

MELSOFT

Programmable Logic Controllers

Operating Manual (Startup)

GX Developer 7

REVISIONS

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

Print Date	* Manual Number	Revision
Jun., 2001	SH(NA)-080165-A	First edition
Sep., 2001	SH(NA)-080165-B	<div style="border: 1px solid black; display: inline-block; padding: 2px;">Pertical corrections</div> CONTENTS, Section3.1.1, Section3.1.2, Section3.2

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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 Describes the online functions of GX Developer including the programming procedure, printing out procedure, monitoring procedure, and debugging procedure. (Sold separately.)	SH-080166 (13JU14)
GX Simulator Version6 Operating Manual This manual gives a product summary, device memory monitoring and setting / operating methods for machine simulation (Sold separately.)	SH-080169 (13JU17)
GPP Function Software for Windows SW4D5C-GPPW-E SW4D5C-LLT-E Starting GPPW(Guidebook) This manual is intended for beginners of the SW4D5C-GPPW-E, SW4D5C-LLT-E. It describes how to install and start them and provides you with a basic knowledge and the methods for creating and editing circuits, making printouts, monitoring, and debugging showing a few illustrations. (Sold separately.)	IB-0800057 (13J966)
GX Developer Version7 Operating Manual (SFC) Describes the functions of GX Developer including the programming procedure and printing out procedure. (Sold separately.)	SH-080167 (13JU15)
GX Developer Version7 Operating Manual (MELSP-L) Describes the function of GX Developer including the programming procedure and printing out procedure. (Sold separately.)	SH-080168 (13JU16)
GX Developer Version7 Operating Manual (Function Block) Describes the function of GX Developer including the programming procedure and printing out procedure. (Sold separately.)	SH-080174 (13JU20)

Note: The manuals other than the Guidebook are contained on the CD-ROM with the corresponding software packages as sets.

Any of the manuals is available separately in printed form. Please indicate its manual number (model code) in the above list.

Generic Names and Abbreviations Used in This Manual

Unless otherwise specified, the following generic names and abbreviations are used for explanations in this manual.

Generic Name/Abbreviation	Description
GX Developer	Generic product name of the product types SWnD5C-GPPW-E, SWnD5C-GPPW-EA, SWnD5C-GPPW-EV and SWnD5C-GPPW-EVA. (n denotes any of versions 0 to 7.) -A means a multiple-license product, and -V an updated product.
1-license product	Abbreviation of the 1-license product of GX Developer or GX Simulator.
Multiple-license product	Abbreviation of the multiple-license product of GX Developer or GX Simulator.

Product Makeup

GX Developer and GX Simulator are made up of the following products.

Type	Product Name	Quantity
SW7D5C-GPPW-E(V)	GX Developer Version7 (1-license product) (CD-ROM)	1
	End-user software license agreement	1
	Software registration Card	1
	License agreement	1
SW7D5C-GPPW-E(V)A	GX Developer Version7 (Multiple license product) (CD-ROM)	1
	End-user software license agreement	1
	Software registration Card	n*1
	License agreement	1

*1: The same number of software registration cards as that of licenses are packed with the product.

NOTICES

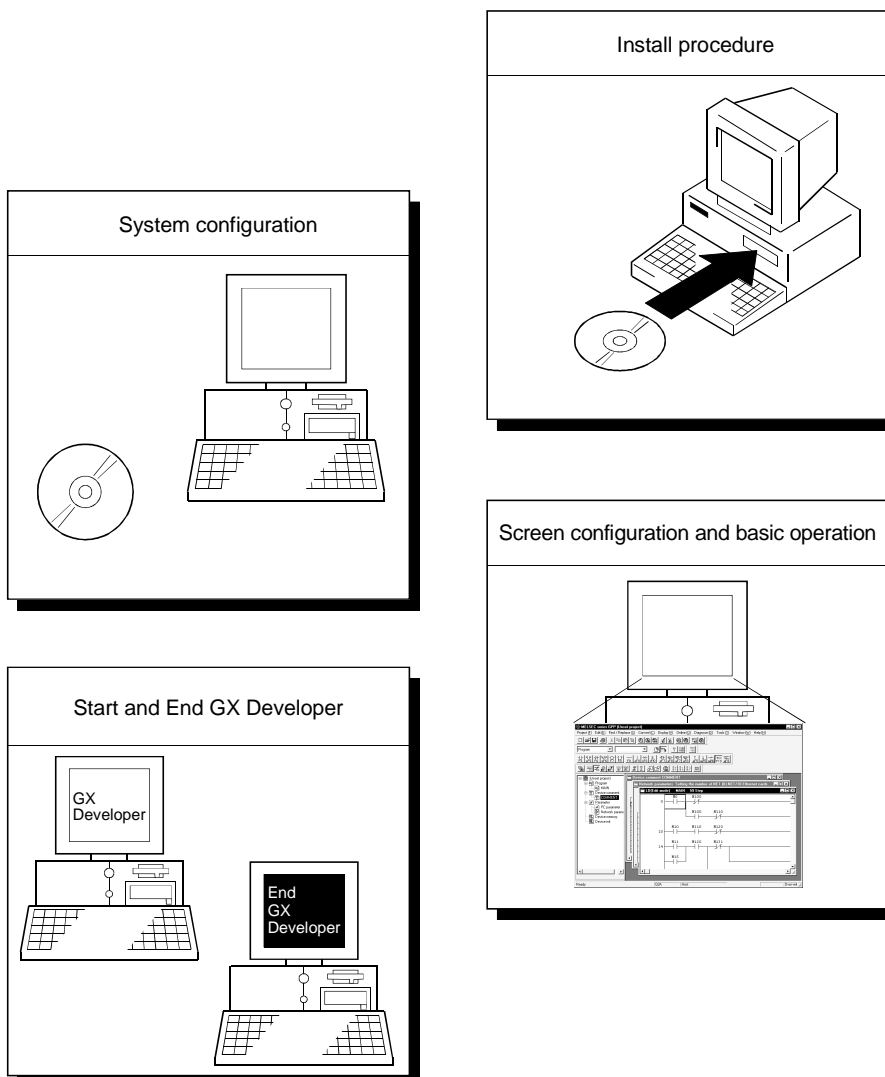
- We don't guarantee the commercially-available Windows® -based software products that have been introduced in this manual.
- We hold the copyrights of this software package.
- No part of this manual may be transcribed or duplicated in any form without prior permission by Mitsubishi Electric Corporation.
- We have attempted to cover all the revisions of software and hardware, but this manual may not contain the latest revisions.
- The software of this product requires one license to be purchased per computer.
- We permit the user to use this software package (including this manual) based on the Software License Agreement.
- We are not liable for consequences or influences due to this software package (including this manual).
- The specifications of this software package and the descriptions in this manual may be altered in future without prior notice.

1. GENERAL DESCRIPTION

This manual describes the system configuration, installation procedure, start method, screen configuration, and basic operations of the following Windows® compatible products.

- GX Developer (CD-ROM Version)

The product type ended by "-V" is an update-only product.



MEMO

1

2. SYSTEM CONFIGURATION

2.1 System Configuration

GX Developer is available to install into the PC that meets the operating environment specification in Section 2.2.

2.2 Operating Environment

The following table summarizes the operating environment.

Item	Contents	
Computer main unit	Pentium® (133 MHz or faster recommended * 1) based personal computers that are compatible with Windows operating system For label program: Pentium® 300MHz or faster	
Required memory	32MB or more * 2 (recommendation) For label program: 64MB or more (recommendation)	
Required hard disk space	For installation	150 MB or more
	For operation	150 MB or more
Disk drive	CD-ROM drive (if using CD-ROM media)	
Monitor	Resolution 800x600 pixels or higher	
Communication interface	RS-232C port : Needed when communicating with the PLC CPU. (Required when accessing a PLC CPU other than the Q02H, Q06H, Q12H and Q25HCPU.)	
	USB port : Can be used when communicating with the QCPU (Q mode). (Excludes the Q00J/Q00/Q01/Q02CPU and remote I/O modules.)	
Operating system	Microsoft® Windows® 95 operating system Microsoft® Windows® 98 operating system Microsoft® Windows® Millennium Edition operating system Microsoft® WindowsNT® Workstation 4.0 operating system Microsoft® Windows® 2000 Professional operating system	

*1: Pentium® 150MHz or more is recommended for use of Windows® Me.

*2: 64MB or more is recommended for use of Windows® 2000.

POINT

- 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.
- Depending on the operating environment of the personal computer, editing on multiple screens opened for programming or like may cause a memory shortage error.
When the personal computer is used with only GX Developer booted, the number of edit screens should be up to 40 as a guideline.

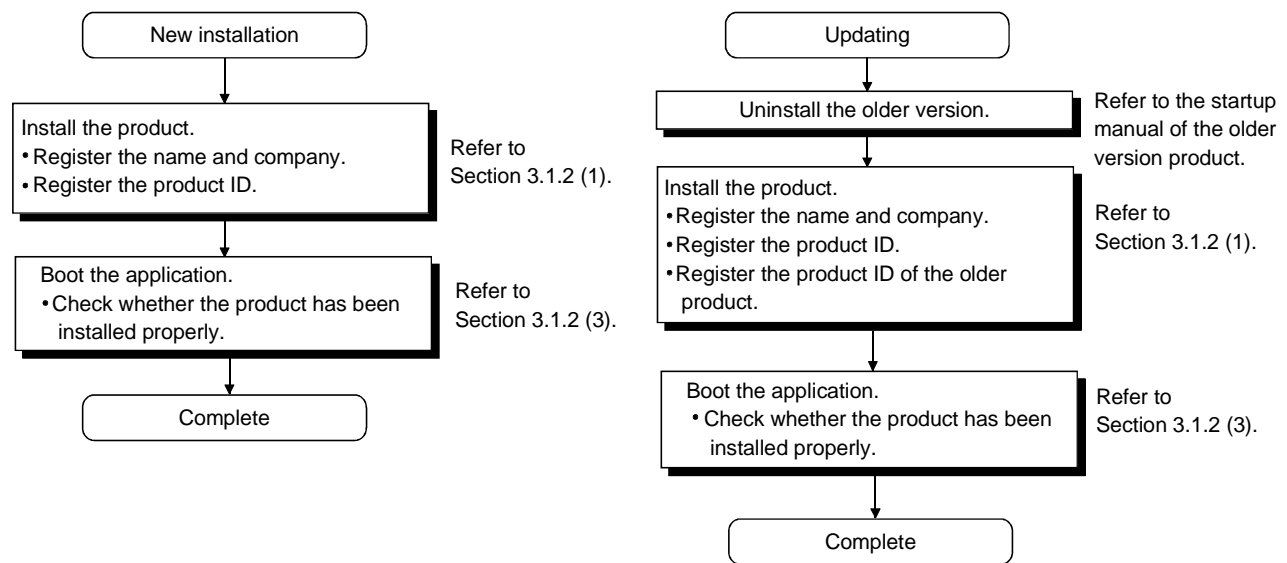
3. INSTALLATION AND UNINSTALLATION

This chapter explains how to install and uninstall the product.

3.1 Installation

3.1.1 Installing Procedure

Install any of GX Developer in the following procedure.



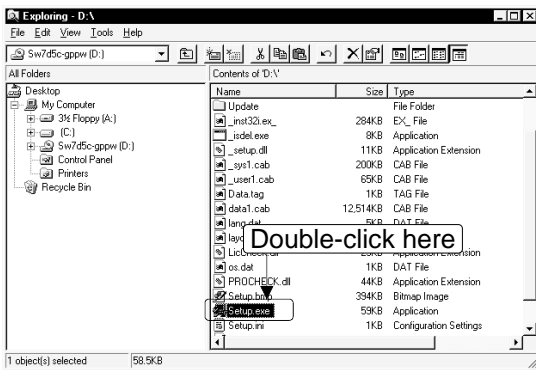
3.1.2 Installing Operation

Before starting installation, confirm the following.

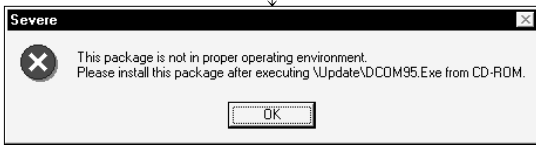
POINT
<ul style="list-style-type: none"> • Terminate all the other applications running under Windows® before installation. • When using Windows NT® Workstation 4.0 or Windows® 2000 Professional, log on as a user having the administrator attributes (for computer administration). • If the license key FD is valid, installing this product enables updating. (The license right of the older version decreases by one.) • To perform uninstalling operation, refer to the startup manual of the product currently installed.

3

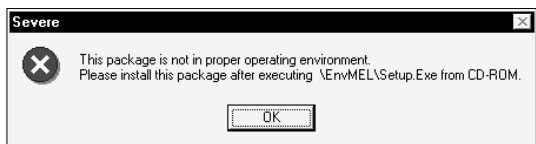
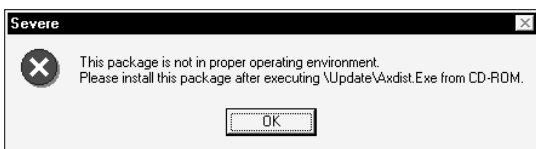
(1) Installing the product



- 1) Start Windows® Explorer and click the drive in which the disk has been inserted.
Double-click "Setup.exe".
On Windows® Explorer, choose [Start]-[Programs]-[Windows Explorer].



- 2) If either of the left screens appears, perform operation in accordance with the instructions given in (a) in "(2) When message appears at start of installation".
After the operation is over, restart installation operation.



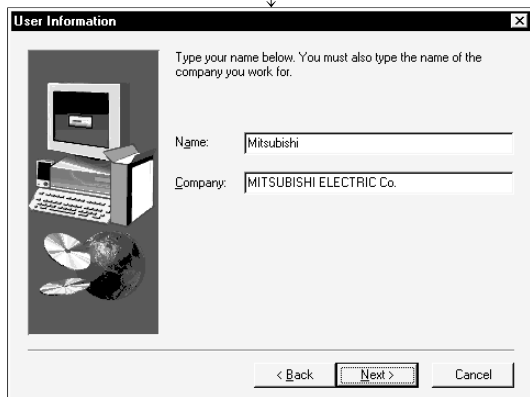
If the left screen appears, perform operation in accordance with the instructions given in (b) in "(2) When message appears at start of installation".
After the operation is over, restart installation operation.

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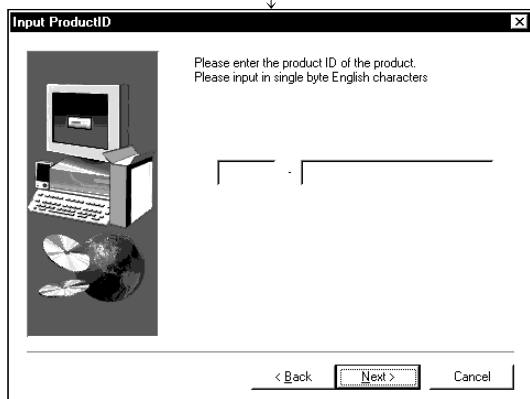


3) If the left message appears, click **OK**, uninstall the product, and then reinstall it.



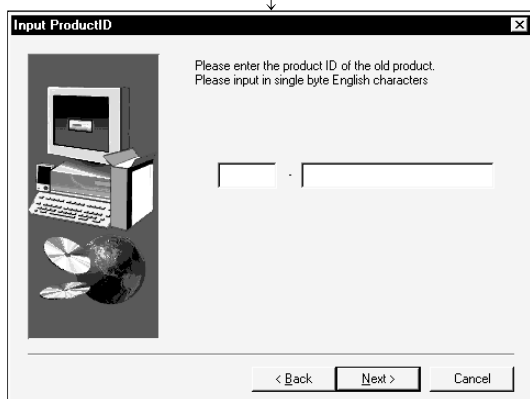
4) Type the name and company, and click **Next>**.

As the confirmation dialog box appears, perform operation in accordance with the message.



5) Type the product ID and click **Next>**.

The product ID is given in the "Software User Registration Card" packed with the product.



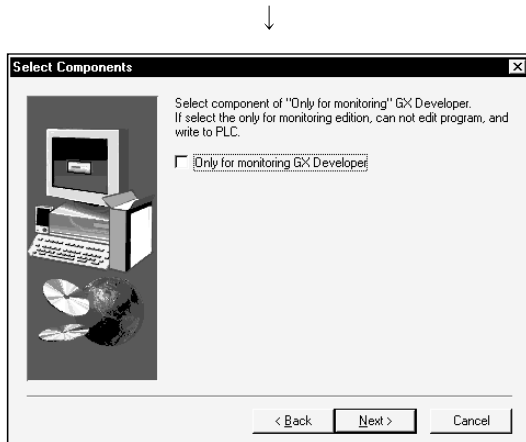
6) When the product is to be updated, the screen shown on the left appears. Type the product ID of the older product and click **Next>**.

The product ID is given in the "Software User Registration Card" packed with the product.

When the product is to be installed anew, the screen shown on the left does not appear.

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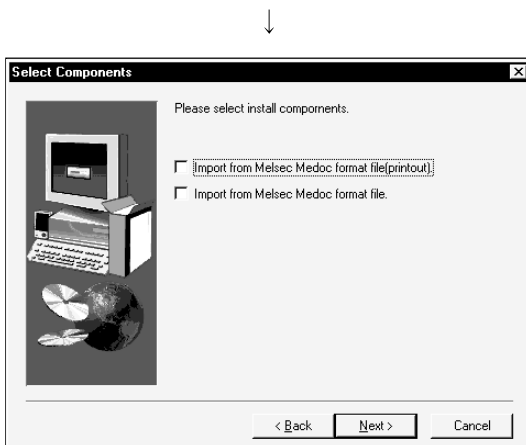


7) When using all functions, click **Next>**.

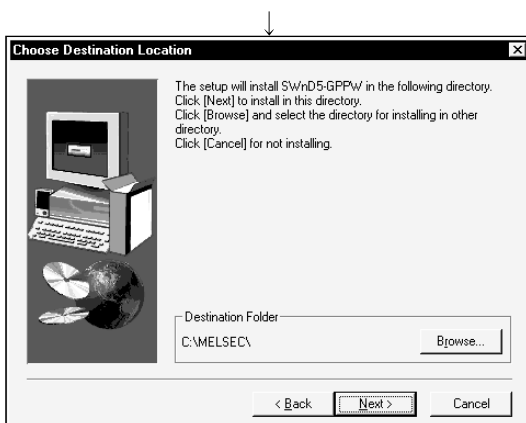
When installing monitoring-only GX Developer, turn on the check box and click **Next>**.

Installing the product as monitoring-only GX Developer prevents on-the-spot editing, accidental changes, and so on. (This disables such functions as write to PLC and PLC data deletion.)

Refer to the GX Developer Operating Manual for the functions available for monitoring-only GX Developer.



8) When you want to import to GX Developer the data created with MELSEC MEDOC or the data output as a printout data file, check the check box and click **Next>**.



9) Specify the installation Destination Folder.

If the installation Destination Folder displayed is correct, click **Next>**.

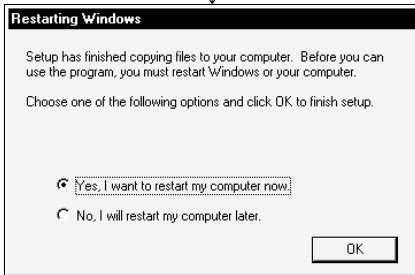
If you change the destination folder, click **Browse** and specify a new drive and folder.

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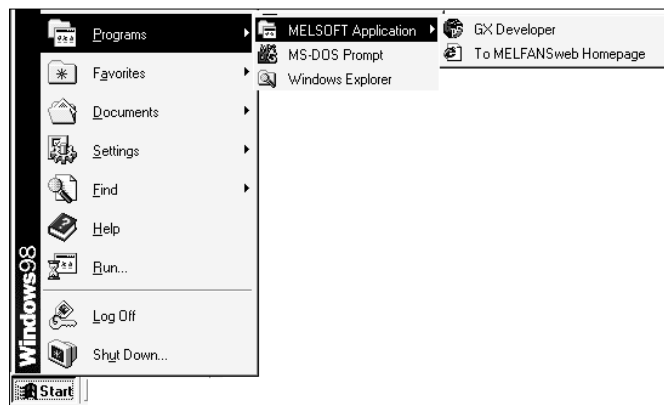


10) This completes installation.
Click **OK**.



11) Windows® must be rebooted if the screen shown on the left appears.

Installation of GX Developer registers the icon as shown below.



(2) When message appears at start of installation

When the installation of this product starts, the "This package is not in proper operating environment" message appears, disabling normal completion of installation.

In such a case, close all applications and perform the (a) or (b) operation.

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

Execute dcom95.exe or Axdist.exe provided for GX Developer.

Install GX Developer 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.)

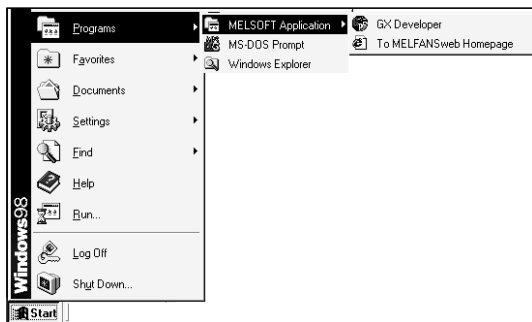
(b) Installation of EnvMEL

Execute Setup.exe in the "EnvMEL" folder on this product CD-ROM.

Install GX Developer 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.

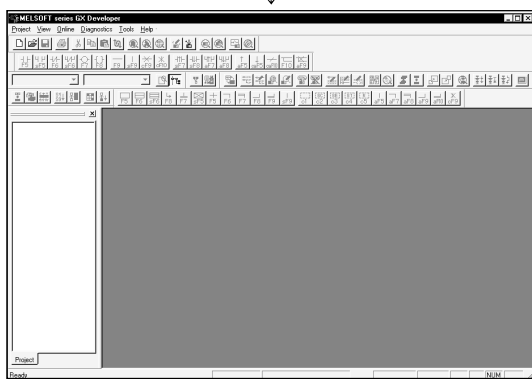
(3) Confirming that GX Developer has booted



1) Click [Start] and move the cursor to the [Programs]-[MELSOFT Application] menu.



2) Click the [GX Developer] menu.



3) GX Developer boots.
If displayed, the screen shown on the left indicates normal installation.

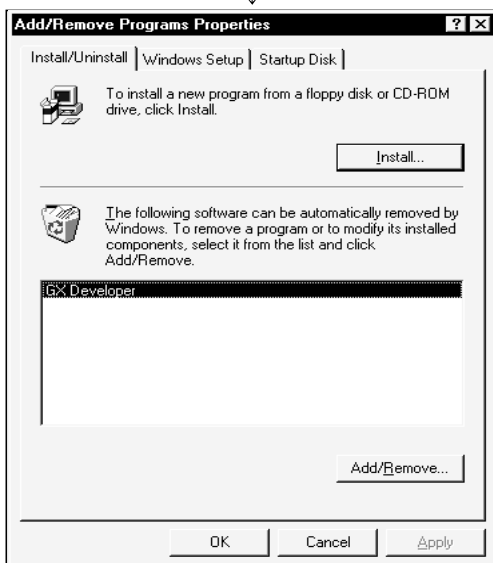
3.2 Uninstallation

This section describes the operation for removing the product from the hard disk.

Uninstallation of the product



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



- 2) Select the software package to be deleted/modified.

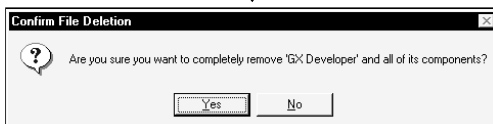
Choose "GX Developer".

After selection, click **Add/Remove...**.

The screen shown on the left is the one for Windows® 98. The screen displayed varies with the OS.

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

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



- 3) Check whether you will remove the software package or not.

When uninstalling it, click **Yes**.

Uninstallation starts.

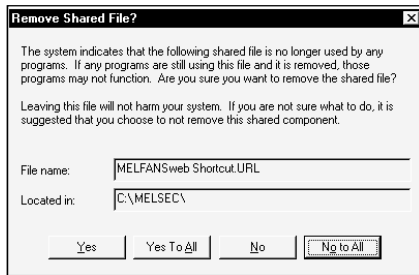
When not uninstalling it, click **No**.

This returns to the preceding screen.

* Components indicate the icons and files installed.

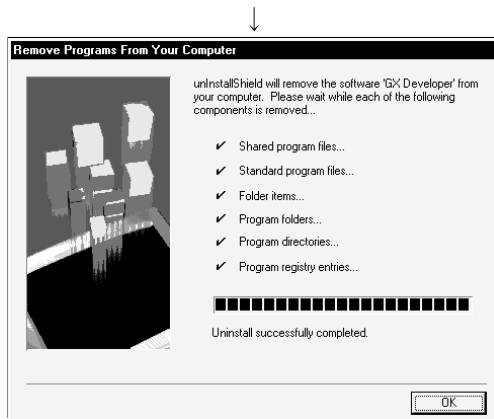
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4) If the left screen has appeared, click the **No To All** button.

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 Developer only.



5) Click **OK** when the message indicating the end of removal has appeared.

When the message indicating completion has appeared, uninstallation is complete.

3.3 Installing the USB Driver

When Windows® 2000 Professional is used, the USB driver must be installed to make CPU USB communication.

The following is the USB driver installation procedure.

POINT

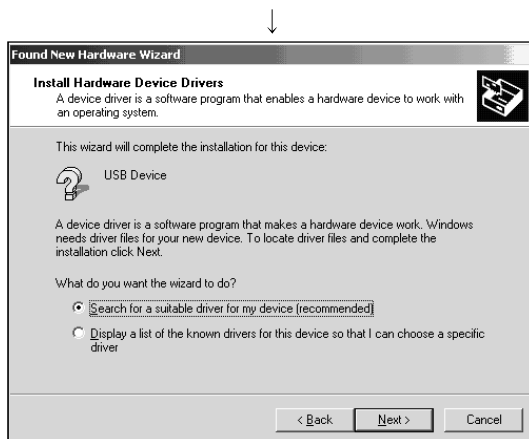
If you have selected "Block-Prevent installation of unsigned files" after [Control Panel] - [System] - [Hardware] - [Driver Signing] - [File signature verification], the USB driver may not be installed.

Choose "Ignore-Install all files, regardless of file signature" or "Warn-Display a message before installing an unsigned file" for [File signature verification], and install the USB driver.



- 1) The screen shown on the left appears when you connect the personal computer and QCPU (Q mode) by the USB cable.

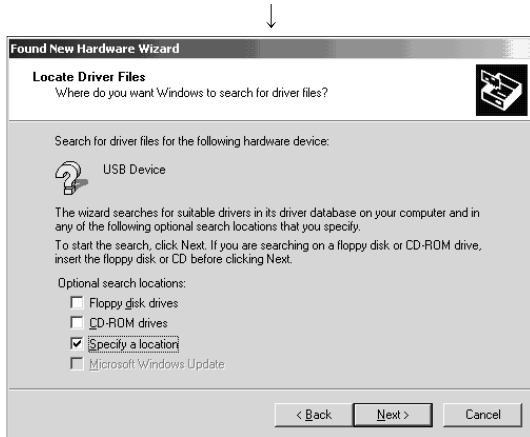
Click the **Next>** button.



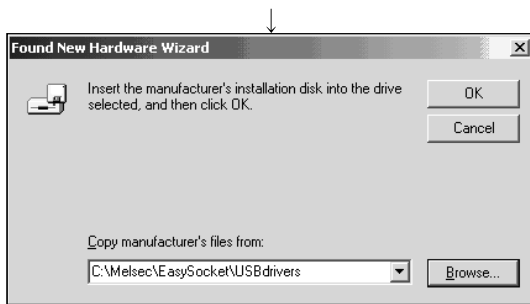
- 2) Choose " Search for a suitable driver for my device (recommended)" and click the **Next>** button.

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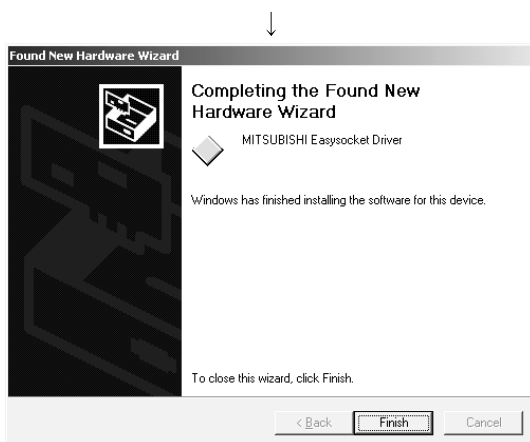
3) Check "Specify a location" and click the **Next>** button.



4) Set the "GX Developer" installation destination "Easysocket\USBdrivers" and click the **Next>** button.

The screen shown on the left shows the example of setting C:\MELSEC\Easysocket\USBdrivers.

If multiple MELSOFT products have been installed, browse the installation destination of the first product.



5) The screen on the left appears to indicate completion of installation.

Click the **Finish** button to terminate installation.

(Completion)

MEMO

4. USING THE OPERATING MANUALS (PDF DATA)

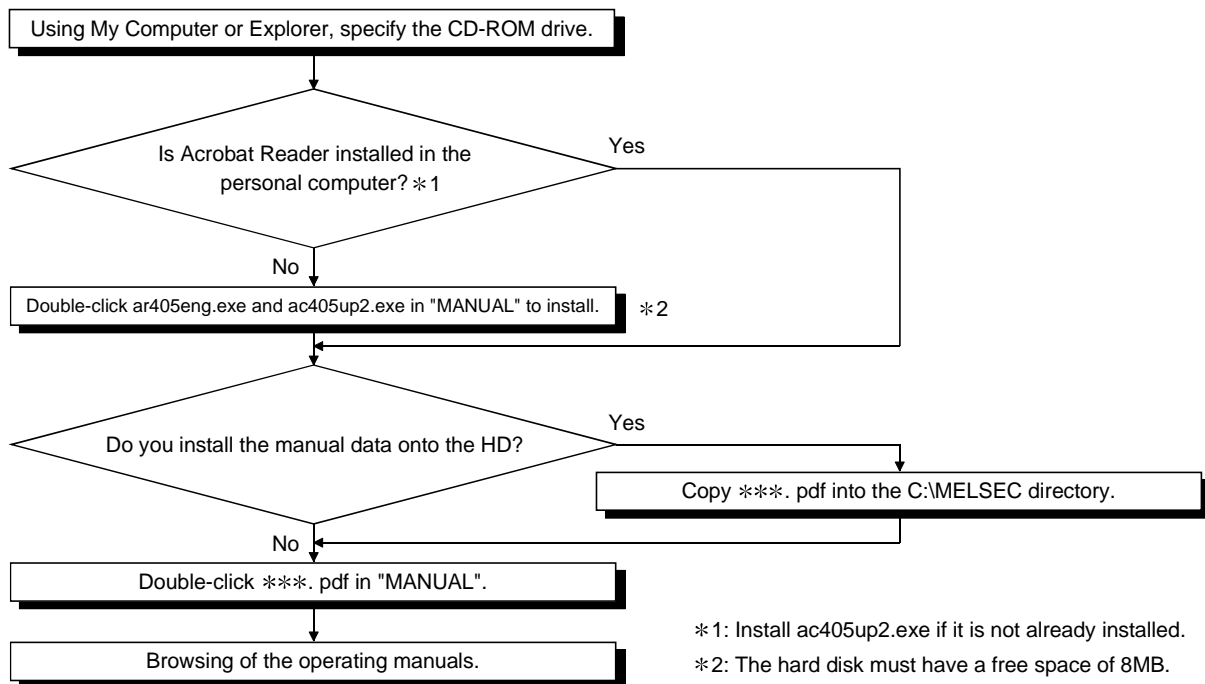
The operating manuals are contained on the CD-ROM which includes the MELSOFT software package products.

The operating manuals may either be used by reading them directly from the CD-ROM or by installing them on the HD. (They can be used at the user's option.)

The manuals are in the form of PDF data which can be viewed using Acrobat Reader of Adobe® Systems, Inc.

4.1 Operating Procedure

4.1.1 Procedure for browsing the operating manuals

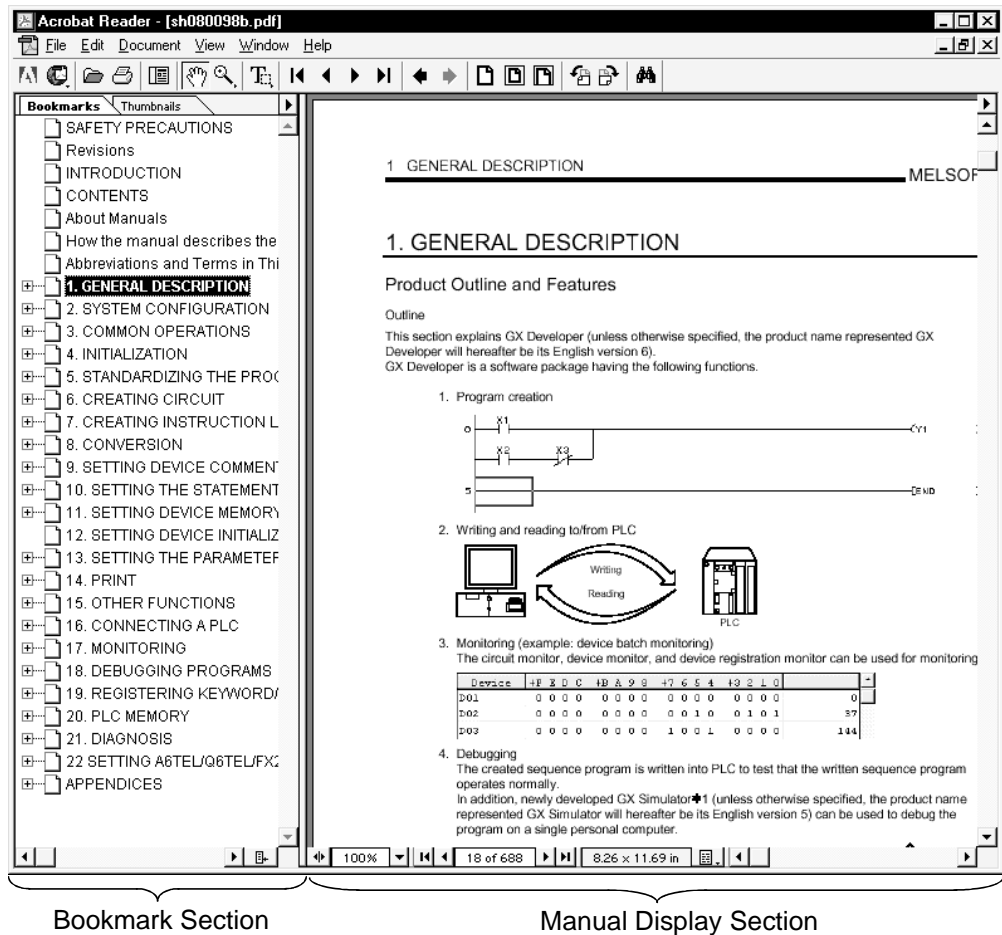


PDF data file list

POINT
The description of the files in the Manual folder of the product (CD-ROM) is given in Readme.txt.

4.1.2 Operation for browsing the operating manual

The following screen is used to brow any operating manual.



4

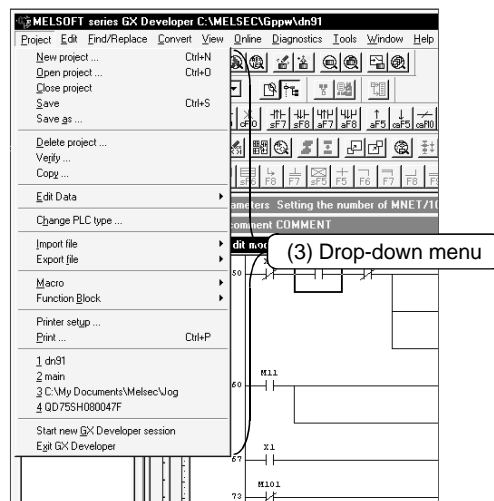
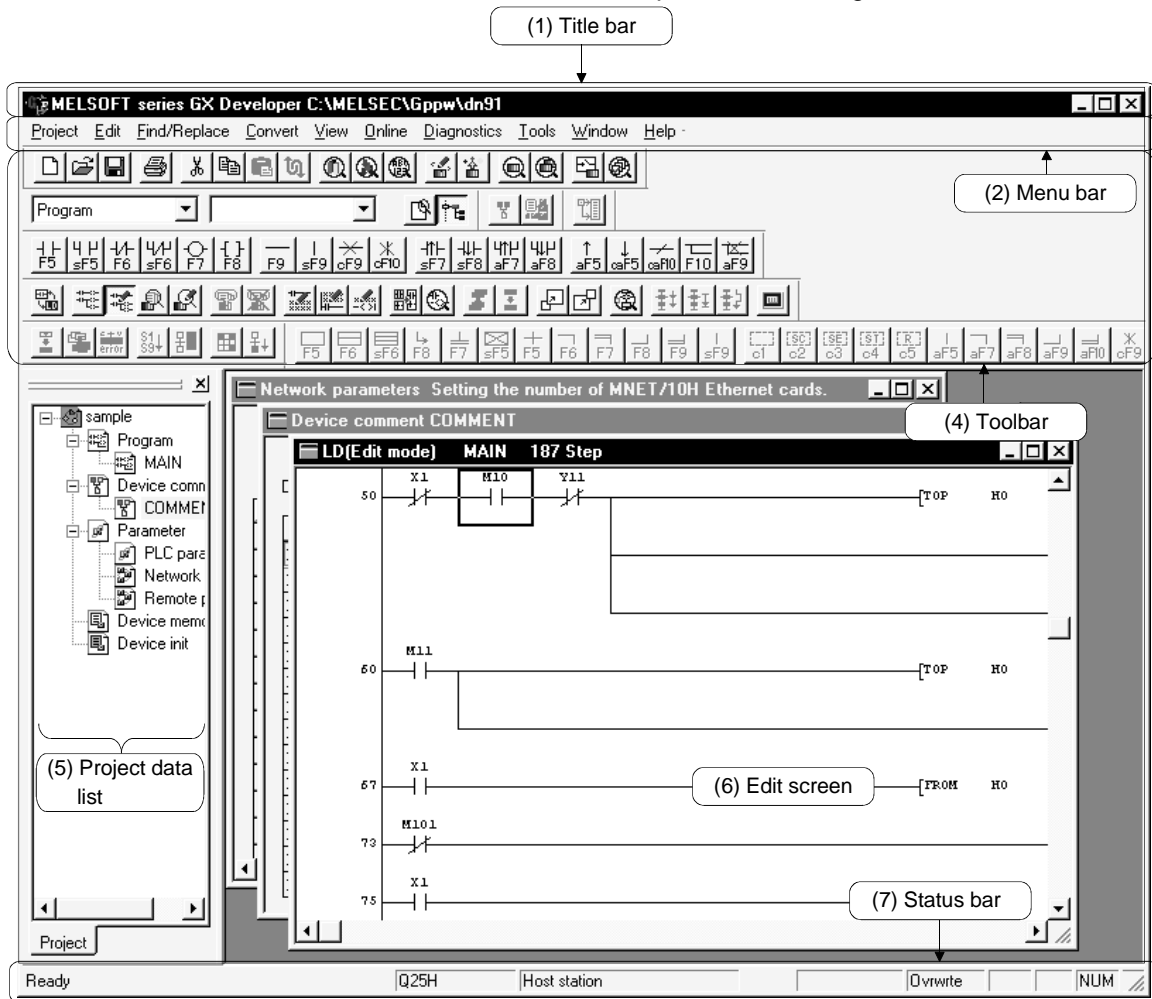
Clicking any contents item in the "bookmark section" with the mouse changes the screen in the "manual display section".

MEMO

5. USING GX Developer

5.1 GX Developer Edit Window and Various Tools

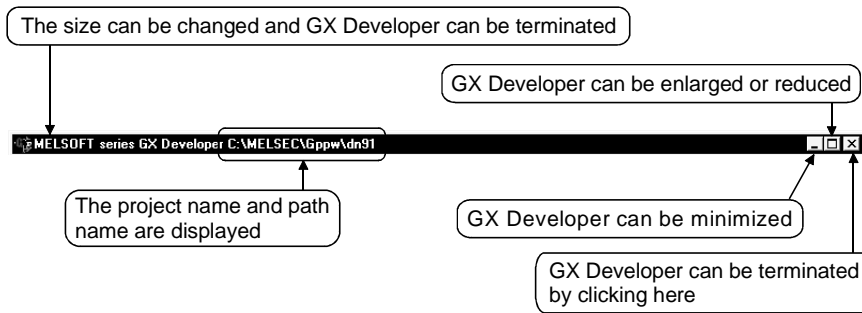
This section describes the GX Developer window configuration and various tools.



5

(1) Title bar

Indicates the name of the open project

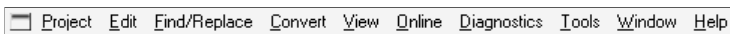


To close multiple windows at once, select [Windows] → [Close all windows].

(2) Menu bar

Displays the names of GX Developer menus.

If a desired menu is selected, the drop-down menu is displayed so that various functions can be used.

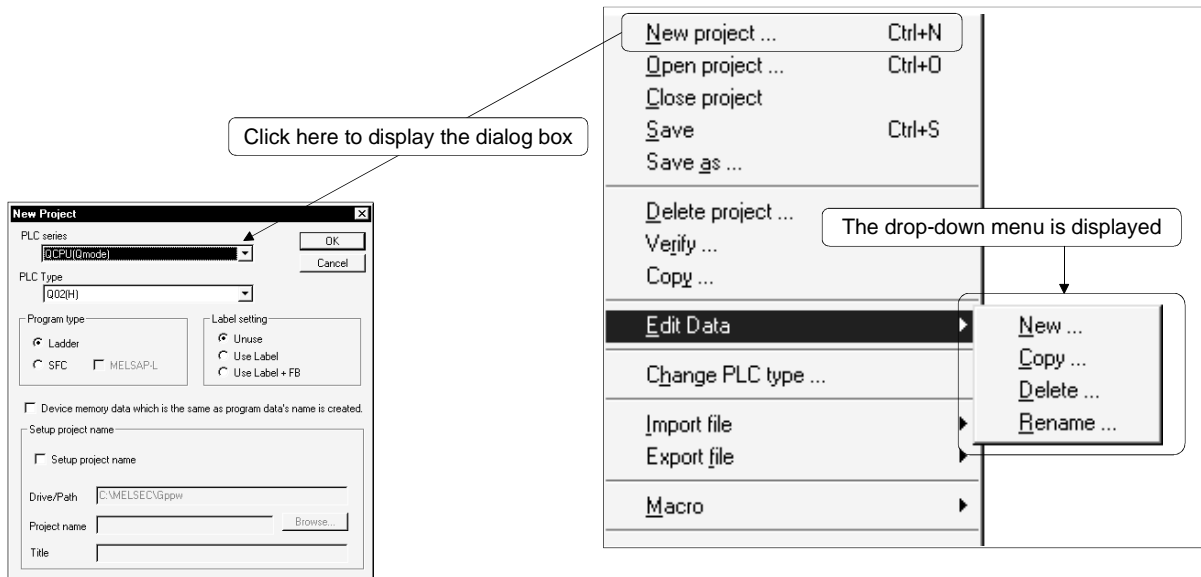


(3) Drop-down menu

Displays the names of GX Developer functions.

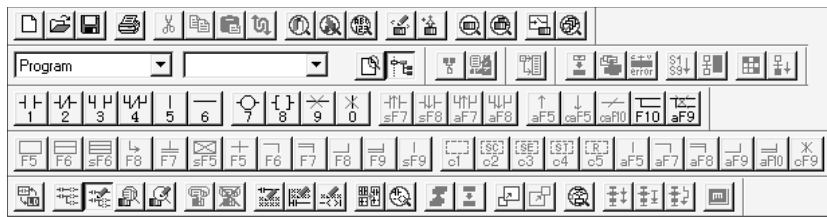
When "▶" is displayed at the rightmost end of the menu item, the drop-down menu of the selected item is displayed.

When "..." is displayed next to a function name, a setup dialog box is displayed by selecting the item.



(4) Toolbar

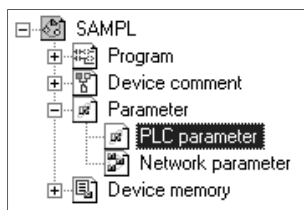
Displays the buttons for the frequently used functions assigned on the menu bar.



(5) Project data list

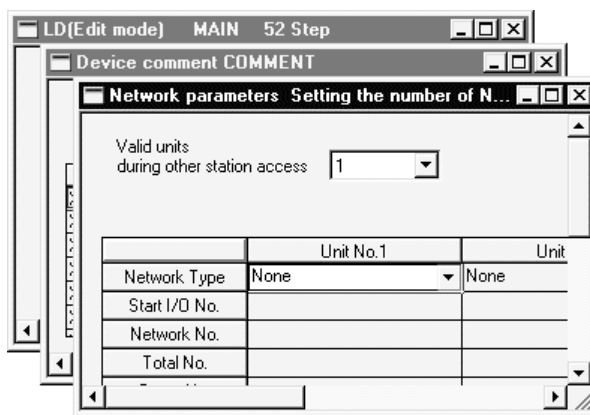
Lists project data by class.

The circuit creation dialog box and other dialog boxes can be directly called.



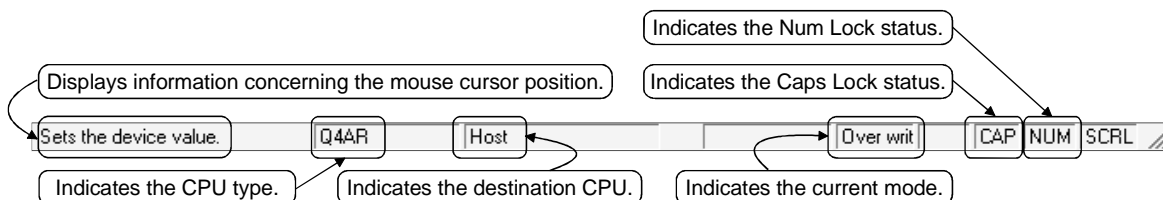
(6) Edit window

Displays the circuit creation dialog box and comment creation dialog box to make settings for circuits, comments, and parameters.



(7) Status bar

Displays the GX Developer status information.

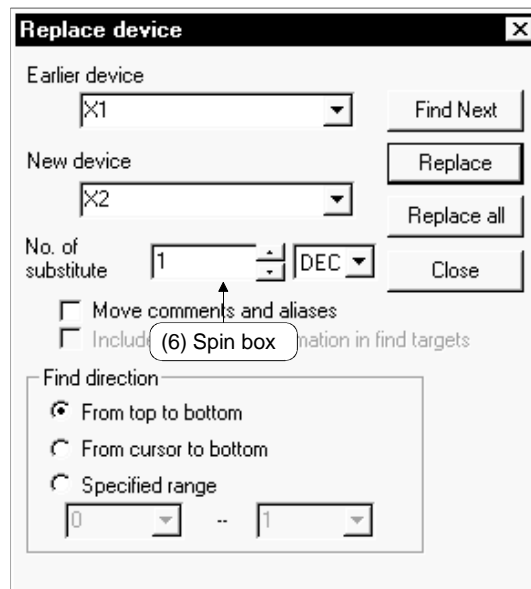
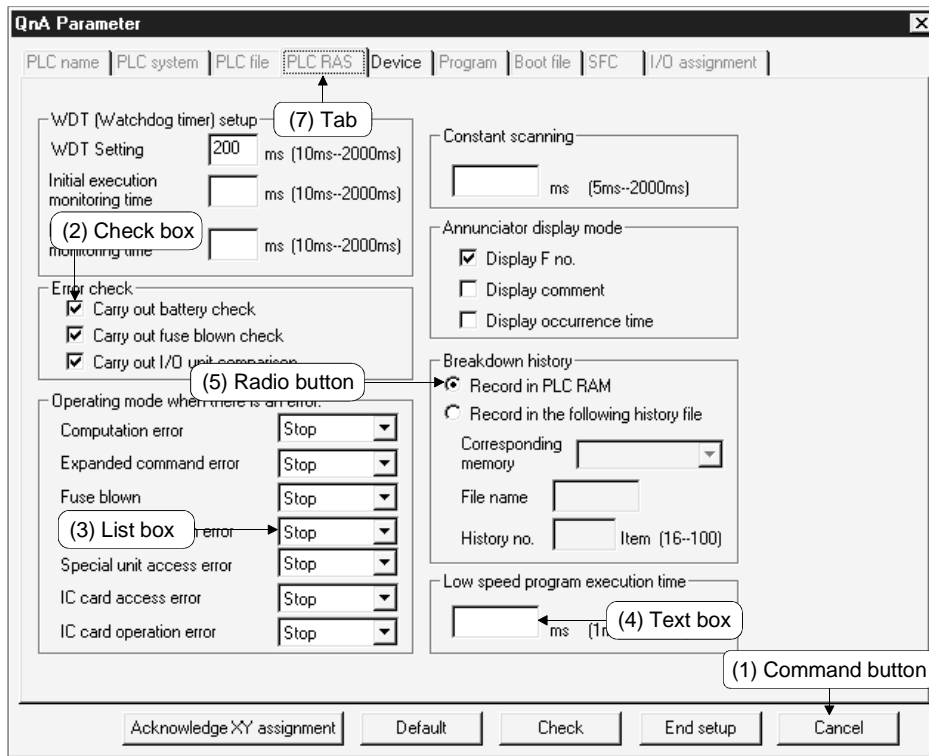


(8) Displaying a handy menu

Work efficiency can be increased by clicking the right mouse button to display a menu of items related to the current work.

When you are editing a circuit or comment, you can select [Cut], [Copy], [Paste] or [Find Device] from this menu.

5.2 Dialog Box Basic Operations



(1) Command button

Buttons such as and .

Click the button to execute the item.

(2) Check box

Click a checkbox to select and execute an item.

(3) List box

Click to drop-down the list of the items, then click a desired item to select.

(4) Text box

Enter characters with the keyboard.

The text box may permit only numeric values or letters.

(5) Radio button

Click for the item to be selected.

(6) Spin box

Spin boxes may permit direct value input or selection of a value by clicking .

When inputting a value directly, click and enter a numeric value with the keyboard.

When clicking for selecting a value, clicking increments the value and clicking decrements the value.

(7) Tab

For tab switching, click the desired tab in the property pages dialog box.

APPENDICES

APPENDIX 1 Questions and Answers about Personal Computers

This section provides basic information in question & answer style for quick reference.

- Q1. What happens when the monitor with a resolution of 800x600 pixels or lower is used?
- A1. The icon near the edges of the screen may not be displayed entirely, so that the operations cannot be performed using that icon.
Read the manual and set the dedicated resolution high enough to display the entire icon.
- Q2. What is the operating environment?
- A2. It refers to a combination of hardware equipment needed to fully utilize GX Developer, GX Simulator, etc., and basic operating software (Refer to Section 2.2).
- Q3. Is the MELSOFT software package available under Microsoft® Windows® 3.1 operating system?
- A3. The MELSOFT software package is not available under Windows® 3.1.
- Q4. What happens when the CPU is Pentium® 133MHz or slower?
- A4. When the clock speed of the CPU is slower than 133MHz, it takes longer for operations such as screen display.

APPENDIX 2 Notes on GX Developer

This section lists the questions and answers to assist you in solving the problems encountered during GX Developer operation.

Q1. Each circuit diagram is enclosed in white lines during circuit editing depending on the type of video card installed in the personal computer (card storing the characters, figures, and pictures to be displayed on the monitor as data). How can these white lines be deleted?

A1. Make necessary settings from the Windows® 95/ Windows® 98/ Windows® Me/ WindowsNT® Workstation 4.0/ Windows® 2000 "Control Panel".

Operating procedure

(1) Open "Control Panel".



(2) Open "System".



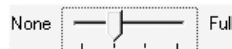
(3) Click the "Performance" tab.



(4) Click the "Graphics" button.



(5) Set "Hardware acceleration" to the entry (second entry) next to "None".



Q2. What action should be taken for the message "Can not allocate Share memory" or "Initialization failed" displayed at the start of the GX Developer software package?

A2. Restart the GX Developer software package or restart Windows® 95/ Windows® 98/ Windows® Me/ WindowsNT® Workstation 4.0/ Windows® 2000 and start the GX Developer software package again.

Q3. Why does it take time to change screen after starting setup.exe on page 3-2?

A3. It takes time when the memory-resident program (such as Virus checker) is running.

- Q4 What points are to be noted in installing PC-cilling (commercially available software package) on the personal computer.
- A4 (a) At the start of PC-cilling
Because it takes time for initialization at the start of PC-cilling, other applications in "StartUp" group may not be started.
In addition, it may take time to accept the subsequent operations after storage into the task tray.
These phenomena vary depending on the specifications of the operating environment (CPU, memory, etc.).
It is well known that this problem occurs frequently when the CPU is Pentium® 100 MHz or lower.
- (b) Effects on the system
When PC-cilling is already started, system load increases because PC-cilling checks the files.
For this reason, it may take extra time for starting the application depending on the operating environment.
These phenomena vary depending on the operating environment specifications (CPU, memory, etc.).
It is well known that this problem occurs frequently when the CPU is Pentium® 100 MHz or lower.
- (c) Effects on applications
When applications cannot be started or run normally after PC-cilling has been installed, check the operations of the applications according to the following procedure:
- 1) Uninstall PC-cilling and restart the system to check the operations of the applications.
If the same problem recurs, the cause of the problem is not PC-cilling.
In such a case, contact our application support engineers.
 - 2) When the applications run normally after PC-cilling has been uninstalled, install PC-cilling again and change the monitor setting to "Custom Monitor." In addition, change the selection of the checkboxes for Extension Designation or Monitor Function.
- * When the system does not work well after the step 1) has been performed, install Windows® 95/ Windows® 98/ WindowsNT® Workstation 4.0 and/or applications again.

- Q5. When a program is read from a floppy disk, it cannot be read from the floppy disk so long as the disk is write protected. Why not?
- A5. Because multiple GX Developer can be started, access to files in the same floppy disk may occur simultaneously. In such a case, an access flag is written to a floppy disk at the time of floppy disk access to prevent the files in the disk from being accessed from another GX Developer. Namely, no files can be read in this system so long as the floppy disk is write protected.

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SPREAD

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