GX Configurator-ST Version 1.08J

# **MITSUBISHI**

## **Operating Manual**





# MELSOFT Integrated FA Software

SW1D5C-STPB-E

## **GX Configurator ST**

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### INTRODUCTION

Thank you for choosing the Mitsubishi MELSOFT Series Integrated FA software. Read this manual and make sure you understand the functions and performance of MELSOFT series thoroughly in advance to ensure correct use.

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## 1 Introduction

GX Configurator-ST is used for the configuration and diagnosis of SLICE systems.

MELSEC-ST systems consist of a head module (ST1H-PB for PROFIBUS-DP systems or ST1H-BT for CC-Link systems) and a number of power supply or I/O modules assembled in a rack.

These systems provide an easy and modular way to add I/O to a PROFIBUS-DP or CC-Link system, without having to install separate wiring to many separate I/O modules. The I/O from each module is grouped into individual data input/output areas for transmission to/from the network master station.

GX Configurator-ST connects to the communication port of the ST1H-PB or ST1H-BT head module using an appropriate programming cable. The head module will independently act as a slave station on a PROFIBUS-DP or CC-Link network.



Example CC-link system

## 1.1 Safety Precautions

## SAFETY PRECAUTIONS •

(Read these precautions before using.)

When using Mitsubishi equipment, thoroughly read this manual and the associated manuals introduced in this manual. Also pay careful attention to safety and handle the module properly. The precautions given in this manual are concerned with this product. Refer to the user's manual of the network system to use for a description of the network system safety precautions. These SAFETY PRECAUTIONS classify the safety precautions into two categories: "DANGER" and "CAUTION".



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

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

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

### [Design Instructions]



• For data change and status control made to the MELSEC-ST system 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 MELSEC-ST system from Personal computers.



- Be sure to read the manual careful and exercise an appropriate amount of caution connecting to MELSEC-ST system and performing online operations (head module resetting, forced output test, etc.) while the personal computer is operating.
- When replacing the module online, make sure to observe the procedure specified for the module.

For I/O module, refer to the chapter of online module change in the head module user's manual; for each intelligent function module, refer to the same chapter in the corresponding intelligent function module user's manual.

## 1.2 Documentation layout

Each topic is divided in sections as shown below.



In addition, there are also the following explanations.



Describes application operation if there are multiple purposes and the basic operation and display/ setting data do not provide enough information.

Point

Provides information relevant to that page, e.g. the items you should be careful of and the functions you should know.

Symbol	Description
[ ]	Represents the menu name of the menu bar. $[] \rightarrow []$ indicates a drop-down menu. Example: [File] $\rightarrow$ [New] menu
( )	Represents the tool button on the toolbar corresponding to the drop-down menu. Example: [File] $\rightarrow$ [Save] menu ( $\blacksquare$ )
n n	Represents the item name in the dialog box. Example: "File name"
	Represents a button. Example: OK button
<< >>	Represents the tab in the dialog box. Example: < <verify all="" modules="">&gt; tab</verify>

The following table lists the symbols used in this manual and their definitions.

#### How to read manual (For CC-Link)

In this manual, remote I/O, remote registers and message transmission areas for CC-Link are represented with Br, Wr, Cr, Bw, Ww, Cw.

- (1) Data symbol
- <Example : Cr Command result area>



- (2) Head Module  $\rightarrow$  Master Station
  - (a) Remote input (RX)

	Data symbol	Area name	Unit	Detail data No. notation
Br	Br.00 to Br.FF	Bit input area	1 bit/symbol	Hexadecimal

(b) Remote register (RWr)

Data symbol	Area name	Unit	Detail data No. notation
Wr Wr.00 to Wr.33	Word input area	1 word/symbo I	Hexadecimal

(c) Message transmission

Data symbol	Area name	Unit	Detail data No. notation
Cr	Command result area	1 word / symbo I	Decimal

### (3) Master station $\rightarrow$ Head module

### (a) Remote output (RY)

	Data symbol	Area name	Unit	Detail data No. notation
Bw	Bw.00 to Bw.FF	Bit output area	1 bit/symbol	Hexadecimal

(b) Remote register (RWw)

	Data symbol	Area name	Unit	Detail data No. notation
Ww	Ww.00 <sub>to</sub> Ww.33	Word output area	1 word / symbo I	Hexadecimal

(c) Message transmission

	Data symbol	Area name	Unit	Detail data No. notation
Cw		Command execution area	1 word / symbo I	Decimal

How to read manual (For PROFIBUS-DP)

In this manual, remote I/O, remote registers and message transmission areas for PROFIBUS-DP are represented with Br, Wr, Cr, Bw, Ww, Cw.

- (1) Data symbol
- <Example : Cr Command result area>



(2) Input send data

D	Data symbol Area		Unit	Detail data No. notation
Br	Br.00 to Br.FF	Bit Input Area	1 bit/symbol	Hexadecimal
Er	Er.00 to Er.FF	Error Information Area	1 bit/symbol	Hexadecimal
Mr	Mr.0 to Mr.127 Module Status Area		1 bit/symbol	Decimal
Cr	*1	Command Result Area	1 word / symbol	Decimal
Wr	Wr.00 to Wr.33	Word Input Area	1 word / symbol	Hexadecimal

\*1: The detailed area of the command result area uses the following symbols.

Data symbol		Area
	Cr.0 (15-8)	Command Execution Result
Cr.0 (7-0)		Start Slice No. of Execution Target
Cr.1		Executed Command No.
Cr.2		Response Data 1
Cr.3		Response Data 2

- Data symbol Area Unit Detail data No. notation Bw.00 to Bit Output Area 1 bit/symbol Bw Hexadecimal Bw.FF Ew.00 to Ew Error Clear Area 1 bit/symbol Hexadecimal Ew.FF 1 word / Sw.0 to Sw.7 Sw System Area Decimal symbol 1 word/symb \*1 Cw Command Execution Area Decimal ol Ww.00 to 1 word / symb Ww Word Output Area Hexadecimal ol Ww.33
- (3) Output receive data

\*1: Following shows the data symbols and the corresponding detail areas within the command execution area.

Data symbol	Area
Cw.0	Start Slice No. of Execution Target
Cw.1	Command No. to be executed
Cw.2	Argument 1
Cw.3	Argument 2

## **1.3 Terms and Abbreviations**

Unless otherwise specified, this documentation uses the following terms and abbreviations to explain the head module.

Term/Abbreviation	Description		
Head module	Generic term for the ST1H-PB MELSEC-ST PROFIBUS-DP head module, ST1H-BT MELSEC-ST CC-Link head module.		
PROFIBUS-DP	Abbreviation for PROFIBUS-DP network.		
CC-Link	Abbreviation for Control & Communication Link system.		
Master module	Abbreviation for the QJ61BT11N used as a master station.		
RDMSG	Generic term for G.RDMSG and GP.RDMSG.		
Bus refreshing module	Module that distributes external system power and auxiliary power to the head module and slice modules.		
Power feeding module	Module that distributes external auxiliary power to slice modules.		
Power distribution module	Generic term for the bus refreshing module and power feeding module.		
Base module	Generic term for a module that transfers data between the head module and slice modules, and between the slice modules and external devices (including wiring).		
Input module	Generic term for modules that handle input data in units of bits.		
Output module	Generic term for modules that handle output data in units of bits.		
Intelligent function module	Generic term for modules that handle input/output data in units of words.		
I/O module	Generic term for input modules and output modules.		
Slice module	Generic term for power distribution modules, I/O modules, and intelligent function modules that can be mounted on base modules.		
MELSEC-ST system	Generic term for a system that is that is composed of a head module, slice modules, an end plate and end brackets.		
External power supply	Generic term for external system power and auxiliary power.		
GX Configurator-ST	Generic product name for SWnD5C-STPB-E. ("n" denotes Version 1 or later.)		
Configuration software	Software used to set slave parameters for head modules and slice modules in PROFIBUS-DP. (e.g. GX Configurator-DP).		

### Term definition for CC-Link

The following explains the meanings and definitions of the terms used in this documentation when using CC-Link.

Term/Abbreviation	Description
Cyclic transmission	A communication method by which remote I/O data and remote register data are transferred periodically.
Master station	This station controls the entire data link system. One master station is required for one system.
Local station	A station that has a programmable controller CPU and can communicate with the master station and other local stations.
Remote I/O station	A remote station that can only use bit data. (Input from or output to external devices) (AJ65BTB1-16D, AJ65SBTB1-16D or others).
Remote device station	A remote station that can use both bit and word data. (Input from or output to external devices, analog data conversion) (ST1H-BT, AJ65BT-64AD, AJ65BT-64DAV, AJ65BV, AJ
Remote station	Generic term for remote I/O stations and remote device stations. Controlled by the master station.
SB	Link special relay (for CC-Link). Bit data that indicate the module operating status and data link status of the master/local station.
SW	Link special register (for CC-Link). Data in units of 16 bits, which indicate the module operating status and data link status of master/local station.
RX	Remote input (for CC-Link). Bit data that are input from remote stations to the master station.
RY	Remote output (for CC-Link). Bit data that are output from the master station to remote stations.
RWr	Remote register (Read area for CC-Link). Data in units of 16 bits, which are input from remote device stations to the master stations.
RWw	Remote register (Write area for CC-Link). Data in units of 16 bits, which are output from the master station to remote device stations.
Remote net Ver. 1 mode	Select this mode when extended cyclic setting is not needed or when the QJ61BT11 is replaced with the QJ61BT11N.
Remote net Ver. 2 mode	Select this mode when creating a new system with extended cyclic setting.
I/O data	Data transferred between the head module and the master station.
Br.n Bit input area	Bit input data of each module. Input data are sent from the head module to the master station through remote input (RX).
Bw.n Bit output area	Bit output data of each module. Output data are received from the master station to the head module through remote output (RY).
Wr.n Word input area	Word (16-bit) input data of an intelligent function module. Input data are sent from the head module to the master station through remote register (RWr).
Ww.n Word output area	Word (16-bit) output data of an intelligent function module. Output data are received from the master station to the head module through remote register (RWw).
Cr.n Command result area	Information that indicates a command result. This information is stored in Setting data (area starting from (D1) + 1) of the RDMSG instruction of the master station.

Term/Abbreviation	Description	
Cw.n Command execution area	Information for executing a command. This information is stored in Setting data (area starting from (S2) + 1) of the RDMSG instruction of the master station.	
Number of occupied I/O points	The area, which is equivalent to the occupied I/O points, is occupied in $\boxed{Br}$ Bit input area / $\boxed{Bw}$ Bit output area.	
Slice No.	The number assigned to every 2 occupied I/O points of each module. The numbers are assigned in ascending order, starting from "0" of the head module. (The maximum value is 127.) This is used for specifying a command execution target.	
Slice position No.	The number that shows where the slice module is physically installed. The numbers are assigned in ascending order, starting from "0" of the head module. (The maximum value is 63.) This is used for specifying a command execution target.	
Start slice No.	The start slice No. assigned to the head module and slice modules.	
Command	Generic term for requests that are executed by the master station for reading each module's operation status, setting intelligent function module command parameters or various controls.	
Command parameter	Generic term for parameter set in commands or GX Configurator-ST. All of the parameters set for the head module and slice modules are command parameters.	
ST bus cycle time	Processing time for the head module to refresh the input or output status of each slice module.	

### Term definition for PROFIBUS-DP

The following explains the meanings and definitions of the terms used in this documentation when using PROFIBUS-DP.

Term/Abbreviation	Description
QJ71PB92V	Abbreviation for the QJ71PB92V PROFIBUS-DP master module.
QJ71PB92D	Abbreviation for the QJ71PB92D PROFIBUS-DP interface module.
A1SJ71PB92D	Abbreviation for the A1SJ71PB92D PROFIBUS-DP interface module.
AJ71PB92D	Abbreviation for the AJ71PB92D PROFIBUS-DP interface module.
PROFIBUS-DPV0	A basic version of PROFIBUS-DP. The following functions are executable: I/O data exchange Diagnostic information notification etc.
PROFIBUS-DPV1	A PROFIBUS-DP version for which the following functions have been added to the basic functionality of PROFIBUS-DPV0 • Acyclic communication • Alarm function etc.
PROFIBUS-DPV2	A PROFIBUS-DP version for which the following functions have been added to the PROFIBUS-DPV1 functionality Time stamping etc.
GX Configurator-DP	SWnD5C-PROFID-E type products. ("n" means version 4 or later.)
Master station	Class 1 master station that communicates I/O data with slave stations.
Slave station	A device that exchanges I/O data with a DP-Master (Class 1). (ST1H-PB, etc)
Repeater	Device that connects PROFIBUS-DP segments.
Bus terminator	Terminator that is connected to both ends of each PROFIBUS-DP segment
FDL address	Address assigned to the master station/slave station. The FDL address is set within the range from 0 to 99.
Extended diagnosticDiagnostic information specific to each DP-SlaveinformationEach of DP-Slaves notifies of it to the DP-Master when an error is defined and the statement of t	
Slave parameter	The slave station parameter (including user parameter) set by the master station. The setting items are described in the GSD file.
GSD file	The electronic file that includes description of the slave station parameter. The file is used when setting slave parameters by configuration software, which is supported by the master station.
Input data	<ul> <li>Data sent from the head module to the master station.</li> <li>The data consists of the following areas.</li> <li>Br Bit Input Area (head module version A only)</li> <li>Information Area <ul> <li>Er</li> <li>Error Information Area (head module version A only)</li> <li>Mr</li> <li>Module Status Area (head module version A only)</li> <li>Cr</li> <li>Command Result Area (head module version A only)</li> </ul> </li> <li>Wr Word Input Area</li> </ul>

Term/Abbreviation	Description
Output data	<ul> <li>Data that the head module receives from the master station.</li> <li>The data consists of the following areas.</li> <li>Bw Bit Output Area (head module version A only)</li> <li>Request Area</li> <li>Ew Error Clear Area (head module version A only)</li> <li>Sw System Area (head module version A only)</li> <li>Cw Command Execution Area (head module version A only)</li> <li>Ww Word Output Area</li> </ul>
I/O data	Data (input data, output data) transferred between the head module and the master station.
Global control	This function enables synchronization command transmission for I/O data from a DP-Master (Class 1) to DP-Slaves.
Br.n Bit input area	Bit input data of each module.
Bw.n Bit output area	Bit output data of each module
Wr.n Word input area	Word (16-bit) input data of an intelligent function module. In the case of analog input module, the digital output data value is stored.
Ww.n Word output area	Word (16-bit) output data of an intelligent function module. In the case of analog output module, the digital setting data value is stored.
Information area	Bit/Word input data for checking each module status and command execution results.
Requestarea	Bit/Word output data for requesting each module to clear errors/to execute commands.
Number of occupied I/O points	The area, that is equivalent to the occupied I/O points, is occupied in Br Bit Input Area/ Bw Bit Output Area.
Slice No.	No. assigned to every 2 occupied I/O points of each module. This numbering starts by assigning "0" to the head module and then proceeds in ascending order. (The maximum value No. is 127). The No. is used for specifying the execution target.
Command	Requesting from the master station in order to read the module status, to set/ control the intelligent function module command parameters.
ST bus cycle time	Processing time for the head module to refresh the input/output status of each slice module.
Bus cycle time	PROFIBUS-DP processing time for the master station to perform cyclic transfer with each slave station.

### 1.4 What's new in version 1.08J?

Version 1.08J introduces a number of new features to improve the functionality and usability of GX Configurator-ST, such as:

• Support for Microsoft® Windows® 7 32-bit and 64-bit operating systems.

### 1.5 Notes for upgrading users

If you have upgraded from the previous version of GX Configurator-ST, you can still reuse the files that you created with the last version. These files can be opened normally, and will be upgraded automatically when they are saved.

Although PROFIBUS-DP files created in this version can be reopened in the last version of the software, it is generally advisable not to switch between versions of the software when configuring a file. After saving a file once in the current version of GX Configurator-ST, opening it in earlier versions is not recommended.



GX Configurator-ST 1.06G will only partially work with the new PROFIBUS-DP head module.

#### Head module set to PROFIBUS-DP version A:

If the head module is set to version A, there will be no problem as GX Configurator-ST 1.06G is fully compatible with this head module version.

#### Head module set to PROFIBUS-DP version B:

If the head module is set to version B, GX Configurator-ST 1.06G cannot communicate with the head module due to changes to the internal structure. Attempting to connect to the head module will display the error below.

Closing other communication software applications and trying again.
---

The user interface is very similar to the versions that you have used before, but now when you start the application you will be taken through the first configuration steps with a 'wizard' interface. In the main configuration display, the module list from the previous version is now just the bottom left section of a larger 'module configuration' window, which also shows a graphical display of the configured system, a list of modules for addition and details of the module selected to be added.

To read more about these features, see the sections shown below:

Feature	PROFIBUS-DP description
First steps using the wizard	Creating a new project
The module configuration window	Screen layout and display switching

If you are stuck while using the application, press F1 to show the relevant section of the help file.

## 2 Overview

GX Configurator-ST is the configuration software dedicated to the MELSEC-ST system.

### 2.1 Features

- (1) Project creation of MELSEC-ST system
  - (a) Uploading module data to create project A project can be created easily by uploading the system configuration and parameters from the MELSEC-ST system.

Sause Brokenski kilot	(r. 17) 20	
그녀의 김 전소 대체를 실려할 것 수		
E fotos fot press		
	An end of each to control of the state - control of each of the state - control of each of the state - control of the state	
State         State <th< th=""><th></th><th></th></th<>		
v		

MELSEC-ST system

### (b) Changing system configuration to edit project

A project can be edited by changing the system configuration, e.g. adding or rearranging modules.



- (2) Monitoring MELSEC-ST system
  - (a) MELSEC-ST system status can be easily checked.

GX Configurator-ST provides an image to show the statuses of the head/slice modules that comprise the MELSEC-ST system on the "System Monitor" screen. Therefore, these module statuses can be checked easily.



(b) I/O module or intelligent function module can be changed online from GX Configurator-ST

By using online module change, the faulty I/O module or intelligent function module can be changed with normal module without the PROFIBUS-DP or CC-Link network being stopped.

GX Configurator-ST allows online module change to be made easily by screen-guided operation without operation of the head module switches.



(c) Output test can be done without affecting PROFIBUS-DP or CC-Link network

In a forced output test, outputs can be tested using the <b>Bw.n</b> Bit Output. Ww.n
Word Output and Error Clear of the head module or slice module.
The user can specify any Bw.n Bit Output, Ww.n Word Output and Ew.n
Error Clear.
As only the <b>Bw.n</b> Bit Output, <b>Ww.n</b> Word Output and <b>Ew.n</b> Error Clear are
used for the forced output test, output data not used in the test are not affected.

In the forced output test, therefore, an output test can be conducted without affecting the PROFIBUS-DP or CC-Link network.



### (3) Parameter setting of slice module

### (a) Parameter setting of intelligent function module

The "Parameter Setting" screen displays a list of module parameters. Parameter setting can be made on this list.

As it includes functions to upload and verify data, and to check the setting errors, the parameters can be confirmed easily.

Module Information Slice No. : 5			
Slice No. : 5			
Slice No. : 5			
	JK ]		
Madda Nama a CT14D01			
Module Name : STIAD24 Ca	ncel		
Label Name :			
Base Module : ST1B-*4IR2			
Unline			
Select Data Target Memory RAM			
Celect All Delease All			
Upload Download Verify			
Channel: CH1			
Select Item Setting Value			
Input range setting 4 to 20 mA			
Setting range 4 to 20 mA	-		
Time/number of times specification Number of times	<b>•</b>		
Sampling process/averaging process setting Sampling	•		
Alarm output setting Disable	-		
Disconnection detection setting Disable	-		
A/D conversion enable/disable setting Enable	-		
50/60Hz notch filter specification Disable	-		
Average time/average number of times setting 4			
Upper upper limit value 4000			
Upper lower limit value 4000			
Lower upper limit value 0			
Lower lower limit value 0	-		

### (4) Power supply capacity check

A check can be made to see if the sum of 5VDC internal current consumption required by each module is within the 5VDC maximum rated output current of the bus refreshing module.

Power	<b>Distribution Check</b>		Þ	<
No. 1 16 43	Supply Current(A) 2.000 2.000 2.000	Consumption(A) 1.800 2.280 1.145	Result OK ERROR OK	(a) (b) (c)
		Close		

A power supply capacity check example is shown below.

- (a) The check result is "OK" since the sum 1.800A of 5VDC internal current consumption required by the head module No. 0 and slice modules No. 2 to 15 is not greater than the 5VDC maximum rated output current 2.000A of the bus refreshing module.
- (b) The check result is "ERROR" since the sum 2.280A of 5VDC internal current consumption required by the slice modules No. 17 to 42 is greater than the 5VDC maximum rated output current 2.000A of the bus refreshing module.
- (c) The check result is "OK" since the sum 1.145A of 5VDC internal current consumption required by the slice modules No. 44 and later is not greater than the 5VDC maximum rated output current 2.000A of the bus refreshing module.
- (5) Byte pack check (PROFIBUS-DP head module version B only) A byte pack check is automatically done with PROFIBUS-DP head module version B. This check ensures in offline mode that the configuration is correctly set up with byte packed modules.

## 2.2 How do I ... ?

This section will list things that you may wish to achieve with the software, and the different ways in which these can be done. There may be several ways to get the same result, for example modules can be added or deleted using several different methods.

How do I?	Instructions
Create a new system	Creating a new project
Set up the communication port	Transfer setup dialog
Read the configuration from the SLICE hardware	<u>Get system</u>
Use the module configuration window	Details of module configuration window
Add modules to the configuration	Adding the module with the "Add module" screen
	Adding the module with the "Wizard area"
Delete modules from the configuration	Deleting a module
	Deleting all modules
Rearrange the modules in the configuration	Rearrange modules
Drag and drop modules	Drag and drop
Set module parameters	Parameter setting
Download parameters to several modules at once	Parameter block write
Compare parameter details with those stored in another project file	Verifying the projects
Compare parameter details with those on the SLICE hardware	Uploading / downloading the parameters
Copy modules from another configuration file	Copying the module information
Use GX Configurator-ST for diagnostics	System monitor
Show module details (address ranges)	Module detail information
View module input/output data	Input/Output monitor
Test / calibrate module outputs	Forced output test
Set offset/gain settings for a module	Offset/gain settings
Change the head module type after the system has been configured	Change head module type

How do I?	Instructions	
Swap modules while the system is running (Online module change)	Online module change	
Set module options	Option setting	
Change module labels	Option setting	
Print the configuration	Printing the project data	
Check the total power consumption	Power distribution check	
Use the toolbar	Details of toolbar	
Use the status bar	Status bar	
Change to/from edit/online mode	Edit mode operation procedures / Diagnosis mode operation procedures	
Reset the head module	Reset the head module	
View the PROFIBUS-DP network parameters	PROFIBUS-DP network parameter monitor (PROFIBUS-DP only)	
Read the point mode and 'without Wr' / 'without Ww' settings from a connected system	Reading input/output data settings (PROFIBUS-DP only)	
Change the head module protocol version	Change PROFIBUS-DP head module protocol version (PROFIBUS-DP only)	
View the master station data communication parameters / data area	Master station data communication monitor	
Rearrange the open windows	Display switching and window rearranging operations	
Find out what an error means	Error messages	

## 3 System Configuration

## 3.1 System Configuration

The following shows the configuration where a personal computer is connected to the MELSEC-ST system.



\*1: Use either of the following cables as the RS-232 cable.

Manufacturer name	Model name	
Mitsubishi Electric	QC30R2	
Beijer ELECTRONICS	SC-Q QC30R2	

#### 3.2 **Operating Environment**

The operating environment of GX Configurator-ST is indicated below.

ltem		Description	
Computer main unit			
	CPU	Refer to the following table "Used operating system and performance required for	
Required personal computer".		personal computer".	
Hard disk free space		60MB or more	
Disk drive	;	CD-ROM disk drive	
Display		$1024 \times 768$ dot or more resolution	
Operating system		Microsoft® Windows® 2000 Professional Operating System (English version) Microsoft® Windows® XP Professional Operating System (English version) <sup>*1, 2</sup> Microsoft® Windows® XP Home Edition Operating System (English version) <sup>*1, 2</sup> Microsoft® Windows Vista® Home Basic Operating System (English version) <sup>*2</sup> Microsoft® Windows Vista® Home Premium Operating System (English version) <sup>*2</sup> Microsoft® Windows Vista® Business Operating System (English version) <sup>*2</sup> Microsoft® Windows Vista® Business Operating System (English version) <sup>*2</sup> Microsoft® Windows Vista® Ultimate Operating System (English version) <sup>*2</sup> Microsoft® Windows Vista® Enterprise Operating System (English version) <sup>*2</sup> Microsoft® Windows ® 7 Home Premium Operating System (English version) <sup>*2</sup> Microsoft® Windows® 7 Professional Operating System (English version) Microsoft® Windows® 7 Enterprise Operating System (English version) Microsoft® Windows® 7 Enterprise Operating System (English version)	

\*1: "XP compatibility mode" and "Fast user switching" are not supported. \*2: 64-bit OS for Windows® XP and Windows Vista® are not supported.

Operating system		Performance Required for Personal Computer	
		CPU	Required memory
Windows® 2000 Profes	sional	Pentium® 133MHz or more	64MB or more
Windows® XP Professional	"XP compatibility mode"	Pentium® 300MHz or more	128MB or more
Windows® XP Home Edition	are not supported.	Pentium® 300MHz or more	128MB or more
Windows Vista® Home	Basic	Pentium® 1GHz or more	1GB or more
Windows Vista® Home	Premium	Pentium® 1GHz or more	1GB or more
Windows Vista® Business		Pentium® 1GHz or more	1GB or more
Windows Vista® Ultimate		Pentium® 1GHz or more	1GB or more
Windows Vista® Enterprise		Pentium® 1GHz or more	1GB or more
Windows® 7 Home Premium		Pentium® 1GHz or more	1GB or more (32-bit) 2GB or more (64-bit)
Windows® 7 Professional		Pentium® 1GHz or more	1GB or more (32-bit) 2GB or more (64-bit)
Windows® 7 Ultimate		Pentium® 1GHz or more	1GB or more (32-bit) 2GB or more (64-bit)
Windows® 7 Enterprise		Pentium® 1GHz or more	1GB or more (32-bit) 2GB or more (64-bit)

Used operating system and performance required for personal computer



Application startup in Windows® compatibility mode Fast user switching Remote desktop Large fonts (detailed setting in Screen properties)

Point

• On Windows Vista® and Windows® 7 authority of USER or higher level must be used.

## 4 Function list

## 4.1 Function list

The functions of GX Configurator-ST are indicated below.

Function	Description	Reference Section
System configuration setting	Registers modules into the system by model name.	<u>'Editing the project'</u>
Parameter Setting	Sets the parameters to the intelligent function module.	'Parameter setting'
Option Settings	Sets the label name, base module etc. for the module.	'Option setting'
Power Distribution Check	Checks whether the 5VDC internal current consumption of the bus refreshing module is sufficient.	'Power distribution check'
System Monitor	Monitors the statuses of the head and slice modules.	<u>'System monitor'</u>
Module configuration, parameter upload/ download	Uploads/downloads the module configuration and parameters.	<u>'Downloading and</u> uploading the parameters'
Input/Output Monitor	Monitors the input data and output data.	<u>'Input/Output monitor'</u>
Forced Output Test	Tests the <b>Bw.n</b> Bit Output, <b>Ww.n</b> Word Output and <b>Ew.n</b> Error Clear of the head module or slice module without stopping the PROFIBUS-DP or CC- Link network.	<u>'Forced output test'</u>
Offset/Gain Setting	Sets the offset and gain values of the intelligent function modules (ST1AD2-V, etc.).	<u>'Offset/Gain setting of</u> intelligent function modules'
Reset Head Module	Resets the head module.	<u>'Reset head module'</u>
Change head module type	Changes the head module type (in edit mode).	<u>'Change head module type'</u>
Change head module protocol version	Changes the head module protocol version (in edit mode) - PROFIBUS-DP only.	<u>'Change PROFIBUS-DP</u> head module protocol version'
Module Detail Information	Shows the module detail information and monitors the corresponding module error status.	<u>'Module detail information'</u>
Online Module Change	Changes the I/O module or intelligent function module online from GX Configurator-ST.	'Online module change'
PROFIBUS-DP Network Parameter Monitor	Monitors the slave parameters and PROFIBUS-DP network parameters sent from the master station of PROFIBUS-DP to the MELSEC-ST system to show the results for confirmation.	<u>'PROFIBUS-DP network</u> parameter monitor'
Master Station Data Communication Monitor	Monitors I/O data between the master station and head module.	<u>'Master station data</u> communication monitor'

#### 4.2 Menu list

This section explains the menus of GX Configurator-ST.



		The [File] menu includes project file exerction print and
File		other functions. For more information, refer to the following
New	Ctrl+N	sections:
Open Close Save Save As	Ctrl+O Ctrl+S	<u>New</u> - create a new project <u>Open</u> - open an existing project <u>Close</u> - close the project <u>Save</u> - save the project
Verify Copy		Save as - save the project with another name Verify - compare modules with another project Copy - copy module information from another project
Print	Ctrl+P	Print - print the project data Recent files - open a recently-used project
1 Sample.st		Exit - close GX Configurator-ST
2 Sample.st		
3 Sample.st		
4 Sample.st		
Exit		

[Ec	lit] menu		
<u>[Ec</u>	It] menu Edit Undo Redo <u>A</u> dd Rearrange <u>D</u> elete All Delete <u>P</u> arameter Set <u>O</u> ption	Ctrl+Z Ctrl+Y Ctrl+Insert Ctrl+Delete Shift+Del tting F9 F10	The [Edit] menu includes the functions for module configuration setting and parameter setting. For more information, refer to the following sections: Undo - reverse the last edit operation Redo - reverse the last undo operation Add - add a module to the configuration Rearrange - change the order of modules Delete - delete a module All delete - delete all modules Parameter setting - change module parameter settings Option - change module options Change head module - change head module type Power distribution check - test power consumption
	Change <u>h</u> ead	module	
	Power Distribu	ition Check	
		agen Zuper	1

[Vi	[View] menu		
	Wew Module Configuration Initialize Module Configuration View Position System Monitor Toolbar Statusbar	The [View] menu includes the function to display/hide each screen. Refer to <u>'Display switching and window rearranging</u> operations' for details of each menu item.	

[Mode] menu		
Mode • Edit F2 Diagnosis F3	The [Mode] menu includes the functions to switch between the edit mode and diagnosis mode. Refer to <u>'Edit mode operation procedure'</u> for details of the	
	[Edit] menu item. Refer to <u>'Diagnosis mode operation procedure'</u> for details of the [Diagnosis] menu item	

[Online] menu		
Online	The [Online] menu includes the functions for connection to	
Transfer Setup	For more information, refer to the following sections:	
Get System Get Input/Output Data Settings	Transfer setup - select communication port to use	
Input/Output Monitor	Get system - read configuration from connected MELSEC- ST system	
Offset/Gain Setting	Get input/output data settings - read input/output data settings from MELSEC-ST system (PROFIBUS-DP only)	
Parameter Block Write	Input/Output monitor - monitor module input/output data	
Reset Head Module	Forced output test - test outputs / error clear	
	Offset/Gain setting - change offset/gain settings	
	Parameter block write - download parameters as a batch	
	Reset the head module - restart the head module	

## [Diagnostics] menu

Diagnostics	The [Diagnostics] menu includes the functions to diagnose
Module Detail Information Online Module Change	sections:
PROFIBUS-DP Network Parameter Monitor Master Station Data Communication Monitor	Module detail information - show more details of a module 'Online module change' - swap out a module 'PROFIBUS-DP network parameter monitor' - view or export network parameter data 'Master station data communication monitor' - view head module data areas

[Window] menu				
Window Cascade Tile Vertically Tile Horizontally Arrange Icons Close All Windows	The [Window] menu includes the functions to change the screen layout of GX Configurator-ST. Refer to ' <u>Display switching and window rearranging</u> operations' for details of each menu item.			
✓ 1 System Monitor 2 Parameter Setting No.4				

[He	elp] menu			
	Help Contents	The [Help] menu inclu help, operate the GX ( software version.	The [Help] menu includes the functions to show the online help, operate the GX Configurator-ST keys and confirm the software version.	
	Key Operation List	Contents	Shows the help file starting at the co	
	 <u>A</u> bout	Key Operation List About	Shows the <u>key operation list</u> page. Shows the version number, copyrigh information.	
## **5** Operation Procedures

## 5.1 Precautions when using GX Configurator-ST

This section provides precautions when using GX Configurator-ST.

 A communication error may occur if communication is made with the MELSEC-ST system after setting of the resume function, suspend setting, power-saving function or standby mode of the personal computer.
 For this reason, do not set any of these functions before starting communication with the MELSEC-ST system.

## 5.2 Edit mode operation procedure

Create a new project, and edit and download it to the MELSEC-ST system.



## 5.3 Diagnosis mode operation procedure

Confirm the error status and take corrective action, or perform the monitor/test, etc. of I/O data.

#### (1) Preparations for diagnosis mode

Make preparations for operation in the diagnosis mode. Perform the following operation before starting operation in the diagnosis mode.



#### (2) Diagnosis mode operation procedure

Perform the operation explained in the reference section for each purpose of use. Before starting the diagnosis mode operation, perform the operation in (1) of this section.

Purpose of use	Reference section		
To monitor the MELSEC-ST system. To confirm the module where an error occurred.	<u>'System monitor'</u>		
To confirm the error definition.	'Module detail information'		
To set the offset and gain values.	<u>'Offset/Gain setting of intelligent function</u> <u>modules'</u>		
To confirm the I/O data.	<u>'Input/Output monitor'</u>		
To conduct the forced output test.	'Forced output test'		
To monitor the master station data communication.	<u>'Master station data communication</u> <u>monitor</u>		
To monitor the PROFIBUS-DP Network Parameters.	<u>'PROFIBUS-DP network parameter</u> <u>monitor</u>		
To reset the head module.	'Reset head module'		
To change the module online.	'Online module change'		

## 6 Installation and uninstallation

This chapter explains how to install and uninstall GX Configurator-ST.

## 6.1 Installation

#### 6.1.1 Installation procedure



#### 6.1.2 Installing GX Configurator-ST

The following indicates how to install GX Configurator-ST. Microsoft® Windows® XP Professional Operating System is used for explanation in this section.



(1) Installing GX Configurator-ST



(To the next page)



(To the next page)



(To the next page)



Installing GX Configurator-ST registers the icon as shown below.

All Programs 🜔 🛗 MELSOFT Application 🔹 🕨	🔒 GX Configurator ST 1.083 🔸 🦉 GX Configurator ST 1.083
	To MELFANSweb Homepage
	🔂 User's Manual
🟭 start	

## REMARK

When any of the following operating systems is used, the registered icon is placed in the menu that appears by selecting [Start]  $\rightarrow$  [Programs]  $\rightarrow$  [MELSOFT Application].

- Microsoft® Windows® 2000 Professional Operating System
- Microsoft® Windows® XP Professional Operating System
- Microsoft® Windows® Vista Operating System
- Microsoft® Windows® 7 Enterprise Operating System

## 6.2 Uninstallation

This section explains the operation for removing GX Configurator-ST from the hard disk. The screens used for explanation in this section are those of Windows® XP Professional. Though they differ slightly from the screens of Windows® 2000 Professional or like, refer to **REMARKS** and perform installation.

📴 Control Panel		
File Edit View Favorites Tools	Help	AT
🕝 Back 🔹 🌍 🕤 🏂 🔎 Sex	arch 😥 Folders 💷 🔹	
Address 🔂 Control Panel		💌 🄁 Go
Control Panel 🛞	Pick a category	
See Also 🙁	Appearance and Themes	Printers and Other Hardware
<ul> <li>Windows Update</li> <li>Help and Support</li> </ul>	Network and Internet Connections	User Accounts
	Add or Remove Programs	Date, Time, Language, and Regional Options
	Sounds, Speech, and Audio Devices	Accessibility Options
	Performance and Maintenance	Security Center

 Double-click "Add or Remove Programs" on the Control Panel. To display the Control Panel, choose [Start] → [Control Panel].

#### REMARKS

When using any of the following operating systems, double-click "Add or Remove Programs". To display the control panel, choose [Start]  $\rightarrow$  [Settings]  $\rightarrow$  [Control Panel].

- Windows® 2000 Professional
- Windows® XP Professional

For Windows Vista® and Windows® 7, click "Uninstall a program" on the Control Panel. To display the Control Panel, select [Start]  $\rightarrow$  [Control Panel].

 S Add or Remove Programs
 Image: Conserver on Remove Programs

 Chorps or Remove Programs
 Currently installed programs:
 Show updates
 Sort by: Name
 Image: Conserver on Remove

 Chorps or Remove Programs
 Currently installed programs:
 Show updates
 Sort by: Name
 Image: Conserver on Remove

 Chorps or Remove
 Currently installed programs
 Sort 200,000%
 Used or 200,000%

 Addificencee
 To remove this program from your computer, click Remove.
 Remove

 Addificencee
 Sort by: Sort by: Name
 Remove

 Sort program
 Sort program
 Remove

 Sort program
 Sort program
 Remove

(To the next page)

 2) Choose "Change or Remove Programs" and then "GX Configurator ST Version 1.
 \*\*" ("\*\*" represents a version number).

After selection, click the **Remove** button.

(From the previous page) ↓ ↓	
Add or Remove Programs	<ul> <li>3) Confirm that the program should be uninstalled.</li> <li>Clicking the Yes button starts uninstallation.</li> <li>Clicking the No button stops uninstallation.</li> </ul>
User Account Control	<ul> <li>4) (When using Windows Vista® or Windows® 7)</li> <li>When the screen on the left is displayed, click "Allow".</li> </ul>
(Completion)	

## 6.3 Starting GX Configurator-ST

This section explains how to start GX Configurator-ST from the start menu.

All Programs MELSOFT Application  GX Configurator ST 1.083  CONFIGURATION OFF Computer Start	<ol> <li>Move the cursor from [Start] →</li> <li>[All Programs *1] →</li> <li>[MELSOFT Application].</li> </ol>
•	<ul> <li>*1: [Programs] is displayed when any of the following operating systems is used.</li> <li>Windows® 2000 Professional</li> <li>Windows® XP Professional</li> </ul>
All Programs	<ol> <li>Click [GX Configurator ST **] ("**" represents a version number).</li> </ol>
MILSOFT GX Configurator ST  Ele Edt Yew Bode Online Diagnostics Window Belp  Module Configuration  For the new system, do you want to:  Eleved the system configuration from the communication port  Ogen an existing file  Build the system configuration offine  Nexts  Pendo	3) GX Configurator-ST starts.

#### REMARK

Multiple GX Configurators-ST can be started to use.

Since different projects can be opened on multiple GX Configurators-ST, multiple projects can be browsed simultaneously.

The same project cannot be opened from multiple GX Configurators-ST.

When multiple GX Configurators-ST are started, GX Configurators-ST started second and later have the following restrictions.

1) The diagnosis mode cannot be used.

The [Mode]  $\rightarrow$  [Diagnosis] menu (B) cannot be clicked.

- 2) Get System cannot be executed.
  - The [Online]  $\rightarrow$  [Get System] menu (b) cannot be clicked.
- 3) Parameter Block Write cannot be executed.
  - The [Online]  $\rightarrow$  [Parameter Block Write] menu cannot be clicked.
- 4) Parameter upload, download and verify cannot be executed on the Parameter Setting screen.
  - The Upload, Download and Verify buttons cannot be clicked.

GX Configurator-ST started first can perform the following operation since the above restrictions do not apply.

Even when GX Configurator-ST started first is exited, the above restrictions still apply to all GX Configurator-ST instances that have started.

To remove the restrictions, restart GX Configurator-ST after exiting all the remaining GX Configurator-ST instances.

## 6.4 Exiting GX Configurator-ST

This section describes how to exit GX Configurator-ST.

(1) From menu



Click the [File]  $\rightarrow$  [Exit] menu. GX Configurator-ST ends.

#### (2) From "Titlebar"



Click and choose [Close]. Alternatively, click at the right end of the "Titlebar".



### REMARK

When a project is newly created, or modified but not yet saved, a dialog box appears asking whether the project will be saved or not.

When not saving it, click the No button.

When saving it, click the Yes button. When saving a new project, name the project. Refer to <u>'Save as'</u> for details.

## 7 Screen layout and display switching

This chapter explains the screen layout of GX Configurator-ST and the display switching of each area.

## 7.1 Screen layout

The screen layout of GX Configurator-ST is shown below.



Name	Description				
	Displays the file name of the open project. When two or more GX Configurator-STs have been started, "Edit Mode only" is displayed before each file name of the second and later ones.				
Titlebar	MELSOFT GX Configurator-ST Edit Mode only				
	When "Window" on GX Configurator-ST is maximized, the name of that "Window" is displayed.				
	MELSOFT GX Configurator-ST (Untitled) - [Parameter Setting No. 3]				
Menubar	Clicking each menu opens the corresponding "Dropdown menu". Then clicking a "Dropdown menu" item will execute the corresponding function of				
Dropdown menu	GX Configurator-ST. Refer to <u>'Menu list'</u> for details.				
Toolbar	Click any of the buttons to execute the corresponding function of GX Configurator- ST. Refer to <u>'Details of toolbar'</u> for more information.				
Screen minimize button	Click this button to minimize GX Configurator-ST.				

Name	Description
Screen maxmize button	Click this button to maximize GX Configurator-ST.
Exits GX Configurator- ST	Click this button to exit GX Configurator-ST.
Module configuration window	This initially shows a configuration wizard. Once a configuration is being edited it will display a list of modules registered to the project, graphically and as a list. Double-click a module to set the parameters. Right-click the module to display the menu, and select a menu item to execute the corresponding function. Use 'drag and drop' in the graphical display to rearrange modules. Use the 'Wizard' area to add modules. Refer to <u>'Details of module configuration window</u> ' for more information.
Window	Displays the "Parameter Setting" screen, "Result Verify" screen, etc. Use $\boxed{Ctrl}_+$ $\boxed{F6}$ to switch to the next window, or $\boxed{Shift}_+$ $\boxed{Ctrl}_+$ $\boxed{F6}$ to switch to the previous window.
Statusbar	When the mouse pointer is moved over each "Dropdown menu" item, the corresponding explanation is displayed. The following information is also displayed. • Current mode of GX Configurator-ST • Station number or FDL address of the connected head module in the diagnosis mode

## 7.2 Display switching and window rearranging operations

The following table shows how to display/hide bars and how to arrange windows.

Operation	Description			
[View] → [Module Configuration Window]	Displays or hides the "Module Configuration Window" screen. This operation can be performed in the edit mode only.			
[View] $\rightarrow$ [Initialize Module Configuration View Position]	Returns the display position of the "Module Configuration Window" screen to the initial status. This operation can be performed in the edit mode only.			
[View] → [System Monitor]	Displays or hides the "System Monitor" screen. This operation can be performed in the diagnosis mode only.			
[View] → [Toolbar]	Displays or hides the <u>"Toolbar"</u> .			
[View] → [Statusbar]	Displays or hides the <u>"Statusbar"</u> .			
[Window] $\rightarrow$ [Cascade]	Overlays multiple "Windows" opened on GX Configurator-ST.			
[Window] $\rightarrow$ [Tile Vertically]	Displays multiple "Windows" vertically.			
[Window] $\rightarrow$ [Tile Horizontally]	Displays multiple "Windows" horizontally.			
[Window] $\rightarrow$ [Arrange lcons]	Arranges the icons to which windows have been minimized.			
[Window] → [Close All Windows]	Closes all "Windows". When a "Window" is being edited, a confirmation message is displayed.			

## 7.3 Details of toolbar

The buttons included in the Toolbar will be explained.

	8	N CH	+0 🕱 🛙	( 6	🔝 🔝	· 📸	i
--	---	------	--------	-----	-----	-----	---

Button	Name	Description	Reference Section
Ľ	New	Creates a new project.	<u>'Creating a new</u> <u>project'</u>
2	Open	Opens the existing project.	<u>'Opening an existing</u> <u>project'</u>
	Save	Saves the open project, whether it is new or existed previously.	<u>'Save'</u>
9	Print	Prints the module configuration, module information list, and module detail information of the open project.	<u>'Printing the project</u> <u>data'</u>
Ŷ	Undo	Restores to the status prior to the last operation.	<u>'Undo'</u>
đ	Redo	Restores to the status prior to the "Undo" operation.	<u>'Redo'</u>
+	Add	Adds a slice module to the project.	'Adding the module'
×	Delete	Deletes the slice module from the project.	'Deleting a module'
	All Delete	Deletes all slice modules from the project.	'Deleting all modules'
	Parameter Setting	Sets the parameters of the intelligent function module.	'Parameter setting'
	Edit	Switches to the edit mode.	_
	Diagnosis	Switches to the diagnosis mode.	
	Get System	Uploads the system configuration and the parameters of each module from the head module.	<u>'Get system'</u>
i	About	Displays the software version of GX Configurator-ST.	_

## 7.4 Details of module configuration window

The module configuration window provides a 'wizard' to guide the user through the system configuration. When GX Configurator-ST is first started, this will show the options for creating a system:

Module Configuration	
For the new system, do you want to:	
Bead the system configuration from the communication port	
C Open an existing file	
Build the system configuration offline	
<u>N</u> ext >>	

Creating a new configuration is described in 'Creating a new project'.

When the configuration is being edited, the window changes to show four separate panes:

- Mod	ule Co	nfiguration							
No.         0         1         2         3         4         5         6         7         8         9         10         11         12         13         14           Image: State						To add a module before or after the current position, select it To remove the current module, select 'Delete'. STIDA1+F01 STIDA2+F01 STIDA2+F01 STIDA2 Bi Reserved Add before  Add after Delete Add			
1/0 Oc	cupatior	Points Bit 2	4 Word 2	7 GSD Version:	B 💌 with	command	•		Name: ST1DA2-V
No.	Slice	Module Name	Unused Bits	Br(HEX)	Bw(HEX)	Wr(HEX)	Ww(HEX)	Label Name 🔺	Description: Analog Output module, 2 Outputs, Voltage, 12 Bit, 1 Module width
0	0	ST1H-PB	•			00.0 · 12.F	00.0 - 12.F		
1	2	ST1PSD							Slots: 1 Wr.U Bit 1: Module ready Wr.0 Bit 2: Convert setting completed flag
2	3	ST1X2-DE1	6	13.0 • 13.1					Slices: 2 Wr.0 Bit 3: System Area (fixed to 0)
3	4	ST1X16-DE1	•	13.8 • 14.7	Module				Br: - Wr.0-Bit 4: System Area (fixed to 0)
4	12	ST1Y2-R2	6	. (	list	).			Bw: - Ww.0 Information Fixed to 0)
5	13	ST1Y2-R2	6	•	1. Inst	· .	•		Wr: 1 Ww.0 area ing request
6	14	ST1AD2-I	•	•	•	14.8 - 17.7	14.0 · 14.F		Ww: 3 Ww 0 Bit 3: CH2 output enable/disable flag
7	16	STIDA2-V	•	•	•	17.8 - 18.7	16.U - 18.F		www.ouk.th. Chiz output enable/ulsable hag
8	18	STIDA1-I	•	•	•	18.8 - 19.7	1A.U - 1C.F		
6	20	\$11551	· ·	·	•	19.8 - 10.7	IE.U+1E.F	•	
									J

Name	Description
Rack display	Displays a graphical representation of the assembled system. It can be used to edit module details or rearrange modules using drag and drop. The display items are described in <u>'Details of rack display</u> .
Module list	Shows the details of the modules, with the address ranges that they will use and any label names assigned to them. The display items are described in <u>'Details of module list'</u> .
Wizard area	This is a continuation of the wizard screen shown when GX Configurator-ST first starts, and can be used to add or delete modules. For more information, see <u>'Details of wizard area'</u> .
Information area	This shows the details of the module selected for addition in the wizard area. The display items are described in <u>'Details of information area</u> '.



You can resize the areas by selecting the bars between them, and then clicking and dragging with the mouse. The size of each area will be saved when the application exits, and restored the next time the program starts. It can be reset from the 'View' menu <u>'Initialize</u> <u>module configuration view position</u>' item.

The following shortcut keys are available for use when the module configuration window is active:

Key	Description
Alt <sub>+</sub> 1	Switch to the rack display.
Alt <sub>+</sub> 2	Switch to the module list
Alt <sub>+</sub> 3	Switch to the wizard area
F6	Switch between panes, in the order: Rack display $\rightarrow$ Module list $\rightarrow$ Wizard area $\rightarrow$ Rack display
Shift + F6	Switch between panes in reverse order: Rack display $\rightarrow$ Wizard area $\rightarrow$ Module list $\rightarrow$ Rack display

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#### 7.4.1 Details of rack display

Displays a graphical representation of the assembled system. This can be useful to provide a quick visual check for errors, as the graphical display should look like the physical hardware.



ltem	Description	
	The rack starts at the left side with the head module, which always occupies slot number zero. This should normally be followed by an ST1PSD bus refreshing module, which is always required to provide power to the head module and the first modules immediately after it.	
	The graphic for each module is shown in two parts; the upper half depends on the module type, and the lower half shows the 'base module' which may be different depending on the type of wiring used.	
Modules	Left click on a module to select it. It will automatically be selected in the module list as well. Many actions in the [Edit] menu require a module to be selected first.	
	Right click on a module to select it and show a menu similar to the [Edit] menu – refer to 'Editing the project' for details of each menu item. If the module has a configuration error (such as consuming more power than the last power supply will provide), this will be shown at the top of the menu. Clicking on the item will show help on the error.	
Scroll bar	If there are more modules in the configuration than the window can display, there will be a scrollbar under the rack which can be used to view the remaining modules	

DISPLAV/SETTING DATA

#### 7.4.2 Details of module list

This shows a list of modules in the configuration.

## [CC-Link systems]

## DISPLAY/SETTING SCREEN



## 🖉 DISPLAY/SETTING DATA

ltem	Description
I/O Occupation Points (Bit)	The total number of bits used by all the modules in the configuration.
I/O Occupation Points (Word)	The total number of words used by all the modules in the configuration.
Max. Bit	The limit on the number of input/output bits with the current optimisation mode, extended cyclic and stations settings.
Max. Word	The limit on the number of input/output words with the current optimization mode, extended cyclic and stations settings.
Mode	This gives the optimization mode currently selected, either 'priority high speed' (use more stations so data is read faster) or 'priority min. stations' (reduce the number of stations used at the cost of reading the data more slowly). This can only be changed for the SLICE system by setting a DIP switch on the head module itself, although the selection can be changed here to see what the effect of switching mode would be. When you switch to diagnostics mode, the current DIP switch setting will be read from the SLICE hardware.
Configuration setting	This shows the configuration setting you will need to correctly configure the head module in GX Works2, GX Developer or GX IEC Developer.
Exp. cyclic setting	By increasing the number of cycles taken to read the data, the number of stations used can be reduced, however this means that the data will take longer to read in total. This value is calculated based on the optimization mode setting.

ltem	Description
Excl. station count	The number of stations used for communications. Using more stations increases the speed at which data is read, but reduces the number of other devices that can be used on the CC-Link bus. This value is calculated based on the optimization mode setting.
	This shows a list of modules in the configuration. Double click on a module to edit its parameter settings (see <u>'Parameter</u> <u>setting'</u> for more details). Left click on a module to select it – the same module will automatically be selected in the rack display as well. Many actions in the [Edit] menu require a module to be selected first. Right click on a module to select it and show a menu similar to the [Edit] menu – refer to <u>'Editing the project'</u> for details of each menu item. If the
	module has a configuration error (such as consuming more power than the last power supply will provide), this will be shown at the top of the menu. Clicking on the item will show help on the error.
List area	You can alter the widths of columns in the module list by moving the mouse pointer over the dividing line between two column headings:
	No. Slice Modu 0 0 ST 1 2
	When the cursor changes to a vertical double line with arrows on each side, click and hold the left mouse button, then drag the column divider to its new position and release the mouse button. The changes you make to the column widths will be remembered and reapplied each time the application is started.
No.	the position number for the module, starting with the head module at position 0 and the first ST1PSD power supply at position 1.
Slice	The Slice position of the module. Some modules can occupy more than one slice, so this does not always match the number.
Module Name	The type of module, for example ST1PSD.
Br(HEX)	The input bit range used by the module
Bw(HEX)	The output bit range used by the module
Wr(HEX)	The input word range used by the module
Ww(HEX)	The output word range used by the module
Label Name	A user-defined label for the module. This can be useful to identify modules when there are several modules of the same type in the system. For example, two similar input/output modules could be labelled 'Cabinet 1 wiring' and 'Cabinet 2 wiring' to tell them apart.

In CC-link systems, the address ranges are sometimes referred to differently. CClink's 'RX' and 'RY' ranges are equivalent to the 'Br' and 'Bw' ranges shown in GX Configurator-ST and CC-link's 'RWr' and 'RWw' ranges are equivalent to 'Wr' and 'Ww'.

## [PROFIBUS-DP systems]

## DISPLAY/SETTING SCREEN



## 🔎 DISPLAY/SETTING DATA

ltem	Description
I/O Occupation Points (Bit)	The total number of bits used by all the modules in the configuration. This cannot be more than the point mode limit (see <u>'Option setting'</u> ).
I/O Occupation Points (Word)	The total number of words used by all the modules in the configuration. The limit on the number of words used varies depending on the point mode.
GSD version	This dropdown gives information about the protocol version the offline configuration is currently set to. By selecting a different value (Version A or B), the configuration can be changed.
Head module mode	PROFIBUS-DP version A: This gives the number of points read when communicating with the PROFIBUS-DP master station. Lower numbers mean that the data is read more frequently, but less data can be read in total. Larger numbers allow more data to be read, but not as often. PROFIBUS-DP version B: This controls whether the head station is used with or without commands.

lte	em	Description
		This shows a list of modules in the configuration. Double click on a module to edit its parameter settings (see <u>'Parameter</u> <u>setting'</u> for more details). Left click on a module to select it – the same module will automatically be selected in the rack display as well. Many actions in the [Edit] menu require a module to be selected first.
Listarea		Right click on a module to select it and show a menu similar to the [Edit] menu – refer to <u>'Editing the project'</u> for details of each menu item. If the module has a configuration error (such as consuming more power than the last power supply will provide), this will be shown at the top of the menu. Clicking on the item will show help on the error.
		You can alter the widths of columns in the module list by moving the mouse pointer over the dividing line between two column headings:
		When the cursor changes to a vertical double line with arrows on each side, click and hold the left mouse button, then drag the column divider to its new position and release the mouse button. The changes you make to the column widths will be remembered and reapplied each time the application is started.
	No.	The position number for the module, starting with the head module at position 0 and the first ST1PSD power supply at position 1.
	Slice	The Slice position of the module. Some modules can occupy more than one slice, so this does not always match the number.
	Module Name	The type of module, for example ST1PSD.
	Unused bits	<i>Head module version B only</i> The number of bits available to use with byte packing
	Br(HEX)	The input bit range used by the module
	Bw(HEX)	The output bit range used by the module
	Wr(HEX)	The input word range used by the module
	Ww(HEX)	The output word range used by the module
	Label Name	A user-defined label for the module. This can be useful to identify modules when there are several modules of the same type in the system. For example, two similar input/output modules could be labelled 'Cabinet 1 wiring' and 'Cabinet 2 wiring' to tell them apart.

#### 7.4.3 Details of wizard area

The wizard area is a continuation of the wizard page which is shown when GX Configurator-ST first starts. It can be used to add or delete modules.

# DISPLAY/SETTING SCREEN



## 🔎 DISPLAY/SETTING DATA

ltem	Description
Information message	This shows advice on the current function of the buttons.
Module tree	This shows the available modules for addition, categorised by type. When a module is selected, its details are shown in the information area – see <u>'Details of information area'</u> .
Add before	Select this if new modules should be added <i>before</i> the currently selected module in the rack display / module list.
Add after	Select this if new modules should be added <i>after</i> the currently selected module in the rack display / module list.
Back button [not shown]	If there are no modules left other than the head module and first bus refreshing module, the Back button will allow you to return to the head module selection page of the wizard.
Delete button	This can be used to delete the module which is currently selected in the module list / rack display.
Add button	Adds a module to the configuration.

#### 7.4.4 Details of information area

When a module is selected for addition in the wizard area tree, the information area shows the details of the module.

# [CC-Link systems] DISPLAY/SETTING SCREEN



## 🔎 DISPLAY/SETTING DATA

ltem	Description	
Name	The module name (type)	
Description	A readable description of the module - this can be useful to identify a module when two modules have similar names	
The module graphic	A graphical representation of the top part of the module as it will appear in the rack	
Slots	The number of slots that will be occupied by the module	
Slices	The number of slices that will be occupied by the module	
Br	The number of input bits occupied	
Bw	The number of output bits occupied	
Wr	The number of input words occupied	
Ww	The number of output words occupied	
Status bit detail	This gives more detailed information about the status bits used by the module	



In CC-link systems, the address ranges are sometimes referred to differently. CClink's 'RX' and 'RY' ranges are equivalent to the 'Br' and 'Bw' ranges shown in GX Configurator-ST and CC-link's 'RWr' and 'RWw' ranges are equivalent to 'Wr' and 'Ww'. I

## [PROFIBUS-DP systems]

## DISPLAY/SETTING SCREEN



## DISPLAY/SETTING DATA

ltem	Description	
Name	The module name (type)	
Description	A readable description of the module - this can be useful to identify a module when two modules have similar names	
The module graphic	A graphical representation of the top part of the module as it will appear in the rack	
Slots	The number of slots that will be occupied by the module	
Slices	The number of slices that will be occupied by the module	
Br	The number of input bits occupied	
Bw	The number of output bits occupied	
Wr	The number of input words occupied	
Ww	The number of output words occupied	
Status bit detail	This gives more detailed information about the status bits used by the module	

## 8 **Project creation**

This chapter explains how to create the project of GX Configurator-ST.

## 8.1 Creating a new project



Creates a new project.

# BASIC OPERATION

(1) When GX Configurator-ST is first started, a 'wizard' page is shown automatically. If you have a configuration file open, you can also return to this page by clicking

the [File]  $\rightarrow$  [New] menu ( $\square$ ) or pressing the Ctrl + N keys on the keyboard.

Module Configuration
For the new system, do you want to:
Read the system configuration from the communication port
C Open an existing file
Euild the system configuration offline
<u>N</u> ext >>

(2) Select 'Build the system configuration offline' and click Next >> to show the protocol selection page.

Module Configuration	
Please select the protocol used by the head module, then click 'Next'	
PROFIBUS-DP (ST1H-PB) CC-Link (ST1H-BT)	
GSD Version Version B without command Version B with command Version A	
<< Back Next >>	

(3) Select the protocol used by the head module (PROFIBUS-DP for the ST1H-PB module, or CC-Link for the ST1H-BT module). For PROFIBUS-DP the protocol version (A, B with command, B without command) can also be selected using

radio buttons. After selecting the protocol and version, click

This displays a new project on the "Module Configuration Window" screen.

## 8.2 Opening an existing project

ြာ *PURPOSE* 

Reads a saved project.



(1) Either:

Click the [File] → [Open] menu () or press the Ctrl + O keys on the keyboard, or At the first wizard page (normally shown when GX Configurator-ST starts), select

'Open an existing file' and click Next >>.

(2) On the opened screen, select the project to be opened, and click the **Open** button. This displays the selected project on the "Module Configuration Window" screen.



Open			?×
Look in: 🔀	) SLICE	• t t	
BMP Sample1			
File name:			Open
Files of type:	GX Configurator-ST File(*.st)	•	Cancel



## DISPLAY/SETTING DATA

ltem	Description	
Look in	Select the directory that stores the project to be opened.	
File name	Set the file name of the project to be opened.	
Open	Opens the project specified at "File name".	
Cancel	Closes this screen without opening the project.	

## 8.3 Closing the project



Closes the currently open project.



- (1) Click the [File]  $\rightarrow$  [Close] menu.
- (2) When closing a project that includes unsaved changes, i.e., newly created project or changed existing project, a screen appears asking whether the project will be saved or not.



When not saving it, click the  $\boxed{No}$  button. When saving it, click the  $\boxed{Yes}$  button. When saving a new project, name the project. Refer to <u>'Save as'</u> for details.

(3) When closing an unchanged existing screen, the following screen appears asking whether the project will be closed or not.



Click the Yes button to close the project.

## 8.4 Saving the project

8.4.1 Save



Saves the open project, whether it is new or existed previously.



Click the [File]  $\rightarrow$  [Save] menu ( $\square$ ) or press the  $\boxed{Ctrl}$  +  $\boxed{S}$  keys on the keyboard. For a new project, name and save it. Refer to  $\underline{'Save as'}$  for details.
#### 8.4.2 Save as

ြာ *PURPOSE* 

To name and save the open project.



- (1) Click the [File]  $\rightarrow$  [Save As] menu.
- (2) On the opened screen, select the destination directory, set the file name, and click the Save button.



### DISPLAY/SETTING SCREEN

Save As			?×
Save jn: 🔀	SLICE	• + €	
BMP Sample1			
File <u>n</u> ame:			Save
Save as type:	GX Configurator-ST File(*.st)	•	Cancel



### DISPLAY/SETTING DATA

Item	Description
Save in	Select the directory that stores the project.
File name	Set the file name of the project to be saved.
Save	Saves the project with the file name specified at "File name".
Cancel	Closes this screen without saving the project.

#### 8.5 Verifying the projects

Verify two projects against each other to check whether the parameters are consistent or not.

There are the following two different verify methods.

(1) n:n verify

Verify all modules of the same No. between the open project and saved project. Refer to <u>'n:n verify'</u> for details of the verify operation. Refer to <u>'Verify result'</u> for details of the verify result.

(2) 1:n verify

Select one module from one of two projects, select multiple modules from the other project, and verify the one module of the former project against the multiple modules of the latter project.

Refer to <u>'1:n verify'</u> for details of the verify operation. Refer to <u>'Verify result'</u> for details of the verify result.

#### 8.5.1 n:n verify

# ြာ *PURPOSE*

Verifies all modules of the same No. between the open project and saved project.

## BASIC OPERATION

- (1) Clicking the [File]  $\rightarrow$  [Verify] menu displays the "Verify" screen.
- (2) Open the <<Verify All Modules>> tab.
- (3) Click the **Browse** button and specify the verification destination project.
- (4) Clicking the **Execute** button starts verify, closes this screen, and displays the result.

Refer to <u>Verify result</u> for details.

**DISPLAY/SETTING SCREEN** X Verify Verification Destination File Drive/Path : C:\MELSEC\SLICE Close File Name : VerifySample3b Browse... Verify All Modules Verify Selected Modules Verify all Execute modules tab Verification Source Verification Destination No. Slice Module Name . Slice Module Name ٠ No. ST1H-BT ST1H-BT 0 0 0 0 ST1PSD ST1PSD 2 2 1 1 2 ST1DA2-V 2 ST1DA2-V 3 3 3 5 ST1RD2 3 5 ST1RD2 7 4 7 £££1AD2∙V 4 STIAD2-V Source 5 9 5 9/ S1 Destination S1 modules modules 2-1 02-1 11 6 1 6 (target file) (current file) 7 13 AD2-I 7 13 024 ST1SS1 8 15 ST1SS1 8 15 9 17 ST1DA2-V 9 17 ST1DA2-V 10 19 ST1RD2 10 19 ST1RD2 21 ST1DA2-V 21 ST1DA2-V 11 11 Ŧ Ŧ

A	

### DISPLAY/SETTING DATA

Item	Description		
Verification Destination File	Specify the verification destination project.		
Drive/Path	Displays the drive and directory that stores the verification destination project specified with the <b>Browse</b> button.		
File Name	Displays the file name of the verification destination project specified with the <b>Browse</b> button.		
Browse	Specifies the project. Operation is the same as opening the existing project. Refer to <u>'Opening an existing project'</u> for details.		
Close	Closes this screen without verifying the projects.		
< <verify all="" modules="">&gt; tab</verify>	Performs n:n verify.		
Execute button	Verifies the projects, closes this screen, and displays the verify result. Refer to <u>Verify result</u> for details of the verify result.		
Verification Source *2	Displays a list of all modules of the open project.		
Verification Destination *2	Displays a list of all modules of the verification destination project.		

- \*1: The **Execute** button cannot be clicked if the open project and verification destination project differ in system configuration.
- \*2: As this verification is conducted to check parameter inconsistency, the module without parameters is grayed out and is not verified.

The module with uploadable parameters is verified, even if the parameters are not editable.

#### 8.5.2 Verify result

ြာ *PURPOSE* 

Confirms the verify result displayed by <u>n:n verify</u> or <u>1:n verify</u>.



### **BASIC OPERATION**

- (1) The module having inconsistent parameters in the verify result is displayed red in the verified module list.
- To display the inconsistent parameters, click the module displayed red. (2) To change the parameters, double-click or select the corresponding module and
- click the Parameter Setting button.





### **DISPLAY/SETTING SCREEN**

	Resul	t Veri	ify 2						
	Verifi Verifi	cation cation	Source File: Unt Destination File: C:\	iitled MELSEC\SLI(	CE\sampl	e2			
	No.(9	irc)	Module Name(Src)	No.(Dst)	Modu	le Name(Dst)	Mismatch Items	<b>^</b>	\/orified module list
	5		ST1AD2-V	2	ST	1×16-DE1			
	5	_	ST1AD2-V	3	ST1	Y16-TPE3			
	5		ST1AD2-V	5	S	T1AD2-V	5		
	5	_	ST1AD2-V	6	S	T1DA2-V		•	
	Par No.	ameter	Setting			Verify Sou	rce Setting Value	Verifv Destir	Inconsistent parameter list
	1	Verag	e number			4	-	8	
	2 1	Jpper u	upper limit value			4000		2000	
	3 (	Jpper I	lower limit value			4000		2000	
	4 I	.ower (	upper limit value			-4000		-2000	
	5 I	.ower I	lower limit value			-4000		-2000	
<				1111				>	

ø	
/-	

### DISPLAY/SETTING DATA

Item		Description		
Verification Source File		Displays the file name of the verification source project. "Untitled" is displayed when a newly created and unsaved project has been set.		
Verifi	cation Destination File	Displays the file name of the verification destination project.		
Verified module list		Displays a list of modules verified. The module having inconsistent parameters is displayed red. Double-click that module to change its parameters. Refer to <u>'Parameter setting</u> ' for details.		
	No. (Src)	Displays the No. of the verification source module.		
	Module Name (Src)	Displays the model name of the verification source module.		
	No. (Dst)	Displays the No. of the verification destination module.		
	Module Name (Dst)	Displays the model name of the verification destination module.		
Mismatch Items		Displays the number of items whose verify result is inconsistent. "" indicates that the "Module Name(Src)" and "Module Name(Dst)" are different modules.		
Parameter Setting		Changes the parameters of the module selected in the verified module list. Refer to <u>'Parameter setting'</u> for details. The target is an open project.		
Inconsistent parameter list		Displays the parameters that were inconsistent as a result of verify in the module selected in the verified module list.		
No.		Displays the serial number.		
Item Verify Source Setting Value Verify Destination Setting Value		Displays the parameter name.		
		Displays the parameter value of the verification source module.		
		Displays the parameter value of the verification destination module.		

#### 8.5.3 1:n verify

### L V PURPOSE

Selects one module from one of two projects, selects multiple modules from the other project, and verifies the one module of the former project against the multiple modules of the latter project.



### **BASIC OPERATION**

- (1) Clicking the [File]  $\rightarrow$  [Verify] menu displays the "Verify" screen.
- (2) Open the <<Verify Selected Modules>> tab.
- (3) With the Browse button, specify the verification destination project.
- (4) With the "Select Verification Source File" radio button, select the project that includes the verification source module.
- (5) With the Add button, select the verification source module.
- (6) With the **Add** / **Delete** button, select the verification target module.
- (7) Clicking the **Execute** button starts verify, closes this screen, and displays the result.

Refer to 'Verify result' for details.

### DISPLAY/SETTING SCREEN



### ø

### DISPLAY/SETTING DATA

Item	Description		
Verification Destination File	Specify the verification destination project. Operation is the same as performing n:n verify. Refer to <u>'n:n verify'</u> for details.		
Close	Closes this screen without verifying the projects.		
< <verify modules="" selected="">&gt; tab</verify>	Performs 1:n verify.		
Select Verification Source File	<ul> <li>Select the project that includes the verify source module.</li> <li>When "Opened File" is selected, select the verification source module from the open project.</li> <li>When "Verification Target File" is selected, select the verification source module from the project specified at "Verification Destination File".</li> </ul>		
Execute	Verifies the projects, closes this screen, and displays the verify result. Refer to <u>Verify result'</u> for details of the verify result.		
Opened File *1	Displays a list of all modules of the open project.		
Add	<ul> <li>Adds the selected module to the "Verification Source Module" or "Verification Destination Module".</li> <li>The addition destination changes depending on the selection of "Select Verification Source File".</li> <li>When "Opened File" is selected, the selected module is added to "Verification Source Module".</li> <li>When "Verification Target File" is selected, the selected module is added to "Verification Destination Module".</li> </ul>		

\*1: As this verification is conducted to check parameter inconsistency, the module without parameters is grayed out and is not verified.

The module with uploadable parameters is verified, even if the parameters are not editable.

Item		ltem	Description		
Verify Selected Modules		cted Modules	—		
Verification Target File *1		cation Target File	Displays a list of all modules of the verification destination project.		
		Add <sub>button</sub>	<ul> <li>Adds the selected module to the "Verification Source Module" or "Verification Destination Module".</li> <li>The addition destination changes depending on the selection of "Select Verification Source File".</li> <li>When "Opened File" is selected, the selected module is added to "Verification Source Module".</li> <li>When "Verification Target File" is selected, the selected module is added to "Verification Destination Module".</li> </ul>		
Verification Source Module		cation Source le	Displays the module selected as the verification source. Only one module can be selected for this item.		
Verification Destination Module		cation Destination le	Displays the modules to be verified.		
Delete		Delete	Deletes the selected module.		

\*1: As this verification is conducted to check parameter inconsistency, the module without

parameters is grayed out and is not verified. The module with uploadable parameters is verified, even if the parameters are not editable.

#### 8.6 Printing the project data

# URPOSE

Prints the module configuration, module information list and module detail information of the open project.



### BASIC OPERATION

- (1) Click the [File] → [Print] menu () or press the Ctrl + P keys on the keyboard.
- (2) Make settings on the opened screen, e.g. select the printing details (Module Configuration, Module Information List or Individual Module Information (Module Detail Information, Parameter)).
- (3) Click the **Print** button to start printing. Refer to <u>'Print examples'</u> for the printing result.





ltem	Description				
Module Configuration	Check this item to print the module configuration.				
Module Turning Position	Set the number of modules to be arranged horizontally when the module configuration is to be printed. This item is available only when the "Module Configuration" is checked.				
Module Information List	Check this item to print the module information list.				
Individual Module Information (Module Detail Information, Parameter)	Check this item to print the detail information of the modules specified at "Print Range".				
Alignment	Select the print orientation for the module names.				
Print the module name by columnar writing	Prints the module names vertically.				
	STIX18-DEI STIPSD STIH-PB				
Print the module name by horizontal writing	Prints the module names horizontally.				
	ST1H-P B ST1PSD -DE1				
Print Range	modules is to be printed. This item is available only when the "Individual Module Information" is checked.				
All Modules	Prints the detail information of all modules.				
Selected Modules	Prints the detail information of the modules displayed in "The module to print".				
-> button	Adds the module selected in the left side list to the end of "The module to print" as the module to be printed.				
<- button	Withdraws the module selected in "The module to print" from the modules to be printed, and deletes it from "The module to print".				
Printer Setup button	Sets the printer. Refer to <u>'Setting up the printer'</u> for details.				
Page Setup button	Sets the page layout. Refer to <u>'Setting a page layout'</u> for details.				
Print button	Starts printing.				
Print Preview button	Closes this screen and displays a print image. Refer to <u>'Previewing a print image'</u> for details.				
Close	Closes this screen without printing.				

#### 8.6.1 Setting up the printer

# PURPOSE

Selects a printer for printing and sets the paper size, the printing orientation, and other printing format-related items.



- Click the Printer Setup button on the "Print" screen to display this screen.
   Select the printer for printing, and set the paper size, print orientation, etc.
- (3) To close this screen, click the OK button.



### DISPLAY/SETTING SCREEN

Print Setup	,		?×
Printer			
Name:	Adobe LP-9200PS3	•	Properties
Status:	Ready		
Type:	AdobePS EPSON LP-9200PS3		
Where:	epc80136		
Comment:			
Paper		Orientation	)
Size:	A4 💌		Portrait
Source:	Automatically Select 🗨	A	C Landscape
Network.		OK	Cancel

DISPLAY/S	SETTING DATA		
Item	Description		
Printer	Selects a printer for printing.		
Properties button	Clicking this button displays the properties dialog box. The printer property option is used to make the basic settings of the printer.		
Paper	Sets the size of the paper for printing and the paper feed method of the printer. printer. The setting range depends on the printer.		
Orientation	—		
Portrait	Characters will be printed along the paper feed direction.		
Landscape	Characters will be printed across the paper feed direction.		
Network button	Click this button when connecting to the shared network folder. This item is displayed only when any of the following operating systems is used. • Microsoft® Windows® 2000 Professional Operating System • Microsoft® Windows® XP Professional Operating System • Microsoft® Windows® XP Home Edition Operating System • Microsoft® Windows Vista® Basic Premium Operating System • Microsoft® Windows Vista® Home Premium Operating System • Microsoft® Windows Vista® Business Operating System • Microsoft® Windows Vista® Business Operating System • Microsoft® Windows Vista® Ultimate Operating System • Microsoft® Windows Vista® Enterprise Operating System • Microsoft® Windows Vista® Thome Premium Operating System • Microsoft® Windows® 7 Home Premium Operating System • Microsoft® Windows® 7 Professional Operating System • Microsoft® Windows® 7 Professional Operating System • Microsoft® Windows® 7 Iltimate Operating System • Microsoft® Windows® 7 Enterprise Operating System		
OK	Click this button after the printer setting is completed.		
Cancel	Cancels the settings and closes this screen.		



For the property setting of the printer, please read the manual of the used printer carefully since the setting changes depending on the printer maker and model.

#### 8.6.2 Setting a page layout



Makes settings related paper, page number, header, and so on.



### **BASIC OPERATION**

- Click the Page Setup button on the "Print" screen to display this screen.
   Set the paper, page number, header, etc.
- (3) To close this screen, click the OK button.



### DISPLAY/SETTING SCREEN

	Pag	e Setup	$\sim$	×
		Paper	Paper selection	Preview of page with these settings
		Size(Z)	A4	Television and the Television
		Paper Supply Method(S)		The spendar are the spendar sp
		Print Orientation	Margins (mm)	122 Conference Per Per Conference II Per Confere
Print directio	<u>_</u>	Portrait	Left (L) 20 Right (R) 20	Plana anno 12
		C Landscape	Top (T) 25 Bottom (B) 25	
Howks		Page No. Setting	Common	Header Setting Page header
print page	, L	Page No. Format	None  Head	der Edit Header
		No. Position	Center Common	Footer Setting
		Initial Value	1 Foote	er Edit Footer Page
				Tooter text
			OK Canc	el Printer Setup(P) Set up printer



ltem	Description			
Paper	Sets paper size and paper feed method.			
Print Orientation	Sets the orientation of printing on paper.			
Margins	Sets the margins of the page.			
Page No. Setting	Set the page number.			
Page No. Format	<ul> <li>Select the page number format.</li> <li>"-**-" indicates that a page number will printed on pages, starting from the initial value.</li> <li>"-**/**-" indicates that a page number and the total number of pages will be printed.</li> <li>Set "None" to print no page numbers.</li> </ul>			
No. Position	Sets the position of page numbers.			
Initial Value	Sets the page number to be printed on the first page. This can be useful if you are printing the configuration as an appendix to another document.			
Common Header Setting/ Common Footer Setting	By checking the check box, a header will be printed on each page. Click the Edit header button, and the "Header Edit" dialog box as shown below will be displayed. <b>Edit Header Edit header Edit Header Edit header Edit header Edit header Edit header</b> button displays the "Footer Edit" dialog box like the Header Edit dialog box. The header (or footer) can be edited within the range of 64 characters x seven lines. Lines and images cannot be edited, and characters cannot be decorated.			
Preview	This shows a graphical representation of how the page will look using the current settings such as landscape / portrait, margins, etc.			
OK button	Click this button after the page setting is completed.			
Cancel	Cancels the settings and closes this screen.			
Printer Setup button	By clicking this button, the printer dialog box will be displayed. Select the printer for printing and click the OK button. Page Setup Printer Name: Adobe LP-9200PS3 Properties Status: Ready Type: AdobePS EPSON LP-9200PS3 Where: Comment: Network OK Cancel			



#### 8.6.3 Previewing a print image



The image of the entire page when it is printed will be displayed.



- (1) Clicking the **Print Preview** button on the "Print" screen displays the print image of the entire page.
- (2) To return to the "Print" screen, click the **Print** button.
- (3) To end the image display, click the **Close** button.



### **DISPLAY/SETTING SCREEN**

J MELSOFT GX Configurator-ST C: WELSEC	SLICE\VerifySample3a.st	
Print Next Page Prey Page One Page	Zoom In Zoom Qut Close	
	Individual Vadale Information Technic Cetail Information Main Cetail Information Main Main Main Main Main Main Main Main	Section Value R P Bodis R adds R adds
Pages 1-2	Edit Mode	

### 🔎 DISPLAY/SETTING DATA

ltem	Description
Print button	Ends the image display and starts the print.
Zoom In button	The displayed image will be enlarged by clicking this button. Data will be displayed in three different scales.
Zoom Out button	The displayed image will be reduced by clicking this button.
Close	Ends the image display.



#### 8.6.4 Print Examples

Print examples are shown below.

#### (1) Module Configuration

(a) When "Print the module name by columnar writing" is set

Module Configuration

0	1	2	3	4
ST1H-PB	ST1PSD	ST1DA2-V	ST1AD2-I	STIDA1-I

#### (b) When "Print the module name by horizontal writing" is set

Module Configuration

0	1	2	3	4 -
ST1H-B	ST1PSD	ST1DA2	ST1AD2	STID
T		-V	-I	-I

#### (2) Module Information List

Module Information List

Input/Output Occupation Points

Bit	50
Word	4

No.	Slice	Module Name	Br (HEX)	Bw (HEX)	Wr (HEX)	Ww(HEX)	Label Name
0	0	ST1H-PB	00-03	00-03			
1	2	STIPSD	04-05	04-05		-	
de la s	-	Long and Market		and the solution	all for the second	the state	

#### (3) Individual Module Information

Module Detail Information

	Module Name	:	ST1H-PB
	Label Name	:	
	Base Module	:	
	No.	:	0
	Slice No.	:	0
	Br (HEX)	:	00-03
1	Bw (HEX)	t.	00-03
1	Mr (HEX)	I.	-
1	Ww (HEX)	I.	-

Parameter

----

Item	Setting Value
Output status at module error	Stop
Ext_Diag information	Enable
Swan of input/output data	Disable

#### Editing the project 9

This chapter explains how to edit the project of GX Configurator-ST.



#### 9.1 Adding the module

9.1.1 Adding the module with the "Add module" screen



Adds a slice module to the project.



(1) Execute any of the following operations to display the "Add Module" screen. Click the [Edit]  $\rightarrow$  [Add] menu (1).

Press the Ctrl + Insert keys on the keyboard. In the "Module Configuration Window", right-click the list in the "Module list" or

"rack display" area, and click [Add] from the menu.

(2) Set the adding position and model name of the module on the "Add Module"

screen, and click the Add button.

(3) To close the "Add Module" screen, click the Close button.

Perform the operation with the "Module Configuration Window" screen open.

To display the "Module Configuration Window" screen, choose the [View]  $\rightarrow$  [Module Configuration] menu.

Point

If adding the module would cause the power consumption to be exceeded for the power supply module which serves the new module, you will be shown a warning message which provides an opportunity to cancel the addition.

This warning is only shown once – it will not be shown if the power supply module was already overloaded before the module was added.

Point

(PROFIBUS-DP protocol version B only)

If adding the module would use more unused bits than there are available, you will be shown a warning message which provides an opportunity to cancel the addition.

D D	ISPLAY/SETTING SCREEN
Add at end of rack	Add Module Insert Position C Last Position C Last Position Add in this slot
	Select Module Type of module Intelligent Module Power Distribution Module Reserved Byte
	Add Close

Select Module

Input/Output

Module Intelligent

Module

Power

Distribution

or later will be incremented by 1.

	AY/SETTING DAT	Description			
Insert Position	Set the position where the slice	e module will be inserted.			
Last Position	Sets the inserting position to th Example: When the module is a Before addition	e last line. added to the last line. After addition			
No.	Select the "No." radio button and select the inserting position from the list.         Example: When the module (ST1Y16-TPE3) is added to No. 3         Before addition         No. Size Hodde News BIFEQ BerFEQ WHEQ - ON STILLER BUTCO ON STILLER DOLD ON STILL				

Module		
	Reserved (PROFIBUS-DP version B only)	Displays the reserved byte modules in the pull-down menu to enable selection.
	Add button *1	Adds the slice module to the project.
	Close	Closes this screen without adding the slice module.

Select the model name of the slice module to be added in the pull-down menu.

Displays the input/output modules in the pull-down menu to enable selection.

Displays the intelligent function modules in the pull-down menu to enable

Displays the power distribution modules in the pull-down menu to enable

\*1: The slice module cannot be added in excess of the Maximum Input/Output points of the head module.

Refer to 'Option setting' for the Maximum Input/Output points.

11

selection.

selection.

#### 9.1.2 Adding the module with the "Wizard area"

# D PURPOSE

Adds a slice module to the project.

## BASIC OPERATION

- (1) Ensure that a module has been selected in the "rack display" / "module list" area left clicking on a module will select it.
- (2) Select the type of module to be added from the tree in the "wizard area" of the "Module Configuration Window" screen. When you have selected a module, its details will be shown in the "information area" of the "Module configuration window".
- (3) Select either "Add before" or "Add after" to determine where the module will be inserted relative to the selected module.
- (4) Click the Add button in the "wizard area".



Perform the operation with the "Module Configuration Window" screen open.

To display the "Module Configuration Window" screen, choose the [View]  $\rightarrow$  [Module Configuration] menu.



If adding the module would cause the power consumption to be exceeded for the power supply module which serves the new module, you will be shown a warning message which provides an opportunity to cancel the addition.

This warning is only shown once – it will not be shown if the power supply module was already overloaded before the module was added.

### [CC-Link systems]

## DISPLAY/SETTING SCREEN

To add a module before or after the current position, select it from the list and click 'Add'. To remove the current module, select 'Delete'.

	~
i Intelligent modules	_
- ST1AD2-I	
- ST1AD2-V	
- ST1DA1-I	
ST1DA1-I-F01	_
ST1DA2-V	
	<u> </u>
C Add before   Add after	
Delete Add	
2	

ltem	Description	
nsert Position	Set the position where the slice module will be inserted.	
	Inserts just before the currently selected module (to the <i>left</i> in the rack display). Example: When the module ST1Y16-TPE3 is added <i>before</i> slot No. 4.	
Add before	Before addition         After addition           Na         Size         Modal Name         BHEDQ         BHEDQ<	
	Note: You cannot insert a module before the head module. A valid configuration must always start with a head module followed by an ST1PSD bus refreshing module.	
	Inserts just after the currently selected module (to the <i>right</i> in the rack display). Example: When the module (ST1Y16-TPE3) is added <i>after</i> slot No. 2.	
Add after	Before addition         After addition           Na         Size         Medablewit         Metbol         <	
elect Module	Select the model name of the slice module to be added from the tree.	
I/O module	Expand this heading to show input/output modules.	
Intelligent module	Expand this heading to display the intelligent function modules in the tree	
Power module	Expand this heading to display the power distribution modules to enabl selection.	
Add button *1	Adds the slice module to the project.	

\*1: The slice module cannot be added in excess of the Maximum Input/Output points of the head module.

Refer to 'Option setting' for the Maximum Input/Output points.

### [PROFIBUS-DP systems]

DISPLAY/SETTING SCREEN

To add a module before or after the current position, select it from the list and click 'Add'. To remove the current module, select 'Delete'.

É- Intelligent modules	^	
ST1AD2-I		
ST1AD2-I(without Ww)		
ST1AD2-V	-	
ST1AD2-V(without Ww)		
ST1DA1-I		
- ST1DA1-I(without Wr)		
CT1D411E01		
C Add before 💿 Add after		
		-
Delete Add		

ltem		Description
Insert Position	Set the position where the sli	ice module will be inserted.
Add before	Inserts just before the current display). Example: When the module S Before addition Note: You cannot insert a mo	Added to the last inp. before the head module. A valid

		ST1PSD bus refreshing module.		
		Inserts just after the currently selected module (to the <i>right</i> in the rack display). Example: When the module (ST1Y16-TPE3) is added <i>after</i> slot No. 2.		
	Add after	Before addition After addition		
		No.         Size         Model Name         BytEQI         BoyEQI         WetDQ         No.         Size         Model Name         BytEQI         WetDQ         WetDQ		
Select Module		Select the model name of the slice module to be added from the tree.		
	I/O module	Expand this heading to show input/output modules.		
		Expand this heading to display the intelligent function modules in the tree.		
	Intelligent module	In PROFIBUS-DP systems, some intelligent modules can be selected with the 'Wr' or 'Ww' range switched off. These modules will have an ex entry followed by either "without Wr" or "without Ww".		
	Power module	Expand this heading to display the power distribution modules to enable selection.		
	Reserved (PROFIBUS- DP version B only)	Expand this heading to display the reserved byte modules.		
Add button *1		Adds the slice module to the project.		

\*1: The slice module cannot be added in excess of the Maximum Input/Output points of the head module.

Refer to 'Option setting' for the Maximum Input/Output points.





(PROFIBUS-DP protocol version B only) If adding the module would use more unused bits than there are available, you will be shown a warning message which provides an opportunity to cancel the addition. MELSOFT GX Configurator-ST Warning - there are not enough unused bits available. Unused bits available: 2, Required: 4							
If adding the module would use more unused bits than there are available, you will be shown a warning message which provides an opportunity to cancel the addition.           MELSOFT GX Configurator-ST         X           Warning - there are not enough unused bits available.         Unused bits available: 2, Required: 4	(PROFIBUS-DP	(PROFIBUS-DP protocol version B only)					
MELSOFT GX Configurator-ST       Image: Configurator Con	If adding the module would use more unused bits than there are available, you will be shown a warning message which provides an opportunity to cancel the addition.						
Warning - there are not enough unused bits available. Unused bits available: 2, Required: 4		MELSOF	T GX Configurator-ST				
Unused bits available: 2, Required: 4			Warning - there are not enough unused bits available.				
		-	Unused bits available: 2, Required: 4				
Select OK to add the module anyway.			Select OK to add the module anyway.				
			OK Cancel				
This warning is only shown once – it will not be shown if the available unused bits had been exceeded before the module was added.							

#### 9.2 Deleting a module

D PURPOSE

Deletes the selected slice module from the project.



- (1) Select the module to be deleted on the "Module Information List" screen.
- (2) Execute any of the following operations.
  - Click the [Edit]  $\rightarrow$  [Delete] menu ( $\mathbb{X}$ ).
  - Press the Ctrl + Delete keys on the keyboard.
  - Right-click the module to be deleted on the "Module Configuration Window" screen "Module list" or "Rack display", and click [Delete] from the menu:

4	5	6	7	To add a	module
.1			Undo	Ctrl+Z	e the c
			Redo	Ctrl+Y	nodules
			Add Rearrange	Ctrl+Insert	T1X2-
			Delete 📐	Ctrl+Delete	1X4-   T1∨10
010	22		All Delete 5	Shift+Del	T1Y16
101		22 22 22 22 22 22	Parameter Setting	F9	T1Y2-
<u>ee</u>	<u>ee</u>		Option	F10	efo <u>r</u> e
			Change head module		
			Power Distribution Check		
5	_				

• Click the Delete button in the "wizard area":



(3) On the opened screen, confirm the slice module to be deleted, and click the Yes button. This deletes the module.

The module Nos. greater than the deleted module No. are decremented by 1.

#### **Deleting all modules** 9.3



Deletes all slice modules from the project.

## BASIC OPERATION

- (1) Execute any of the following operations.
  - Click the [Edit]  $\rightarrow$  [All Delete] menu ( $\mathbb{K}$ ).

  - Press the Shift + Delete keys on the keyboard.
     Right-click the list of the "Module Information List" screen, and click [All Delete] from the menu.

(2) On the opened screen, click the Yes button.

Point Perform the operation with the "Module Configuration Window" screen open. To display the "Module Configuration Window" screen, choose the [View]  $\rightarrow$ [Module Configuration] menu.
### 9.4 Copying the module information

# URPOSE

Copies the slice module from the saved project to the open project. At this time, the parameters are also copied to the copied slice module.



- (1) Click the [File]  $\rightarrow$  [Copy] menu.
- (2) Specify the copy source project with the Browse button.
- (3) Select the slice module to be copied, set the inserting position at the "Insert

Position" section, and click the Add button.

(4) To close this screen, click the Close button.

Point

Perform the operation with the "Module Configuration Window" screen open. To display the "Module Configuration Window" screen, choose the [View] → [Module Configuration] menu.



## DISPLAY/SETTING SCREEN

c	ору			×				
Г	Copy Source File							
	Drive/Path: C:\MELSEC\SLICE projects							
	Filo N :	eme: 🖸		Browse				
	T IIC TAG	anie. Ist	ampie i . st					
	Insert	Position-						
	-			Add				
	۲	Last Positi	ion 🔘 No.   No. 1: ST1	PSD Close				
Ľ								
	No.	Slice	Module Name	Label Name	Copy source project			
	0	0	ST1H-PB		corresponding module list			
	1	2	ST1PSD					
	2	3	ST1X16-DE1					
	3	11	ST1Y16-TPE3					
	4	19	ST1PDD					
	5	20	ST1AD2-V					
	6	22	ST1DA2-V					
ľ								
L	•			Þ				



Item		Description
Copy Source File		Specify the copy source project.
	Drive/Path	Displays the drive and directory of the project.
	File Name	Displays the file name of the project.
	Browse	Specifies the project. The operation is the same as opening the existing project. Refer to <u>'Opening an existing project'</u> for details. When the project is specified, the modules of the copy source project are displayed in the "Copy source project corresponding module list".
Inser	t Position	Set the position where the slice module will be inserted into the open project.
	Last Position	Sets the inserting position to the last line.
	No.	Select the "No." radio button and then select the insert position from the list.
Add		Copies the slice module selected in the "Copy source project corresponding module list". Copy is not executed when no slice module is selected.
Close		Closes this screen.
Copy source project corresponding module list		Select the slice module to be copied.

### 9.5 Undo



Returns the following operations to the status prior to execution.

- Adding the module
- Deleting the module
- Deleting all modules
- Copying the module information
- Get System



# BASIC OPERATION

Executing any of the following operations returns to the status prior to the last operation.

- Click the [Edit]  $\rightarrow$  [Undo] menu ( $\square$ ).
- Press the Ctrl + Z keys on the keyboard.
- Right-click the list of the "Module list" or "Rack display" areas of the "Module Configuration Window", and click [Undo] from the menu.

Repeating this operation returns to the status of up to the tenth preceding operation.

Point

- Perform the operation with the "Module Configuration Window" screen displayed. The "Module Configuration Window" screen is displayed when the [View] → [Module Configuration] menu is selected.
- The operation history is erased when the project is closed. When the project is closed, the operation performed before closing the project cannot be returned to the previous status.

### 9.6 Redo

Returns to the status prior to the "Undo" processing in 'Undo'.



Execute any of the following operations.

- Click the [Edit]  $\rightarrow$  [Redo] menu ( $\square$ ).
- Press the Ctrl + Y keys on the keyboard.
- Right-click the list of the "Module list" or "Rack display" areas of the "Module Configuration Window", and click [Redo] from the menu.

Perform the operation with the "Module Configuration Window" screen open. To display the "Module Configuration Window" screen, choose the [View]  $\rightarrow$  [Module Configuration] menu.

#### 9.7 Rearranging the modules

9.7.1 Rearranging the modules with the Rearrange dialog



bint

Rearranges the slice modules of the project.





- (1) Execute either of the following operations.
  - Click the [Edit] → [Rearrange] menu.
  - Right-click the list of the "Module Configuration Window" screen "Rack display" or "Module list" area, and click [Rearrange] from the menu.
- (2) On the opened screen, select the slice module to be moved from among the slice modules displayed in the list, and move it using the Up / Down button.
- (3) To close this screen, click the OK button.



Perform the operation with the "Module Configuration Window" screen open.

To display the "Module Configuration Window" screen, choose the [View] → [Module Configuration] menu.



A valid system will always have an ST1PSD module immediately after the head module. If the modules are rearranged in such a way as to leave another module type in the slot after the head module, you will be prompted to rearrange the modules again.

## DISPLAY/SETTING SCREEN



- <b>6</b> 2	10
- Am	- R
	_

## DISPLAY/SETTING DATA

ltem	Description
After Rearr.	Displays the No. of the slice module after rearrangement.
Current No.	Displays the No. of the slice module before rearrangement.
Module Name	Displays the product model name of the slice module after rearrangement.
Up button	Changes the positions of the selected slice module with the one above that. When the selected slice module is at the top of the list, its position is not changed.
Down button	Changes the positions of the selected slice module with the one below that. When the selected slice module is at the bottom of the list, its position is not changed.
OK button	Validates the rearrangement and closes this screen.
Cancel button	Cancels the rearrangement and closes this screen.

#### 9.7.2 Rearranging the modules with drag and drop

In addition to the rearrange dialog, modules can be rearranged by dragging and dropping them directly from the "Rack display" area of the "Module Configuration Window".



Rearranges the slice modules of the project. Using this method allows several modules to be moved at once.

Point The head module cannot be rearranged.



1. Click on the first module to be moved. If more than one module needs to be moved, keep the left button held down.

2. If you want to move a block of modules, keep the left mouse button held down and drag to the last module in the block.

The number field is highlighted to show the range of modules that are currently selected.

3. Now all the modules are selected, they can be moved. Move the mouse pointer over one of the borders of the selected modules, so that the mouse pointer changes to a picture of a rack with an arrow underneath it, as shown.

Click and hold the left mouse button - the arrow will disappear.



4. With the left mouse button still held down, drag the modules to their new position. An outline border is drawn around the position where the modules will be placed.

If the target position is not visible, you can drag the mouse pointer near to the left or right edge of the rack display to scroll the display.

5. When the left mouse button is released, the modules will be moved to the new position.

They will be automatically selected again, so that if the target position was 'missed', they can be quickly dragged again into the right position.

Point





If you try to drag one or more modules to the left of the the head module or first power supply module, the drag action will automatically be cancelled. A valid system must always start with a head module and a power supply module.

(PROFIBUS-DP head module version B only)

Reserved bytes can only be rearranged in the configuration using the rearrange dialog.

#### 9.8 Parameter setting

The following table shows the reference section for each parameter-related operation. The operation can be performed on the "Parameter Setting" screen.

Refer to <u>"Parameter setting" screen</u>' for the operation to display the "Parameter Setting" screen.

Operation	Reference Section
To set the parameters.	'Setting the parameters'
To upload the parameters. To download the parameters. To verify the parameters being edited and the parameters within the module.	<u>'Uploading / downloading /</u> <u>verifying'</u>
To check the parameters being edited for errors and identify the parameter errors.	<u>'Checking the parameters'</u>

#### 9.8.1 "Parameter setting" screen displaying operation

# BASIC OPERATION

The "Parameter Setting" screen displaying operation differs among the following (1) to (3).

#### (1) In the edit mode

- (a) When the "Module Configuration Window" screen is not displayed, choose the [View] → [Module Configuration] menu to display the "Module Configuration Window" screen.
- (b) On the "Module Configuration Window" screen "Rack display" or "Module list" area, select the module whose parameters will be set.
- (c) Execute any of the following operations to display the "Parameter Setting" screen.
  - Click the [Edit]  $\rightarrow$  [Parameter Setting] menu ( $\blacksquare$ ).
    - Press the F9 key on the keyboard.
    - On the "Module Configuration Window" screen "Rack display" or "Module list" area, right-click the module whose parameters will be set, and click [Parameter Setting] from the menu.
    - On the "Module Configuration Window" screen "Rack display" or "Module list" area, double-click the module whose parameters will be set.

#### (2) In the diagnosis mode

- (a) When the "System Monitor" screen is not displayed, choose the [View] → [System Monitor] menu to display the "System Monitor" screen.
- (b) On the "System Monitor" screen, select the module whose parameters will be set.
- (c) Execute any of the following operations to display the "Parameter Setting" screen.
  - Click the [Edit]  $\rightarrow$  [Parameter Setting] menu ( $\blacksquare$ ).
  - Press the F9 key on the keyboard.
  - On the "System Monitor" screen, right-click the module whose parameters will be set, and click [Parameter Setting] from the menu.
  - On the "System Monitor" screen, select the module whose parameters will be

set, and click the Parameter Setting button.

(3) When the "Result Verify" screen is open after project verify

Execute either of the following operations to display the "Parameter Setting" screen.

- On the "Result Verify" screen, double-click the module whose parameters will be set.
- On the "Result Verify" screen, select the module whose parameters will be

set, and click the Parameter Setting button.

#### 9.8.2 Setting the parameters

# ြာ *purpose*

Sets the parameters of the intelligent function module.



# BASIC OPERATION

- (1) When the module has the same parameters on multiple channels, select the channel whose parameters will be set at "Channel".
- (2) Set the parameters in the "Parameter list".
- (3) Click the OK button to close this screen.



## DISPLAY/SETTING SCREEN

🗖 Param	Parameter Setting No.5				
Module Information Slice No. : 9 Module Name : ST1AD2-V Module information Label Name : Base Module : ST1B-*4IR2 Online Online Select Data Target Memory RAM					
Channel:	Channel: CH1 Parameter Set to defaults Default Error Check				
Select	Item	Setting Value			
	Input range setting	-10 to 10 V			
	Setting range	-10 to 10 V 👻			
	Time/number of times specification	Number of times			
	Sampling process/averaging process setting	Sampling 📃 🚽			
	Alarm output setting	Disable 🗨			
	Disconnection detection setting	Disable 🗾 🚽			
	A/D conversion enable/disable setting	Enable 🗾 🚽			
50/60Hz notch filter specification		Disable 🗾 🚽			
	Average time/average number of times setting	4			
	Upper upper limit value	4000			
	Upper lower limit value	4000			
	Lower upper limit value	-4000			
	Lower lower limit value	-4000			

ltem		Description
Module Information		Displays the information (start slice No., module name, label name, base module name) of the target intelligent function module.
OK button		Validates the settings and closes this screen.
Са	Incel button	Cancels the settings and closes this screen.
Channel		Specify the channel of the parameters to be displayed in the parameter list. Only when the intelligent function module has the same parameters on multiple channels, this item is available.
Default button		Returns the parameters in the "Parameter list" to the default values. Only when the module has the parameters that can be changed, this item is available.
Parameter list		A list of the parameters of the intelligent function module is displayed and can be edited. For the types and applications of the parameters of the module, refer to the manual of the corresponding intelligent function module.
	ltem	Displays the parameter name.
	Setting Value	Edit the parameter. The parameter that cannot be edited is grayed out.

# 9.8.3 Uploading/downloading the parameters or verifying the parameters being edited and parameters within module

# D PURPOSE

Uploads/downloads the parameters, or verifies the parameters being edited and parameters within module.



## BASIC OPERATION

- (1) When the module has the same parameters on multiple channels, select the channel, whose parameters will be uploaded, downloaded or verified, at "Channel".
- (2) Select the parameters to be uploaded, downloaded or verified.To make selection, mark the "Select" check box in the "Parameter list":

1	cican rolan resol solarig		9	cicai 📑			
	D/A conversion		disable setting	Disable	Ŧ		
	Preset value 🐧	<u></u>		0		•	
					b.		

- (3) At "Target Memory", select the memory as the target of upload, download or verify.
- (4) To upload the parameters, click the Upload button.
- (5) To download the parameters, click the **Download** button.
- (6) To verify the parameters, click the Verify button.
- (7) Click the OK button to close this screen.



DISPLAY/SETTING SCREEN

Parameter Setting No.5		
Module Information Slice No. : 9 Module Name : ST1AD2-V Label Name : Base Module : ST1B-*4IR2 Online Select Data Target	Cancel	
Select All Release All Upload Download Verify Cherrer Channel Channel Channel Channel Channel Error Check		
Select Item	Setting Value	
Input range setting	-10 to 10 V	
Setting range	-10 to 10 V 🔹	
Time/number of times specification	Number of times	
Sampling process/averaging process setting	Sampling 🗨	
Alarm output setting	Disable 🗾 🗸	
Disconnection detection setting	Disable 🗸 🗸	
A/D conversion enable/disable setting	Enable 🗾	
50/60Hz notch filter specification	Disable 📃	
Average time/average number of times setting	4	
Upper upper limit value	4000	
Upper lower limit value	4000	
Lower lower limit value	-4000	
	1000	

## <u>ا ھ</u>

	Item	Description
Modu	Ile Information	Displays the information (start slice No., module name, label name, base module name) of the target module.
0	<b>≺</b> button	Closes this screen.
Onlin	е	Perform operation for the target module.
	Select Data	Select the parameters to be uploaded, downloaded or verified.
	Select All button	Checks all "Select" check boxes in the "Parameter list".
	Release All button	Unchecks all "Select" check boxes in the "Parameter list".
	Target Memory	Select the memory as the target of upload, download or verify.
	Upload <sub>button</sub>	Uploads the parameters of the target module from the memory selected at "Target Memory". When the module has the same parameters on multiple channels, the parameters of the channel selected at "Channel" are uploaded. The uploaded parameters are displayed in the "Parameter list".
	Download <sub>button</sub>	Checks the parameters for incorrect settings, and when they are correct, downloads the parameters to the memory selected at "Target Memory". When the module has the same parameters on multiple channels, the parameters of the channel selected at "Channel" are downloaded. If any parameter is incorrect, that parameter is not downloaded, and its name under "Item" is displayed red in the "Parameter list".
	Verify button	Verifies the parameters of the memory selected at "Target Memory" and those in the "Parameter List". When the module has the same parameters on multiple channels, the parameters of the channel selected at "Channel" are verified. If any parameter is judged as inconsistent as a result of verify, its name under "Item" is displayed red in the "Parameter list".
Char	nel	Specify the channel for which parameters will be uploaded, downloaded or verified. Only when the module has the same parameters on multiple channels, this item is available.
Para	meter list	Displays a list of the parameters of the module. For the types and applications of the parameters of the module, refer to the manual of the corresponding module.
	Select	Select the parameters used for the operation performed at "Online".
	Item	Displays the parameter name. This item may be displayed red depending on the result of clicking the <b>Download</b> or <b>Verify</b> button. For details, refer to the description of the corresponding button.
	Setting Value	Displays the parameter value. Downloading is not allowed to the items displayed in gray, however, uploading and verification is available.

#### 9.8.4 Checking the parameters for errors

# ြာ *PURPOSE*

Checks the parameters for errors and identifies the parameter errors.



- (1) When the module has the same parameters on multiple channels, select the channel, whose parameters will be checked for errors, at "Channel".
- (2) Click the **Error Check** button to start an error check.
- (3) Click the OK button to close this screen.



### **DISPLAY/SETTING SCREEN**

🗖 Parameter Setting No. 5 🛛 🔚 🔲 🔀				
Module Information Slice No. : 9 Module Name : ST1AD2-V Label Name :	Cancel			
Base Module : ST1B-*4IR2				
Online operations				
Select Data	Target Memory RAM			
Channel: CH1 Parameter Set to defaults Default Error Check				
Channel Channel: CH1 Parameter	Set to defaults Default Error Check			
Channel Channel: CH1 Parameter Ist Select Item	Set to defaults Default Error Check Setting Value			
Channel Channel: CH1 Parameter Ist Select Item	Set to defaults Default Error Check Setting Value			
Channel: CH1 Parameter Ist Select Item Input range setting Setting range	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V			
Channel: CH1 Parameter list Select Item Select Item Setting range Time/number of times specification	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting	Set to defaults Default Error Check -10 to 10 V · · -10 to 10 V · · Number of times · Sampling · Disable ·			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling Disable Disable V Disable			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting A/D conversion enable/disable setting	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling Disable Disable Enable Enable Enable Control to			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting A/D conversion enable/disable setting 50/60Hz notch filter specification	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling Disable Enable Enable Disable Enable Uisable Enable Uisable Enable Uisable Enable Uisable Enable Uisable Enable Uisable Uisable Enable Uis			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting A/D conversion enable/disable setting Sources and the setting Average time/average number of times setting Newsge time/average number of times setting	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling Disable Enable Disable 4 4 4			
Channel: CH1 Parameter Ist Select Item Select Item Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting A/D conversion enable/disable setting So/60Hz notch filter specification Average time/average number of times setting Upper upper limit value	Set to defaults Default Error Check Setting Value -10 to 10 V -10 to 10 V Number of times Sampling Disable Enable Disable 4 4 4000 4000			
Channel: CH1 Parameter ist Select Item Input range setting Setting range Time/number of times specification Sampling process/averaging process setting Alarm output setting Disconnection detection setting A/D conversion enable/disable setting Sources and the specification Average time/average number of times setting Upper lower limit value Upper lower limit value	Set to defaults Default Error Check Setting Value -10 to 10 V Number of times Sampling Disable Enable Disable Uisable 4 4 4000 4000 Construction			
Channel:       Channel         Channel:       CH1         Parameter         ist         Select       Item         Input range setting         Setting range         Time/number of times specification         Sampling process/averaging process setting         Alarm output setting         Disconnection detection setting         A/D conversion enable/disable setting         50/60Hz notch filter specification         Average time/average number of times setting         Upper lower limit value         Upper lower limit value         Lower upper limit value         Lower upper limit value	Set to defaults Default Error Check  Setting Value  -10 to 10 V  -10 to 10 V  Number of times  Sampling  Disable  Disable  Enable  Disable  4  4  4000  4000  -4000 -4000  -4000 -			

## ø

ltem		Description
Modu	le Information	Displays the information (start slice No., module name, label name, base module name) of the target module.
Oł	button	Closes this screen.
Channel		Specify the channel of the parameters to be checked for errors. Only when the module has the same parameters on multiple channels, this item is available.
Error Check button		Checks the parameters for incorrect settings. If any parameter has an incorrect setting, its name under "Item" is displayed red in the "Parameter list", as in the example below. Liear/nouvrieset seturing D/A conversion enable/disable setting Preset value (9999999999 (9999999999)
Parameter list		Displays a list of the parameters of the module. For the types and applications of the parameters of the module, refer to the manual of the corresponding module.
	ltem	Displays the parameter name. This item may be displayed red depending on the result of clicking the Error Check button. For details, refer to the description of the Error Check button.

#### 9.9 **Option setting**

PURPOSE

Sets the label name, base module, etc.



## BASIC OPERATION

- (1) Execute any of the following operations.
  - Click the [Edit] → [Option] menu.

  - Press the F10 key on the keyboard.
    On the "Module Configuration Window" screen "Rack display" or "Module list" area, right-click the module, where option settings will be made, and click [Option] from the menu.

(2) On the opened screen, make option settings and click the OK button.



## [CC-Link systems]

# DISPLAY/SETTING SCREEN

For head module

For slice module

Option 🔀	Option 🔀
Module Name ST1H-BT	Module Name ST1RD2
Label Name Head module	Label Name
Base Module	Base Module ST1B-*4IR2
🗖 Use Word Input Data 🗖 Use Word Output Data	🔽 Use Word Input Data 🛛 Use Word Output Data
OK Cancel	OK Cancel



# 🔎 DISPLAY/SETTING DATA

Item	Description
Model Name	Displays the product model name of the module for which option settings will be made.
Label Name	Enter any character string within 32 alphanumeric characters. As the label name is displayed on the "Module Configuration Window" screen or is output for printing, it is useful for module management, etc.
Base Module *1	Select the base module for the slice module. GX Configurator-ST does not distinguish between spring clamp (S) and screw (E) wiring types in the base module.
Use Word Input Data	When the module has $Wr.n$ word input, this box will be checked. If the $Wr.n$ word input data is optional for a module, it will automatically be unchecked in CC-Link systems.
Use Word Output Data	When the module has Ww.n word output, this box will be checked. If the Ww.n word output data is optional for a module, it will automatically be unchecked in CC-Link systems.
OK button	Validates the settings and closes this screen.
Cancel	Cancels the settings and closes this screen.

\*1: For applicable base modules, refer to the manual of the module used.



Unlike PROFIBUS-DP systems, there is no selectable 'maximum input/ output points' setting for CC-Link systems. The maximum number of input / output points is always fixed at 252 for CC-Link systems.

## [PROFIBUS-DP systems]

# DISPLAY/SETTING SCREEN

For head module	For slice module		
Option 🔀	Option 🛛 🗙		
Module Name ST1H-PB	Module Name ST1RD2		
Label Name Head module	Label Name		
Base Module	Base Module ST1B-*4IR2		
Maximum Input/Output Points 256-pt mode			
🗖 Use Word Input Data 🛛 🗖 Use Word Output Data	🗹 Use Word Input Data 🔲 Use Word Output Data		
OK Cancel	OK Cancel		

## ø

# DISPLAY/SETTING DATA

ltem	Description
Model Name	Displays the product model name of the module for which option settings will be made.
Label Name	Enter any character string within 32 alphanumeric characters. As the label name is displayed on the "Module Configuration Window" screen or is output for printing, it is useful for module management, etc.
Base Module *1	Select the base module for the slice module. GX Configurator-ST does not distinguish between spring clamp (S) and screw (E) wiring types in the base module.
Maximum Input/Output Points	Head module version A: Set the Maximum Input/Output points for the head module. Head module version B: This input is not available as it is calculated automatically.
Use Word Input Data	When the module has Wr.n word input, check this check box to use the Wr.n word input.
Use Word Output Data	When the module has Ww.n word output, check this check box to use the Ww.n word output.
OK	Validates the settings and closes this screen.
Cancel button	Cancels the settings and closes this screen.

\*1: For applicable base modules, refer to the manual of the module used.

### 9.10 Power distribution check



Checks whether the sum of 5VDC internal current consumption required by the modules is within the 5VDC maximum rated output current of the bus refreshing module.

For details of the calculation method used for this function, refer to the MELSEC-ST System User's Manual.



# BASIC OPERATION

- (1) Execute any of the following operations.
  - Click the [Edit]  $\rightarrow$  [Power Distribution Check] menu.
  - On the "Module Configuration Window" screen "Rack display" or "Module list" area, right-click a menu and click [Power Distribution Check] from the menu.
- (2) On the opened screen, confirm the check result.
- (3) Click the **Close** button to close this screen.



Perform the operation with the "Module Configuration Window" screen open.

To display the "Module Configuration Window" screen, choose the [View]  $\rightarrow$  [Module Configuration] menu.



P	ower	Distribution Check			
	No. 1 6	Supply Current(A) 2.000 2.000	Consumption(A) 1.005 2.075	Result OK ERROR	
			Close		



DISPLAY/SETTING DATA

ltem	Description		
No.	Displays the mounting position of the bus refreshing module.		
Supply Current (A)	Displays the 5VDC maximum rated output current of the bus refreshing module.		
Consumption (A)	Displays the sum of 5VDC internal current consumption of the modules powered by the bus refreshing module.		
Result	Displays the check result. "OK" : The sum of 5VDC internal current consumption is not greater than the 5VDC maximum rated output current of the bus refreshing module. "ERROR" : The sum of 5VDC internal current consumption is greater than the 5VDC maximum rated output current of the bus refreshing module.		
Close	Closes this screen.		



To find the exact slot where the power consumption was exceeded (i.e. the slot which needs another power supply module installed just before it), look at the module list, where the module will be highlighted in red.

### 9.11 Change head module type

# D PURPOSE

Changes the head module type, i.e. from PROFIBUS-DP to CC-Link, or from CC-Link to PROFIBUS-DP. This is not the same as 'online module change', and cannot be used to change the head module while the system is live. It only changes the configuration that is being edited.



An alternative way to perform this change is to simply connect to a MELSEC-ST system where the head module has already been replaced. If GX Configurator-ST detects that the connected system is identical except for the head module, you will be prompted to read the head module details from the system and continue.



- (1) Execute any of the following operations.
  - Click the [Edit]  $\rightarrow$  [Change head module] menu.
  - On the "Module Configuration Window" screen "Rack display" or "Module list" area, right-click a menu and click [Change head module] from the menu.
- (2) In the confirmation dialog, select the new head module type from the list and then click the **Change** button.

button.

Change head module				
Select the new head module type from the list and then click 'Change' to confirm.				
ST1H-BT				
1				
Change Close				

(3) A warning will be shown about the Wr and Ww ranges. Read this carefully and then select either **Yes** to continue or **No** to cancel.



When you change from a PROFIBUS-DP head module to a CC-Link head module, the parameter settings will be reset to defaults and all the modifiable 'without Wr' and 'without Ww' settings for intelligent modules will be reset to 'without' (as this feature is not used on CC-Link systems). This change is not reversible, so if you change back to a PROFIBUS-DP head module later, you will need to re-enter these settings.



When you change from CC-Link to PROFIBUS-DP, the PROFIBUS head module version is automatically set to protocol "Version B without command".



Perform the operation with the "Module Configuration Window" screen open. To display the "Module Configuration Window" screen, choose the [View] → [Module Configuration] menu.

### 9.12 Change PROFIBUS-DP head module protocol version

## [PROFIBUS-DP systems]

This functionality applies to PROFIBUS-DP systems only.

# 

Point

The head module protocol version can be changed to have old configurations reset to newer ones.

To switch the ST-series head module from protocol version A to version B, an applicable head module has to be used, and the configuration needs to be set up via a GSD file and has to be downloaded to the PROFIBUS-DP master station.



Select a head module protocol version from the combo box in the module list.



## DISPLAY/SETTING SCREEN

Module (	Configu	ation									
No.		1 2 # 8	3 8 - 10 - 10 - 10	4 5	6 7 8 9 33 31 31 11	10 11 12 13		To add a m from the list To remove	odule before or after the and click 'Add'. the current module, sek	e current position, sel ect 'Delete'.	ect it
	1/0 Oc	cupatior	20 20 20 20 20 20 20 20 20 20 20 20 20 2	4 Word 2	GSD Version 7 GSD Version	B v with	command	ead module mode	1DA14-F01 1DA2-V-F01 1DA2-V-F01 1RD2 S1 1D2 red		<ul> <li>×</li> </ul>
	No.	Slice	Module Name	Unused Bits	Br(HEX)	Bw(HEX)	Wr(HEX)	Ww(HEX)	Label Name	<b>_</b>	
	0	0	ST1H-PB				00.0 - 12.F	00.0 - 12.F			
	1	2	ST1PSD	-	-	-	-				
L/O.Occur	2	3	ST1X2-DE1	6	13.0 - 13.1			-			
no occup	3	4	ST1X16-DE1		13.8 • 14.7					:puts, Voltar	ge, 12 Bit, 1 Module width
No. SI	4	12	ST1Y2-R2	6		13.0 - 13.1	-				
1	5	13	ST1Y2-R2	6	-	13.8 - 13.9	-			Module	ready
2	6	14	ST1AD2-I		-		14.8 - 17.7	14.0 - 14.F		Convert System	: setting completed flag Area (fixed to 0)
3	7	16	ST1DA2-V				17.8 • 18.7	16.0 - 18.F		System	Area (fixed to 0)
4 1	8	18	ST1DA1-I				18.8 - 19.7	1A.0 - 1C.F		System	Area (fixed to 0)
6	9	20	ST1SS1				19.8 - 1C.7	1E.0 - 1E.F		Convert     CH1 out	: setting request mut enable/disable flag
7 1										CH2 out	put enable/disable flag
8 18	ST	1DA1-I			18.8 - 19.7	1A.0 - 1C.F			-		
1 10		11001			10.0 10.7	10.100					

## 🔎 DISPLAY/SETTING DATA

ltem	Description
000	Displays the actual head module version.
GSD version	The setting can be changed to either A or B.
Head module mode	<ul> <li>For PROFIBUS-DP head module version A:</li> <li>With this combo box the actual point mode is shown or set (for offline configuration).</li> <li>For PROFIBUS-DP head module version B:</li> <li>With this combo box the actual mode (with or without command) is shown or set (for offline configuration).</li> </ul>



If the head module is changed from version B to version A, all modules that are not supported in version A (for example, reserved byte modules) will be removed from the configuration. When changing to version A, a warning message will be shown giving you the chance to cancel the change.

After changing the head module version to B, the conversion dialog will be shown:



Point

When changing from head module version A to B, reserved bytes and byte packed modules can automatically be inserted into the module configuration.

These options are only available when switching from head module version A to B.



Check the required options, then click OK.



### **DISPLAY/SETTING SCREEN**

Conversion
Settings Set the intelligent module address at the beginning of a word. (WORD oriented master) I Reserved Byte Set byte pack for digital modules whenever possible. I Byte Pack
OK Cancel



Item Description	
Reserved Byte	Inserts reserved bytes ahead of intelligent modules to ensure their address word is aligned.
Byte Pack	Inserts a byte pack module whenever possible to save memory.

### **10** Downloading and uploading the parameters

This chapter explains how to download or upload the parameters of each module.

#### 10.1 Transfer setup

b PURPOSE

Sets the connection with the head module.



- (1) Click the [Online]  $\rightarrow$  [Transfer Setup] menu.
- (2) Make setting and click the OK button.



## DISPLAY/SETTING SCREEN

Transfer Setup	
	Serial
COM Port :	COM3
Transmission Speed :	9.6kbps
Timeout :	5 × 4 (s)
	Timeout
OK	Cancel



ltem	Description
COM Port	Select the COM port connected with the head module. (Setting range: COM1 to COM10, default *1: COM1)
Transmission Speed	Select the transmission speed. (Setting range: 9.6kbps, 19.2kbps, 38.4kbps, 57.6kbps, default *1: 9.6kbps)
Timeout *2	When the external power supply of the MELSEC-ST system is switched off or the head module is reset during communication with the head module, it will take some time before a communication error is displayed. The monitor displays Executing until the error is displayed. The maximum time until the error is displayed can be found by the following expression. (Specified "Timeout" period) x 4 For example, when 5s was specified for "Timeout", (5s) x 4 = 20s and the error is displayed in a maximum of 20s. (Setting range: 1 to 9, default *1: 2)
OK button	Validates the settings and closes this screen.
Cancel	Closes this screen without making settings.

- \*1: When this screen is used the second or later time after installation of GX Configurator-ST, the default is the value set when this screen was used the last time.
- \*2: If a communication error occurs during write to the ROM of each module, a maximum of 30s is required before the error is displayed.

-				
When a transmission speed of 19.2kbps or higher is set to "Transmission Speed", some personal computers may be unstable, fail the communication and display the following screen.				
	MELSOFT GX Configurator-ST			
	Cannot communicate with Head module for one of the following reasons: * Communications timeout. * The preparation of communication environment is bad. * Cable error. * Cannot communicate with the transmission speed set up now. To fix this, try: * Checking the cable and selected port number * Setting transmission speed to a lower value. * Closing other communication software applications and trying again. <es:0180840b></es:0180840b>			



This setting only applies to communications between GX Configurator-ST and the communication port on the head module. It is independent from the transmission speed used for communications between the master device and the PROFIBUS-DP or CC-Link communication port on the head module.

#### 10.2 Get system

D PURPOSE

Uploads the module configuration and the parameters from each module. This can be useful if you have a configured SLICE system, but do not have the configuration file that was originally used to build it.



- (1) Either:
  - Click the [Online] → [Get System] menu (<sup>1</sup>/<sub>1</sub>), or
  - On the first wizard page (shown when GX Configurator-ST is started or after selecting [File] → [New] ), select "Read the system configuration from the communication port" then click the Next button.
- (2) When the project is open, uploading the module configuration and the parameters of each module erases the project information uploaded previously. Hence, a screen appears asking whether data will be uploaded or not.
  - Click the Yes button to display the "Get System" screen. In this case, the project information uploaded previously is erased.
  - Click the No button to stop processing.
- (3) Set the data to be uploaded on the "Get System" screen, and click the OK button to upload the module configuration and the parameters of each module.
- When upload is completed, the "Completed" message is displayed.
   Click the OK button.







Item		Description
Read Parameter		Check this check box to upload the parameters of each module. The module configuration is uploaded regardless of the setting of this item.
	RAM	Uploads the parameters from the RAM of each module. This item is available only when the "Read Parameter" check box is checked.
	ROM	Uploads the parameters from the ROM of each module. When the target module does not have the ROM, the parameters are uploaded from the RAM. This item is available only when the "Read Parameter" check box is marked.
0	Kbutton	Validates the settings and closes this screen. On completion, the new configuration will be available for editing.
Cancel		Closes this screen without making settings.

### 10.3 Get input / output data settings (PROFIBUS-DP only)

# URPOSE

Uploads the input/output data settings made using GX Configurator-ST from each module.

The following two different input/output data settings are uploaded.

- Maximum Input/Output points of the head module
- Setting of whether the Wr.n word input/ Ww.n word output of the intelligent function module are used or not



# BASIC OPERATION

- (1) Click the [Online]  $\rightarrow$  [Get Input/Output Data Settings] menu.
- (2) A screen appears asking whether the settings will be uploaded or not. Click the OK button to upload the input/output data settings.
- (3) When upload is completed, the "Completed" message is displayed. Click the OK button.

#### 10.4 Parameter block write

# D PURPOSE

Downloads the parameters to the modules in a block.

# BASIC OPERATION

- Click the [Online] → [Parameter Block Write] menu to display the "Parameter Block Write" screen.
- (2) Select the target memory and parameters, and click the **Download** button.
- (3) When download is completed, the "Download Completed" message is displayed. Click the OK button.
- (4) To close this screen, click the Close button.

## DISPLAY/SETTING SCREEN

#### Preparing to download

#### Downloading


### ø

### DISPLAY/SETTING DATA

ltem		Description
Sele	ct Data	Batch-select the modules whose the parameters will be downloaded.
	Select All button	Selects all modules.
	Release All button	Deselects all modules.
Target Memory		<ul> <li>Select the memory where the parameters will be downloaded.</li> <li>When "RAM" is selected, the parameters are downloaded to the RAM of each module.</li> <li>When "ROM" is selected, the parameters are downloaded to the ROM of each module.</li> <li>When "RAWROM" is selected, the parameters are downloaded to both RAM and ROM of each module.</li> </ul>
Download <sub>button</sub>		Downloads the parameters of the module specified at "Select". While the parameters are downloaded, this button cannot be clicked.
Cancel button		Stops download. Only while the parameters are downloaded, this button can be clicked.
Select *1		Select the module whose parameters will be downloaded, by clicking on the 'Select' button to the left of the module name, so that it appears checked:
No. *	1	Displays the module No.
Modu	ile Name *1	Displays the module name.
Statu	s *1	Displays the download execution status. Refer to (1) in this section for details of the execution status.
CI	ose	Closes this screen. While the parameters are downloaded, this button cannot be clicked.

\*1: For the module whose parameters cannot be edited, this item is grayed out and is not available, as parameter download is not necessary.

#### (1) Download execution status

Details of the download execution status are described below.

Display	Description
_	Indicates the module that does not have parameters or to which parameters are not downloaded.
Wait	Indicates the status prior to download.
Writing	Indicates that download is in progress.
Complete	Indicates that download is completed.
Error	Indicates a failure in download.

#### **10.5** Offset/Gain setting of intelligent function modules

Point

For details of this function, refer to the manual of the used intelligent function module.

# ſh

## PURPOSE

Sets the offset value or gain value of the intelligent function module\*1.

\*1: The following gives the examples of the intelligent function modules to which the offset or gain value can be set.

• ST1AD2-V	• ST1AD2-I
• ST1DA2-V	• ST1DA1-I
• ST1DA2-V-F01	• ST1DA1-I-F01

For details, refer to the manual of the used intelligent function module.



### BASIC OPERATION

- (1) On the "System Monitor" screen, select the intelligent function module for which the setting will be made.
- (2) On the "System Monitor" screen, click the ON button of "Forced Output Test Mode" to change the MELSEC-ST system to the forced output test mode. When the MELSEC-ST system is changed to the forced output test mode, the RUN LED of the head module flickers.
- (3) Execute any of the following operations.
  - Click the [Online]  $\rightarrow$  [Offset/Gain Setting] menu.
  - Right-click the module selected in (1), and click Offset/Gain Setting from the menu.
  - Click the [Offset/Gain Setting] button on the "System Monitor" screen.
- (4) The dialog box appears asking whether or not the MELSEC-ST system will be changed to the offset/gain setting mode.

Click the OK button to change the system to the offset/gain setting mode. When the system changes to the offset/gain setting mode, the RUN LED of the target intelligent function module flickers (at 0.5s intervals) and the module's operation is stopped.

- (5) Select the channel to be set at "Select Channel", choose the wiring method of the base module at "Connection Method", and select the value to be set from "Offset" or "Gain".
- (6) Set the offset or gain value adjustment amount, and click the **Set** button. Repeat the operation in Step (6) until the desired value is reached.

- (7) Click the **Save** button to download the offset or gain value to that intelligent function module.
- (8) To close this screen, click the Close button.
- (9) The dialog box appears asking whether or not the MELSEC-ST system will be released from the offset/gain setting mode.

Click the Yes button to release the system from the offset/gain setting mode.

#### REMARK

(a) If the MELSEC-ST system is not in the forced output test mode after the operation in Step (3) is performed, the dialog box appears asking whether or not the MELSEC-ST system will be changed to the forced output test mode.

Click the OK button to change the system to the forced output test mode.

(b) If the MELSEC-ST system is changed to the forced output test mode in (a), the dialog box appears asking whether or not the MELSEC-ST system will be released from the forced output test mode after the operation in Step (9) is performed.

Click the Yes button when releasing the system from the forced output test mode.

Click the **No** button when not releasing the system from the forced output test mode.

### DISPLAY/SETTING SCREEN



### ø

### DISPLAY/SETTING DATA

Item	Description
Module Information	Displays the information (No., start slice No., module name, label name, base module) of the target intelligent function module.
Select Channel	Select the channel to which the offset or gain value will be set. When multiple channels are checked, the offset or gain values will be set to all the corresponding channels. The channels displayed in this item change depending on the module of the setting target. For details, refer to the manual of the used intelligent function module.
Offset	Set the offset value adjustment amount. This item is available only when the "Offset" radio button is selected. For details, refer to the manual of the used intelligent function module.
Gain	Set the gain value adjustment amount. This item is available only when the "Gain" radio button is selected. For details, refer to the manual of the used intelligent function module.
Error Clear button	Turns ON the Error Clear to clear the error of the intelligent function module.
Set button	Applies the set value to the target module.
Save	Validates the value set with the <b>Set</b> button.
Close	Closes this screen and releases the system from the offset/gain setting mode. Releases the MELSEC-ST system from the forced output test mode if it was not in the forced output test mode when this screen was opened.

#### 11 Monitor, Test

This chapter explains how to monitor and test the modules.



#### 11.1 System Monitor



Monitors the statuses of the head module and slice modules.



- When the "System Monitor" screen is not displayed, click the [View] → [System Monitor] menu to display the "System Monitor" screen. This menu item is only available when the system is in "Diagnosis" mode. To switch to "Diagnosis" mode, [Mode] → [Diagnosis].
- (2) Monitor starts as soon as the "System Monitor" screen is displayed.
- (3) To close this screen, click the Close button.

### **B**oint

The "System Monitor" screen is not displayed if the module configuration of the MELSEC-ST system connected to the personal computer differs from that of the project.

There is one exception to this - if the configurations are identical except for the head module type, a message is shown giving the option to copy the head module details from the live system and continue. This is intended to make it easier to reuse configuration projects when changing the protocol type for a MELSEC-ST system.

Display the "System Monitor" screen after confirming that their module configurations are the same.

### 塔 HELPFUL OPERATION

To identify the module where an error has occurred, execute the following operation on the "System Monitor" screen.

- (1) At "Select Module", confirm the area displayed red or yellow.
- (2) Click the **Display Position** button corresponding to the area confirmed in (1).
- (3) The module whose "Module Status" in the "Module display" is displayed red or yellow is where the error occurred.

Scroll the "Module display" to identify the module whose "Module Status" in the "Module display" is displayed red or yellow.

#### DISPLAY/SETTING SCREEN





### DISPLAY/SETTING DATA

Item	Description
Module Information	Displays the information (module name, label name, base module) of the module selected in the "Module display".

ltem		Description	
		Indicates the status of communica	tion between the head module and
		master station. "Communicating"	: Communicating with the master
Comr Maste	munication Status With er Station	"Communication suspended"	station : Communication with the master
		"No communication"	station suspended (Interruption)
		No communication	station stopped (No
			communication)
		Displays the samples of the colors under "Module Status" in the "Modu	displayed under "Select Modules" and ule display".
Modu	le Status	Red : System error	
		Yellow : Warning	and online
		Displays the illustrative image of the	ne MELSEC-ST system being
		monitored.	le Millele of System Song
		When using the function specific to	a certain module, click and select the
Modu	le display	module from this item.	the the exercise status of the align
		At Module Status above the mout module is displayed.	lle, the operating status of the since
		Refer to (1) in this section for detai	ls of the module status.
Selec	tod module	The currently selected module is s	hown with the slot number coloured in
06160		grey. Click on a module to select it	
		The numerals indicate the module	Nos., and the color shows the
Selec	t Module Range	statuses of the modules in that rar	ige. The modules displayed in the
		Refer to (1) in this section for detail	Is of the module status.
	Display Position		rent de la constate de la constate a
	button	The numerals on the left of this but corresponding modules are displa	tton indicates the module loss, and the
	buttom		
Monit	or Switch	Starts/stops monitor.	
		Starts monitor.	chitaria at a aton
		This button is usable only write in	Dhitor is at a stop.
		While monitor is executed, " " " flic	kers on the left side of this button.
	Start button	Monitor	Switch
		Monitoring	Start Stop
		indicator	Start Stop
			monitoring
	Stop button	Stops monitor. This button is usable only while m	onitor is executed.
		Sets/releases the MELSEC-ST sys	stem to/from the forced output test
		mode, and displays the current mo	ode status.
Forced Output Test Mode		Forced	Output Test Mode
		- OFF	
		Current	
		state	Switch on
	button	Sets the MELSEC-ST system to the	e forced output test mode.

ltem	Description
OFF	Releases the MELSEC-ST system from the forced output test mode.
Input/Output Monitor	Monitors the input data and output data of the module selected in the "Module display". Refer to <u>'Input/Output monitor'</u> for details. When no module has been selected, the error message is displayed and monitor cannot be executed.
Forced Output Test	Runs a forced output test on the head module, output module or intelligent function module selected in the "Module display". Refer to <u>Forced output test</u> for details. When no module has been selected, the error message is displayed and the forced output test cannot be executed.
Offset/Gain Setting	Sets the offset or gain value to the target intelligent function module which is selected in the "Module display". Refer to <u>'Offset/Gain setting of intelligent function modules</u> ' for details. When no module has been selected, the error message is displayed and the offset or gain value cannot be set.
Module Detail Informat	Monitors the detail information and error status of the module selected in the "Module display". Refer to <u>Module detail information</u> for details. When no module has been selected, the error message is displayed and monitor cannot be executed.
Online Module Chan	Performs the online change of the I/O module or intelligent function module selected in the "Module display". Refer to <u>'Online module change</u> ' for details. When no module has been selected, the error message is displayed and online module change cannot be executed.
Parameter Settir	Sets the parameters to the head module, I/O module or intelligent function module selected in the "Module display". Refer to Section ' <u>Parameter setting</u> ' for details. When no module has been selected, the error message is displayed and parameter setting cannot be executed.
Close	Closes this screen.

#### (1) Module status

Details of the module status are described below.

Display	Description
Red	System error occurred. For details of the error, refer to the manual of the corresponding module.
□ Yellow	Warning occurred. For details of the warning, refer to the manual of the corresponding module.
Purple	Module being changed online
Gray	Module not mounted Gray is displayed for "Select Module" only.
□White	Operating normally



If the slice module is changed for another type of module during a monitor stop on this screen and the monitor is then resumed, the items corresponding to the new module and modules of the following Nos. are displayed red in the "Module Status" section.

#### 11.2 Module detail information

## D PURPOSE

Shows the module detail information, and monitors the corresponding module operation status and error status.



### BASIC OPERATION

- (1) On the "System Monitor" screen, select the module to be monitored.
- (2) Execute any of the following operations to display the "Module Detail Information" screen and start monitor.
  - Click the [Diagnostics]  $\rightarrow$  [Module Detail Information] menu.
  - Right-click the module selected in (1), and click [Module Detail Information] from the menu.
  - Click the Module Detail Information button on the "System Monitor" screen.
- (3) To update the operation status or error status, click the **Refresh** button.
- (4) To close this screen, click the Close button.

#### [CC-Link systems]

### DISPLAY/SETTING SCREEN



For power distribution module, I/O module or intelligent function module

Module Detail In	Iformation	$\times$
Module Detail Inf Slice No. Module Name Label Name Base Module Version Br(HEX) Bw(HEX) Wr(HEX) Ww(HEX)	ormation : 7 : ST1DA1-I : ST1B-*4IR2 : BAA : 0E - 11 : 02 - 03	
Current Error	Current Error No error Close	

### DISPLAY/SETTING DATA

ltem	Description
Module Detail Information	<ul> <li>Displays the information of the module to be monitored.</li> <li>This item includes the following information.</li> <li>Start slice No. *1</li> <li>Module name</li> <li>Label name</li> <li>Station No. *2 <ul> <li>"" is displayed if the Station No. set with the address setting switches of the head module is outside the setting range.</li> <li>For details, refer to "Current Error/Status" or "Error/Status Log" on this screen.</li> </ul> </li> <li>Base module name *1 <ul> <li>Excl. station count*2 - the number of stations used for communications.</li> <li>Exp. cyclic setting*2 - the number of cycles taken to read the data.</li> <li>Version <ul> <li>The module version is displayed.</li> <li>If a module does not support this, "" is displayed instead.</li> </ul> </li> <li>Mode *2 <ul> <li>Communication baud rate *2 <ul> <li>"" is shown if the MELSEC-ST system is not communicating with the master station.</li> </ul> </li> <li>Br.n Bit Input *1/ Bw.n Bit Output *1/ Wr.n Word Input *1' *3/</li> </ul> </li> </ul></li></ul>
Current Error/Status *2, *4	Displays the current operation status or error information of the head module.
No. (HEX)	Displays the error code in hexadecimal.
Current Error/Status	Displays the operation status or error definition.
Current Error *1, *4	Displays the current operation status or error information of the target module.
No. (HEX)	Displays the error code in hexadecimal.
Current Error/Status	Displays the operation status or error definition.
Error/Status Log *2, *4	Displays the operation status or error history of the head module. The latest log is displayed in the top line (descending order). This item displays up to five status or error logs. When information is added as the sixth status or error, the information is deleted in the order from the oldest to the newest. Switching off the external power of the MELSEC-ST system or resetting the head module erases the data of this item.
No. (HEX)	Displays the error code in hexadecimal.
Error/Status Log	Displays the operation status or error definition.
Refresh	Updates the data of "Current Error/Status" and "Error/Status Log".
Close	Closes this screen.
Clear Log button *2	Erases the data of "Error/Status Log". The data of "Current Error/Status" are not erased.

- \*1: This item is available for the power distribution module, I/O module or intelligent function module. GX Configurator-ST does not distinguish between spring clamp (S) and screw (E) wiring types in the base module.
- \*2: This item is available for the head module.
- \*3: "-" is displayed for the Br.n Bit Input / Bw.n Bit Output / Wr.n Word Input / Ww.n Word Output when the target module does not occupy the corresponding area.
- \*4: For details of the errors, refer to the manual of the corresponding module.

In CC-link systems, the address ranges are sometimes referred to differently. CClink's 'RX' and 'RY' ranges are equivalent to the 'Br' and 'Bw' ranges shown in GX Configurator-ST and CC-link's 'RWr' and 'RWw' ranges are equivalent to 'Wr' and 'Ww'.

### [PROFIBUS-DP systems]

## DISPLAY/SETTING SCREEN

For head module			
Module Detail In	formation	$\mathbf{X}$	
Module Detail Info Module Name : Label Name : FDL Address : Version : Current Error/Stat No.(HEX) 0000	ormation ST1H-P8 42 AAA Output Points : 256-pt mode Current Error/Status No error Active error	Update nformation Refresh Close	
Emor/Status Log			
No.(HEX)	Error/Status Log	Clear Log Clear error history	
	ristory		

### For power distribution module, I/O module or intelligent function module

Module Detail In	formation	×
Module Detail Infi Slice No. Module Name Base Module Version Br(HEX) Bw(HEX) Wr(HEX) Ww(HEX)	ormation : 7 ST1DA1-I : ST1DA1-I : ST1B-*4IR2 : B A A : 0E - 11 : 0E - 12 : 0E -	
No.(HEX)	Current Error	
0000	No error Close	

### 🔎 DISPLAY/SETTING DATA

ltem	Description		
Module Detail Information	<ul> <li>Displays the information of the module to be monitored. This item includes the following information.</li> <li>Start slice No. *1</li> <li>Module name</li> <li>Label name</li> <li>FDL Address *2 "" is displayed if the FDL address set with the FDL address setting switches of the head module is outside the setting range (100 or later). For details, refer to "Current Error/Status" or "Error/Status Log" on this screen.</li> <li>Base module name *1</li> <li>Version The module version is displayed. If a module does not support this, "" is displayed instead.</li> <li>Maximum Input/Output points *2</li> <li>Transmission speed *2 "" is displayed when the MELSEC-ST system is not communicating with the master station.</li> <li>Br.n Bit Input *1/ Bw.n Bit Output *1/ Wr.n Word Input *1' *3/ Ww.n Word Output *1' *3</li> </ul>		
Current Error/Status *2, *4	Displays the current operation status or error information of the head module.		
No. (HEX)	Displays the error code in hexadecimal.		
Current Error/Status	Displays the operation status or error definition.		
Current Error *1, *4	Displays the current operation status or error information of the target module.		
No. (HEX)	Displays the error code in hexadecimal.		
Current Error/Status	Displays the operation status or error definition.		
Error/Status Log *2, *4	Displays the operation status or error history of the head module. The latest log is displayed in the top line (descending order). This item displays up to five status or error logs. When information is added as the sixth status or error, the information is deleted in the order from the oldest to the newest. Switching off the external power of the MELSEC-ST system or resetting the head module erases the data of this item.		
No. (HEX)	Displays the error code in hexadecimal.		
Error/Status Log	Displays the operation status or error definition.		
Refresh	Updates the data of "Current Error/Status" and "Error/Status Log".		
Close	Closes this screen.		
Clear Log button *2	Erases the data of "Error/Status Log". The data of "Current Error/Status" are not erased.		

\*1: This item is available for the power distribution module, I/O module or intelligent function module. GX Configurator-ST does not distinguish between spring clamp (S) and screw (E) wiring types in the base module.

\*2: This item is available for the head module.

- \*3: For the Wr.n Word Input/ Ww.n Word Output, "-" is displayed when the target module does not occupy the corresponding area.
- \*4: For details of the errors, refer to the manual of the corresponding module.

#### 11.3 Input/Output monitor



Monitors the input data and output data of the module.



### BASIC OPERATION

- (1) On the "System Monitor" screen, select the module to be monitored.
- (2) Execute any of the following operations to display the "Input/Output Monitor" screen and start monitor.
  - Click the [Online]  $\rightarrow$  [Input/Output Monitor] menu.
  - Right-click the module selected in (1), and click [Input/Output Monitor] from the menu.
  - Click the Input/Output Monitor button on the "System Monitor" screen.
- (3) To close this screen, click the Close button.

Point In CC-Link systems, the following areas are not available for I/O monitoring: Ew.n Error Clear area Wr.n Word Input area of intelligent output modules Ww.n Word Output area of intelligent input modules



DISPLAY/SETTING SCREEN

🔲 Input/Output Mo	nitor No.4					
Monitor Switch	Stop	Start / monit	stop		Close	
Module Information						
Slice No. :	7	dodulo	1			
Module Name :	STIDA1-I	details	)			
Label Name :						
Bit Data						
Output Data	ltem	Va	lue Inc	ut Data		Item
Bit Output Area	Convert setting request	No req	uest Bit Inpul	Area	Module read	by and a second s
	CH1 output enable/disable f	flag Disable			Convert setti	ing completed fl
Error Clear Area	Error clear request	No req	uest Error Inf	ormation Area	CH1 error init	formation
Bi	t input / tput data					
1						•
Word Data				CH	IEX	
Output Data	Item	Value	Input Data		Item	Value
Word Output Area	CH1 digital value setting 0		Word Input Area	CH1 dig	ital value	
	Word input / output data					

ø	DISPLAY/SETTING DATA
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ltem Descr		Description
Monitor	Switch	Starts/stops monitor.
		Starts monitor. This button is usable only while monitor is at a stop.
		While monitor is executed, " * " flickers on the left side of this button.
C	Start button	Monitor Switch * Start Stop indicator Start monitoring monitoring
	Stop button	Stops monitor. This button is usable only while monitor is executed.
Clos	se button	Closes this screen.
Module Information		Displays the information (start slice No., module name, label name) of the module to be monitored.
Bit Data	a *1	Displays the input/output data of the target module in bit unit.
Word Data *1		When the target module is the intelligent function module, displays the Wr.n Word Input values and WW.n Word Output values. Selecting the DEC or HEX radio button displays the values displayed under "Value" in decimal or hexadecimal. DEC: Decimal HEX: Hexadecimal

\*1: For details of each data, refer to the manual of the corresponding module.

\*2: When the MELSEC-ST system is in the forced output mode, the values entered on the "Forced Output Test" screen are displayed.

Point
The rate at which values are updated on the "Input / Output Monitor" screen depends on the following conditions:
<ul> <li>Transmission speed (refer to <u>Transfer Setup</u>)</li> </ul>
<ul> <li>The number of open input/output monitor windows</li> </ul>
The status of the system monitor
To get the best input/output monitor performance:
<ul> <li>Do not open several input/output monitor windows</li> </ul>
Stop the system monitor

The following refers to PROFIBUS-DP head module version B only

### DISPLAY/SETTING SCREEN

Input/Output Mo	nitor No.4					
Monitor Switch	Stop	Start / monit	Stop	Close		
Slice No. : Module Name : Label Name :	5 ST1DA2-V	Module details	$\rightarrow$			
Input/Output Data			@ DEC	C HEX		
Output Data	ltem	V	alue Input Da	ta It	em	Value
Bit Output Area	Convert setting request	No rec	uest Bit Input Area	Module ready		Ready
	CH1 output enable/disabl	e flag Disabl	e	Convert setting	g completed flag	No request
	CH2 output enable/disabl	ut enable/disable flag Disable Word Input A		ea CH1 digital va	lue	0
Word Output Area	CH1 digital value setting	0		CH2 digital va	lue	0
	CH2 digital value setting	0				
Input / Output data						
Citor Data	llan	Mahar	Iner A Data	lines	Value	
Error Clear Area	Error clear request	Value No request	Error Information Area	CH1 error information	No error	
Entroi clear Alea	Entor crear request	no request	Lifer monitolination Alea	CH2 error information	No error	
	Error data					

DATA

ltem	Description
Monitor Switch	Starts/stops monitor.
Start button	Starts monitor. This button is usable only while monitor is at a stop. While monitor is executed, " * " flickers on the left side of this button.
Stop button	Stops monitor. This button is usable only while monitor is executed.
Close	Closes this screen.
Module Information	Displays the information (start slice No., module name, label name) of the module to be monitored.
I/O data *1 *2 *3	Displays the input/output data of the target module. When the target module is the intelligent function module, displays the Wr.n Word Input values and Ww.n Word Output values. Selecting the DEC or HEX radio button displays the values displayed under "Value" in decimal or hexadecimal. DEC: Decimal HEX: Hexadecimal
Error Data *1	Displays error data of the target module

\*1: For details of each data, refer to the manual of the corresponding module.

\*2: When the MELSEC-ST system is in the forced output mode, the values entered on the "Forced Output Test" screen are displayed.

\*3: In the case of an intelligent module which does not have an input sending area, output data will be displayed in the input area / fields for troubleshooting. For example, if the output data values are not being sent correctly, this display can be used to confirm that the output data reached the intelligent module.

#### 11.4 Forced output test

## D PURPOSE

Runs an output test on the **Bw.n** Bit Output, **Ww.n** Word Output and **Ew.n** Error Clear bits of the head module and slice modules without stopping the PROFIBUS-DP or CC-Link network.



### **BASIC OPERATION**

- (1) On the "System Monitor" screen, select the module to be monitored.
- (2) On the "System Monitor" screen, click the ON button of "Forced Output Test Mode". This displays a screen asking whether or not the MELSEC-ST system will be changed to the forced output test mode.

Click the Yes button to change the MELSEC-ST system to the forced output test mode.

When the MELSEC-ST system is changed to the forced output test mode, the RUN LED of the head module flickers.

- (3) Execute any of the following operations to display the "Forced Output Test" screen.
   Click the [Online] → [Forced Output Test] menu.
  - Right-click the module selected in (1), and click [Forced Output Test] from the menu.

Click the Forced Output Test button on the "System Monitor" screen.

- (4) On the "Forced Output Test" screen, select the forced output test item and set data, and click the **Set** button to start the forced output test.
- (5) When the forced output test is completed, the "Completed" message is displayed.

Click the OK button.

- (6) To close this screen, click the **Close** button.
- (7) On the "System Monitor" screen, click the OFF button of "Forced Output Test Mode" to release the MELSEC-ST system from the forced output test mode.

(1) If any of <b>Bw.n+1</b> Convert setting request, <b>Bw.n+3</b> , <b>Bw.n+2</b> CH <sup>I</sup> output
permission ON/OFF, and [VVW.D], [VVW.D+1] CH digital value setting is
changed in the forced output test, fully ensure safety before starting the test as the
analog output will change.
(2) When the communication between the MELSEC-ST system and master station is
disconnected, changing the Bw.n+1 Convert setting request of the intelligent
function module, whose CH $\Box$ CLEAR/HOLD/PRESET setting is set to HOLD, from
ON to OFF in the forced output test turns the Ww.n Word Output value to 0.
In this case, the Ww.n Word Output value will not return to the held value if the

In CC-Link systems, the following areas are not available for forced output tests:

• Ww.n Word Output area of intelligent input modules

#### REMARK

(a) If the MELSEC-ST system is not in the forced output test mode when the

Set button is clicked in (4), a screen appears asking whether or not the MELSEC-ST system will be changed to the forced output test mode.

Click the OK button to change the system to the forced output test mode and start the forced output test.

(b) When the MELSEC-ST system was changed to the forced output test mode in (a), a screen appears asking whether or not the system will be released from the forced out<u>put test</u> mode after the operation in Step (6) is performed.

Click the Yes button when releasing the system from the forced output test mode.

Click the No button when not releasing the system from the forced output test mode.

	No.4		
Select / Select all Se	elect All Hease All	Set Close Set outp values Module details	
Bit Data			
Output Data	Select	Item Name	Value
Bit Output Area		Convert setting request	No request
		CH1 output enable/disable flag	Disable
		CH2 output enable/disable flag	Disable
		Bit data	
Word Data		@ DEC	C HEX
Output Data	Select	Item Name	Value
Word Output Area		CH1 digital value setting	0
		CH2 digital value setting	0
Frror Clear Data			Wo
	10.1.1	Item Mana	Value
Output Data	L Select	I IIEM NAME	I VOULE

DISPLAY/SETTING DATA				
Item	Description			
	Checks all "Select" check boxes of "Bit Data" and "Word Data". A 'tick' is shown to indicate that the parameter is selected, as shown in the picture below.			
Select All button	Select Com			

Release All button	Unchecks all "Select" check boxes of "Bit Data" and "Word Data".
Set	Runs a forced output test on the Bw.n Bit Output, Ww.n Word Output*2 and (in PROFIBUS-DP only) Ew.n Error Clear whose "Select" check boxes are checked. (Ew.n Error Clear bits are available for PROFIBUS-DP only) When the forced output test is completed, the "Completed" message is displayed.
Close button	Closes this screen. The screen to release the MELSEC-ST system from the forced output test mode is displayed if the system was not in the forced output test mode when this screen was opened.
Module Information	Displays the information (start slice No., module name, label name) of the module on which a forced output test will be conducted.
Bit Data *1	Select the bit data on which a forced output test will be conducted by checking the corresponding "Select" check box, and set the bit value to be output at "Value".
Word Data *1 *2	Select the word data on which a forced output test will be conducted by checking the corresponding "Select" check box, and set the word value to be output at "Value". Selecting the DEC or HEX radio button changes the input format of "Value" to decimal or hexadecimal. DEC: Decimal HEX: Hexadecimal
Error clear data	Select the error clear data on which a forced output test will be conducted by checking the corresponding "Select" check box, and set the word value to be output at "Request".

\*1: For details of each data, refer to the manual of the corresponding module.

\*2: In CC-Link systems, word output data is not available for intelligent input modules.

#### 11.5 Master station data communication monitor

11.5.1 Master station data communication monitor

# ြာ *purpose*

Monitors the input/output data between the master station and head module of the PROFIBUS-DP or CC-Link system.



### BASIC OPERATION

- Click the [Diagnostics] → [Master Station Data Communication Monitor] menu to display the "Master Station Data Communication Monitor" screen and start monitor.
- (2) At "Select Area", select the I/O data to be displayed in the "Data display".
- (3) To save the monitored data into a text file, click the <u>Stop</u> button to stop monitor, and click the <u>Copy to File</u> button. Refer to <u>Saving the communication data</u> for details.
- (4) To close this screen, click the Close button.

### DISPLAY/SETTING SCREEN

	N	laster Stat	ion	Dat	a Co	omn	nun	ica	tion	Мо	nite	or		~	E	xport	: data	a to	<u> </u>	×	
Word display format		Select Area Word Data DEC(sig	elect Area Bit Input Area filter														ile ile		Close Stop	Start / stop monitoring	
		Address	F	E	D	С	В	A	9	8	7	6	5	4	3	2	1	0	Word Data		
		(	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	H4440		
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ноооо		
		3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Н0000		
		4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
		-	5 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
		6	i 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
		James J	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
	1	Data in bit 🕈	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Н0000		
	ł	format	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Н0000		
	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
		E	3 0	0	0	0	0	0	0	0	0	0	0	0	0	9	 ```	~~	Н0000		
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	ſ	Jata	ın ∶ ⊣	) H0000		
		C	0	0	0	0	0	0	0	0	0	0	0	0	0		form	at "	/ ноооо		
		E	0	0	0	0	0	0	0	0	0	0	0	0	0	2		0	H0000		
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000		
	-		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	

### [CC-Link systems]

### DISPLAY/SETTING DATA

	ltem	Description
Seled	ct Area *1	From among the following items, select the I/O data to be displayed in the "Data display". Bit Output Area Word Output Area Bit Input Area Word Input Area Wr Word Input Area
С	opy to File button	Saves the monitored data into a text file. Refer to <u>'Saving the communication data'</u> for details. While monitor is executed, this button is not usable. Save the data after clicking the <u>Stop</u> button to stop monitor.
Cl	ose button	Closes this screen.
Word	l Data	Changes the representation of the word values in the text file to be saved with the <b>Copy to File</b> button and in the "Data display".
	DEC(signed)	Displays the values in signed decimal.
	DEC(unsigned)	Displays the values in unsigned decimal.
	HEX	Displays the values in hexadecimal headed by "H".
Monit	tor	Starts/stops monitor.
	Start button	Starts monitor. This button is usable only while monitor is at a stop. While monitor is executed, " * " flickers on the left side of this button.
	Stop button	Stops monitor. This button is usable only while monitor is executed.
Dete		Displays the data in the data range selected at "Select Area".

\*1: For details of the I/O data, refer to the Head Module Manual.

[PROFIBUS-DP systems]



	ltem	Des	scription									
		From among the following items, s	elect the I/O data to be displayed in the									
		"Data display".										
		PROFIBUS-DP version A:										
		All Area	: All I/O data									
		Bit Output Area	: Bw Bit Output Area									
		Error Clear Area	: Error Clear Area									
		System Area	: Sw System Area									
		Command Execution Area	: Cw Command Execution Area									
		Word Output Area	: Www Word Output Area									
Selec	xt Area "1	Bit Input Area	Br Bit Input Area									
		Error Information Area	Er Error Information Area									
		Module Status Area										
		Command Result Area										
		Word Input Area										
		PROFIBUS-DP version B:	: LIII Word Input Area									
		All Area	: All I/O data									
		Output Area	: Output Area only *2									
		Input Area : Input Area only *2										
		Saves the monitored data into a text file.										
Co	py to File button	Refer to <u>'Saving the communication data</u> ' for details. While monitor is executed, this button is not usable.										
		Save the data after clicking the Stop button to stop monitor										
		Save the data after clicking the Lover button to stop monitor.										
C	ose button	Closes this screen.										
Word	I data	Changes the representation of the word values in the text file to be saved with the										
vvoru		Copy to File button and in the	"Data display".									
	DEC(signed)	Displays the values in signed decir	nal.									
	DEC(unsigned)	Displays the values in unsigned de	ecimal.									
	HEX	Displays the values in hexadecima	I headed by "H".									
Monit	or	Starts/stops monitor.										
		Starts monitor.										
		This button is usable only while mo	Shitor is at a stop.									
		While monitor is executed, " " flic	kers on the left side of this button.									
	Start button	- Monitor :	Switch									
		×	Start Stop									
			Statt Stop									
			monitoring monitoring									
	Stop button	Stops monitor.										
		This button is usable only while monitor is executed.										
Data	dieplay*1	Displays the data in the data range selected at "Select Area".										
Daid	αιοριαγ ι	Address 0 set as the start address										

- \*1: For details of the I/O data, refer to the Head Module Manual.
- \*2: In PROFIBUS-DP version B systems, the input/output area layout depends on the configuration details (for example, byte packing).

#### REMARK

When confirming the data for each module, use the "Input/Output Monitor" screen. Refer to <u>'Input/Output monitor</u>' for details.

#### 11.5.2 Saving the communication data

## D PURPOSE

Saves the I/O data, which were monitored on the "Master Station Data Communication Monitor" screen in <u>'Master station data communication monitor</u>, into a text file.



- On the "Master Station Data Communication Monitor" screen, click the Stop button to stop monitor, and then click the Copy to File button.
- (2) Set the destination directory and file name, and click the Save button to save the monitored data into a text file and close this screen.



#### DISPLAY/SETTING SCREEN





### DISPLAY/SETTING DATA

ltem	Description
Save in	Select the directory that stores the monitored data.
File name	Set the file name of the monitored data.
Save	Saves the project with the file name specified at "File name".
Cancel button	Closes this screen without saving the project.

(1) Example of text file for saving data

The following shows an example of the text file for saving data.

	Ma	iste	rS	tat	ior	ıCo	m	ns	Ou	tpı	ut.1	xt	- 1	Not	ep	ad								×
File	E	Edit	F	orm	at	Vi	ew	Н	elp															
GX Mor 000 000 000 000	Ci 00 01 02 03 04	onf tor		gur 0 0 0 0	nat 0 0 0 0	0 0 0 0 0	AT 0000000	0 0 0 0	Ma Ar 0 0 0 0	151 10 0 0 0	er 0 0 0 0	000000000	5t; 0 0 0 0	at 0 0 0 0	ior 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	Cor	mmunicatio H0000 H0000 H0000 H0000 H0000	on	Monitor		< 12
<																							>	.ii

#### 11.6 PROFIBUS-DP Network Parameter Monitor (PROFIBUS DP only)

#### 11.6.1 PROFIBUS-DP Network parameter monitor



Confirms of the slave parameters and PROFIBUS-DP network parameters sent from the master station of PROFIBUS-DP to the MELSEC-ST system.



- Click the [Diagnostics] → [PROFIBUS-DP Network Parameter Monitor] menu to display the "PROFIBUS-DP Network Parameter Monitor" screen and start monitor.
- (2) To save the monitored data into a text file, click the <u>Stop</u> button to stop monitor, and click the <u>Copy to File</u> button. Refer to <u>'Saving the PROFIBUS-DP network parameter data'</u> for details.
- (3) To close this screen, click the **Close** button.

[	PROFIBUS-D	P N	etwo	ork P	ara	mete	er Mo	onito	"<	Save	e data file	a to a	>				
oring	× St	art		St	op			Сору	to Fi	le		Ľ	CI	ose			
	Address	0	1	2	3	4	5	6	7	8	9	А	В	С	D	Е	F
	0	00	00	00	00	00	00	00	00	12	00	00	00	00	00	00	00
	1	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	2	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	3	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	4	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	5	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	6	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	7	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	8	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	9	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	A	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	В	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
							$\langle$		etwor	k data	>						



### DISPLAY/SETTING DATA

	ltem	Description
Monit	tor	Starts/stops monitor.
		Starts monitor. This button is usable only while monitor is at a stop. While monitor is executed, " <sup>*</sup> " flickers on the left side of this button.
	Start button	Monitor Switch Start Stop indicator Start Start monitoring monitoring
	Stop button	Stops monitor. This button is usable only while monitor is executed.
Co	opy to File button	Saves the monitored data into a text file. Refer to <u>'Saving the PROFIBUS-DP network parameter data'</u> for details. While monitor is executed, this button is not usable. Save the data after clicking the <u>Stop</u> button to stop monitor.
Cl	ose	Closes this screen.
Data	display*1	Displays the slice module parameters and PROFIBUS-DP parameters sent from the master station of PROFIBUS-DP to the MELSEC-ST system. "Address" is the offset address of the monitored parameter, with Address 0 set as the start address.

\*1: For details of the data, refer to the manual of the used master station or configuration software.

#### 11.6.2 Saving the PROFIBUS-DP network parameter data



Saves the data, which were monitored on the "PROFIBUS-DP Network Parameter Monitor" screen in <u>'PROFIBUS-DP network parameter monitor</u> into a text file.



- (1) On the "PROFIBUS-DP Network Parameter Monitor" screen, click the Stop button to stop monitor, and then click the Copy to File button.
- (2) Set the destination directory and file name, and click the Save button to save the monitored data into a text file and close this screen.



Copy to file	?×
Save in: 🗁 SLICE	
BMP B Master	
File name:	Save
Save as type: Monitor data[".txl)	Cancel



#### DISPLAY/SETTING DATA

ltem	Description
Save in	Select the directory that stores the monitored data.
File name	Set the file name of the monitored data.
Save	Saves the project with the file name specified at "File name".
Cancel button	Closes this screen without saving the project.

(1) Example of text file for saving data The following shows an example of the text file for saving data.

📮 Pro	ofil	ousD	Pne	tPa	rami	Mon	itor.	txt	- No	tepa	ıd								×
File E	dit	For	mat	Viev	v H	elp													
þΧ Ci	onf	igu	inat	or-	-ST	PRO	FIE	BUS-	-DP	Net	wor	'k F	Para	amet	er	Mor	nito	r	^
0000 0001 0002 0003 0004 0005 0006 0007 0008 0007 0008 0009 000A 000B		00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	12 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00	>	11. (C

#### 12 Online module operation

This chapter explains the functions for operating each module from GX Configurator-ST in the online mode (where the MELSEC-ST system and personal computer are connected).

#### 12.1 Reset head module

### L D PURPOSE

Resets the head module from GX Configurator-ST.



### BASIC OPERATION

- (1) Click the [Online]  $\rightarrow$  [Reset Head Module] menu.
- (2) When there is a window being monitored, a screen appears asking whether monitor will be stopped or not.

Click the OK button to stop monitor.

(3) A screen appears asking whether the head module will be reset or not.

Click the OK button to reset the head module, and check the LED status (on/ off) to see if the head module has been reset.

While the head module is reset, all LEDs are off. When reset is completed, the LEDs turn on again.

Confirm that all LEDs turn on after they have turned off once.

(4) A screen appears asking whether a reset request has been issued to the head module or not.\_\_\_\_

Click the OK button.

(5) When monitor is stopped in Step (2), a message appears asking whether monitor will be resumed or not.

Click the Yes button to resume monitor.

Click the No button to keep monitor stopped.

#### 12.2 Online module change

(1) Online module change function

The I/O modules (except ST1X1616-DE1-S1) and intelligent function modules can be replaced without stopping the MELSEC-ST system.
An online module change can be executed by operation of the head module buttons or from GX Configurator-ST.
This section explains how to perform an online module change from GX Configurator-ST.

#### 12.2.1 Precautions for online module change

The precautions for the online module change are given below.

 To perform the online module change, the system configuration must be appropriate for execution of the online module change. For details, refer to the MELSEC-ST System User's Manual, "3.4 Precautions for System Configuration". Executing the online module change in an inappropriate system configuration may result in malfunction or failure. In such a system configuration, shut off all phases of the external power supply for the MELSEC-ST system to replace a slice module.
 Be sure to perform an online module change in the procedure given in <u>Procedures for online module change</u>.

Failure to do so can cause a malfunction or failure.

(3) Before starting an online module change, confirm that the external device connected with the slice module to be removed will not malfunction.

It is recommended to set 0 (OFF) to Bw.n Bit output and Ww.n Word output of the slice module to be replaced in advance.

- Only the slice modules of the same model name can be replaced online.
   It is not possible to replace with/add the slice module of different model name.
- (5) Only one slice module can be replaced in a single online module change.
   To replace multiple slice modules, perform an online module change for each module.
- (6) This function is available for I/O module (except ST1X1616-DE1-S1) and intelligent function module; not available for power distribution module and base module. Shut off all phases of the external power supply before installing or removing the power distribution module and/or the base module. Failure to do so may result in damage to all devices of the MELSEC-ST system.
- (7) While an online module change is in execution (while the head module's REL. LED is on), no command can be executed to the slice module being replaced online. If a command is executed to such a slice module, an error will occur.
- (8) To change parameters of a slice module that is in execution of online module change (while the head module's REL. LED is on), wait until the online module change is completed. If any parameter setting is changed during online module change, upon completion of the online module change, the modified setting is overwritten with the parameters saved into the head module and does not take effect.
- (9) During an online module change, the ERR. LED of the head module turns on only when an error related to the online module change occurs. It will not turn on or flicker when any other error occurs.
- (10) While an online module change is being executed (while the REL. LED of the head module is on), the following data of the slice module being replaced online all turn to 0 (OFF).
  - Br.n Bit Input
  - Er.n Error Information (PROFIBUS-DP only)
  - Mr.n Module Status (PROFIBUS-DP only)
  - Wr.n Word Input
- (11) When the communication with the master station is disconnected, replacing the output module

online, whose CLEAR/HOLD setting is set to HOLD, turns the Bw.n Bit Output value to 0 (OFF).

After the online module change is finished, the **Bw.n** Bit Output value will not return to the held value.

(12) When the forced output test is executed on the slice module being replaced online, only

**Ew.n** Error Clear can be tested ( **Ew.n** Error Clear bits are available for PROFIBUS-DP only).

**Bw.n** Bit Output and **Ww.n** Word Output cannot be tested.

#### 12.2.2 Procedures for online module change

This section explains the procedures for the online module change. Replace a module online as shown below.



\*1: Refer to the MELSEC-ST System User's Manual, "3.4 Precautions for System Configuration". \*2: Refer to "Preparations for online module change" in the corresponding slice module manual. \*3: Refer to "External device connection and disconnection procedures for online module change".

#### 12.2.3 Online module change from GX Configurator-ST

Here is an explanation of how to replace a module online from GX Configurator-ST.

Coint
If a slice module different from the target one is selected by mistake, restart the operation as
instructed below.
(1) To restart the operation at step 3)
Click the <b>Cancel</b> button on the screen to terminate online module change.
(2) To restart the operation at step 4)
Click the Next button without executing online module change, continue to step 10)
(3) To restart the operation at step 8)
Mount the removed slice module again, click the <b>NEXT</b> button, continue to step 10) and
then terminate online module change.
Preparation for replacing slice module



1) Select the slice module to be replaced online on the "System Monitor" screen.

Input/Output Monitor	Forced Output Test
Offset/Gain Setting	Module Detail Information
Online Module Change	Parameter Setting
Close	
,	<b>V</b>



2) Click the Online Module Change button on the "System Monitor"screen. Then, confirm that the RUN LED of the selected slice module is flashing at 0.25s intervals.

## REMARKS

In addition to above, the following operations are also available.

- Select [Diagnostics] → [Online Module Change].
- Right-click the slice module selected at step 1), and click Online Module Change on the menu.



Online Module Change
Target Module
No. : 4 Slice No. : 7 Details of module
Module Name : ST1DA1-I selected for
Label Name : replacement
Base Module : STIB-4HHZ
Start Online Module Change 1.Please confilm the module. 2.Please click "Next" button.
Next step
Lancei

- 3) Confirm that the slice module displayed as "Target Module" is the slice module to be replaced and click the Next button.
  - (a) Clicking the Next button validates the settings and the following will be performed.
    - Puts the head module into the online module change mode.
    - Saves the parameters of the target slice module into the head module.
  - (b) After clicking the Next button, confirm the following module statuses.
    - The REL. LED of the head module is on.
    - The RUN LED of the target slice module is off.
    - The "Module Status" indicator of the target module has turned purple (
      ). This applies only when monitoring from the "System Monitor" screen.
  - (c) If the parameters cannot be read from the slice module, the REL. LED and ERR. LEDs of the head module will turn on, and an error message will appear on the screen at step 8).
    In this case, confirm the error details and take corrective action.
    For how to read error codes and error code details, refer to the Head Module Manual.

When not executing online module change, click the **Cancel** button.

(a) Clicking the **Cancel** button causes the screen to show that online module change is cancelled.

Clicking the **Exit** button returns to the step 1).

(To the next page)







(To the next page)

If the parameters could not be read from the removed slice module in step 3), the REL. and ERR. LEDs of the head module will turn on and the left screen will appear in GX Configurator-ST. In this case, confirm the error details and take corrective action.

For how to read error codes and error code details, refer to the Head Module Manual.

When step 10) has completed in this status, the intelligent function module starts its operation with the command parameters set as default.

(From the previous page)	
↓ ↓	
Online Module Change       Image Module         No. ::       4         Sice No. ::       4         Sice No. ::       4         Module Name:       511DA1-1         Label Name ::       Base Module ::         Base Module ::       STIB*4IR2         Please click 'Next' button to start the changed module operations.       Online Module Change can be cancelled by 'Cancet' button.         Next 3       Cancel	<ul> <li>9) Clicking the Next button releases the head module from the online module change mode.</li> <li>(a) Clicking the Next button performs the following.</li> <li>Releases the head module from the online module change mode.</li> <li>Restarts refreshing the I/O data, etc.</li> <li>(b) After clicking the Next button, confirm the following module statuses.</li> <li>The REL. LED of the head module is off.</li> <li>The RUN LED of the newly mounted slice module is on.</li> <li>The "Module Status" indicator of the target slice module has turned white (□). This applies only when monitoring from the "System Monitor" screen.</li> <li>(c) If the head module cannot be released from the online module change mode, both REL. LED and ERR. LED of the head module turn on. In this case, confirm the error details and take corrective action.</li> </ul>
	<ul> <li>For how to read error codes and error code details, refer to the Head Module Manual.</li> <li>When interrupting online module exchange, click the Cancel button.</li> <li>(a) Clicking the Cancel button, i.e., interrupting online module change returns to step 1). In this case, select the same slice module as selected before, and complete online module change. Note that selecting different one causes an error.</li> </ul>
Online Module Change         Target Module         No. :: 4         Sice No. :: 7         Module Amer: STIDA14         Label Name :: STIDA14         Base Module :: STIB-4IR2         Online Module Change is completed.	10) The left screen appears showing that online module change has been completed. Click the <b>Finish</b> button.
(Completion)	

# 13 Reference

# 13.1 Key operations list

Some of the commonly-used menu items are also available on shortcut keys, listed below.

File

Operation Contents	Key operation
New	Ctrl + N
<u>Open</u>	Ctrl + O
Save	Ctrl + S
Print	Ctrl + P

## Edit

Operation Contents	Key operation
<u>Undo</u>	Ctrl + Z
Redo	Ctrl + Y
Add	Ctrl + Insert
Delete	Ctrl + Delete
All Delete	Shift + Del
Parameter Setting	F9
Option	F10

# Mode

Operation Contents	Key operation
<u>Edit</u>	F2
<u>Diagnosis</u>	F3

# 13.2 Error messages

This section will list the error messages that can be shown by the program, with advice on how to prevent or fix the errors.

#### 13.2.1 Communication errors

These errors are shown when GX Configurator-ST has problems communicating with the SLICE hardware.

Message	Cannot communicate with Head module for one of the following reasons:
	<ul> <li>Communications timeout.</li> <li>The preparation of communication environment is bad.</li> <li>Cable error.</li> <li>Cannot communicate with the transmission speed set up now.</li> </ul>
	To fix this, try:
	<ul> <li>Checking the cable and selected port number</li> <li>Setting transmission speed to a lower value.</li> <li>Closing other communication software applications and trying again.</li> </ul>
Description	This message occurs when it is not possible to make a connection to the SLICE hardware.
Causes and actions	This message will be shown if the connection to the SLICE hardware cannot be opened. This could be due to a hardware or software problem:
	<ul> <li>Hardware issues may include power failure to the SLICE hardware, the cable becoming disconnected, the wrong type of cable being used, or the cable being plugged into the wrong device.</li> <li>Software issues may include another program using the</li> </ul>
	communication port where the cable is connected.

Message	Cannot communicate with PLC.
Description	There was a problem communicating with the SLICE hardware.
Causes and actions	• This message may be shown if the SLICE hardware does not respond within a reasonable time. Check that the SLICE hardware is powered on and that the correct cable is connected to the correct port on the intended device.

Message	Cannot communicate with Head module for one of the following reasons	
	<ul><li>Bad connection to the head module.</li><li>The preparation of communication environment is bad.</li></ul>	
	To fix this, try:	
	<ul><li>Checking the connection to the head module</li><li>Closing other communication software applications and trying again.</li></ul>	
Description	There was an error when sending / receiving data to or from the SLICE hardware.	
Causes and actions	This message will be shown if the connection to the SLICE hardware cannot be opened. This could be due to a hardware or software problem:	
	• Hardware issues may include power failure to the SLICE hardware, the cable becoming disconnected, the wrong type of cable being used, or the cable being plugged into the wrong device.	
	• This error message will also be shown if you use an earlier version of GX Configurator-ST (such as 1.06G) to connect to a head module configured for PROFIBUS-DP version B. This does not work due to changes to the internal structure.	
	Software issues may include another program using the communication port where the cable is connected.	

Message	Set data exceeds the range. Execute again after confirming set data. The range that can be set is 1 - 9.
Description	This message is shown on the 'Transfer setup' dialog, when a timeout value outside the range 1-9 is set.
Causes and actions	<ul> <li>Change the timeout value to a number from 1 to 9, and try again.</li> </ul>

Message	Cannot process because of monitoring. Please stop all monitoring and execute again.
Description	Some online operations are not possible while monitoring is in progress. This message is shown if one of these operations is initiated while monitoring is in progress.
Causes and actions	<ul> <li>Stop monitoring for the duration of the operation, and restart it afterwards.</li> </ul>

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## 13.2.2 Diagnostic errors

The errors in this section can occur when the system is in diagnosis mode.

Message	This feature cannot be executed during monitoring. Please execute again after stop monitoring.
Description	This message is shown when the 'Copy to file' button is selected on the PROFIBUS-DP Network parameter monitor or Master station data communications dialog, but monitoring is still active.
Causes and actions	<ul> <li>Stop monitoring before saving the data to a file. Monitoring can be restarted after the file has been saved.</li> </ul>
Message	The module for the setting has not been selected. Please select the

	module that is to be set in the System Monitor.
Description	This error is shown on the <u>system monitor</u> screen, when an action is selected (such as <u>module detail information</u> ) without any module selected for it to work on.
Causes and actions	<ul> <li>Select the module to use for the action, then try again.</li> </ul>

Message	There is no monitor data to write to the file.
Description	This error occurs when the 'Copy to file' button is selected on the <u>PROFIBUS-DP Network parameter monitor</u> or <u>Master station data</u> <u>communications</u> dialog, but there is no data available to save to the file.
Causes and actions	<ul> <li>Try again when there is some data available to write.</li> </ul>

Message	Cannot monitor the Input/Output Data of the specified module.
Description	I/O monitoring was selected for a module, but the module does not support it.
Causes and actions	• The selected module may not have any I/O to monitor. Check that the correct module has been selected, then try again.

Message	The module for the setting has not been selected. Please select the module that is to be set in the System Monitor.
Description	An attempt was made to start I/O monitoring without first selecting a module.
Causes and actions	• Make sure that the correct module is selected by clicking on it in the system monitor display, then try again.

Message	The head module does not match, but the other modules are correct. Copy the head module details from the live system and continue?
Description	When attempting to switch to diagnostics mode, it was discovered that the head module type of the live system does not match the head module type in the configuration, although the remaining modules do match. This could happen if (for example) the head module in an existing SLICE system was replaced with a different type of head module.
Causes and actions	<ul> <li>You can either:</li> <li>Answer 'Yes' at the prompt, in which case the system will copy the head module details from the live system and continue - if you have replaced the head module but wish to reuse the module parameters in an old configuration file, this is the correct option.</li> <li>Answer 'No' at the prompt, if (for example) a connection has been made to the wrong SLICE hardware. The 'wrong system configuration' error will be shown (as below)</li> </ul>

Message	The module configuration differs from the mounting state. Please check the module configuration and execute again. Module No
Description	This message is shown when switching to diagnostics mode, if the configuration of the attached SLICE hardware does not match the configuration being edited. The message shows the first module number which is different.
Causes and actions	<ul> <li>Check that the communication cable is connected to the right serial port and the right SLICE hardware - there may be a connection to a different system. <u>'Transfer setup'</u> can be used to change the serial port used.</li> </ul>
	<ul> <li>Make sure that the configuration file is up to date, in case new modules have been added since the last time it was saved.</li> </ul>
	<ul> <li>If you do not need to keep any parameters in the local file, use <u>'Get</u> system' to read the details of the connected system from the port.</li> </ul>

Message	The configuration has changed. Please close all monitoring windows before reactivating. Otherwise several indication errors could occur.
Description	This error occurs if the configuration of the ST-series head module is changed while monitoring is active (e.g. switched protocol from Version A to B) and the changed configuration was loaded into GX Configurator-ST.
Causes and actions	<ul> <li>Close all monitoring dialogs and start monitoring again.</li> </ul>

Message	This will start monitoring of the Input/Output Monitor?
Description	When you switch from edit mode to diagnostics mode, and there are I/O monitor windows open from a previous diagnostics mode session, you will be prompted to restart monitoring.
Causes and actions	Either answer:
	<ul> <li>'Yes' - to restart monitoring in these windows, or</li> </ul>
	<ul> <li>'No' - in which case monitoring will not be switched on in the open I/O monitor windows.</li> </ul>

Message	This will stop monitoring of the Input/Output Monitor.
Description	This is a warning shown when switching from diagnostics mode to edit mode while there is an I/O monitor active.
Causes and actions	<ul> <li>There is no action to take - when you click 'OK', the active I/O monitors will stop monitoring.</li> </ul>

Message	Module Detail Information cannot be executed in the specified module.
Description	This error can appear on the system monitor dialog when an attempt is made to start the 'module detail information' dialog for a module whose details cannot be shown.
Causes and actions	• Make sure that the right module is selected, by clicking on it in the system monitor dialog, then try again.

### 13.2.3 File errors

These errors may occur when there are problems opening or reading from a file.

Message	The file cannot be opened because the selected file is damaged.
Description	An attempt was made to open a file which appears to be corrupted.
Causes and actions	<ul> <li>There may be a problem reading the file from a network drive, or the file may have become corrupted.</li> <li>If you have a recent backup of the file, check if the backup is readable.</li> </ul>

Message	This file has been created in latest version of application. Cannot process it in this application.
Description	This message may be shown if you have created a file in a newer version of GX Configurator-ST than this one (1.08J), and attempted to load it into this version.
Causes and actions	<ul> <li>Open the file with the version of GX Configurator-ST in which it was created.</li> </ul>

Message	The file cannot be opened because the selected file is damaged.
Description	The file was found and opened, but discovered to be corrupt.
Causes and actions	<ul> <li>It will not be possible to read the file - load a backup copy if you have one, or if you have access to the SLICE hardware, use the <u>'Get</u> <u>system'</u> feature to read the configuration from the hardware.</li> </ul>

Message	The following error occurred during processing of the file
Description	While processing the file, the operating system reported an error. The error description returned by the operating system is shown at the end of the message.
Causes and actions	• The message should show what the problem was, and from this it should be possible to work out the correct action to take.

Message	Cannot use the specified file because it is being write protected. Please check the attribute and try again.
Description	Permission was denied to use the file.
Causes and actions	<ul> <li>Make sure that the file has not been opened elsewhere</li> <li>Check that the file is not write protected - files can sometimes be left write protected when (for example) they are copied from a backup CD.</li> </ul>

Message	Cannot find the file.
Description	The file to be opened was not found.
Causes and actions	<ul> <li>Make sure that the file exists, and is not (for example) on an inaccessible network drive.</li> </ul>

Message	Cannot use the specified file because it is being used by some other application.
Description	Another application has the file open, so GX Configurator-ST cannot use it.
Causes and actions	<ul> <li>Look for other files that may be using the file, then switch to the other application and close the file.</li> </ul>
	<ul> <li>If the file still appears to be locked and there is no application apparently using it, rebooting the PC may fix the problem.</li> </ul>

Message	The allowable No. of characters has been exceeded. Set to less than 150 characters.
Description	A file name was selected which is too long to use.
Causes and actions	<ul> <li>Enter a shorter file name, then try again.</li> </ul>

## 13.2.4 Forced output / offset and gain errors

These errors can occur when using the forced output / offset and gain settings dialogs. For more information, see <u>'Forced output test'</u> and <u>'Offset/Gain setting of intelligent</u> <u>function module'</u>.

Message	The module for the setting has not been selected. Please select the module that is to be set in the System Monitor.
Description	An attempt was made to start the forced output test dialog without first selecting a module whose outputs are to be written.
Causes and actions	• Make sure that a module is selected by clicking on it in the system monitor dialog, then try again.

Message	The selected module cannot execute the Forced Output Test function.
Description	An attempt was made to start the forced output test dialog for a module that does not support forced output tests (e.g. because it has no suitable outputs).
Causes and actions	• Select a module which does support forced output tests, by clicking on it in the system monitor dialog, then try again.

Message	Cannot change into the Forced Output Test Mode because the communication error has occurred. Please execute again.
	If selecting the "Cancel" button, please reset the head module because the last value may be outputted when you next execute the Forced Output Test function.
Description	This message is shown when trying to switch on the 'forced output test' mode, if there is a communication error before the operation can be completed. Pressing 'OK' will retry the connection, or pressing 'Cancel' will abandon the attempt.
Causes and actions	• Check the connections and try again. As the message suggests, if you select 'Cancel' it is advisable to reset the head module to make sure that there are no 'left over' output values the next time you switch to forced output test mode.

Message	Head module is in the status of the Forced Output Test Mode. Do you want to release the Forced Output Test Mode?
Description	This message is shown when the operating mode is about to be switched from 'diagnostics mode' to 'edit mode', while the 'forced output test' mode is active.
Causes and actions	• This is a warning message - if you wish to continue using forced output mode, cancel the change.

Message	This will release the Forced Output Test Mode. Is it OK?
Description	This prompt is shown when closing a forced output test dialog window while the test is active.
Causes and actions	<ul> <li>Either answer:</li> <li>'Yes' - to switch off forced output test mode before returning, or</li> <li>'No' - to leave the forced output test mode active</li> </ul>

Message	Mode setting is in the Forced Output Test Mode. Do you want to close in the Forced Output Test Mode?
Description	This message is shown when the project file is about to be closed, but the 'forced output test' mode is active.
Causes and actions	• This is just a warning message - if you wish to continue using forced output mode, use the 'cancel' option.

Message	It is possible to set Offset/Gain only during the Forced Output Test Mode. Change into the Forced Output Test Mode?
Description	This message is shown when trying to set the offset and gain settings for a module, when the system is not in forced output test mode.
Causes and actions	<ul> <li>Offset/gain settings can only be set in forced output mode. Answer 'Yes' at the prompt to switch to forced output test mode, or 'No' to cancel the operation.</li> </ul>

Message	The selected module cannot set Offset/Gain.
Description	An attempt was made to change the offset/gain settings of a module which does not have offset/gain settings to change (such as the head module or a power supply module).
Causes and actions	<ul> <li>It is likely that the wrong module is selected - make sure that the correct module (one which has offset/gain settings) is selected, and then try again.</li> </ul>

Message	The module to be set has not been selected. Please select a module to be set in the System Monitor.
Description	This message is shown when attempting to show the offset/gain settings dialog without first selecting a module for which the offset/gain settings should be changed.
Causes and actions	• Make sure that a module has been selected by clicking on it in the 'system monitor' dialog, then try again.

Message	The Window is closed during Offset/Gain Setting Mode. Please open the Offset/Gain Setting and close again.
Description	The offset/gain dialog window was closed unexpectedly while setting offset/gain settings.
Causes and actions	<ul> <li>Open the offset/gain settings window and try the operation again.</li> </ul>

Message	Channel has not been selected. Please select a channel.
Description	This error is shown on the offset/gain settings dialog, when trying to write the settings without first selecting one or more channels.
Causes and actions	<ul> <li>Select the channel(s) to which the new setting values should be applied,</li> </ul>

Message	Please set the Offset/Gain Value.
Description	On the offset/gain settings dialog, the 'Set' button was used without entering a valid value.
Causes and actions	• Make sure that a valid number has been entered for the new offset/gain value, then try again.

Message	Value input is out of range.
Description	The value entered for the offset or gain setting is out of range, i.e. it is below the lower limit for values, or above the upper limit for values.
Causes and actions	<ul> <li>Enter a value which is within the limits, then try again.</li> </ul>

Message	Please select an Output Data.
Description	On the forced output test dialog, the 'settings' button was clicked without first selecting one or more outputs.
Causes and actions	• Make sure that at least one output is selected (checked) and try again.

Message	The value besides the range is set as the setting value.
Description	This error is shown on the forced output dialog, if the output value selected is not permitted. The value may be lower than the minimum permitted, higher than the maximum permitted, or too large for the data type (e.g. when trying to store a 32-bit value in a 16-bit setting).
Causes and actions	<ul> <li>Enter a value within the permitted ranges, then try again.</li> </ul>

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#### 13.2.5 Module addition and copying errors

These errors may be shown when new modules are being added to the system, or copied from another file.

Message	Cannot add the module. Modules can be added to the maximum of
Description	No more modules can be added to the system - the limit on the number of modules in a SLICE system has been reached.
Causes and actions	<ul> <li>You may be able to reduce the number of modules needed by using different types of modules.</li> </ul>
	<ul> <li>If there is no way to reduce the number of modules needed, the only solution is to install an additional SLICE system in a new rack with a separate head module.</li> </ul>

Message	Cannot add the module. Bit Input/Output range exceeds points.
Description	It is not possible to add the module, because the total number of bit I/O points in the system would exceed the limit.
Causes and actions	• In a PROFIBUS-DP system, the point mode is selectable, so you may be able to change to a higher point mode and continue.
	• If there is no way to reduce the number of bit input/output points used, the only solution is to install an additional SLICE system in a new rack with a separate head module.

Message	Cannot add the module. Word Input/Output range exceeds points.
Description	It is not possible to add the module, because the total number of word I/O points in the system would exceed the limit.
Causes and actions	<ul> <li>In a PROFIBUS-DP system, you may sometimes be able to switch to a lower point mode to increase the number of word I/O items that can be used.</li> </ul>
	• If there is no way to reduce the number of word input/output items used, the only solution is to install an additional SLICE system in a new rack with a separate head module.

Message	Cannot add the module. Intelligent modules can be added to the maximum of
Description	It is not possible to add the module, because the maximum number of intelligent modules has already been reached.
Causes and actions	• In a PROFIBUS-DP system, the number of intelligent modules permitted is affected by the point mode selected. You may be able to change the point mode to allow more intelligent modules to be used.
	• You may be able to install different types of intelligent modules in the system to get the same results with a lower number of modules.
	• You may be able to install one or more non-intelligent modules in the system to get the same results.
	• If more intelligent modules are still needed, the only solution is to install an additional SLICE system in a new rack with a separate head module.

Message	The module could not be recognized. Module: No
Description	GX Configurator-ST does not recognise the module.
Causes and actions	<ul> <li>This message should not normally be shown. Uninstalling and reinstalling the application may solve the problem.</li> </ul>

Message	The module isn't selected. Please select the module.
Description	In the 'Add module' dialog, 'add' was pressed before a module was selected.
Causes and actions	<ul> <li>Select a module from the drop-down list, then try again.</li> </ul>

Message	It cannot add the module in the specified position.
Description	In the 'Add module' or 'Copy module' dialog, an attempt was made to add a module at an invalid slot number.
Causes and actions	<ul> <li>Correct the slot number and try the action again. The slot number should not be before or at the head module slot, or beyond the end of the rack.</li> </ul>

Message	A missing number will be made. Is it OK to change the No. to?
Description	In the 'add module' or 'copy modules' dialog, an attempt was made to add a module after the end of the rack. For example, if the last module in the rack is in slot 8, an attempt to add a new module in slot 10 would cause this error.
Causes and actions	• Either select 'Yes' to accept the suggested alternative (normally the slot number just after the right hand end of the rack), or 'No' to cancel the addition and re-enter the slot number manually.

Message	Warning - after adding this module, the supply current is not sufficient. Supply current : mA, Consumption : mA. Select 'OK' to add the module anyway.
Description	This message is shown after adding a module in the wizard area, if there was previously sufficient power supply to the modules in the configuration, but adding the new module would cause more current to be drawn than is being supplied.
Causes and actions	<ul> <li>Select 'OK' to add the module anyway and fix the power supply issue later, or</li> </ul>
	• Select 'Cancel' to prevent the addition, so that another power supply module (e.g. ST1PSD) can be added in the correct place.

Message	Warning - there are not enough unused bits available. Unused bits available :, Required : Select 'OK' to add the module anyway.
Description	This message is shown after adding a module in the wizard area, if the unused bits had not previously been exceeded, but adding the new module would require the use of more unused bits than there are available.
Causes and actions	<ul> <li>Select 'OK' to add the module anyway and fix the problem later, or</li> <li>Select 'Cancel' to prevent the addition, so that the marked module or the module to the left of it can be changed to a standard module. Depending on your configuration, you may be able to rearrange the other modules to make better use of the unused bits to be able to use them for byte packing.</li> </ul>

Message	There is no file path settings. Please check it again.
Description	This occurs when trying to use the 'Add' button on the 'Copy' dialog without having selected a valid path for the source file.
Causes and actions	<ul> <li>Select the source file to copy from using the 'Browse' button. There are further instructions available in <u>'Copying the module information'</u>.</li> </ul>

Message	Cannot add the module. Maximum configuration reached.
Description	No more modules can be added to the system - the limit on the number of modules in a SLICE system has been reached.
Causes and actions	<ul> <li>Use a larger I/O module instead of smaller ones.</li> <li>You may be able to reduce the number of modules needed by using different types of modules. If there is no way to reduce the number of modules needed, the only solution is to install an additional SLICE system in a new rack with a separate head module.</li> </ul>

Message	Cannot add the head module. Please select the other module.
Description	This error is shown when adding to use the 'Copy' dialog to copy the head module.
Causes and actions	<ul> <li>The wrong module may have been accidentally selected, in which case select the correct module to copy.</li> </ul>
	<ul> <li>The head module cannot be directly copied - however you can obtain the same result by entering items such as the label name and parameters manually.</li> </ul>

### 13.2.6 Module configuration errors

If a problem is detected with the module configuration, the affected module will be highlighted in red in the module list. When the context menu is shown (e.g. by clicking on the module with the right mouse button), the descriptions of the module errors will appear at the top of the context menu.

The possible errors are:

Message	Slot 1 should always contain a '' module
Description	In a valid configuration, the first slot after the head module should always contain a power supply module of the type shown in the message. This provides power to the head module itself, as well as to the remaining modules.
Causes and actions	• The power supply module is either missing, or in the wrong place. Either move an existing power supply module to the slot immediately after the head module, or install a new power supply module after the head module.

Message	The power supply module in slot 1 should have an 'H-SET' base type
Description	The first power supply module has the wrong base type selected - for the first power supply after the head module, the base type should always be 'H-SET'. The remaining power supply modules have 'R-SET' base types.
Causes and actions	• Ensure that a power supply with 'H-SET' base type is installed immediately after the head module. You can change the base module type by right clicking on the slot and selecting 'Option' from the pop-up menu. For more information see <u>'Option setting'</u> .

Message	The power supply module in this slot should have an 'R-SET' base type
Description	The power supply module in this slot has the wrong base type selected - for power supply modules other than the first power supply after the head module, the base type should always be 'R-SET'.
Causes and actions	• Ensure that a power supply with 'R-SET' base type is used in this slot. You can change the base module type by right clicking on the slot and selecting 'Option' from the pop-up menu. For more information see <u>'Option setting'</u> .

Message	Power consumption exceeds supply from power supply module in slot
Description	With the current configuration, there is not enough power being supplied to the module. The message shows the number of the slot containing the power supply which feeds this module.
Causes and actions	• There may not be enough power supply modules in the system. To fix this, you will need to install an additional power supply just before the first module that reports this error.
	• Depending on your configuration, you may be able to rearrange the other modules to make better use of the existing power supplies.

Message	ST1X1616-DE1-S1-L module required after this module
Description	The ST1X1616-DE-S1 module is presented in the software as two modules, ST1X1616-DE1-S1-F and ST1X1616-DE1-S1-L. These modules are one physical unit and so they must always appear as a pair with the ST1X1616-DE1-S1-F module followed by the ST1X1616-DE1-S1-L module. This message appears when there is a ST1X1616-DE1-S1-F module which is not followed by a ST1X1616-DE1-S1-L module.
Causes and actions	• Either add an ST1X1616-DE1-S1-L module if it is missing, or rearrange the existing modules so that the two modules are adjacent with the ST1X1616-DE1-S1-F module followed by the ST1X1616-DE1-S1-L module.

Message	ST1X1616-DE1-S1-F module required before this module
Description	The ST1X1616-DE-S1 module is presented in the software as two modules, ST1X1616-DE1-S1-F and ST1X1616-DE1-S1-L. These modules are one physical unit and so they must always appear as a pair with the ST1X1616-DE1-S1-F module followed by the ST1X1616-DE1-S1-L module. This message appears when there is a ST1X1616-DE1-S1-L module which does not have a ST1X1616-DE1-S1-F module before it.
Causes and actions	<ul> <li>Either add an ST1X1616-DE1-S1-F module if it is missing, or rearrange the existing modules so that the two modules are adjacent with the ST1X1616-DE1-S1-F module followed by the ST1X1616-DE1-S1-L module.</li> </ul>

Message	Byte pack consumption exceeds unused bits
Description	A byte pack module cannot be used here because there are not enough unused bits left.
Causes and actions	• There are not enough unused bits left to use byte packing. To fix this, the marked module or the module to the left of it must be a standard module. Depending on your configuration, you may be able to rearrange the other modules to make better use of the unused bits to be able to use them for byte packing.

#### **13.2.7 Module deletion errors**

These errors can occur when deleting modules. For more information, see <u>'Deleting a</u> <u>module'</u> or <u>'Deleting all modules'</u>.

Message	Cannot delete head module.
Description	An attempt was made to delete the head module.
Causes and actions	<ul> <li>The head module cannot be deleted - all valid systems must have a head module in the first slot. If you wish to start again and reconfigure the system with a different head module, select <u>'File -&gt; New'</u>. Alternatively, use the 'Edit' menu item <u>'Change head module'</u> to select another head module type while leaving the remaining modules in place.</li> </ul>

Message	The module to be deleted has not been selected. Please select the module to delete in the Module Information List.
Description	The 'Delete module' action was selected, but there is no module selected for deletion.
Causes and actions	<ul> <li>Select a module by clicking on it, then try again.</li> </ul>

## 13.2.8 Module parameter errors

These errors can occur when setting or reading parameter values.

Message	There are some errors. The following reasons may be responsible:
	The invalid setting value is selected.
	<ul> <li>The value besides the range is set as the setting value.</li> </ul>
Description	When checking the parameter settings for errors on the parameter settings screen, some of the parameters were not valid.
	For more information about parameter settings, see <u>'Checking the</u> parameters for errors'.
Causes and actions	• The most likely cause is that the parameter value is out of range. For example, a number has been entered which is below the lower limit for the parameter value or above the upper limit for the parameter value.

Message	The parameter item for the corresponding Read/Write/Verify has not been selected. Please select the parameter item.
Description	In the parameter settings dialog, an action (such as upload / download / verify) was selected without first selecting the parameters to work on.
Causes and actions	<ul> <li>To prevent this happening, select one or more parameters from the list before selecting an action. For more information, see <u>'Parameter</u> <u>setting'</u> or <u>'Uploading/Downloading the parameters'</u>.</li> </ul>

Message	The setting value that cannot be changed is read only. The setting value for the read only cannot be downloaded.
Description	In the parameter settings dialog, an attempt was made to download an item which is read only.
Causes and actions	• Read only items cannot be downloaded by GX Configurator-ST. If there are other parameters to download which are not read only, deselect the read only item and try again.
	<ul> <li>In some cases, it may be possible to change the parameter by sending a command from the master station.</li> </ul>

Message	The module differs from the mounted module.
Description	This error can occur when trying to download parameters to a module in a given slot using the parameter settings dialog. The problem is that the module in that slot in the connected SLICE system is not the same type as the module in that slot in the configuration file. For more information, see <u>'Parameter setting</u> '.
Causes and actions	• This normally means that there is a mismatch between the configuration file and the connected hardware. Check that the PC is connected to the right hardware, i.e. that the cable is not in the wrong port on the computer or connected to a different SLICE system.
	• The configuration file may be out of date. If the connected system was expected to match, it may be easier to use 'Get system' to read the details from the connected hardware, and then try again.

Message	Cannot set the parameter of the specified module.
Description	An attempt was made to show the parameter settings of a module which does not have parameters (such as a power supply module).
Causes and actions	<ul> <li>There are no parameters for the type of module selected.</li> <li>If you were expecting the module to have parameters, please check that the right module is selected.</li> </ul>

Message	The module to be set has not been selected. Please select the module to be set in the Module Information List or the System Monitor.
Description	An attempt was made to show the parameter settings dialog without first selecting the module to view.
Causes and actions	<ul> <li>Select a module, and then try again.</li> </ul>

Message	Please select modules
Description	When performing a parameter block write, no modules have been selected for download.
Causes and actions	• Select the modules whose parameters should be downloaded to the SLICE system by clicking in the 'Select' column, then try again.

Message	Download canceled.
Description	This message is shown when a parameter block write is canceled before the parameters have been downloaded for all modules.
Causes and actions	• To continue with the download, make sure that all the required modules are selected (modules whose status is marked as 'completed' have already been downloaded in full and can be deselected) and try again.

#### **13.2.9 Module selection errors**

These errors can occur when it is not possible to tell which module was selected.

Message	The Module Information List is not displayed. Please activate the Module Information List in the menu.
Description	This error is shown in edit mode when an attempt is made to use a feature that needs a selected module, but the module configuration window is not shown, or no module is selected. The module configuration window must be visible to allow modules to be selected.
Causes and actions	• Use the 'View' menu <u>'Module configuration'</u> item to show the window, then click on a module in the module list or rack display to select it, and try again.

Message	The module to be set has not been selected. Please select the module to be set in the Module Information List.
Description	An attempt was made to show the module option dialog without first selecting a module to work with.
Causes and actions	<ul> <li>Make sure that a module has been selected in the module list or rack display by clicking on it, then try again.</li> </ul>

### 13.2.10 Module verify (compare) errors

These errors can occur while verifying (comparing) modules against another configuration file. For more information about this feature, see the <u>'Verifying the projects'</u> section.

Message	The system configuration of the file opened for verification and the file under editing is different. Cannot execute verification for all the selected modules.
Description	This error can be shown when the destination file is first opened in the verify dialog, when the 'Verify all modules' tab is active. When 'Verify all modules' is used, the source and target systems are expected to be very similar, with the same number and type of modules, and this is not the case for the selected file.
Causes and actions	<ul> <li>If you do not intend to use the 'Verify all modules' feature, you can ignore this message and activate the 'Verify selected modules' tab instead, as this will still work even if the configurations are different.</li> <li>If you were expecting the two configurations to be comparable, check that you have opened the correct file.</li> </ul>

Message	Is it OK to clear the selected module?
Description	This message is shown when using the 'Verify selected modules' tab to set up the list(s) of modules to compare. It appears when the source is changed after some modules have been selected, and is a warning that all the module selections will be reset if the source is changed.
Causes and actions	• Either confirm the prompt, in which case the selections will be cleared and you will have to enter them again, or
	• Cancel, in which case the source will not be changed.

Message	Module at the verification source has not been selected.
Description	With the 'Verify selected modules' tab active, an attempt was made to start the comparison before selecting a source module.
Causes and actions	<ul> <li>One source module needs to be selected before starting the comparison. This module will be compared against each of the destination modules in turn.</li> </ul>

Message	Module at the verification destination has not been selected.
Description	With the 'Verify selected modules' tab active, an attempt was made to start the comparison before selecting any destination modules.
Causes and actions	• One or more destination modules need to be selected before starting the comparison. Each of these will be compared against the source module.

Message	The specified module does not exist.
Description	In the verify results dialog, after trying to edit the parameter settings by double clicking a module row or pressing the 'Parameter settings' button, GX Configurator-ST could not find the module whose settings should be edited.
Causes and actions	<ul> <li>Make sure that a valid row is selected.</li> </ul>
	<ul> <li>Make sure that the module at the selected row has editable parameters.</li> </ul>
	• Try closing the results dialog and using the <u>module list</u> or <u>rack display</u> to edit the parameters of the module instead.

### 13.2.11 Online change errors

These errors can occur during online module change. For more information about the online change procedure, see the head module documentation and the sections <u>'Online module change</u>' and <u>'Online module change from GX Configurator-ST'</u>.

Message	The module for the setting has not been selected. Please select the module that is to be set in the System Monitor.
Description	The 'online change' feature was started without first selecting the module to be changed.
Causes and actions	<ul> <li>Select a module to change by clicking on it in the system monitor dialog, then try again.</li> </ul>

Message	The selected module cannot execute Online Module Change.
Description	This message is shown when an attempt is made to use the online change feature on a module which does not support online change. For example, the head module and power supply modules cannot be exchanged while the system is running.
Causes and actions	• Select a module which supports online changes and try again. If you do need to replace a module that does not support online change, the only safe way is to power down the system and replace the module while the whole system is switched off.

Message	Online Module Change was stopped. This module does not operate. Please execute "Online Module Change" again.
Description	This message is shown if the online change procedure is cancelled part way through the exchange. It indicates that the selected module is not operating as a result of stopping the exchange procedure.
Causes and actions	• Go through the online change procedure again for the same module (it does not actually have to be replaced). If you try to select a different module, an error will be shown.

Message	There is some other module that is performing Online Module Change. Please execute Online Module Change for one module of at a time.
Description	An attempt was made to start an online change operation, but there is already a module part way through the online change process. This can occur if a previous online change (either from GX Configurator-ST or using the buttons on the front of the head module) has not fully completed or was cancelled part way through.
Causes and actions	<ul> <li>Select the module that is part way through online change (the module will have a purple () status colour in the system monitor), and complete its online change procedure first. Online change can only be used for one module at a time.</li> </ul>

### 13.2.12 Printing errors

The errors in this section can occur during printing. For more information, see <u>'Printing the project data'</u>.

Message	Please close GX Configurator-ST after closing Print Preview.
Description	If the print preview dialog is open, it must be closed before trying to close GX Configurator-ST.
Causes and actions	• Close the print preview dialog, then select the 'File' menu <u>'Exit'</u> item to quit.

Message	Please select one or more modules.
Description	This message is shown on the print dialog, if the print range is 'selected modules' but no modules have been seleced.
Causes and actions	<ul> <li>Either:</li> <li>Select some modules by clicking on them in the list on the left, then using the '-&gt;' button to add them to the list of modules to print, or</li> </ul>
	• Select the 'All modules' option for the print range instead, in which case all the modules will be included in the printout.

Message	Please specify the print item.
Description	The print dialog has three options for sections that can be included in the printout:
	Module configuration
	Module information list
	<ul> <li>Individual module information</li> </ul>
	This error message is shown when all three options have been deselected, and there is nothing remaining to print.
Causes and actions	<ul> <li>Select at least one section to be printed. If you do not want to print anything, cancel the dialog.</li> </ul>

Message	Please set the Module Turning Position within the range of 1-99.
Description	The module turning position gives the number of modules printed per row on the module configuration page of the printout. It must be a number from 1-99.
Causes and actions	• Enter a number from 1-99 for this value, then try again.

Message	The initial page value is outside the range.\nThe initial page value should be set within the range 1-32767.
Description	This error is shown on the page setup dialog, if the first page number is not within the range 1-32767.
Causes and actions	• Enter an initial page number from 1-32767 and try again.

## 13.2.13 System errors

I

These errors occur when there are other issues with the system, or problems with the installation.

Message	Insufficient memory. Please close other applications to increase memory.
Description	There is not enough free memory available to complete the current activity.
Causes and actions	<ul> <li>If possible, try to close other applications which you are not using, to release memory.</li> </ul>
	<ul> <li>You may also be able to increase the amount of memory available by increasing the size of the page file, or by installing additional memory in the computer.</li> </ul>

Message	There is not enough memory, so the GX Configurator-ST cannot be activated. Quit other applications, then activate the GX Configurator-ST.
Description	There is not enough free memory available to start the application.
Causes and actions	<ul> <li>If possible, try to close other applications which you are not using, to release memory.</li> </ul>
	• You may also be able to increase the amount of memory available by increasing the size of the page file, or by installing additional memory in the computer.

Message	Some of the necessary files for running the application are not found. Please reinstall.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	<ul> <li>A file is missing, or part of the application failed to load or initialise.</li> <li>In general, uninstalling the program (from 'Control Panel -&gt; Add or remove programs') and then reinstalling should fix the problem.</li> </ul>

Message	Failed to read the registry data. There is some possibility for some error in the operating environment of the application.
	Please do reinstall. Administrator authorization is required in case of using Windows® 2000, Windows® XP, Windows Vista® and Windows® 7.
Description	The application was unable to read settings from the system registry.
Causes and actions	• The currently logged-on user may not have Administrator rights. Log back on as a user with Administrator access.
	• The application may not be correctly installed, in which case it should be uninstalled (from 'Control Panel -> Add or remove programs') and then reinstalled.

Message	Cannot execute online operations in this application. Online operation is possible only in the application that started in the beginning.	
Description	The system cannot make connections to the device hardware, as the connection is already in use.	
Causes and actions	• This message will be shown if GX Configurator-ST is run twice. Use the instance that was started first for online operations.	

Message	Failed to open the database. Please reinstall.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	<ul> <li>A file is missing, or part of the application failed to load or initialise.</li> <li>In general, uninstalling the program (from 'Control Panel -&gt; Add or remove programs') and then reinstalling should fix the problem.</li> </ul>

Message	Cannot access the database, The database may be damaged or old. Please update to the latest database.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	<ul> <li>A file is missing, or part of the application failed to load or initialise.</li> <li>If restarting the application or rebooting the PC does not help, uninstalling the program (from 'Control Panel -&gt; Add or remove programs') and then reinstalling it may fix the problem.</li> </ul>

Message	Failed to access some necessary information from database. The database may be damaged or old. Please update to the latest database.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	<ul> <li>A file is missing, or part of the application failed to load or initialise.</li> <li>If restarting the application or rebooting the PC does not help, uninstalling the program (from 'Control Panel -&gt; Add or remove programs') and then reinstalling it may fix the problem.</li> </ul>

Message	Cannot read the database because it is of an old version. Please renew the database.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	<ul> <li>A file is missing, or part of the application failed to load or initialise.</li> <li>In general, uninstalling the program (from 'Control Panel -&gt; Add or remove programs') and then reinstalling should fix the problem.</li> </ul>

Message	Cannot read the database because it is of a new version. Please update the application.
Description	This message normally means that GX Configurator-ST did not install correctly, or some of the application files or registry settings have been damaged.
Causes and actions	• In addition to trying to uninstall and reinstall GX Configurator-ST, check that there is only one version installed on the computer. This error could occur if two versions of the software are installed into the same directory.
Message	Application becomes unstable. Please restart.
-----------------------	---
Description	This message may be shown if the application is not able to load a key file.
Causes and actions	• If the message is only shown when opening a particular file, the file may be corrupt, have an invalid path, or could have been created by a much earlier or much later version of GX Configurator-ST.
	• If this message is shown regularly, try uninstalling and reinstalling the application.

Message	A MELSOFT application error has occurred. Please restart.
Description	This message may be shown if an unknown error occurs, i.e. an error which does not have its own error message. This is normally related to online operations or data communications.
Causes and actions	• This message may just be an unusual communications error. Make sure that the communication link is correct, and that you are connected to the right SLICE system.
	<ul> <li>Check that the configuration being edited does actually match the SLICE hardware.</li> </ul>
	<ul> <li>Restarting the application may fix the problem.</li> </ul>
	<ul> <li>If this message is shown regularly, try uninstalling and reinstalling the application.</li> </ul>

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#### GX Configurator-ST Version 1.08J

**Operating Manual** 

MODEL	SW1D5C-STPB-E-O-E		
MODEL CODE	13JU47		
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