



Mitsubishi Integrated FA Software
MELSOFT GX Series

- **GX Developer**
Version 7
- **GX Simulator Version 6**

2001 No.150E

NEW PRODUCT RELEASE



New!

Enhancement of GX Developer

New features

////// *"Function block" function*

- To standardize programs and reduce the development time.
 To prevent man-caused mistakes

////// *Installation of "only for monitoring GX Developer" version*

- To enhance preventive maintenance of a work site

////// *Compatibility with new products, Basic Model QCPU (Q00JCPU, Q00CPU, Q01CPU)*

- To program and debug all Q Series CPU
- To utilize the exiting programs by "Change PLC TYPE" function

////// *Compatibility with MELSEC Q Series-compatible PC CPU module (CONTEC)*

Enhancement of GX Simulator

New features

////// *Serial communication fuction*

- To perform serial communication with external devices

////// *Compatibility with new products, Basic Model QCPU*

- Complying with Basic Model QCPU like GX Developer Version 7

Enhancement of whole GX Series

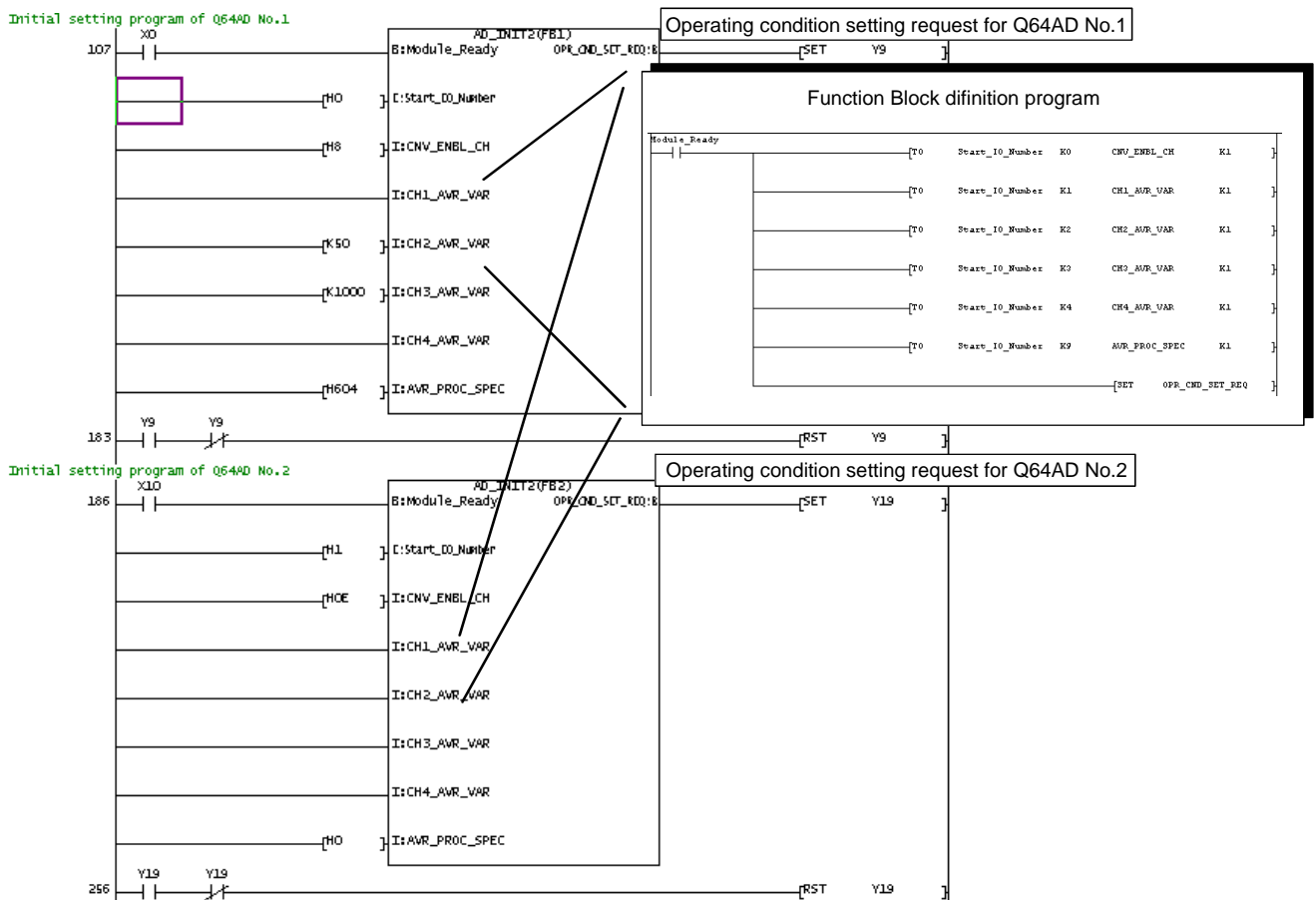
////// *Compatibility with Windows 2000 Professional and Microsoft Windows Me.*

[List of new features (GX Developer Version 7)]

New features	Description	Related NEW PRODUCT RELEASE
Compatibility with QUPU	Compatibility with Q00JUPU, Q00CPU, Q01CPU	-
Program standardization	Incorporating "Function Block" function	-
Installation of the version dedicated to monitor	This version can be installed by selecting the standard version and the version dedicated to monitor function from GX Developer functions.	-
Operating environment	Complying with Microsoft Windows 2000 Professional Operating System and Microsoft Windows Millennium Edition	-
Compatibility with new products	Complying with QJ71E71-100 type Ethernet Interface module	No.155E
	Complying with MELSEC Q Series-compatible PC CPU module (CONTEC)	-
Telephone line connection function	Complying with the "Callback" function of QJ71C24 type Serial Communication module	-

[Detail of the new features (GX Developer Version 7)]

- "Function block function" standardizes the programs and reduces the development time .
 - This function allows you to register the frequently-used part of program as a file, that is called "function block" . You can create a large program easily by pasting the function blocks to any position of the program if necessary.
 - This function prevents coding mistakes and improves the readability, which leads to the ease of editing and debugging programs.
- *This function is compatible with High Performance model QCPU and QnACPU.

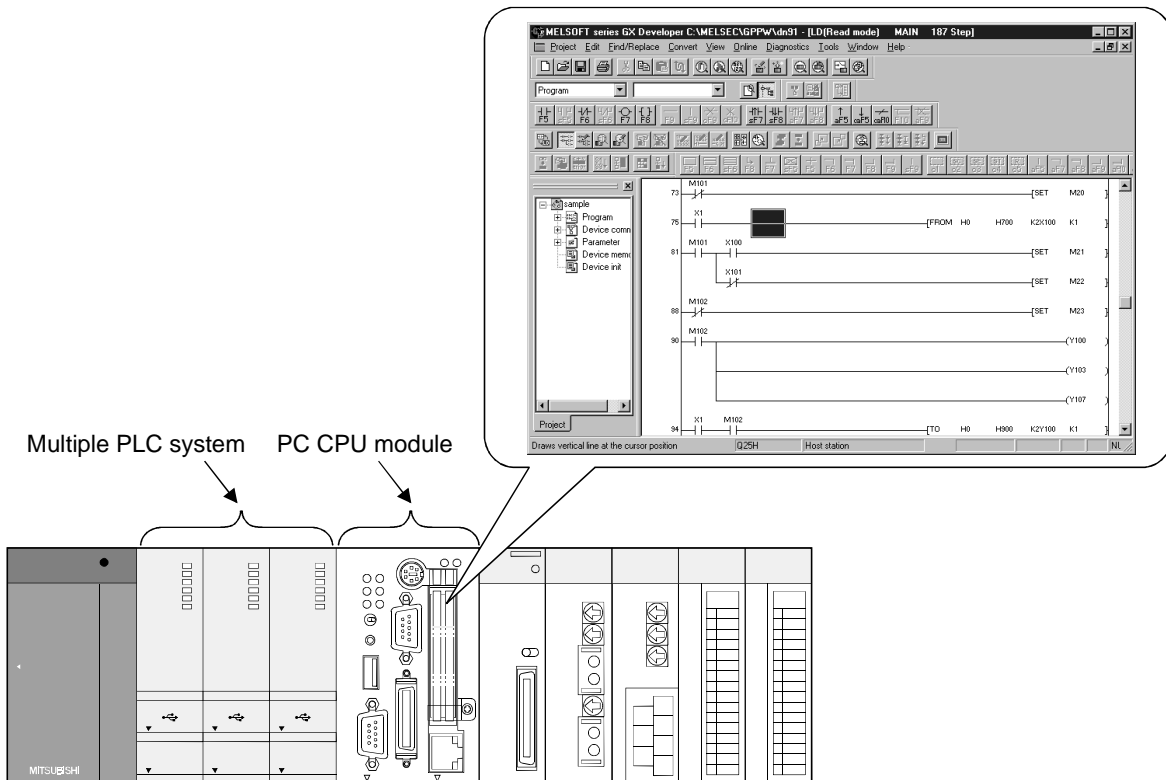


- Installation of "only for monitoring GX Developer" version
 You can install the "only for monitoring GX Developer" version by selecting "Only for monitoring GX Developer" on "InstallShield Wizard" screen. This version is suitable for preventive maintenance, and protects the following programs from tampering.
 - Ladder monitoring program
 - Device monitoring program
 - Diagnosing program, etc.

- Compatibility with new products, Basic Model QCPU
 New CPUs compatible with GX Developer

PLC	Type
QCPU(Q mode)	Q00JCPU, Q00CPU, Q01CPU

- Compatibility with MELSEC Q Series-compatible PC CPU module (CONTEC)
 You can maintain the other PLCs with the GX Developer Version 7, which is installed in the PC CPU module.



- Compatibility with Windows 2000 Professional and Windows Me.

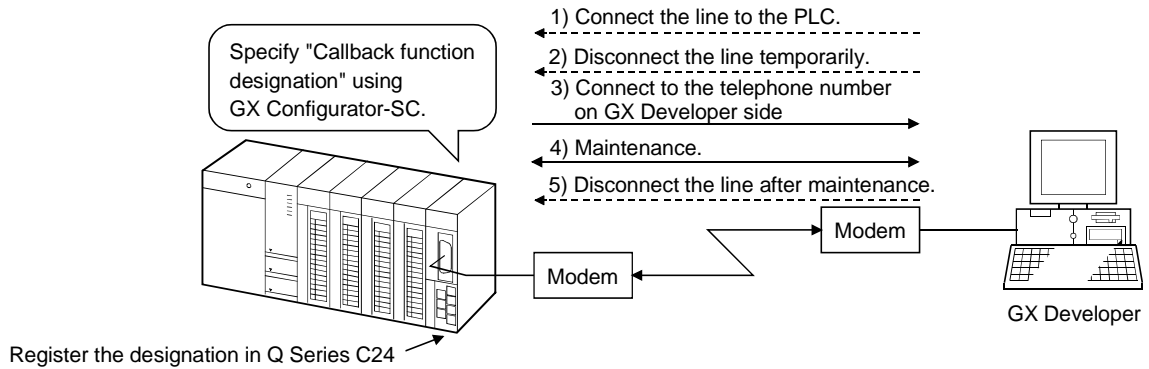
● **Callback function**

- Callback function allows you to make the access cost at the expenses of the PLC facility side.

<Compatible module>

QJ71C24/QJ71C24-R2 type Serial Communication module

- * Callback function automatically reconnects the long distance line to GX Developer side from the PLC side. This function works when you connect them via a modem.



[Improved functions (GX Developer Version 7)]

Improved function	Description
Monitor	The monitoring performance for the local device is improved. Monitors the local device of the active window.
CC-Link diagnosis	Displays the maker codes (maker names) of the connected devices.
Ethernet diagnosis	Executes PING and loopback test of the devices on Ethernet from the GX Developer directly connected to the PLC CPU.
Set TEL data	Displays graphically, as well as diagnoses the error at connection error occurrence.
Help	Displays the errors of remote Input/Output module for QCPU (Q mode).

[Detail of new features (GX Simulator Version 6)]

Serial communication function

- Serial communication with external devices

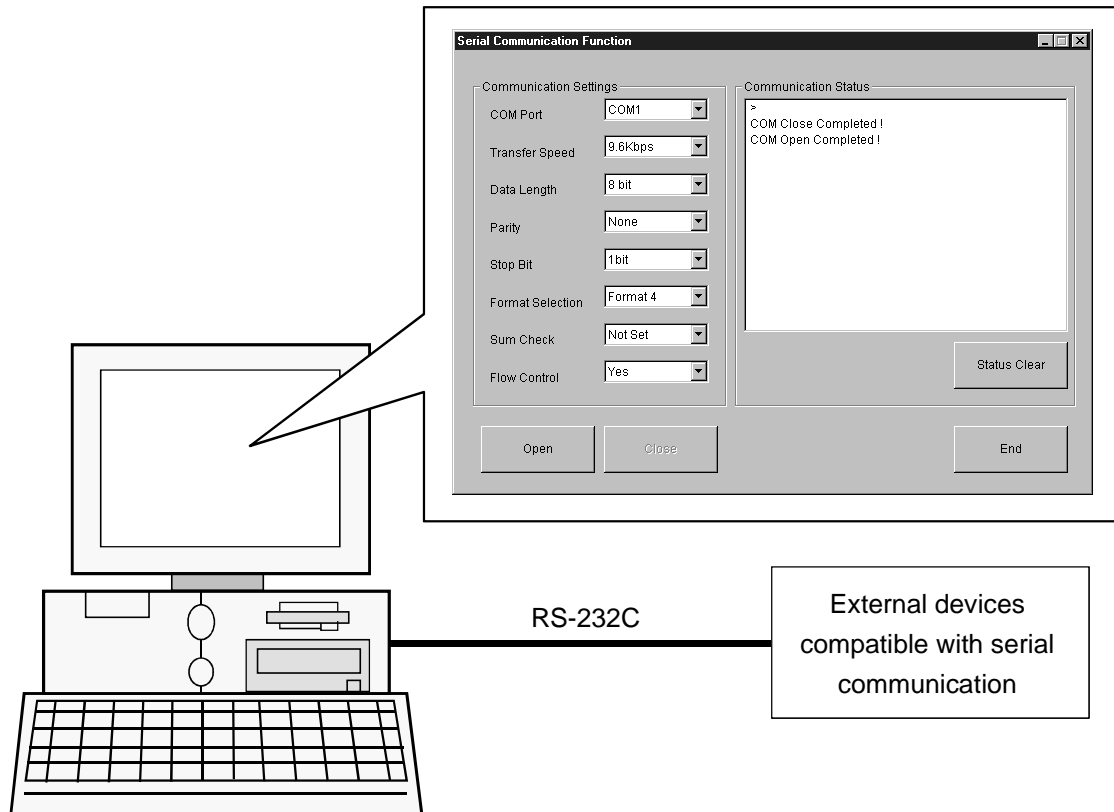
This function enables debugging with external devices connected to the COM port on the PC

- This function allows the external devices compatible with the procedure dedicated to MELSEC PLC communication to connect with Q CPU for access to PLC CPU.

- This function allows the external devices to read/write the devices of the PLC CPU.

The sequence program for data communication is not necessary for the GX Simulator which can work as a PLC.

*This function is not compatible with FXCPU



* Serial communication function is not compatible with the nonprocedural protocol for serial communication created by the ladder.

- Compatibility with new products, Basic Model QCPU

GX Simulator Version 6 complies with Q00JCPU, Q00CPU and Q01CPU, like GX Developer Version 7.

- Compatibility with Windows 2000 Professional and Windows Me

[New Utility Package]

QCPU-compatible utility package version □.10L or later complies with Basic Model QCPU, Windows 2000 Professional and Microsoft Windows Me.

[List of specifications]

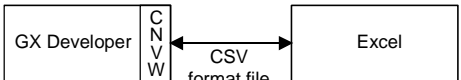
Compatible PLC CPU ... A = ACPU, B = QnACPU, C = FXCPU, D = QCPU (Q mode), E = QCPU (A mode)

○: Compatible, △: Compatible with QCPU module with first five digits of serial No. 02092 or above, -: Not available

Item	Details	Compatible PLC CPU				
		A	B	C	D	E
General environment	Compatible PLC CPU ACPU, QnACPU, FXCPU, QCPU(Q mode), QCPU(Amode), Motion controller (SCPU) * There are following two modules of QCPU (Q mode): • High Performance model QCPU (Q02(H)CPU, Q06HCPU, Q12HCPU, Q25HCPU) • Basic model QCPU (Q00JCPU, Q00CPU, Q01CPU) * A0J2, A1, A2, A3, A3H, A3M, A3V, A52G and A73 are not available.			○		
	Compatibility with programs in GX Developer format <pre>graph TD Q[Q Series] --> A[A Series] A --> FX[FX Series] A --> QnA[QnA Series]</pre> The A Series includes the QCPU (A mode) and motion controller (SCPU).		○	The A Series programs can be used in their original state, when using in the QCPU (A mode).		
	Compatibility with format data Reads the other format files and converts it to the GX Developer format, or convert from the GX Developer format to the other format file. GPPQ format compatible with QnACPU (SW□IVD-NX-GPPQ-E) GPPA format compatible with ACPU (SW□IVD-NX-GPPA-E) FX format compatible with FXCPU (FXGP(DOS), FXGP(WIN))			○		
High compatibility with Windows standard	Personal computer OS environment Microsoft Windows 95 Operating System Microsoft Windows 98 Operating System Microsoft Windows Millennium Edition Microsoft Windows NT Workstation Operating System Version 4.0 Microsoft Windows 2000 Professional Operating System			○		
	Operating performance • Input edition with list format, function key, mouse and menu. (By customizing the keys, the same key operations as the conventional software can be used.) • Displays the correct operation and setting when operation or setting is mistaken. • Program edition with instruction HELP			○		
	Editing performance • Edits multiple programs and comments created with multi-windows simultaneously. • Cuts, copies or paste data in contact, line or block units between projects, files or same programs. • Utilizes comment data edited with software on the market, such as Excel or Word. • In addition, pastes comment data edited with GX Developer into Excel or Word, etc.			○		
	Flexible operating performance of GX Developer • Reads and replaces circuits with device and instruction search. • Global search • Creates macro instructions with macro registration or macro use. • Edits and displays while switching between the circuit mode and list mode. 1) Speedy changing. 2) Charges the screen can basing on the position of the cursor between the circuit and list screen 3) Saves the previously displayed information as the default.			○		
	Flexible editing performance of GX Developer • Assigns comments can to all devices. (Comments can have up to 32 characters. The comment range settings is unnecessary.) • Displays all comment points as 2x8 characters/3x5 characters or 4x8 characters/3x5 characters (select the changeover) • Edits the circuit while displaying comments. • Edits the comments with search and change.			○		

Item	Details		Compatible PLC CPU						
			A	B	C	D	E		
Ample program creation and maintenance functions	Programming language	• Ladder	○						
		• List							
		• SFC	MELSAP-II	○	-	-	-	○	
			MELSAP3	-	○	-	○	-	
	MELSAP-L		-	-	-	○	-		
	Program standard izer	Label program	-	○	-	○	-		
		Function block	-	○	-	○ ^{*1}	-		
	Circuit monitor, test, debug	<ul style="list-style-type: none"> Monitors multiple programs simultaneously using multi-windows. Turns the devices turned ON/OFF and changes the current value easily with the mouse. In addition designates the device easily by dragging and dropping with the mouse. The program step, skip and partial execution. The program execution brake conditions (SFC). Scan time measurement Sampling trace PLC CPU RUN/STOP/PAUSE using remote operations List monitor 	○						
		• Forced input/output registration/cancel						-	-
	Diagnosis functions	Network diagnosis	<ul style="list-style-type: none"> Line monitor Network test Setting confirmation test Station order confirmation test 	○	○	-	○	○	
			PLC diagnosis	• Diagnosis of each PLC CPU	○	○	○	○	○
			CC-Link diagnosis	<ul style="list-style-type: none"> Line monitor Line test 	○	○	-	○	○
				Ethernet diagnosis	• Parameter status	○	○	-	○
		• Error history	○		○	-	○	○	
		• Status per connection	○		○	-	○	○	
		• Status per protocol	-		○	-	○	-	
		• LED status	-		○	-	○	-	
		• Received electronic mail information	-		-	-	○	-	
		• Sent electronic mail information	-		-	-	○	-	
		• PING test	○	○	-	○	○		
• Return test		-	-	-	○	-			
System monitor	<ul style="list-style-type: none"> Display of specification of module mounted on base Display of error status level with colors I/O assignment error, module detailed information, etc. 	-	-	-	○	-			
PLC CPU communication	• Open connection by designating connection destination with graphic display.	○							
	• Access of PLC CPU via existing Ethernet						○	○	-
Remote maintenance	Maintenance at a remote location using a phone line	A6TEL modem interface module (Sold separately)	○	-	-	-	-		
		Q6TEL modem interface module (Sold separately)	○	○	-	-	-		
		QJ71C24 (when modem function is set) (Sold separately)	-	-	-	○	○		
	Remote password	QJ7171(-B2), QJ71C24 (-R2) function version B (Sold separately)	-	-	-	△	-		
	Callback function	QJ71E71(-B2), QJ71C24(-R2) function version B (sold separately) QJ71CMO (sold separately)	-	-	-	△	-		
Sample comment data enclosed	A collection of sample comment data for the special relays and special registers (SM, SD) is enclosed as a standard.	○							
Printer	A Windows compatible printer is available.	○							
Environment measures	Manual on CD-ROM PDF format manual data is enclosed as a standard on the same CD-ROM as the software package.	○							

*1 Not compatible with Basic model QCPU (Q mode).

Item	Details	Compatible PLC CPU									
		A	B	C	D	E					
Ample related software groups	Various utility packages (Sold separately)	Operating performance is improved by setting with the intelligent function module setting utility and the program dedicated instruction support. • Compatible with Basic model QCPU, Microsoft Windows 2000 Professional Operating System and Microsoft Windows Millennium Edition. [Utility package groups] • GX Configurator-AD (for A/D conversion module setting, monitor tool) • GX Configurator-DA (for D/A conversion module setting, monitor tool) • GX Configurator-SC (for serial communication module, modem interface module setting, monitor tool) • GX Configurator-CT (for high speed counter module setting, monitor tool) • GX Configurator-TC (for temperature control module setting, monitor tool) • GX Configurator-FL (for FL-net module setting, monitor tool) • GX Configurator-TI (for temperature input module setting, monitor tool) • GX Configurator-PI (for QD70 module setting, monitor tool) • GX Configurator-CC (for CC-Link module setting, monitor tool)					-	-	-	○	-
	Offline debugging using GX Simulator (Sold separately)	[GX Simulator Version 6 (PLC simulator)] • Debugging of PLC programs on a personal computer 1) Serial communication function 2) Basic model QCPU 3) Compatible with Microsoft Windows 2000 Professional Operating System and Microsoft Windows Millennium Edition. 4) Timing chart display or buffer memory batch monitoring 5) Input/Output system function								○	
	Controlling batch project using GX Developer (Sold separately)	[GX Simulator Version 1 (Project management tool)] Simple verification of Network configuration • Displays the Network configuration graphically. • Allows the user to read or write the programs by operating intuitively such as "drag & paste". • Starts the GX Developer automatically to perform editing/monitoring by double-clicking the program or comment icon.								○	-
	Creating document using GX Developer (Sold separately)	[GX Converter Version 1 (Data converter)] Allows the user to create a document at will. • Inputs and outputs instruction lists and device comments in CSV format file. 								○	

[Working environment]

GX Developer/GX Simulator/GX Works	
OS	Microsoft Windows 95 Operating System Microsoft Windows 98 Operating System Microsoft Windows Millennium Edition Microsoft Windows NT Workstation Operating System Version 4.0 Microsoft Windows 2000 Professional Operating System
CPU	Pentium 133MHz or more recommended *1 *2 Pentium 300 MHz or more recommended (for label program)
Memory	32MHz or more recommended 64MB or more recommended (for label program)
For installation	150MB or more (for GX Developer, GX Simulator installation)
For operation (temporary space)	150MB or more
Disk drive	CD-ROM disk drive required
Display	Resolution 800x600 dots or more

*1. Pentium 150MHz or more is recommended for Microsoft Windows Millennium Edition.

*2. Pentium 200MHz or more is recommended for GX Developer.

[Relation with format products]

		GX Developer				
		SW3D5-GPP W-E	SW4D5-GPP W-E	SW5D5-GPP W-E	SW6D5-GPP W-E	SW7D5C-GPP W-E
GX Simulator	SW3D5-LLT-E	○	△ ^{*2}	△ ^{*1*3}	△ ^{*1*3*5}	△ ^{*1*3*5}
	SW4D5-LLT-E	△ ^{*2}	○	△ ^{*3}	△ ^{*3*5}	△ ^{*3*5}
	SW5D5-LLT-E	△ ^{*2*4}	△ ^{*4}	○	△ ^{*5*6}	△ ^{*5*6}
	SW6D5-LLT-E	△ ^{*2*4*6}	△ ^{*4}	△ ^{*5}	△ ^{*5}	△ ^{*5}

*1 GX Developer does not demand the QCPU (Q mode, A mode) GX Simulator.

*2 The GX Developer is not compatible with QCPU (Q mode, A mode).

*3 The GX Simulator for FX1S, FX1N can not be started from the GX Developer.

*4 The FX1S, FX1N CPU cannot be selected from the GX Developer.

*5 Multiple PLC system cannot be operated. Besides, this combination does not comply with label programming function or forced input/output function registration/cancel function.

*6 Serial communication function cannot be performed.

[Packing list]

● GX Developer/GX Simulator/GX Works

Product name	Type	Remarks
GX Developer Version 7 (CD-ROM Version) Individual sales product	SW7D5C-GPPW-E	
GX Simulator Version6 (CD-ROM Version) Individual sales product	SW6D5C-LLT-E	
GT Works (CD-ROM Version) Individual sales product Set sales product	SW7D5C-GPPLT-E	GX Developer Version 7 × 1 GX Simulator Version 6 × 1 GX Explorer Version 1 × 1
	SW3D5C-QSET-E	GX Developer Version 7 × 1 GX Simulator Version 6 × 1 GX Explorer Version 1 × 1 GX Configurator-AD × 1 GX Configurator-DA × 1 GX Configurator-CT × 1 GX Configurator-SC × 1

● Volume license products

You can specify 2⁺ volume licenses. Contact your local Mitsubishi branch office or dealer for details.

Product name	Type	Remarks
GX Developer Version 7 (CD-ROM Version) Volume licenses product	SW7D5C-GPPW-EA	
GX Simulator Version 6 (CD-ROM Version) Volume licenses product	SW6D5C-LLT-EA	

● Additional license product

Product name	Type	Remarks
GX Developer Version 7 Additional license product	SW7D5C-GPPW-EAZ	This product does not include CD ROM. Only license certificate with the product ID number will be issued.
GX Simulator Version 6 Additional license product	SW6D5C-LLT-EAZ	

<The discontinuation of the license key FD and the attachment of the license agreement>

Even though the license key FD has been used in the past, some of the PCs recently sold have no FD drives. This has been causing problems for some of the customers who use GX Series.

Therefore, we have discontinued the license key FD and have replaced it with licensing by means of the licensing agreement and the entry of the product ID number.

We will continue on product development to offer you the best possible products. Your continuous support is deeply appreciated.

[GX Developer and GX Simulator related manuals]

● GX Developer

Manual name	Manual shipment state	IB/SH No.	Type code
GX Developer Version7 Operating Manual (Startup)	Enclosed with product *	SH-080165	13JU13
GX Developer Version7 Operating Manual	Enclosed with product *	SH-080166	13JU14
GX Developer Version7 Operating Manual (SFC)	Enclosed with product *	SH-080167	13JU15
GX Developer Version7 Operating Manual (MELSAP-L)	Enclosed with product *	SH-080168	13JU16
GX Developer Version7 Operating Manual (Function Block)	Enclosed with product *	SH-080174	13JU20
QCPU(Q Mode)Programming Manual (MELSAP-L)(Printed manual)	Sold separately	SH-080076	13JF61
GPP Function software for Windows SW4D5C-GPPW-E SW4D5C-LLT-E (Starting GPPW)(Printed manual)	Sold separately	IB-0800057	13J966

"Starting GPPW" in the above table can be used to learn the basic operations of the GX Developer.

● GX Simulator

Manual name	Manual shipment state	IB/SH No.	Type code
GX Simulator Version6 Operating Manual	Enclosed with product *	SH-080169	13JU17

* : The software CD-ROM includes the manual data in PDF format. (In addition, Acrobat Reader, an application program to view PDF format document on a personal computer is included in the CD-ROM.) The printed manual is sold separately. (IB/SH No. and Type code are required for purchase of the manual.)

[GX Works (SW3D5C-QSET-E, SW7D5C-GPPLL-T-E) related manuals]

● GX Explorer Version 1

Manual name	Manual shipment state	IB/SH No.	Type code
GX Explorer Version1 Operating Manual	Enclosed with product *	SH-080170	13JU18

● GX Configurator-AD

Manual name	Manual shipment state	IB/SH No.	Type code
Analog-Digital Converter Module User's Manual	Enclosed with product *	SH-080055	13JR03

● GX Configurator-DA

Manual name	Manual shipment state	IB/SH No.	Type code
Digital-Analog Converter Module User's Manual	Enclosed with product *	SH-080054	13JR02

● GX Configurator-CT

Manual name	Manual shipment state	IB/SH No.	Type code
High-Speed Counter Module User's Manual QD62/QD62E/QD62D	Enclosed with product *	SH-080036	13JL95

● GX Configurator-SC

Manual name	Manual shipment state	IB/SH No.	Type code
Q Corresponding Serial Communication Module User's Manual (Basic)	Enclosed with product *	SH-080006	13JL86

Remarks : The software CD-ROM includes the manual data in PDF format. (In addition, Acrobat Reader, an application program to view PDF format document on a personal computer is included in the CD-ROM.) The printed manual is sold separately. (IB/SH No. and Type code are required for purchase of the manual.)

[Software package information]

The following table shows the changes in the software packages and announces the next- scheduled version upgrade.

- Version upgrade history

(1) GX Developer

Version	History
Ver.2 Marketed: August 1998	Compatibility with FX Series This version can read the programs created by each programming tool for FX Series.
Ver.3 Marketed: March 1999	<ul style="list-style-type: none"> • Compatibility with SFC language • Addition of phone line function • Support of CC-Link diagnosis • Compatibility with motion controller sequence section • Incorporation of add-on data conversion software for text data/Excel data (CSV format data)
Ver.4 Marketed: September 1999	<ul style="list-style-type: none"> • Compatibility with Q Series • Add-in GX Developer for intelligent function module setting utility (QCPU- Q mode compatibility) • Addition of system monitor function • Incorporation of graphics for Transfer setup screen
Ver.5 Marketed: January 2000	<ul style="list-style-type: none"> • Compatibility with additional FX Series, motion controller series FX1SCPU, FX1NCP, A173UHCPU (S1), and compatibility with of FX Series compatible SFC • Addition of MELSAP-L to QCPU (Q mode)
Ver.6 Marketed: October 2000	<ul style="list-style-type: none"> • Addition of label programming function • Compatibility with MELSECNET/H remote I/O network • Compatibility with multiple PLC by Q Series (Q mode)
Ver.7 Marketed: May 2001	<ul style="list-style-type: none"> • Compatibility with Basic model QCPU • Addition of function block function

(2) GX Simulator

Version	History
Ver.2 Marketed: August 1998	Compatibility with FX Series
Ver.3 Marketed: March 1999	Addition of timing chart display
Ver.4 Marketed: September 1999	<ul style="list-style-type: none"> • Compatibility with Q Series • Enhancement of monitor test functions
Ver.5 Marketed: January 2000	<ul style="list-style-type: none"> • Change of external device input to setting with timing chart
Ver.6 Marketed: June 2001	<ul style="list-style-type: none"> • Compatibility with Basic model QCPU

- Version upgrade information

GX Developer Version 8 is scheduled to be available in Spring 2002.

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Country/Region	Sales office	Tel/Fax
U.S.A	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061	Tel : 1-847-478-2100 Fax : 1-847-478-0328
Brazil	MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda. Av. Rio Branco, 123-15 ,and S/1507, Rio de Janeiro, RJ CEP 20040-005, Brazil	Tel : 55-21-221-8343 Fax : 55-21-221-9388
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8 D-40880 Ratingen, GERMANY	Tel : 49-2102-486-0 Fax : 49-2102-486-717
U.K	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Herts., AL10 8XB, UK	Tel : 44-1707-276100 Fax : 44-1707-278695
Italy	Mitsubishi Electric Europe B.V. Italian Branch Centro Dir. Colleoni, Pal. Perseo - Ingr.2 Via Paracelso 12, 20041 Agrate B., Milano, Italy	Tel : 39-039-6053301 Fax : 39-039-6053312
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubi 76-80 08190 - Sant Cugat del Valles, Barcelona, Spain	Tel : 34-935-653135 Fax : 34-935-891579
South Africa	MSA Manufacturing (Pty) Ltd. P O Box 39733 Bramley 201 8 Johannesburg, South Africa	Tel : 27-11-444-8080 Fax : 27-11-444-8304
Hong Kong	Ryoden International Ltd. 10th Floor, Manulife Tower, 169 Electric Road, North Point, HongKong	Tel : 852-2887-8870 Fax : 852-2887-7984
China	Ryoden International Shanghai Ltd. 3F Block5 Building Automation Instrumentation Plaza 103 Cao Bao Rd. Shanghai 200233 China	Tel : 86-21-6475-3228 Fax : 86-21-6484-6996
Taiwan	Setsuyo Enterprise Co., Ltd. 6F., No.105 Wu-Kung 3rd.RD, Wu-Ku Hsiang, Taipei Hsine, Taiwan R.O.C.	Tel : 886-2-2299-2499 Fax : 886-2-2299-2509
Korea	HAN NEUNG TECHNO CO.,LTD. 1F Dong Seo Game Channel Bldg., 660-11,Deungchon-dong Kangsec-ku, Seoul, Korea	Tel : 82-2-3668-6567 Fax : 82-2-3664-8335
Singapore	Mitsubishi Electric Asia Pte, Ltd. 307 ALEXANDRA ROAD #05-01/02, MITSUBISHI ELECTRIC BUILDING SINGAPORE 159943	Tel : 65-473-2480 Fax : 65-476-7439
Thailand	F. A. Tech Co.,Ltd. 898/28,29,30 S.V.CITY BUILDING,OFFICE TOWER 2,FLOOR 17-18 RAMA 3 ROAD,BANGKONGPANG,YANNAWA,BANGKOK 10120	Tel : 66-2-682-6522 Fax : 66-2-682-6020
Indonesia	P.T. Autoteknindo SUMBER MAKMUR JL. MUARA KARANG SELATAN BLOK A UTARA NO.1 KAV. NO.11 KAWASAN INDUSTRI/ PERGUDANGAN JAKARTA - UTARA 14440	Tel : 62-21-663-0833 Fax : 62-21-663-0832
India	Messung Systems Put,Ltd. Electronic Sadan NO:111 Unit No15, M.I.D.C BHOSARI,PUNE-411026	Tel : 91-20-7128927 Fax : 91-20-7128108
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