station indicates the PLC CPU connected with the personal computer by a connection cable (RS-232, USB), MELSECNET/10(H) board, CC-Link board or Ethernet board. The PLC series, PC side I/F, PLC side I/F, etc. must be set in Transfer setup.

5.1 Starting and Exiting

5.1.1 Starting

The following is a sequence of operations for starting GX Explorer.



Note: The PC side window displays the drives, projects, folders and files in the personal computer.

*1: Refer to Section 5.4.5 for changing the connection station.

*2: If communications cannot be made due to Transfer setup PLC type mismatch, communication error, PLC CPU power-off or like, click No or Cancel.

After starting GX Explorer, check the connection cables, PLC CPU power and Transfer setup (refer to Section 5.4.1).

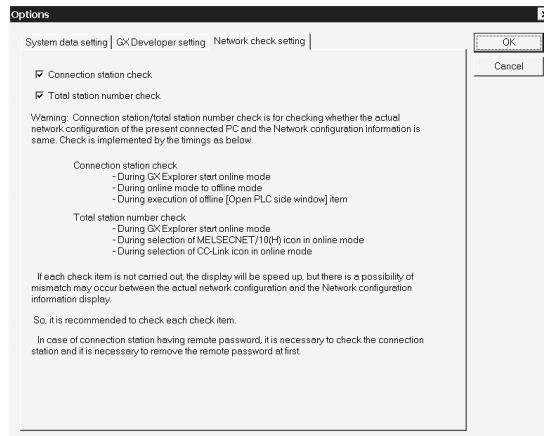
*3: After starting GX Explorer, make Transfer setup and get the network configuration information.

*4: The displayed network configuration may not match the actual network configuration.

Update the network configuration information before starting management or diagnostics of the data in the PLC CPU. (Refer to Section 5.4.2.)

POINT

- GX Developer (SW7D5C-GPPW or later) must have been installed to start GX Explorer.
- The processing at start of GX Explorer varies with the network check setting in Options.
To make the network check setting, click the [Tools]-[Options] menu and make setting on the Network check setting screen in the Options dialog box.





Connection station check : Checks whether the PLC types of the connection stations and the presence/absence of networks match the network configuration information. After Target setup is finished, a connection station check is made automatically. (Refer to Section 5.4.1 for Target setup.)

Total station number check: Checks whether the total number of stations actually connected in the networks matches the total number of stations in the network configuration information.

5.1.2 Exiting

There are the following methods to exit from GX Explorer.

- Click the [File] - [Exit GX Explorer] menu.
- Click  on the left of the title bar and click the [Close] menu.
- Click  on the right of the title bar.
- Press the shortcut keys **Alt** + **F4**.

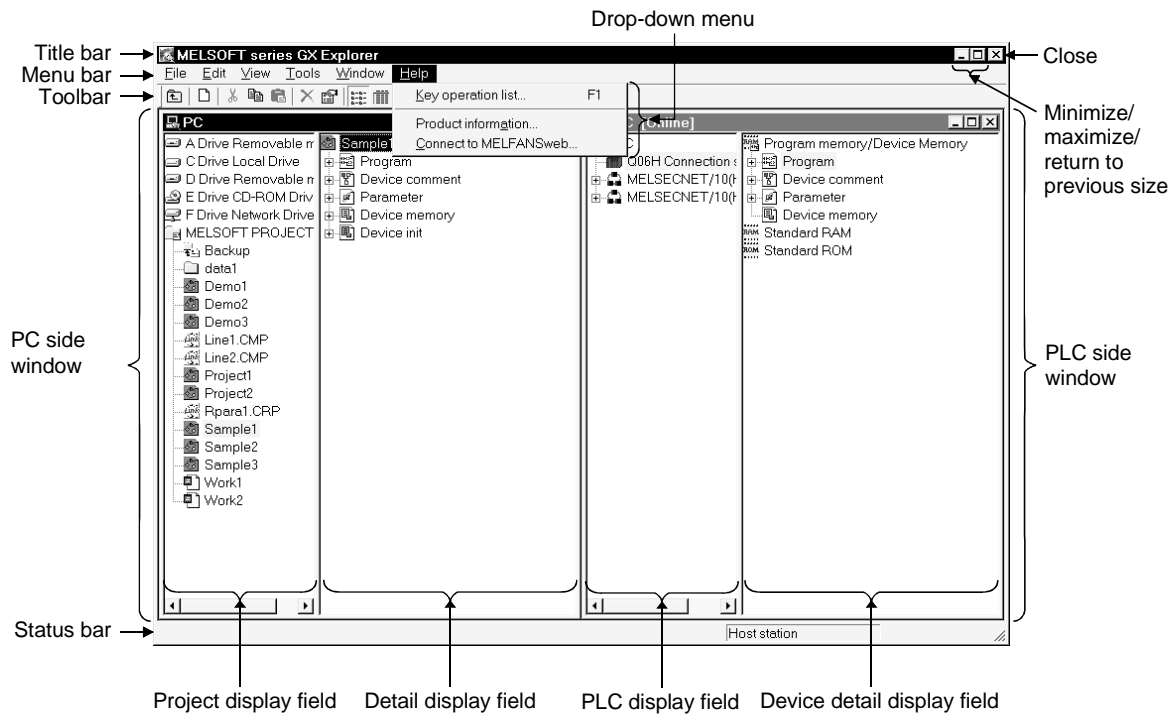
5.2 Screen Layout

5.2.1 Basic screen layout

The following are the basic screen layout and dialog box of GX Explorer.

(1) Basic screen layout

This section explains the layout and common operations of the basic screen.



Purpose	Operation
Switch between displaying and hiding the toolbar.	[View]-[Toolbar] menu
Switch between displaying and hiding the status bar.	[View]-[Status bar] menu
Open the PC side window.	[Window]-[Open PC side window] menu
Open the PLC side window.	[Window]-[Open PLC side window] menu
Close the active window.	[Window]-[Close] menu
Close all open windows.	[Window]-[All Close] menu
Display the windows one over another partially.	[Window]-[Cascade] menu
Display the windows side by side.	[Window]-[Tile Vertically] menu
Display the windows top to bottom.	[Window]-[Tile Horizontally] menu

(a) Layout of PC side window

Displays the drives, folders, projects and files in the personal computer.

1) Project display field

Displays the drives, folders, projects and files in the personal computer in a tree structure.

2) Detail display field

Selecting the drive or folder in the project display field displays the objects in that drive or folder.

When the project of GX Developer is selected in the project display field, its data are displayed in a tree structure.

(b) Layout of PLC side window

Displays the connected stations and network configuration.

1) PLC configuration field

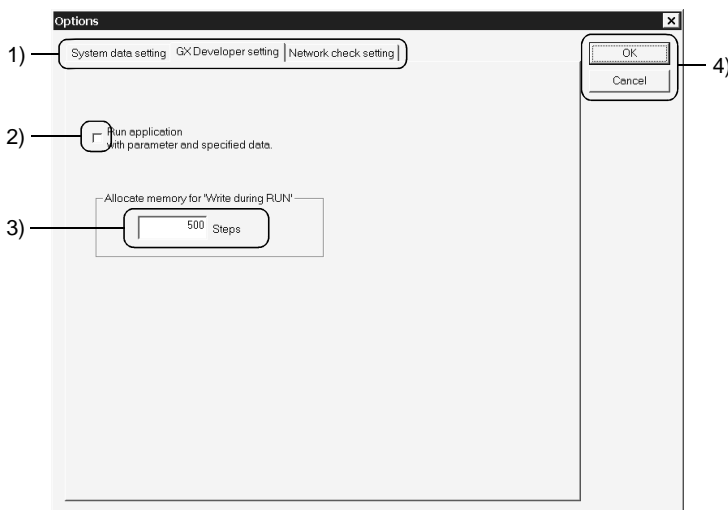
Displays the connected stations and network configuration in a tree structure.

2) Device detail information field

Selecting the network type in the PLC configuration field displays the stations belonging to that network.

Selecting the station in the PLC configuration field displays the memory (drive) structure and stored data of that station in a tree structure.

(2) Basic operation for dialog box



1) Tabs

Click the setting item name to make selection.

2) Check box

To execute the item, click the check box to check it.

3) Text box

Enter a numeral/characters.





















4) Command button

Click to execute "OK" or "Cancel".

5.2.2 Icon lists

The following tables list icons displayed in the PC and PLC side windows of GX Explorer.

























(1) PC side window

Icon	Description
	Removable media (e.g. FD, MO) drive
	Local drive
	CD-ROM drive
	Network drive
	System data
	Backup folder
	Project of GX Developer
	Project of GX Configurator-QP
	Master parameter setting file (extension ".CMP") or remote parameter setting file (extension ".CRP") of GX Configurator-CC
	Program (ladder) of GX Developer project
	SFC program of GX Developer project
	Global variables for label program of GX Developer project
	Header for label program of GX Developer project
	Body for label program of GX Developer project
	Device comments (common comments) of GX Developer project
	Program-based comments of GX Developer project
	Parameters (PLC parameters) of GX Developer project
	Network parameters or remote password of GX Developer project
	Device memory of GX Developer project
	Initial device values of GX Developer project

POINT

In the PC side window, files other than projects and their data are displayed by icons associated by Windows[®] Explorer.

(2) PLC side window

Icon	Description
	Online mode
	Offline mode
	QCPU (Q mode), QnACPU, ACPUCPU, QCPU (A mode), remote I/O station (MELSECNET/H)
	MELSECNET/10(H) network, CC-Link system
	Type unknown station
	Network configuration information not yet acquired
	Program memory/device memory of QCPU (Q mode)
	Built-in RAM/device memory of QnACPU, ACPUCPU or QCPU (A mode)
	Memory card (RAM) of QCPU (Q mode)
	IC memory card A (RAM) or IC memory card B (RAM) of QnACPU
	Memory card (ROM) of QCPU (Q mode)
	IC memory card A (ROM) or IC memory card B (ROM) of QnACPU
	Standard RAM of QCPU (Q mode)
	Standard ROM of QCPU (Q mode)
	Program
	Program (when password is set)
	PLC parameters/network parameters/remote password of QCPU (Q mode)
	PLC parameters/network parameters of QnACPU, ACPUCPU or QCPU (A mode)
	Intelligent parameters of QCPU (Q mode)
	Common comments of QCPU (Q mode) or QnACPU
	Extension comments of ACPUCPU or QCPU (A mode)
	Common comments of QCPU (Q mode) or QnACPU (when password is set)
	Program-based comments of QCPU (Q mode) or QnACPU
	Program-based comments of QCPU (Q mode) or QnACPU (when password is set)
	Device memory
	File registers
	Device initial values of QCPU (Q mode) or QnACPU
	Device initial values of QCPU (Q mode) or QnACPU (when password is set)
	General data (PLC user data) of QCPU (Q mode)

5.2.3 Shortcut key lists

The following tables list the shortcut keys of GX Explorer.

(1) When PC side window is active

Operation	Description
[+] key	Opens the currently selected folder.
[-] key	Closes the currently selected folder.
[→] key	Opens the currently selected folder/selects the lower layer when the folder is open.
[←] key	Closes the currently selected folder/selects the upper layer when the folder is closed.
[Backspace]	Moves to the layer above the current one.
[Ctrl] + [A]	Selects all objects in the detail display field (invalid for the project detail display).
[Ctrl] + [X]	Cut
[Ctrl] + [C]	Copy
[Ctrl] + [V]	Paste (Performs write to PLC on PLC side (after write to PLC, data is not deleted by cut))
[Ctrl] + [W]	Creates new system data.
[Ctrl] + drag	Copies (performs write to PLC on PLC side).
[Shift] + drag	Moves (performs write to PLC on PLC side (after write to PLC, data is not deleted)).
[Alt]	Makes the menu bar active.
[F10]	
[Alt] + [Enter]	Property display
[Alt] + double-click	Property display (only when the detail display field is in the list display mode)
[Alt] + [Space]	Shortcut menu display of title bar
[F1]	Help display
[F2]	Rename
[Ctrl] + [F4]	Closes the window.
[Alt] + [F4]	Exits from the application.
[F5]	Updates the window data.
[F6]	Changes the active view to the project or detail display field.
[Tab]	
[Ctrl] + [F6]	Change the active window to the PLC side window.
[Shift] + [F10]	Displays the shortcut menu of the selected item.
[Delete]	Deletes the selected object.
[Shift] + [Delete]	Deletes the selected object from the disk without moving it to the trash.

(2) When PLC side window is active

Operation	Description
key	Opens the currently selected folder.
key	Closes the currently selected folder.
key	Opens the currently selected folder/selects the lower layer when the folder is open.
key	Closes the currently selected folder/selects the upper layer when the folder is closed.
	Moves to the layer above the current one.
	Copy
	Paste (write to PLC)
	Valid for the personal computer side only (read from PLC).
	Makes the menu bar active.
	Shortcut menu display of title bar
	Help display
	Closes the window.
	Exits from the application.
	Updates the data of the selected object.
	Changes the active view to the network configuration or device detail display field.
	Change the active window to the personal computer side window.
	Displays the shortcut menu of the selected item.

POINT

Right-clicking the PC or PLC side window displays the shortcut (right-click) menu.

5.3 Basic Operations for PC Side Window

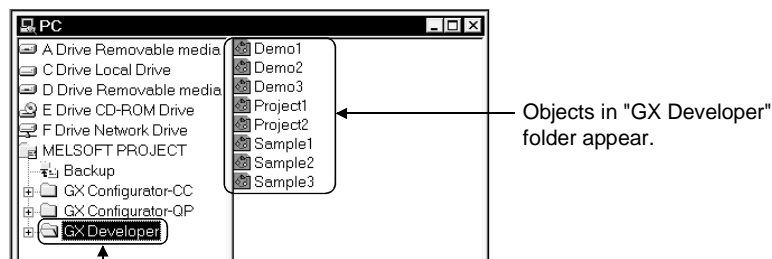
5.3.1 Displaying the data in the personal computer

This section explains the basic operations to be performed in the PC side window.

(1) Viewing the objects in the drive or folder

Choosing a drive or folder in the project display field or double-clicking a folder in the detail display field displays its internal objects (projects, folders, files) in the detail display field.

Choosing the [Edit] - [Move up] menu displays the layer above the current one. (You may also press the **Backspace** key.)



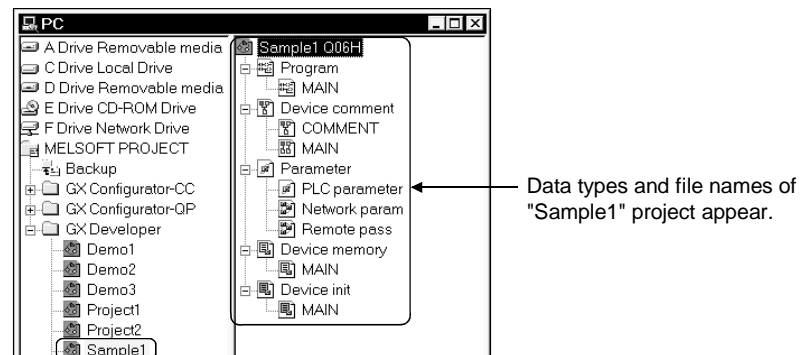
Choose "GX Developer" folder.

(2) Viewing the project layout

Choosing a project in the project display field displays only that project in the detail display field.

Further double-clicking that project in the detail display field shows the data types and file names of that project in a tree structure.

Choosing the [Edit] - [Move up] menu displays the layer above the current one. (You may also press the **Backspace** key.)



Choose "Sample1" project.

POINT

Note that when folders and files in the personal computer are displayed, GX Explorer may differ from Windows® Explorer in icons and/or upper/lower-case character indications.

(3) Changing the display type

The detail display field has two display modes: list display and detail display.

Choosing the [View] - [List] menu selects the list display mode.

Choosing the [View] - [Details] menu selects the detail display mode.

In the detail display mode, the following items appear.

- Project PLC type (GX Developer project only), Size, Type, Modified
- Folder Type, Modified, Attributes *
- File Size, Type, Modified, Attributes *

*There are the following attributes.

- R: Read-only H: Hidden
- S: System A: Archive

<Example of screen in detail display mode>

Name	PLC Type	Size	Type	Modified	Attributes
Backup			Back up Folder	5/09/01 2:40 PM	
data1			File Folder	5/09/01 5:36 PM	
Demo1	Q06H	101KB	GX Developer project	2/16/01 9:47 AM	
Line1.CMP		15KB	GX Configurator-CC proj...	2/16/01 10:03 AM	
Project1	A2SH	114KB	GX Developer project	2/20/01 7:02 PM	
Rpara1.CRP		3KB	GX Configurator-CC proj...	2/16/01 2:42 PM	
Sample1	Q06H	64KB	GX Developer project	5/09/01 2:55 PM	
Work1		138KB	GX Configurator-QP proj...	5/09/01 5:50 PM	
Device.txt		9KB	Text Document	3/30/01 3:51 PM	HA
information.html		23KB	Internet Document (HTML)	3/30/01 3:51 PM	A
Manual.pdf		2,220KB	Adobe Acrobat Document	9/14/00 11:50 AM	R
Readme.txt		2KB	Text Document	3/30/01 3:53 PM	RA

(4) Changing the display order

You can change the display order of the detail display field between the name, type, size and date orders.

However, the basic "folder - project - file" order is not changed.

Choosing the [View] - [Arrange Icons] - [by Name] menu displays folders/projects/files in the name order.

Choosing the [View] - [Arrange Icons] - [by Type] menu displays folders/projects/files in the type order.

Choosing the [View] - [Arrange Icons] - [by Size] menu displays folders/projects/files in the size order. (The folders are displayed in the name order.)

Choosing the [View] - [Arrange Icons] - [by Date] menu displays folders/projects/files in the updated date order.

Clicking the corresponding item in the detail display mode changes the display order.

(Clicking it again changes between the ascending and descending orders.)

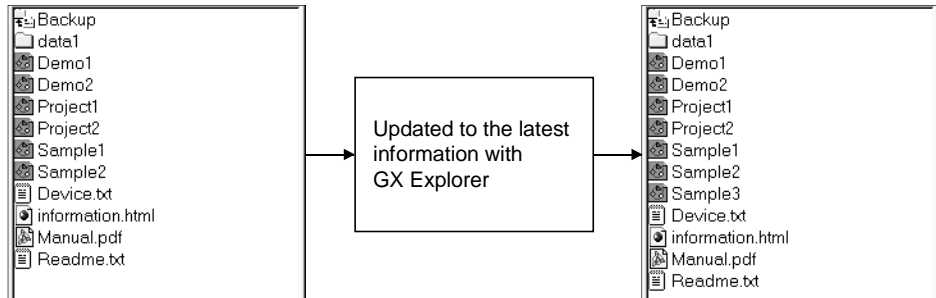
<Example of screen displayed in size order>

Name	PLC Type	Size	Type	Modified	Attributes
Backup			Back up Folder	5/09/01 2:40 PM	
data1			File Folder	5/09/01 5:36 PM	
Rpara1.CRP		3KB	GX Configurator-CC proj...	2/16/01 2:42 PM	
Line1.CMP		15KB	GX Configurator-CC proj...	2/16/01 10:03 AM	
Sample1	Q06H	64KB	GX Developer project	5/09/01 2:55 PM	
Demo1	Q06H	101KB	GX Developer project	2/16/01 9:47 AM	
Project1	A2SH	114KB	GX Developer project	2/20/01 7:02 PM	
Work1		138KB	GX Configurator-QP proj...	5/09/01 5:50 PM	
Readme.txt		2KB	Text Document	3/30/01 3:53 PM	RA
Device.txt		9KB	Text Document	3/30/01 3:51 PM	HA
information.html		23KB	Internet Document (HTML)	3/30/01 3:51 PM	A
Manual.pdf		2,220KB	Adobe Acrobat Document	9/14/00 11:50 AM	R

(5) Displaying the latest information

If the objects being displayed in the PC side window are moved or updated, for example, using Windows Explorer or any other application, such changes are not reflected on the display of the personal computer side window.

To display the new status, choosing the [View] - [Refresh] menu updates the display. (Displaying the other layer automatically updates the data.)



5.4 Basic Operations for PLC Side Window

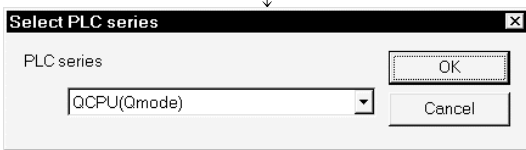
5.4.1 Displaying the PLC configuration information

If there is no network configuration information at an initial start or like, display the connection stations and network configuration in the PLC side window in the following procedure.

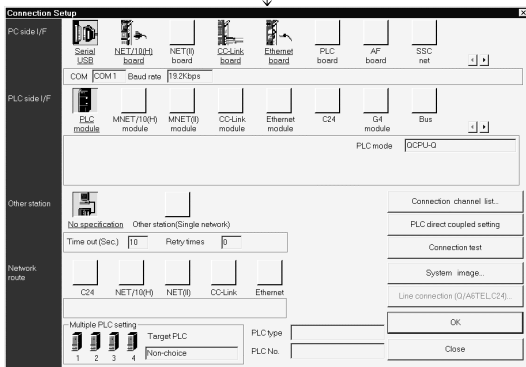
(1) Operation sequence



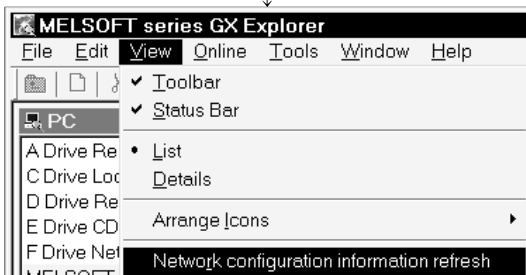
1) Choose the PLC side window and click the [Online] - [Transfer setup] menu.



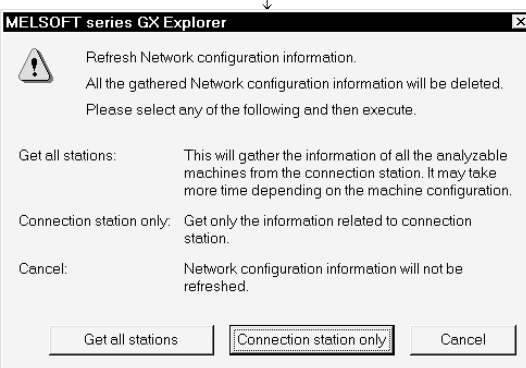
2) Choose the PLC series in the Select PLC series dialog box.



3) On the Transfer setup screen, set the "PC side I/F", "PLC side I/F" and others and click the [OK] button. (Refer to (2) for the Target setup screen.) Making Target setup automatically starts a connection station check which confirms the PLC types of the connection stations and the presence/absence of networks. (Refer to POINT in Section 5.1.1 for the connection station check.)



4) Click the [View] - [Network configuration information refresh] menu.

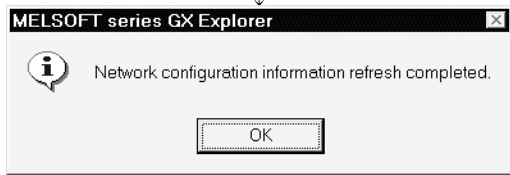


5) In the dialog box designed to confirm the updating of the network configuration information, choose "Get all stations" or "Connection station only".

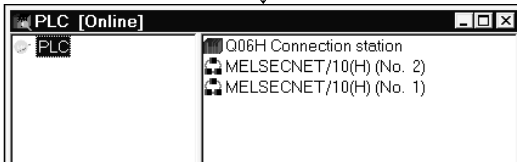
- "Get all stations" Updates the network presence/ absence and the PLC types, memory names and stored data of the connection stations and all stations of each network.
- "Connection station only" Updates the network presence/ absence and the PLC types of the connection stations.

(To next page)

From preceding page



6) The confirmation dialog box appears on completion of network configuration information updating.



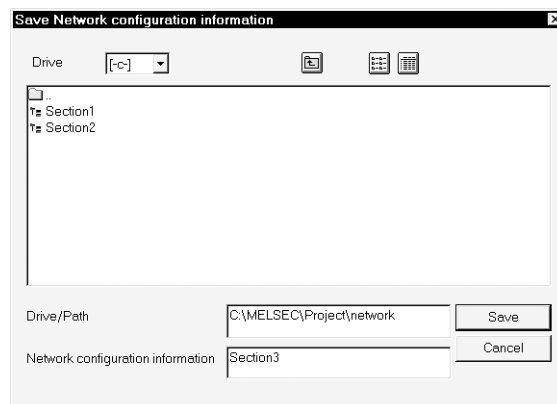
7) The connection stations and their network configurations are displayed in the PLC side window.

POINT

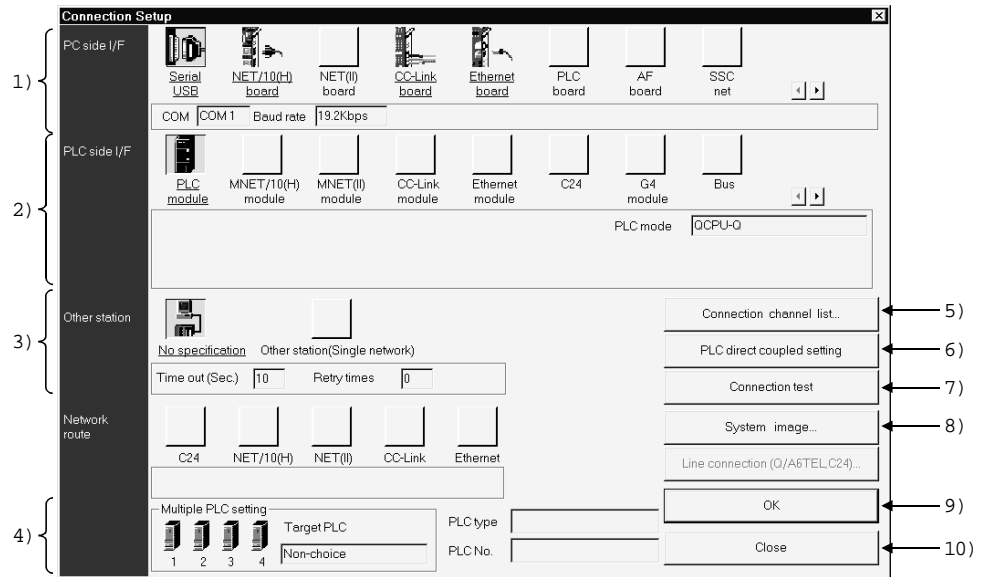
- The network configuration information that may be displayed depends on the PLC series of the connection station and the position in the network. (Refer to Section 5.4.6 for the PLC series and range that may be displayed in the network configuration information.)
- When the PLC was connected via the Q series Ethernet module and a remote password was set to that Ethernet module, enter the remote password on the following screen.



- When the network configuration information is acquired, its data can be saved by choosing the [File] - [Save Network configuration information] menu. The saved network configuration information can be read by choosing the [File] - [Read Network configuration information] menu. (In the offline mode only) For management of multiple systems, reading the saved network configuration information eliminates the need to update the network configuration information when the connection station is changed. (Refer to Section 5.4.3.)



(2) Making the target setup



POINT

A yellow icon indicates that it has already been selected.
 For details of Target setup, refer to the GX Developer Operating Manual.

No.	Item	Description
1)	PC side I/F	Choose the personal computer side interface. Double-clicking enables detail setting.
2)	PLC side I/F	Choose the connected PLC side module.
3)	Other station	Automatically selected according to the PC side I/F setting. (Need not be selected) Double-clicking enables the setting of the communication time check period and retry count.
4)	Multiple PLC setting	You can specify any of No. 1 to No. 4 when the connection station is the QCPU (Q mode) in a multiple PLC configuration.
5)	Connection channel list button	Used to return the settings to the initial settings. (The initial settings are "RS-232C", "PLC module" and "No specification".)
6)	PLC direct coupled setting button	Used to display a list of selectable connection target paths and choose the target path.
7)	Connection test button	Used to conduct a test for communication with the connection station.
8)	System image button	Used to display the selected connection target path by illustration.
9)	OK button	Used to determine the target setup. After determination, a connection station check is made automatically.
10)	Close button	Used to cancel the settings and close the screen.

(3) Paths connectable using GX Explorer

The following table indicates the paths connectable using GX Explorer on a PLC series basis.

PLC Series	Description	Name in Connection Path List
QCPU (Q mode)	Connected to the PLC CPU from the serial port by the RS-232 cable or from the USB connector by the USB cable.	Serial port PLC module connection
	Connected to the MELSECNET/10(H) network module by the MELSECNET/10(H) board.	MNET/10 (H) board communication Access other station via MNET/10 (H) module
	Connected to the CC-Link master/local module by the CC-Link board.	CC-Link board communication Access other station via CC-Link module
	Connected to the Ethernet interface module by the Ethernet board.	Ethernet board communication Access other station via Ethernet module
	Connected to the remote I/O station of MELSECNET/H from the serial port by the RS-232 cable.	Serial port NET/10 (H) remote module connection
QnACPU	Connected to the PLC CPU from the serial port by the RS-232 cable.	Serial port PLC module connection
	Connected to the MELSECNET/10 network module by the MELSECNET/10(H) board.	MNET/10 (H) board communication Access other station via MNET/10 (H) module
	Connected to the CC-Link master/local module by the CC-Link board.	CC-Link board communication Access other station via CC-Link module
	Connected to the Ethernet interface module by the Ethernet board.	Ethernet board communication Access other station via Ethernet module
QCPU (A mode)	Connected to the PLC CPU from the serial port by the RS-232 cable.	Serial port PLC module connection
	Connected to the MELSECNET/10 network module by the MELSECNET/10(H) board.	MNET/10 (H) board communication Access other station via MNET/10 (H) module
ACPU	Connected to the PLC CPU from the serial port by the RS-232 cable.	Serial port PLC module connection
	Connected to the MELSECNET/10 network module by the MELSECNET/10(H) board.	MNET/10 (H) board communication Access other station via MNET/10 (H) module

POINT

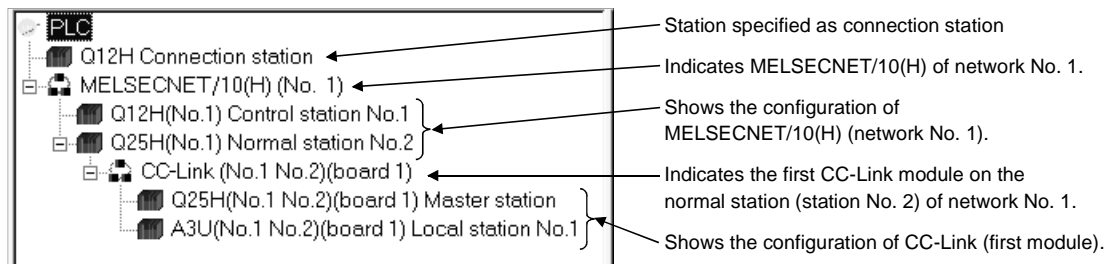
- A communications error may occur if communications are made with the PLC after setting the resume function, suspend setting, power-saving function or standby mode of the personal computer.
Hence, any of the above functions should not be set for making communications with the PLC.
- When the USB cable is used, frequently unplugging/plugging the USB cable, resetting the PLC CPU, or switching power OFF/ON during communications with the PLC CPU may cause a communications error, from which a recovery cannot be made.
During communications, do not unplug/plug the USB cable, reset the PLC CPU, or switch power OFF/ON.
If a recovery cannot be made from a communications error, unplug the USB cable completely once, wait for more than five seconds, and then plug it again.
(After performing this operation, an error may occur at initial communication but operation will be normal at and after the second time.)
*During communications: Indicates that the related application in the PLC side window is being run, write to PLC (paste) or read from PLC (copy) is being performed, the network configuration information is being updated, the PLC data is being deleted, or diagnostics, connection station check or total station check is being made.
- Communication errors may occur depending on the type of personal computer used or USB cable assembly In this case.
Please execute communication again according to the error message contents.
- When fast communication is made after the baud rate has been changed on the personal computer's serial port (personal computer side interface), communications may not be made or communications retries may take place to delay communications, depending on the performance of the personal computer. If communications cannot be made in fast communication, reduce the baud rate and make communication.

5.4.2 Displaying the data in the PLC CPU

This section describes the display operation to be performed in the PLC side window.

(1) Network configuration

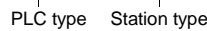
The PLC configuration field shows the connection station and the station names connected to MELSECNET/10(H) and CC-Link in a tree structure.



The station names are displayed as indicated below.

- For the connection station, the PLC type and station type are displayed.

(Example) Q02H Connection station

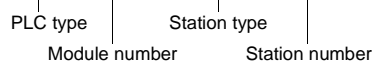


- For CC-Link on the connection station, the PLC type, module number, station type and station number are displayed.

The module number indicates the master/local module number on the connection station.

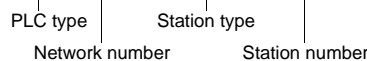
The station number is given to the local station only.

(Example) Q02H (board1) Local station No.1



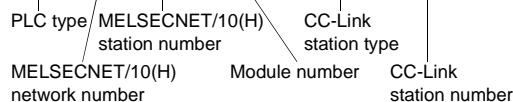
- For the MELSECNET/10(H) station, the PLC type, network number, station type and station number are displayed.

(Example) Q02H (No.1) Control station No.1



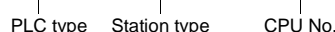
- For CC-Link on the MELSECNET/10(H) station, the PLC type, the MELSECNET/10(H) network number and station number of the station loaded with the master station, the station type of CC-Link and the station number of CC-Link are displayed.

(Example) Q02H (No.1 No.2) (board1) Local station No.1



- For the QCPU (Q mode) multiple PLC system, the CPU number is displayed at the end of the station name.

(Example) Q02H Connection station PLC No.2



(a) MELSECNET/10(H) network configuration

When MELSECNET/10(H) is selected in the PLC configuration field, the device detail display field shows the configuration of that network.

PLC		Name	Station No.
Q12H Connection station		Q12H(No.1) Control station No.1	1
MELSECNET/10(H) (No. 1)		Q25H(No.1) Normal station No.2	2
Q12H(No.1) Control station No.1			
Q25H(No.1) Normal station No.2			

The following station types are displayed in the station names of MELSECNET/10(H).

- Control station
- Remote master
- Parallel remote master
- Parallel remote sub
- Normal station
- Multiplexed remote sub
- Multiplexed remote sub
- Stand by station

For the remote I/O station of MELSECNET/H, the PLC type is displayed as "Remote I/O".

(b) CC-Link network configuration

When CC-Link is selected in the PLC configuration field, the device detail display field shows the stations of that network.

PLC		Name	Station No.
Q12H Connection station		A3U(No.1 No.1) Local station No.1	1
MELSECNET/10(H) (No. 1)		Q25H(No.1 No.2)(board 1) Master station	
Q12H(No.1) Control station No.1			
Q25H(No.1) Normal station No.2			
CC-Link (No.1 No.2)(board 1)			
Q25H(No.1 No.2)(board 1) Master station			
A3U(No.1 No.2)(board 1) Local station No.1			

The following station types are displayed in the network configuration of CC-Link.

- Master station
- Standby master
- Local station

POINT

In the following network configuration, the display example of the PLC configuration field is as shown below.

- Network configuration

- Display in PLC configuration field

(2) Viewing the memories and data in the PLC CPU

Selecting a station in the PLC configuration field shows the memory names of that station in the device detail display field.

Further double-clicking the memory name in the device detail display field shows the stored data types and files in a tree structure.

However, the files in the hidden-attribute drive of the QnACPU are not displayed.

← Further displays the data types and file names + dates in a tree structure.

Select "Q02(H) connection station PLC No. 1".

When the device detail display field shows the network configuration or memory configuration, choosing the [Edit] - [Move up] menu displays the layer above the current one. (You may also press the **Backspace** key.)

POINT



- When SFC (MELSAP2) is stored in the ACPU, "MAIN + MELSAP2/ microcomputer" is displayed as Program.

(3) Changing the display type

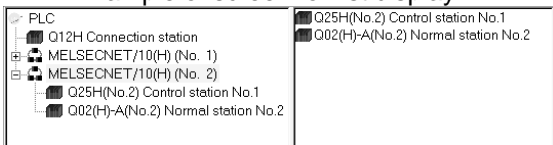
When the device detail display field shows the network configuration, you can change between list display and detail display.

Choosing the [View] - [List] menu provides a list display (station names (PLC types, station types)).

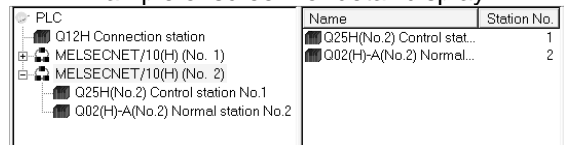
Choosing the [View] - [Details] menu provides a detail display (station names (PLC types, station types), station numbers).

(The  button can be used to provide a list display and the  button a detail display.)

<Example of screen for list display>



<Example of screen for detail display>



(4) Changing the display order

When MELSECNET/10(H) or CC-Link is selected in the PLC configuration field, the device detail display field can be switched between the name order and station number order.

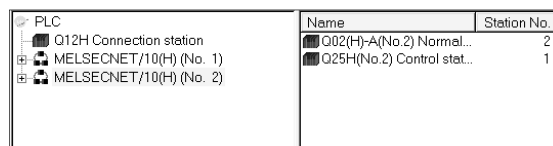
Choosing the [View] - [Arrange Icons] - [by Name] menu shows data in name order.

Choosing the [View] - [Arrange Icons] - [by Station No.] menu shows data in station number order.

Click the "Name" or "Station No." item to change the display order.

(Clicking it again switches between ascending order and descending order.)


<Example of screen displaying MELSECNET/10(H) in name order>

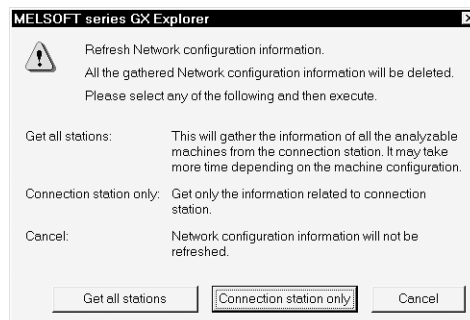


(5) Displaying the latest information

If write to PLC is performed using GX Developer while data is being displayed in the PLC side window, the data written is not reflected on the PLC side window.

To display new data, choose the [View] - [Network configuration information refresh] menu to update the display data.

If you have modified the network configuration itself, choose "PLC"  to update the network configuration information.

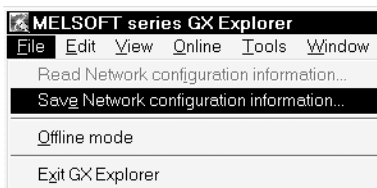


5.4.3 Saving and reading the network configuration information

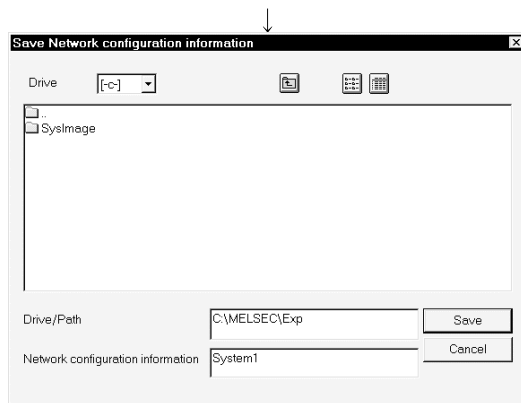
The network configuration information displayed in the PLC side window can be saved into the personal computer as a file.

Also, the saved network configuration information can be read in the offline mode. By saving/reading the network configuration information, you need not update the network configuration information every time the connection station is changed.

(1) Operation for saving the network configuration information

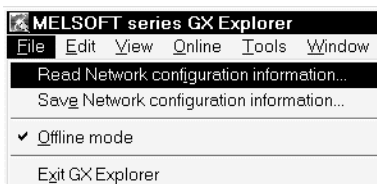


- 1) Choose the PLC side window and click the [File] - [Save Network configuration information] menu.

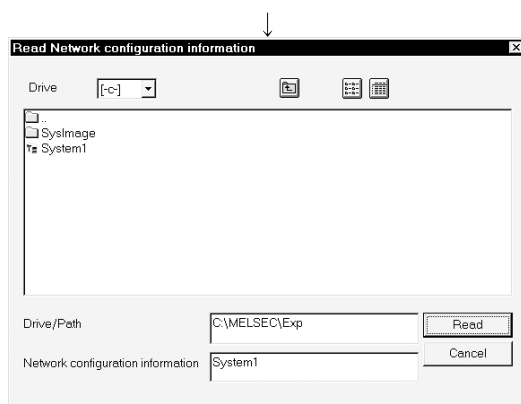


- 2) In the network configuration information saving dialog box, set the drive/path and file name and click the **Save** button.

(2) Operation for reading the network configuration information



- 1) In the offline mode, choose the PLC side window and click the [File] - [Read Network configuration information] menu. (Refer to Section 5.4.4 for the offline mode.)



- 2) In the network configuration information reading dialog box, set the drive/path and file name and click the **Read** button.

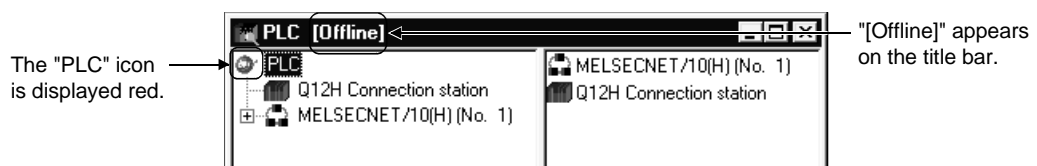
5.4.4 Offline mode

When merely displaying the already acquired network configuration information, choosing the offline mode does not make network checks (connection station check, total station count check) in the options, speeding up a display in the PLC side window. In the offline mode, you can read and display the saved network configuration information. (Refer to Section 5.4.3 for reading the network configuration information.) However, the following functions designed for communications with the PLC CPU are unusable.

- Write to PLC (paste)
- Read from PLC (copy)
- PLC data deletion
- Network configuration information refresh
- Target setup
- Diagnostics
- Run a related application

(1) Operations in offline mode

Choose the PLC side window and click the [File] - [Offline mode] menu.



To choose the online mode, click the [File]-[Offline mode] menu again.

When you exited from GX Explorer in the offline mode, also start it in the offline mode next time.

POINT

When the mode is switched between offline and online, the network checks in the options are executed.

(Refer to Section 5.1.1 for the network check setting.)

5.4.5 Changing the connection station

The network configuration information of GX Explorer displays the network information based on the connection station.

Hence, when you change the connection station, the already acquired network configuration information becomes different from the actual network configuration information, disabling communications with the specified station.

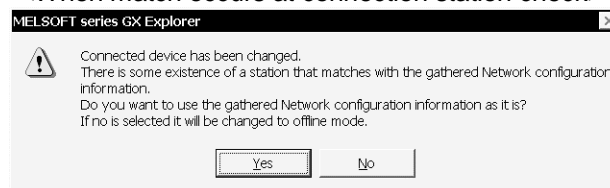
At the time of the connection station check, GX Explorer checks the match between the network configuration information already acquired and the network configuration information based on the information of the new connection station.

The following are the operations to be performed for match and mismatch.

(1) When match occurs

When you changed the connection station to the other station displayed in the network configuration information, the network configuration information of the new connection station matches the already acquired network configuration information, and the station corresponding to the new connection station is recognized from the already acquired network configuration information.

<When match occurs at connection station check>



When you did not change the network configuration, choose the **Yes** button.

The already acquired network configuration information is replaced by the network configuration information based on the new connection station.

To replace the network configuration information takes shorter time than to acquire the network configuration information again.

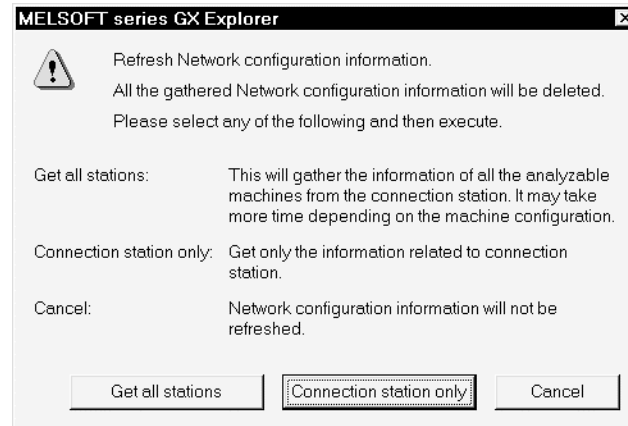
POINT

- When the connection station is changed from the QCPU (Q mode) to the QnACPU, the QCPU (Q mode), QCPU (A mode) and ACPU are not displayed.
- When the connection station is changed from the QCPU (Q mode) to the QCPU (A mode) or ACPU, the QCPU (Q mode) and QnACPU are not displayed.
- When the connection station is changed to any of the local stations in the same configuration that consists of only CC-Link local stations, the new connection station may not be recognized.
(Since the CC-Link local stations in the same configuration cannot be identified between each other)
- When the connection station is changed to the ACPU other than the AnUCPU, MELSECNET/10 is recognized as MELSECNET/II, resulting in network configuration information mismatch.

(2) When mismatch occurs

When you changed the network configuration or connected to the station of a different network, the network configuration information of the new connection station does not match the already acquired network configuration information.

<When mismatch occurs at connection station check>



Click **Get all stations** or **Connection station only** to get the new network configuration information.

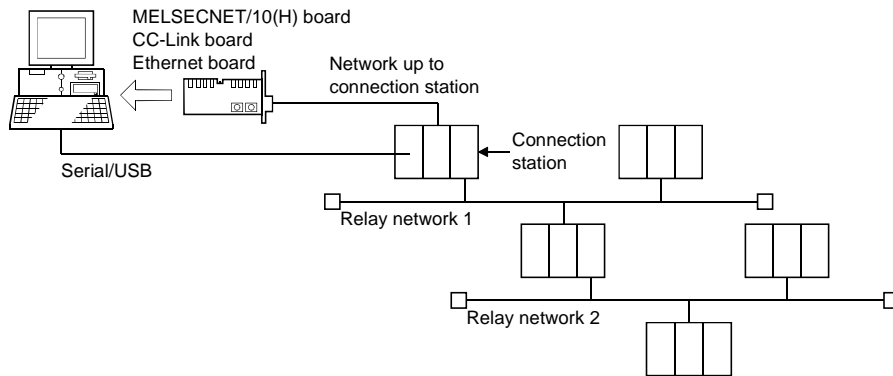
POINT

Reading the saved network configuration information eliminates the need to get the network configuration information when the connection station is changed.
Refer to Section 5.4.3 for saving/reading the network configuration information.

5.4.6 Ranges enabled for display and operation of network configuration information

This section provides the ranges enabled for the display and operation of the network configuration information and their precautions.

The network up to the connection station and the relay networks 1, 2 given in (1) to (3) are in the following ranges.



(1) When the connection station is the QCPU (Q mode)

PC Side I/F in Target Setup	Network Up to Connection Station	Relay Network 1	Relay Network 2	Display and Operation of Network Configuration Information		
				QCPU (Q mode)	QnACPU	ACPU QCPU (A mode)
Serial/USB	—	MELSECNET/10 (H) * 1	—	○	○	○
	—	MELSECNET/10 (H) * 1	CC-Link * 2	○	○	○
	—	CC-Link * 2	—	○	○	○
	—	CC-Link * 2	MELSECNET/10 (H) * 1	—	—	—
MELSECNET/10(H) board	MELSECNET/10 (H) * 1	—	—	○	○	○
	MELSECNET/10 (H) * 1	CC-Link * 2	—	—	—	—
CC-Link board	CC-Link * 2	—	—	○	○	○
	CC-Link * 2	MELSECNET/10 (H) * 1	—	—	—	—
Ethernet board	Ethernet	MELSECNET/10 (H) * 1	—	○	○	○
	Ethernet	MELSECNET/10 (H) * 1	CC-Link * 2	○	○	○
	Ethernet	CC-Link * 2	—	○	○	○

*1: Up to 7 relay stations and 8 networks are permitted when the routing parameters have been set. Only the network of the connection station is permitted when the routing parameters have not been set. Up to 1 gate and 2 networks are permitted when the connection station is a remote I/O station.
 *2: When the connection station and relayed station are the Q series master stations.
 ○ : Display/operation enabled
 — : Display/operation disabled

(2) When the connection station is the QnACPU

PC Side I/F in Target Setup	Network Up to Connection Station	Relay Network 1	Relay Network 2	Display and Operation of Network Configuration Information		
				QCPU (Q mode)	QnACPU	ACPU QCPU (A mode)
Serial	—	MELSECNET/10 (H) * 1	—	△	○	—
MELSECNET/10(H) board	MELSECNET/10 (H) * 1	—	—	△	○	—
CC-Link board	CC-Link	—	—	△	— * 2	—
	CC-Link	MELSECNET/10 (H) * 1	—	—	—	—
Ethernet board	Ethernet	MELSECNET/10 (H) * 1	—	△	○	—

*1: Up to 7 relay stations and 8 networks are permitted when the routing parameters have been set. Only the network of the connection station is permitted when the routing parameters have not been set.
 *2: Display/operation enabled for the connection station only.
 ○ : Display/operation enabled
 — : Display/operation disabled
 △ : Disable enabled, operation inhibited (Refer to Section 5.4.6 (4))

(3) When the connection station is the ACPU or QCPU (A mode)

PC Side I/F in Target Setup	Network Up to Connection Station	Relay Network 1	Relay Network 2	Display and Operation of Network Configuration Information		
				QCPU (Q mode)	QnACPU	ACPU QCPU (A mode)
Serial	—	MELSECNET/10 (H) * 1	—	—	—	○
MELSECNET/10(H) board	MELSECNET/10 (H) * 1	—	—	—	—	○
	MELSECNET/10 (H) * 1	MELSECNET/10 (H) * 1	—	—	—	○

*1: Up to 7 relay stations and 8 networks are permitted when the routing parameters have been set.

Only the network of the connection station is permitted when the routing parameters have not been set.

○ : Display/operation enabled

— : Display/operation disabled

(4) Instructions

The following are the instructions for the network configuration information using GX Explorer.

IMPORTANT

When the connection station is the QnACPU, the QCPU (Q mode) in the network is displayed as the Q4ACPU. Do not perform the following operations for the QCPU (Q mode) that is displayed as the Q4ACPU. If any of the operations is performed, we cannot guarantee proper operation of the QCPU (Q mode).

- Run a related application
- Write to PLC (paste)
- Read from PLC (copy)
- PLC data deletion
- Diagnostics

(a) When the network consists of different PLC series

Analyzing the network consisting of different PLC series takes much time to get the network configuration information.

(b) When MELSECNET/10(H) exists in the network configuration

1) Display range when the connection station is the remote I/O station

When the connection station is the remote I/O station of MELSECNET/H, the routing parameters cannot be set and therefore the network that can be displayed is only the network of the connection station.

2) Network configuration information getting time when the routing parameter setting is illegal

When the routing parameter setting is illegal, correct network analysis cannot be made and therefore it takes much time to get the network configuration information.

3) Display provided when the same network numbers exist

When there are the same network numbers, only the network whose information was acquired first can be displayed.

4) Routing parameters of the MELSECNET/10(H) board

If the routing parameters have not been set to the MELSECNET/10(H) board, a routing parameter error occurs and the network configuration information cannot be displayed.

5) Station type-based display when the keyword is set on the QnACPU

When the keyword has been set to the drive that stores the parameters on the QnACPU, the station type is displayed as described below.

Station Type	Display of GX Explorer
Remote master station, stand by station for Control station, Multiplexed remote master station, Parallel remote master station	Control station
Stand by station for Normal station, Multiplexed remote submaster station, Pallel remote submaster station	Normal station

(c) When CC-Link exists in the network configuration

1) PLC series and station type of relay station

Only when the relay station is the QCPU (Q mode) and master station, the network configuration is displayed. Any other CC-Link existing on a local station cannot be displayed.

2) Station type that can be displayed

Only the master, local and standby master stations are displayed. Remote I/O, remote device and intelligent device stations cannot be displayed.

3) Remote I/O network mode and offline mode are not displayed

The remote I/O network mode and offline mode are not displayed since local stations do not exist in those modes.

4) Function version of the QnA series master/local module

When the local station is the QnACPU, only the function version B or later can be displayed.

(d) PLC type display of the motion controller (SCPU)

The motion controllers (SCPUs) are displayed as the following ACPUs on GX Explorer.

PLC Type	Display of GX Explorer
A171SH	A2SH
A172SH	A3N
A173UH (S1), A273UH (S1)	A3U

Write to PLC/read from PLC can also be performed for the projects of the PLC type that is the motion controller (SCPU).

(e) When the ACPUs is set in Target Setup and the QCPU (A mode) is connected

If you set the "ACPU" as the PLC series of the connection station in Target Setup and actually connected the QCPU (A mode), the connection station is displayed as the A4U but it is operable as equivalent to the A4U.

(f) Restrictions on/notes for communications

There are the following restrictions on/notes for communications to be made with the PLC CPU displayed in the network configuration information.

Item	Restriction/Note
PLC communication	During communication, e.g. PLC read/PC write, do not disconnect the cable for connection of the personal computer and PLC CPU and connect it another PLC.
Use of other packages at the same port	It is not possible to communicate with a PLC while using GPPA/APPQ at the same port. Either use a different port or quit GPPA/GPPQ (close the DOS prompt too), before using the port.
	When using the Windows version of, for example, SW[]NIW-GOT800P, simultaneous access to the same port is not possible. Communication with one of the packages only is possible.

(g) When the routing parameters have been set for a Ethernet module

When the routing parameters have been set for a Ethernet module, GX Explorer regards it as MELSECNET/10(H) and therefore communicates with all the stations at network analysis.

The device connected through Ethernet is not displayed because it is not to be analyzed by GX Explorer.

Errors (Error code: C033H, C080H, C082H) occur and COM error is lit.

However, this will not effect on the system operation.

You can reset the above COM error by clicking the button

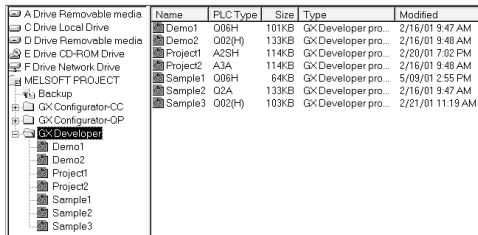
and the button on the "Error history" tab screen for Ethernet diagnosis.

6 MANAGEMENT OF PROJECTS IN THE PERSONAL COMPUTER

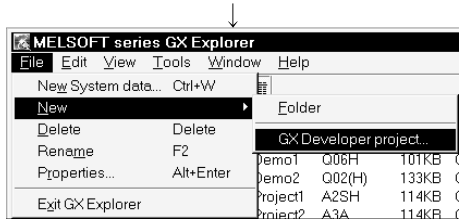
This chapter describes the management of projects in the PC side window.

6.1 Creating a New Project

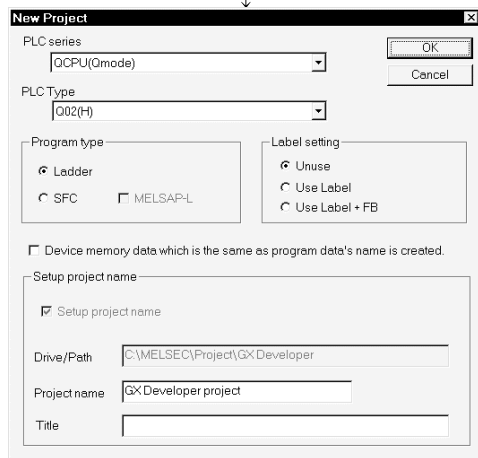
Create a new project of GX Developer.



- 1) Choose the folder for creating a new GX Developer folder in the project display field of the PC side window.



- 2) Click the [File] - [New] - [GX Developer project] menu. (You may also right-click and click the [New] - [GX Developer project] menu.)



- 3) In the new project dialog box, set the "PLC series", "PLC type", "Program type", "Label setting", "Project name" and "Title", and click the **OK** button. (Set the "Program type" and "Label setting" for the QCPU (Q mode) or QnACPU only.)

- The number of characters of a project path + a project name is within 150.
- The following characters cannot be used in a project name.
/, \, >, <, *, ?, ", ", |, ;, ;
(: and \ may be used to only specify a drive.)
- Do not use . (period) at the end of a project name.
- A title is within 32 characters long.



- 4) Clicking the **Yes** button creates a new GX Developer project.

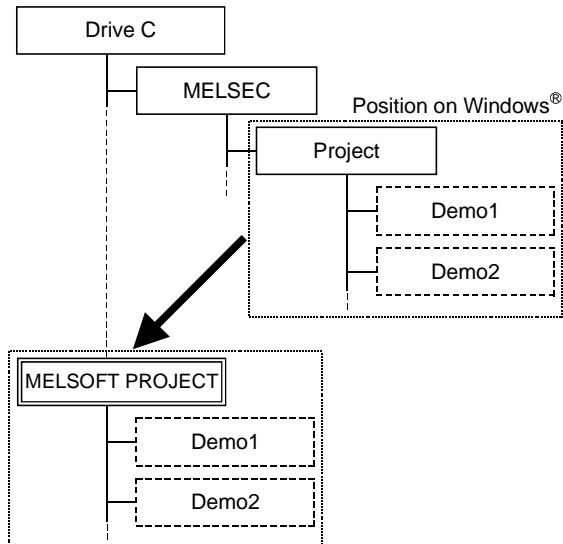
POINT

- By choosing the [File] - [New] - [Folder] menu, you can create a new folder.
- The following screen appears if a project of the same name exists in the folder.



- On GX Explorer, the folder registered as the system data can be displayed on the top layer where the drive of the personal computer exists. By gathering various projects in a specific folder and registering that folder as system data, you can perform centralized and batch management of projects more easily. Refer to Section 6.8 for the system data.

<System data example>

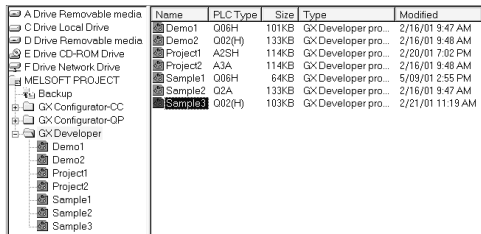


By registering a folder as system data "MELSOFT PROJECT", it is displayed in the same column as the drive on GX Explorer.

6.2 Deleting the Project

Delete a project.

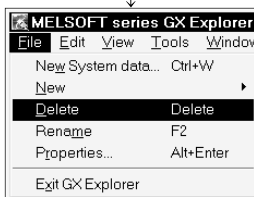
Another folder or file can be deleted by similar operation.



1) Choose the project to be deleted.

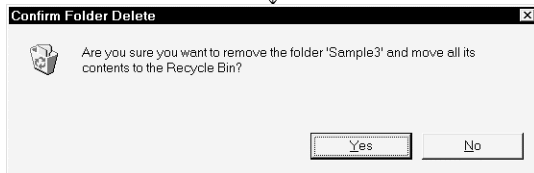
Choosing the [Edit] - [Select All] menu allows you to batch-select the projects being displayed in the detail display field.

(Batch selection can also be made by pressing **Ctrl** + **A**.)



2) Click the [File] - [Delete] menu.

(You may also right-click, choose the [Delete] menu, press the **X** button and click the **Delete** key.)



3) Click the **Yes** button in the deletion confirmation dialog box.

*: The deletion confirmation message may not be displayed depending on the Trash property of Windows®.

POINT

Holding down the **Shift** key and performing deletion operation deletes the project without moving it to Trash.

The icon that appears differs from the one displayed when the project is moved to Trash.



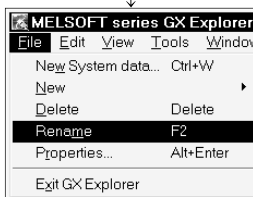
6.3 Renaming the Project

Change the project name.

Another folder or file can be renamed by similar operation.

Name	PLC Type	Size	Type	Modified
Demo1	Q06H	101KB	GX Developer pro...	2/16/01 9:47 AM
Demo2	Q02(H)	133KB	GX Developer pro...	2/16/01 9:48 AM
Project1	A2SH	114KB	GX Developer pro...	2/20/01 7:02 PM
Project2	A3A	114KB	GX Developer pro...	2/16/01 9:49 AM
Sample1	Q06H	64KB	GX Developer pro...	5/09/01 2:55 PM
Sample2	Q2A	133KB	GX Developer pro...	2/16/01 9:47 AM
Sample3	Q02(H)	103KB	GX Developer pro...	2/21/01 11:19 AM

1) Choose the project to be renamed.



2) Click the [File] - [Rename] menu.

(You may also right-click, choose the [Rename] menu, and press the [F2] key.)

Name	PLC Type
Demo1	Q06H
Demo2	Q02(H)
Project1	A2SH
Project2	A3A
Sample1	Q06H
Sample2	Q2A
Sample3	Q02(H)

3) Since the name part is displayed as a text box, enter a new project name or file name.

4) Click the part other than the name or press the [Enter] key to determine the name.

POINT

The following characters cannot be used in a project name.

/, \, >, <, *, ?, ", ", |, :, ;

(: and \ may be used to only specify a drive.)

Do not use . (period) at the end of a project name.

(1) The project name of GX Developer has the following condition.

- The number of characters of a project path + a project name is within 150.

(2) The project name of GX Configurator-QP has the following condition.

- The number of characters of a project name + a file name in the project is within 150.

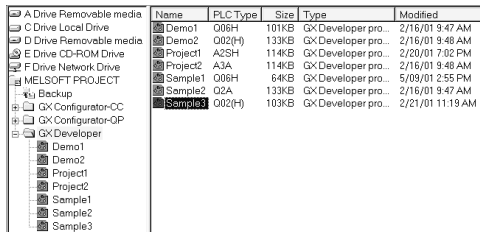
(3) The project name (file name) of GX Configurator-CC has the following conditions.

- A file name is within 64 characters long including an extension.
- Do not change the extension.
- Do not begin a file name with a space.

6.4 Project Information

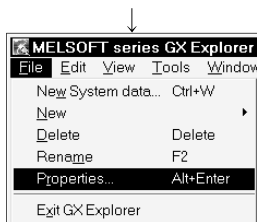
Display the information (properties) of a project or data (program, device comment or like) in a project.


The information (properties) of another folder or file can also be displayed by similar operation.

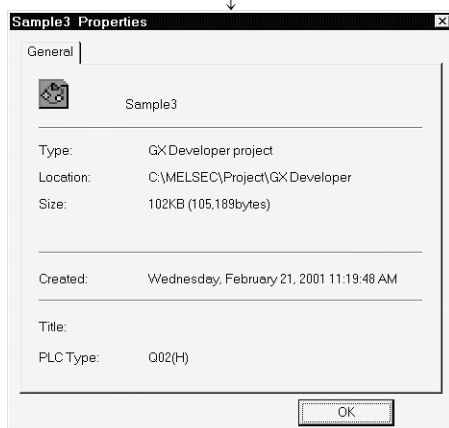


Name	PLC Type	Size	Type	Modified
Demo1	006H	101KB	GX Developer pro...	2/16/01 9:47 AM
Demo2	002(H)	133KB	GX Developer pro...	2/16/01 9:48 AM
Project1	A2SH	114KB	GX Developer pro...	2/20/01 7:02 PM
Project2	A3A	114KB	GX Developer pro...	2/16/01 9:48 AM
Sample1	006H	64KB	GX Developer pro...	5/09/01 2:55 PM
Sample2	02A	133KB	GX Developer pro...	2/16/01 9:47 AM
Sample3	002(H)	103KB	GX Developer pro...	2/21/01 11:19 AM

- 1) Choose the project or data whose information will be displayed.



- 2) Click the [File] - [Properties] menu.
(You may also right-click, choose the [Properties] menu, press the  button, and click the **Alt** + **Enter** keys.)



- 3) The information (properties) of the project or data appears.

6.5 Moving the Project

Move a project to another drive/folder.

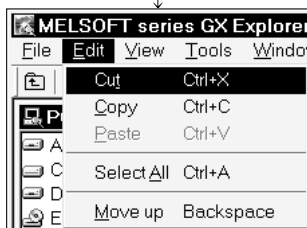
Another folder or file can also be moved by similar operation.

	Name	PLC Type	Size	Type	Modified
A Drive Removable media					
C Drive Local Drive					
D Drive Removable media	Demo1	006H	101KB	GX Developer pro...	2/16/01 9:47 AM
E Drive CD-ROM Drive	Demo2	002(H)	133KB	GX Developer pro...	2/16/01 9:48 AM
F Drive Network Drive	Project1	A2SH	114KB	GX Developer pro...	2/20/01 7:52 PM
MELSOFT PROJECT	Project2	A3A	114KB	GX Developer pro...	2/16/01 9:48 AM
	Sample1	006H	64KB	GX Developer pro...	5/09/01 2:55 PM
	Sample2	02A	133KB	GX Developer pro...	2/16/01 9:47 AM
	Sample3	002(H)	103KB	GX Developer pro...	2/21/01 11:19 AM

1) Choose the project to be moved.

Choosing the [Edit] - [Select All] menu allows you to batch-select the projects being displayed in the detail display field.

(Batch selection can also be made by pressing **Ctrl** + **A**.)

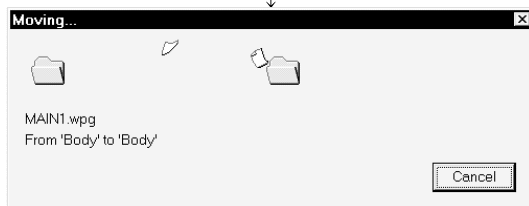


2) Click the [Edit] - [Cut] menu.

(You may also right-click, choose the [Cut] menu, press the **⌘** button, and click the **Ctrl** + **X** keys.)

	Name	PLC Type	Size	Type	Modified
A Drive Removable media					
C Drive Local Drive					
D Drive Removable media					
E Drive CD-ROM Drive					
F Drive Network Drive					

3) Choose the destination drive/folder in the project display field.

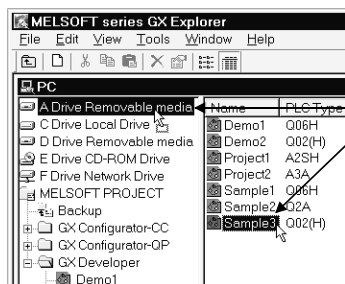


4) Click the [Edit] - [Paste] menu.

(You may also right-click, choose the [Paste] menu, press the **⌘** button, and click the **Ctrl** + **V** keys.)

POINT

A project may also be moved by **Shift** + drag & drop.

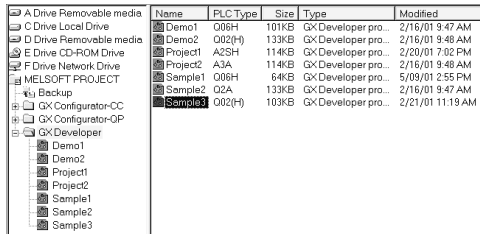


Hold down **Shift** key and drag and drop.

6.6 Copying the Project

Copy a project to another drive/folder.

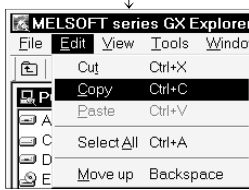
Another folder or file can also be copied by similar operation.



1) Choose the project to be copied.

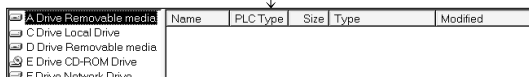
Choosing the [Edit] - [Select All] menu allows you to batch-select the projects being displayed in the detail display field.

(Batch selection can also be made by pressing **Ctrl** + **A**.)



2) Click the [Edit]-[Copy] menu.

(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)



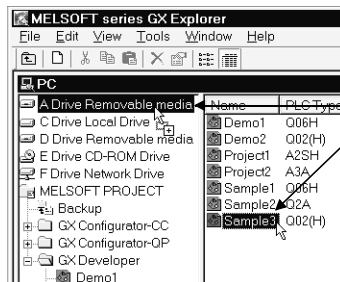
3) Choose the destination drive/folder in the project display field.



4) Click the [Edit] - [Paste] menu. (You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

POINT

A project may also be copied by **Ctrl** + drag & drop.



Hold down **Ctrl** key and drag and drop.

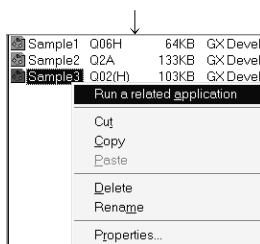
6.7 Opening a Project

The GX Developer project/GX Configurator-QP project/GX Configurator-CC project selected on GX Explorer can be opened and edited on the created application.

Another file can also be opened by similar operation if relation setting has been made on Windows® Explorer.

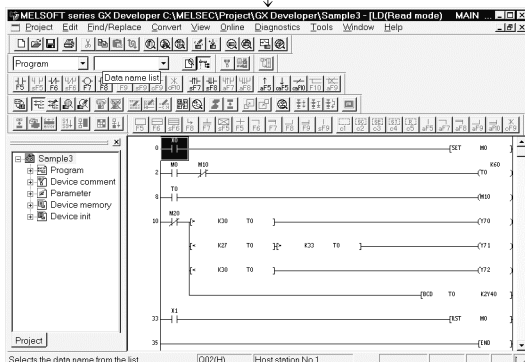
	Name	PLC Type	Size	Type	Modified
A Drive Removable media					
C Drive Local Drive	Demo1	Q06H	101KB	GX Developer pro...	2/16/01 9:47 AM
D Drive Removable media	Demo2	Q02(H)	133KB	GX Developer pro...	2/16/01 9:48 AM
E Drive CD-ROM Drive	Project1	A2SH	114KB	GX Developer pro...	2/20/01 7:02 PM
F Drive Network Drive	Project2	A3A	114KB	GX Developer pro...	2/16/01 9:48 AM
MELSOFT PROJECT	Sample1	Q06H	64KB	GX Developer pro...	5/09/01 2:55 PM
Backup	Sample2	Q2A	133KB	GX Developer pro...	2/16/01 9:47 AM
GX Configurator-CC	Sample3	Q02(H)	103KB	GX Developer pro...	2/21/01 11:19 AM
GX Configurator-OP					
GX Developer					
	Demo1				
	Demo2				
	Project1				
	Project2				
	Sample1				
	Sample2				
	Sample3				

1) Choose the project to be edited.



2) Right-click and click the [Run a related application] menu.

(You may also double-click and press the **Enter** key.)



3) The created application starts and the selected project opens.

For open project editing and other operations, refer to the manual of the corresponding application.

POINT

- The related application starts independently of GX Explorer.
When you performed project editing, saving or other operation to modify the project, update it using GX Explorer.
If it is not updated, mismatch will occur between the actual data and the display of GX Explorer.
- In the project of GX Configurator-CC, only the master parameter setting (extension ".CMP") can start a related application.
Since the remote parameter setting (".CRP") cannot start a related application, boot GX Configurator-CC from the start menu or like and open the project.

6.8 Using System Data for Management

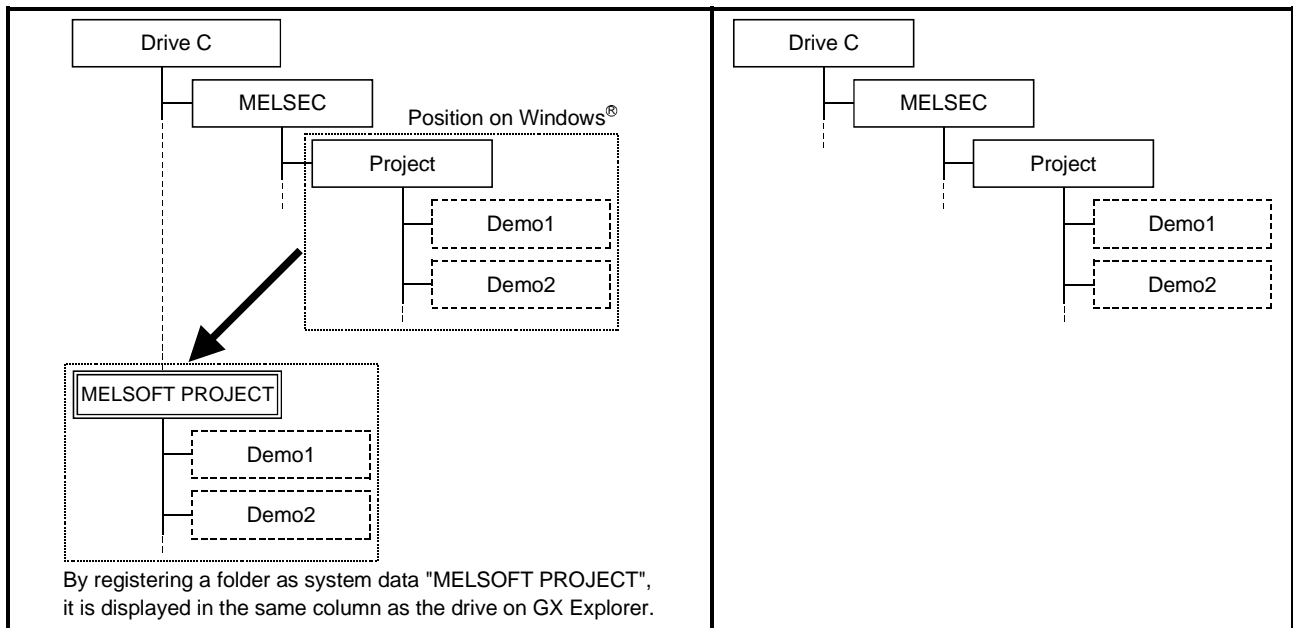
(1) Outline of system data

On GX Explorer, the folder registered as the system data can be displayed on the top layer where the drive of the personal computer exists.

By gathering various projects in a specific folder and registering that folder as system data, you can perform centralized and batch management of projects more easily.

<When C:\MELSEC\Project is registered as system data>

<When project is not registered as system data>

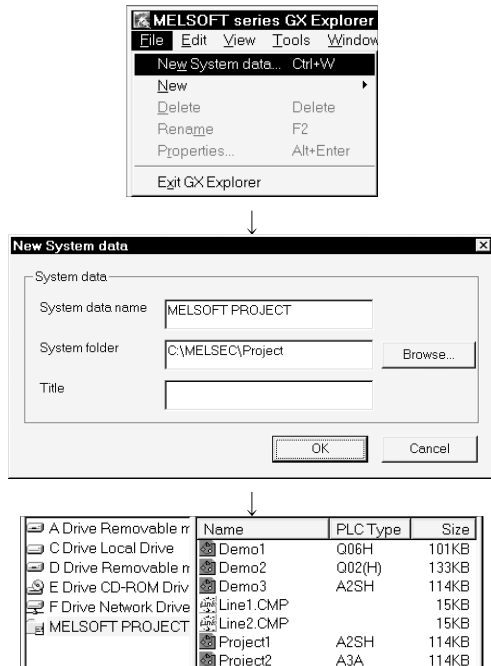


MELSEC System data

MELSEC Drive/folder

Project Project

(2) Operation for creating new system data



1) Click the [File] - [New System data] menu.

2) Set "System data name", "System folder" and "Title" in the New System data dialog box, and click the **OK** button.

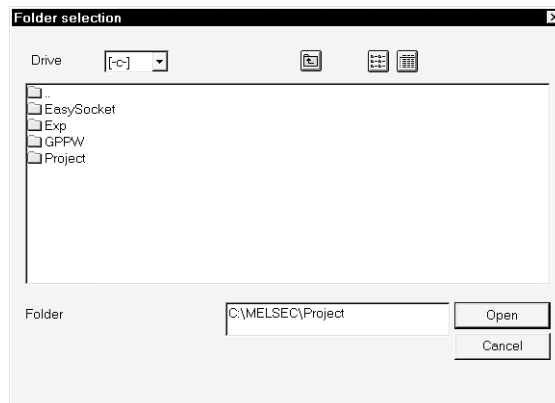
- The system data name may be different from the folder name registered as system data.
- As the system folder, set the folder registered as the system data.

3) The system data name appears on the same layer as the drives in the project display field.

The system folder can be set from the **Browse** button in the New System data dialog box.

Clicking the **Browse** button displays the Folder selection dialog box. Choose "Drive" and "Folder" and click the **Open** button.

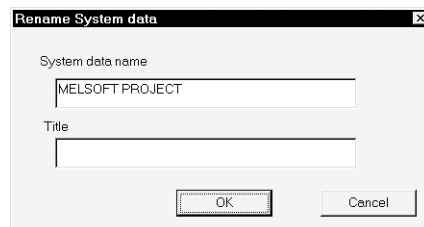
The Folder selection dialog box closes and the folder selected is set in "System folder" of the New System data dialog box.



POINT
<p>(1) The system data name has the following conditions.</p> <ul style="list-style-type: none"> • The system data name is within 247 characters long. • The following characters are unusable. /, \, >, <, *, ?, ", ", , :, ; • Any space following the folder name is automatically deleted. • Any of the following system names is unusable. COM1 to COM9, LPT1 to LPT9, AUX, CON, PRN, NUL, CLOCK\$ <p>(2) The folder that may be specified as the system folder has the following conditions.</p> <ul style="list-style-type: none"> • The full path + system folder is within 247 characters long. /, \, >, <, *, ?, ", ", , :, ; (: and \ may be set only to specify the drive.) • Any space following the folder name is automatically deleted. • You cannot specify the folder name that is followed by a period. • You cannot specify a removable medium, (e.g. FD, MO) and CD-ROM drive. • You cannot specify a network folder. (May be specified if it is registered to the network drive.) <p>(3) The title is within 32 characters long.</p>

(3) Changing the system data name

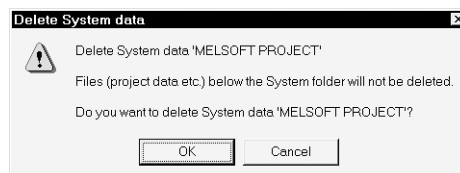
To change the system data name or title, choose the system data in the project display field and click the [File] - [Rename] menu. (You may also press the **F2** key.)



Enter the system data name or title and click the **OK** button.

(4) Deleting the system data

To delete (cancel) the system data, choose the system data to be deleted in the project display field, and click the [File] - [Delete] menu. (You may also press the **Delete** key.)



Clicking the **OK** button deletes (cancels) the system data.

However, the data within the folder specified as the system folder are not deleted.

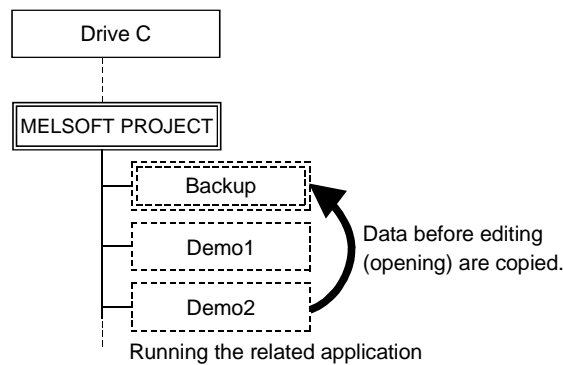
6.9 Backing Up the Project

The backup function is designed to automatically back up the project opened by running the related application.

A removable medium (e.g. FD, MO) drive and a CD-ROM drive cannot be backed up. This section explains the operations for making backup setting and returning a backed up project.

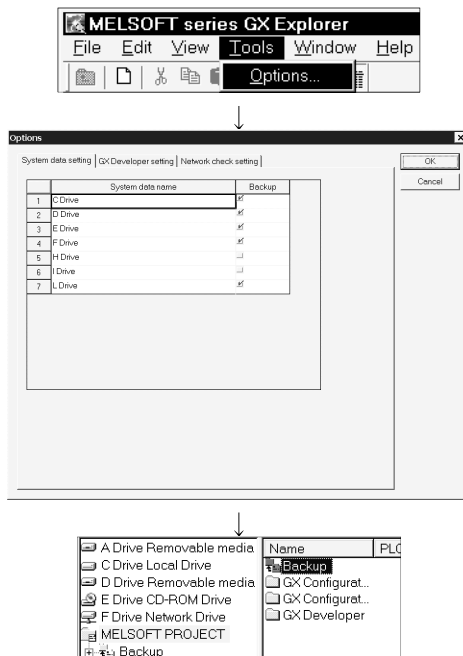
(1) Outline of backup

Create a "Backup" folder on a drive or system data basis, and copy the project that has not yet been opened by running the related application.



(2) Backup setting

This section describes the operation for making backup setting to the drive or system data.



1) Click the [Tools]-[Options] menu.

2) Check "Backup" on the right of the drive or system data name to be set for backup on the "System data setting" tab screen in the Options dialog box, and click the **OK** button.

(The removable medium (e.g. FD, MO), CD-ROM and other drives are not displayed as they cannot be set for backup.)

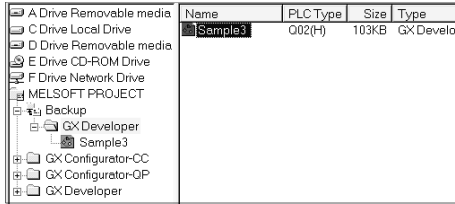
3) The folder named "Backup" is created for the drive/system data set for backup.

POINT

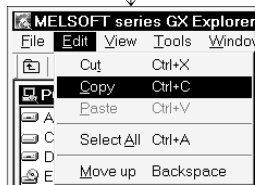
If a project is saved in the folder within the drive or system data set for backup, the folder of the same name is also created within the "Backup" folder at execution of backup.

(3) Returning the backed up project


This section explains the operation for returning the modified project to the backed up project.

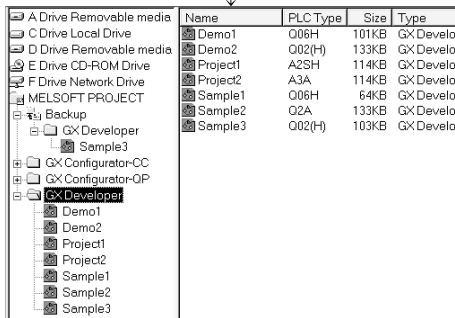


- 1) Choose the project within the "Backup" folder that you want to return.

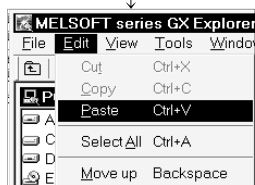


- 2) Click the [Edit] - [Copy] menu.


(You may also right-click, click the [Copy] menu, click the  button, and press the **Ctrl** + **C** keys.)

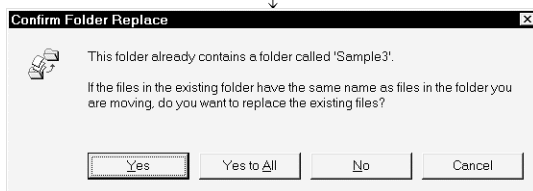


- 3) Choose the folder where the backup source project is saved.



- 4) Click the [Edit] - [Paste] menu.

(You may also right-click, click the [Paste] menu, click the  button, and press the **Ctrl** + **V** keys.)



- 5) As the folder overwrite confirmation dialog box appears, click the **Yes to All** button.

7 MANAGEMENT OF DATA IN THE PLC CPU

This chapter describes write/read to/from the PLC CPU displayed in the PLC side window and data editing and deletion.

7.1 Write/Read to/from PLC CPU

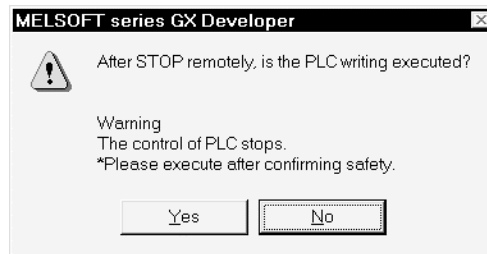
GX Explorer can perform write/read to/from PLC using project or data cut/copy and paste (drag and drop).

Write-enabled data vary with the memory type.

For write-enabled data, refer to the user's manual of the PLC CPU being used.

GX Explorer cannot perform online program correction to the PLC CPU.

Making online program correction to the PLC displays the remote STOP confirmation dialog box.



Click the **Yes** button to execute write to PLC after remote STOP.

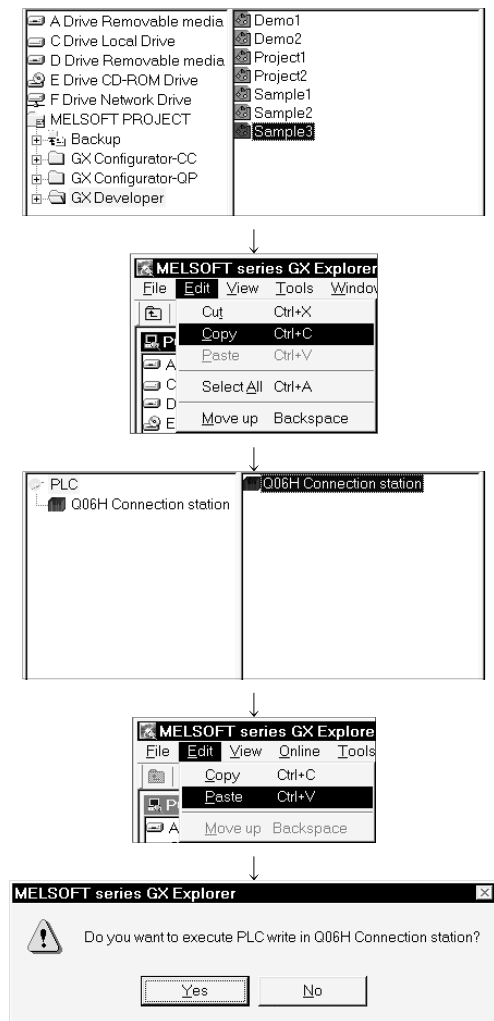
After completion of write to PLC, perform remote operation (refer to Section 7.4.2 (QCPU (Q mode), QnACPU only)) or move the RUN/STOP switch of the PLC CPU to RUN.

Click **No** when you are not executing remote STOP and write to PLC.

7.1.1 Batch-write/read


The following examples of write to PLC are used to explain the operations for batch-writing/reading the GX Developer project saved in the personal computer or the data (programs, device comments, parameters, etc.) in the PLC CPU.

(1) Operation of menu-driven operation




1) In the PC side window, choose the GX Developer project file to be written.

2) Click the [Edit] - [Copy] menu.

(You may also right-click, choose the [Copy] menu, press the  button, and click the **Ctrl** + **C** keys.)

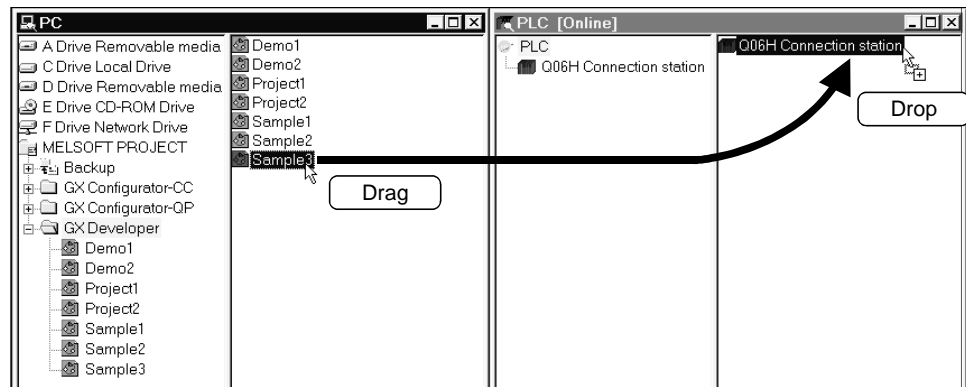
3) In the PLC side window, choose the write destination station or memory (drive).

4) Click the [Edit] - [Paste] menu.

(You may also right-click, choose the [Paste] menu, press the  button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



(3) Precautions for data types

Precautions are required for the data types included in write/read to/from PLC.

For details, refer to the following reference sections.

Program.....: Refer to Section 7.1.2.

Device comment: Refer to Section 7.1.3.

Parameter.....: Refer to Section 7.1.4.

Device memory: Refer to Section 7.1.5.

Device initial value: Refer to Section 7.1.6.

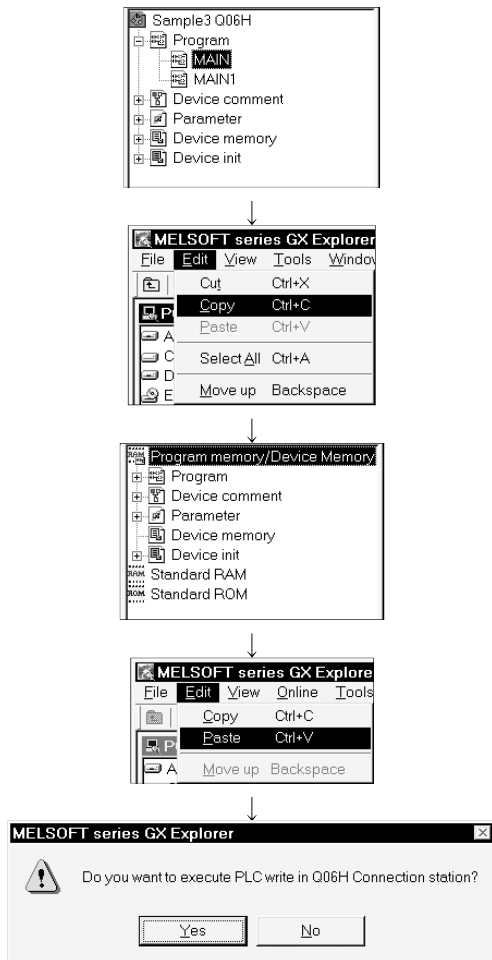
POINT

- When write/read is performed from the personal computer side window to the PLC side window, [Cut] will not delete the project in the personal computer side window.
- After write to PLC, you must perform such operation as reset to make the parameters valid. Refer to the user's manual of the PLC CPU being used.
- If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, it is read as a new project. Its project name is "GX Developer project".
If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).
- For the remote I/O of MELSECNET/H, write/read to/from PLC is enabled for only parameters.
- For the QCPU (Q mode) or QnACPU, performing write of a project including device memory to PLC, with the PLC CPU or Program memory/Device memory (PLC RAM/Device memory for the QnACPU) specified, does not write File register data. Specify the memory to which file register data can be written.

7.1.2 Writing/reading a program

The following examples of write to PLC are used to explain the operations for writing/reading a program.

(1) Example of menu-driven operation



1) In the PC side window, choose the program file to be written.
(Choosing "Program" indicating the data type selects all programs.)

(Choosing "Program" indicating the data type selects all programs.)

2) Click the [Edit] - [Copy] menu.

(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)

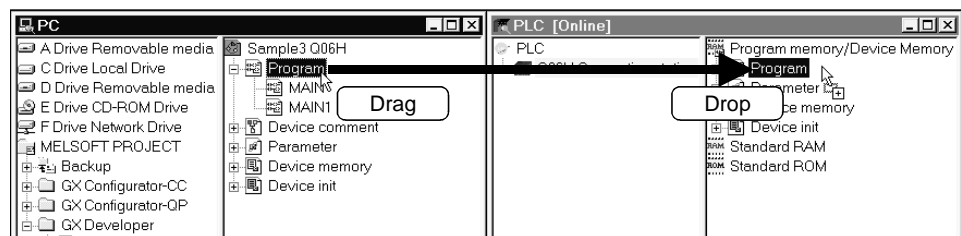
3) Choose the memory in the PLC side window.

4) Click the [Edit] - [Paste] menu.

(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



(3) Label program

Write to PLC cannot be performed if an uncompiled label program is included in the program specified from the QCPU (Q mode) or QnACPU project.

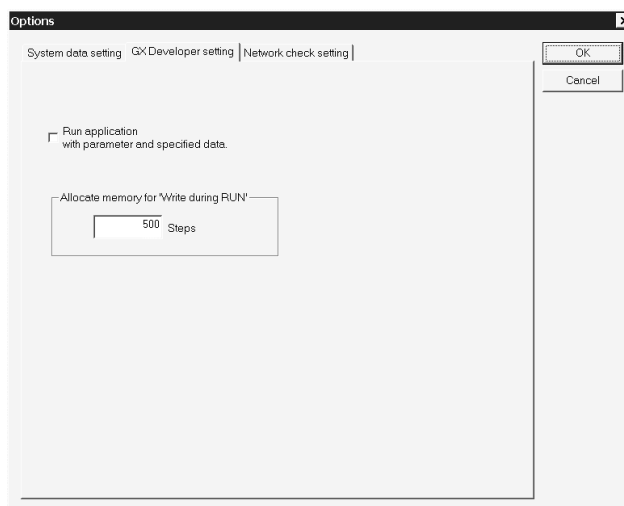
POINT

- If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, a new project is created and only the specified program is read. (The parameters are set to the initial values). Its project name is "GX Developer project".
If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).

REMARK

The step reserved for online program correction can be changed on the "GX Developer setting" tab screen in the Options dialog box.

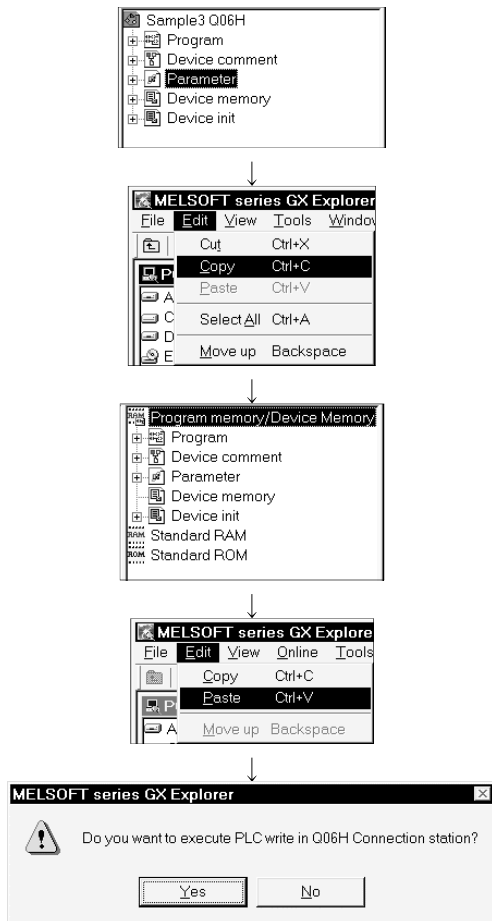
(Choose the [Tools] - [Options] menu to open the Options dialog box.)



7.1.3 Writing/reading parameters

The following examples of write to PLC are used to explain the operations for writing/reading parameters.

(1) Example of menu-driven operation



1) In the PC side window, choose the parameter file to be written.

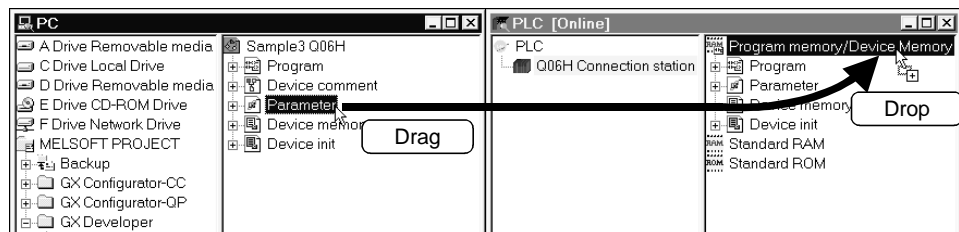
2) Click the [Edit] - [Copy] menu.
(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)

3) Choose the memory in the PLC side window.

4) Click the [Edit] - [Paste] menu.
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



(3) Batch-writing/reading parameters

Since the parameter type (e.g. PLC parameter, network parameter) is not differentiated in the PLC CPU, the parameter type cannot be specified to perform write/read to/from PLC.

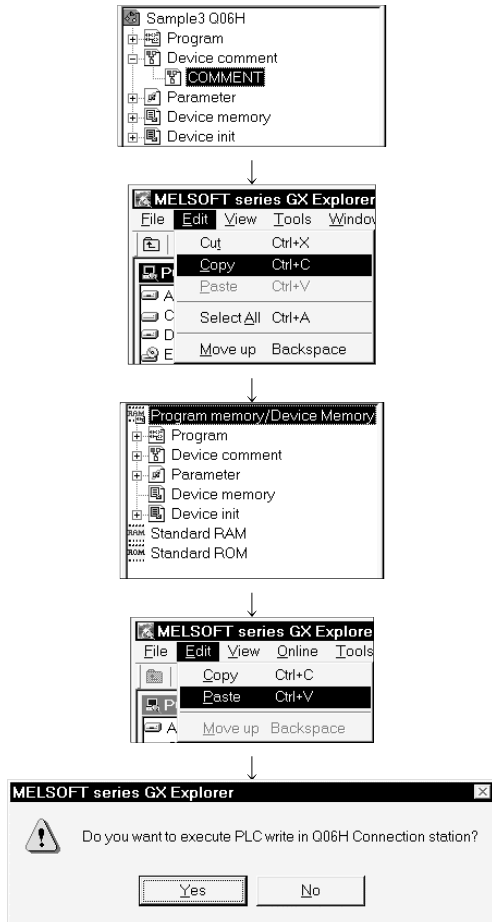
If you specify the parameter type in the PC side window, the parameters of all types are batch-written.

POINT
<ul style="list-style-type: none">• If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, a new project is created and only the parameters are read. Its project name is "GX Developer project". If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).• After write to PLC, reset the PLC CPU or MELSECNET/H remote I/O. Reset must be performed to make the written parameters valid. For reset operation, refer to the user's manual of the PLC CPU being used.

7.1.4 Writing/reading device comments

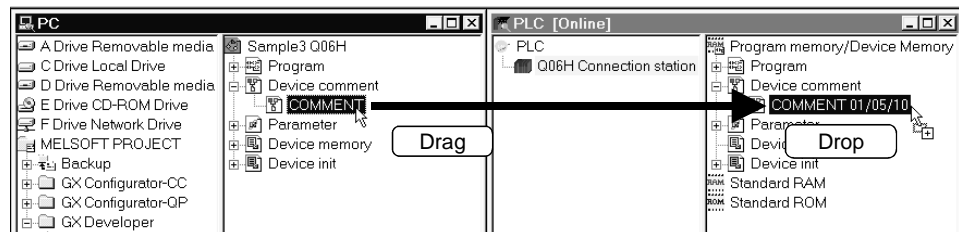
The following examples of write to PLC are used to explain the operations for writing/reading device comments.

(1) Example of menu-driven operation



- 1) In the PC side window, choose the device comment file to be written.
(Choosing "Device comment" indicating the data type selects all device comments.)
- 2) Click the [Edit] - [Copy] menu.
(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)
- 3) Choose the memory in the PLC side window.
- 4) Click the [Edit] - [Paste] menu.
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)
- 5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



(3) Comment range setting

(a) Write to PLC

Write to PLC is performed only in the range of comment range setting.

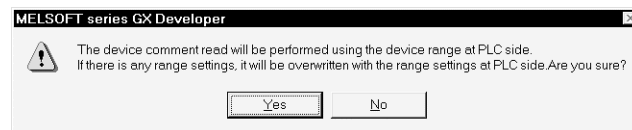
If comment range setting has not been made for the ACPU or QCPU (A mode), device comments cannot be written to the PLC.

Using GX Developer, make comment range setting.

If comment range setting has not been made for the QCPU (Q mode) or QnACPU, the specified device comment file is written to the PLC.

(b) Read from PLC

For read of device comments to PLC, the following screen appears.



The comment range setting made on the PLC CPU side and the device comments in that range are read to the PLC.

If comment range setting has not been made for the QCPU (Q mode) or QnACPU, the specified device comment file is read to the PLC.

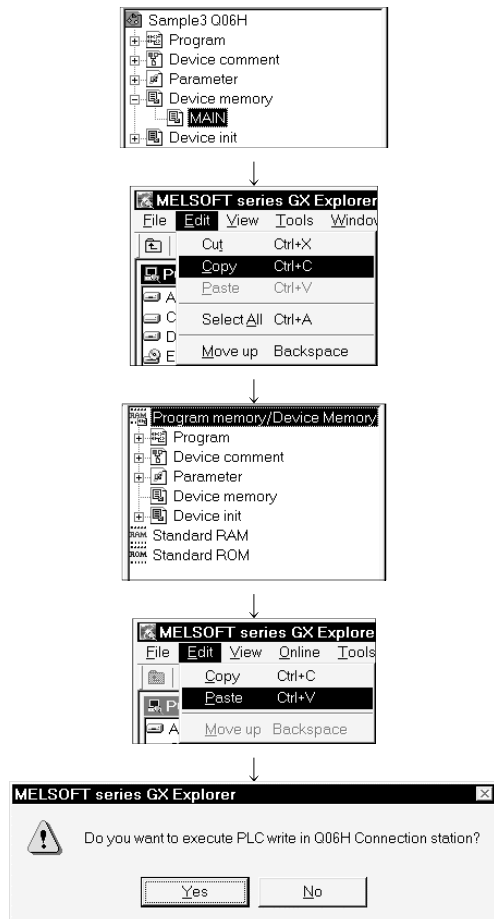
POINT

- If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, a new project is created and only the specified comments are read. (The parameters are set to the initial values.) Its project name is "GX Developer project". If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).
- When write to PLC is performed, an error will not occur if any write-disabled device comment is included. However, the write-disabled device comment is not written to the PLC.

7.1.5 Writing/reading device memory data

This section describes the operations for performing write/read of device memory data to/from PLC.

(1) Example of menu-driven operation for write to PLC



1) In the PC side window, choose the device memory file to be written.

("Device memory" indicating the data type can also be the target of write.)

2) Click the [Edit] - [Copy] menu.

(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)

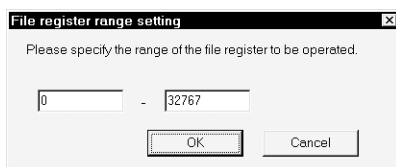
3) Choose the memory in the PLC side window.

4) Click the [Edit] - [Paste] menu.

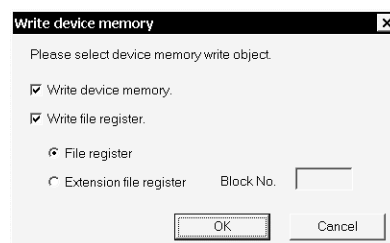
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the write to PLC confirmation dialog box.

Either of the following screens appears depending on the target of write.

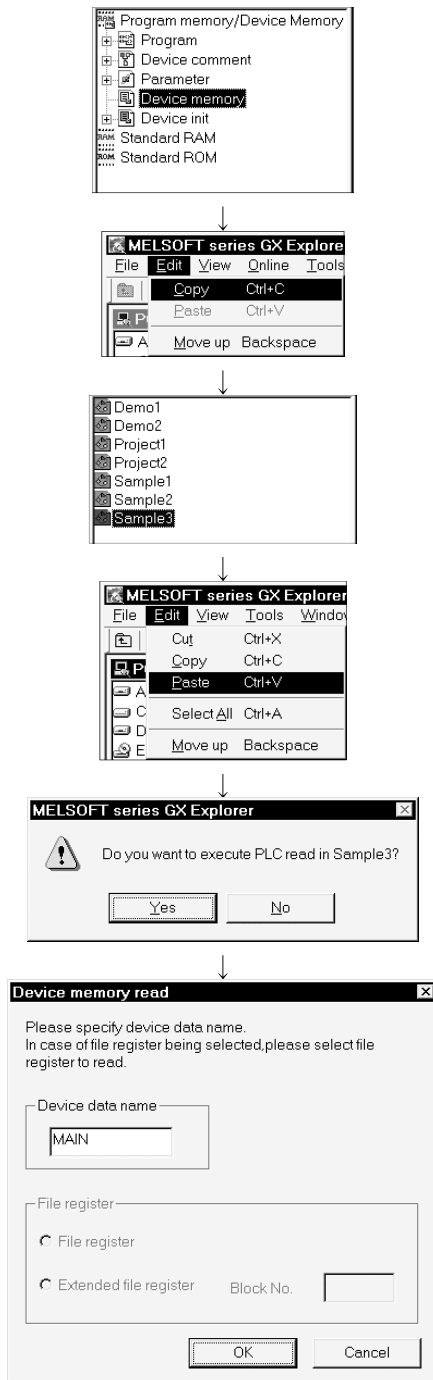


- When you performed write to other than Program memory/Device memory (QCPU (Q mode)) or to other than PLC RAM/Device memory (QnACPU), set the number of file register points. (When there are more than one device memory file, their ranges are all the same.)



- When you performed write to the ACPU or QCPU (A mode), set write to device memory, write to file register and its type (block No. 1 to 256 for Extension file registers).

(2) Example of menu-driven operation for read from PLC



1) In the PLC side window, choose the device memory file to be read.

2) Click the [Edit] - [Copy] menu.
(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)

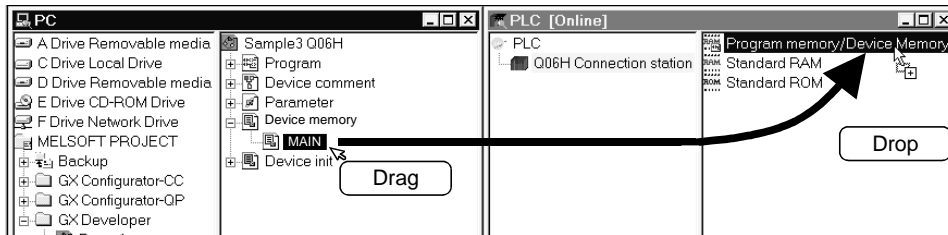
3) Choose the read destination project in the PC side window. (If the project is not selected, a new project name "GX Developer project" is created.)

4) Click the [Edit] - [Paste] menu.
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the read from PLC confirmation dialog box.

6) Set "Device data name" in the Device memory read dialog box.
For the file registers of the ACPUCPU or QCPUCPU (A mode), set the file register type ("File register" or "Extension file register") and further "Block No." for the extension file registers.

(3) Example of drag and drop operation



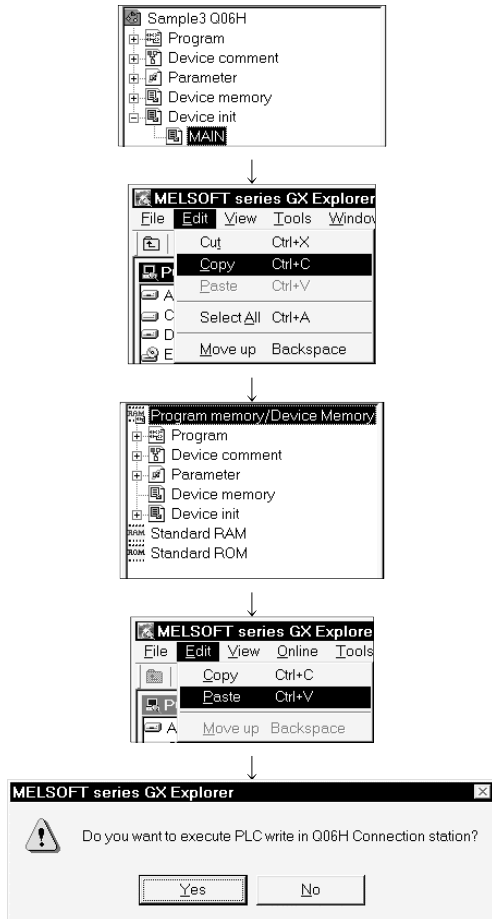
POINT

- If there are more than one device memory file in a project, the target of write cannot be identified, and therefore write to PLC with the project or data type specified cannot be performed to the Program memory/Device memory of the QCPU (Q mode) or to the PLC RAM/Device memory of the QnACPU, ACPUC or QCPU (A mode).
Specify and read the file.
- If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, a new project is created and only the data of the specified device memory (file registers) are read. (The parameters are set to the initial values.)
Its project name is "GX Developer project".
If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).

7.1.6 Writing/reading device initial values

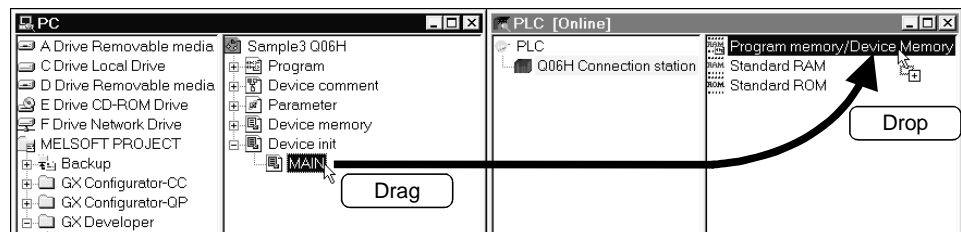
This section explains the operations for writing/reading device initial values to the QCPU (Q mode) or QnACPU.

(1) Example of menu-driven operation



- 1) In the PC side window, choose the device initial value file to be written.
(“Device initial value” indicating the data type can also be the target of write.)
- 2) Click the [Edit] - [Copy] menu.
(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)
- 3) Choose the memory in the PLC side window.
- 4) Click the [Edit] - [Paste] menu.
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)
- 5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



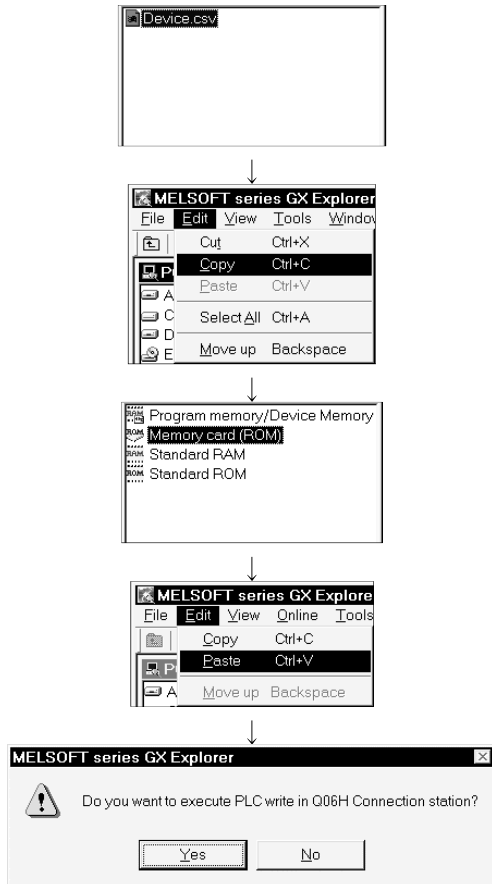
POINT

- If there are more than one device initial value file in the same memory of the PLC CPU, the target of read cannot be identified, and therefore read from PLC with the memory or data type specified cannot be performed.
Specify and read the file.
- If you do not choose a paste (read from PLC) destination project but select a folder and paste (drop) the source project, a new project is created and only the specified device initial value file is read. (The parameters are set to the initial values.)
Its project name is "GX Developer project".
If the project of the same name exists in the folder, the project name will be "GX Developer project*" (*indicates a number in numerical order, starting from 1).

7.1.7 Writing/reading general data

The following examples of write to PLC are used to explain the operations for writing/reading general data (PLC user data) to the QCPU (Q mode).

(1) Example of menu-driven operation



1) In the PC side window, choose the general data file to be written.

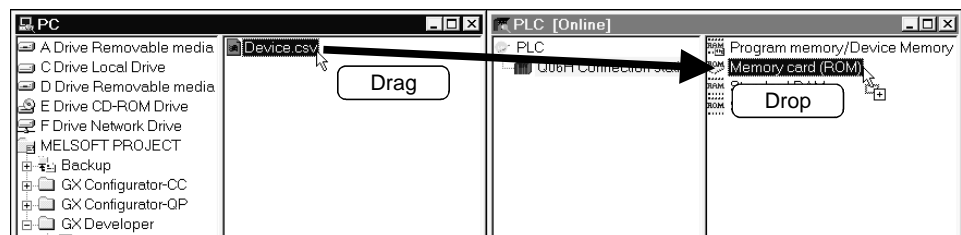
2) Click the [Edit] - [Copy] menu.
(You may also right-click, choose the [Copy] menu, press the button, and click the **Ctrl** + **C** keys.)

3) Choose the memory card (ROM) in the PLC side window.

4) Click the [Edit] - [Paste] menu.
(You may also right-click, choose the [Paste] menu, press the button, and click the **Ctrl** + **V** keys.)

5) Click the **Yes** button in the write to PLC confirmation dialog box.

(2) Example of drag and drop operation



POINT

- (1) Write of general data (PLC user data) to/from PLC is enabled for only the ATA card of the QCPU (Q mode).
- (2) The following general data (PLC user data) cannot be written to the PLC.
- File that does not satisfy a "file name (within 8 characters) "." extension (within 3 characters)"
- File that includes any of the inhibited characters (" = | : ; , \ [] + * ? < > . / and space) in the file name and/or extension.
 - File whose extension is any of QPG, QCD, QDI, QDR, QDL, QTD, QTX, QTR, QFD, QAD, QTM and WTM
 - File whose name is any of QN.QSY, WORK.QSY, TRACE.QSY, PARAM.QPA, IPARAM.QPA, AUTOEXEC.QBT, Q00.DAT to Q99.DAT and MONITOR.Q00 to MONITOR.Q0F

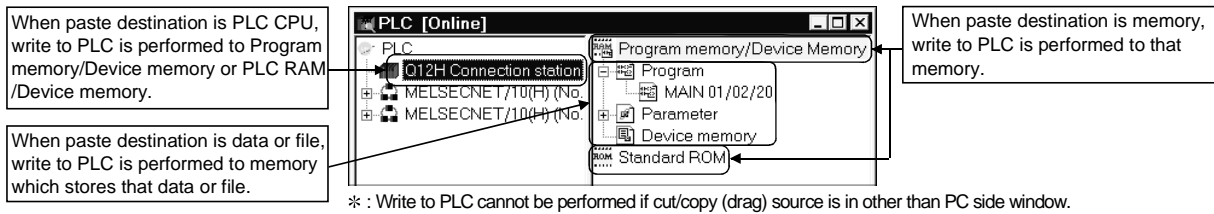
7.1.8 Instructions

(1) Target of write/read to/from PLC

This section explains the target memory of write to PLC and the target data of read from PLC using cut/copy and paste (drag and drop).

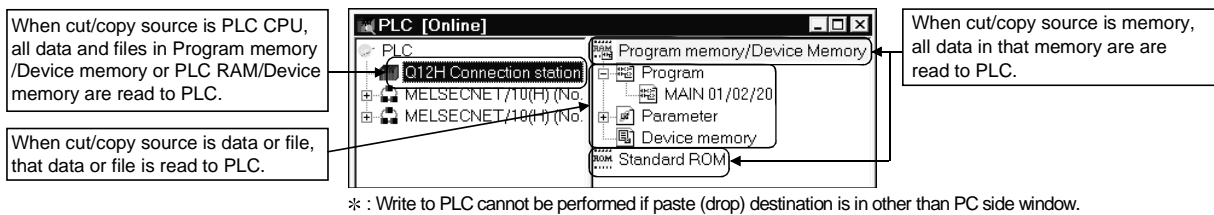
(a) Target memory of write to PLC

- When the PLC CPU is specified as the paste (drop) destination, Program memory/Device memory or PLC RAM/Device memory is the target memory.
- When the memory is specified as the paste (drop) destination, the specified memory is the target memory.
- When the data type/file is specified as the paste (drop) destination, the memory storing the specified data or file is the target memory.



(b) Target data and file of read from PLC

- When the PLC CPU is specified as the cut/copy (drag) source, all data and files in Program memory/Device memory or PLC RAM/Device memory are the target of read.
- When the memory is specified as the cut/copy (drag) source, all data and files in the specified memory are the target of read.
- When the data type/file is specified as the cut/copy (drag) source, the memory storing the specified data or file is the target of read.



(2) PLC series/types of project and PLC CPU

If the PLC series of the cut/copy source differs from that of the paste destination, paste (write/read to/from PLC) cannot be performed.

If the PLC series of the cut/copy source and paste destination are the same but their PLC types are different, the following screen appears before execution of paste (write/read to/from PLC).



Change the PLC type of the project using GX Developer.

(3) Motion controller (SCPU)

Since the motion controller (SCPU) is recognized as the ACPU by GX Explorer, the project of any of the following PLC types is enabled for write/read to/from PLC.

(a) Write to PLC

Write Source PLC Type (Project)	Write Destination CPU
A171SH*, A2SH	A2SH, A171SH (displayed as A2SH on GX Explorer)
A172SH*, A3N	A3N, A172SH (displayed as A3N on GX Explorer)
A173UH (S1)*, A273UH (S1)*, A3U	A3U, A173UH(S1) (displayed as A3U on GX Explorer), A273UH(S1) (displayed as A3U on GX Explorer)

*: Write to PLC is performed as the data of the motion controller (SCPU).

(b) Read from PLC

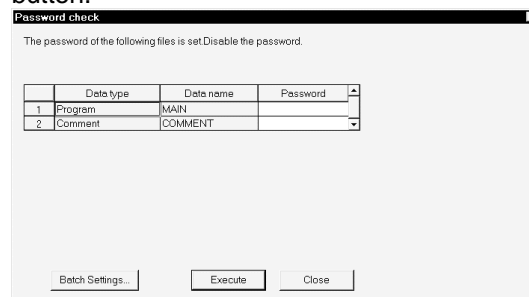
Read Destination PLC Type (Project)	Read Source CPU
A171SH*, A2SH	A2SH, A171SH (displayed as A2SH on GX Explorer)
A172SH*, A3N	A3N, A172SH (displayed as A3N on GX Explorer)
A173UH (S1)*, A273UH (S1)*, A3U	A3U, A173UH(S1) (displayed as A3U on GX Explorer), A273UH(S1) (displayed as A3U on GX Explorer)

*: Read from PLC is performed as the data of the motion controller (SCPU).

(4) Password/keyword setting

(a) QCPU (Q mode)

When a password has been set to the QCPU (Q mode), enter the password at the time of write/read to/from PLC and click the [Execute] button.



If you enter a wrong password, the password check dialog box reappears. The password must be entered every time operation for write/read to/from PLC is performed.

(b) QnACPU

When a password has been set to the QnACPU, the keyword cannot be canceled at the time of write/read to/from PLC.

Delete the keyword and perform write/read to/from PLC. (Refer to Section 7.4 (2).)

(c) ACPU, QCPU (A mode)

When a keyword has been set to the ACPU or QCPU (A mode), write/read to/from PLC cannot be performed using GX Explorer. Use GX Developer to perform write/read to/from PLC.

(5) Project of label program

Read from PLC cannot be performed to the project of a label program of the QCPU (Q mode) or QnACPU.

"Global variables", "Label" and "Local label" are disabled for write to PLC.

7.2 Opening the Data in the PLC CPU

The data (programs, parameters, etc. other than general data (PLC user data)) stored in the PLC CPU are read and edited on GX Developer.

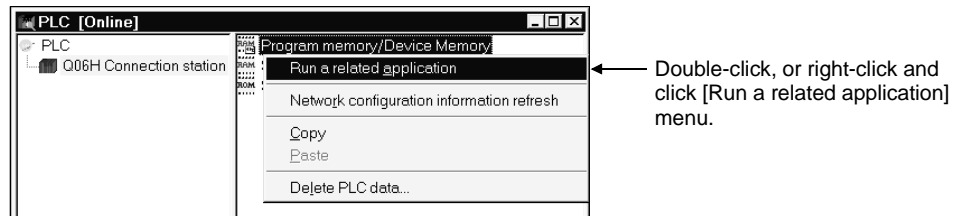
The data of GX Configurator-QP and GX Configurator-CC cannot be opened from GX Explorer.

(1) Operation example

Double-click the PLC CPU, memory or data you want to edit, or right-click and click the [Run a related application] menu.

GX Developer starts and the data stored in the specified memory are read.

(Specifying the PLC CPU reads data from the program memory/device memory for the QCPU (Q mode) or from the built-in RAM/device memory for the QnACPU.)



When the device comments are stored in the PLC CPU, a screen appears to warn that only the data of the comment range setting will be read. (Refer to Section 7.1.4.)

When the device memory data are stored in the PLC CPU, the device memory read dialog box appears. (Refer to Section 7.1.5 for the device memory read dialog box.)

(2) After starting GX Developer

The read data can be edited as "Unset project".

When you want to reflect the edited data on the PLC CPU, perform write to PLC using GX Developer.

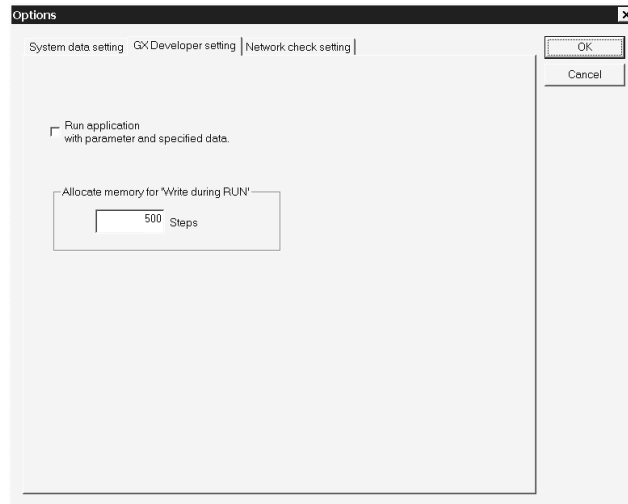
When you want to save the edited data, save it with a name using GX Developer. GX Developer that has been started cannot be terminated from GX Explorer. GX Developer must be terminated by itself.

Refer to the GX Developer Operating Manual for the operations of GX Developer.

POINT

At the time of installation, all data stored in the specified memory are batch-read. When you want to read only the specified data, choose the [Tools] - [Options] menu and make option setting.

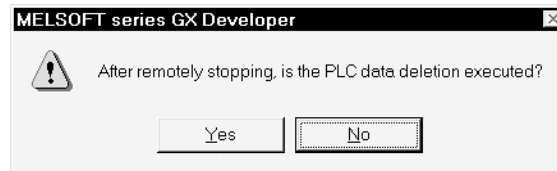
Check "Start application with parameter and specified data" on the [GX Developer setting] tab screen in the Options dialog box.



7.3 Deleting Data in the PLC CPU

Delete the program, parameters or other data of the QCPU (Q mode) or QnACPU. This operation cannot be performed for the ACPUCPU or QCPUCPU (A mode).

Deleting PLC data during RUN displays the remote STOP confirmation dialog box.

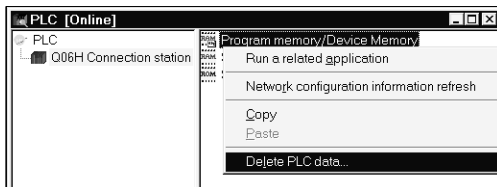


Click the **Yes** button to delete the PLC data after remote STOP.

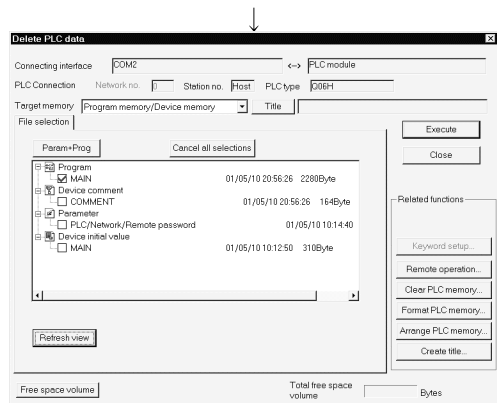
After completion of PLC data deletion, perform remote operation (refer to Section 7.4.2) or move the RUN/STOP switch of the PLC CPU to RUN.

Click **No** when not executing remote STOP and PLC data deletion.

(1) Operation example

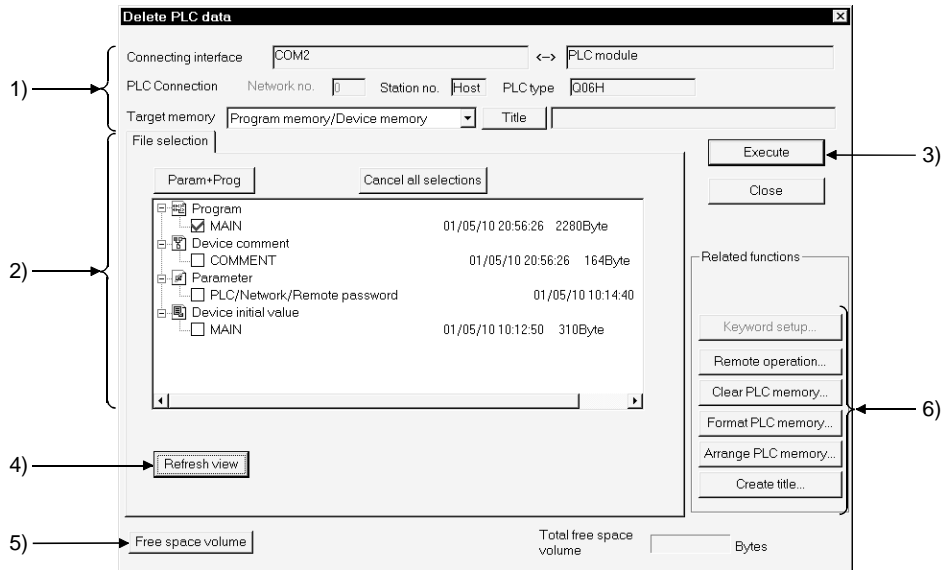


- 1) Choose the PLC CPU or memory name whose PLC data will be deleted, right-click, and click the [Delete PLC data] menu.



- 2) In the Delete PLC data dialog box, choose the target memory and the file to be deleted, and click the **Execute** button.

(2) Screen explanation



No.	Item	Description
1)	Connection destination information	Shows the connected interface and target station. Set the target memory.
2)	PLC data	Shows a list of data in the target memory. Check the data name you want to delete. Click the Param + Prog button to select the parameters and all programs of the project. Click the Cancel all selections button to cancel all data.
3)	Execute button	Click this button when setting is finished.
4)	Refresh view button	Used to update the data list in the target memory.
5)	Free space volume button	Used to display the maximum continuous space (QnACPU only) and all free space of the target memory.
6)	Related function buttons	Keyword setup button Refer to Section 7.4.1. Remote operation button Refer to Section 7.4.2. Clear PLC memory button Refer to Section 7.4.3. Format PLC memory button Refer to Section 7.4.4. Arrange PLC memory button Refer to Section 7.4.5. Create title button Refer to Section 7.4.6.

7.4 PLC CPU Related Functions

This section describes the functions related to the memory and operation of the QCPU (Q mode) or QnACPU.

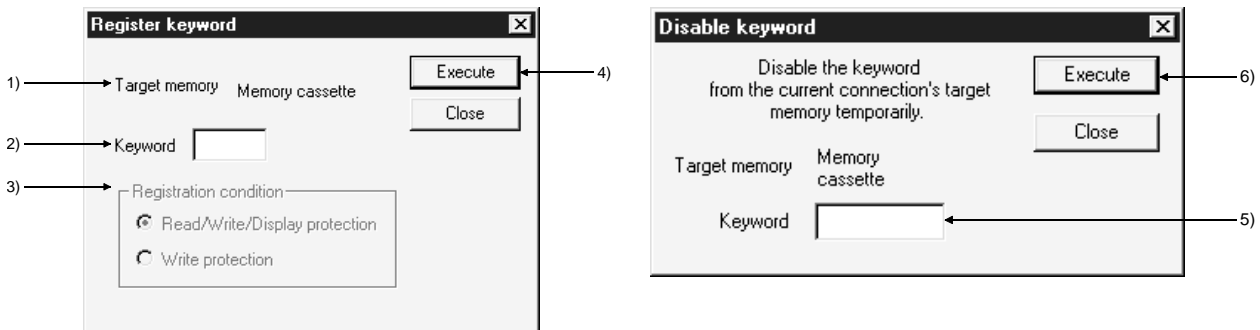
7.4.1 Keyword setup

Set a new keyword to the QnACPU, or change, delete or cancel its keyword.

(1) Setting a new keyword

Set a new keyword to the QnACPU or change its keyword.

Click the **Keyword setup** button in the Delete PLC data dialog box, and click the **Register keyword** button in the Keyword setup dialog box.



No.	Item	Description
1)	Target memory	Sets the memory whose keyword is to be registered or changed.
2)	Keyword	Set the keyword (6 numeric characters).
3)	Registration condition	Select the functions restricted by the keyword. For the A series this is reading/writing and disabling of the display only. <input checked="" type="radio"/> Read/Write/Display protection Writing, reading, verification, deletion, and list display are restricted by the keyword. <input checked="" type="radio"/> Write protection Writing is restricted by the keyword.
4)	Execute button	Click this button after setting the necessary settings. However, in the case of an keyword change or condition change, the dialog box shown below is displayed.
5)	Keyword	Sets the keyword that has been registered for the PLC.
6)	Execute button	Click this button after setting the necessary settings.

• Operating Procedure

1. Set 1), 2) and 3) in the Register new keyword dialog box.
2. Click 4).

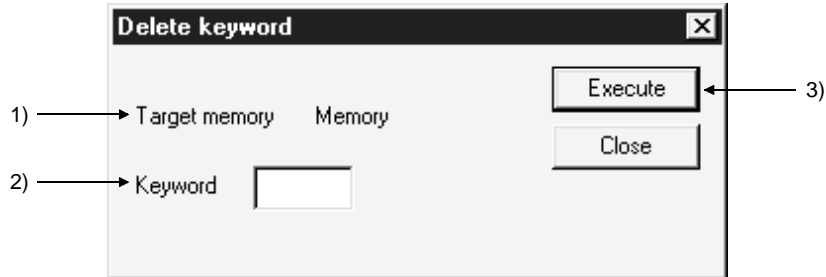
For an keyword change, the present keyword is now displayed in the dialog box.

3. Set 5) and click 6).

(2) Deleting the keyword

Delete the keyword registered to the QnACPU.

Click the **Keyword setup** button in the Delete PLC data dialog box, and click the **Delete keyword** button in the Keyword setup dialog box.

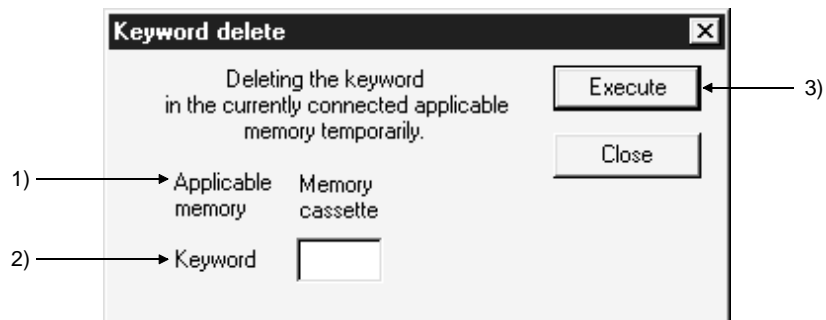


No.	Item	Description
1)	Target memory	Sets the applicable memory for the keyword cancellation.
2)	Keyword	Sets the currently registered keyword.
3)	Execute button	Click this button after setting the necessary settings.

(3) Canceling the keyword

When making PLC data deletion to the QnACPU, free the memory locked by the keyword so that the memory may be selected as the deletion target file.

Click the **Keyword setup** button in the Delete PLC data dialog box, and click the **Disable keyword** button in the Keyword setup dialog box.



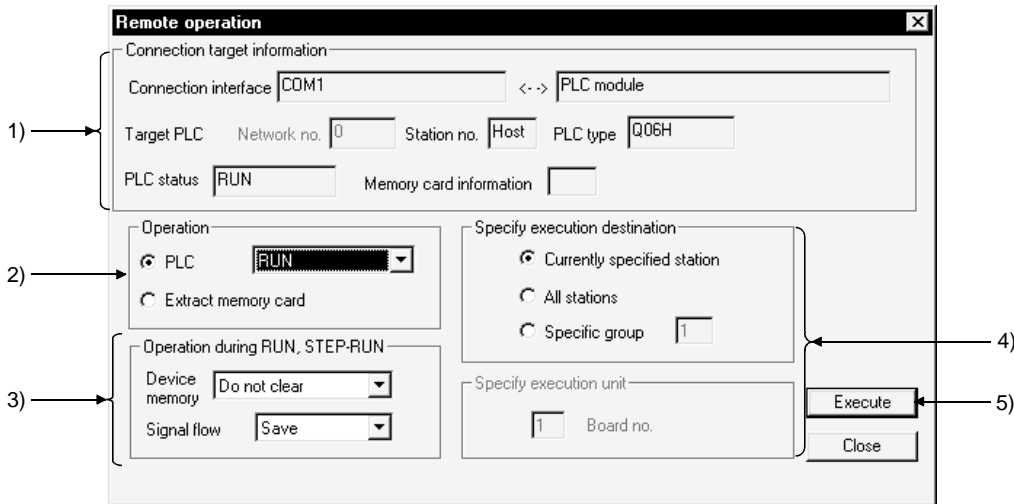
No.	Item	Description
1)	Applicable memory	Indicates the currently connected memory.
2)	Keyword	Sets the keyword registered for the PLC.
3)	Execute button	Click this button after setting the necessary settings.

POINT

- Disable keyword is valid for PLC data deletion only.
Perform Delete keyword when displaying the data of the memory whose keyword has been registered to the PLC side window.
- If you have forgotten the keyword, format the PLC memory. (Refer to (5) for PLC memory formatting.)
Note that since formatting clears all data including the keyword, write all data again.
- Since the keyword is written directly to the PLC CPU by execution of registration, the parameters and like need not be written to the PLC.
The keyword is made valid immediately after registration.

7.4.2 Remote operation

Change the running status of the PLC CPU from GX Explorer.
 Note that this operation is enabled in the RUN mode of the PLC CPU.
 Click the **Remote operation** button in the Delete PLC data dialog box.



No.	Item	Description
1)	Connection target information	Shows the information of the specified PLC CPU.
2)	Operation	Designates the operating state of the PLC. The following designations are possible: STOP, PAUSE, STEP-RUN, RUN, RESET and latch clear.
3)	Operation during RUN,STEP-RUN	Sets the operation with respect to the device memory and signal flow in the RUN and STEP-RUN states.
4)	Specify execution destination	Sets the applicable station for remote operation. <ul style="list-style-type: none"> • Currently specified station Executed only at the station with the connection destination designation. • All stations Executed at all stations of the network designated as the presently designated station. 1 to 4 modules can be set for execution module designation. • Specific group Executed in a specific group of the network designated as the presently designated station. Set 1 to 4 modules for execution module designation and set the group number.
5)	Execute button	Click this button after setting the necessary settings.

POINT

- Remote operation is valid when the PLC is in the RUN state.
 However, since the remote operation setting is memorized when the key switch is set to STOP, on setting the key switch to RUN, the state set in remote operation applies.
 For example, if remote operation is set to STOP while the key switch is at STOP, the PLC will remain in the STOP state even if the key switch is set to RUN.
 Similarly, if STEP-RUN is set in remote operation while the key switch is set to STOP, when the key switch is set to RUN the PLC enters the STEP-RUN state.
 In this kind of case, the RUN state has to be established by remote operation.
 If there is any disagreement in the key switch, remote operation, and remote RUN/PAUSE contact operations at the PLC, the following order of priority applies.

Operations to the PLC	Priority
STOP	1
PAUSE	2
STEP-RUN	3
RUN	4

- The QnACPU operation is determined by the combination of the key switch position and remote operation as follows.

Remote Operation Key switch	RUN	STEP-RUN	PAUSE	STOP	RESET * 1	Latch clear
	RUN	RUN	STEP-RUN	PAUSE	STOP	Operation not possible * 2
STOP	STOP	STOP	STOP	STOP	RESET	Latch clear

* 1 : Remote reset must be enabled by PLC system setting in the PLC parameters.

* 2 : Operation possible when set to STOP by remote operation.

- When removing the memory card, turn on SM605.
 The PLC CPU will result in an error if you remove the memory card that is not enabled for removal.

7.4.3 Clearing the PLC memory

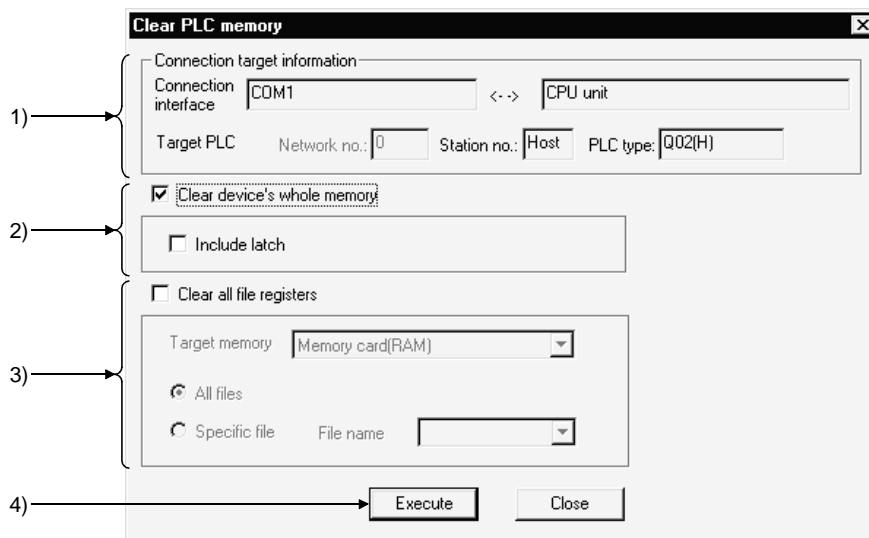
Clear all device memory of the QCPU (Q mode) or QnACPU.

This function is invalid for flash ROM.

Note that this function is enabled in the STOP or PAUSE mode of the PLC CPU.

Perform this function after placing the PLC CPU in the STOP/PAUSE status with the PLC CPU switch or by performing remote operation (refer to Section 7.4.2).

Click the **Clear PLC memory** button in the Delete PLC data dialog box.



No.	Item	Description
1)	Connection target information	Shows the information of the specified PLC CPU.
2)	Clear all device memory	When this check box is checked to select it, the device memory is all-cleared. You can set whether or not the devices designated in latch range designation are cleared.
3)	Clear all file registers	Sets all file register data to "0." The area and file names are not cleared. To designate a file, designate the applicable memory and the file name.
4)	Execute button	Click this button after setting the necessary settings.

POINT
<ul style="list-style-type: none"> • If the latched range is included in the device memory all clear operation, the latch clear key invalid area is also cleared. • All clear is not possible when the PLC is in the RUN state.

7.4.4 Formatting the PLC memory

Format the program memory, standard RAM and memory card of the QCPU (Q mode) or the built-in RAM and IC memory card of the QnACPU.

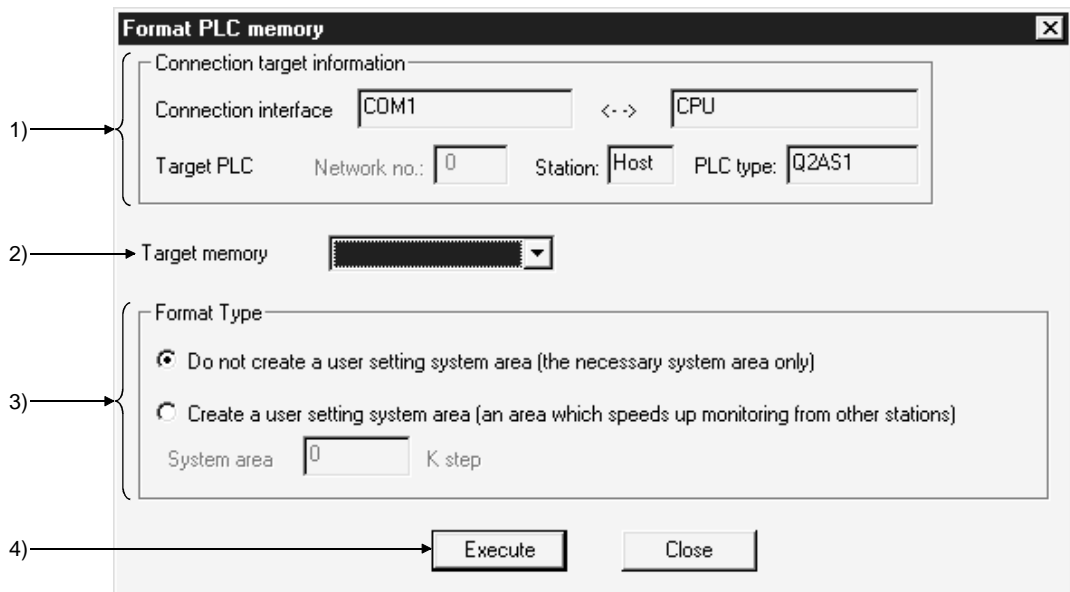
Formatting is valid for SRAM and ATA.

This function is invalid for flash ROM.

Note that this function is enabled in the STOP mode of the PLC CPU.

Perform this function after placing the PLC CPU in the STOP status with the PLC CPU switch or by performing remote operation (refer to Section 7.4.2).

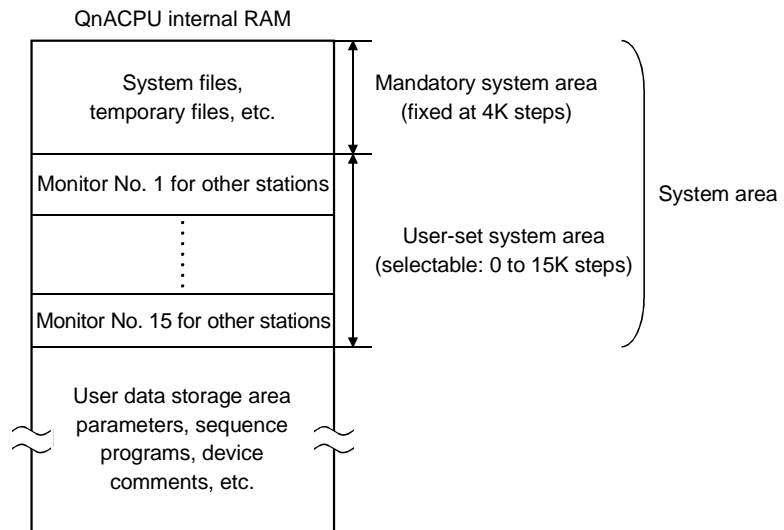
Click the **Format PLC memory** button in the Delete PLC data dialog box.



No.	Item	Description
1)	Connection target information	Shows the information of the specified PLC CPU.
2)	Target memory	Sets the object of PLC memory formatting.
3)	Format Type	<ul style="list-style-type: none"> Do not create a user setting system area (the necessary system area only) Only the system area that is essential for the applicable memory is created. Create a user setting system area (an area which speeds up monitoring from other stations) A mandatory system area and a system area for high-speed monitoring from other stations (user-set) are created. The setting range is 0 to 15K steps.
4)	Execute button	Click this button after setting the necessary settings.

POINT

- There are two types of system area: "mandatory" and "user-set."
The mandatory system area is automatically created during formatting, but the user-set system area is created according to the user's required settings.
- When the user-set system area is created, the data storage area for sequence programs and other data is reduced.
Check the data capacity before setting the range for the user-set system area.



- Files in the system area cannot be displayed as a data list.
Create the user-set system area in the internal RAM.
- If it is set in an IC memory card, the speed of other station monitoring will not change.

7.4.5 Arranging the PLC memory

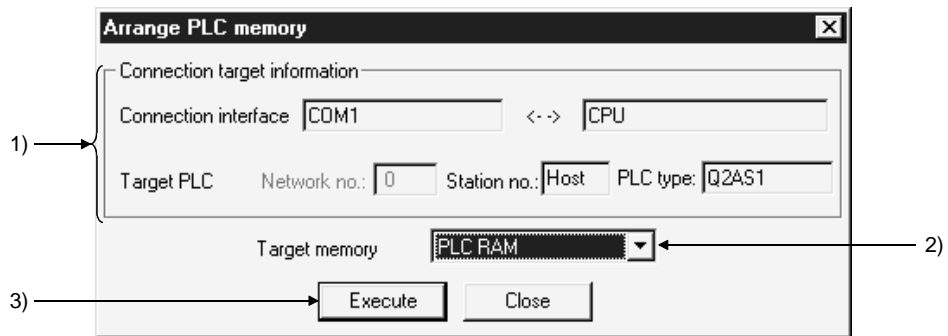
Arrange the data in the program memory or memory card of the QCPU (Q mode) or the built-in RAM or IC memory card of the QnACPU to reserve a consecutive free space.

This function is invalid for flash ROM.

Note that this function is enabled in the STOP mode of the PLC CPU.

Perform this function after placing the PLC CPU in the STOP status with the PLC CPU switch or by performing remote operation (refer to Section 7.4.2).

Click the **Arrange PLC memory** button in the Delete PLC data dialog box.



No.	Item	Description
1)	Connection target information	Shows the information of the specified PLC CPU.
2)	Target memory	Sets the PLC memory that is to be sorted.
3)	Execute button	Click this button after setting the necessary settings.

POINT

The following indicates an example of arranging the PLC Memory.

<p>28K</p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>Program A</td><td>8K</td></tr> <tr><td>Program B</td><td>6K</td></tr> <tr><td>Program C</td><td>6K</td></tr> <tr><td>Free area</td><td>8K</td></tr> </table> <p>• Total free capacity 8K • Max. contiguous free area 8K</p>	Program A	8K	Program B	6K	Program C	6K	Free area	8K	<p>→ Program B deleted</p>	<table border="1" style="width: 100%; text-align: center;"> <tr><td>Program A</td><td>8K</td></tr> <tr><td>Free area</td><td>6K</td></tr> <tr><td>Program C</td><td>6K</td></tr> <tr><td>Free area</td><td>8K</td></tr> </table> <p>• Total free capacity 14K • Max. contiguous free area 8K</p>	Program A	8K	Free area	6K	Program C	6K	Free area	8K
Program A	8K																	
Program B	6K																	
Program C	6K																	
Free area	8K																	
Program A	8K																	
Free area	6K																	
Program C	6K																	
Free area	8K																	
	<p>→ PC memory sort</p>	<table border="1" style="width: 100%; text-align: center;"> <tr><td>Program A</td><td>8K</td></tr> <tr><td>Program C</td><td>6K</td></tr> <tr><td>Free area</td><td>14K</td></tr> </table> <p>• Total free capacity 14K • Max. contiguous free capacity 14K</p>	Program A	8K	Program C	6K	Free area	14K										
Program A	8K																	
Program C	6K																	
Free area	14K																	

In the following cases, the PLC Memory cannot be arranged.

- The drive memory is faulty.
- One file is not stored in one continuous area.

7.4.6 Creating the title

Creates a label for the applicable memory when using QCPU(Q mode)or QnACPU.
Clicking button displays the dialog box shown below.



8 DIAGNOSTICS

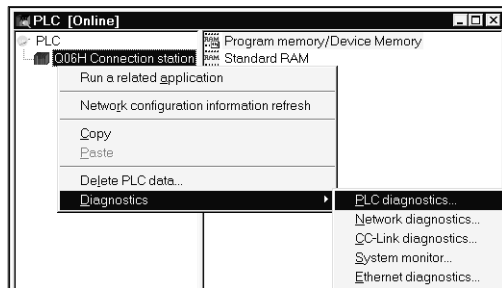
Diagnostics are designed to display the error states, failure history and others of the PLC and check system states and like on a network basis.

Since the diagnostic functions are equivalent to those of GX Developer, refer to "DIAGNOSTICS" in the GX Developer Operating Manual for operations and details.

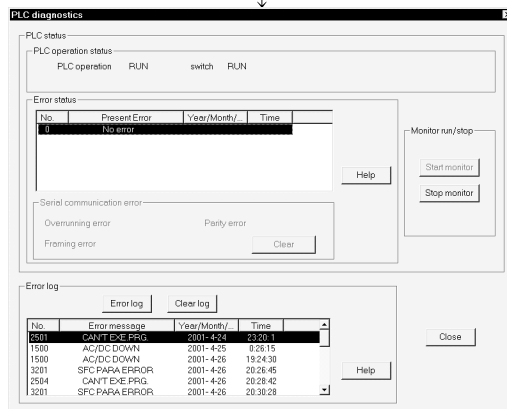
8.1 PLC Diagnostics

You can display the status, errors and others of the PLC CPU.

The following is the operation for displaying the PLC diagnostics dialog box.



- 1) Choose the PLC CPU to be diagnosed, right-click, and click the [Diagnostics] - [PLC diagnostics] menu.



- 2) The PLC diagnostics dialog box appears.
(The PLC diagnostics dialog box varies with the CPU type. The screen shown on the left is that of the QCPU (Q mode).)

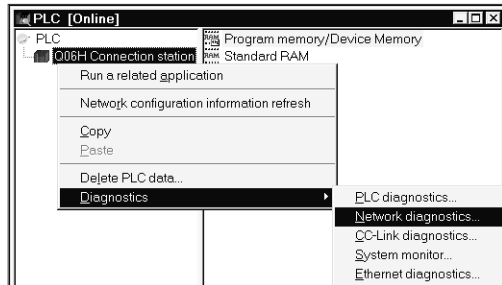
POINT

- In the PLC diagnostics of GX Explorer, the **Error Jump** button is not displayed since error steps cannot be displayed.

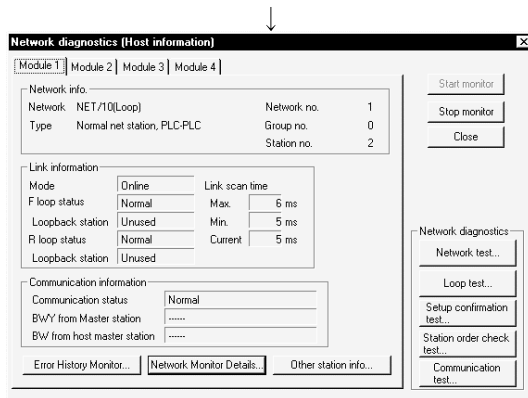
8.2 Network Diagnostics

You can check the status of specified MELSECNET(II), MELSECNET/10 or MELSECNET/H.

The following is the operation for displaying the Network diagnostics dialog box.



- 1) Choose the PLC CPU of the network to be diagnosed, right-click, and click the [Diagnostics] - [Network diagnostics] menu.

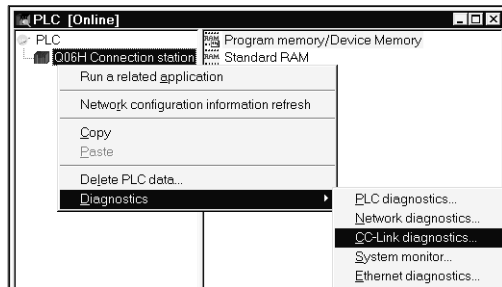


- 2) The Network diagnostics dialog box appears.

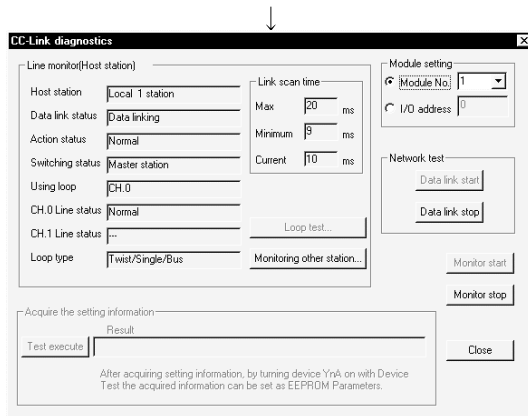
8.3 CC-Link Diagnostics

CC-Link diagnostics allow you to monitor the network information of each station and diagnose and test the network status.

The following is the operation for displaying the CC-Link diagnostics dialog box.



- 1) Choose the PLC CPU of CC-Link to be diagnosed, right-click, and click the [Diagnostics] - [CC-Link diagnostics] menu.

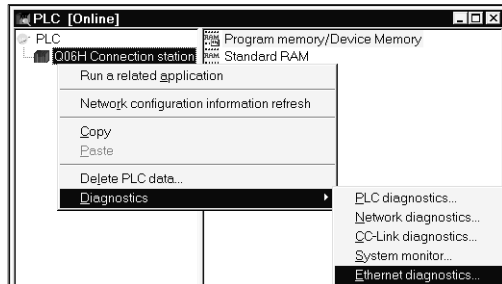


- 2) The CC-Link diagnostics dialog box appears.

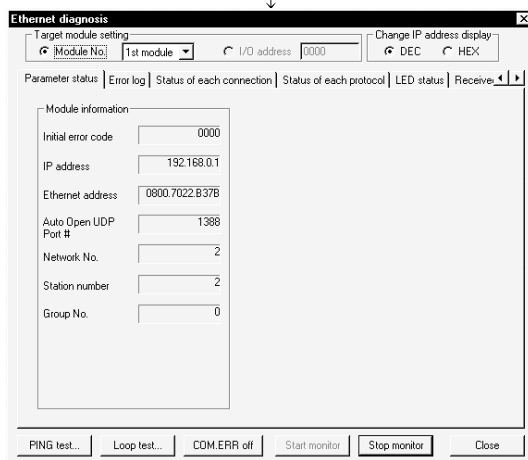
8.4 Ethernet Diagnostics

You can check various settings of the Ethernet module.

The following is the operation for displaying the Ethernet diagnostics dialog box.



- 1) Choose the PLC CPU to be Ethernet-diagnosed, right-click, and click the [Diagnostics] - [Ethernet diagnostics] menu.



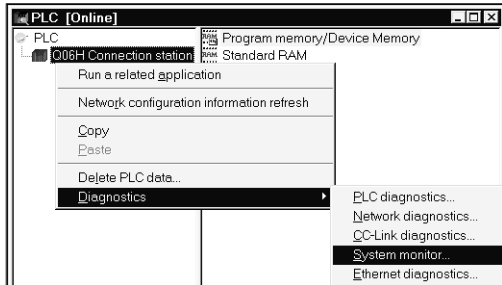
- 2) The Ethernet diagnostics dialog box appears.

8.5 System Monitor

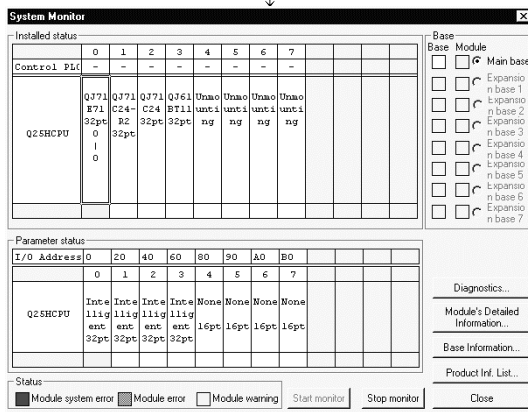
Monitor the system status of the PLC CPU.

The following is the operation for displaying the System Monitor dialog box.

- 1) Choose the PLC CPU, right-click, and click the [Diagnostics] - [System monitor] menu.



- 2) The System Monitor dialog box appears.

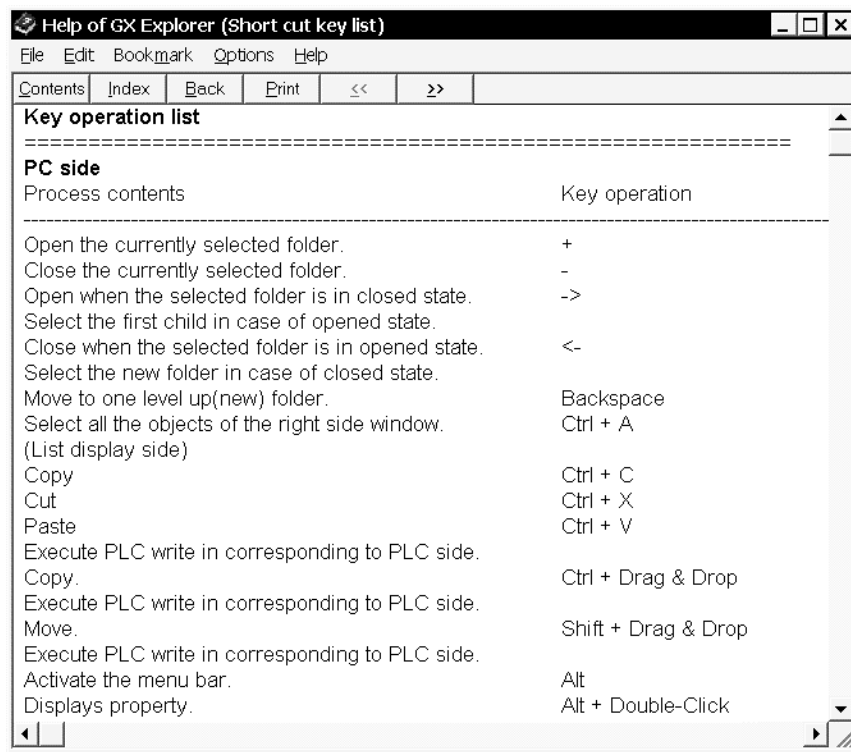


9 HELP

Help of GX Explorer has the following functions.

Function	Description
Key operation list	Displays a list of shortcut keys to the menus on GX Explorer.
Product information	Displays the information on the product such as the version of GX Explorer.
Connect to MELFANSweb	Connects to MELFANSweb. You can check the technical news (models confirmed to operate properly) and others.

<Screen example: Key operation list>



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SPREAD

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GX Explorer Version 1

Operating Manual

MODEL	SW1D5-EXP-O-E
MODEL CODE	13JU18
SH(NA)-080170-B(0109)MEE	

 **MITSUBISHI ELECTRIC CORPORATION**

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