

**SMARTDAC+ STANDARD
Hardware Configurator
User's Manual**

Introduction

This manual explains how to use SMARTDAC+ STANDARD Hardware Configurator. To ensure correct use, please read this manual thoroughly before beginning operation.

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Revisions

December 2012	1st Edition
February 2013	2nd Edition
May 2013	3rd Edition
May 2014	4th Edition

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End of document

How to Use This Manual

Structure of the Manual

This manual contains the following four chapters.

Chapter	Title and Description
1	Before Using the Product Provides an overview of Hardware Configurator. It also explains the PC system requirements, how to start the software, the screen configuration, and the menus.
2	Creating Setup Data Explains how to display, create, edit, save, and print setup data as well as how to control the GX/GP using this software.
3	Creating Setup Data for GX/GPs with the Advanced Security Function (AS) Explains how to display, create, edit, and save setup data files (.GSL extension) for GX/GPs with the advanced security function (AS) as well as how to control the GX/GP from this software.
4	Troubleshooting Provides a list of errors and messages.

Scope of This Manual

This manual does not explain the basic operations of your PC's operating system. For this information, read the Windows user's guide or related materials.

Conventions Used in This Manual

Unit	
K	Denotes 1024. Example: 768K (file size)
k	Denotes 1000.
Notes	
	<i>Improper handling or use can lead to injury to the user or damage to the instrument.</i> This symbol appears on the instrument to indicate that the user must refer to the user's manual for special instructions. The same symbol appears in the corresponding place in the user's manual to identify those instructions. In the manual, the symbol is used in conjunction with the word "WARNING" or "CAUTION."
WARNING	Calls attention to actions or conditions that could cause serious or fatal injury to the user, and precautions that can be taken to prevent such occurrences.
CAUTION	Calls attention to actions or conditions that could cause light injury to the user or cause damage to the instrument or user's data, and precautions that can be taken to prevent such occurrences.
Note	Calls attention to information that is important for the proper operation of the instrument.
Reference Item	
▶	Reference to related operation or explanation is indicated after this mark. Example: ▶ section 4.1
Conventions Used in the Procedural Explanations	
Bold characters	Indicates character strings that appear on the screen. Example: Volt
Procedure	Carry out the procedure according to the step numbers. All procedures are written under the assumption that you are starting operation at the beginning of the procedure, so you may not need to carry out all the steps in a procedure when you are changing the settings.
Explanation	The explanation section describes limitations and related information about the operation.

Images

The images used in this manual may differ from those that actually appear in the software. Such differences do not affect the procedural explanation.

Products That This Manual Covers

Product	Version
GX10, GX20, GP10, and GP20	Up to firmware version R1.03.xx. In the explanations in this manual, these are referred to as the "GX/GP."
SMARTDAC+ STANDARD Hardware Configurator	Up to R.2.01.xx

Revision History

Edition	Software Version	Explanation
1	R1.01	New edition
2	R1.02	Modified for version R1.02.xx. Added descriptions for the GX10, GP10, and GP20. Modified system requirements (support for IE9) and added descriptions for the multilingual display feature. Improvements to descriptions.
3	R1.03	Modified for version R1.03.xx. Improvements to descriptions.
4	R2.01	Modified to support setup data for GX/GP firmware version R2.01.xx (release number 2). <ul style="list-style-type: none"> • Hardware models GX20-2 and GP20-2, I/O Base Unit (Expandable I/O), and the new mA module, DIO module, and IO module added to GX/GP R2. • GX/GP advanced security option (/AS) • New menus (Read comparison source, Load Changed Settings, and Validation print window) Modified system requirements (support for Windows 8.1, IE10, and IE11). Modified for functional and user-interface improvements. Improvements to descriptions.

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www.smartdacplus.com/software/en/

Download the latest manuals of the Hardware configurator, and GX/GP from the following

URL: www.smartdacplus.com/manual/en/

Related Manuals

Manual Name	Manual No.
Models GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide	IM 04L51B01-02EN
Models GX10/GX20/GP10/GP20 Paperless Recorder User's Manual	IM 04L51B01-01EN
Models GX10/GX20/GP10/GP20 Advanced Security Function (/AS) User's Manual	IM 04L51B01-05EN

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1.1 Overview of Hardware Configurator

1.1.1 Hardware Configurator Features

SMARTDAC+ STANDARD Hardware Configurator is a PC software application for creating setup data for the GX/GP recorder.

You can use it to create, edit, save, and print setup data.

You can also use it to exchange data with a recorder and control a recorder via communication.

Web-based Offline Application

You can use a Web browser (Internet Explorer) on your PC to create and edit setup data. You only need this software and a browser; you do not have to configure communication parameters.

Creating and Editing Setup Data

You can create new setup data by specifying the model and options.

You can also edit existing setup data.

Loading Changed Settings into Setup Data

You can load the settings from a separate file and apply them to the current setup data.

Saving and Loading Setup Data

You can save the data that you create to your PC and load setup files that have been saved on your PC.

Sending and Receiving Setup Data

You can send setup data to and receive data from a recorder via communication.

Printing Setup Data

You can print setup data.

Loading Comparison Source and Validation Printing

You can load a reference setup file and display a window for comparing and verifying the current setup data against the reference. The displayed screen can be printed and used for validation.

* The two sets of setup data that are compared must be of the same system configuration.

Controlling Recorders

You can start and stop recording or computing on the GX/GP via communication.

Retrieving Information from Recorders

You can retrieve information from the GX/GP via communication.

1.1.2 Installation and Version Updating

Download the latest installer from YOKOGAWA's website to install and update the software. From the Help menu, you can view the software version information and access the link to the website.

Note

- Close all other software applications before installing this software.
- To reinstall the software, uninstall the current software first.
- The "Countries/regions except Japan" selection dialog box appears during installation. Select the country that you will use the software in.
- Standard Hardware Configurator uses HTTP port 34443 to communicate with the Web browser. If 34443 is in use, Hardware Configurator will start with an unused port in the range of 34443 to 65535.

1.2 PC System Requirements

1.2.1 Hardware

PC

A PC running Windows Vista, Windows 7 or Windows 8.1.

CPU and Main Memory

PC Configuration	OS	Requirements
CPU	Windows Vista/7/8.1 (32-bit edition)	Intel Pentium 4, 3 GHz or faster x64 or x86 processor.
	Windows 7/8.1 (64-bit edition)	Intel Pentium 4, 3 GHz or faster x64 processor.
Memory	Common	2GB or more.
Hard Disk		Free space of at least 100 MB (depending on the amount of data, you may need more disk space). NTFS recommended.
Mouse		A mouse compatible with the OS.
Display		A display that is compatible with the OS, that has a resolution of 1024×768 or higher, and that can show 65,536 colors (16-bit, high color) or more.
Communication port		Ethernet port compatible with the OS and TCP/IP protocol.
Printer		A printer compatible with your Windows system (a printer driver for the OS is required)

1.2.2 Operating System

OS	Edition
Windows Vista	Home Premium SP2 (excluding 64-bit editions)
	Business Edition SP2 (excluding 64-bit editions)
Windows 7	Home Premium SP1 (32- or 64-bit edition)
	Professional SP1 (32- or 64-bit edition)
Windows 8.1	Basic Edition (32- or 64-bit edition)
	Pro (32- or 64-bit edition)

1.2.3 Web Browser

Compatible Browser	Version
Windows Internet Explorer	IE8, IE9, IE10 and IE11 (Enable HTTP 1.1 and JavaScript.)

Note

- The Web browser that Hardware Configurator uses to display information is limited to Internet Explorer (IE). If IE is not installed on your PC, an error will appear when you start Hardware Configurator.
- Set the zoom level of IE to 100% when using this software.
- IE versions other than the specified versions and other Web browsers are not supported.

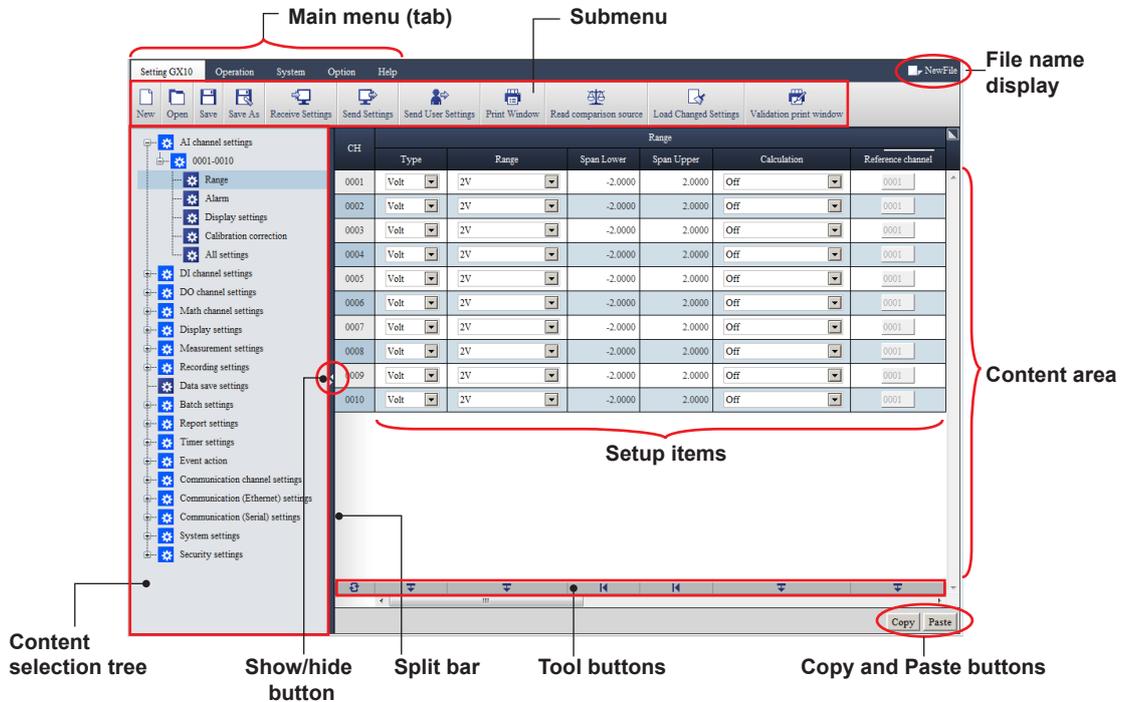
1.2.4 Other Operating Conditions

To view the user's manual of this software, you need to use Adobe Reader 7 or later by Adobe Systems (the latest version is recommended).

1.3 Window and Menus

1.3.1 Window and Menu Configuration

Hardware Configurator's menu consists of the main menu, submenu, and file name display area, as shown below.



Main Menu and Submenu

The main menu is tabular. Click a tab to activate it, and the submenu will switch accordingly. The following table shows the menu items and their descriptions.



Main Menu	Submenu	What You Can Do
Setting GX10 GX20 GP10 GP20	New	Create a new setup data file.
	Open	Load a setup file from a PC.
	Save	Overwrite the file.
	Save As	Save a new file to the PC.
	Receive Settings	Receive the GX/GP setup data.
	Send Settings	Send the current setup data to the GX/GP.
	Send User Settings	Send only the user settings to the GX/GP via communication.
	Print Window	Open a window used to print setup data.
	Read comparison source	Load the comparison source data for comparing the setup data.
	Load Changed Settings	Load the settings from a separate setup file and apply them to the data that is currently displayed.
	Validation print window	Display the window for printing validation information.
Operation	Start Recording	Start GX/GP recording.
	Stop Recording	Stop GX/GP recording.
	Start Computing	Start GX/GP computing.
	Stop Computing	Stop GX/GP computing.
	Hardware Info.	Receive and display the GX/GP status and option information.
System	System Config.	View and change the system configuration.
	Initialize	Initialize the current setup data.

Main Menu	Submenu	What You Can Do
Option	Display	Specify the display option (Language, Date Format) of Hardware Configurator.
	Port No.	Specify the port number of Hardware Configurator.
Help	Instruction Manual	View the user's manual.*
	Version	View the Hardware Configurator version.
	Web to update	Visit the Website to download the latest version of Hardware Configurator.

* If the language displayed in the browser is English, Japanese, or Chinese, the user's manual in the corresponding language will be displayed. If another language is displayed, the English user's manual will be displayed.

File Name Display

The setup file name is displayed in this area.

A specific file name or "New File" will be displayed.

A specific file name will be displayed under the following conditions.

- When a specific file is loaded and displayed
- When a file is saved using the Save As command

"New File" will be displayed under the following conditions.

- When Hardware Configurator starts.
- When you click **New**.
- When a connection is established with a recorder and the setup is received.

Content Selection Tree

The content selection tree is used to select the items (edit items) you want to edit.

When you click an item in the content selection tree, the items displayed in the content area (right side) change accordingly.

Content Area

The content area displays setup item details.

It displays the settings for the item selected in the content selection tree.

Immediately after Hardware Configurator starts, this area shows channel settings. If there are no channel settings, this area shows display settings.

Split Bar

You can use the split bar to change the window layout.

Drag the split bar to change the panel width of the content selection tree area and content area. Click the show/hide button in the center to show and hide the content selection tree.

Copy and Paste Buttons

The Copy and Paste buttons are used to copy and paste settings when you edit setup items.

Operation: ► [Copying the Selected Range and Pasting](#)

Jump Navigation Button

You can use this button to jump to the specified setup item.

Operation: ► [Using the Jump Function](#)

Tool Buttons

You can use the tool buttons to collectively edit items according to the function assigned to each button.

Operation: ► [Editing Using Tool Buttons](#)

1.3.2 Menu Operation and Basic Workflow

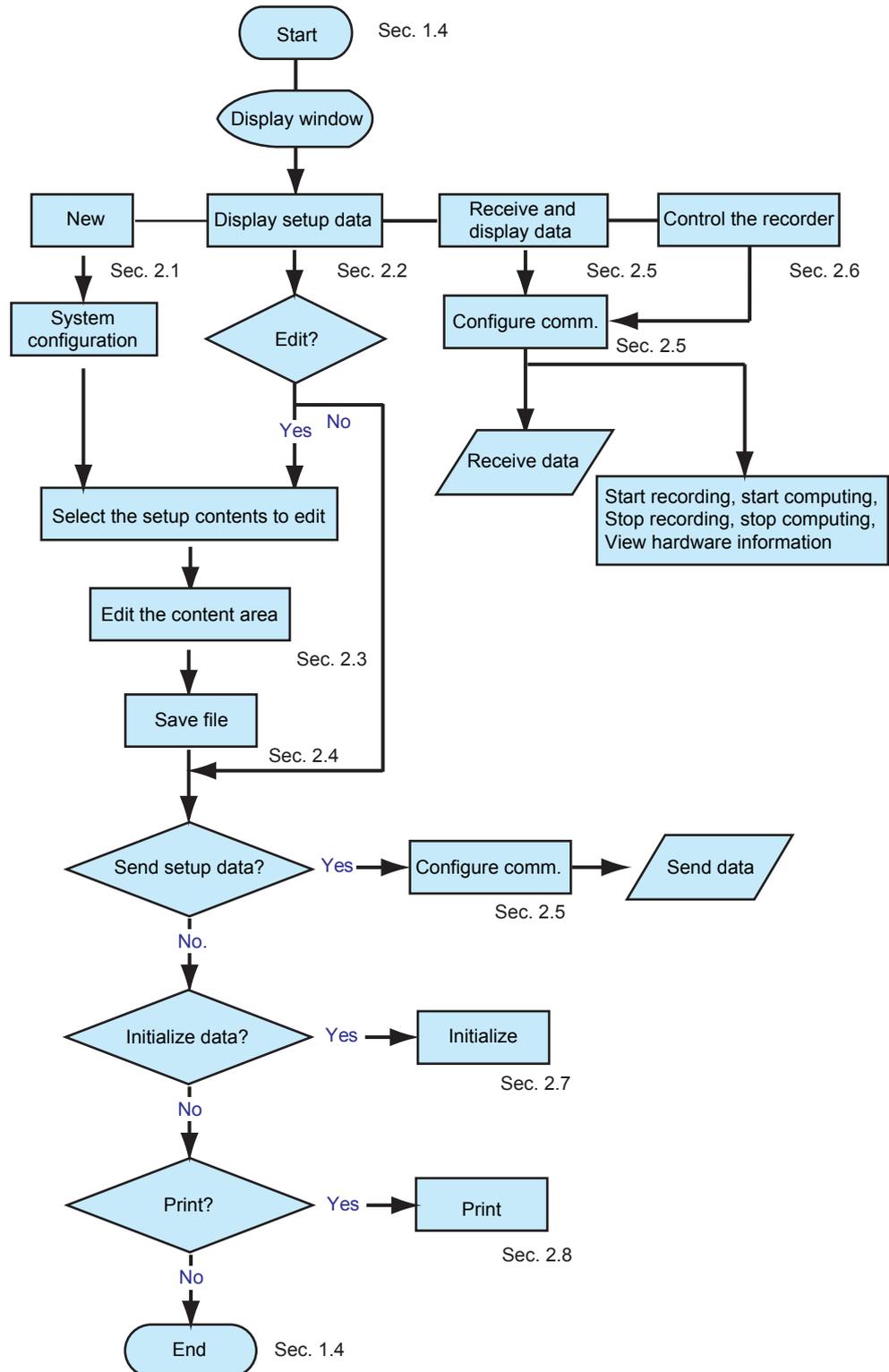
The basic procedure for using Hardware Configurator is shown below.
For more details, see chapter 2, “Creating Setup Data.”

Procedure

- 1** Start Hardware Configurator.
- 2** Click a main menu tab (**Setting, Operation, System, or Option**).
- 3** Select a submenu item (**New, Open, Start Recording, Stop Recording, etc.**).
- 4** Perform operations in the displayed dialog box.
- 5** To edit settings, select a title in the content selection tree. Edit the displayed settings.
- 6** Process the setup data file that you created or edited by selecting appropriate commands (Save, Send Settings, etc.) from the main menu and submenu.
- 7** Close Hardware Configurator.

1.3.3 Workflow

The features and workflow of Hardware Configurator are illustrated below.



1.4 Starting and Closing Hardware Configurator

1.4.1 Starting the Software

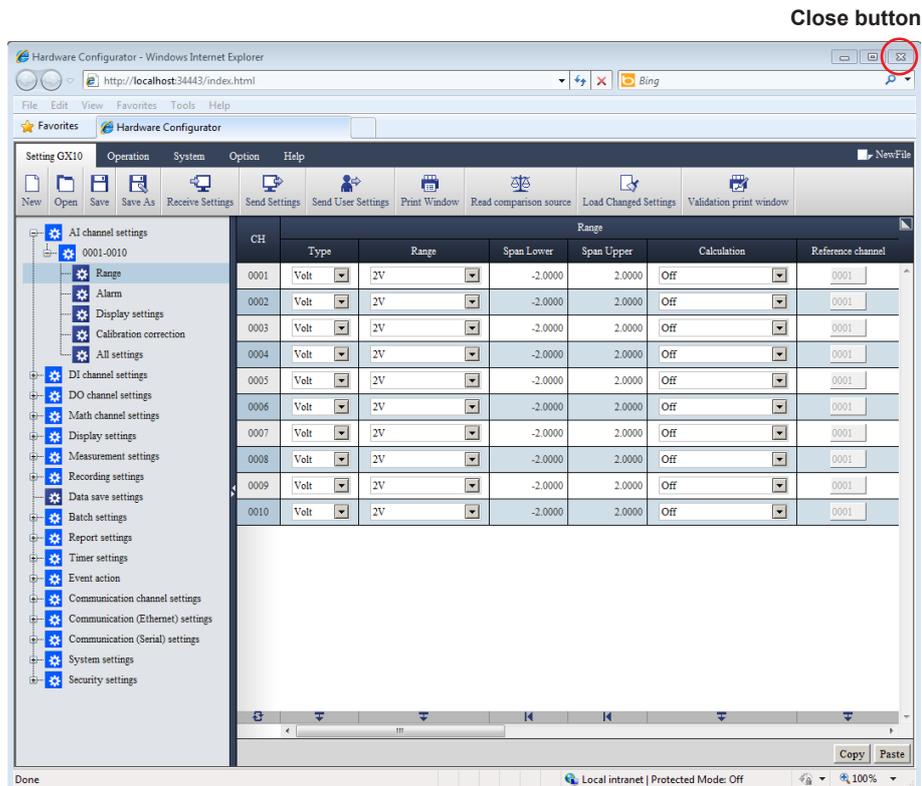
Procedure

- 1 From the **Start** menu, select **All Programs - SMARTDAC+ STANDARD - Hardware Configurator**.

The first time Hardware Configurator starts after installation, the Windows Security Alert dialog box appears (the figure below is the Windows 7 screen capture). Click “Allow access.”



Hardware Configurator starts, and the following window appears.



Close button

Note

- Hardware Configurator will not start if Internet Explorer is not installed.
- The default settings are the system configuration of the GX10.

Internet Explorer Zoom Level

Set the IE zoom level (on the View menu, or in the lower-right corner) to 100%. Otherwise, the layout may appear crooked.

System Configuration on the First Startup

The following table shows the system configuration (**System** tab > **System Config**) that is used the first time the software is started. Before creating a setup file, use **System Config** to align the software configuration with the GX/GP configuration.

Details on system configuration: ► [2.1 Creating New Setup Data](#)

Item	Value
Model	GX10
Version	(The most recent version will be displayed.)
Module	AI module
Option	No options

Running Multiple Instances

You can run multiple instances of this software (version R2.01.01 and later).

To do so, repeat step 1 on the previous page.

The first instance starts with the port number that was in use when the software was closed the previous time.

The subsequent instances start with unused ports in the range of 34443 to 65535.

Note

To change the port number to a different number after starting the software, follow the procedure in the next section (1.4.2).

1.4.2 Setting the Display Language and Date Format

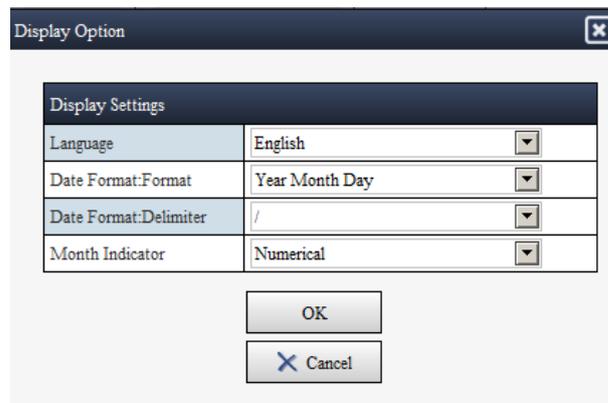
You can set the display language to English, Japanese, German, French, Chinese, Russian or Korean. In addition, you can select the date format for printing according to the selected language.

Procedure

- 1 On the main menu, click the **Option** tab.
- 2 On the submenu, click **Display**.



The Display Option dialog box appears.



- 3 Click the Language arrow, and select from the list.

- 4 If necessary, select the date format. The available options are shown in the following table.

Item	Available Format
Date Format: Format	[Month Day Year] [Year Month Day] [Day Month Year]
Date Format: Delimiter	[/] (Slash), [.] (Period) [-] (Dash)
Month Indicator	[Numerical] [Charactors]

- 5 Click **OK**.

Note

- The date format is applied only to the print window and validation print window.
- If Language is set to Japanese, Korean, or Chinese, Month Indicator is fixed to Numerical.

1.4.3 Specifying the HTTP port number

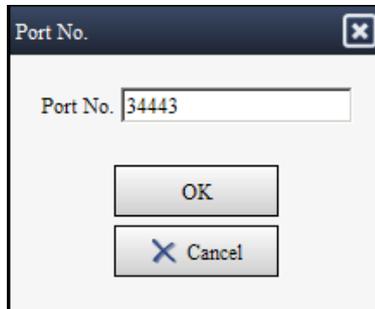
You can specify the HTTP port number for using the Web browser from this software. The default HTTP port number is 34443. To change the port number to a different number, follow the procedure below.

Procedure

- 1 On the main menu, click the **Option** tab.
- 2 On the submenu, click **Port No.**



The Port No. dialog box appears.



- 3 Enter the port number (in the range of 34443 to 65535).

Note

- To activate the new port number, restart the software.
- The software will continue to use the old port number until you restart the software.

1.4.4 Closing the Software

Procedure

- 1 Close Internet Explorer by clicking the **Close** button or by clicking **Exit** on the **File** menu.

Note

- If you change the setup data, the changes are stored and will appear the next time you start the software.

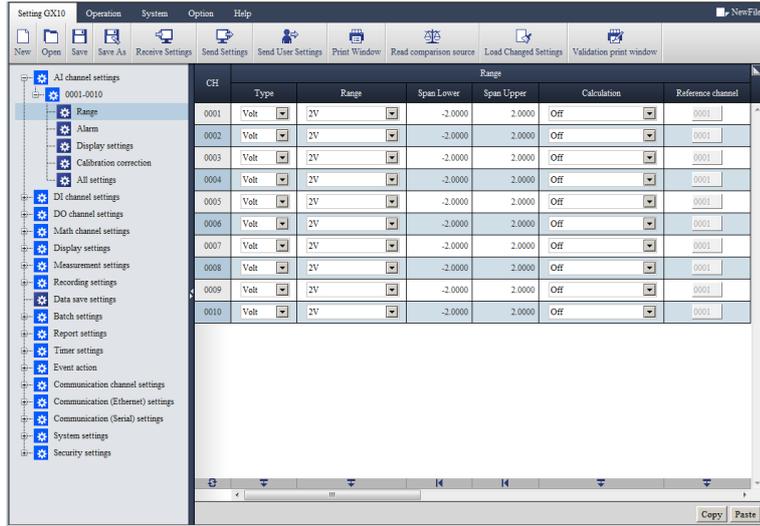
2.1 Creating New Setup Data

2.1.1 Creating a New File

This section explains how to use SMARTDAC+ STANDARD Hardware Configurator to create a new data file for configuring various GX/GP functions.

Procedure

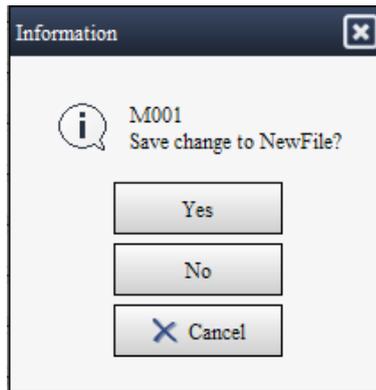
- 1 Start Hardware Configurator. The setup window appears.



- 2 On the main menu, click the **Setting** tab and then **New**.



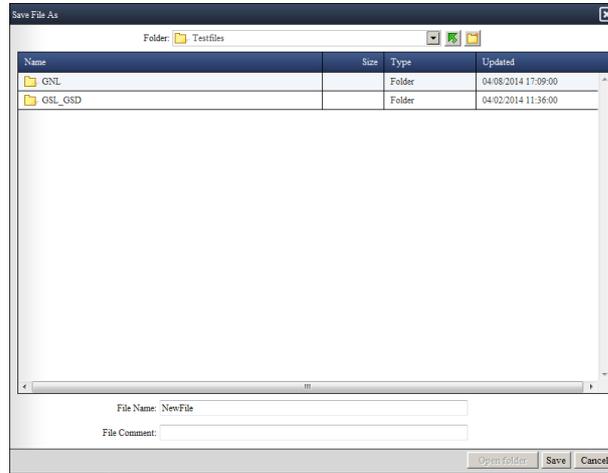
If a setup file is already displayed, a confirmation message is displayed that asks whether you want to save the file.



3 To save the file, click **Yes**; otherwise, click **No**.

If you click **Yes**, a dialog box for saving the file (see the figure below) appears.

How to save files: ► [2.4 Saving Setup Data](#)

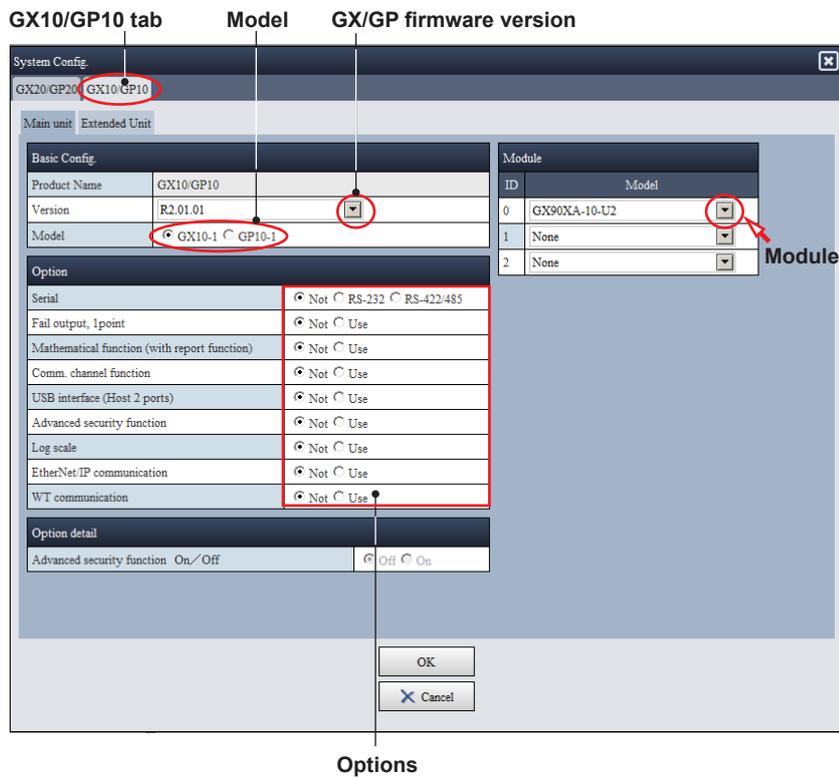


If you select **No**, the System Config. dialog box, shown in step 4, appears.

Note

If you reconfigure the system configuration, the setup items that you have edited up to that point will be initialized. To save these items, click **Yes** in step 2.

4 Set the system configuration for GX/GP main unit.



5 Click the **GX10/GP10** or **GX20/GP20** tab depending on the GX/GP that you are using.

6 Under **Basic Config.**, set the **Product Name**, **Version**, and **Model**.

Basic Config.	
Product Name	GX10/GP10
Version	R2.01.01
Model	<input checked="" type="radio"/> GX10-1 <input type="radio"/> GP10-1

The following table shows the **Basic Config.** settings of each tab page.

Submenu	Item	Displayed value	Initial value
GX10/GP10	Product Name	GX10/GP10	Not editable
	Version	R2.01.01, R1.03.01, R1.02.01, R1.01.01	R2.01.01
	Model	GX10-1, GP10-1	GX10-1
GX20/GP20	Product Name	GX20/GP20	GX20/GP20
	Version	R2.01.01, R1.03.01, R1.02.01, R1.01.01	R2.01.01
	Model	GX20-1, GX20-2, GP20-1, GP20-2	GX20-1

7 Set the items under **Option**.

Option	
Serial	<input checked="" type="radio"/> Not <input type="radio"/> RS-232 <input type="radio"/> RS-422/485
Fail output, 1point	<input checked="" type="radio"/> Not <input type="radio"/> Use
Mathematical function (with report function)	<input checked="" type="radio"/> Not <input type="radio"/> Use
Comm. channel function	<input checked="" type="radio"/> Not <input type="radio"/> Use
USB interface (Host 2 ports)	<input checked="" type="radio"/> Not <input type="radio"/> Use
Advanced security function	<input checked="" type="radio"/> Not <input type="radio"/> Use
Log scale	<input checked="" type="radio"/> Not <input type="radio"/> Use
EtherNet/IP communication	<input checked="" type="radio"/> Not <input type="radio"/> Use
WT communication	<input checked="" type="radio"/> Not <input type="radio"/> Use

The types of options that appear vary depending on the GX/GP firmware version.
The following table shows the available options for different firmware versions.

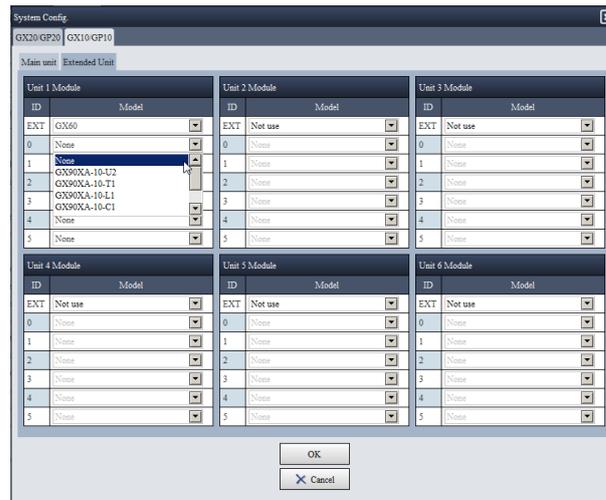
Item	Initial value	GX/GP Firmware Version and Availability
Serial	Not	Displayed on R1.01.01 or later.
Fail output, 1 point	Not	Displayed on R1.01.01 or later.
Mathematical function (lwith report function)	Not	Displayed on R1.01.01 or later.
Comm. channel function	Not	Displayed for R1.01.01 and later. For R2.01.01 and later, this option is fixed to Use when WT communication or EtherNet/IP communication is set to Use.
USB interface (Host 2 ports)	Not	Displayed on R1.01.01 or later.
Advanced security function	Not	Displayed on R2.01.01 or later.
Log scale	Not	Displayed on R2.01.01 or later.
EtherNet/IP communication	Not	Displayed on R2.01.01 or later.
WT communication	Not	Displayed on R2.01.01 or later.

Note

Advanced security function corresponds to the GX/GP's advanced security function (/AS).
If you select Use, select Off or On under Option detail.

Option detail	
Advanced security function	On/Off <input checked="" type="radio"/> Off <input type="radio"/> On

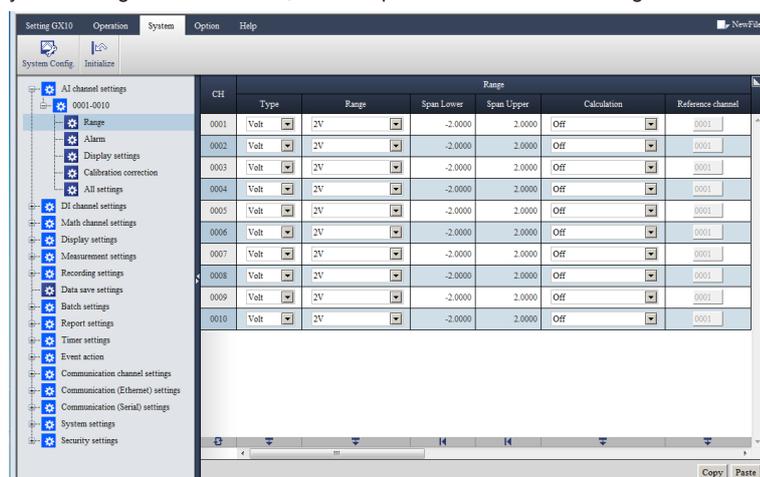
- 10** Select the module configuration from Unit1 to Unit6 under **Extended Unit**.



The following table shows the available models. If the IO expansion module is not installed in the GX/GP, the item will be unavailable.

ID	Module	Initial value	Description
EXT	GX60/Not use	Not use	Base unit model (fixed)
	None		
	GX90XA-10-U2		
	GX90XA-10-T1		
	GX90XA-10-C1		
0 - 5	GX90XA-10-L1	None	Installed module
	GX90XD-16-11		
	GX90YD-06-11		
	GX90WD-0806-01		
	GX90EX-02-TP1		

- 11** After you set the items, click **OK**.
The system configuration is loaded, and setup items based on the configuration are created.



- 12** Edit the setup items in the new window to create the setup data.

How to edit setup items: ► [2.3 Editing Setup Data](#)

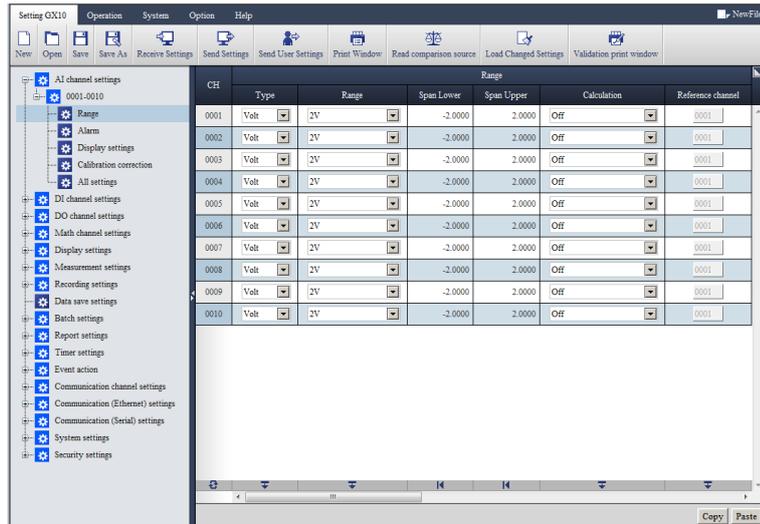
2.2 Displaying Setup Data

2.2.1 Opening a File

This section explains how to load and display an existing setup data file that has been saved to a PC.

Procedure

- 1 Start Hardware Configurator.
The setup window appears.

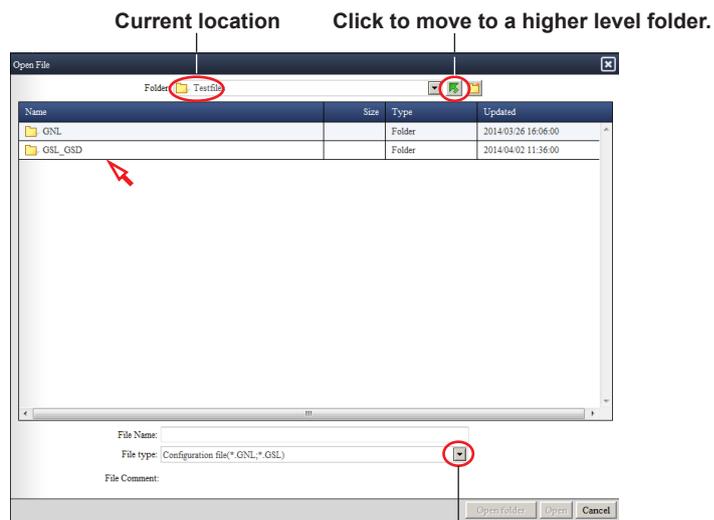


- 2 On the main menu, click the **Setting** tab and then **Open**.

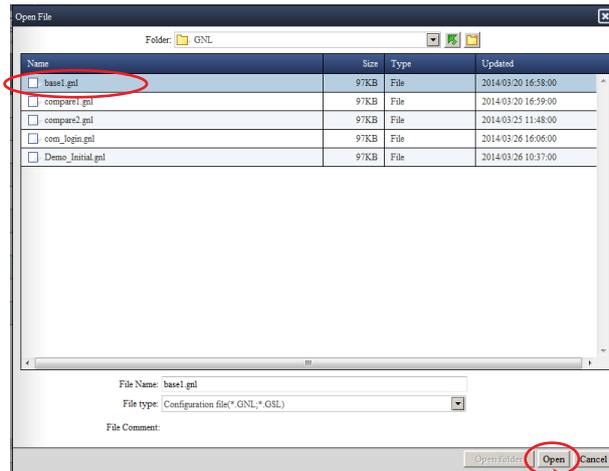


The Open dialog box* appears.

* To display the setup data of a measurement data file (*.GSE or *.GSD), change the file type.



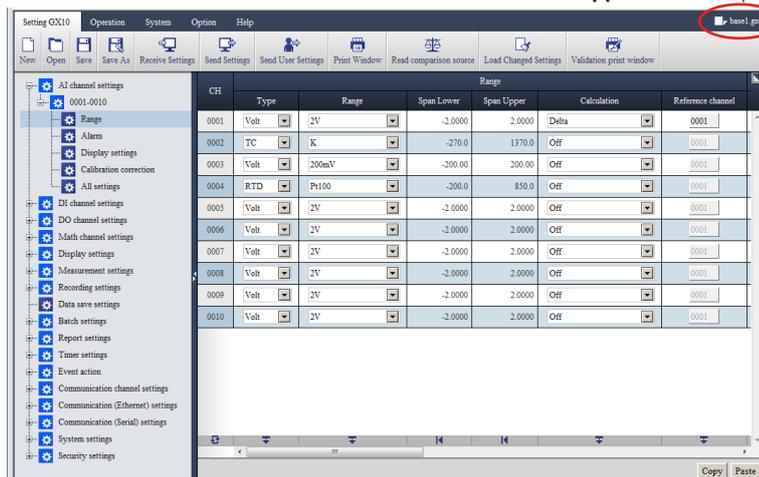
- 3 Select the setup data file (.GNL extension) that you want to open,* and click **Open**.



Click **Open**.

The data is loaded.

The name of the loaded file appears.



Note

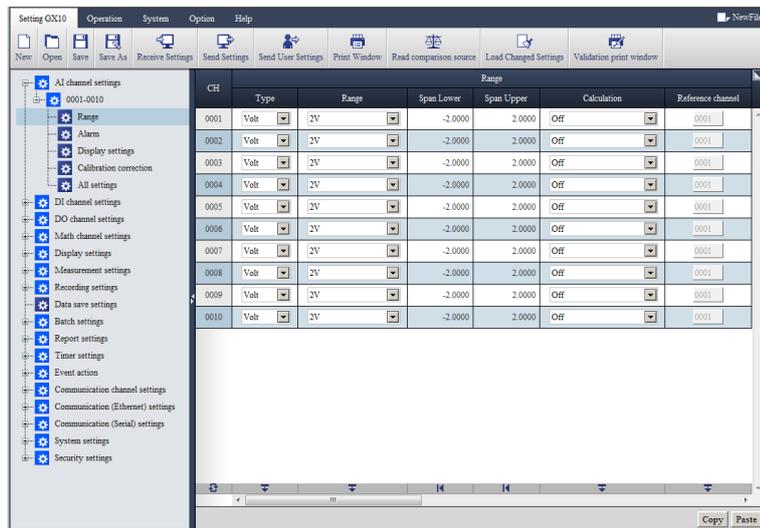
- In the case of a setup data file of a GX/GP with the advanced security function (/AS), authentication is necessary to display the Security settings. For details, see section 3.2, "User Authentication."
- A setup data file (.GSL extension) of a GX/GP with the advanced security function (/AS) cannot be overwritten after it is displayed and edited.
- If you specify a measurement data file, the setup file data in the file will be loaded.
- The maximum file path length (including the file name) is 256 characters. If this limit is exceeded, an error will occur. Pay attention to the hierarchical depth and file name length.

2.2.2 Opening the Comparison Source File

This software has a validation print function, which can be used to compare and print settings, for verifying setup data. You can use the Read comparison source menu to load a reference comparison source file. The difference between the files can be verified on the Validation print window.

Procedure

- 1 Start Hardware Configurator. The setup window appears.



- 2 Before loading the comparison source setup file, open the target setup file that you want to compare.

How to open a file: ▶ [2.2.1 Opening a File](#)

Note

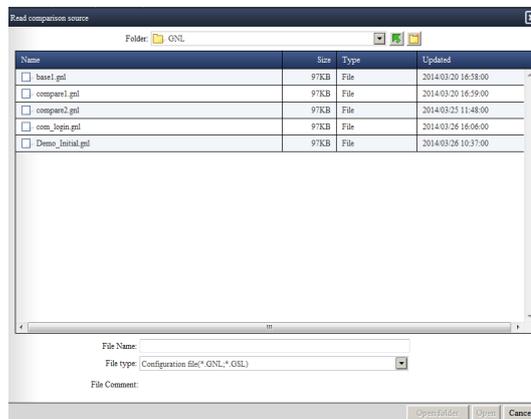
Make sure that the system configuration in the setup file that is currently displayed is the same as that in the comparison source file. If they are not the same, you will not be able to load the comparison source file.

Setting the system configuration: ▶ [“Step 4” on page 2-2](#)

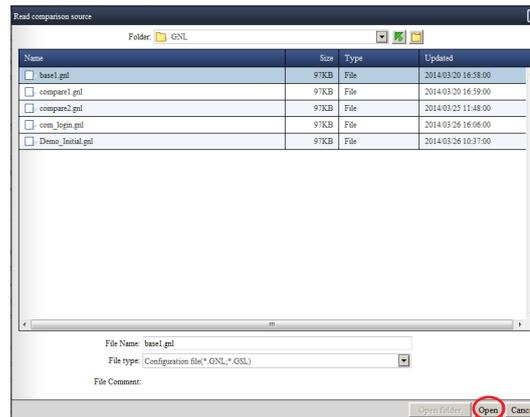
- 3 On the main menu, click the **Setting** tab and then **Read comparison source**.



The Read comparison source dialog box appears.



4 Select the comparison source file, and click **Open**.



When the comparison source file is loaded, two file names will appear in the upper right of the window.

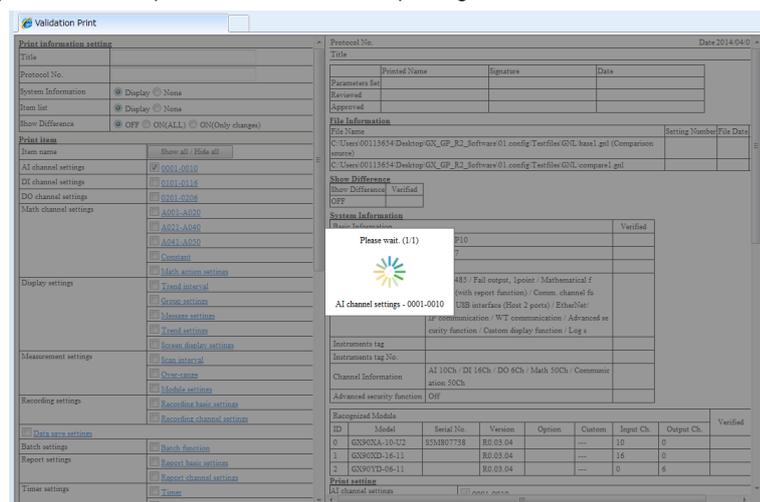
The left is the name of the setup file that is currently displayed, and the right is the name of the comparison source file.



5 On the main menu, click the **Setting** tab and then **Validation print window**.

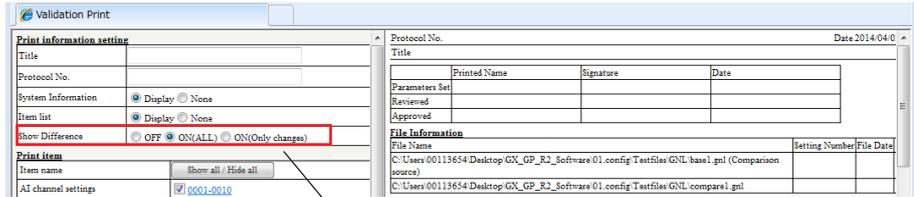


A separate window opens, and the window for printing is loaded.



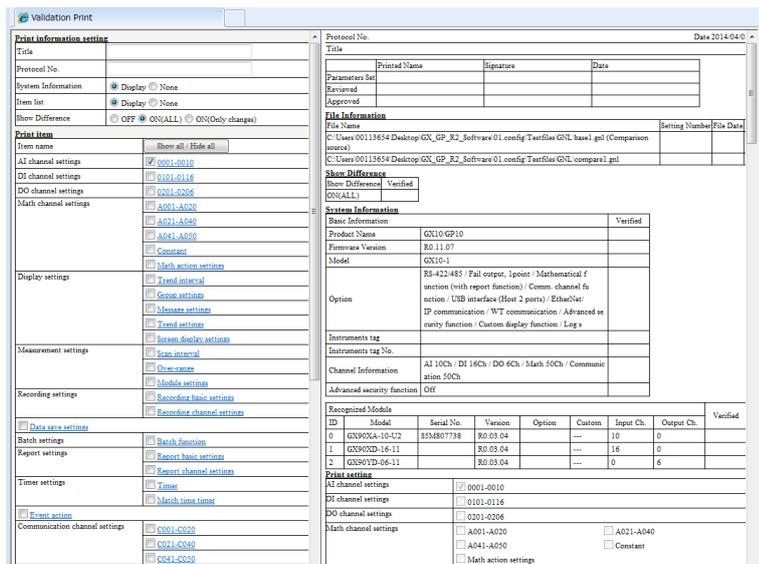
The Validation print window appears.

6 On the left side of the **Validation print window**, click **ON(ALL)** of **Show Difference**.



**“Show Difference”
Whether to include the difference**

You can view the differences in the setup data in the print content on the right.



For detailed information about “Validation print window”: ► [2.8.2 Validation Print](#)

Note

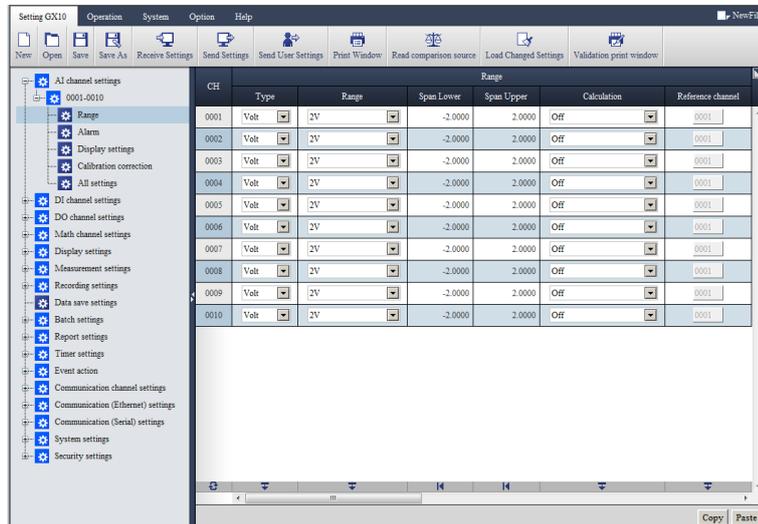
- The comparison source data is cleared when you perform any of the following operations.
- A new file with different system information is opened.
 - Settings with different system information are received from the GX/GP.
 - The system configuration is changed.
 - A new file is created.

2.2.3 Opening an Update Source File

You can use the Load Changed Settings menu to load the setup data from a separate file and apply them to the current setup data. (The system configuration is not updated.)

Procedure

- 1 Start Hardware Configurator.
The setup window appears.



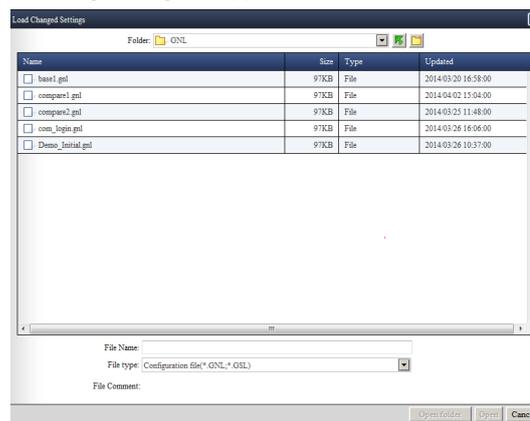
- 2 Open the target setup file that you want to change.

How to open a file: ► [2.2.1 Opening a File](#)

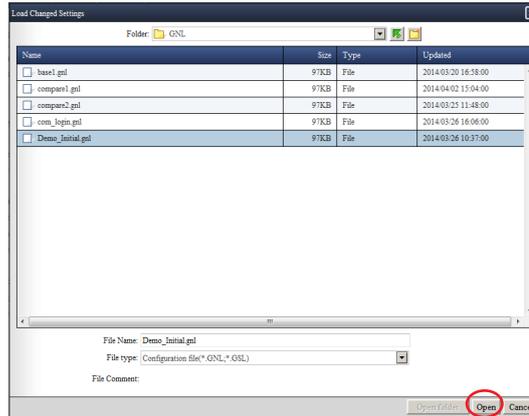
- 3 On the main menu, click the **Setting** tab and then **Load Changed Settings**.



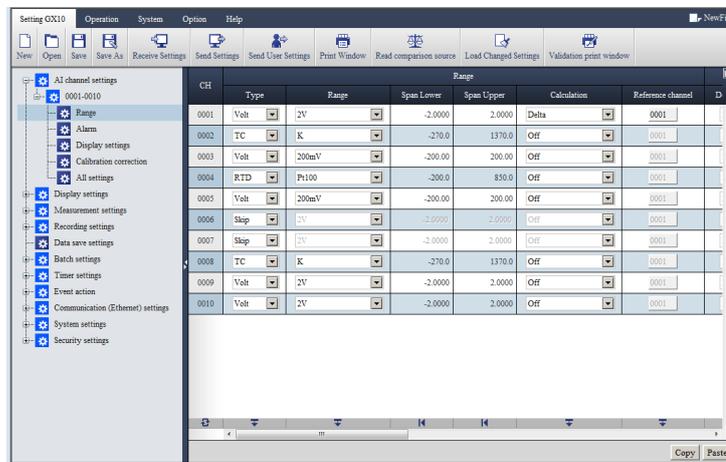
The Load Changed Settings dialog box appears.



- 4 Select the update source file, and click **Open**.



The update source data is loaded, and the current setup data is changed.



- 5 If necessary, edit and save the changed data.

How to save a setup data file: ► [2.4 Saving Setup Data](#)

Note

Using the Load Changed Settings menu changes only the settings. It does not change the system configuration or the file name.

2.3 Editing Setup Data

2.3.1 Basic Operation

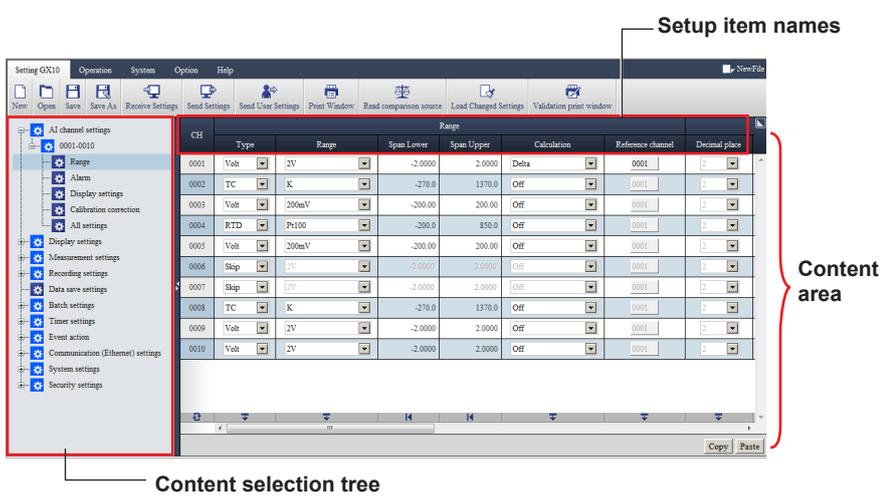
This section explains how to use Hardware Configurator to edit GX/GP's setup data (.gsl extension). The setup data editing and display features are the same as those of the Web application on the GX/GP itself. In addition, the setup items of this software are the same as those on the recorder. Therefore, this section will only cover typical operations and the unique features of this software.

Setup item details: ▶ Chapter 1 "Configuring the GX/GP" in the Models GX10/GX20/GP10/GP20 Paperless Recorder User's Manual (IM 04L51B01-01EN).

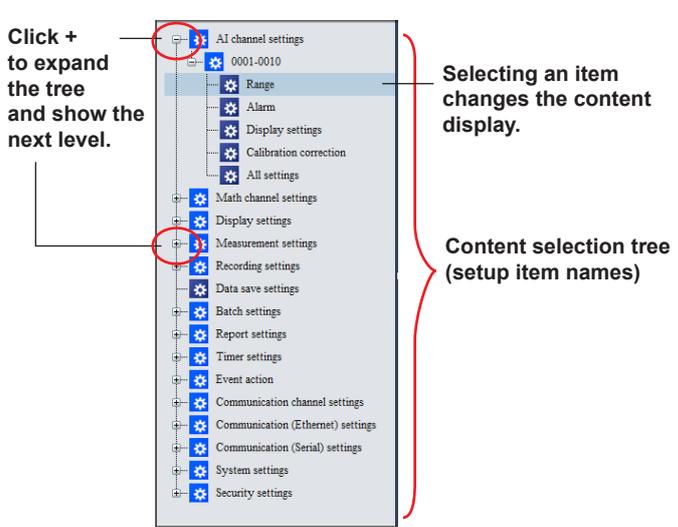
Editing the Setup Data (*.GSL) of a GX/GP with the Advanced Security Function (/AS)
 Be sure to also read the precautions provided in chapter 3, "Setup Data of GX/GPs with the Advanced Security Function (/AS)."

Procedure

- 1 Display the file that you want to edit on the **Setting** tab.



- 2 From the content selection tree, which is on the left side of the window, select the name of the setup item you want to edit. (This example will show how to set DI channels.)



When you select a title, the setup items appear in the content area, which is on the right.

2.3 Editing Setup Data

The channel settings content can be shown in Range, Alarm, Display settings, and Calibration correction groups. If you select All settings, all the setup items are displayed in the content area.

Items are displayed by each selected group.

- 3 Edit the channel settings.
Edit the setup items in the content area.

Channel number
1 line = 1 channel

Scroll right to view
more setup items. →

CH	Range					
	Type	Span Lower	Span Upper	Calculation	Reference channel	Decimal place
0101	DI	0	1	Off	0001	2
0102	DI	0	1	Off	0001	2
0103	DI	0	1	Off	0001	2
0104	DI	0	1	Off	0001	2
0105	DI	0	1	Off	0001	2
0106	DI	0	1	Off	0001	2
0107	DI	0	1	Off	0001	2
0108	DI	0	1	Off	0001	2
0109	DI	0	1	Off	0001	2
0110	DI	0	1	Off	0001	2

Note

The items and available settings that appear in the configuration window vary depending on the hardware system configuration. If an item that you want to edit does not appear, check the option and module configuration.

How to set the system configuration: ▶ [2.1 Creating New Setup Data](#)

Using the Jump Function

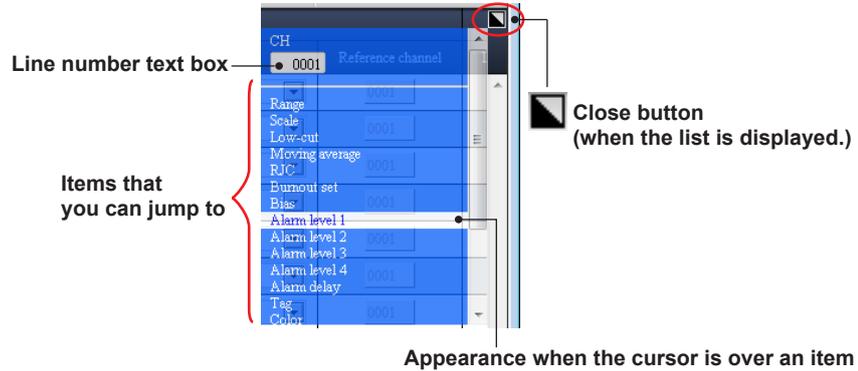
On setting edit windows in table format (e.g., channel setting window), you can jump to a specific position in the window.

- 1 Click button in the upper right corner of the window.

A list of items that you can jump to appears. If the list is long, a scroll bar appears.

CH	Range						
	Type	Range	Span Lower	Span Upper	Calculation	Ref.	Decimal place
0001	Volt	2V	-2.0000	2.0000	Off	0001	2
0002	Volt	2V	-2.0000	2.0000	Off	0001	2
0003	Volt	2V	-2.0000	2.0000	Off	0001	2
0004	Volt	2V	-2.0000	2.0000	Off	0001	2
0005	Volt	2V	-2.0000	2.0000	Off	0001	2
0006	Volt	2V	-2.0000	2.0000	Off	0001	2
0007	Volt	2V	-2.0000	2.0000	Off	0001	2
0008	Volt	2V	-2.0000	2.0000	Off	0001	2
0009	Volt	2V	-2.0000	2.0000	Off	0001	2
0010	Volt	2V	-2.0000	2.0000	Off	0001	2

- 2 In the line number text box, enter the channel line number that you want to move to. The default value is the line number of the first line.



- 3 Select and click the jump destination item name on the list.

Move to the specified item in the specified line.

CH	On/Off	Type	Value	Hysteresis	Log	CH	Output type
0001	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Range
0002	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Scale
0003	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Low-cut
0004	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Moving average
0005	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	RJC
0006	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Bismout set
0007	<input type="checkbox"/>	H: High limit	0.0000	0.0005	<input type="checkbox"/>	0001	Bias

You can move to the specified setup item in the specified line.

- 4 To close the list, click the  Close button in the upper right of the window.

Note

- If the line number text box is empty or the specified line number does not exist, the line will remain the same and only a horizontal movement will be made.
- The setup items that appear in the list are the parent title of each setup item. For example, Alarm level 1 will be displayed but not Value or Hysteresis.

2.3.2 Editing and Manipulating Values

From the content selection tree, select the title of the setup item that you want to edit, and edit the setup items that appear. Values are entered using the input controls and dialog boxes described below.

Input Controls

The following input controls are available.

Control Type	Display Example	Setup Procedure
Text box	-2.0000	Enter text or numbers.
Check box	<input checked="" type="checkbox"/>	When the check box is selected, the setting is "On" or enabled.
List box	Volt 	Click the arrow, and select from the list that appears.
Option buttons	<input checked="" type="radio"/> Point <input type="radio"/> Comma	Click to select.

Dialog Boxes

The following dialog boxes are available. For details on how to use each dialog box, see the Operation Example in the table.

Dialog Box Type	Display Example	Setup Procedure
Channel selection button	Operation 1 Step 1, 2	Configure a specific channel such as an I/O channel.
Color selection	Operation 1 Step 3, 4	Select the display color of alarm marks and the like.
Channel selection string	Operation 2	Specify multiple channels such as when editing a display group.
Data selection	Operation 3	Specify internal switches and the like.
Special dialog box (calibration correction)	Operation 4	Use calibration correction.
Calculation expression input	Operation 5	Enter calculation expressions.

To configure a specific channel such as an I/O channel, click a channel number to specify the channel you want.

Click a color on the color selection palette in the dialog box. You can also enter the RGB values to specify any color.

When specifying multiple channels such as when editing a display group, click a channel number button to add the channel to the channel configuration. The added channel is displayed as a character string.

When specifying the internal switch or other item, click the displayed character string such as the switch number. (Same as channel selection.)

A dialog box for editing calibration correction values. Enter the correction value directly.

A dialog box for entering calculation expressions. Set calculation expressions by selecting operators and channels from the lists that appear.

How to Use the Different Dialog Boxes

Operation 1

Channel selection button, Color selection

- 1 Set the channel range.
This example shows how to set the reference channel for difference computation. Click the channel number under Reference channel.

Click here (▼) to show the available values.

CH	Range					
	Type	Span Lower	Span Upper	Calculation	Reference channel	Decimal p
0101	DI	0	1	Linear scaling	0001	2
0102	DI	0	1	Delta	0001	2
0103	Skip DI	0	1	Delta	0001	2
0104	DI	0	1	Off	0001	2

Enter values within the selectable range.

Click to display the Channel selection dialog box.

The Channel selection dialog box appears.

- 2 Click the channel number under Reference channel.

Click the number to select the channel

Show or hide by channel type (when multiple channel types are available).

Clicking a number applies the output destination and closes the dialog box.

- 3 Scroll to the right, and set all necessary items.
- 4 If you want to change the alarm mark color, click a color.

CH	Alarm point mark					
	Indicate on Scale	Mark type	Alarm 1 color	Alarm 2 color	Alarm 3 color	Alarm 4 color
0001	<input checked="" type="checkbox"/>	Fixed	Black	Red	Green	Yellow
0002	<input type="checkbox"/>	Alarm				

The color selection dialog box appears.

Current color Red

R: 255
G: 0
B: 0

Key color

Red, Green, Blue, Blue violet, Brown, Orange, Yellow-green, Light blue, Violet, Gray, Lime, Cyan, Dark blue, Yellow, Light gray, Purple, Black, Pink, Light brown, Light green, Dark gray, Olive, Dark cyan, Spring green

Recently used color

OK, Cancel

- To create a color, enter values in the Current color boxes. To use a key color, select the color, and click **OK**.

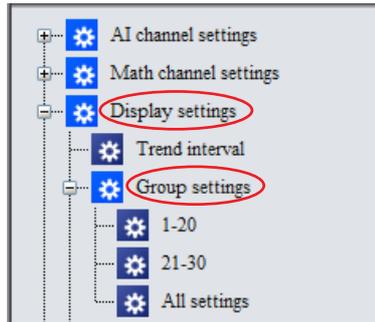
The selected color is applied.

Operation 2

Channel selection string

This example shows how to assign channels to group 1.

- On the content selection tree, click **Display settings** and then **Group settings**.
- From the list of group numbers under **Group settings**, select the group numbers that you want to display. Here, select **1-20** (groups 1 to 20).



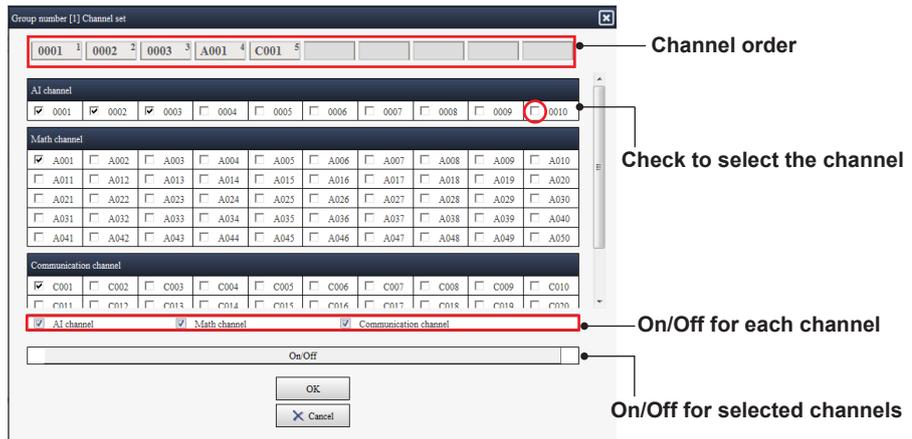
The Group settings dialog box appears.

- Click **Channel set** of **Group number 1**.

Group number	On/Off	Group name	Group settings	Channel set	Scale unit
1	<input checked="" type="checkbox"/>	GROUP 1		0001.0002.0003.0004.0005.0006.0007.0008.0009.0010	
2	<input checked="" type="checkbox"/>	GROUP 2		A001.C001	

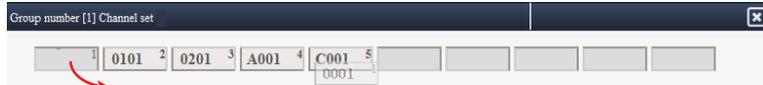
The **Group number [1] Channel set** dialog box appears.

- Select the check boxes of the channels that you want to include in group 1. To exclude a channel from group 1, clear the check box.



The selected channels are listed at the top area of the window.

- 5** The channel numbers at the top area of the window can be dragged to change their order.



If you drop the first number "0001" on the fifth number "C001,"



"0001" is moved there, and other channels are shifted to the left.

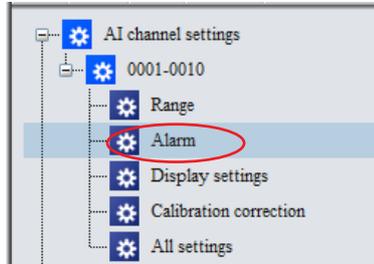
- 6** Click **OK**.
The channel numbers selected under Channel set are applied.

Operation 3

Data selection

This example shows how to set the alarm output destination.

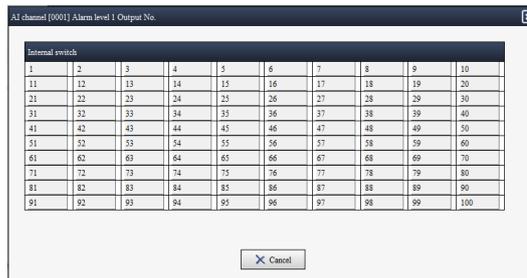
- 1 On the content selection tree, click **Alarm**.



- 2 Under **Alarm Level 1**, select the **On/Off** check box of channel 1. Here, set **Output type** to **Internal switch**.

Alarm level 1							
CH	On/Off	Type	Value	Hysteresis	Logging	Output type	Output No.
0001	<input checked="" type="checkbox"/>	H : High limit	0.0000	0.0005	<input checked="" type="checkbox"/>	Off	1
0002	<input type="checkbox"/>	H : High limit	0.0000	0.0005	<input checked="" type="checkbox"/>	Internal switch	1
0003	<input type="checkbox"/>	H : High limit	0.0000	0.0005	<input checked="" type="checkbox"/>	Off	1

- 3 Click **Output No.**.
The Output No. dialog box appears.



- 4 Select the output Internal switch number.
The selected switch number is applied, and the setup window returns.

Note

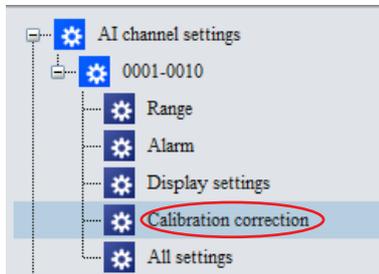
- When the maximum number of selectable channels is reached, you will no longer be able to select additional channels.
- On dialog boxes that show check boxes and option buttons, you can select a range.
How to select a range: ► [2.3.3 Selecting a Range and Copying and Pasting](#)

Operation 4

Calibration Correction

This example shows how to edit Calibration correction under AI channel settings.

- 1 On the content selection tree, click **Calibration correction**.



- 2 Set the Mode and Number of set points.

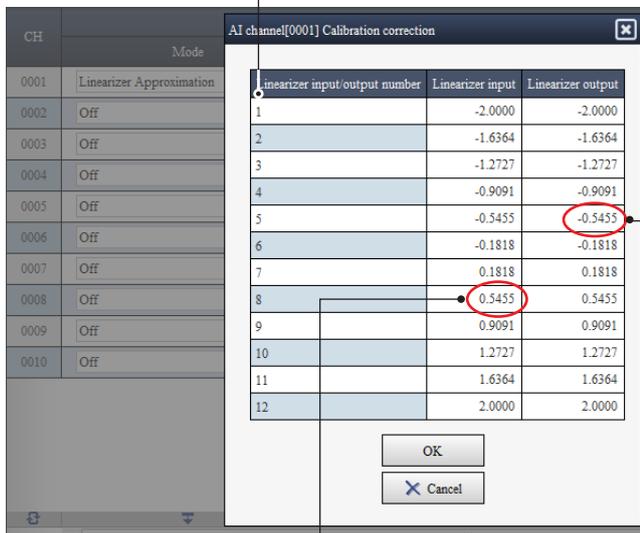
CH	Calibration correction		
	Mode	Number of set points	Linearizer input/output
0001	Off	2	Linearizer input/output
0002	Off	2	Linearizer input/output

- 3 Under Calibration correction, click **Linearizer input/output**.

CH	Calibration correction		
	Mode	Number of set points	Linearizer input/output
0001	Linearizer Approximation	12	Linearizer input/output
0002	Off	2	Linearizer input/output

The Calibration correction dialog box appears.

Calibration correction set points



Editing an input position causes the value to be checked against the upper and lower limits and the value to be corrected.

Editing an output position causes the value to be checked against the upper and lower limits.

Note

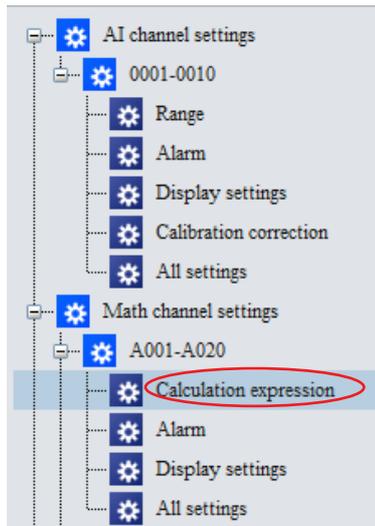
If you enter a value in any input position in the Calibration correction dialog box, the value is checked against the upper and lower limits and against the values of other positions and corrected. If you enter a value in any output position, the value is only checked against the upper and lower limits. For details on calibration correction, see the *Models GX10/GX20/GP10/GP20 Paperless Recorder User's Manual* (IM 04L51B01-01EN).

Operation 5

Calculation expression input

This example shows how to set a calculation expression in a math channel using the appropriate dialog boxes.

- 1 On the content selection tree, click **Math channel settings** and then **Calculation expression**.



- 2 Select the On/Off check box of the channel that you want to set a calculation expression in.

CH	On/Off	Calculation expression	Decimal place
A001	<input checked="" type="checkbox"/>	0001	Calculation expression 2
A002	<input type="checkbox"/>	0001	Calculation expression 2
A003	<input type="checkbox"/>	0001	Calculation expression 2
A004	<input type="checkbox"/>	0001	Calculation expression 2

The Calculation expression button becomes available.

- 3 Click **Calculation expression**.

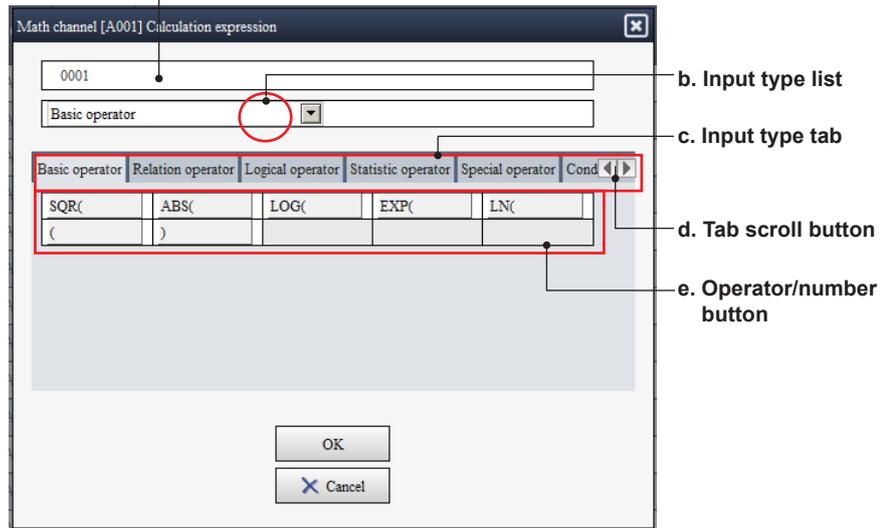
CH	On/Off	Calculation expression
A001	<input checked="" type="checkbox"/>	0001 Calculation expression
A002	<input checked="" type="checkbox"/>	0001 Calculation expression
A003	<input checked="" type="checkbox"/>	0001 Calculation expression
A004	<input type="checkbox"/>	0001 Calculation expression

A Calculation expression dialog box appears. (Continued on the next page)

Note

You can also directly enter the expression (text) in Calculation expression of the setup window without using the dialog box.

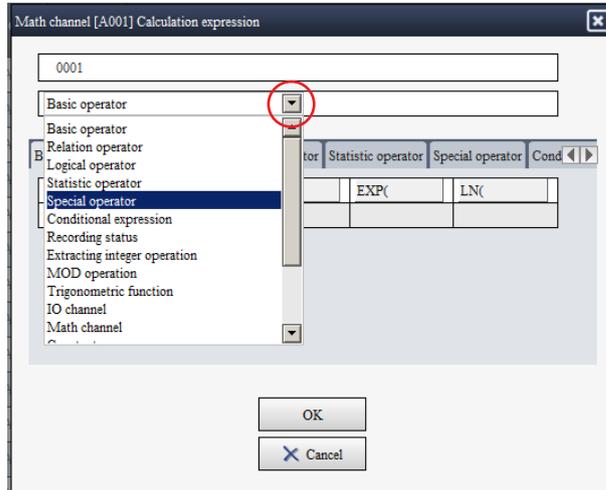
a. Calculation expression edit box



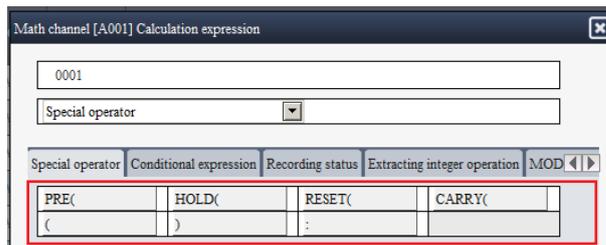
The table below shows the details for the items.

Item	Description
a. Calculation expression edit box	The box for entering the calculation expression. You can directly enter text.
b. Input type list	The items in the list are the same as those of "c", Input type tab. The list name that you select here becomes the tab name.
c. Input type tab	Tab pages containing operators, numbers, and the like used in calculation expressions. They are grouped by input type. Clicking a tab displays the operators and numbers for the input type in area "e."
d. Tab scroll button	Click to scroll the tab position horizontally.
e. Operator/number button	Click to add the text shown on the button to the end of the "a" text string.

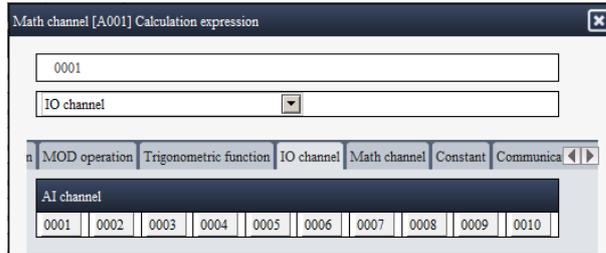
- 4 Enter the calculation expression in the calculation expression edit box. Click the Input type list arrow, and select the operator or channel that you want to display.



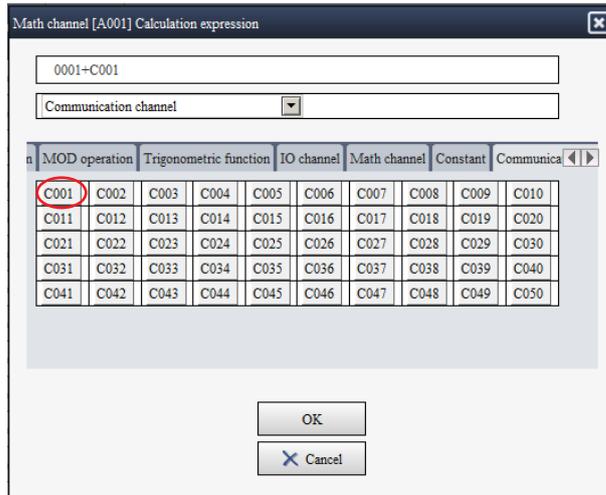
The selected operator is displayed.



You can also select the Input type tab to display in a similar manner. In addition, clicking the channel list or tab displays channels.

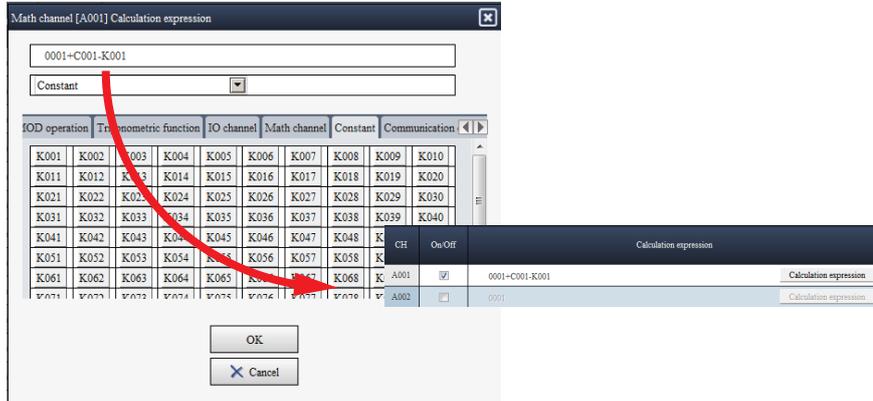


- 5 Click the operator or channel that you want to enter in the calculation expression.



The appropriate characters are added at the cursor position.

- 6 When you are finished entering the calculation expression, click **OK**.



The dialog box closes, and the entered expression appears in Calculation expression in the setup window.

If the Calculation Expression Overflows

If the calculation expression is too long, it will not fit in the edit box.

In such a case, moving the cursor over the calculation expression in the setup window will show the entire expression in a pop-up.

- Pop-up display when the entered calculation expression fits in the edit box

CH	On/Off	Calculation expression	Decimal place
A001	<input checked="" type="checkbox"/>	0001+C001-K001	2
A002	<input type="checkbox"/>	0001	2

- Pop-up display when the entered calculation expression does not fit in the edit box

CH	On/Off	Calculation expression	Decimal place
A001	<input checked="" type="checkbox"/>	0001+0002+0003+0004+0005+0006+0007+0008+0009+0010+A001+A002+A003	2
A002	<input type="checkbox"/>	0001	2
A003	<input type="checkbox"/>	0001	2
A004	<input type="checkbox"/>	0001	2

If an Invalid Calculation Expression Is Entered

If an invalid calculation expression is entered, the expression is displayed in red. The pop-up will display an error message and the entire calculation expression.

- Error message in the first line and the entire expression in the subsequent lines

CH	On/Off	Calculation expression	Decimal place
A001	<input checked="" type="checkbox"/>	0000+0002+0003+0004+0005+0006+0007+0008+0009+0010	2
A002	<input type="checkbox"/>	0001	2
A003	<input type="checkbox"/>	0001	2

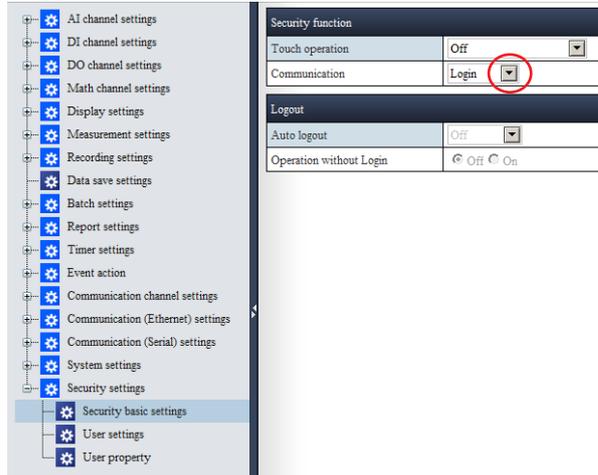
Note

- The calculation expression that appears in the pop-up are updated when you finish entering the calculation expression. It is not updated while you are entering the calculation expression (while the cursor is in the text box).
- The pop-up does not appear in the calculation expression text box of the dialog box.

How to Register Users

This example shows how to register GX/GP users when Advanced security function (/AS) is set to Off.

- From the content selection tree, select Security settings - Security basic settings, and set Security settings. User settings and User property are added to the tree content.



- From the contents selection tree, select Security settings - User settings.



- Register the user information for each user number.

The first user is fixed to Admin. Select the mode. Click to register a password.

User number	User level	Mode	User name	Password
1	Admin	Touch operation + Communication	User01	***** Change
2	User	Touch operation + Communication	User02	***** Change
3	Off	Touch operation + Communication	User03	***** Change
4	Off	Touch operation + Communication	User04	***** Change
5	Off	Touch operation + Communication	User05	***** Change

To register a password, click **Change**.



If you change a password, the concealed characters (asterisks) will turn blue.



If you change the user name, the corresponding password will be initialized. In this case, "Initialize" will appear in blue.



4 To set User property, select On and assign an authority number.

User number	User level	Mode	User name	Password	User property	Authority number
1	Admin	Touch operation - Communication	User01	***** Change	Off	1
2	User	Communication	User02	***** Change	On	1
3	User	Touch operation	User03	***** Change	Off	1
4	Off	Touch operation - Communication	User04	***** Change	Off	1

Note

- Only Admin can be registered in user number 1.
- Make a note of the administrator password, and do not lose it.
- Enter the password using up to 20 characters. Single quotations, semicolons, and spaces are not allowed.
- You can set User property only when the User level is User.

2.3.3 Selecting a Range and Copying and Pasting

This software enables you to select a range of setup items to edit them, copy them, and paste them.

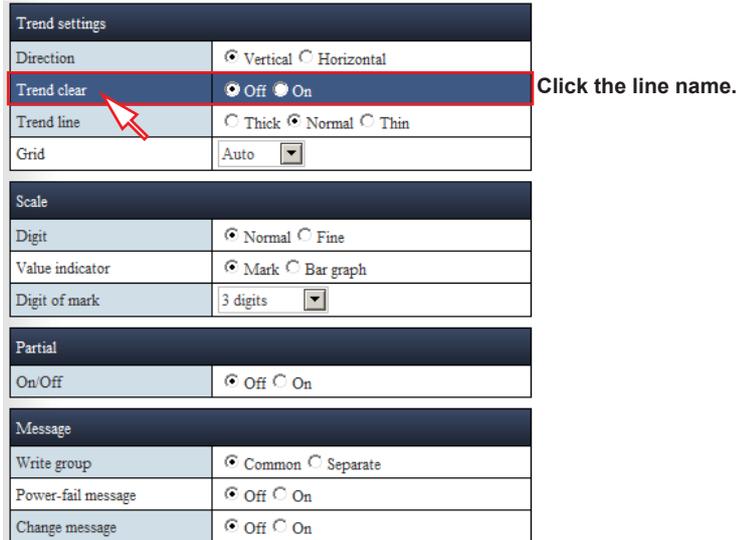
This section explains how to select a range of items and how to use the Copy, Paste, and Tool buttons.

Selecting a Range

Procedure

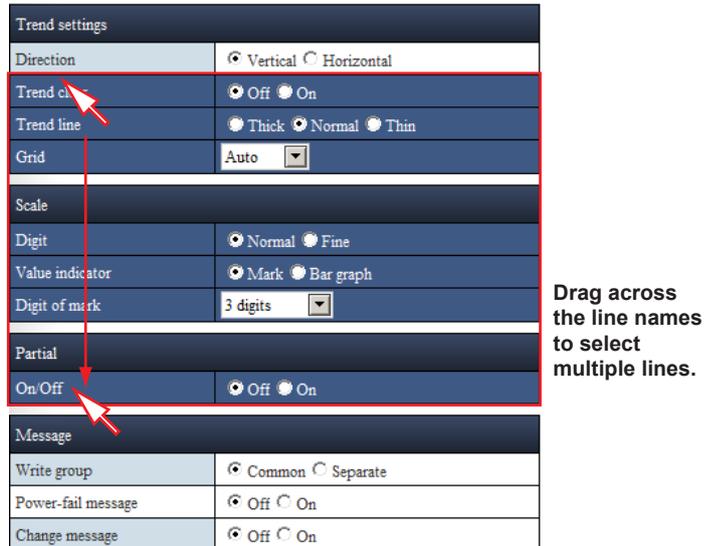
- 1 To select a line, click an item name.

The example below is for **Display settings - Trend settings - List type**.



The line is selected.

- 2 To select multiple lines, drag the cursor and release the mouse at the last line you want to select.



Multiple lines are selected.

Note

When selecting a range, you cannot select multiple lines one by one. You cannot select columns individually.

Copying the Selected Range and Pasting

Procedure

- To copy the selected range, click the **Copy** button, which is located in the lower right of the window. You can also press Ctrl+C on the keyboard.
When the range is copied to the Clipboard, the color of the range changes as shown below.

Trend settings	
Direction	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Trend clear	<input type="radio"/> Off <input checked="" type="radio"/> On
Trend line	<input type="radio"/> Thick <input checked="" type="radio"/> Normal <input type="radio"/> Thin
Grid	Auto

- You can paste the contents of the Clipboard to an Excel spreadsheet or a text file. The figure below shows an example in which the contents are copied to cell A1 of an Excel spreadsheet.

When pasting to an Excel spreadsheet, check the format of the cell that you are pasting to.

	A	B	C
1	Trend clear	Off	
2	Trend line	Normal	
3	Grid	Auto	
4	Digit	Normal	
5	Value indicator	Mark	
6	Digit of mark	3 digits	
7	On/Off	Off	
8			

- The pasted contents can be edit on Excel or a text editor.

	A	B
1	Direction	Horizontal
2	Trend clear	Off
3	Trend line	Normal
4	Grid	Auto



	A	B
1	Direction	Vertical
2	Trend clear	On
3	Trend line	Thin
4	Grid	5

Edit the values in the B column in Excel.

- The edit contents can be pasted back to the setup items. Copy the edit results from the Excel spreadsheet. Copy not just the values but also the item names in row A.

	A	B
1	Direction	Vertical
2	Trend clear	On
3	Trend line	Thin
4	Grid	5
5		

- Select the paste range in the configuration window. Make the paste range the same as the range of the copied data (the number of lines).

Trend settings	
Direction	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Trend clear	<input type="radio"/> Off <input checked="" type="radio"/> On
Trend line	<input type="radio"/> Thick <input checked="" type="radio"/> Normal <input type="radio"/> Thin
Grid	Auto

- Paste the data. Click the **Paste** button, which is located in the lower right of the window. You can also press Ctrl+V on the keyboard.

Trend settings	
Direction	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Trend clear	<input type="radio"/> Off <input checked="" type="radio"/> On
Trend line	<input type="radio"/> Thick <input checked="" type="radio"/> Normal <input type="radio"/> Thin
Grid	5

The edit results from the Excel spreadsheet is pasted to the configuration window.

Note

- Depending on the format of the Excel cells that you are pasting to, the values may change when you paste the contents from the Clipboard. For example, if the format is set to **Number**, "0001" will change to "1". You can prevent pasted values from being automatically corrected by setting **Number** to **Text** in the Format Cells dialog box of the Excel sheet that you want to paste to.
- If the values cannot be pasted as they are to the Excel sheet even with the settings above, we recommend that you use a text editor for copying and pasting.
- If the values that you edit with Excel or a text editor are outside the setting range, when you paste the data back to the configuration window of the software, the values will be corrected in the same way as when you enter values directly.

Selecting a Range of Channels Whose Types Are Different and Copying and Pasting Them

The example below is an AI channel configuration window.

Procedure

- Select a range of channels as shown below.

CH	Type	Range	Range		Calculation	Reference channel
			Span Lower	Span Upper		
0001	Skip	2V	-2.0000	2.0000	Off	0001
0002	Volt	2V	-2.0000	2.0000	Off	0001
0003	TC	K	-270.0	1370.0	Delta	0001
0004	RTD	Pt100	-200.0	850.0	Off	0001

Click the name of the line to select the entire line.
 Drag down to select multiple lines.

- Copy the channel information (lines).

CH	Type	Range	Range		Calculation	Reference channel
			Span Lower	Span Upper		
0001	Skip	2V	-2.0000	2.0000	Off	0001
0002	Volt	2V	-2.0000	2.0000	Off	0001
0003	TC	K	-270.0	1370.0	Delta	0001
0004	RTD	Pt100	-200.0	850.0	Off	0001

Press Ctrl+C, or click Copy to copy the cells.

3 Paste to different channels.

CH	Range				
	Type	Range	Span Lower	Span Upper	Calculation
0001	Skip	2V	-2.0000	2.0000	Off
0002	Volt	2V	-2.0000	2.0000	Off
0003	TC	K	-270.0	1370.0	Delta
0004	RTD	Pt100	-200.0	850.0	Off
0005	Skip	2V	-2.0000	2.0000	Off
0006	Volt	2V	-2.0000	2.0000	Off
0007	TC	K	-270.0	1370.0	Delta
0008	RTD	Pt100	-200.0	850.0	Off
0009	Volt	2V	-2.0000	2.0000	Off
0010	Volt	2V	-2.0000	2.0000	Off

Copy Paste

Select the cells to paste to. Press Ctrl+V, or click Paste to paste to the cells.

The example below shows the configuration window that appears when you select **Display settings - Group settings - Channel set**.

Procedure

- 1 Select a range of channels as shown below.

AI channel									
<input checked="" type="checkbox"/> 0001	<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input checked="" type="checkbox"/> 0004	<input checked="" type="checkbox"/> 0005	<input checked="" type="checkbox"/> 0006	<input checked="" type="checkbox"/> 0007	<input checked="" type="checkbox"/> 0008	<input checked="" type="checkbox"/> 0009	<input checked="" type="checkbox"/> 0010
DI channel									
<input type="checkbox"/> 0101	<input type="checkbox"/> 0102	<input type="checkbox"/> 0103	<input type="checkbox"/> 0104	<input type="checkbox"/> 0105	<input type="checkbox"/> 0106	<input type="checkbox"/> 0107	<input type="checkbox"/> 0108	<input type="checkbox"/> 0109	<input type="checkbox"/> 0110
<input type="checkbox"/> 0111	<input type="checkbox"/> 0112	<input type="checkbox"/> 0113	<input type="checkbox"/> 0114	<input type="checkbox"/> 0115	<input type="checkbox"/> 0116				

Click a label in a cell to select a single cell.

AI channel									
<input checked="" type="checkbox"/> 0001	<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input checked="" type="checkbox"/> 0004	<input checked="" type="checkbox"/> 0005	<input checked="" type="checkbox"/> 0006	<input checked="" type="checkbox"/> 0007	<input checked="" type="checkbox"/> 0008	<input checked="" type="checkbox"/> 0009	<input checked="" type="checkbox"/> 0010
DI channel									
<input type="checkbox"/> 0101	<input checked="" type="checkbox"/> 0102	<input checked="" type="checkbox"/> 0103	<input checked="" type="checkbox"/> 0104	<input checked="" type="checkbox"/> 0105	<input type="checkbox"/> 0106	<input type="checkbox"/> 0107	<input type="checkbox"/> 0108	<input type="checkbox"/> 0109	<input type="checkbox"/> 0110
<input type="checkbox"/> 0111	<input checked="" type="checkbox"/> 0112	<input checked="" type="checkbox"/> 0113	<input checked="" type="checkbox"/> 0114	<input checked="" type="checkbox"/> 0115	<input type="checkbox"/> 0116				

Drag to select a rectangular area.

AI channel									
<input checked="" type="checkbox"/> 0001	<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input checked="" type="checkbox"/> 0004	<input checked="" type="checkbox"/> 0005	<input checked="" type="checkbox"/> 0006	<input checked="" type="checkbox"/> 0007	<input checked="" type="checkbox"/> 0008	<input checked="" type="checkbox"/> 0009	<input checked="" type="checkbox"/> 0010
DI channel									
<input type="checkbox"/> 0101	<input checked="" type="checkbox"/> 0102	<input checked="" type="checkbox"/> 0103	<input checked="" type="checkbox"/> 0104	<input checked="" type="checkbox"/> 0105	<input type="checkbox"/> 0106	<input type="checkbox"/> 0107	<input type="checkbox"/> 0108	<input type="checkbox"/> 0109	<input type="checkbox"/> 0110
<input type="checkbox"/> 0111	<input checked="" type="checkbox"/> 0112	<input checked="" type="checkbox"/> 0113	<input checked="" type="checkbox"/> 0114	<input checked="" type="checkbox"/> 0115	<input type="checkbox"/> 0116				

Selection can be made across different setup item blocks.

- 2 While holding down Ctrl, click any of the check boxes in the selected range, or click the **On/Off** button to select or clear all the check boxes in the selected range.

Check boxes in the selected range will be On at once.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AI channel									
<input type="checkbox"/> 0001	<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input type="checkbox"/> 0004	<input type="checkbox"/> 0005	<input type="checkbox"/> 0006	<input type="checkbox"/> 0007	<input type="checkbox"/> 0008	<input type="checkbox"/> 0009	<input type="checkbox"/> 0010
DI channel									
<input type="checkbox"/> 0101	<input checked="" type="checkbox"/> 0102	<input checked="" type="checkbox"/> 0103	<input type="checkbox"/> 0104	<input type="checkbox"/> 0105	<input type="checkbox"/> 0106	<input type="checkbox"/> 0107	<input type="checkbox"/> 0108	<input type="checkbox"/> 0109	<input type="checkbox"/> 0110
<input type="checkbox"/> 0111	<input checked="" type="checkbox"/> 0112	<input checked="" type="checkbox"/> 0113	<input type="checkbox"/> 0114	<input type="checkbox"/> 0115	<input type="checkbox"/> 0116				

Click while holding down Ctrl, or click On/Off.

Selected channels.									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input checked="" type="checkbox"/> 0102	<input checked="" type="checkbox"/> 0103	<input checked="" type="checkbox"/> 0112	<input checked="" type="checkbox"/> 0113	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AI channel									
<input type="checkbox"/> 0001	<input checked="" type="checkbox"/> 0002	<input checked="" type="checkbox"/> 0003	<input type="checkbox"/> 0004	<input type="checkbox"/> 0005	<input type="checkbox"/> 0006	<input type="checkbox"/> 0007	<input type="checkbox"/> 0008	<input type="checkbox"/> 0009	<input type="checkbox"/> 0010
DI channel									
<input type="checkbox"/> 0101	<input checked="" type="checkbox"/> 0102	<input checked="" type="checkbox"/> 0103	<input type="checkbox"/> 0104	<input type="checkbox"/> 0105	<input type="checkbox"/> 0106	<input type="checkbox"/> 0107	<input type="checkbox"/> 0108	<input type="checkbox"/> 0109	<input type="checkbox"/> 0110
<input type="checkbox"/> 0111	<input checked="" type="checkbox"/> 0112	<input checked="" type="checkbox"/> 0113	<input type="checkbox"/> 0114	<input type="checkbox"/> 0115	<input type="checkbox"/> 0116				

Click again to clear all the check boxes.

3 The contents in the selected range can be pasted to other cells.

Select the cells to copy from, and press Ctrl+C to copy.

0002	1	0003	2	0102	3	0103	4	0112	5	0113	6								
AI channel																			
<input type="checkbox"/>	0001	<input checked="" type="checkbox"/>	0002	<input checked="" type="checkbox"/>	0003	<input type="checkbox"/>	0004	<input type="checkbox"/>	0005	<input type="checkbox"/>	0006	<input type="checkbox"/>	0007	<input type="checkbox"/>	0008	<input type="checkbox"/>	0009	<input type="checkbox"/>	0010
DI channel																			
<input type="checkbox"/>	0101	<input checked="" type="checkbox"/>	0102	<input checked="" type="checkbox"/>	0103	<input type="checkbox"/>	0104	<input type="checkbox"/>	0105	<input type="checkbox"/>	0106	<input type="checkbox"/>	0107	<input type="checkbox"/>	0108	<input type="checkbox"/>	0109	<input type="checkbox"/>	0110
<input type="checkbox"/>	0111	<input checked="" type="checkbox"/>	0112	<input checked="" type="checkbox"/>	0113	<input type="checkbox"/>	0114	<input type="checkbox"/>	0115	<input type="checkbox"/>	0116								
DO channel																			
<input type="checkbox"/>	0201	<input type="checkbox"/>	0202	<input type="checkbox"/>	0203	<input type="checkbox"/>	0204	<input type="checkbox"/>	0205	<input type="checkbox"/>	0206								



0002	1	0003	2	0102	3	0103	4	0112	5	0113	6								
AI channel																			
<input type="checkbox"/>	0001	<input checked="" type="checkbox"/>	0002	<input checked="" type="checkbox"/>	0003	<input type="checkbox"/>	0004	<input type="checkbox"/>	0005	<input type="checkbox"/>	0006	<input type="checkbox"/>	0007	<input type="checkbox"/>	0008	<input type="checkbox"/>	0009	<input type="checkbox"/>	0010
DI channel																			
<input type="checkbox"/>	0101	<input checked="" type="checkbox"/>	0102	<input checked="" type="checkbox"/>	0103	<input type="checkbox"/>	0104	<input type="checkbox"/>	0105	<input type="checkbox"/>	0106	<input type="checkbox"/>	0107	<input type="checkbox"/>	0108	<input type="checkbox"/>	0109	<input type="checkbox"/>	0110
<input type="checkbox"/>	0111	<input checked="" type="checkbox"/>	0112	<input checked="" type="checkbox"/>	0113	<input type="checkbox"/>	0114	<input type="checkbox"/>	0115	<input type="checkbox"/>	0116								
DO channel																			
<input type="checkbox"/>	0201	<input type="checkbox"/>	0202	<input type="checkbox"/>	0203	<input type="checkbox"/>	0204	<input type="checkbox"/>	0205	<input type="checkbox"/>	0206								



Select the cell to paste to and drag to select a range.

0002	1	0003	2	0102	3	0103	4	0112	5	0113	6								
AI channel																			
<input type="checkbox"/>	0001	<input checked="" type="checkbox"/>	0002	<input checked="" type="checkbox"/>	0003	<input type="checkbox"/>	0004	<input type="checkbox"/>	0005	<input type="checkbox"/>	0006	<input type="checkbox"/>	0007	<input type="checkbox"/>	0008	<input type="checkbox"/>	0009	<input type="checkbox"/>	0010
DI channel																			
<input type="checkbox"/>	0101	<input checked="" type="checkbox"/>	0102	<input checked="" type="checkbox"/>	0103	<input type="checkbox"/>	0104	<input type="checkbox"/>	0105	<input type="checkbox"/>	0106	<input type="checkbox"/>	0107	<input type="checkbox"/>	0108	<input type="checkbox"/>	0109	<input type="checkbox"/>	0110
<input type="checkbox"/>	0111	<input checked="" type="checkbox"/>	0112	<input checked="" type="checkbox"/>	0113	<input type="checkbox"/>	0114	<input type="checkbox"/>	0115	<input type="checkbox"/>	0116								
DO channel																			
<input type="checkbox"/>	0201	<input checked="" type="checkbox"/>	0202	<input checked="" type="checkbox"/>	0203	<input type="checkbox"/>	0204	<input type="checkbox"/>	0205	<input type="checkbox"/>	0206								



Press Ctrl+V to paste.

0002	1	0003	2	0102	3	0103	4	0112	5	0113	6	0202	7	0203	8				
AI channel																			
<input type="checkbox"/>	0001	<input checked="" type="checkbox"/>	0002	<input checked="" type="checkbox"/>	0003	<input type="checkbox"/>	0004	<input type="checkbox"/>	0005	<input type="checkbox"/>	0006	<input type="checkbox"/>	0007	<input type="checkbox"/>	0008	<input type="checkbox"/>	0009	<input type="checkbox"/>	0010
DI channel																			
<input type="checkbox"/>	0101	<input checked="" type="checkbox"/>	0102	<input checked="" type="checkbox"/>	0103	<input type="checkbox"/>	0104	<input type="checkbox"/>	0105	<input type="checkbox"/>	0106	<input type="checkbox"/>	0107	<input type="checkbox"/>	0108	<input type="checkbox"/>	0109	<input type="checkbox"/>	0110
<input type="checkbox"/>	0111	<input checked="" type="checkbox"/>	0112	<input checked="" type="checkbox"/>	0113	<input type="checkbox"/>	0114	<input type="checkbox"/>	0115	<input type="checkbox"/>	0116								
DO channel																			
<input type="checkbox"/>	0201	<input checked="" type="checkbox"/>	0202	<input checked="" type="checkbox"/>	0203	<input type="checkbox"/>	0204	<input type="checkbox"/>	0205	<input type="checkbox"/>	0206								

Note

- When you attempt to copy and paste values, Internet Explorer may show the message “Do you want to allow this webpage to access your clipboard?” Click **Allow** access to enable the copy and paste feature of this software. If you click **Don't allow**, you will not be able to use the copy and paste feature.
- If the cells whose check box is selected (on) reaches the maximum selectable number, cells whose check boxes are unselected become unavailable, and you will not be able to paste to them. You cannot paste to cells that do not have check boxes.
- Pasting is not possible to character strings that cannot be edited or passwords (concealed character strings).
- When option buttons or list boxes are selected, only the selected character strings can be copied and pasted.

Explanation

The configuration windows of this software can be classified into three window types. First is the list type, as in the **Trend settings** window. Second is the table type, as in the **AI channel settings** window. Third is the check box sheet type, as in the **Channel set** window of **Group settings**. The table below shows the differences in how you edit items for each window type.

Window Type	Selectable Range	Selection Method	Selection Cancellation Method	Limitations
List type	<ul style="list-style-type: none"> • By lines. • Multiple lines across different setup items can be selected. 	Click the name of the line to select the entire line. Drag across the names of lines to select multiple lines.	Click a location other than a line name and within the setup item edit area.	Multiple lines cannot be selected one by one. Columns cannot be selected individually.
Table type	<ul style="list-style-type: none"> • One or multiple lines. 	Click the name of the line to select the entire line. Drag across the names of lines to select multiple lines.	Click a location other than the line name.	If you click a cell in a different line, the selection of previously selected cells will be cleared.
Check box sheet type	<ul style="list-style-type: none"> • By cells. • A rectangular region can be selected. 	Click a label in a cell to select a single cell. Drag the cursor diagonally to select a rectangular area. Selection can be made across different setup item blocks.	Click an area within the check sheet without holding the Ctrl key.	If the cells that are On reaches the maximum selectable number, cells whose check boxes are not selected become unavailable.

Editing Using Tool Buttons

On table type configuration windows, you can use the tool buttons that are shown at the bottom of each table. Each tool button is assigned a function. You can use them to edit items collectively.

The available types of tool buttons are **Initialize**, **Paste to all lines**, **Increment**, **Minimize/Maximize**, and **Change all**.

Tool button types and functions: ► See the [table on the next page](#).

In the operation example below, the **Paste to all tool** button is used to set the **Type** of all selected channels to the same value.

Procedure

- On the table type configuration window (the AI channel settings configuration window in this example), select the lines that contain the data that you want to copy. CH0001 is selected.

Select the line to copy from.

CH	Range				
	Type	Range	Span Lower	Span Upper	Calculation
0001	Volt	2V	-2.0000	2.0000	Off
0002	GS	1-5V	1.0000	5.0000	Linear scaling
0003	GS	1-5V	1.0000	5.0000	Linear scaling
0004	GS	1-5V	1.0000	5.0000	Linear scaling
0005	Volt	2V	-2.0000	2.0000	Off
0006	Volt	2V	-2.0000	2.0000	Off

Paste destination

- Drag the cursor to the last line that you want to assign the same type. CH0001 to CH0004 are selected.

CH	Range				
	Type	Range	Span Lower	Span Upper	Calculation
0001	Volt	2V	-2.0000	2.0000	Off
0002	GS	1-5V	1.0000	5.0000	Linear scaling
0003	GS	1-5V	1.0000	5.0000	Linear scaling
0004	GS	1-5V	1.0000	5.0000	Linear scaling
0005	Volt	2V	-2.0000	2.0000	Off
0006	Volt	2V	-2.0000	2.0000	Off

- Click the **Past to all** button on the tool bar.

CH	Range				
	Type	Range	Span Lower	Span Upper	Calculation
0001	Volt	2V	-2.0000	2.0000	Off
0002	GS	1-5V	1.0000	5.0000	Linear scaling
0003	GS	1-5V	1.0000	5.0000	Linear scaling
0004	GS	1-5V	1.0000	5.0000	Linear scaling
0005	Volt	2V	-2.0000	2.0000	Off
0006	Volt	2V	-2.0000	2.0000	Off
0007	Volt	2V	-2.0000	2.0000	Off
0008	Volt	2V	-2.0000	2.0000	Off
0009	Volt	2V	-2.0000	2.0000	Off
0010	Volt	2V	-2.0000	2.0000	Off

Click here

2.3 Editing Setup Data

The type of CH0002 to CH0004 is set to **Volt**.

CH	Range				
	Type	Range	Span Lower	Span Upper	Calculation
0001	Volt	2V	-2.0000	2.0000	Off
0002	Volt	2V	1.0000	2.0000	Linear scaling
0003	Volt	2V	1.0000	2.0000	Linear scaling
0004	Volt	2V	1.0000	2.0000	Linear scaling
0005	Volt	2V	-2.0000	2.0000	Off
0006	Volt	2V	-2.0000	2.0000	Off

Note

- When you use the tool button to paste data, the values are automatically corrected in the same way as when you enter values directly.
- Tool buttons are unavailable when no cells are selected (except for the **Change all** button).

The table below shows the different tool button types and their functions.

Button	Icon	Function
Past to all		Pastes the value in the first selected line to all other lines.
Increment		<ul style="list-style-type: none"> • For numeric input Pastes numbers to all selected lines by auto-incrementing the least significant digit, based on the number in the first selected line. • For character string input Pastes the character string of the first line appended with auto-incremented sequence numbers to all selected lines. If the character string of the first selected line ends with a number, this number will be used as the first sequence number. If the character string of the first selected line ends with a character, the sequence number 1 is appended to the character string of the first selected line.
Initialize		Initializes the values of the selected lines to their defaults.
Minimize		Sets the values of the selected lines to their minimum values.
Maximize		Sets the values of the selected lines to their maximum values.
Change all		<ul style="list-style-type: none"> • For check boxes Switches the check box values of the selected lines at once. If all the check boxes of the selected lines are selected, they are cleared. If they are cleared, they are selected. • For line name columns Selects or unselects all lines in the table.

2.4 Saving Setup Data

2.4.1 Saving a Setup Data File

This section explains how to save a setup data file to your PC.

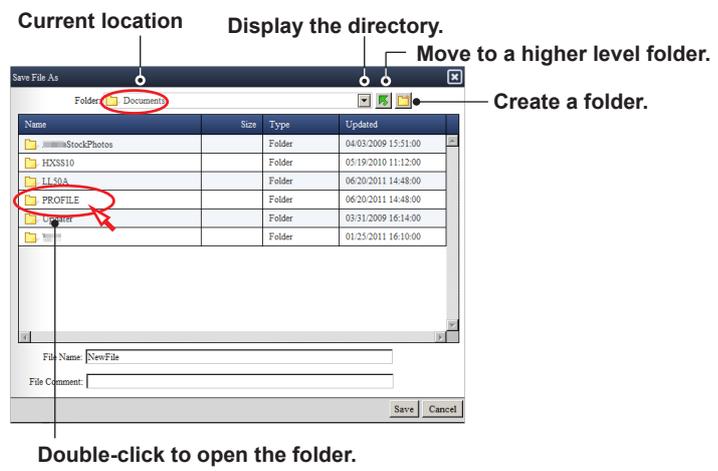
Procedure

1 On the main menu, click the **Setting** tab and then **Save As**.

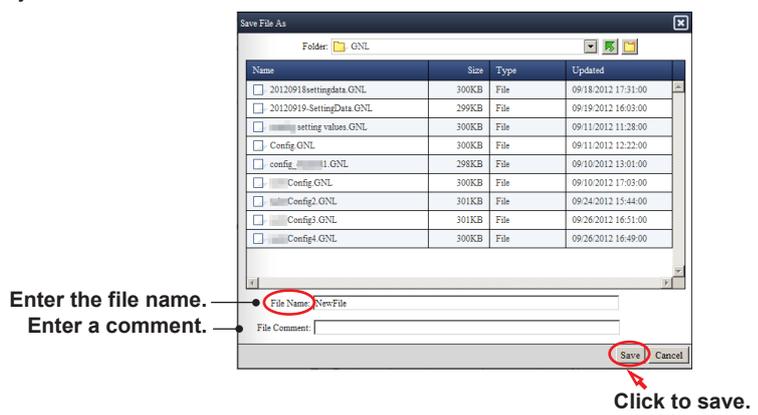


The **Save As** dialog box* appears.

*: The subsequent times you open the dialog box, The first time you open this dialog box, Folder will be set to My Documents. Folder will show the last location that you opened or save to.



2 Specify the folder to save to, enter the file name, and click **Save**.



If a file with the same name exists in the folder, an overwrite confirmation message will appear. Click **OK** or **Cancel**. If you click **OK**, the setup data file (.GNL, or .GSL extension) will be saved to the specified folder.

Note

- The GX/GP cannot load setup files whose names contain non-alphabet characters (such as Japanese and Korean). Therefore, if you need to load such files in the GX/GP, do not use non-alphabetic characters.
- The maximum file path length (including the file name) is 256 characters. If this limit is exceeded, an error will occur. Pay attention to the hierarchical depth and file name length.
- The following characters cannot be used in file names or folder names.

Prohibited characters	Name
/	Slash
> <	Inequality signs
:	Colon
?	Question mark
"	Double quotation
'	Single quotation
\	Backslash
*	Asterisk
	Pipe
;	Semicolon

- You can enter up to 50 characters for the comment.

Save

On the main menu, click the **Setting** tab and then **Save** to save the edited contents to the current file.

If the file has not been saved yet, clicking **Save** will result in the same operation as clicking **Save As**.

Click the **Setting** tab and then **Save**.



A measurement data file (.GSL extension) saved with a GX/GP with the advanced security function (/AS) cannot be overwritten. Save it to a new file (using Save As).

2.5 Receiving and Sending Setup Data

You can receive setup data from the GX/GP and send setup data to the GX/GP. You cannot send setup data when the recorder is recording or computing (you can send user settings).

Receiving and sending when the advanced security function (/AS) is On: ►

Note

- Before exchanging setup data with a recorder, check the system configuration. If the configuration between the recorder and the software is not the same, settings may not be set properly.
- If on the recorder, Security settings - Basic settings - Communication is set to Login, send data using an administrator user name. Otherwise, a portion of the data such as security settings will not be applied to the recorder.
- Whether setup data can be sent or received depends on the GX/GP security settings as shown in the following table.

The GX/GP's Security settings	Settings That Are Sent and Received			
	General settings (other than security settings)		Security settings	
	Reception	Transmission	Reception	Transmission
Security settings - Basic settings - Communication: Off	Yes	Yes	Yes	Yes
User level: Admin	Yes	Yes	Yes	Yes
User level: User, and User property not set	Yes	Yes	Yes ²	No ²
User level: User, and User property and Setting operation are set to Lock ¹	Yes	No	Yes	No

- 1 If both general and security settings cannot be sent, "W014: Permission denied" will be displayed at the time of data transmission.
- 2 If general settings can be sent but not security settings, "W011: Failed to set any settings." will be displayed at the time of data transmission.

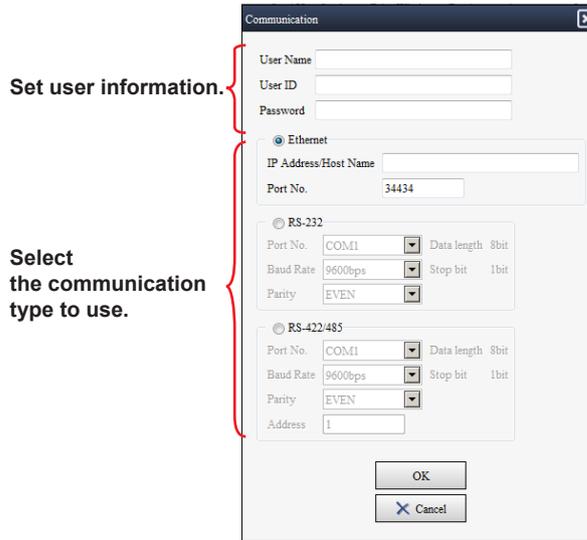
2.5.1 Receiving Setup Data

Procedure

- 1 On the main menu, click the **Setting** tab and then **Receive Settings**.



A Communication dialog box appears.



Note

If the GX/GP's Security settings - Basic settings - Communication is set to Login, you need to specify the user information. If set to Off, you only need to enter the communication parameters to connect.

- 2 Enter the communication information for connecting to the GX/GP. Select Ethernet, RS-232, or RS-422/485 for the communication parameter.
- 3 Enter the information, and click **OK**.
A confirmation message for receiving data appears.



- 4 To start receiving, click **OK**.
Settings are received from the recorder and displayed. The file name display shows "NewFile."

Explanation

The items in the Communication dialog box are described below.

User Name and Password

Enter the user information to log in to the recorder via communication. The subsequent times, the user name that you entered previously will appear, so you will only need to enter the password.

- You can enter up to 20 characters. If you exceed this limit, the exceeded portion will be cut.
- The characters that you can enter are ASCII characters other than single quotation, semicolon, or space.

User ID

If the GX/GP's advanced security function (/AS) is enabled, use the user ID in combination with the user name and password shown above.

User authentication when the advanced security function is On: ► [Chapter 3](#)

Ethernet Communication Parameters

IP address and host name that you enter will be stored and will appear the next time you open the dialog box.

- You can enter up to 128 characters. If you exceed this limit, the exceeded portion will be cut.
- The characters that you can enter are the alphabet (A to Z, a to z), numbers (0 to 9), hyphens, and dots.

The port number is the port number of the recorder that you want to connect to. If you have changed the recorder port number, enter that port number.

- Default value: 34434 (selectable range: 1 to 65535)

Serial Communication Parameters

Set the RS-232 and RS-422/485 parameters from the **Port No.**, **Baud rate**, and **Parity** lists. (Enter the RS-422/485 address in the **Address** box.) These values are also stored and will appear the next time you open this dialog box.

Communication	Setup Item	Default Value	Selectable Range
RS-232	Port No.	COM1	COM1 to COM20
	Baud rate	9600	9600/19200/38400/57600/115200 bps
RS-422/485	Parity	EVEN	ODD/EVEN/NONE
	Address	1	1 to 99

Note

- If you change the serial communication COM port number from Windows Device Manager, restart the PC. Otherwise, the new setting may not take effect.
- The serial communication parameters in this software are fixed at 8-bit data lengths and 1-bit stop bit.

2.5.2 Sending Setup Data

You can send the current setup data to the GX/GP. This is not possible if the recorder is recording.

Procedure

- 1 On the main menu, click the **Setting** tab and then **Send Settings**.



A dialog box for entering communication information appears.

- 2 Enter the information, and click **OK**.

 A screenshot of the 'Communication' dialog box. It has a title bar with a close button. The dialog contains several input fields and radio buttons. At the top, there are fields for 'User Name', 'User ID', and 'Password'. Below these are three radio buttons: 'Ethernet' (selected), 'RS-232', and 'RS-422/485'. Under 'Ethernet', there is a field for 'IP Address/Host Name' and a 'Port No.' field with the value '34434'. Under 'RS-232', there are fields for 'Port No.' (COM1), 'Data length' (8bit), 'Baud Rate' (9600bps), 'Stop bit' (1bit), and 'Parity' (EVEN). Under 'RS-422/485', there are fields for 'Port No.' (COM1), 'Data length' (8bit), 'Baud Rate' (9600bps), 'Stop bit' (1bit), 'Parity' (EVEN), and 'Address' (1). At the bottom, there are 'OK' and 'Cancel' buttons.

A confirmation message for sending data appears.

- 3 To start sending, click **OK**.
The setup data will be sent.

Note

- If the GX/GP's Security settings - Basic settings - Communication is set to Login, only registered users will be able to send data.
- If you change the GX/GP's (firmware version R1.xx.xx) **Security settings - Basic settings - Communication** from **Off** to **Login** and send setup data, be sure to follow the procedure in **"The procedure described in this section is necessary if you are using GX/GP firmware version R1.xx.xx. If you are using R2.xx.xx or later, you can set the login function according to section 2.5.2 Sending Setup Data and send user information according to section 2.5.3 Sending User Settings."** of section 2.5.4.
- If settings are sent from Hardware Configurator when the Web application is monitoring data (e.g., trend monitor), the setting changes may not be communicated properly to the Web application. In such a case, restart the Web application (Internet Explorer).

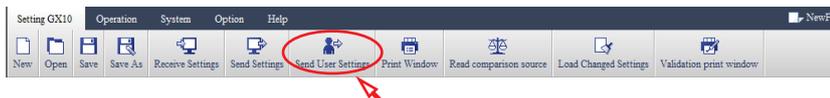
2.5.3 Sending User Settings

You can send only the user settings to the GX/GP via communication. You can perform this operation even when the recorder is recording or computing.

Details on user settings: ► Section 1.9 in the *Models GX10/GX20/GP10/GP20 Paperless Recorder User's Manual* (IM 04L51B01-01EN).

Procedure

- 1 On the main menu, click the **Setting** tab and then **Send User Settings**.



A dialog box for entering communication information appears.

- 2 Enter the information, and click **OK**.

 A screenshot of the 'Communication' dialog box. It has a title bar with a close button. The dialog contains several input fields: 'User Name', 'User ID', and 'Password'. Below these are three radio buttons for selecting the communication method: 'Ethernet' (selected), 'RS-232', and 'RS-422/485'. Under 'Ethernet', there are fields for 'IP Address/Host Name' and 'Port No.' (with the value '34434'). Under 'RS-232', there are dropdown menus for 'Port No.' (COM1), 'Data length' (8bit), 'Baud Rate' (9600bps), 'Stop bit' (1bit), and 'Parity' (EVEN). Under 'RS-422/485', there are dropdown menus for 'Port No.' (COM1), 'Data length' (8bit), 'Baud Rate' (9600bps), 'Stop bit' (1bit), and 'Parity' (EVEN), plus an 'Address' field with the value '1'. At the bottom are 'OK' and 'Cancel' buttons.

A confirmation message for sending data appears.

- 3 To start sending, click **OK**.
The setup data will be sent.

Note

If you are logged in and you change the user information and send it to the GX/GP with firmware version R1.xx.xx, errors will occur when you send subsequent setup commands. To change your user information in the GX/GP from the software via communication, be sure to follow the procedure in **“Changing User Information in the GX/GP via Communication”** of section 2.5.4.

2.5.4 Changing the GX/GP's Security Settings (GX/GP with firmware version R1.xx.xx)

The procedure described in this section is necessary if you are using GX/GP firmware version R1.xx.xx. If you are using R2.xx.xx or later, you can set the login function according to section [2.5.2 Sending Setup Data](#) and send user information according to section [2.5.3 Sending User Settings](#).

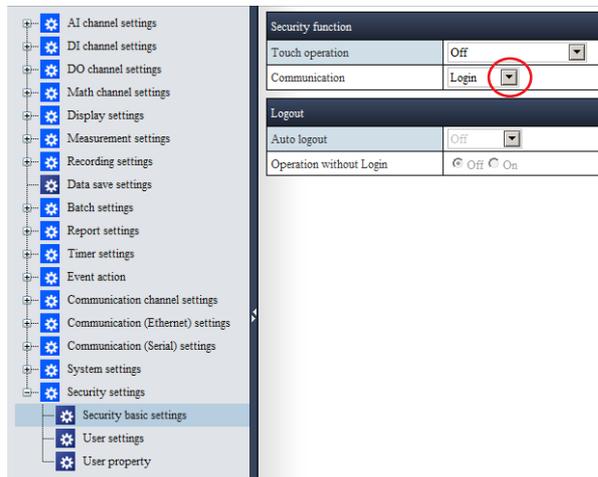
Changing the GX/GP Communication Login Function from Off to Login

The procedure below is for enabling the GX/GP communication login function from Hardware Configurator. Follow the procedure below to change the GX/GP's Security settings - Basic settings - Communication from Off to Login from the software via communication. This allows only registered users to access the GX/GP via communication.

To change the GX/GP communication login function from Login to Off: ► [2.5.2 Sending Setup Data](#)

Procedure

- From the content selection tree, select **Security settings - Security basic settings**, and set **Communication** under **Security function** to **Login**. User settings and User property are added to the tree content.



- From the contents selection tree, select **Security settings - User settings**, and register a user. **The first user is fixed to Admin. Select the mode. Click to register a password.**

User number	User level	Mode	User name	Password
1	Admin	Touch operation + Communication	User01	***** Change
2	User	Touch operation + Communication	User02	***** Change
3	Off	Touch operation + Communication	User03	***** Change
4	Off	Touch operation + Communication	User04	***** Change
5	Off	Touch operation + Communication	User05	***** Change

To register a password, click **Change**.



- 3 On the Submenu, click **Send User Settings** to send the user information.



A Communication dialog box appears.

- 4 Click **OK**.
The user information will be sent.

- 5 On the Submenu, click **Send Settings**.



A Communication dialog box appears.

- 6 A dialog box for entering communication information appears. From the user settings sent in step 3, enter the **User Name** and **Password** for the **Admin** user level.

User Name and Password
for the Admin user level }

- 7 Click **OK** to send the settings.
The setup data will be sent.

Changing User Information in the GX/GP via Communication

Follow the procedure below to change the user information of a logged-in user from this software.

How to change the user information of other users (excluding your own): ► [2.5.2 Sending Setup Data](#), or [2.5.3 Sending User Settings](#)

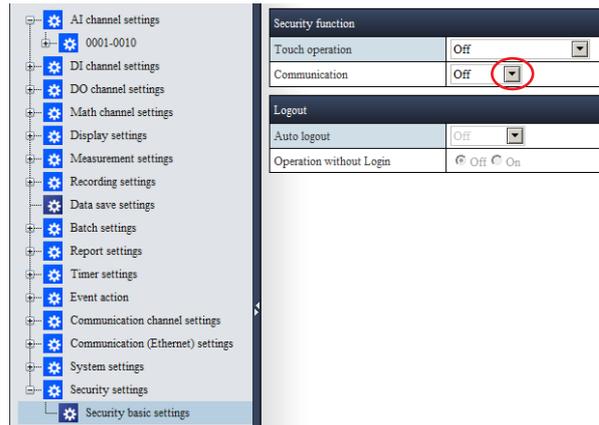
- 1 From the contents selection tree, select **Security settings - User settings**.



- 2 Change the user registration information, such as the user name and password.

User number	User level	Mode	User name	Password
1	Admin	Touch operation + Communication	User01	***** Change
2	User	Touch operation + Communication	User02	***** Change
3	Off	Touch operation + Communication	User03	***** Change
4	Off	Touch operation + Communication	User04	***** Change
5	Off	Touch operation + Communication	User05	***** Change

- 3 From the content selection tree, select **Security settings - Security basic settings**, and set **Communication** under **Security function** to **Off**.



- 4 For this step, use the user name and password for the Admin user level that were valid before you edited them in step 1. Click **Send Settings**.



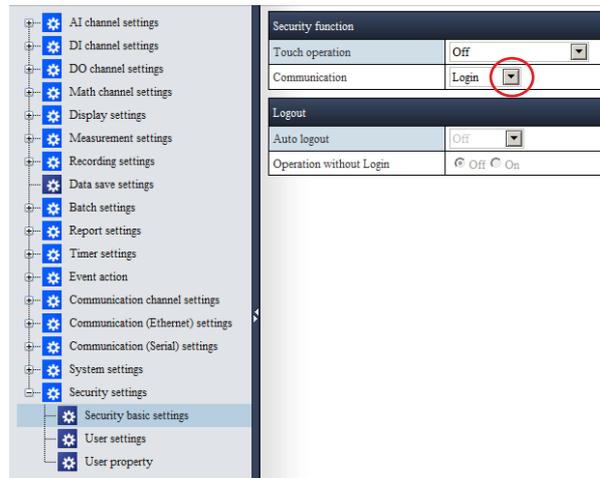
A Communication dialog box appears.

- 5 Enter the old Admin user level information.



The GX/GP's **Security settings - Basic settings - Communication** is set to **Off**. At the same time, the user information edited in step 1 is set in the GX/GP.

- 6 From the content selection tree, select **Security settings - Security basic settings**, and change **Communication** under **Security function** to **Login**.



- 7 Enter the user name and password for the Admin user level that you edited in step 1, and click **Send Settings** on the **Submenu** again.

The GX/GP's **Security settings - Basic settings - Communication** returns to Login. This completes the updating of the user information.

2.6 Controlling the Recorder

You can use this software to start and stop the recorder's recording and computing function and display the recorder's hardware information.

* Computation is an option.

2.6.1 Starting and Stopping Recording and Computing

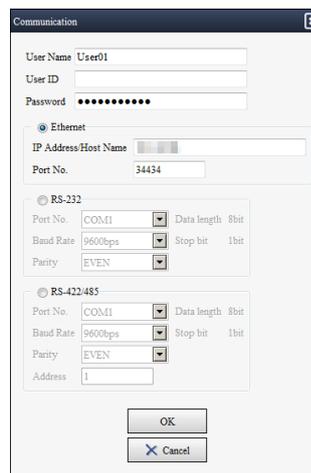
Procedure

- 1 On the main menu, click the **Operation** tab and then **Start Recording**, **Stop Recording**, **Start Computing**, or **Stop Computing** on the submenu.



A Communication dialog box appears.

When you select a command on the **Operation** tab of the main menu, a dialog box for setting communication parameters first appears. For details on the settings of the **Communication** dialog box, see the procedure in section [2.5.1 Receiving Setup Data](#).



- 2 Enter the information, and click **OK**.
A confirmation message for starting or stopping appears.



- 3 To execute the operation, click **OK**.
The recorder will start or stop recording or computing.

2.6.2 Viewing the Recorder Hardware Information

Procedure

- 1 On the main menu, click the **Operation** tab and then **Hardware Info**.



A Communication dialog box appears.

- 2 Enter the information, and click **OK**.

Basic Information								
Product Name	GX10-GP10							
Serial No.	S5M807750							
MAC Address	00-00-64-92-81-19							
Firmware Version	R2.01.94							
Main Program	R2.01.94							
Web Program	R2.00056							
Model	GX10-1							
Option	RS-422/485 / Fail output, 1point / Mathematical function (with report function) / Comm. channel function / USB interface (Host 2 ports) / EtherNet/IP communication / WT communication / Advanced security function / Custom display function / Log scale							
Instruments tag								
Instruments tag No.								
Channel Information	AI 10Ch / DI 0Ch / DO 0Ch / Math 50Ch / Communication 50Ch							
Advanced security function	OFF							
Recognized Module								
ID	Status	Model	Serial No.	Version	Option	Custom	Input Ch.	Output Ch.
0	<input checked="" type="checkbox"/>	GX200XA-10-U2	S5M807738	R0.03.04			10	0
1	<input type="checkbox"/>
2	<input type="checkbox"/>
Status		Status						

The Hardware Information dialog box appears.

About displayed Information: [▶ Explanation](#)

- 3 After you confirm, click **OK**.
Dialog box will close.

Explanation

The Hardware Information dialog box shows the following information.

Basic Information

- Product name: “GX20/GP20” or “GX10/GP10”
- Serial No.
- MAC address
- Firmware version
- Model: GX10, GX20, GP10, or GP20
- Option: The options detected by the recorder are listed in order.

Option		Displayed Characters
Serial communication interface	/C2	RS-232
	/C3	RS-422/485
VGA output	/D5	VGA output
Fail output	/FL	Fail output, 1point
Mathematical function with report function	/MT	Mathematical function (with report function)
Communication channel functions	/MC	Communication channel function
24 V DC/AC power supply	/P1	24VDC/AC power supply
USB interface (Host 2 ports)	/UH	USB interface (Host 2 ports)
Pre-installed modules	/Uxx0	Model pre-installed with analog (universal) input module
	/CRxx	Model pre-installed with digital output module(s) and/or digital input module(s)
EtherNet/IP communication	/E1	EtherNet/IP communication
WT communication	/E2	WT communication
Advanced security function	/AS	Advanced security function
Custom display function	/CG	Custom display function
LOG scale	/LG	Log scale

- Instruments tag: Displays the instruments tag assigned to the GX/GP.
- Instruments tag No.: Displays the instruments tag number assigned to the GX/GP.
- Channel Information: Displays the number of AI, DI, DO, math, and communication channels.
- Advanced security function: Displays the status (On or Off) of the advanced security function (/AS) if the options is installed.

Recognized Module

- ID:
GX20, GP20: 0 to 9
GX10, GX20: 0 to 2
- Status: Displays the recorder output status by icons and tooltips.

Display	Description (text appears on each tooltip)
None	No information
Light blue	GOOD
Yellow	WARNING
Red	ERROR
Blue(?)	INVALID
Yellow(!)	UNMATCH

- Model: Model name of the module. “-----” if it does not exist.
- Serial No.
- Version: Module firmware version
- Option
- Custom: Customization information. “-----” if it is standard.
- Input Ch.: Number of input channels
- Output Ch.: Number of output channels

Status

- Recording: The recorder is recording.
- Computing: The recorder is computing.
- Accessing Media: The recorder is accessing a storage medium.

2.7.2 Initializing Setup Data

Procedure

- 1 On the main menu, click the **System** tab and then **Initialize**.



The initialization confirmation dialog box appears.



- 2 Click **OK** to initialize.
Initialization will take place.

2.8 Printing Setup Data

You can display the current system configuration data and setup data in a separate window and print them. You can select what items to print.

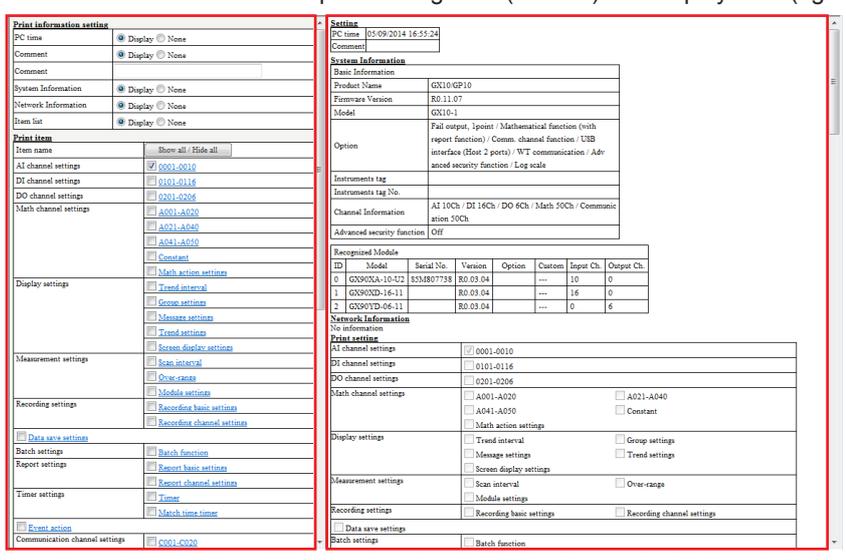
2.8.1 Setting the Print Options

Procedure

- 1 On the main menu, click the **Setting** tab and then **Print Window**.

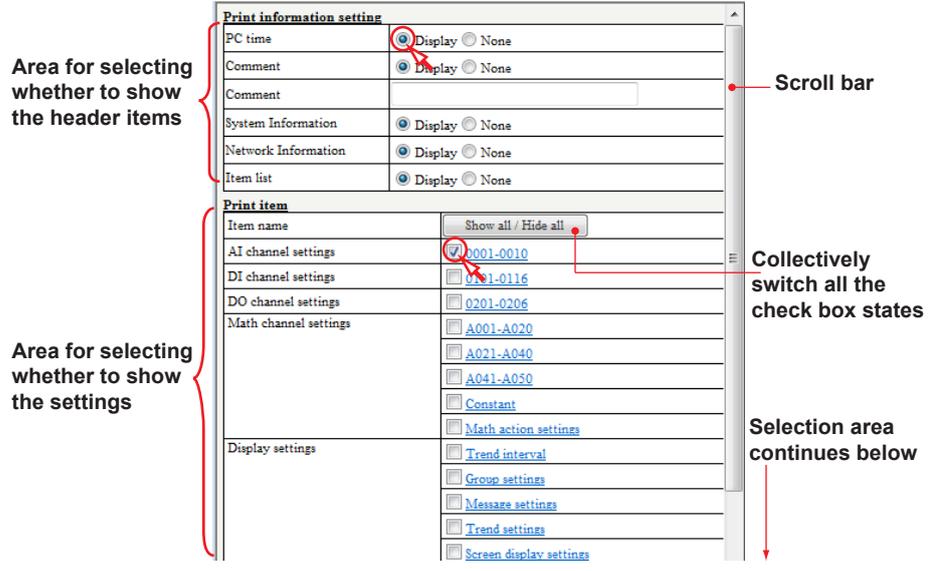


A separate window for printing opens. The window is divided into the print setting area (left half) and display area (right half).



Area for setting print conditions Area for displaying the content to be printed

- 2 In the print setting area (left half), select which items to print. For each item that you want to print, select Display or select the check box. For the items that you do not want to print, select None or clear the check box.



Area for selecting whether to show the header items

Area for selecting whether to show the settings

Scroll bar

Collectively switch all the check box states

Selection area continues below

The selections that you make are applied immediately to the window. In the example shown below, an header item is changed.

Before changing the setting area

Print information setting	
PC time	<input checked="" type="radio"/> Display <input type="radio"/> None
Comment	<input checked="" type="radio"/> Display <input type="radio"/> None
System Information	<input type="radio"/> Display <input checked="" type="radio"/> None
Network Information	<input checked="" type="radio"/> Display <input type="radio"/> None
Item list	<input checked="" type="radio"/> Display <input type="radio"/> None

System Information is set to None



After changing the setting area

Print information setting	
PC time	<input checked="" type="radio"/> Display <input type="radio"/> None
Comment	<input checked="" type="radio"/> Display <input type="radio"/> None
System Information	<input type="radio"/> Display <input checked="" type="radio"/> None
Network Information	<input checked="" type="radio"/> Display <input type="radio"/> None
Item list	<input checked="" type="radio"/> Display <input type="radio"/> None

Before changing the display area

Setting							
PC time	05/12/2014 10:00:28						
Comment							
System Information							
Product Name	GX10 GP10						
Firmware Version	R0.11.07						
Model	GX10-1						
Option	Fail output / Ipoint / Mathematical function (with report function) / Comm. channel function / USB interface (Host 2 ports) / W/C communication / Advanced security function / Log scale						
Instruments tag							
Instruments tag No.							
Channel Information	All 10Ch / DI 16Ch / DO 6Ch / Math 30Ch / Communication 30Ch						
Advanced security function	OFF						
Recognized Module							
ID	Model	Serial No.	Version	Option	Custom	Input Ch.	Output Ch.
0	GX90XA-10-02	55M807738	R0.03.04		---	10	0
1	GX90XD-16-11		R0.03.04		---	16	0
2	GX90YD-09-11		R0.03.04		---	0	6
Network Information		No information					



After changing the display area

Setting	
PC time	05/12/2014 10:00:28
Comment	
Network Information	
No information	
Print setting	
All channel settings	<input checked="" type="checkbox"/> 0001-0010
DI channel settings	<input checked="" type="checkbox"/> 0101-0116
DO channel settings	<input checked="" type="checkbox"/> 0201-0206
Math channel settings	<input type="checkbox"/> A001-A020 <input type="checkbox"/> A021-A040
	<input type="checkbox"/> A041-A050 <input type="checkbox"/> Constant
	<input type="checkbox"/> Math action settings
Display settings	<input type="checkbox"/> Trend interval <input type="checkbox"/> Group settings
	<input type="checkbox"/> Message settings <input type="checkbox"/> Trend settings
	<input type="checkbox"/> Screen display settings
Measurement settings	<input type="checkbox"/> Scan interval <input type="checkbox"/> Over-range
	<input type="checkbox"/> Module settings
Recording settings	<input type="checkbox"/> Recording basic settings <input type="checkbox"/> Recording channel settings

The System Information area is gone, and the AI channel settings have been shifted up.

- 3 When you have selected all the items that you want to print, click **Print** on the Web browser's **File** menu. The Web browser's Print dialog box appears.
- 4 Click **OK**. The setup data will be printed.

Note

- In the user settings of security settings, User ID and Password are printed with concealed characters (asterisks).
- To preview the print, on the **File** menu, click **Print Preview**.
- If you change settings while the Print window is displayed, to apply the changes to the window, click **Refresh** from the Internet Explorer's **View** menu.
- To set the page number, click Page Setup on the Internet Explorer's File menu.
- Configure the printer settings in accordance with your PC system.

Explanation

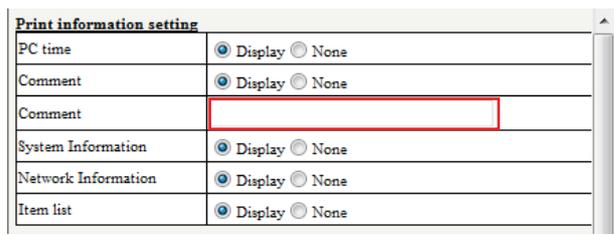
This section explains the print settings shown on the left side of the window.

Print information setting

The settings in this area specifies the printing of header items. The default values of all items are set to Display.

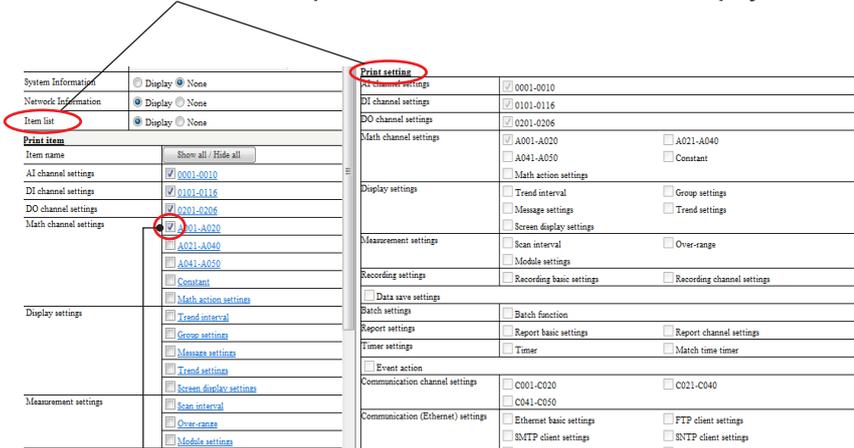
Changing an item to None clears the title and information from the display area on the right.

- In the Comment box, you can directly enter a comment (text). When Comment is set to Display, this text is displayed.



- If Item list is set to Display, a list of settings to be printed is printed in the header area. This list reflects the items selected in Print item describe below.

The Item list is added to the print content when Item list is set to Display.



If you select the check boxes for the items you want to print, they are reflected in the Print item list.

Print item

Select the check boxes of the items to specify the settings to be printed.

By default, only the first item (e.g., AI channel settings) is selected. The check box conditions when you close the window are retained for the next time.

- Click **Show all/Hide all** to collectively select or clear all the Print item check boxes.



2.8 Printing Setup Data

- Clicking a title of the settings under Print item moves the display area on the right to the corresponding title.

Jumped to "0101-0116"

Print information settings		0101-0116		Range				Scale			
CH	Type	Span Lower	Span Upper	Calculation	Reference channel	Decimal place	Lower	Upper	Unit		
0101	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0102	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0103	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0104	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0105	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0106	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0107	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0108	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0109	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0110	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0111	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0112	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0113	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0114	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0115	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		
0116	DI	0	1	OFF	N/A	N/A	N/A	N/A	N/A		

Click "0101-0116"

2.8.2 Validation Print

The Validation print window is used to compare the setup data that you created to a setup data reference.

You can use the Read comparison source menu to load a comparison source file, compare the differences, and print them.

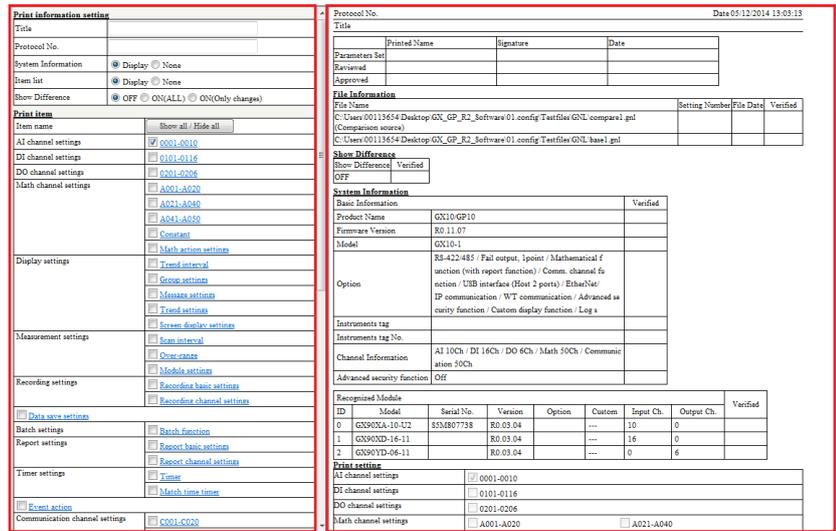
Loading the Comparison Source File: ► [2.2.2 Opening the Comparison Source File](#)

Procedure

- 1 On the main menu, click the **Setting** tab and then **Validation print window**.



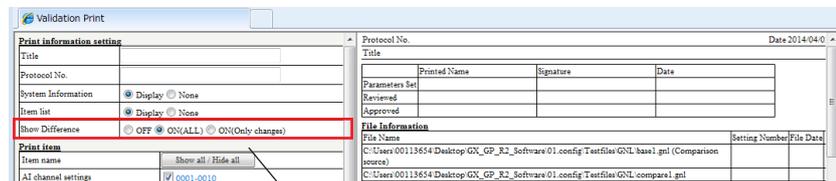
A separate window for printing opens.



Area for setting print conditions Area for displaying the content to be printed

- 2 In the print setting area shown on the left side of the window, select which items to print.
For the items that you want to print, select Display or select the check boxes. For the items that you do not want to print, select None or clear the check boxes.

- 3 If you want to display and print the differences between two files, under Print information setting, set Show Difference to Display.



“Show Difference”
Whether to include the difference

You can view the differences in the setup data in the print content on the right.

The procedure to set the print conditions is the same as that described in section [2.8.1 Setting the Print Options.](#)”

Explanation

This section explains the setting area shown on the left side of the Validation print window.

Print information setting

The settings in this area specifies the printing of header items.

Item	Selectable Range/Options	
Title	Text input (up to 64 characters)	The entered text is reflected in the header of the print display area.
Protocol No.	Text input (up to 32 characters)	Same as above
System Information	Display, None	Selecting Display shows the item in the display area on the right.
Item list	Display, None	Selecting Display prints a list of the print item settings in the header area. The items in this list are the same as those selected under Print item.
Show Difference ^(Note)	None	The difference is not displayed.
	ON (All)	Items that are different and those that are not are both displayed (printed).
	ON (Only changes)	The details of only the items that are different are displayed (printed). For items that are not different, only their titles are displayed.

Note

- Show Difference is valid only when a comparison source file has been specified.
- If Show Difference is set to ON (ALL), the comparison source settings are printed with strikethroughs. Items that are the same are printed in the same manner as normal printing.

0001-0010												
CH	Type	Range				Calculation	Reference channel	Scale				Verified
		Range	Span Lower	Span Upper	Decimal place			Lower	Upper	Unit		
0001	Volt	2V	-2.0000	2.0000	Delta Off	0001 N/A	N/A	N/A	N/A	N/A		
0002	TC	K	-270.0	1370.0	Off	N/A	N/A	N/A	N/A	N/A		
0003	Volt	200mV	-200.00	200.00	Off	N/A	N/A	N/A	N/A	N/A		
0004	RTD	Pt100	-200.0	850.0	Off	N/A	N/A	N/A	N/A	N/A		
0005	Volt	200mV 2V	-200.00 -2.0000	200.00 2.0000	Off	N/A	N/A	N/A	N/A	N/A		
0006	Skip Volt	N/A 2V	N/A -2.0000	N/A 2.0000	N/A Off	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A		
0007	Skip Volt	N/A 2V	N/A -2.0000	N/A 2.0000	N/A Off	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A		
0008	FE Volt	K 2V	-270.0 -2.0000	1370.0 2.0000	Off	N/A	N/A	N/A	N/A	N/A		
0009	Volt	2V	-2.0000	2.0000	Off	N/A	N/A	N/A	N/A	N/A		
0010	Volt	2V	-2.0000	2.0000	Off	N/A	N/A	N/A	N/A	N/A		

- If Show Difference is set to ON (Only changes), only the lines with changes are printed as shown below. If all the items under a title have not changed, "No change" is printed under the title.

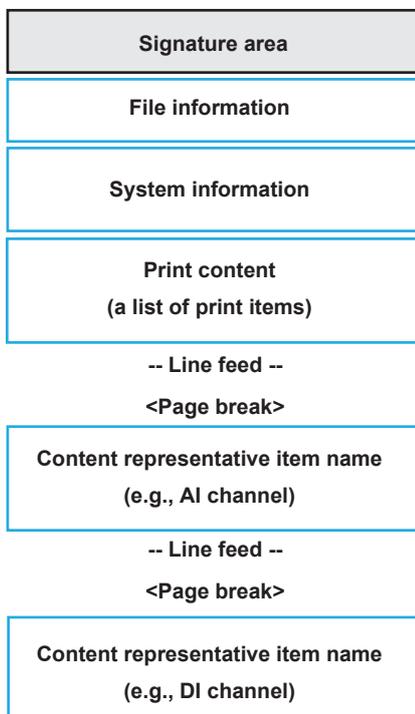
0001-0010												
CH	Type	Range				Calculation	Reference channel	Scale				Verified
		Range	Span Lower	Span Upper	Decimal place			Lower	Upper	Unit		
0001	Volt	2V	-2.0000	2.0000	Delta Off	0001 N/A	N/A	N/A	N/A	N/A		
0005	Volt	200mV 2V	-200.00 -2.0000	200.00 2.0000	Off	N/A	N/A	N/A	N/A	N/A		
0006	Skip Volt	N/A 2V	N/A -2.0000	N/A 2.0000	N/A Off	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A		
0007	Skip Volt	N/A 2V	N/A -2.0000	N/A 2.0000	N/A Off	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A		
0008	FE Volt	K 2V	-270.0 -2.0000	1370.0 2.0000	Off	N/A	N/A	N/A	N/A	N/A		

Print Item

Select the check boxes for the items to specify the settings to be printed. The procedure is the same as that described in "Print item" on page 2-55.

Print Contents

The following figure shows the structure of the print content shown on the right side of the Validation print window. Of the item that are printed, those that are different from normal printing are described below.



Header

The header displays the title and protocol number entered under Print information setting and the PC timestamp of when the Validation print window was displayed. The timestamp is displayed in the format specified in the Display menu. The header appears at the top of each page in the print preview and in the actual print.

Protocol No.	Date 05/12/2014 13:13:48
Title	

Signature

The signature area is printed at the top of validation and for each content item name (e.g., AI channel settings, DI channel settings). If the print item name is set to Hide all, it is only displayed at the top of validation. If all the settings under an item have not changed, only the item name and signature area are displayed.

	Printed Name	Signature	Date
Parameters Set			
Reviewed			
Approved			

File Name

The file path, Setting Number, File Date, and Verified are displayed in a table. The following figure is for when Show Difference is set to Display. The top line is the comparison source file.

File Information			
File Name	Setting Number	File Date	Verified
C:\Users\... Desktop\GX_GP_R2_Software\01.config\Testfiles\GNL\compare1.gnl (Comparison source)			
C:\Users\... Desktop\GX_GP_R2_Software\01.config\Testfiles\GNL\base1.gnl			
Show Difference			
Show Difference	Verified		
ON(Only changes)			

Note

Setting Number and File Date are displayed only for setup files that have been created on a GX/GP with the advanced security function (/AS) set to On. N/A is displayed if Setting Number is not available.

System Information

Displays the GX/GP system information. In the case of validation, a confirmation column is added to the right of the table.

System Information								Verified
Basic Information								
Product Name	GX10/GP10							
Firmware Version	R0.11.07							
Model	GX10-1							
Option	RS-422/485 / Fail output, 1point / Mathematical function (with report function) / Comm. channel function / USB interface (Host 2 ports) / EtherNet/IP communication / WT communication / Advanced security function / Custom display function / Logs							
Instruments tag								
Instruments tag No.								
Channel Information	AI 10Ch / DI 16Ch / DO 6Ch / Math 50Ch / Communication 50Ch							
Advanced security function	Off							
Recognized Module								Verified
ID	Model	Serial No.	Version	Option	Custom	Input Ch.	Output Ch.	
0	GX90XA-10-U2		R		---	10	0	
1	GX90XD-16-11		R		---	16	0	
2	GX90YD-06-11		R		---	0	6	

Print Item

The settings of the items selected under Print item are printed. In the case of validation, a confirmation column is added to the right of the table. The following figure is for when Show Difference is set to ON (Only changes).

0001-0010											Verified	
CH	Type	Range				Calculation	Reference channel	Scale				
		Range	Span Lower	Span Upper	Decimal place			Lower	Upper	Unit		
0001	Volt	2V	-2.0000	2.0000	Offset	0001	N/A	N/A	N/A	N/A		
0005	Volt	200mV	-200.00	200.00	Off	N/A	N/A	N/A	N/A	N/A		
0006	Skip	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
0007	Skip	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
0008	Temp	K	-270.0	1370.0	Off	N/A	N/A	N/A	N/A	N/A		

Security Settings

In the user settings of security settings, User name, User ID, and Password are left empty in the print.

- Difference display example for when the advanced security function (/AS) is not available or is set to Off

Security settings								
Printed Name	Signature	Date						
Parameters Set								
Reviewed								
Approved								
Security basic settings								
Security function	Off	Verified						
Communication	Login							
User settings								Verified
User number	User level	Mode	User name	Password	User property	Authority number		
1	Admin	Touch operation + Communication			N/A	N/A		
2	User	Touch operation + Communication			Off	N/A		
3	User	Touch operation			Off	N/A		
4	Off	N/A			N/A	N/A		

- Difference display example for when the advanced security function (/AS) is set to On

Security settings			
Printed Name	Signature	Date	
Parameters Set			
Reviewed			
Approved			

Security basic settings
No change

User settings							
User number	User level	Mode	User name	User ID	Password	Password expiration	Verified
4	User Off	Touch operation N/A	Communication			Off N/A	

User number	User property	Authority number	Sign in property	Authority of sign in	Verified
4	Off N/A	N/A	Off N/A	N/A	

User property
No change

Sign in settings		
Data file transfer	Sign in	Verified
FTP transfer timing	Data save	

Sign in property
No change

Note

Even if items in the comparison source data are set to off, some of them are displayed in the show difference window when the print setting is set to on.

In such a case, the difference is displayed by assuming the comparison source data to be invalid (N/A). The following figure is a display example for Batch text.

Batch text			
Text field number	Title of field	Characters	Verified
1	N/A abcdefg	N/A 0123456789	
2	N/A hijklmn	N/A 9876543210	
3	N/A	N/A	

Note

- To preview the print, on the **File** menu, click **Print Preview**.
- If you change settings while the Validation print window is displayed, to apply the changes to the window, click **Refresh** from the Internet Explorer's **View** menu.
- To set the page number, click **Page Setup** on the Internet Explorer's **File** menu.
- Configure the printer settings in accordance with your PC system.

Blank

3.1 Operation

This chapter explains how to use setup data files (.GSL extension)* for GX/GPs with the advanced security function (/AS).

* Refers to setup data files that have been created on a GX/GP with the advanced security function (/AS) set to On.

It also includes setup data created with Advanced security function On/Off under System config set to On in this software.

Note

For details on how to use and configure the GX/GP advanced security function (/AS), see the Advanced Security Function (/AS) User's Manual (IM 04L51B01-05EN).

Creating Setup Data

For the procedure, see section **"2.1 Creating New Setup Data"**

Displaying Setup Data

You can load an existing setup data file (*.GSL) or measurement data file (*.GSE, *GSD) from a PC and display the settings.

For the procedure, see section **"2.2 Displaying Setup Data"**

To display Security settings including user settings, authentication is required. For details, see section **"3.2 User Authentication"**

Editing Setup Data

For the procedure, see section **"2.3 Editing Setup Data"**

To edit Security settings including user settings, authentication is required. For the procedure, see section **"3.2 User Authentication"**

Note the following points when you edit settings with the advanced security function set to On. If you make a mistake in the settings, you may no longer be able to log in to the GX/GP.

1. When using the password management function (KDC)
 - For Certification key under Communication (Ethernet) settings > KDC client settings, be particularly careful when entering Host principal and the password of the host user.
 - Be sure to include users that are registered on the KDC server side in the GX/GP User settings.
 - Store the root user password in safe keeping.
 - If you forget or lose it, you will not be able to set Login back to Off in an emergency (such as when you can no longer log in due to an KDC setting error).
 - You can use the root user also to log in via communication from this software.
2. If On/Off under Security basic settings > User ID is changed, the User ID and Password in user settings are initialized.
3. If On/Off under Security basic settings > Password management is changed, the User ID and Password in user settings are initialized.
4. If Security basic settings > Password management is set to On, the User name setting is not shown in this software.

Saving Setup Data

For the procedure, see section [“2.4 Saving Setup Data”](#)
Note that overwriting is not possible.

Receiving and Sending Setup Data

For the procedure, see section [“2.5.1 Receiving Setup Data”](#) and section [“2.5.2 Sending Setup Data”](#)

Note

Before sending settings, check that an SD memory card is installed in the GX/GP. If the advanced security function is enabled, settings will not be sent if an SD memory card is not available.

Whether setup data can be sent or received depends on the GX/GP security settings. If the advanced security function is enabled, it is as shown in the following table.

The GX/GP's Security settings - Basic settings		Settings That Are Sent and Received			
		General settings (other than security settings)		Security settings	
		Reception	Transmission	Reception	Transmission
Touch operation and Communication are both set to Off		Yes	Yes	Yes	Yes
Touch operation is set to Login, and Communication is set to Off ^(Note)		Yes	No	Yes	No
Touch operation and Communication are both set to Login or Touch operation is set to Off and Communication is set to Login	Admin	Yes	Yes	Yes	Yes
	User User property not set	Yes	Yes	Yes	No
	User User property and Setting operation are set to Lock	Yes	No	Yes	No
	Monitor	Yes	No	Yes	No

Note

For a GX/GP whose advanced security function is set to On, Touch operation is set to Login, and Communication is set to Off, Send Settings is not possible from this software. (Receive Settings is possible.)
If you want to apply the settings edited with this software to the GX/GP, save the setup file from the software. Then, log in to the GX/GP using touch operation, and load the file.

Initializing Setup Data

Only the settings that are being edited are initialized.
For the procedure, see section [“2.7 Initializing Setup Data”](#)

Printing Setup Data

You can print setup data.
However, if the advanced security function is set to On, User name, User ID, and Password are printed with concealed characters (asterisks).
For the procedure, see section [“2.8 Printing Setup Data”](#)

Printing Validation Data

You can load a reference setup file, compare with the current setup data, and print the validation data.

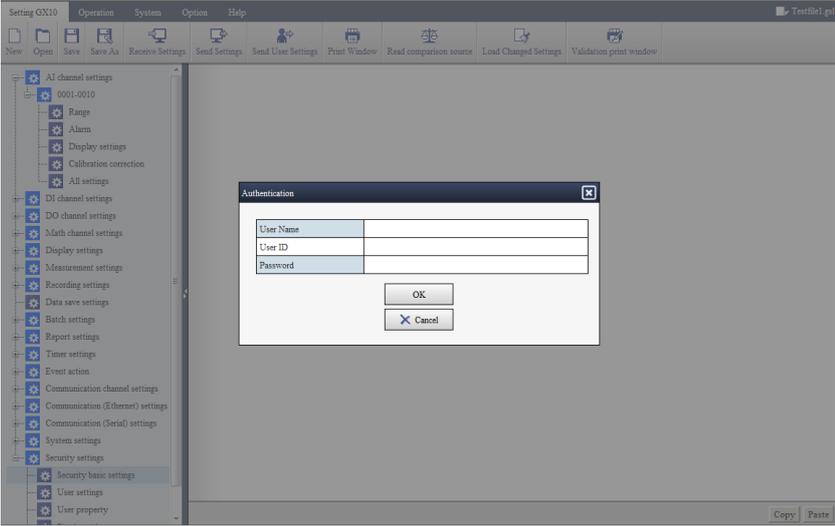
For instructions on how to load a reference file, see [“2.2.2 Opening the Comparison Source File”](#)

For information on how to configure validation printing, see section [“2.8.2 Validation Print”](#)

3.2 User Authentication

If the security function is in use in a system configuration where the advanced security function (/AS) is enabled, attempting to display the content under Security settings may trigger User authentication. This section explains user authentication.

The following figure is an example of a window for when you select Security basic settings in a condition in which authentication is assumed to occur.



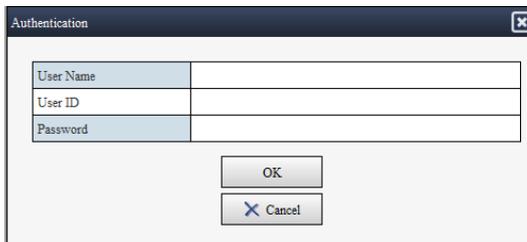
3.2.1 When User Authentication Occurs

When you open a setup file or execute Receive Settings, a User authentication dialog box appears if all the following conditions are met.

1. In System config, Advanced security function On/Off is set to On.
2. Under Security basic settings - Security function, Touch operation or Communication is set to Login.
3. An item belonging to Security settings is selected for displaying.
 - Security basic settings
 - User settings
 - User property
 - Sign in settings
 - Sign in property

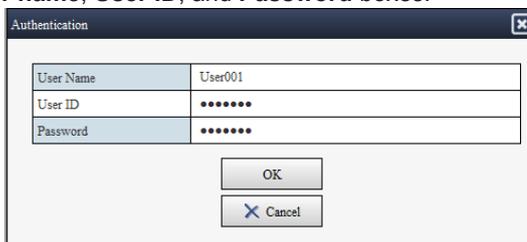
3.2.2 Entering Information in the User Authentication Dialog Box

This section describes the procedure to perform when a User authentication dialog box appears. If authentication is successful, you will be able to display and edit the items in Security settings.



Procedure

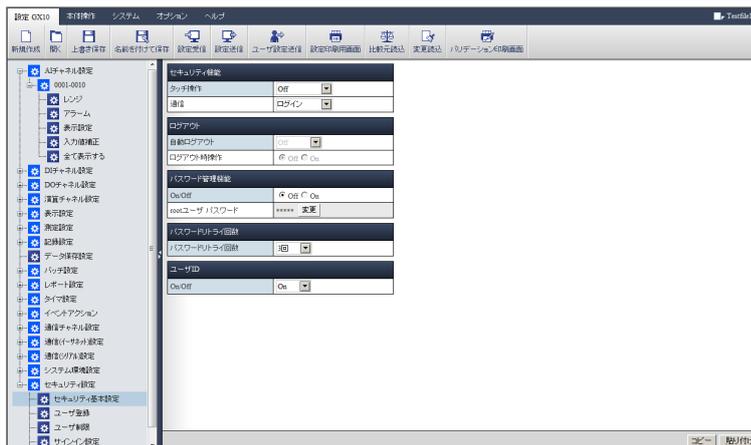
- 1 When a User authentication dialog box appears, enter the information of an “Admin” user in the **User name**, **User ID**, and **Password** boxes.



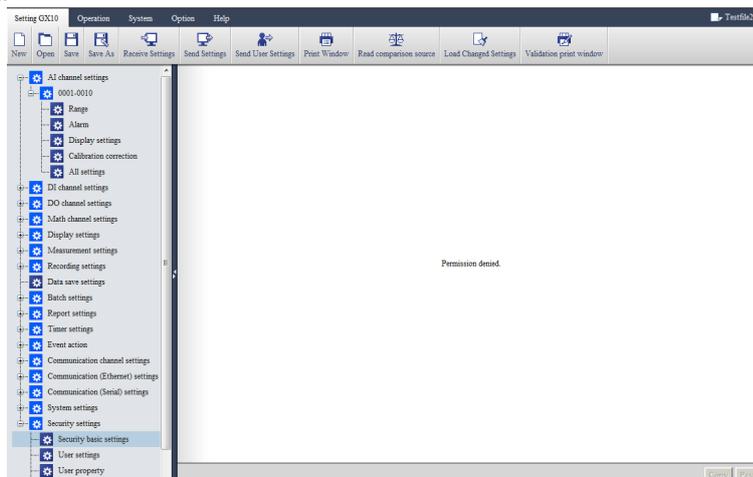
Note

- The “Admin” user refers to an “Admin” user in the user settings within the setup data that is opened.
- In some cases, User ID and Password may not appear. (See the explanation on the next page.)

- 2 Click **OK**.
The dialog box closes, and authentication takes place.
If the entered user information matches that of any “Admin” user in the setup data, the selected settings will appear.



If authentication fails, the message “Permission denied” will appear in the content area.



- 3** To retry authentication, select other items under Security settings. A User authentication dialog box will appear.

Explanation

The items in the User authentication dialog box are described below.

User name

Enter the user name of an “Admin” user in the user settings within the setup data.

User ID

Enter the user ID of an “Admin” user in the user settings within the setup data. The text that you enter will not be displayed. This is displayed only when Security basic settings > User ID is set to On in the setup data.

Password

Enter the password of an “Admin” user in the user settings within the setup data. The text that you enter will not be displayed. This is displayed only when Security basic settings > Password management is set to Off in the setup data.

Note

- Authentication will be successful when the information entered in the dialog box matches the user information (User name, User ID, and Password) of an “Admin” user in the user settings within the setup data.
- Once authentication is successful, you can display various security settings without authentication until the conditions for triggering authentication described earlier are met again.
- If user authentication fails, an error will appear. There is no limit on the number of times you can fail.

Blank

4.1 Errors and Messages

Message

Code	Message	Description and Corrective Action
None	The current password has expired. Input the new password.	This message appears if the password has not been changed from its default value or if the password has expired.
M001	Save changes to xxx?	File name confirmation.
M002	Receiving finished.	Reception completed successfully.
M003	Sending finished.	Transmission completed successfully.
M004	Recording started.	The recorder started recording.
M005	Recording stopped.	The recorder stopped recording.
M006	Computing started.	The recorder started computing.
M007	Computing stopped.	The recorder stopped computing.

Warning Messages

Code	Message	Description and Corrective Action
No code	Input value is invalid. It is returned before the change.	An invalid value may have been entered in a setup item. Check the settings below. <ul style="list-style-type: none"> • Expression • IP address • FTP connection • SMTP or POP3 server password • Password for the security setting operation lock or user registration
W001	Receive settings from connecting hardware.	Reception confirmation. To continue, click OK . To cancel, click Cancel .
W002	Send settings to connecting hardware. If user level is not "Admin", some settings can not be set on the device.	Transmission confirmation. To continue, click OK . To cancel, click Cancel .
W003	Hardware and software configurations don't match. Continue sending data?	Transmission confirmation. To continue, click OK . To cancel, click Cancel .
W004	System configuration has been changed. The input configuration and data will be initialized. Continue?	If you change the system configuration, the displayed setup data will be initialized. To continue changing, click OK . To cancel, click Cancel .
W005	Overwrite the file?	Confirmation for overwriting a file with the same name. To continue, click OK . To cancel, click Cancel .
W006	Start recording.	Recording start confirmation. To continue, click OK . To cancel, click Cancel .
W007	Stop recording.	Recording stop confirmation. To continue, click OK . To cancel, click Cancel .
W008	Start computing.	Computing start confirmation. To continue, click OK . To cancel, click Cancel .
W009	Stop computing.	Computing stop confirmation. To continue, click OK . To cancel, click Cancel .
W010	Initialize current settings.	Initialization confirmation. To continue, click OK . To cancel, click Cancel .
W011	Failed to store any settings.	Some of the setup data have not been applied to the recorder due to differences in the system configuration. Check the system settings.
W012	Number of channels is over the maximum value.	The module configuration setting exceeds the maximum number of channels. Check the modules and the maximum number of channels, and reconfigure.
W013	Failed to set any settings.	Some of the setup data have not been applied to the software. Check the system configuration or user level.
W014	Permission denied.	You do not have permission to send settings. Increase the user level, or grant permissions to allow it.
W015	All extended units settings will be discarded. OK?	This message appears when in system configuration, an IO expansion module of the GX/GP is changed from specified to not specified. To proceed with the change, click OK .

Error Messages

Code	Message	Description and Corrective Action
E001	Communication error occurred.	Communication error occurred with the recorder. Check communication parameters, network cables, and settings on the recorder.
E002	Failed to save the file.	Failed to save the file. Check the folder and file properties.
E003	Failed to read the file.	Failed to open the file. Check the file name.
E004	Internet Explorer is not installed.	Internet Explorer is not installed. Install Internet Explorer.
E005	Now recording. Can't store settings.	Settings cannot be send while the recorder is recording. Send them after the recorder stops recording.
E006	Now computing. Can't store settings.	Settings cannot be send while the recorder is computing. Send them after the recorder stops computing.
E007	The file is read-only.	Attempting to save to a read-only file. Make the file writable, or save to a different file.
E008	Access to the file is denied.	Check the access privileges to the file. Check whether the file system limit has been exceeded.
E009	The disk is full.	Check the free space in the save destination.
E010	The directory is full.	Check the number of files in the save destination.
E011	The file is invalid.	A file format error.
E012	Sharing violation occurred.	The file is already opened in another application. Close the file.
E013	Error occurred.	An error other than those above (001 to 012) occurred.
E014	The directory does not exist.	The directory may have been deleted.
E015	PDF file reader is not installed.	Install Adobe Reader.
E016	The directory already exists.	Check whether the path and folder name have been specified correctly.
E017	Bad file path is specified.	The file path length has exceeded the limit (256 characters), or an invalid character has been used. Shorten the file path, or correct the file name.
E018	Failed to open program files.	This error occurs when a browser other than the browser started by this software was used to access the software, or Internet Explorer was refreshed consecutively. Close all browsers, and restart Hardware Configurator.
E019	Please delete temporary internet files from the browser, close the browser and restart the application.	This error occurs when temporary internet files affect the software. Delete temporary files in Internet Explorer, then restart Hardware Configurator.
E020	Login inputs are incorrect.	Enter a valid user name and password in the communication condition dialog box. If the GX/GP firmware version is R1.xx.xx, this message appears when the user logged in changes his or her own user information and sends it or when the user sends setup data that changes the "Security setting > basic settings > communication" setting on the GX/GP from Off to Login. In these cases, resend the command with the new valid user name and password.
E021	This function is not possible at this time.	This message appears in the following cases. • Math start or Math stop was attempted, but the GX/GP does not have the math option. • The GX/GP advanced security function is enabled, the Touch operation is set to Login, and communication is set to Off.
E022	Failed to open due to difference in system configuration.	You are trying to use Read comparison source to open a file whose system configuration is different from the settings that are currently displayed. Differences can be shown only when the system configurations match. Select a file whose system configuration matches the settings that are currently displayed.
E023	Failed to overwrite due to advanced security file.	An advanced security file with the same name already exists. Save to a different name, or delete the file first before saving.