Portable Gas Monitor
GX-2012
Data Logger Management Program
SW-GX-2012(EX)
Operating Manual

RIKEN KEIKI Co.,Ltd.

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Preface

The operation procedures and precautions mentioned in this operating manual apply only for the specified use of the program. We do not hold ourselves responsible for uses not described in this operating manual.

This operating manual will not explain the basic common operations of Microsoft Windows 7, Windows 8 and Windows 10, such as selecting commands or setting dialog boxes. First-time users of Windows should read the Windows manual or other documents in advance to learn common operations of the operating system.

⚠️ **WARNING**

This product is distributed on a special type of CD called "CD-ROM".
Do not try to play this CD on a common audio CD player.
Ignoring this warning may cause loud noise, resulting in hearing impairment or speaker damage.

⚠️ **CAUTION**

Necessity of pointing devices
This software requires pointing devices such as a mouse or touchpad.
Keyboard-only operation is not supported.

1-1. Purpose and features of this program

This program is used to download data collected by the data logger function featured in GX-2012 to a PC to use the data effectively.
There are the following advantages in downloading data collected by the data logger function:
- Gathered data can be viewed in a list.
- Gathered data can be viewed in graph and table formats.
- Graph and table data can be printed and stored on paper.
- Past data can be stored.
- Manual copying of data is no longer necessary.
- Able to know quickly which unit needs calibration, and perform calibration automatically.
- Able to manage more than one unit easily.

⚠ **Notice**

- Copying or duplicating the content of this manual without our knowledge, in whole or in part, is prohibited unless otherwise specified in law.
- Due to the improvement of the product, the content of this operating manual might be amended without prior notice.
- It is necessary to agree with the Software License Agreement, separately provided, before using this product. Please consent that we assume you have agreed to this agreement when the package is opened.
- Utilization of the software other than for intended purposes is prohibited. If the operating manual is ignored when using the software, or the software is altered in any way, the safety and quality of the product might not be maintained. We will not be liable for any accidents caused by these conditions.

Contents

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Installation and Uninstallation

2-1. Precautions on operating environment

This program can be used on Microsoft operating systems Microsoft Windows 7, Windows 8 and Windows 10. Please note that it cannot be used on other operating systems.

This program requires a maximum of 40 MB hard disk when it is installed. Moreover, on operation of the system, it requires hard disk capacity depending on the amount of data. Please use the program with sufficient disk capacity.

⚠ **CAUTION**

Precautions on handling the CD-ROM

1. CD-ROM storage
   Do not store the CD-ROM in a place exposed to direct sunlight or a place with high temperature and humidity.
2. CD-ROM drive to use
   Avoid using a slot-loading CD-ROM drive.
   The label attached on the CD-ROM might prevent CD-ROM from ejecting properly.
   Use a tray-type CD-ROM drive.

2-2. Software installation

Insert a disk which stores data of the program to a CD-ROM drive of a Windows-based PC. After a while, an installation screen will automatically start.

When the PC does not support the auto-start function of the CD-ROM, operate as follows:

1. From Explorer, open the CD-ROM drive.
2. Double-click the setup.exe file.

2-3. Installation procedure

● **Start the setup program**

After inserting the CD-ROM or starting setup.exe, the following screen is displayed.

Click the "Next" button.

● **Accept the license agreement**

The following screen is displayed.

Click the "Next" button to continue the installation, or the "Cancel" button to abort the installation.

⚠️ **CAUTION**

Fully understand the license agreement before continuing with the installation of the software.

● **Customer Information**

Click the "Next" button to display the following screen.

Click the "Next" button.

● **Destination Folder**
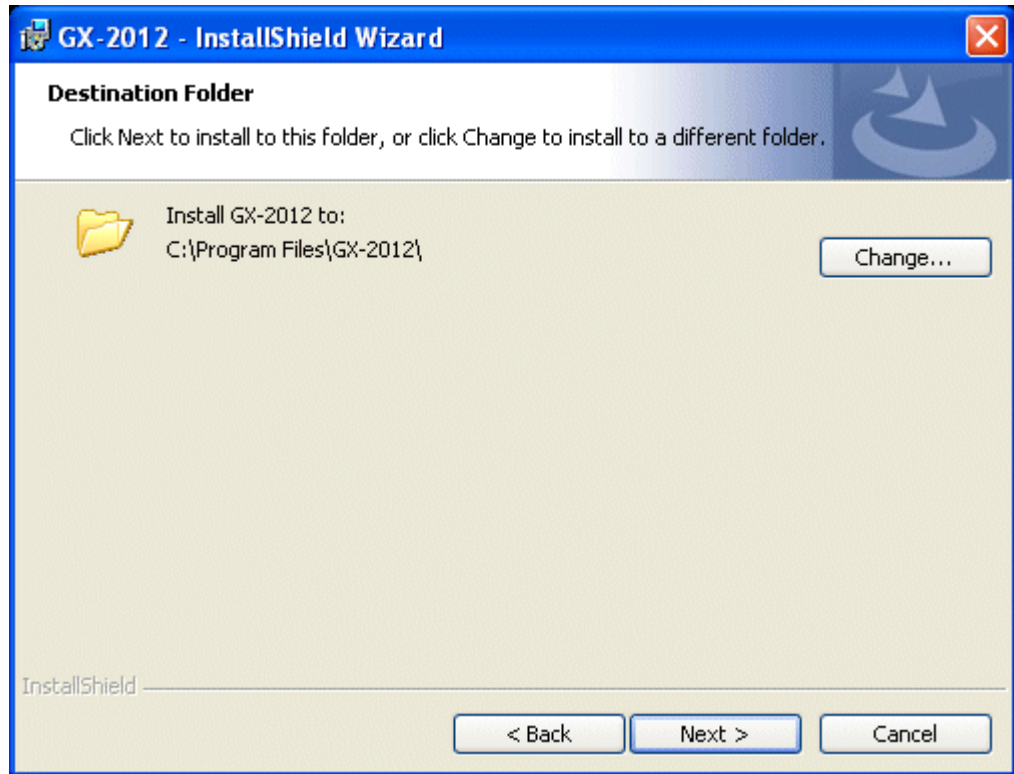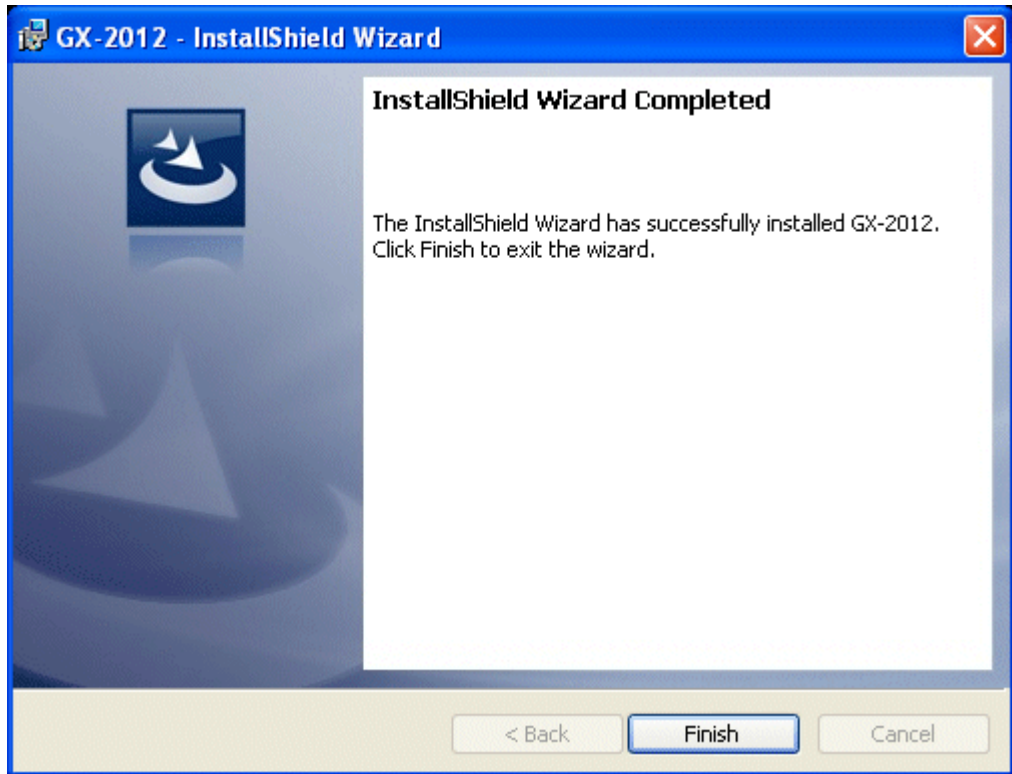

Click the "Next" button.

● **Start setup**

Click the "Next" button to start installation.

● **Complete**   When the setup process is completed, the following screen is displayed.

The program can be used immediately after setup.

⚠ **CAUTION**

Save past data for reinstallation
Please note the following when reinstalling the software:
1. Uninstall the software before reinstallation.
2. If the software is uninstalled after some operation, some files will remain on the PC. Of these files, GX2012.mdb is a database file. If past data needs to be saved, copy this file to a different location, and then delete the folder.

⚠ **CAUTION**

Precautions when installing on Windows 7/8/10
This software requires a library, which consists of files such as various drivers, installed on the Windows system. The files are installed automatically during the installation of the software.
When using Windows 7/8/10, installation of the system library requires administrator privileges.
In this case, follow the instructions to log in as an administrator, and then install the system library.
After installation, a dialog prompts to restart the system. Restart, log on again as a general user, and install the application.
(Both the library and the application are installed by clicking setup.exe in the CD-ROM. Installation with an administrator privilege is required only when the required library is not installed in the system folder.)

⚠ When using the software under a network-connected environment

When installing on a network-connected PC running Windows 7/8/10, check the following points.
IrDA communication utilizes a subset of TCP/IP technology (the communication technology used for the Internet, etc.) and uses a special set of communication groups and IP addresses.
Because of this, some strong Internet security software might reject communication.

If possible, use a computer that is not connected to the network.
When using a computer connected to the network, use with sufficient considerations on security settings.

2-4. Uninstallation

● **Startup**

To uninstall the software, from the Start Menu of the Windows bar, click "Settings" and then start "Control Panel".

Control Panel (example)
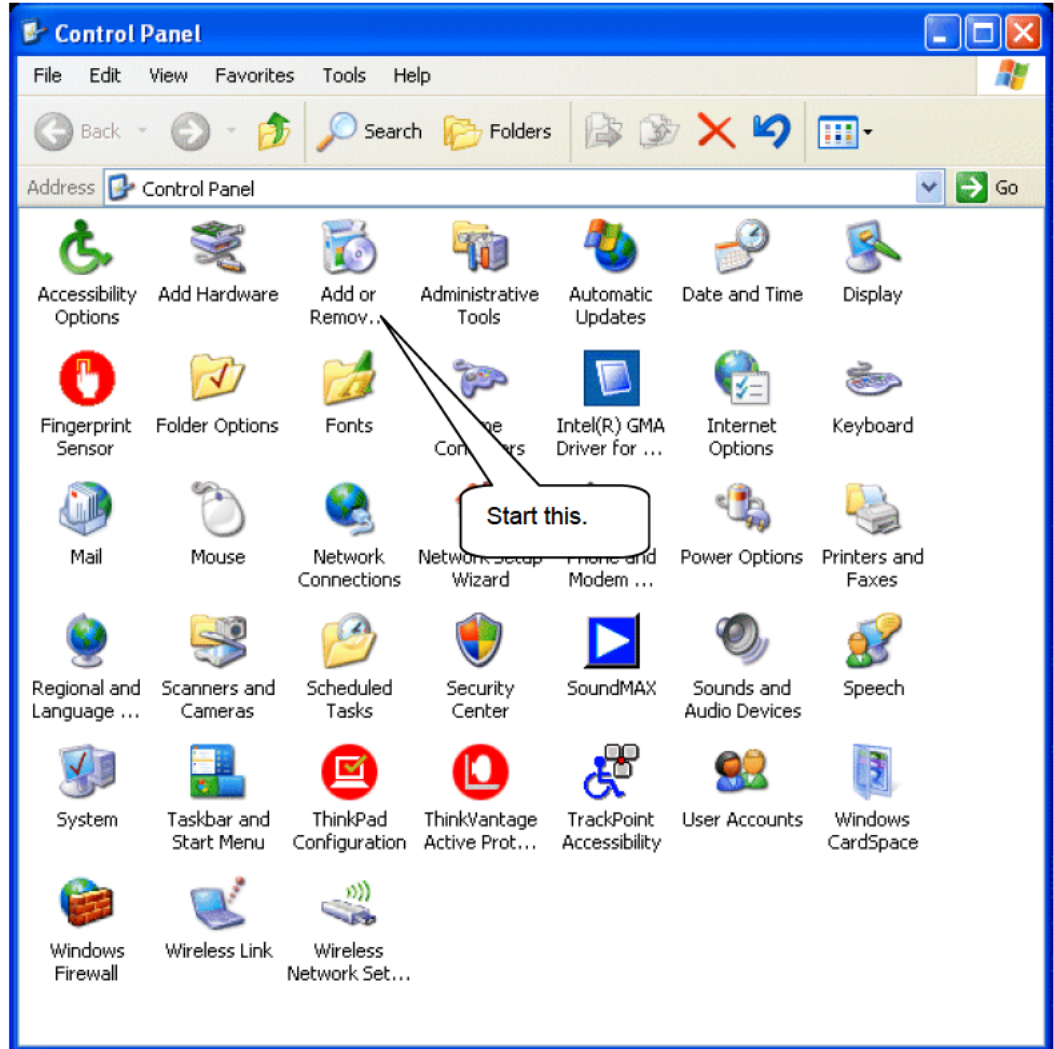
From the Control Panel, double-click "Add or Remove Programs" to start.

● **Select GX-2012**   When "Add or Remove Programs" is double-clicked, the following screen is displayed.
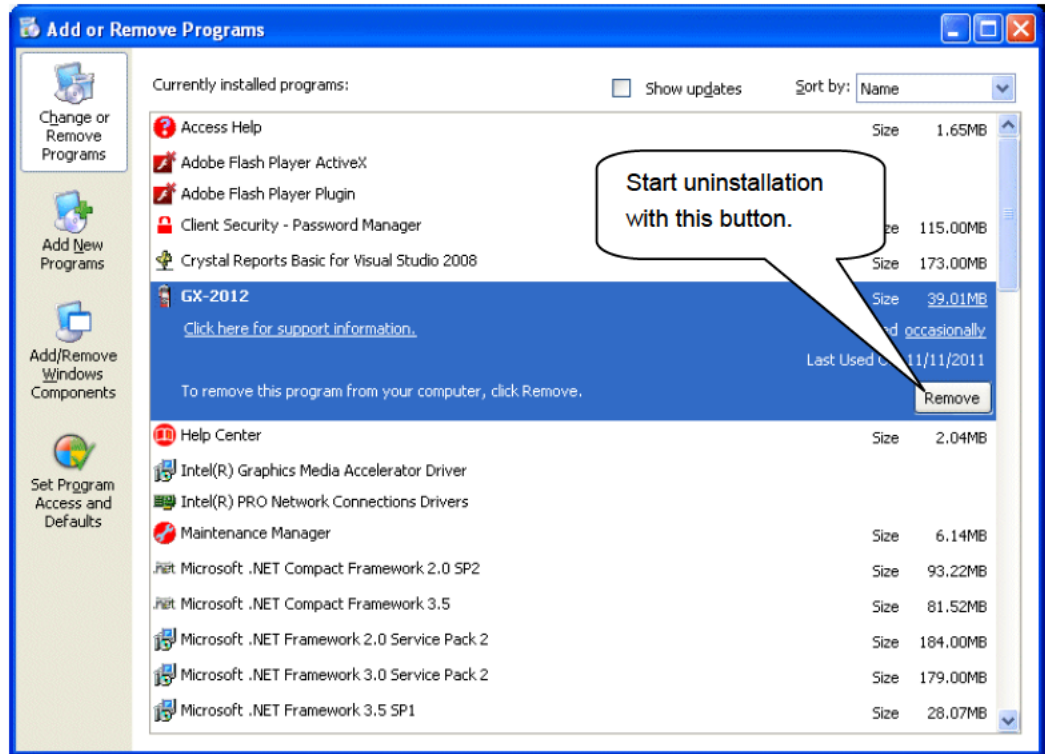
● **Start deletion**   Select "GX-2012" and click the "Remove" button.
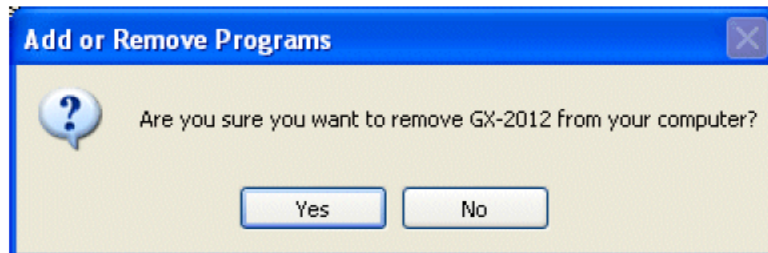
Click "Yes" to start the uninstallation.

⚠ **CAUTION**

A message, "Do you want to remove the shared file?" might be displayed during uninstallation. Select No to All. Selecting Yes to All might affect other applications.

3

How to Operate

Double-click the "GX-2012" desktop shortcut, or click the "Start" menu, select "Programs" and click the GX-8000 program icon.

3-1. Download screen

After the splash screen, the download screen is displayed.

Current screen name

(1) Download data from GX-2012.

(7) Change the setting.

Information area
The communication status is displayed.

(2) The instrument information data is downloaded.

GX-201... ata Logger Management Pro... .04129]

Download
Status
● Serial Port   ● Connect

Download State

Instrument
Serial No.(20 Characters)
Station ID (16 Characters)
User ID (16 Characters)

Automatic Mode
☐ Automatic Download
☐ Automatic Data Removal
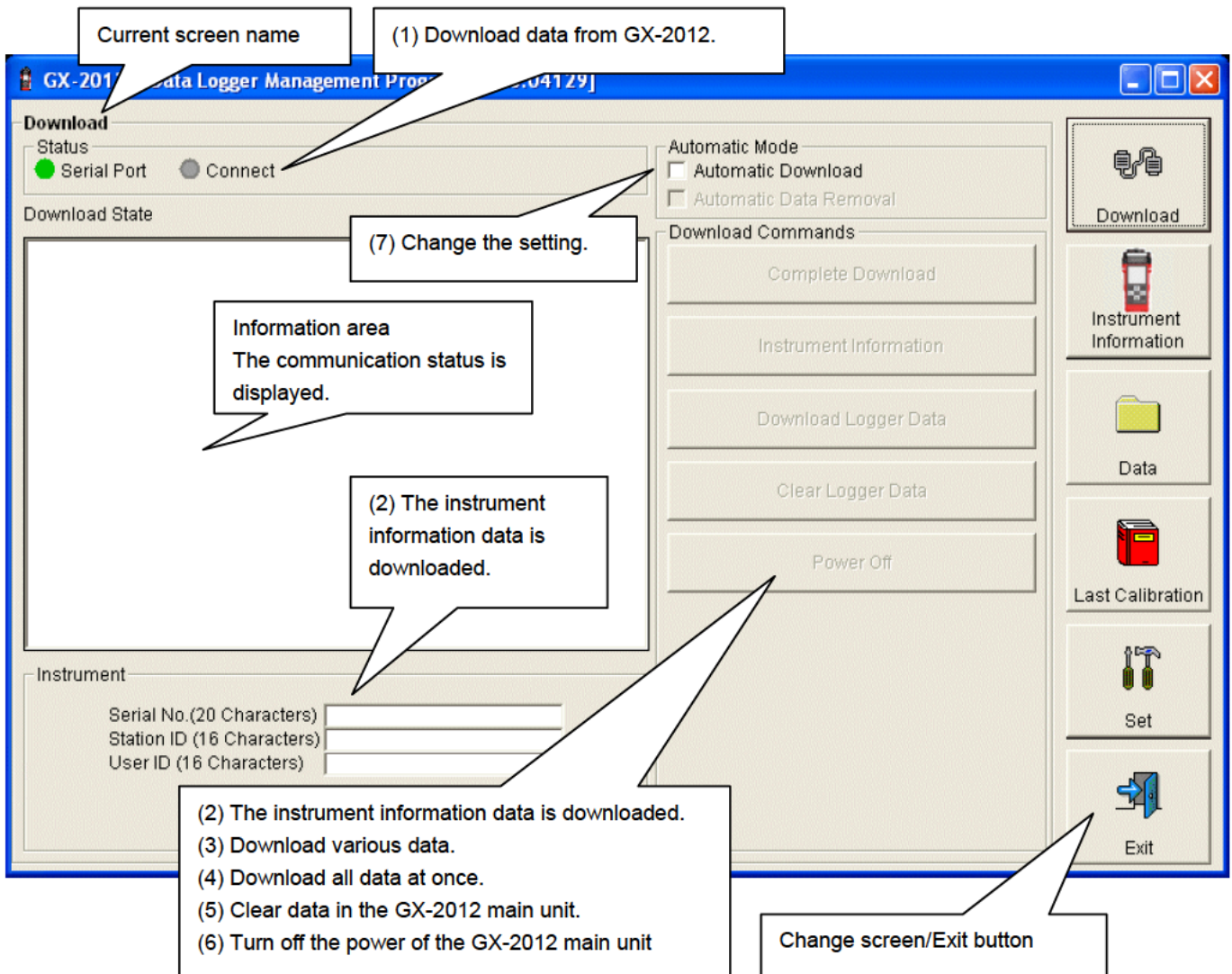
Download Commands
Complete Download
Instrument Information
Download Logger Data
Clear Logger Data
Power Off

Download

Instrument Information

Data

Last Calibration

Set

Exit

(2) The instrument information data is downloaded.
(3) Download various data.
(4) Download all data at once.
(5) Clear data in the GX-2012 main unit.
(6) Turn off the power of the GX-2012 main unit

Change screen/Exit button

To perform data communication, place the GX-2012 main unit to an appropriate position, and with the program activated, turn on the power of the main unit. The program automatically judges whether or not communication is possible. If possible, the PC will be ready to receive the data.

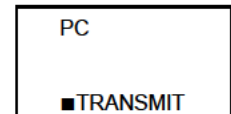# (1) Download data from GX-2012

● **Prepare the main unit**

1. Start the software.
2. With the GX-2012 main unit powered off, move it to a position capable of communication.
3. Turn on the GX-2012 main unit.

⚠ **CAUTION**

Make sure to turn on the power of GX-2012 after placing it to a position capable of communication.
Communication will not be established when it is placed at a position capable of communication with the power turned on.

The message will be displayed as shown on the right on the LCD screen of the GX-2012 main unit. →
(Due to the display resolution of GX-2012, the message will be somewhat difficult to read.)

PC

■TRANSMIT

The following message is displayed in the Information Area.

This shows that the communication with main unit is established.

The "Complete Download", "Instrument Information" and "Power Off" buttons are enabled.

⚠ **CAUTION**

If the content of the Information Area is different from above, turn off the power of the GX-2012 main unit, check the position of the unit, and then turn on the power again.

When communication is established, the Status area changes as follows.
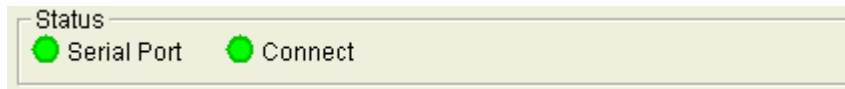
Serial Port:
    Communication available: Green (PC port ready)
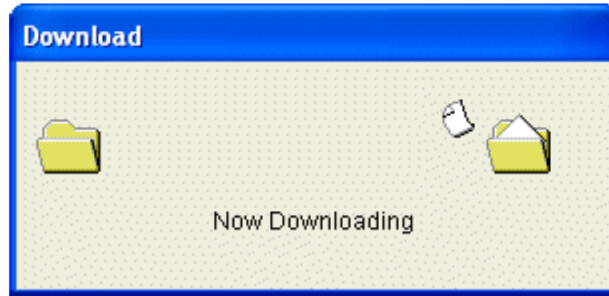   Communication not available: Red
Connect:
    Communication ready: Gray
    Communication in progress: Green

(2) Download instrument information

● **Download instrument information**

First, click the "Instrument Information" button to download instrument information data.

An animation is displayed during download.

When the Instrument Information data is downloaded, the content of the Instrument Information area is updated and the "Download Logger Data" and "Clear Logger Data" buttons are enabled.

The content is updated to show the status of the GX-2012 main unit.

The "Download Logger Data" and "Clear Logger Data" buttons are enabled.
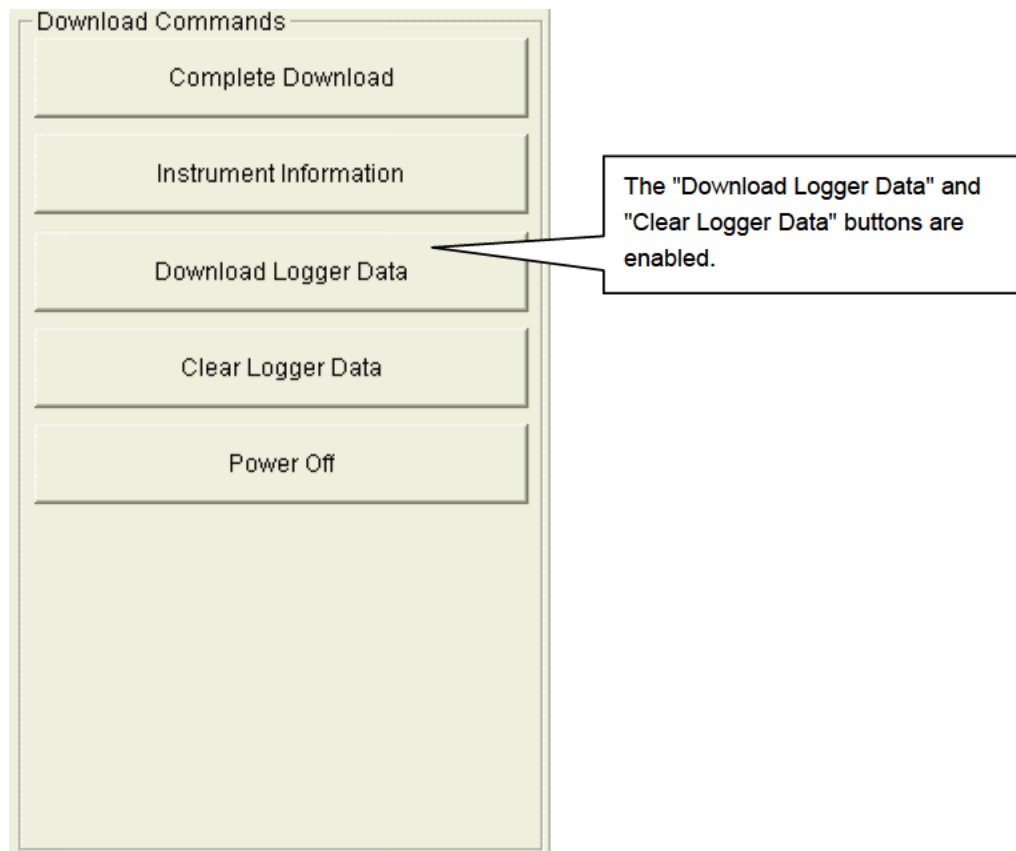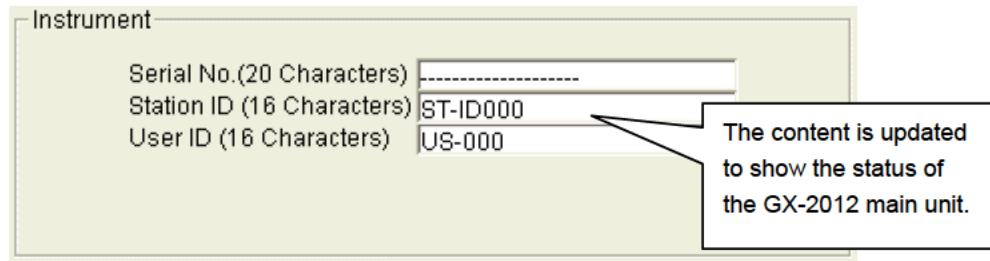
(3) Download various data

● **Trend data**
● **Event data**

After the instrument information data is downloaded using the "Instrument Information" button, the "Download Logger Data" button is enabled.

Click the "Download Logger Data" button.
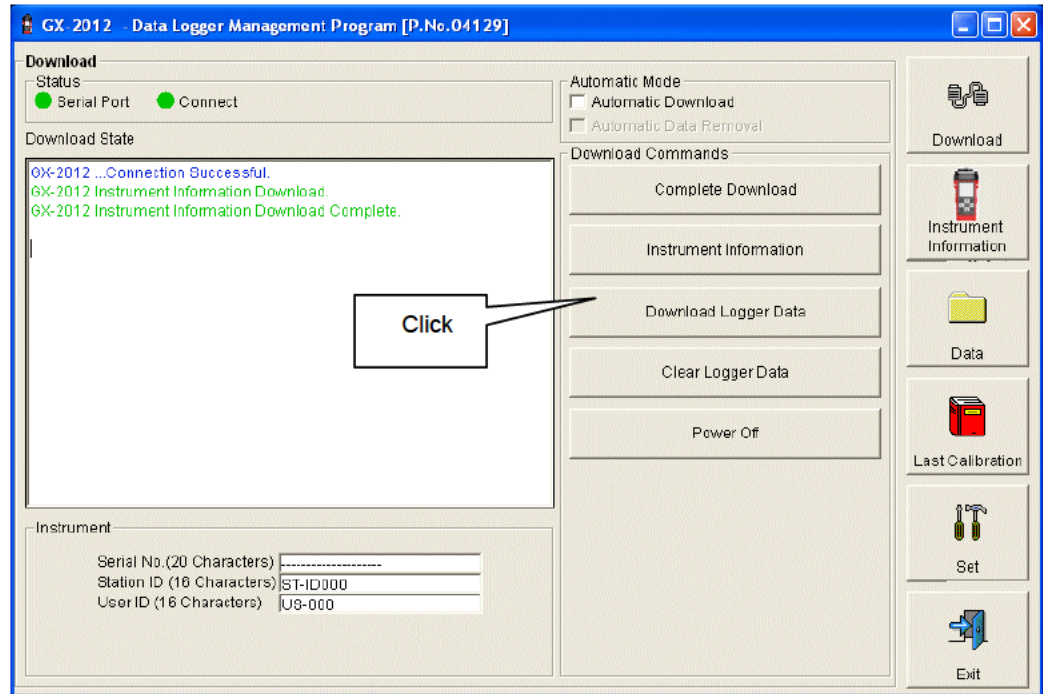
The download status is displayed in the information area.

⚠️ **CAUTION**

During download of each data, other data accesses are prohibited. Therefore, other download buttons and the "Set" button are disabled.

(4) Complete download

● **Complete download**

The "Complete Download" button downloads "Instrument Information", "Interval Trend", "Alarm Trend", "Alarm Events", "Trouble Events" and "Power Events" data at once.

Click the "Complete Download" button.

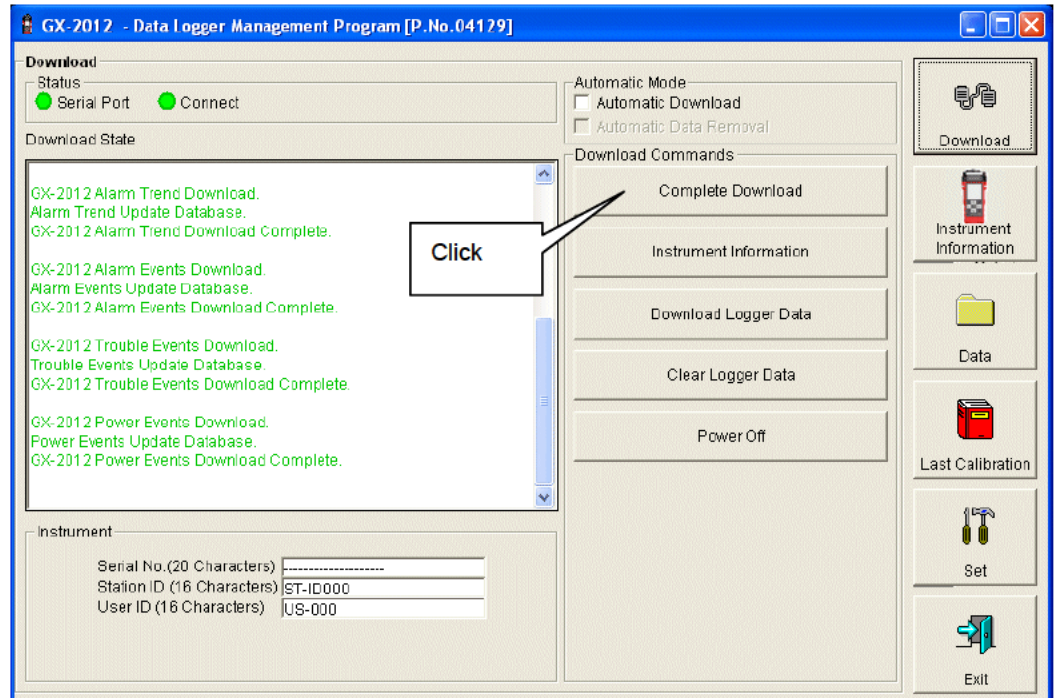The download status is displayed in the information area.

> ⚠ **CAUTION**
> During download of each data, other data accesses are prohibited. Therefore, other download buttons and the "Set" button are disabled.

(5) Clear data in the GX-2012 main unit

● **Data clear**

Use the "Clear Logger Data" button to delete various data stored inside GX-2012.

Click the "Clear Logger Data" button.

Click "Yes" to start clearing the data.

(6) Turn off the power of the GX-2012 main unit

● **Power OFF**

Use the "Power Off" button to turn off the power of the GX-2012 main unit and initialize the serial port of the PC.
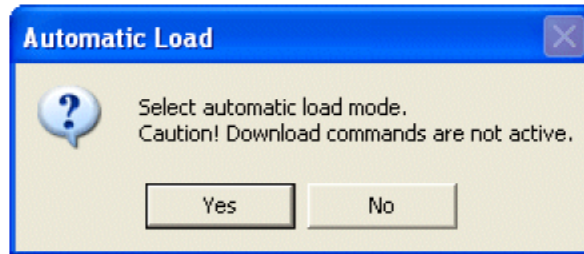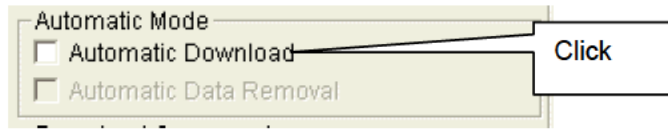
1. Click the "Power Off" button.
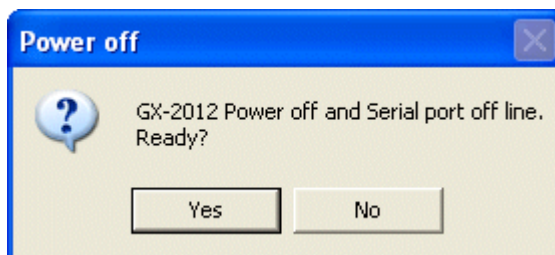
Click the "Yes" button to start the power off process of the GX-2012 main unit. After the serial port of the PC is initialized, it will be reset to the data download ready status.

(7) Switch to automatic mode

● **Automatic Download**

1. Mark the Automatic "Download" checkbox (if not marked yet).

```
┌ Automatic Mode ──────────────────┐
│  ☐  Automatic Download                          Click
│  ☐  Automatic Data Removal
```

Automatic Load

? Select automatic load mode.
Caution! Download commands are not active.

[Yes]   [No]

Click "Yes" to switch to Automatic Download.
Click "No" to cancel mode change.

In this mode, after the GX-2012 main unit is powered on, the PC automatically downloads complete data and then turns off the power of the GX-2012 main unit. During automatic download, manual download is not available.

● **Automatic Data Removal**

When Automatic Download is used, downloaded data can be automatically removed after download.

1. Mark the "Automatic Data Removal" checkbox.

```
┌ Automatic Mode ──────────────────┐
│  ☑  Automatic Download                          Click
│  ☐  Automatic Data Removal
```

Auto data Removal.

? Remove Data after download.
Ready?

[Yes]   [No]
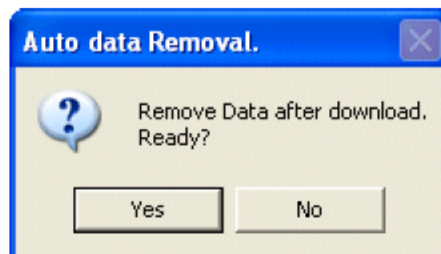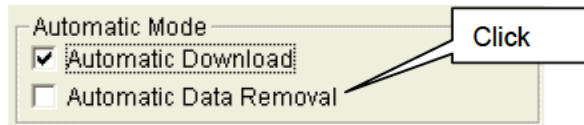
Click "Yes" to automatically remove data stored in GX-2012 after downloading complete data.

* This setting is useful for shortening download time when repeating download and data removal processes.

3-2. Instrument Information screen

Click the "Instrument Information" button at the right side of the screen to switch to the following screen. This screen lists instrument information data for the currently connected GX-2012 main unit.

(1) Data source type
(2) Status information
(3) Calibration history information
Click this button

GX-2012 [] ata Logger Ma [] ment Program [P.No.04129]

Instrument Information [Co [] cted]

GX-2012 Status

Serial No. (20 Characters)

Station ID (16 Characters)
ST-ID000

User ID (16 Characters)
US-000

			Calibration History		
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
CH4(100%LEL)	4/1/2011	0	0	50	Now
O2(40.0VOL%)	4/1/2011	0.0	0.0	12.0	Now
CO(500ppm)	4/1/2011	0	0	50	Now
CH4(5000ppm)	4/1/2011	0	0	500	Now
CH4(100VOL%)	4/1/2011	0	0	50	Now

		Last Bump Test		
Gas	Bump Test Date	Test Result	Concentration	Bump Test Due(
CH4(100%LEL)	4/1/2011		0	50 Now
O2(40.0VOL%)	4/1/2011		0.0	12.0 Now
CO(500ppm)	4/1/2011		0	50 Now
CH4(5000ppm)	4/1/2011		0	500 Now
CH4(100VOL%)	4/1/2011		0	50 Now

		Warning and Alarm point		
Gas	Warning	Alarm	STEL	TWA
CH4(100%LEL)	10	50	-----	-----
O2(40.0VOL%)	20.8	18.0	-----	-----
CO(500ppm)	25	50	200	25
CH4(5000ppm)	-----	-----	-----	-----
CH4(100VOL%)	-----	-----	-----	-----

(4) Sensor alarm setpoint information

Download

Instrument Information
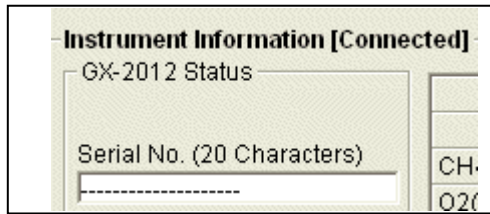
Data

Last Calibration

Set

Exit

⚠️ **CAUTION**

This screen is read-only. Modification of data is not supported. -> See "3-6. Set screen".
When the Instrument Information data is not downloaded, no data is displayed.
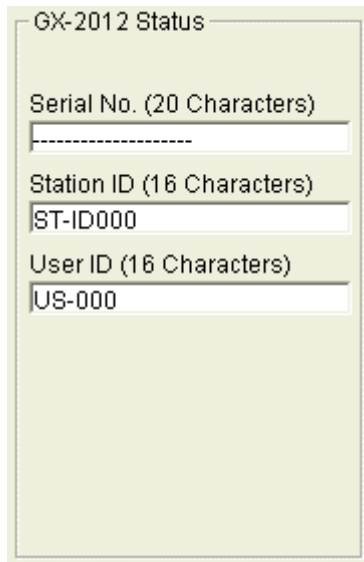
(1) Data source type

● **Data source information**

When the information of the multi-gas monitor main unit is displayed, the text [Connected] is displayed.

(2) Status information

● **Information details**

Serial No, Station ID and User ID stored inside the main unit are displayed.

⚠ **CAUTION**

This column is read-only. Modification of the data is not supported.

(3) Calibration history information

● **Calibration history details**

	Calibration History					
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)	
CH4(100%LEL)	4/1/2011	0	0	50	Now	
O2(40.0VOL%)	4/1/2011	0.0	0.0	12.0	Now	
CO(500ppm)	4/1/2011	0	0	50	Now	
CH4(5000ppm)	4/1/2011	0	0	500	Now	
CH4(100VOL%)	4/1/2011	0	0	50	Now	

Contents:
Gas:	Measured gas name (full scale)
Calib.Date:	Date of last calibration
Before:	Concentration before last calibration
After:	Concentration after last calibration/calibration failure
A.Cal.:	Concentration for automatic calibration
Cal.Due(Days):	Guaranteed operating time without another calibration (when the remaining time reaches 1 month, this item is displayed in red to indicate a warning)

● **Bump test history details**

	Last Bump Test			
Gas	Bump Test Date	Test Result	Concentration	Bump Test Due(
CH4(100%LEL)	4/1/2011	0	50	Now
O2(40.0VOL%)	4/1/2011	0.0	12.0	Now
CO(500ppm)	4/1/2011	0	50	Now
CH4(5000ppm)	4/1/2011	0	500	Now
CH4(100VOL%)	4/1/2011	0	50	Now

Contents:
Gas:	Measured gas name (full scale)
Bump.Date:	Date of last bump test
Test Result Concentration:	Last test result concentration
Test Gas Concentration:	Last test gas concentration
Bump.Due(Days):	Guaranteed operation time without another bump test (when the remaining time reaches 1 month, this item is displayed in red to indicate a warning)

(4) Sensor alarm setpoint information

● **Details**

	Warning and Alarm point			
Gas	Warning	Alarm	STEL	TWA
CH4(100%LEL)	10	50	-----	-----
O2(40.0VOL%)	20.8	18.0	-----	-----
CO(500ppm)	25	50	200	25
CH4(5000ppm)	-----	-----	-----	-----
CH4(100VOL%)	-----	-----	-----	-----

Contents:
Gas:	Measured gas name
Warning:	Concentration at first alarm setpoint
Alarm:	Concentration at second alarm setpoint
STEL:	Concentration at STEL alarm setpoint
TWA:	Concentration at TWA alarm setpoint

3-3. Data screen

Click the "Data" button at the right side of the screen to switch to the following screen and view the list of downloaded data.

The operation of this screen is similar to the Windows Explorer. However, the following operations are not supported.
1. Rename data.
2. Move the data to another location.

Folders are displayed in an Explorer-like manner, with serial numbers, station IDs and User IDs displayed hierarchically in this order.

Folders and data names are formed under the following rules.

Folder name: 04/11 = Data of April 2011.

File name: iv22111930_3EB = Interval trend, 22nd day, 11:19:30 (Start date and time of logging)
               al26150419_3EB = Alarm trend, 26th day, 15:04:19 (Date and time of alarm occurrence)

The limit of data items to be stored in each folder depends on the memory limit of the PC. However, to maintain response speed, back up data files at least once a year. 4.
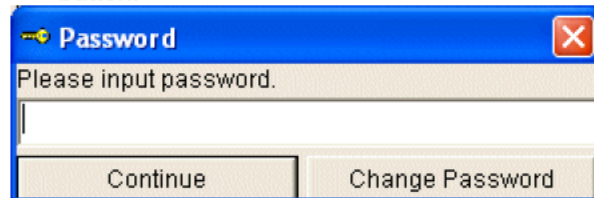
(1) Delete data

- **Delete**

1. Click to select the data or folder to delete.
2. Right-click there (without moving the mouse).

Name	SerialNo	StationID	UserID	Date/Time
iv10090705	----------...	---------	Click	-...	4/10/2011 9:07:0
Delete				
iv10091150...	----------...	-----------...	----------...	4/10/2011 9:11:5
iv10091315...	----------...	-----------...	----------...	4/10/2011 9:13:1
iv10110700...	----------...	-----------...	----------...	4/10/2011 11:07:
iv10110050				4/10/2011 11:00:

- **Input password**

The Delete Menu is displayed. Click "Delete".

1. The Password dialog is prompted. Enter the password and press the "Continue" button.

Password

Please input password.

| Continue | Change Password |

⚠️ **CAUTION**

When "Continue" is pressed without entering the password, the delete operation is canceled.

2. When "Continue" is pressed with an appropriate password, the following message is displayed.

Delete Sample

? Delete sample iv10090705_-------------------, Ready?

| Yes | No |
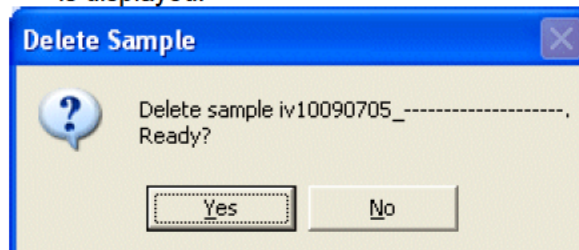
Click the "Yes" button to delete the data.
Click the "No" button to cancel deletion of data.

(2) View details of data

- **View data details**

1. Click the data to be viewed in detail. Check that the summary of the data is displayed in the summary pane, and click the "View Data" button.

   or

2. Double-click the data to be viewed in detail.

For details on how to use the data details screen, see **"3-4. Data View screen"**.

(3) Summary pane

● **Details**

When the selected data is a normal data, the summary of the data is displayed.
Interval trend

Property	Value			
Sampling Date/Time	4/10/2011 9:07:05 AM to 4/10/2011 9:10:30 AM			
Serial No.	--------------------			
Station ID	----------------			
User ID	----------------			
Data Count	6			
Interval Time (sec)	300			
Gas(FullScale)	CH4(100%LEL)	O2(40.0vol%)	CO(500ppm)	H2S(100.0ppm)
Avg	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
Max	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
Max Date/Time	04/10 09:06:15	04/10 09:07:06	04/10 09:06:15	04/10 09:06:15
Min	*****	20.9 vol%	*****	*****
Min Date/Time	*****	04/10 09:07:06	*****	*****
Warning	10 %LEL	19.5 vol%	25 ppm	5.0 ppm
Alarm	50 %LEL	23.5 vol%	50 ppm	30.0 ppm
STEL	*****	*****	200 ppm	5.0 ppm
TWA	*****	*****	25 ppm	5.0 ppm

Name: Data name
Sampling Date/Time: Start and end of sampling date/time
Serial No./Station ID/User ID: Status of the GX.-2012 main unit
Data Count: Number of sampled data
Interval Time (sec):   Sampling interval (sec)
Gas(FullScale):   Gas (full scale)
Avg: Average value of gas
Max: Maximum value of gas data
Max Date/Time: Date/time when the maximum value is logged
Min: Minimum value of gas data
Min Date/Time: Date/time when the minimum value is logged
Warning: First alarm setpoint
Alarm: Second alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

Alarm events

DateTime	Gas	Event
4/19/2011 11:11:44 AM	CH4(100%LEL)	WARNING
4/19/2011 11:05:34 AM	CH4(100%LEL)	WARNING
4/19/2011 11:04:21 AM	CH4(100%LEL)	WARNING
4/19/2011 11:04:21 AM	CH4(100%LEL)	ALARM
4/19/2011 9:36:08 AM	O2(40.0vol%)	WARNING
4/18/2011 2:57:40 PM	O2(40.0vol%)	WARNING
1/1/2011 12:01:36 AM	O2(40.0vol%)	WARNING
1/1/2011 12:01:36 AM	CH4(100%LEL)	WARNING
1/1/2011 12:01:36 AM	CH4(100%LEL)	ALARM

DateTime: Date and time when the event occurred
Gas: Naturally occurring or produced gas
Event: Event type

Alarm trend

Property	Value			
Name	al18145740_--------------------			
Alarm Date/Time	4/18/2011 2:57:40 PM			
Serial No.	--------------------			
Station ID	----------------			
User ID	----------------			
Data Count	720			
Interval Time (sec)	5			
Gas(FullScale)	CH4(100%LEL)	O2(40.0vol%)	CO(500ppm)	H2S(100.0ppm)
Value	0 %LEL	10.1 vol%	*****	*****
Warning	10 %LEL	19.5 vol%	25 ppm	5.0 ppm
Alarm	50 %LEL	23.5 vol%	50 ppm	30.0 ppm
STEL	*****	*****	200 ppm	5.0 ppm
TWA	*****	*****	25 ppm	5.0 ppm

Name: Data name
Alarm Date/Time: Date/time when the alarm is occurred
Serial No./Station ID/User ID: Status of the GX-2012 main unit
Data Count: Number of sampled data
Interval Time (sec):   Sampling interval
Gas(FullScale):   Gas (full scale)
Value: Concentration when the alarm is occurred
Warning: First alarm setpoint
Alarm: Second alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

Calibration history

DateTime	Gas	Before	After
4/19/2011 11:10:11 AM	CH4(100%LEL)	-----	-----
	O2(40.0vol%)	-----	-----
	CO(500ppm)	-----	-----
	H2S(100.0ppm)	-----	-----
	CH4(100vol%)	45 vol%	50 vol%
4/19/2011 11:03:05 AM	CH4(100%LEL)	52 %LEL	50 %LEL
	O2(40.0vol%)	-----	-----
	CO(500ppm)	-----	-----
	H2S(100.0ppm)	-----	-----
	CH4(100vol%)	-----	-----
...	Total	17	Datas

DateTime: Date and time when the event occurred
Gas: Gas
Before: Concentration before calibration
After: Concentration after calibration

Trouble events

DateTime	Gas/Body	Event
4/18/2011 2:57:49 PM	O2(40.0vol%)	Fail(Sens.)
4/18/2011 2:57:31 PM	Body	Fail(FLOW)
4/18/2011 2:55:22 PM	H2S(100.0ppm)	Fail(Sens.)
4/18/2011 2:55:22 PM	CO(500ppm)	Fail(Sens.)
4/18/2011 2:52:03 PM	Body	Fail(FLOW)
4/18/2011 2:51:57 PM	Body	Fail(FLOW)
4/14/2011 7:04:07 PM	H2S(100.0ppm)	Fail(Sens.)
4/14/2011 7:04:07 PM	CO(500ppm)	Fail(Sens.)

DateTime: Date and time when the event occurred
Gas/Body: Naturally occurring or produced gas, or the GX-2012 main unit (Body)
Event: Event type

Bump test

DateTime	Gas	Test Result	Concentration	Judge
4/15/2011 3:45:56 PM	CH4(100%LEL)	2 %LEL	50 %LEL	FAIL
	O2(40.0vol%)	20.9 vol%	12.0 vol%	FAIL
	CO(500ppm)	-----	-----	-----
	----(---)	-----	-----	
	CH4(100vol%)	-----	-----	-----
4/15/2011 3:44:21 PM	CH4(100%LEL)	2 %LEL	50 %LEL	FAIL
	O2(40.0vol%)	20.9 vol%	12.0 vol%	FAIL
	CO(500ppm)	-----	-----	-----
	----(---)	-----	-----	
	CH4(100vol%)	-----	-----	-----
...	Total	14	Datas	

DateTime: Date and time when the event occurred
Gas: Gas
Test Result: Test result concentration
Concentration: Test gas concentration
Judge: Test judgment

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Bar hole

Property	Value			
Name	iv15171348_--------------------			
Sampling Date/Time	4/15/2011 5:13:48 PM to 4/15/2011 5:14:19 PM			
Serial No.	--------------------			
Station ID	----------------			
User ID	----------------			
-----	-----			
Interval Time (sec)	30			
Gas(FullScale)	CH4(100%LEL)	O2(40.0vol%)	----(---)	----(---)
Avg	0 %LEL	20.9 vol%	-----	-----
Max	0 %LEL	20.9 vol%	-----	-----
Max Date/Time	04/15 17:13:48	04/15 17:13:48	-----	-----
Min	*****	20.9 vol%	*****	*****
Min Date/Time	*****	04/15 17:13:48	*****	*****
Warning	10 %LEL	19.5 vol%	-----	-----
Alarm	50 %LEL	23.5 vol%	-----	-----
STEL	*****	*****	-----	-----

Name: Data name
Sampling Date/Time: Start and end of sampling date/time
Serial No./Station ID/User ID: Status of the GX-2012 main unit
Interval Time (sec):   Sampling interval (sec)
Gas(FullScale):   Gas (full scale)
Avg: Average value of gas
Max: Maximum value of gas data
Max Date/Time: Date/time when the maximum value is logged
Min: Minimum value of gas data
Min Date/Time: Date/time when the minimum value is logged
Warning: First alarm setpoint
Alarm: Second alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

Snapshot

Property	Value			
Name	ss10142110_--------------------			
Sampling Date/Time	4/10/2011 2:21:10 PM			
Serial No.	--------------------			
Station ID	----------------			
User ID	----------------			
-----	-----			
-----	-----			
Gas(FullScale)	CH4(100%LEL)	O2(40.0vol%)	CO(500ppm)	H2S(100.0ppm)
Concentration	0 %LEL	20.9 vol%	0 ppm	0.0 ppm

Name: Data name
Sampling Date/Time: Recorded date/time
Serial No./Station ID/User ID: Status of the GX-2012 main unit
Gas(FullScale):   Gas (full scale)
Concentration: Gas concentration of the recorded date/time

3-4. Data View screen

This screen displays the details of each data in a table or a graph.

(1) Switch between table and graph views

(2) Output to a printer

(3) Save to a file

(4) To view data summary simultaneously

No	Date/Time	CH4(100%LEL)	O2(40.0vol%)	CO(500ppm)	H2S(100.0ppm)
1	4/19/2011 11:11:44 A	WARNING	------	------	------
2	4/19/2011 11:11:58 A	AIR	AIR	AIR	AIR
3	4/19/2011 11:12:30 A	NORMAL	------	------	------
4	4/19/2011 11:16:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
5	4/19/2011 11:21:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
6	4/19/2011 11:26:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
7	4/19/2011 11:31:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
8	4/19/2011 11:36:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
9	4/19/2011 11:41:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
10	4/19/2011 11:46:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
11	4/19/2011 11:51:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
12	4/19/2011 11:56:42 A	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
13	4/19/2011 12:01:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
14	4/19/2011 12:06:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
15	4/19/2011 12:11:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
16	4/19/2011 12:16:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
17	4/19/2011 12:21:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
18	4/19/2011 12:26:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
19	4/19/2011 12:31:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
20	4/19/2011 12:36:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
21	4/19/2011 12:41:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
22	4/19/2011 12:46:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
23	4/19/2011 12:51:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
24	4/19/2011 12:56:42 P	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
25	4/19/2011 1:01:42 PM	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
26	4/19/2011 1:06:42 PM	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
27	4/19/2011 1:11:42 PM	0 %LEL	20.9 vol%	0 ppm	0.0 ppm
28	4/19/2011 1:16:42 PM	0 %LEL	20.9 vol%	0 ppm	0.0 ppm

Data View (Interval Trend)
○ Table ○ Graph □ Event Only □ Condensed   Print   Export   Summary   Return

Download
Instrument Information
Data
Last Calibration
Set
Exit

☐ Event Only: Displays event data only.
☐ Condensed: Displays data which shows some change in sample data.

⚠️ **CAUTION**

Graph is not available when the number of samples is five or less.

In the table for the Alarm Trend data, the data where the alarm occurred is painted in red.

Among the event data, when the mouse cursor is pointed to WARNING, ALARM or OVER, the cursor changes to the following.
When in this state, clicking the cell triggers a search for the corresponding trend data. If it exists, it can be displayed in a separate screen.

In case of WARNING, ALARM, OVER

The separate screen displayed in case of WARNING, ALARM, OVER.
Click the "Return" button to turn off the screen.

* In the table for the Alarm Trend data, the data where the alarm occurred is painted in red.

(1) Switch between table and graph views

● **Switch to graph view**

1. From the Table and "Graph" radio buttons at the top left of the screen, select "Graph".
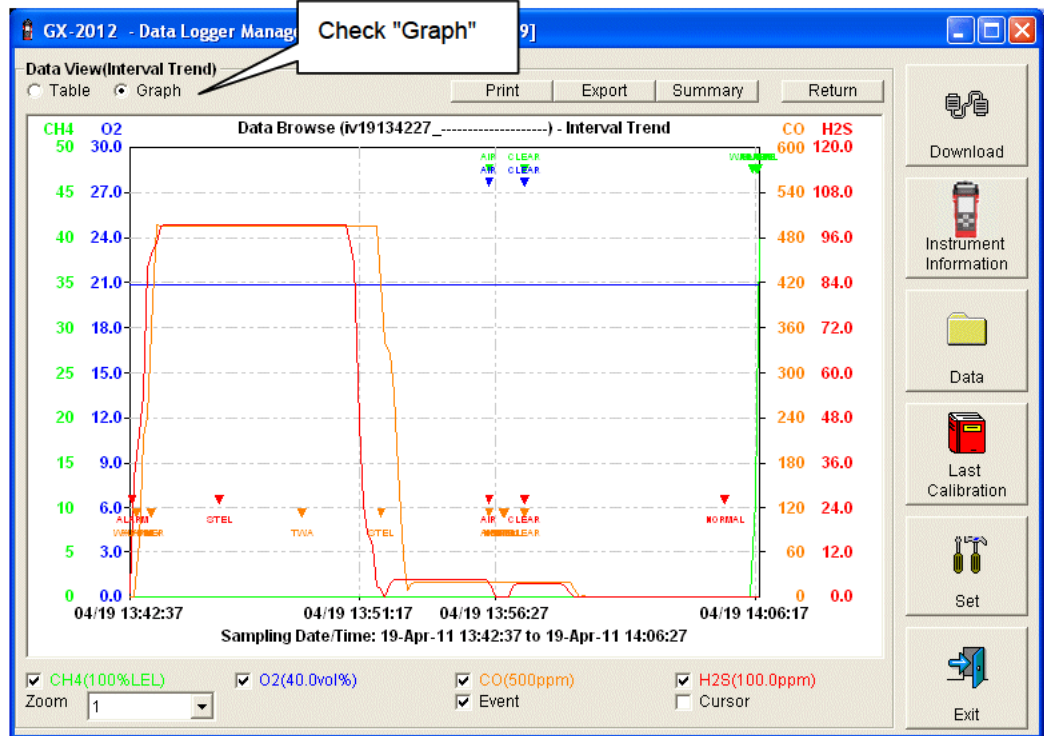
Use checkboxes and a combo box at the bottom of the screen to perform various operations on the view.

Checkboxes at the top of the screen (gas name): Select these boxes to toggle on/off each gas data.
"Zoom" combo box: Use this box to select the magnification ratio of the horizontal axis, according to the number of samples.
"Event" checkbox: Select this box to display event information markers, such as alarms.
"Cursor" checkbox: Select this box to display a cursor on the graph.

> ⚠️ **CAUTION**
>
> The maximum value of the graph's vertical axis is automatically adjusted based on the following definitional equations.
> When the maximum value of data without event is "x", if full scale is 10 or above, the equation will be Ymax = {int(x / 10) + 1} * 10. If full scale is below 10, the equation will be Ymax = {int(x) + 1}, where "int" means to round off the decimal part.

⚠️ **CAUTION**

A graph is not displayed unless there are five or more normal concentration data. Data that contains only events cannot be drawn as a graph, because no concentration data is included.

Among the event data, when the mouse cursor is pointed to WARNING, ALARM or OVER, the cursor changes to the following. When in this state, clicking the graph triggers a search for the corresponding trend data. If it exists, it can be displayed in a separate screen.

   In case of WARNING, ALARM, OVER

The separate screen displayed in case of WARNING, ALARM, OVER.
Click the "Return" button to turn off the screen.

(2) Output to a printer

● **Print**

The content currently displayed on the Data View screen can be output to a printer.

1. Click the "Print" button on the screen.

Click "Print"
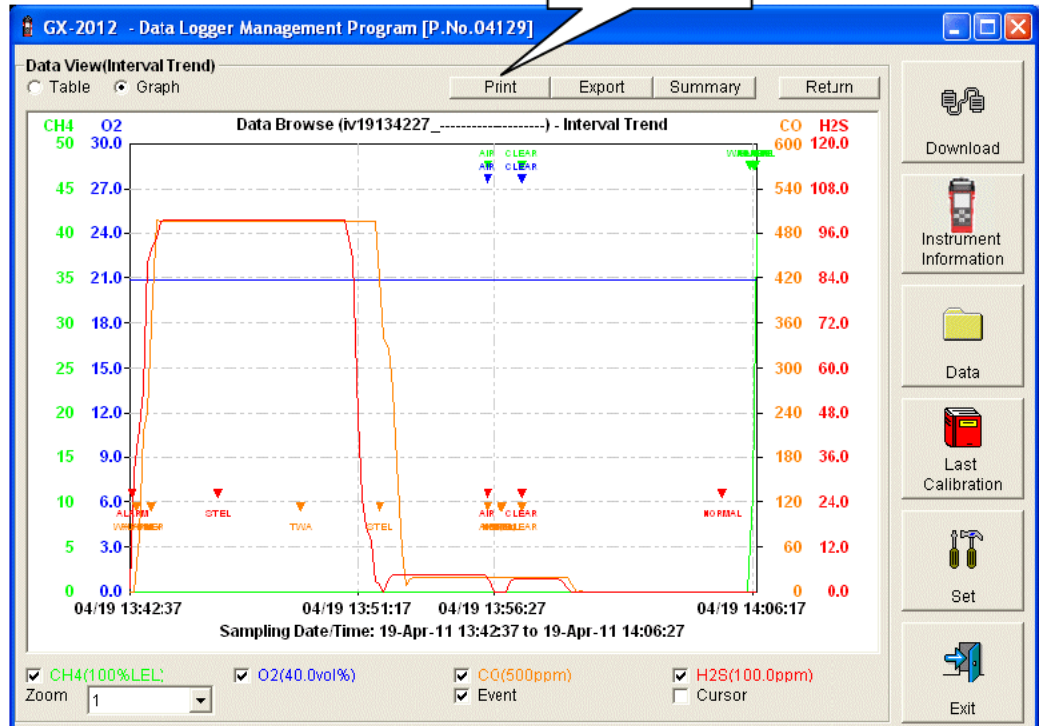
The Printer List screen is displayed. Select the printer to use and click the "OK" button.
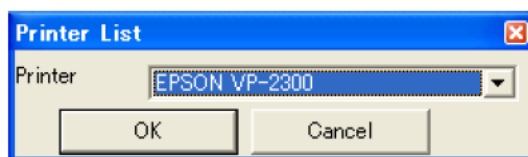
Click the "OK" button to start the printout.
Click the "Cancel" button to cancel the printout and return to the previous screen.

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Printout example (graph printout)
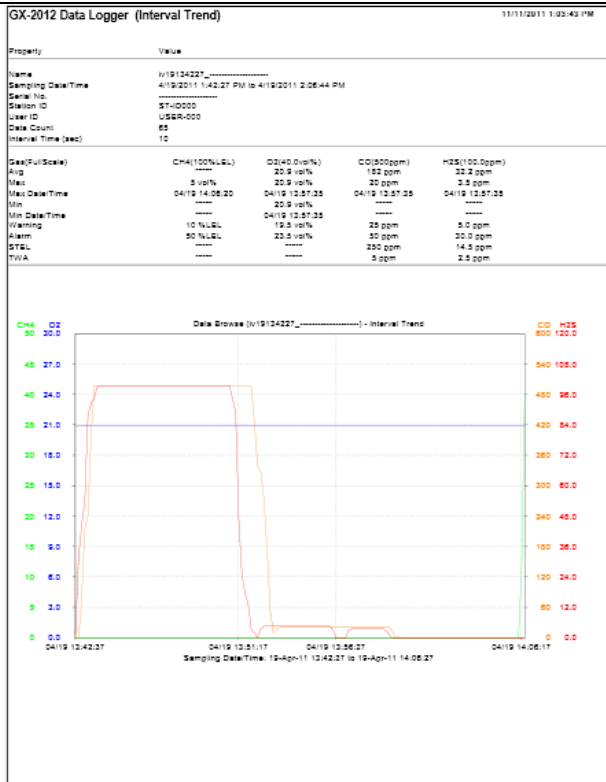
Printout example (table printout)

Printout example (calibration history)

Printout example (alarm events)

Printout example (bump test)

Printout example (trouble events)	Printout example (bar hole)
	Printout example (snapshot)

⚠️ **Note on printer settings**

(1) Detailed printer settings depend on the printer used. Please see the operation manual of the printer.

(2) This program does not support Print Area setting. Therefore, usage such as printing only part of the selected data is not possible.

(3) Copies can be changed only when the setting is available from the printer.
When the setting is changed in this way, the change affects other applications subsequently used. (For example, when Copies is changed to 2, a printout operation from another application might also result in two copies.)

When printer settings are changed in this program and then a printout is required from another application, check printer settings of that application before printing.

(3) Printing CALIBRATION REPORT

● CALIBRATION REPORT

The instrument is capable of viewing or printing CALIBRATION REPORT for a passed calibration.

CALIBRATION REPORT

ISSUE DATE	3/13/2014			
LABORATORY NAME				
LABORATORY ADDRESS				
REPORT NUMBER	923c6840-ec8b-4c25-ad35-7265ffab52bb-3			
GAS DETECTOR DATA	Serial	--------------------		
	Manufacturer	RIKEN KEIKI		
	Model	GX-2012		
	Station ID	ST-ID000		
	User ID	----------------		
STANDARD OR REGULATION USED				
TRACEABILITY				
CALIBRATION RESULT	GAS	CH4(%LEL)	O2(vol%)	H2S(ppm)	
	Range	0-100%LEL	0-40.0vol%	0-100.0ppm	
	Gas concentration	50 %LEL	12.0 vol%	25.0 ppm	
	Reading before calibration	47 %LEL	11.9 vol%	25.5 ppm	
	Reading after calibration	50 %LEL	12.0 vol%	25.0 ppm	
	Result	PASS	PASS	PASS	
ENVIRONMENTAL CONDITIONS				
OBSERVATIONS				
EXECUTOR				

1/1

CAUTION:
Can not print CALIBRATION REPORT, if the calibration is not performed successfully.

●CALIBRATION REPORT window

1. To open "Report" menu, right-click on the calibration history that you would like to print.
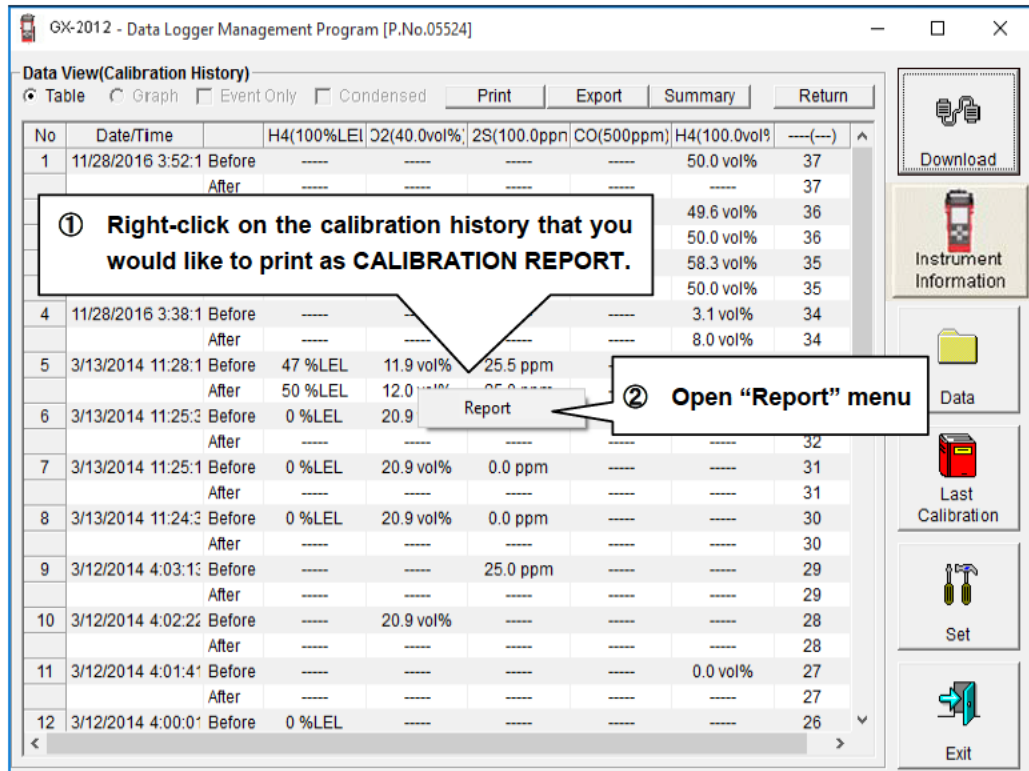
CAUTION:
If a calibration has been performed successfully, values appear on the sheet : "Before" and "After".
When a calibration has failed or NOT been performed, [......] will appear. If all gas concentration shows [......], you could not open CALIBRATION REPORT.

2. Clicking "Report" menu opens CALIBRATION REPORT window. You can enter some information at this page.

Calibration Report		Align ⊙ Left ○ Center	Print	Close
ISSUE DATE		3/13/2014		
LABORATORY NAME				
LABORATORY ADDRESS				
REPORT NUMBER		923c6840-ec8b-4c25-ad35-7265ffab52bb-3		
GAS DETECTOR DATA	Serial	--------------------		
	Manufacturer	RIKEN KEIKI		
	Model	GX-2012		
	Station ID	ST-ID000		
	User ID	------------------		
STANDARD OR REGULATION USED				
TRACEABILITY				

CALIBRATION RESULT	GAS	CH4(%LEL)	O2(vol%)	H2S(ppm)	
	Range	0-100%LEL	0-40.0vol%	0-100.0ppm	
	Gas concentration	50 %LEL	12.0 vol%	25.0 ppm	
	Reading before calibration	47 %LEL	11.9 vol%	25.5 ppm	
	Reading after calibration	50 %LEL	12.0 vol%	25.0 ppm	
	Result	PASS	PASS	PASS	

ENVIRONMENTAL CONDITIONS	
OBSERVATIONS	
EXECUTOR	

CAUTION:
The information you can enter is ;
- **LABORATORY NAME**
- **LABORATORY ADDRESS**
- **STANDARD OR REGULATION USED**
- **TRACEABILITY**
- **ENVIRONMENTAL CONDITIONS**
- **OBSERVATIONS**
- **EXECUTER**

Information is saved if the calibration report is printed. If it is not printed and click "Close", the information entered is not saved.
A calibration report which is not entered any information shows most recent entered information from other CALIBRATION REPORT.

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(4) Save to a file

● **Save**

1. Click the "Save" button on the screen.
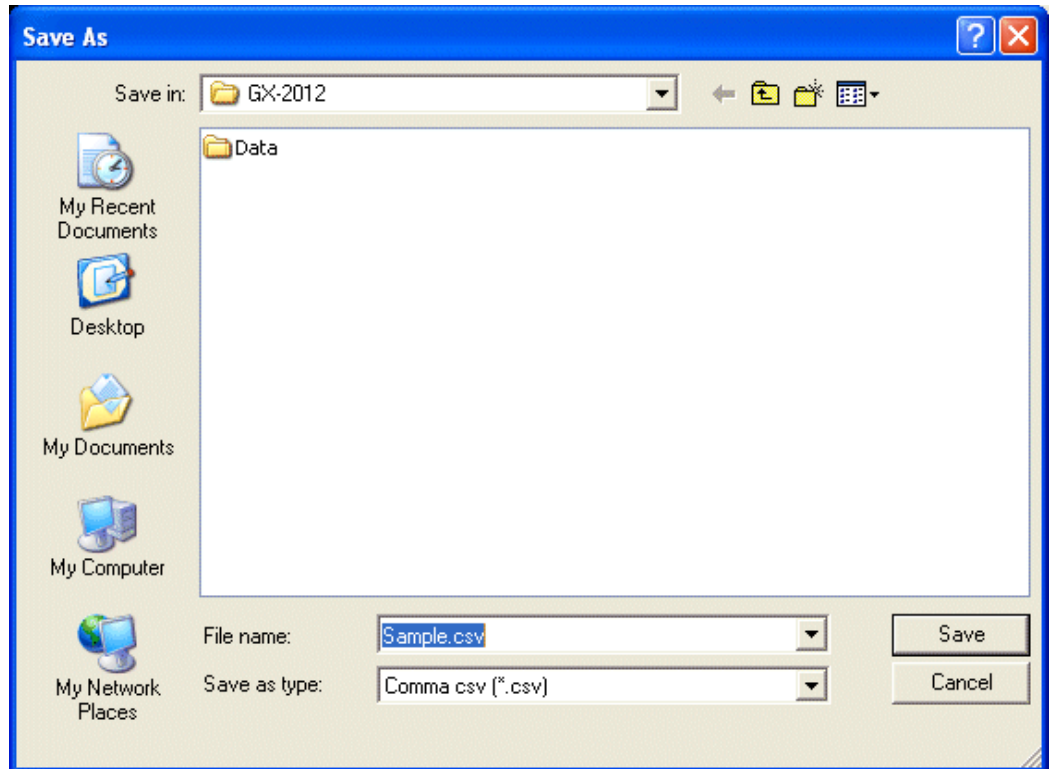
Specify the location and the file name, and click the "Save" button to store the data.
Click the "Cancel" button to cancel the save operation.

⚠️ **CAUTION**

When a table is displayed, the content of the table is saved in the Excel CSV
format.
When a graph is displayed, the bitmap of the graph is saved.

(5) To view data summary simultaneously

● **Summary view**

1. Click the "Summary" button on the screen.
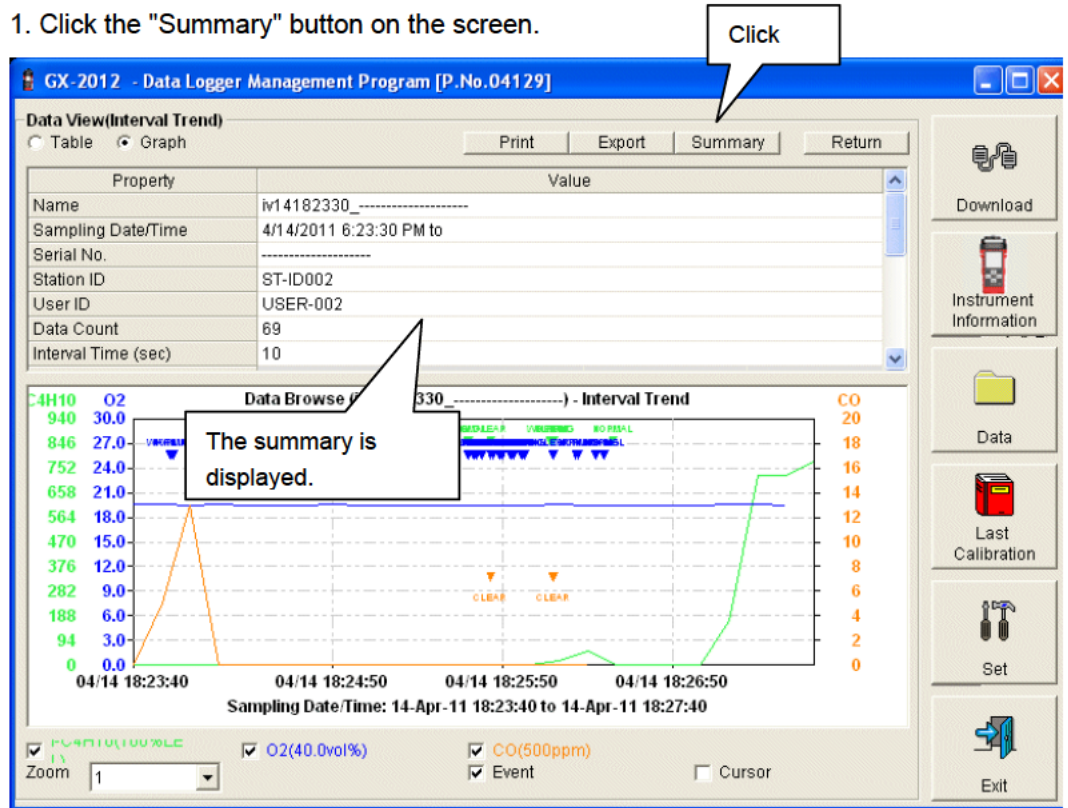
When the "Summary" button is clicked, the summary view is cleared.

(6) Table details

- **Event color**

The cells that display gas concentration are painted according to the event occurred at that time.

FAIL:	Gra	Fault
WARNING:	Orange	First alarm
ALARM:	Red	Second alarm
STEL:	Pink	STEL alarm
TWA:	Light purple	TWA alarm
NORMAL:	Deep green	Recovery from the above state
OVER:	Light red	Over full scale
AIR:	Transparent	Operation
CLEAR:	Transparent	Operation

(7) Graph details

● **Cursor**

1. Click the Cursor checkbox to display a cursor on the graph.
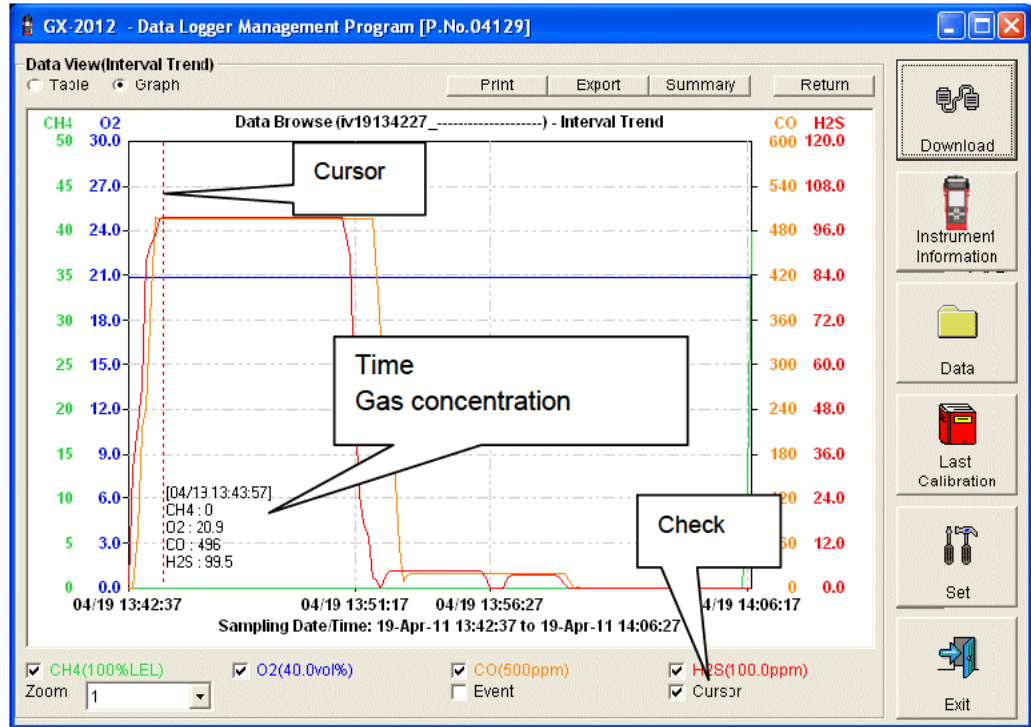
Use the left and right keys to move the cursor left and right, and the up and down keys to move the time and concentration views up and down.
The Shift key can be used together to speed up the cursor.

⚠️ **CAUTION**

Cursor operation is not available when a window irrelevant to the program is opened and the focus is moved outside the graph area.
The cursor itself is displayed as a dashed line. To restore focus, click inside the graph area.
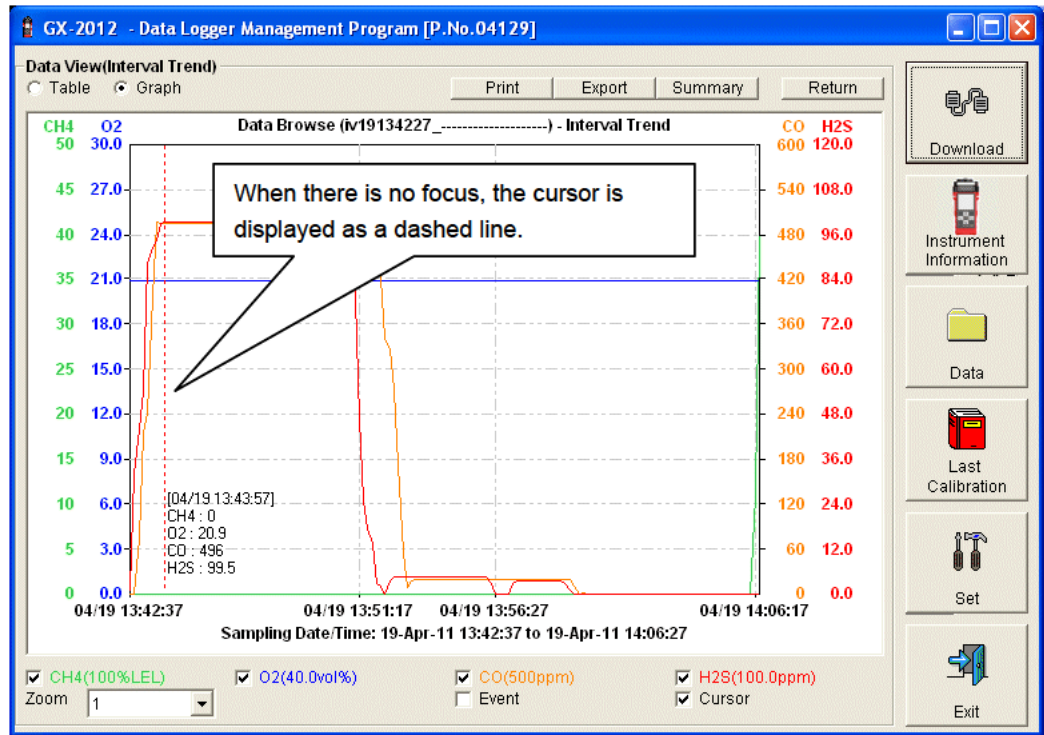
3-5. Last Calibration screen

The expiration dates of the data downloaded in the past can be checked. The bump test is displayed similarly.

(1) Change displayed contents

(2) Output to a printer

(3) Delete data
(4) Change password

About bump test

Click this button

⚠ **CAUTION**
This table is read-only. Modification of the table is not supported.

(1) Change displayed contents

● **Expired data**

1. Click the "Need Calibration" radio button.

No.	SerialNo	UserID	StationID	CH4	O2	CO	CH4	CH4	Last Down
1	-------------	US-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	11/11/2011
2	-------------	USER-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	8/8/2011 4
3	G-3	USER-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	6/6/2011 1
4	-------------	USER-000	ST-ID050	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/21/2011
5	-------------	USER-000	ST-ID101	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/21/2011
6	-------------	USER-000	ST-ID001	4/20/2011 9	4/1/2011	4/19/2011 2	4/19/2011 2	4/20/2011 9	4/20/2011

Among the GX-2012 main units connected in the past (in other words, the main units from which Instrument Information data is downloaded), this table extracts and displays the records which have an expired calibration date.

● **List view**

1. Click the "Calibration Date" radio button.

No.	SerialNo	UserID	StationID	CH4	O2	CO	CH4	CH4	Last Down
1	-------------	US-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	11/11/2011
2	-------------	USER-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	8/8/2011 4
3	G-3	USER-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	6/6/2011 1
4	-------------	USER-000	ST-ID050	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/21/2011
5	-------------	USER-000	ST-ID101	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/21/2011
6	-------------	USER-000	ST-ID001	4/20/2011 9	4/1/2011	4/19/2011 2	4/19/2011 2	4/20/2011 9	4/20/2011

Data for the GX-2012 main units connected in the past is listed. (Of the data with the same serial number, user ID and Station ID, the newest data is displayed.)

● **Detailed view**

1. Click the "Calibration Record" radio button.

No.	SerialNo	UserID	StationID	Gas	Before	After	A.Cal.	Cal.Due
1	-------------	US-000	ST-ID000	CH4	0	0	50	Now
				O2	0.0	0.0	12.0	Now
				CO	0	0	50	Now
				CH4	0	0	500	Now
				CH4	0	0	50	Now
2	-------------	USER-000	ST-ID000	CH4	0	0	50	Now
				O2	0.0	0.0	12.0	Now
				CO	0	0	50	Now
				CH4	0	0	500	Now
				CH4	0	0	50	Now
3	G-3	USER-000	ST-ID000	i-C4H10	0	0	50	Now

Data for GX-2012 main units connected in the past is listed in the same format as the Instrument Information screen.

For details on the displayed items, see "3-2. Instrument Information screen, (3) Calibration history information".

(2) Output to a printer

● **Print**

The last calibration date of each unit can be printed out using "Need Calibration" or "Calibration Date".
The Printer List screen is displayed. Select the printer to use and click the "OK" button.

(3) Delete data

● **Delete**

1. Move the mouse to the data that needs to be deleted, and right-click the data.

No.	SerialNo	UserID	StationID	CH4	O2	CO	CH4	CH4	Last Down
1	----------------	US-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	11/11/2011
2	----------------	USER-000	ST-ID000	4/1/2011	4/1/2011	4/1/2011		4/1/2011	8/8/2011 4
3	G-3	USER-000	ST-ID000	4/1/2011				4/1/2011	6/6/2011 1
4	----------------	USER-000	ST-ID050	4/1/2011		4/1/2011	4/1/2011	4/1/2011	4/21/2011
5	----------------	USER-000	ST-ID101	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/21/2011
6	----------------	USER-000	ST-ID001	4/20/2011 9	4/1/2011	4/19/2011 2	4/19/2011 2	4/20/2011 9	4/20/2011

(Radio buttons: ○ Need Calibration ⊙ Calibration Date ○ Calibration Record   Print)

(Callout: Click → Delete)

⚠ **CAUTION**

Deletion of data is available only in "Need Calibration" and "Calibration Date" views.
It is not available in the "Calibration Record" view.

● **Input password**

1. When the "Delete" button is clicked, the Password dialog is prompted. Enter the password and press the "Continue" button.
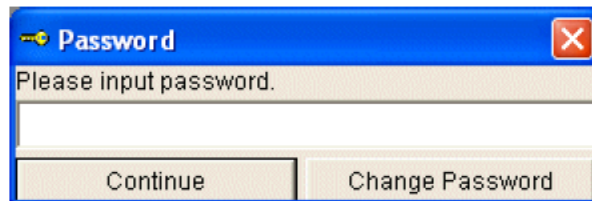
Password
Please input password.
[   ]
[Continue]   [Change Password]

⚠ **CAUTION**

When "Continue" is pressed without entering the password, the delete operation is canceled.

2. When "Continue" is pressed with an appropriate password, the following message is displayed.

Delete History
ⓘ   Delete History : SerialNo=G-3
[Yes]   [No]
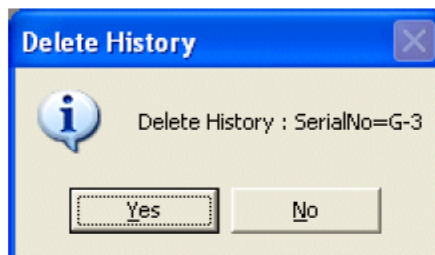
Click the "Yes" button to delete the data.
Click the "No" button to cancel deletion of data.

(4) Change password

● **Input password**

1. Display the Password dialog in the same way as deleting the data, and click "Change Password".
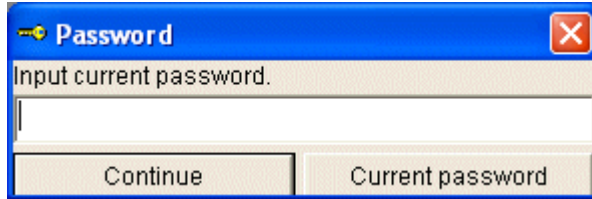
2. Enter an appropriate password and click the "Current password" button. The following message is displayed.
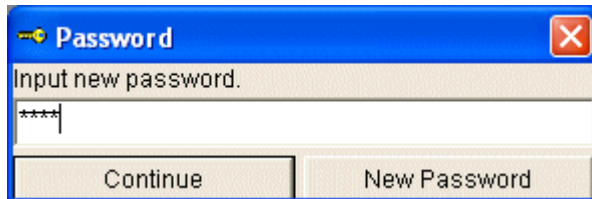
3. Enter the new password and click the "New Password" button.

4. The Password dialog is prompted again. Enter the same new password and click "New Password".

Click "OK" to update the password.

⚠ **CAUTION**

The password immediately after installation is "Riken". (Case-sensitive)

3-6. Set screen

In this screen, display settings of the screen and the detailed settings of the unit can be specified.

⚠️ **CAUTION**

The data specified and/or changed must be sent to the GX-2012 main unit using the "Update" button.

⚠️ **CAUTION**

The font setting is applied on the next startup.

(1) Change font and graph colors

● **Change the font**

1. Click the area that displays the font.

┌─ Font And Color ────────────────────┐
│   │
│   │
│   ┌──────────────┐   │
│   │   Arial(9)   │ ◄───────── Click
│   ├──────────────┤   │
│   │ Graph Color │   │
│   ├──────────────┤   │
│   │ Graph Color │   │
│   ├──────────────┤   │
│   │ Graph Color │   │
│   ├──────────────┤   │
│   │ Graph Color │   │
│   └──────────────┘   │
│   ┌──────────────┐   │
│   │Detail Settings│   │
│   └──────────────┘   │
│   │
└──────────────────────────────────────┘
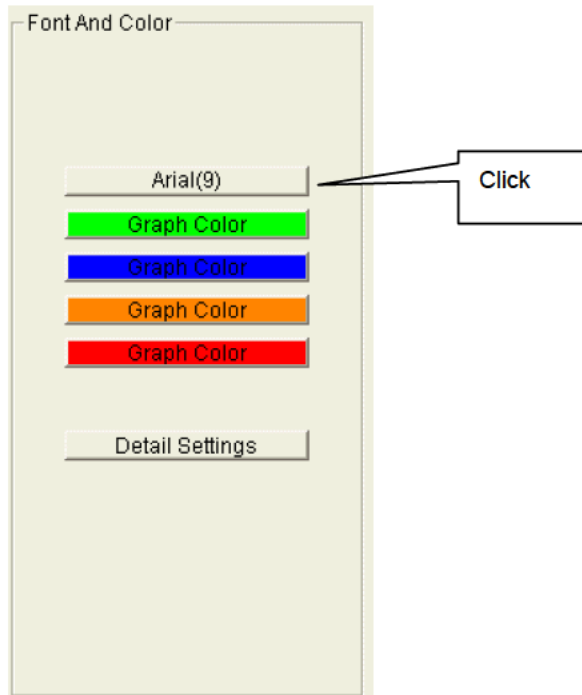
The font setting dialog is displayed. Specify an appropriate font.

⚠ **CAUTION**
When an extremely large font is used, the screen might be hard to view.
This change will be effective on the next startup.

● **Change the graph color**

The display colors mapped for the gases in the graph can be changed.
1.Click the area that displays each gas.

┌─ Font And Color ────────────────────┐
│   │
│   │
│   ┌──────────────┐   │
│   │   Arial(9)   │   │
│   ├──────────────┤   │
│   │ Graph Color │ ◄───────── Click
│   ├──────────────┤   │
│   │ Graph Color │   │
│   ├──────────────┤   │
│   │ Graph Color │   │
│   ├──────────────┤   │
│   │ Graph Color │   │
│   └──────────────┘   │
│   ┌──────────────┐   │
│   │Detail Settings│   │
│   └──────────────┘   │
│   │
└──────────────────────────────────────┘
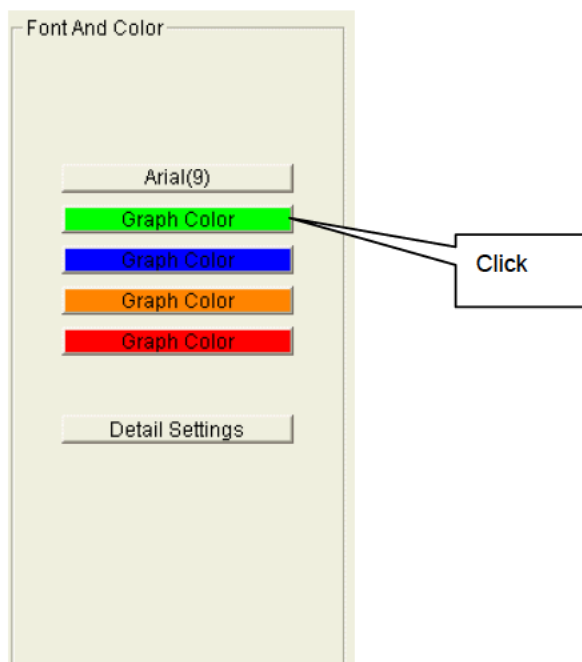
The color selection dialog is displayed. Specify an appropriate color.

(2) Change status of the main unit

● **Edit station/user list**

1. Edit the station/user ID list.
Click "Detail Settings".
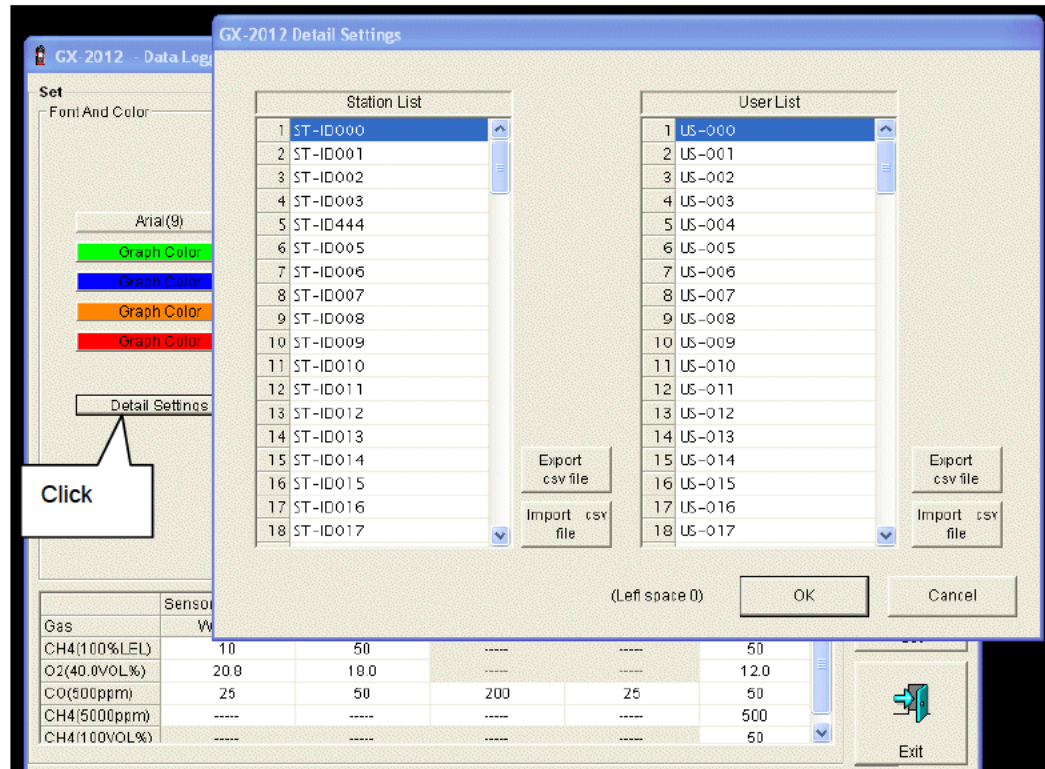
The edit dialog is displayed. The station list contains stations up to Number 256.
Up to 16 characters of alphabets, numerics, spaces, hyphens and slashes can be entered.

* In the GX-2012 main unit, only the first eight characters are displayed. We recommend to use up to eight characters of only upper-case alphabets and/or numerics.

Export csv file: The data is exported to a file. A text file is created using the "Number,data" format.

Import csv file: Data is loaded from a text file that follows the "Number,data" format. If the data contains unsupported letters, or the data is too long, the background color of the corresponding cells is changed to red.

* If any cells have red background, OK cannot be selected.
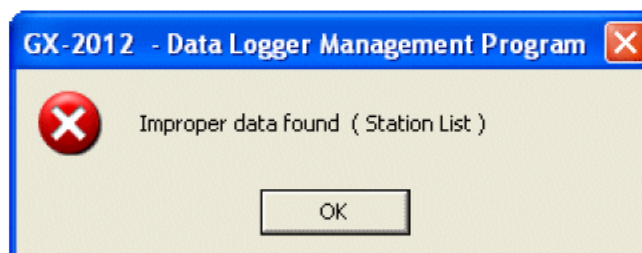
● **Change**

2. In the status area, change the desired data.

GX-2012 Status

Serial No. (20 Characters)   --------------------
Station ID (16 Characters)   ST-ID000
User ID (16 Characters)   US-000
Interval Trend Time (Sec)   300

PC Date/Time   11/11/2011 1:20:58 PM
GX-2012 Date/Time   11/11/2011 2:21:12 PM

Update   Date/Time Set

The contents of Serial No. (20 Characters) can be changed.
Interval Trend Time (Sec), Station ID (16 Characters), and User ID (16 Characters) can be selected and changed from the list.
The "Date/Time Set" button can be used to align the internal clock of the GX-2012 main unit ("GX-2012 Date/Time") to the set time of the PC ("PC Date/Time").

⚠ **CAUTION**

The date/time areas cannot be entered directly.

⚠ **CAUTION**

The settings of the GX-2012 main unit are not modified except "Date/Time Set" by this change. Make sure to click Update to send the change request process to the main unit.

(3) Send updates to the GX-2012 main unit

● **Send updates**

1. Modify the places to change and click the "Update" button.
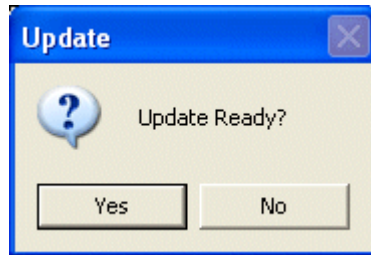
When the "Yes" button is clicked, the changes are sent to the GX-2012 main unit and stored there.
When the "No" button is clicked, update is canceled.

⚠ **CAUTION**

The changes cannot be undone. Before clicking "Update", it is possible to revert to the data stored in the main unit by clicking the "Instrument Information" button on the Download screen to download the instrument information data.

4

Data Maintenance

Depending on usage (such as loading data many times in a single day), the number of data might increase drastically. In such a case, it might be difficult just to find the desired data. In addition, there is a possibility of losing valuable data caused by an unexpected trouble of the PC.
To prepare for such unexpected events, a periodical backup of the data is recommended.

4-1. Details of data storage structure

Data is stored in the installation folder of the GX-2012 program.

1) File name: GX2012.mdb
    File type: Microsoft Jet 3.6 database file

2) File name: Data
    File type: Folder Trend data files are organized under year/month folders

4-2. Backup

Although it depends on usage, we recommend the data to be copied to another hard disk device or an auxiliary storage device (such as an MO drive or CD-R drive).
To restore data, copy it to the installation folder of the GX-2012 executable. The program searches for data on startup and the data will be available to view.

5

Operating Precautions

When using the program, take sufficient considerations on the following points:

(1) When downloading data, check that GX-2012 is placed at an appropriate position. If the position is not appropriate, download cannot be performed properly.

(2) When downloading, avoid similar operations using another application. (For example, performing IR communication during data download)

(3) Do not kill the program (for example, by using Ctrl + Alt + Del). This program saves setting parameters on the shutdown process to prepare for the next startup. Therefore, if the program is killed, the next startup might fail.

(4) Do not modify a data file directly.

6

Troubleshooting

Symptoms	Causes	Solutions
Communication is not possible.	The position of the main unit is inappropriate. An obstacle is in the way.	Change the position of the main unit.
	There is another device that uses IR.	Turn off the other devices, or prevent its interference.
Error occurs during communication.	There is a scattered light outside.	Eliminate the device that uses IR.
	The GX-2012 unit moved during communication.	Do not move the unit during communication.
Something is wrong in the communication data.	There is a scattered light outside.	Eliminate the device that uses IR.

If an error still persists despite the above actions, please contact RIKEN KEIKI.

7

IrDA Specifications

7-1. About infrared communication

Communication with the main unit is performed via infrared communication (IrDA protocol).
Check that the computer to be used is capable of infrared communication.
Also, place the units so the infrared communication port of the main unit and the communication port of the PC directly face each other, and prevent interference of other lights.

⚠️ **CAUTION**

> This program can establish communication with the GX-2012 main unit only in an environment with IrDA enabled. Check that the PC has a built-in IrDA device, and that it is enabled.
> If the computer does not have a built-in IrDA device (this applies to most desktop PC and some notebook PC), use a separately sold IrDA-USB converter.

7-2. Display of communication ready status

At the start of communication, the operating system recognizes existence of an infrared device and displays an icon on the task bar.
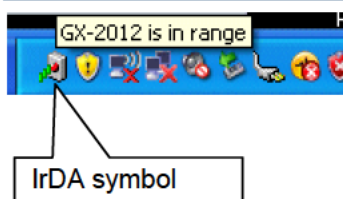By that icon, the communication status can be understood to some extent.

⚠️ **CAUTION**

> The displayed content might differ depending on the operating system and IrDA driver settings.

7-2-1. Task bar icon when the operating system recognizes GX-2012

IrDA symbol

The IrDA symbol is displayed, and when the cursor is pointed over the symbol, the message "GX-2012 is in range" is displayed.

7-2-2. Task bar icon when communication between the data logger program and the GX-2012 main unit is in progress
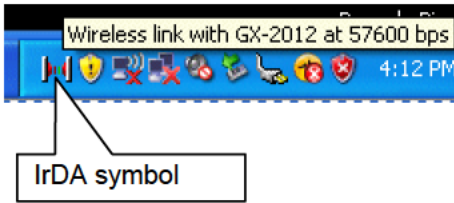
IrDA symbol

The IrDA symbol changes to an animation icon that shows communication, and when the cursor is pointed over the symbol, the message "Wireless link with GX-2012 at xxxx bps" is displayed.
* "xxxx" shows communication speed, which is normally 57600 bps. Depending on the environment, the rate might drop to a value around 38400 bps.

⚠ **CAUTION**

Due to overhead in internal process of the GX-2012 main unit and/or the data logger program, there is little difference in overall communication time if the communication rate is 38400 bps or above. This is because a relatively long time is required to create data within the GX-2012 main unit and to analyze the downloaded data by the data logger program.

8

File Structure

This chapter explains the details about file contents at installation and during operation.

8-1. Current directory immediately after installation

File name	Details
GX2012.exe RkIrDA11.ocx Filemove.avi	GX-2012 main unit Infrared communication component Animation file that shows that data download is in progress

8-2. Current directory during operation

File name	Details
GX2012.exe RkIrDA11.ocx Filemove.avi	GX-2012 main unit Infrared communication component Animation file that shows that data download is in progress
GX2012.ini GX2012.dat GX2012.mdb Data Serial.log	GX-2012 initialization file File for data downloading Database file (Microsoft Jet 3.6 database) Save directory for trend data files Recording of data that flowed through communication port since startup of the program (for investigation and maintenance)

⚠ **CAUTION**

Files and directories below the double line are created after startup of the program.

9

Software Specifications

Name of product (name of program)	GX-2012 Data Logger Management Program
Model	SW-GX-2012(EX)
Executable file name	GX2012.EXE
Supported OS	Microsoft Windows 7 Windows 8 Windows 10
Program capacity	Main program: Approx. 3 MB/Library: Approx. 5.2 MB (Uses up to 40 MB of disk space on installation)
Communication of the main unit	Infrared (conforming to IrDA 1.1 protocol) Standard communication settings Baud rate: 57600 bps (maximum) Data bit: 8 bits Stop bit: 1 bit Parity: Even parity
Transfer time	Maximum 3 minutes (standard communication setting, with maximum amount of data)
Medium	One CD-ROM
Package contents	Operating Manual (this document) Product warranty and registration card License agreement

Manual Log

Rev.	Amendment	Issue data
0	First issue	2017/7/5