PT0E-1780

RIKEN KEIKI

Portable Gas Monitor

GX-3R

Data Logger Management Program

SW-GX-3R(EX)

Operating Manual

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1. Introduction

The operating procedures and precautions described in this operating manual apply only for use in accordance with the stipulated purposes. Riken Keiki rejects all liability in cases involving use of the program in ways not described in this manual.

This operating manual omits descriptions of basic operations like command selection and dialog box settings for Microsoft Windows 7, Windows 8, and Windows 10. If you are using Windows for the first time, read the Windows manual and familiarize yourself with basic Windows operations before proceeding.

⚠WARNING

The CD on which this program is provided is a CD-ROM.
Do not attempt to play this CD on a regular audio CD player.
High audio volumes may damage your ears or speakers.

CAUTION

Requires pointing device.
This software requires the use of a pointing device such as a mouse or touchpad. It cannot be used with a keyboard alone.

1-1. Software purpose and features

This software program is designed to import data collected using the data logger function of the GX-3R into a PC for various purposes.
Importing data collected using the data logger function into a PC offers the following benefits:

- Allows collected data to be listed.
- Allows collected data details to be displayed in graph or table form.
- Allows graph and table data to be printed and stored as hard copies.
- Retains records of past data.
- Eliminates the need to write down data on paper by hand.
- Helps pinpoint which devices need calibration.
- Simplifies the management of multiple devices.

NOTE

- Unauthorized reprinting or reproduction of the contents of this document in part or in whole is strictly prohibited, unless otherwise stipulated by law.
- The contents of this document are subject to change without notice to allow product improvements.
- The user must accept the separately provided Software License Agreement before using this product. Opening the product package constitutes consent to the terms of the license agreement.
- Use this software solely for the intended purpose. Modifying the product or using the product in a manner departing from this manual may affect product safety and quality. Riken Keiki rejects all liability for any incidents or damages arising from failure to observe the warnings indicated above.

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2. Installing and Uninstalling

2-1. Operating environment precautions

This program is compatible with Microsoft Windows 7, Microsoft Windows 8, and Microsoft Windows 10. The program is not compatible with other operating systems.

This program requires up to approximately 40 MB of free hard disk space to install. It may require additional space, depending on the number of data samples. Make sure sufficient disk space is available.

CAUTION

Precautions regarding handling of the CD-ROM
1. CD-ROM storage Do not store in locations subject to direct sunlight or high temperatures and humidity. 2. CD-ROM drive type Do not insert in slot-loading CD-ROM drives. The label on the CD-ROM may prevent the CD-ROM from ejecting properly. Load the CD-ROM into a tray-loading CD-ROM drive.

2-2. Installing the software

Insert the install CD containing this program into the CD-ROM drive of your PC. The installation screen will appear automatically after a short while.

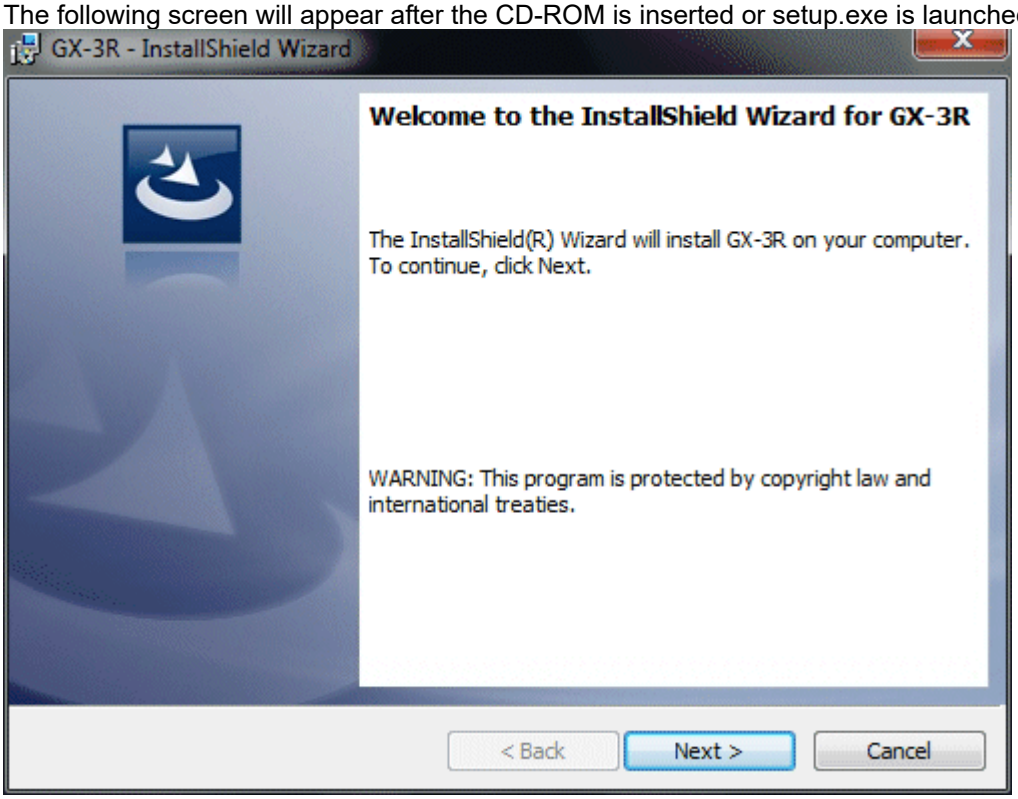
Do the following if the PC does not support automatic CD-ROM startup:

1. Open the CD-ROM drive in Explorer.
2. Double-click on the file “setup.exe”.

2-3. Installation procedure

● Launch setup

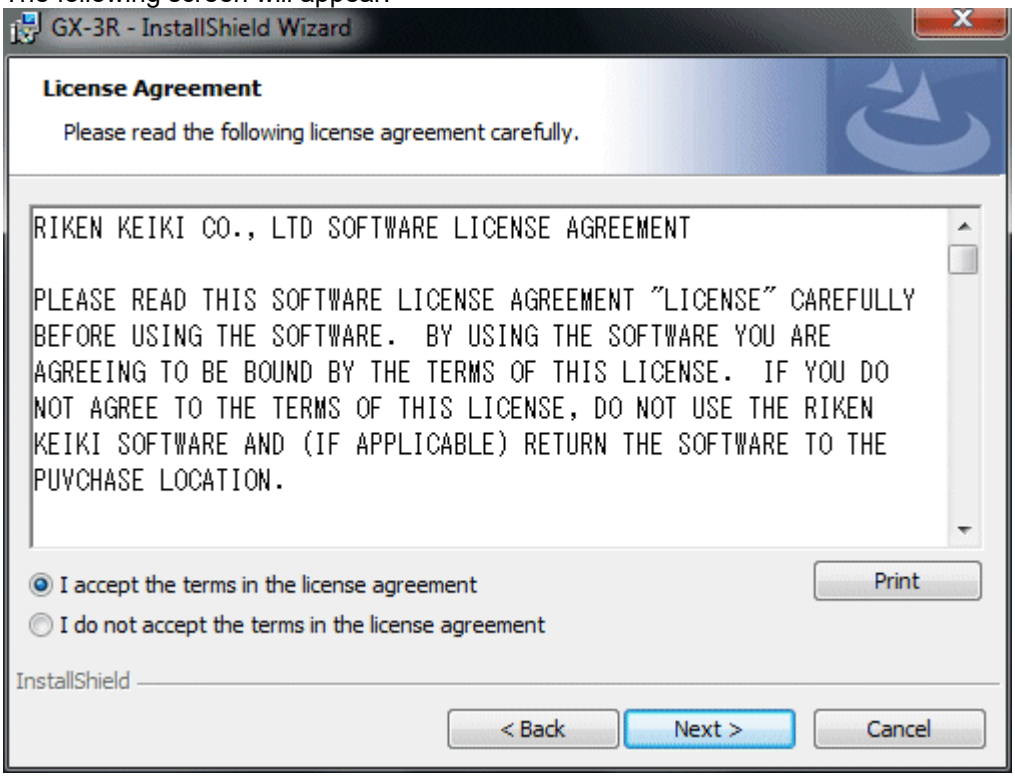
The following screen will appear after the CD-ROM is inserted or setup.exe is launched.



Click the “Next” button.

● Accept license agreement

The following screen will appear:

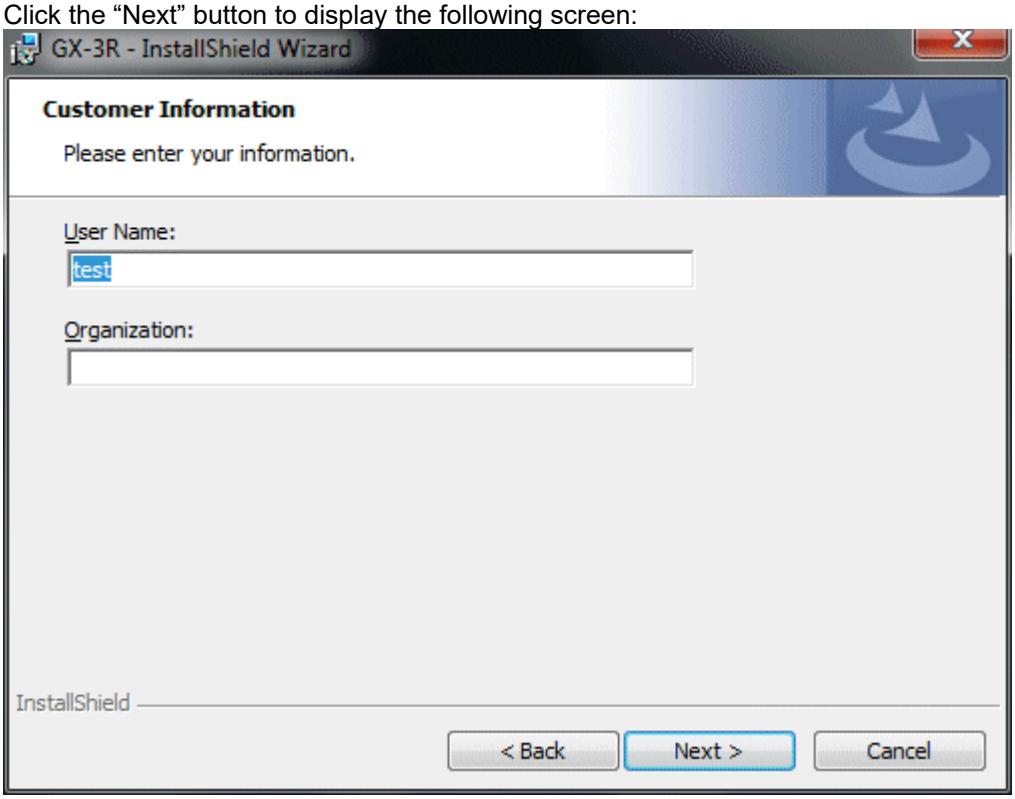


To install the software, click the “Next” button. To abort the process, click the “Cancel” button.

CAUTION: Make sure you have read and fully understand the terms of the software license agreement before installing the software.

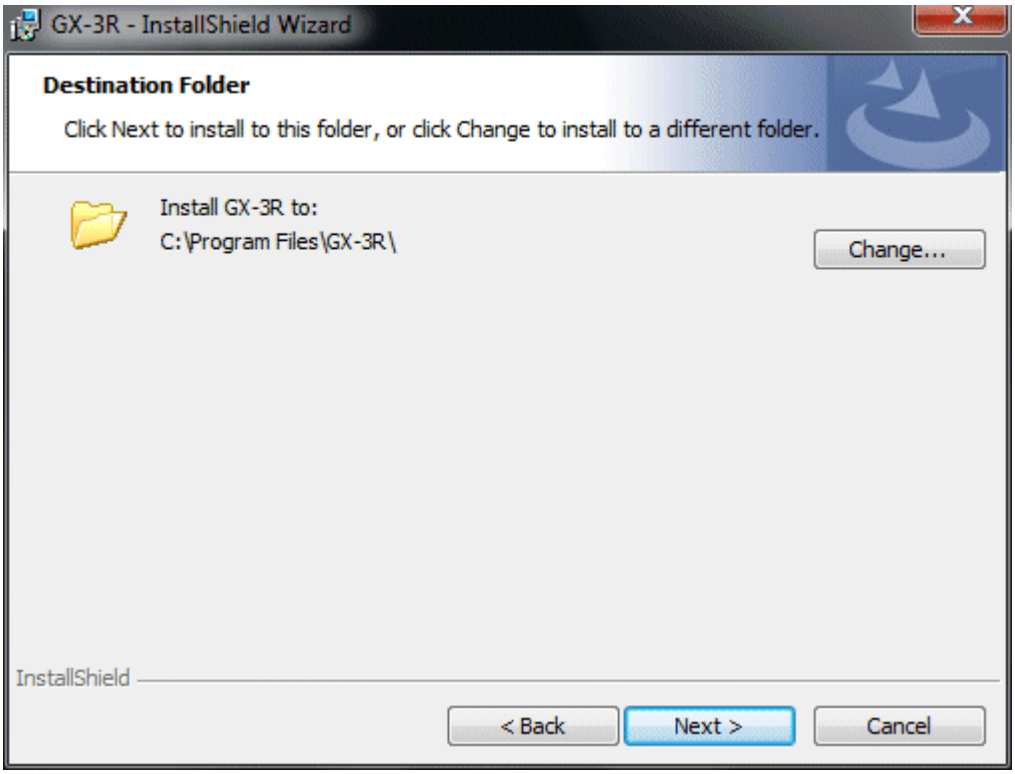
● **User information**

Click the “Next” button to display the following screen:



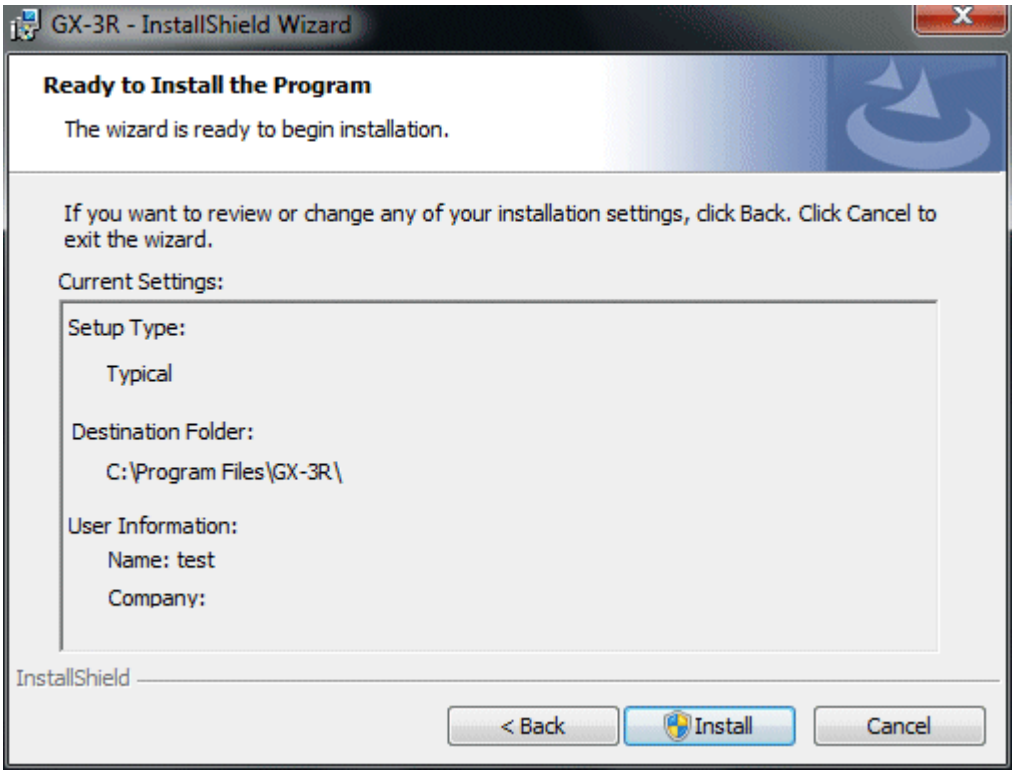
Click the “Next” button.

● **Destination folder**



Click the “Next” button.

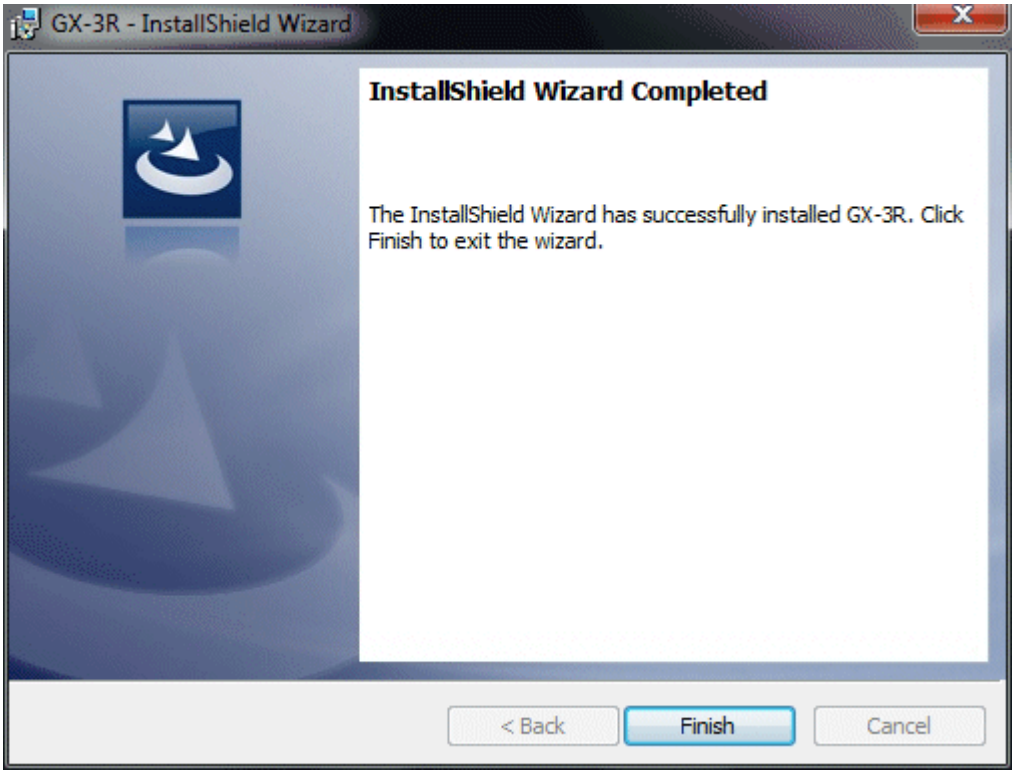
● **Start setup**



Click the “Install” button to begin installing.

The following screen will appear once setup is complete:

● **Complete**



The program can be used as soon as setup is complete.

CAUTION

Saving past data before reinstalling
Note the following precautions if reinstalling the program: 1. Uninstall the program before reinstalling. 2. If the program is uninstalled after it has been used, certain files will remain undeleted. One such file is the “GX3R.mdb” database file. If you wish to save past data, save this file to another location before deleting the folder.

CAUTION

Precautions for installing on Microsoft Windows 7, Microsoft Windows 8, and Microsoft Windows 10
This software requires libraries for various drivers for the Windows system. Installing the software automatically initiates the processing required to incorporate these libraries. However, if you are using Microsoft Windows 7, Microsoft Windows 8, or Microsoft Windows 10, you will be asked to install system libraries with administrator privileges. Follow the instructions displayed to log in as an administrator and install the system libraries. You will then be asked to restart Windows. When Windows restarts, log in once again as a general user, then install the application. (Installing the libraries and application involves simply launching setup.exe on the CD-ROM. Administrator privileges are required only if the necessary libraries are not present in the system folder.)

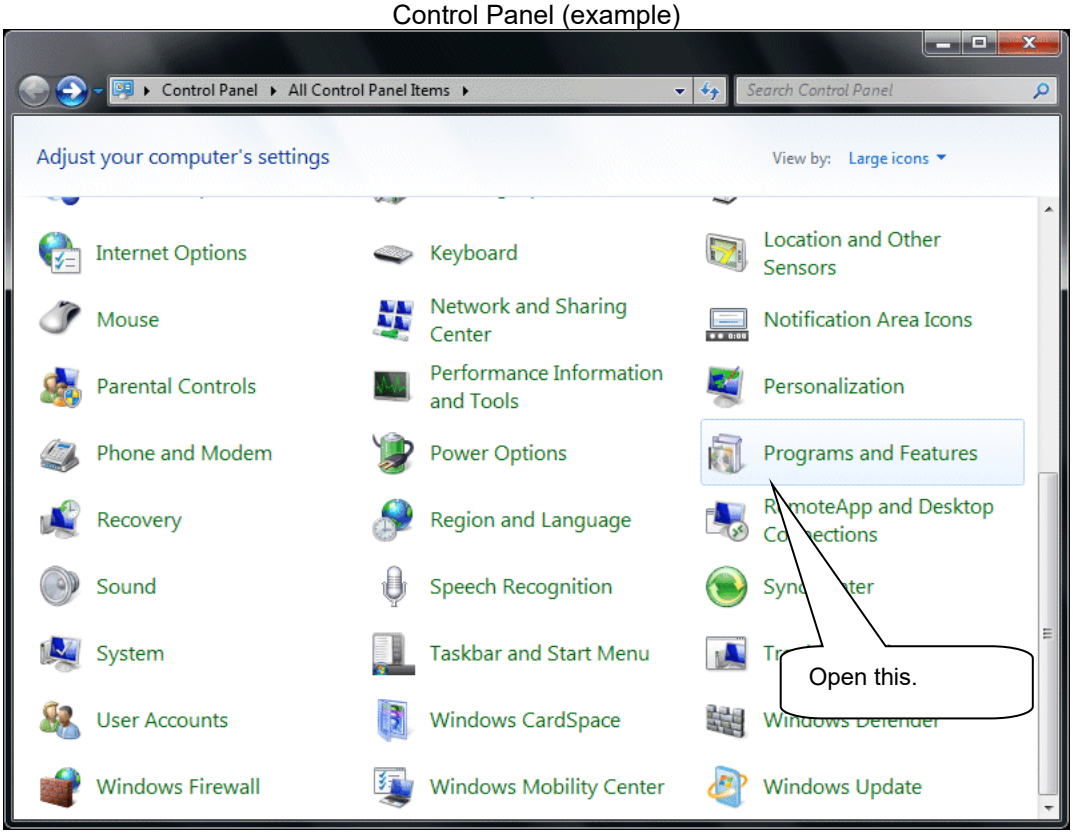
Using with a network connection
Check the following before installing on a PC running Microsoft Windows 7, Microsoft Windows 8, or Microsoft Windows 10 and connected to a network. IrDA communication uses certain TCP/IP-based technology (communication technology used in the Internet, etc.) and uses a special communication group and IP address. For this reason, communications may be blocked in certain cases by strong Internet security software. Where possible, run the software on a PC not connected to a network. If use on a PC connected to a network is unavoidable, carefully assess the security settings before use.

2-4. Uninstallation procedure

● **Startup**

To uninstall the software, click “Start” on the taskbar, click “Settings”, and launch the Control Panel.

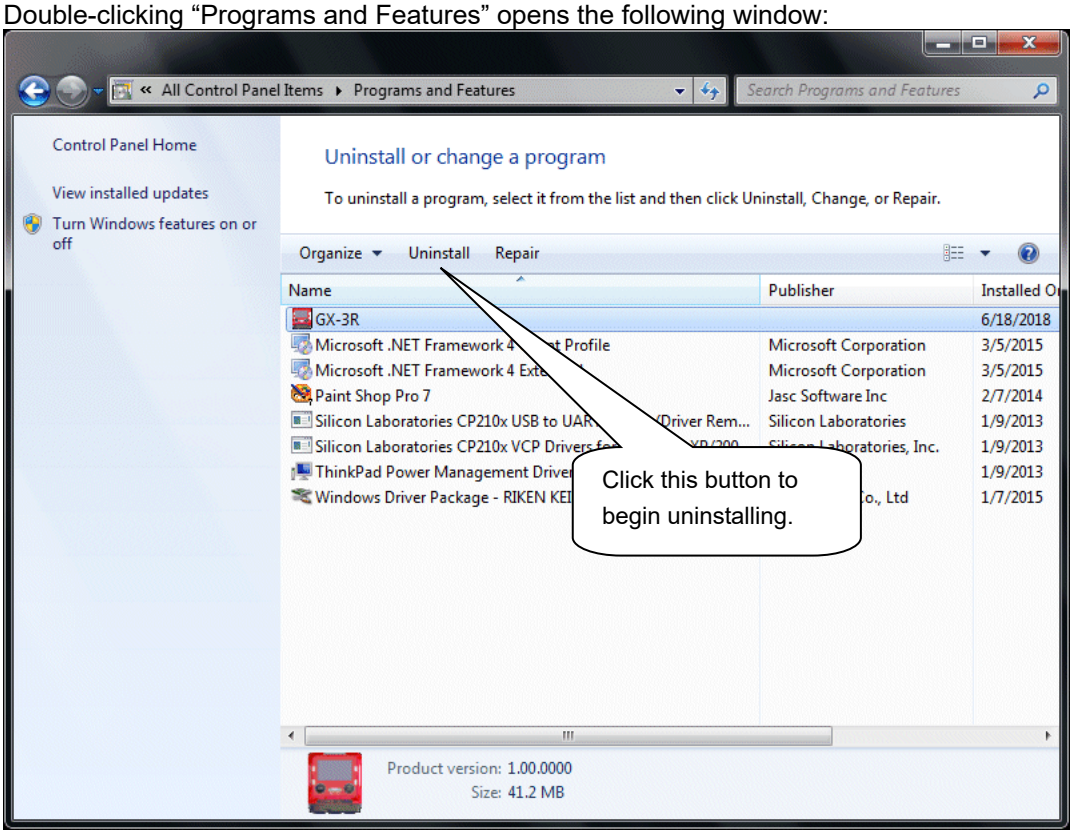
Control Panel (example)



Double-click to open “Programs and Features” in the Control Panel.

● **Select GX-3R**

Double-clicking “Programs and Features” opens the following window:



● **Start deletion**

Select (right-click) “GX-3R”, then click the “Uninstall” menu. Or select (click) “GX-3R”, then click the “Uninstall” button.

Click “Yes” to begin uninstalling.

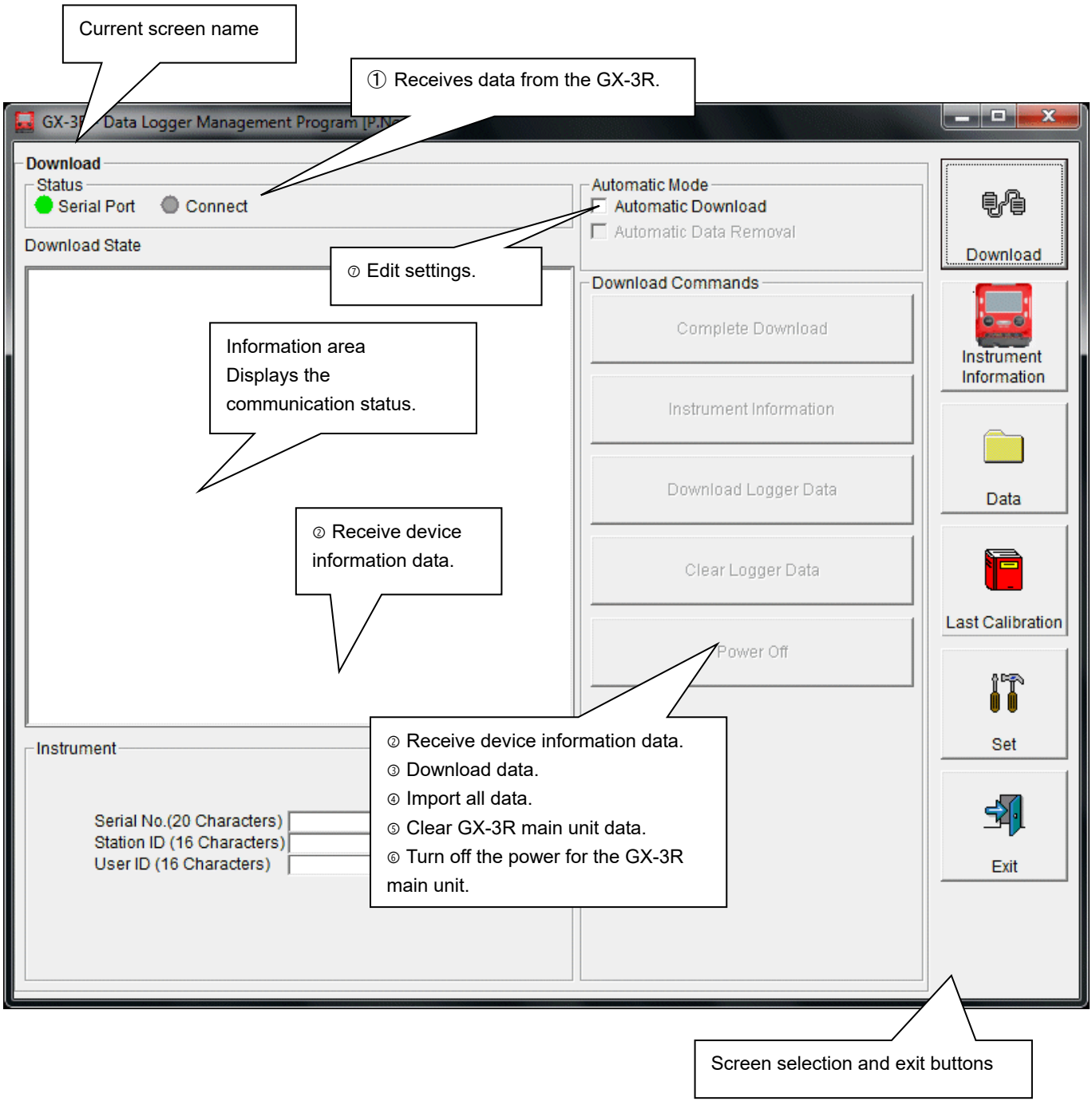
CAUTION: The message “Do you want to remove the shared file?” may appear when uninstalling. Select “No”; selecting “Yes” may affect other applications.

3. Operating procedures

Start the program by clicking the “GX-3R” shortcut on the desktop or click the Start menu and start the "Program".

3-1. Download screen

The Download screen follows the splash screen.



To start data communication, place the GX-3R in a suitable location, start this program, and power on the main unit. The program will automatically determine whether data communication is possible; if so, it will enter reception standby mode.

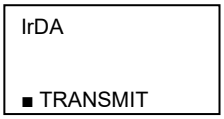
① Receiving data from the GX-3R

● Main unit preparation

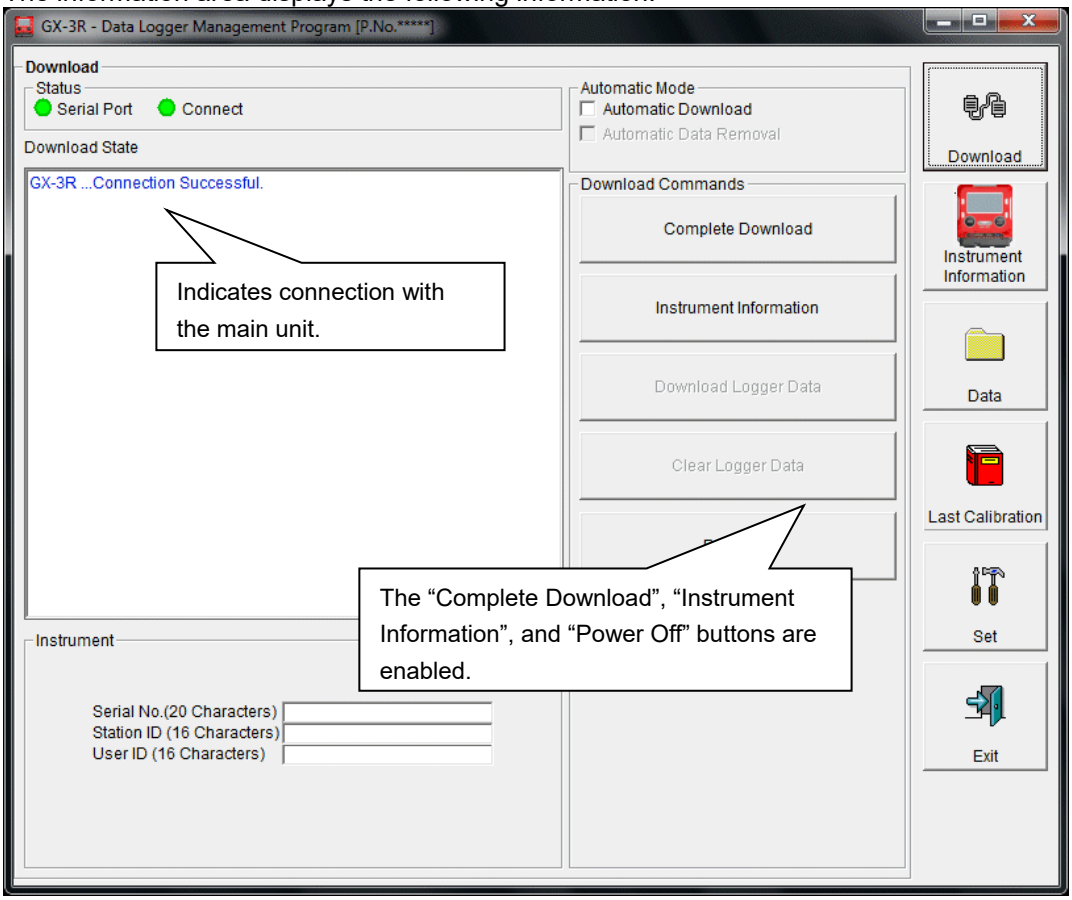
1. Start this software.
2. Place the GX-3R in a location where communication is possible with the power turned off.
3. Turn on the power for the GX-3R.

CAUTION:
Be sure to place the GX-3R in a location where communication is possible before turning on the power.
Connection cannot be made if moved to a location where communication is possible with the power already on.

The LCD on the GX-3R will appear as shown on the right. → (This may be somewhat difficult to read due to the display limitations of the GX-3R LCD.)

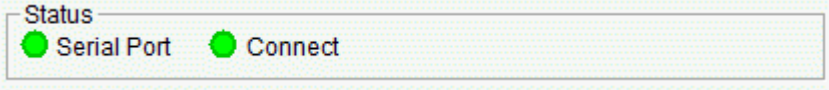


The information area displays the following information:



CAUTION:
If the details shown in the information area differ from those shown here, power off the GX-3R main unit and check and change the location of the main unit as necessary before turning on the power once again.

The “Status” area changes to indicate communication is possible.



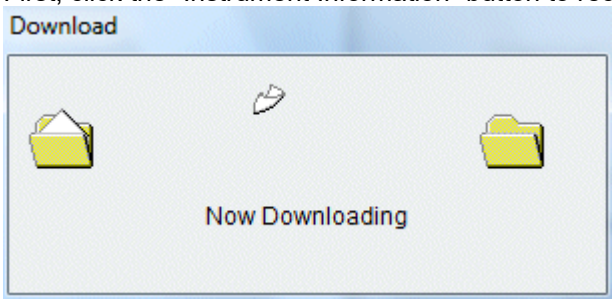
Serial Port:
- Communication possible: Green — The PC port is available for use.
- Communication not possible: Red

Connect:
- Standby: Gray
- Communicating: Green

② Receiving device information data

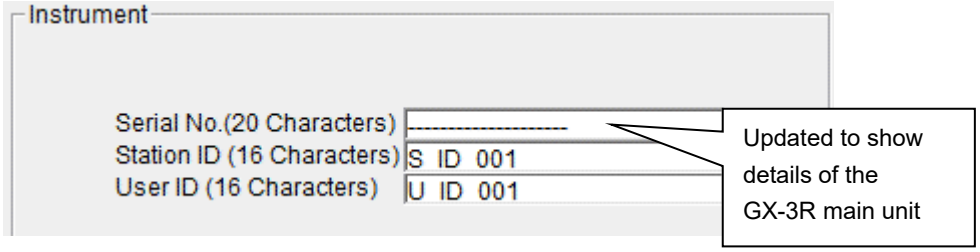
● Receive device information

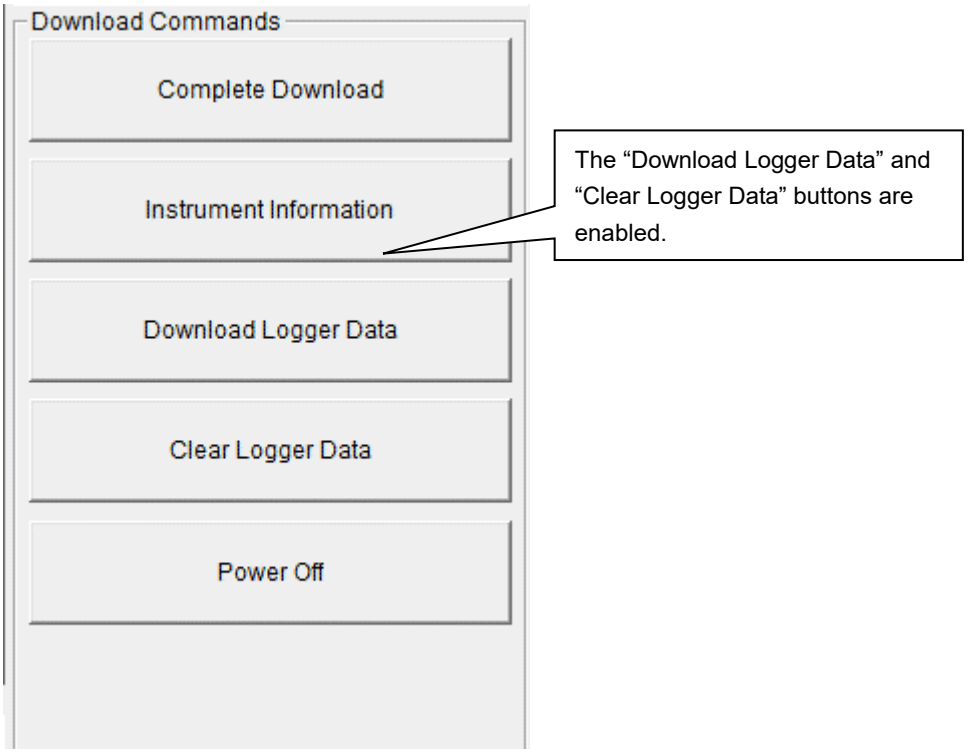
First, click the “Instrument Information” button to receive device information data.



An animated display will appear while data is being received.

Once the “Instrument Information” data has been received, the details shown in the “Instrument” area will be updated and the “Download Logger Data” and “Clear Logger Data” buttons enabled.



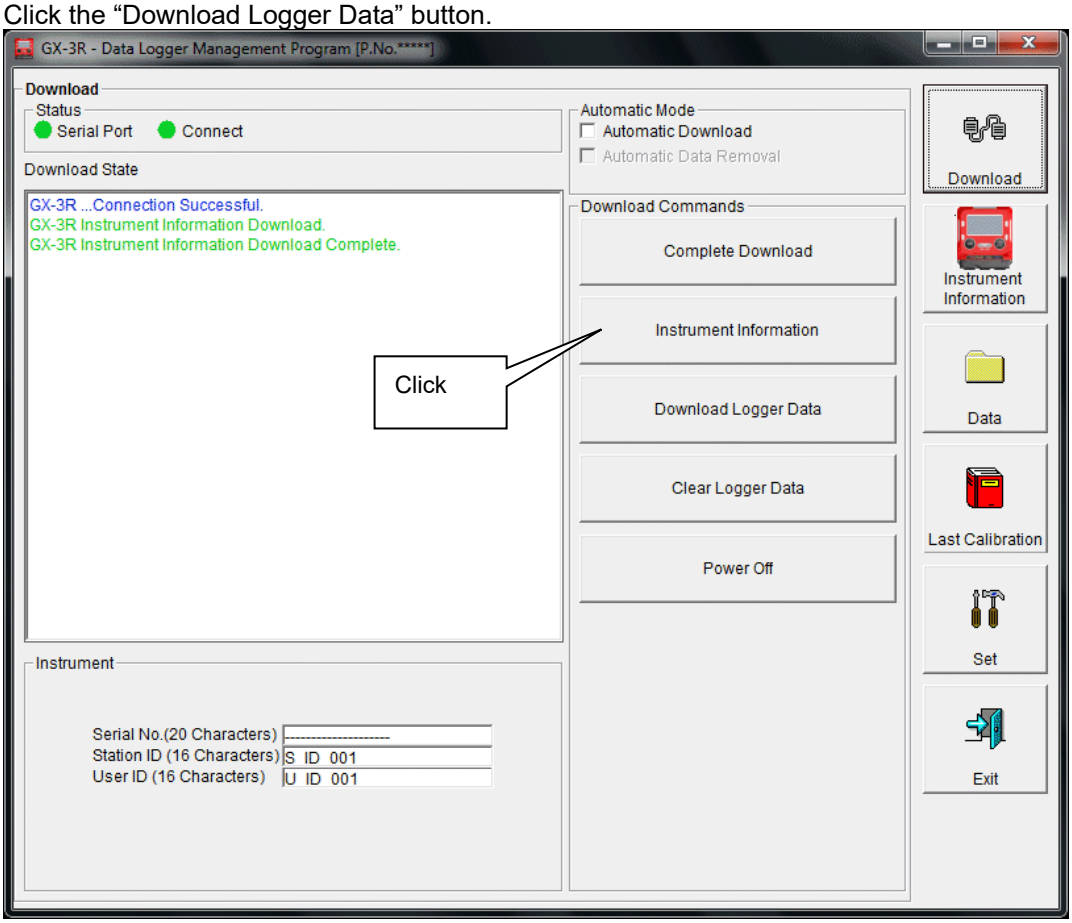


③ Downloading data

- **Trend data**
- **Event data**

After clicking the “Instrument Information” button and downloading the device information data, the “Download Logger Data” button is enabled.

Click the “Download Logger Data” button.



The information area displays the data receiving status.

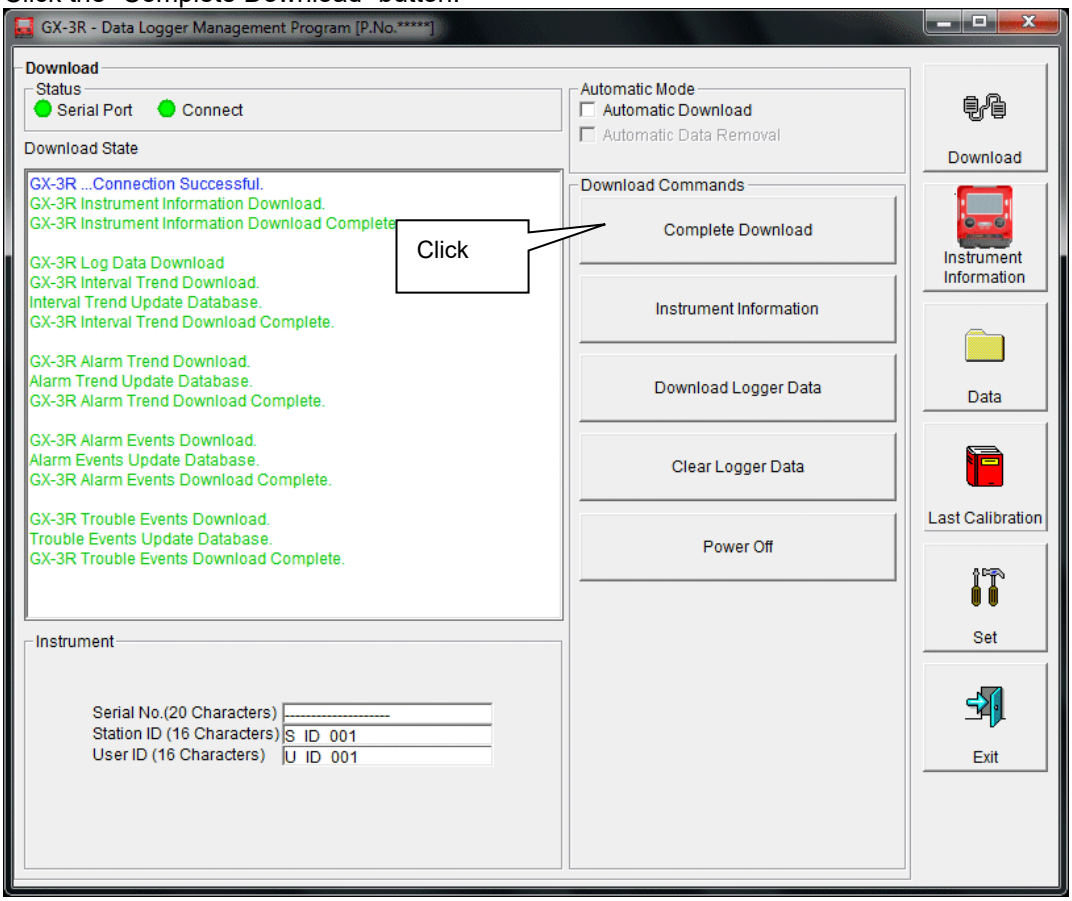
CAUTION:
Since access to other data is not permitted, other download buttons and the “Set” button are disabled while data is being downloaded.

④ Downloading all main unit data

● All data

Clicking the “Complete Download” button downloads all data, including “Instrument Information”, “Interval Trend”, “Alarm Trend”, “Alarm Events”, “Trouble Events”, and “Power ON/OFF Events” data.

Click the “Complete Download” button.



The information area displays the data receiving status.

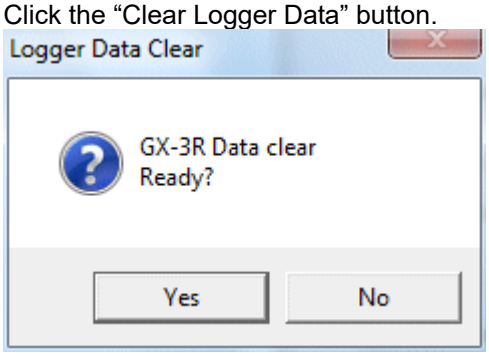
CAUTION:
Since access to other data is not permitted, other download buttons and the “Set” button are disabled while data is being downloaded.

⑤ Clearing GX-3R main unit data

● **Clear data**

Clicking the “Clear Logger Data” button clears all data from the GX-3R.

Click the “Clear Logger Data” button.



Click “Yes” to begin clearing the data.

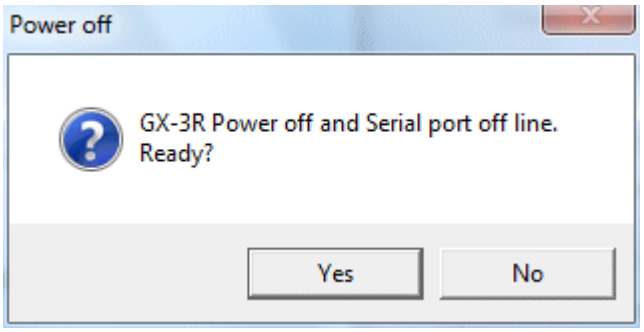
⑥ Turning off the power for the GX-3R main unit

● **Power off**

Clicking the “Power Off” button turns off the power for the GX-3R main unit and resets the PC serial port.

1. Click the “Power Off” button.

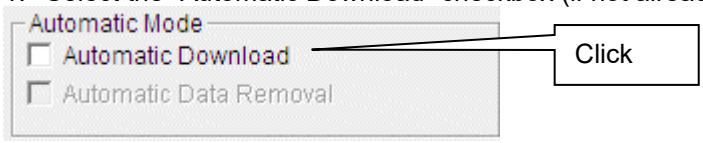
Click “Yes” to begin the process of powering off the GX-3R main unit and to reset the PC serial port before switching to standby to await data from the main unit.

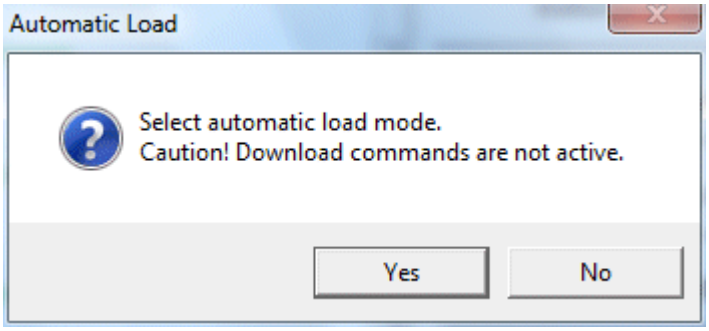


⑦ Switching to automatic processing

● Automatic download mode

1. Select the “Automatic Download” checkbox (if not already selected).





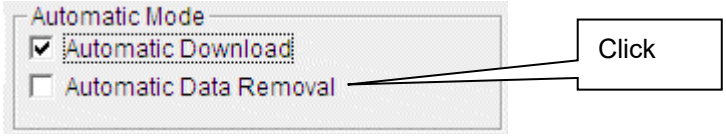
Click “Yes” to switch to automatic processing.
Click “No” to cancel the mode change.

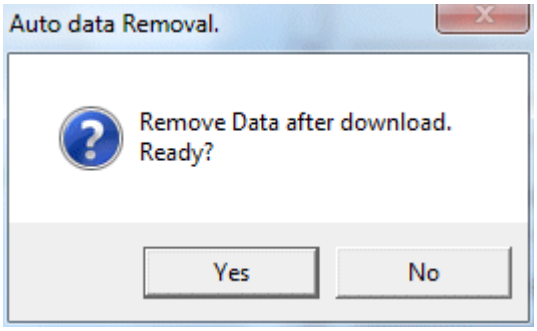
● Automatic removal after download

All data is downloaded automatically by the PC when the GX-3R main unit is powered on. The GX-3R main unit will then power off.
Data cannot be downloaded manually while automatic processing is underway.

Automatic processing can be configured to automatically delete downloaded data after it is downloaded.

1. Select the “Automatic Data Removal” checkbox.



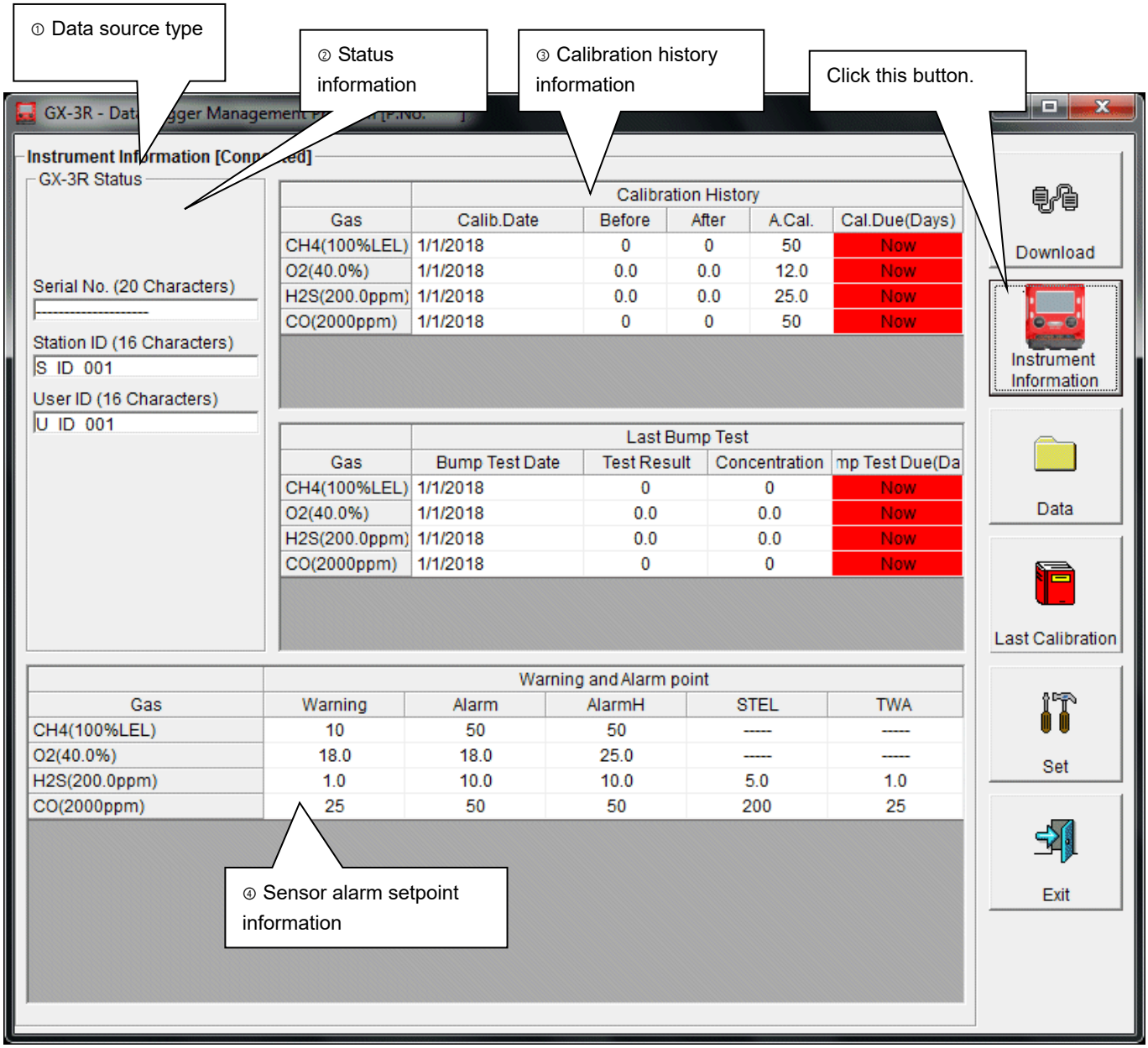


Click “Yes” **to automatically delete all data inside the GX-3R after it is downloaded.**

* This is a convenient way to reduce download times when repeating the Download → Delete → Download procedure several times.

3-2. Instrument Information screen

Click the “Instrument Information” button on the right-hand side of the screen to display the following screen. This screen lists device information data about the connected GX-3R main unit.

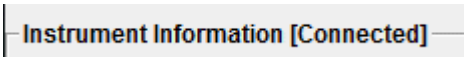


CAUTION: This screen is read-only. Data cannot be edited on this screen. → See 3-6. Set screen.
Data is not displayed if the “Instrument Information” data has not been downloaded.

① Data source type

● **Data source information**

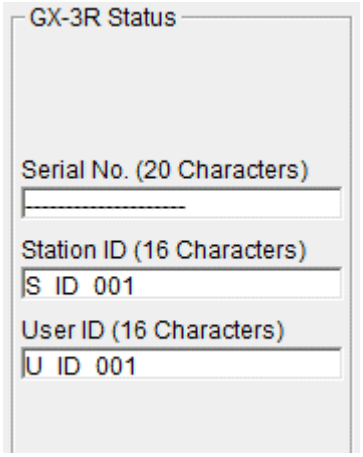
The indication will be “[Connected]” if information about the connected multi-gas monitor main unit is displayed.



② Status information

● **Information details**

Displays the “Serial No.”, Station ID”, and “User ID” stored inside the main unit.
CAUTION: These boxes are read-only and cannot be edited.



③ Calibration history information

● Calibration history details

	Calibration History				
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
CH4(100%LEL)	1/1/2018	0	0	50	Now
O2(40.0%)	1/1/2018	0.0	0.0	12.0	Now
H2S(200.0ppm)	1/1/2018	0.0	0.0	25.0	Now
CO(2000ppm)	1/1/2018	0	0	50	Now

Details:

Gas:	Measured gas names (full-scale units)
Calib.Date:	Date of last calibration
Before:	Concentration before last calibration
After:	Concentration/calibration failure after last calibration
A.Cal:	Automatic calibration concentration
Cal.Due (Days):	Warranty period for uncalibrated state (A warning is displayed in red 1 month before calibration expires.)

● Bump test history details

	Last Bump Test			
Gas	Bump Test Date	Test Result	Concentration	mp Test Due(Da
CH4(100%LEL)	1/1/2018	0	0	Now
O2(40.0%)	1/1/2018	0.0	0.0	Now
H2S(200.0ppm)	1/1/2018	0.0	0.0	Now
CO(2000ppm)	1/1/2018	0	0	Now

Details:

Gas:	Measured gas names (full-scale units)
Bump Test Date:	Date of last bump test
Test Result:	Concentration result for last bump test
Concentration:	Calibration gas concentration for last bump test
Bump Test Due (Days):	Warranty period for state with no bump test (A warning is displayed in red 1 month before the bump test expires.)

④ Sensor alarm setpoint information

● Details

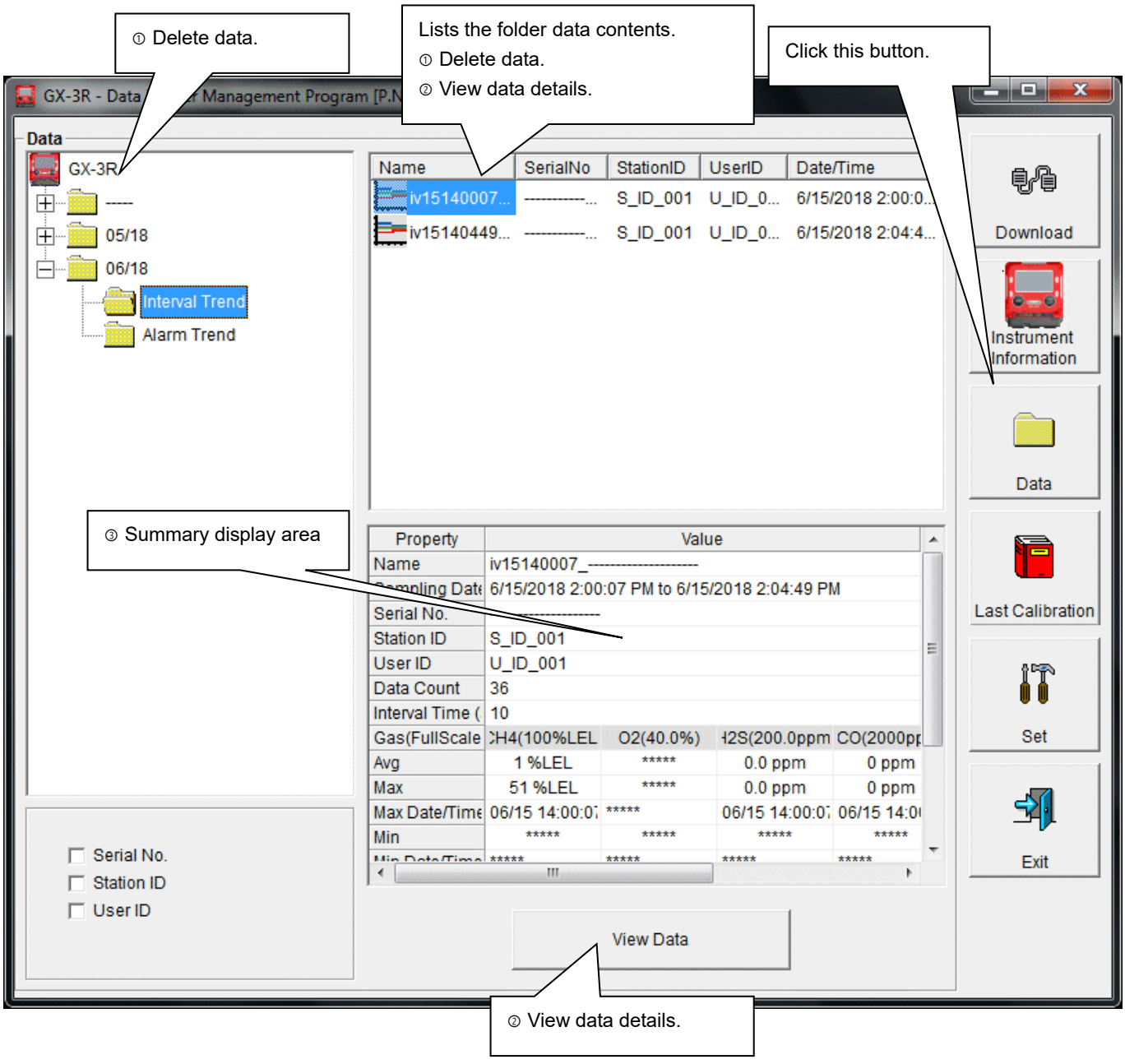
	Warning and Alarm point				
Gas	Warning	Alarm	AlarmH	STEL	TWA
CH4(100%LEL)	10	50	50	-----	-----
O2(40.0%)	18.0	18.0	25.0	-----	-----
H2S(200.0ppm)	1.0	10.0	10.0	5.0	1.0
CO(2000ppm)	25	50	50	200	25

Details:

Gas:	Measured gas names
Warning:	1st alarm setpoint concentration
Alarm:	2nd alarm setpoint concentration
AlarmH:	3rd alarm setpoint concentration
STEL:	STEL alarm setpoint concentration
TWA:	TWA alarm setpoint concentration

3-3. Data screen

Click the “Data” button on the right-hand side of the screen to display the following screen. This screen lists the downloaded data.



This screen can be used in the same way as Windows Explorer. However, the following operations are not available:

1. Renaming data
2. Moving data to other locations

The Explorer-style folders are displayed hierarchically in order of serial number, station ID, and user ID.

The folder and data names have the following formats:

Folder name: 03/11 = Data for March 2011

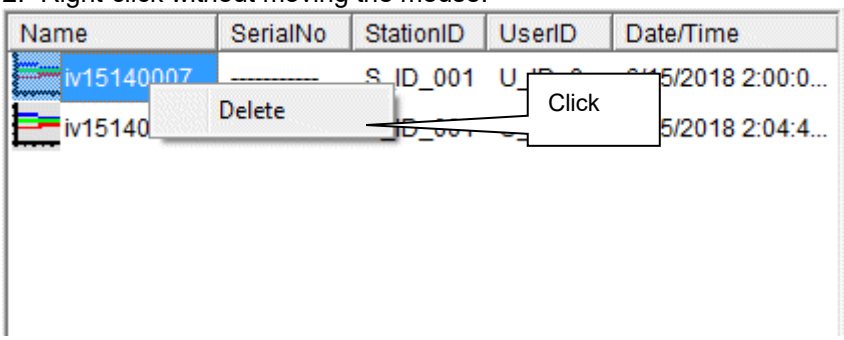
File name: 22111930_3EB = Interval trend for 11:19:30 on 22nd (date and time of logging start)
al26150419_3EB = Alarm trend for 15:04:19 on 26th (date and time of alarm occurrence)

The number of data samples allowed in each folder is limited by the PC’s hard disk capacity. To maintain acceptable response times, you should back up data files each year. 4. See 4. Data Maintenance.

① Deleting data

● Delete

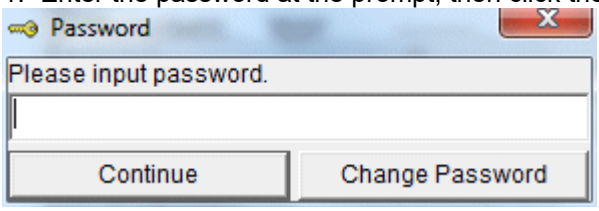
1. Click and select the data (folder) to delete.
2. Right-click without moving the mouse.



Click “Delete” on the “Delete” menu that appears.

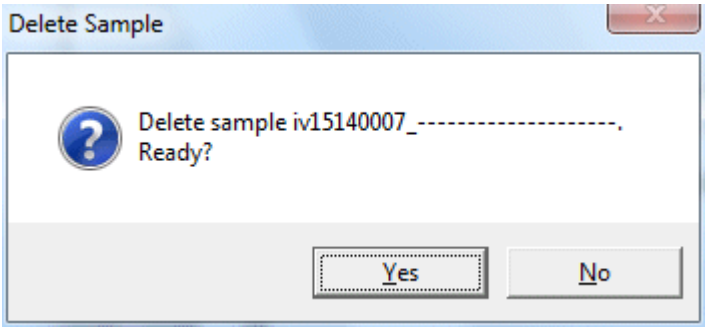
● Password input

1. Enter the password at the prompt, then click the “Continue” button.



CAUTION: Clicking “Continue” without entering a password will cancel the delete.

2. The following message will appear when you enter the correct password and click the “Continue” button.



Click the “Yes” button to delete the data.
Click the “No” button to cancel data deletion.

② Viewing data details

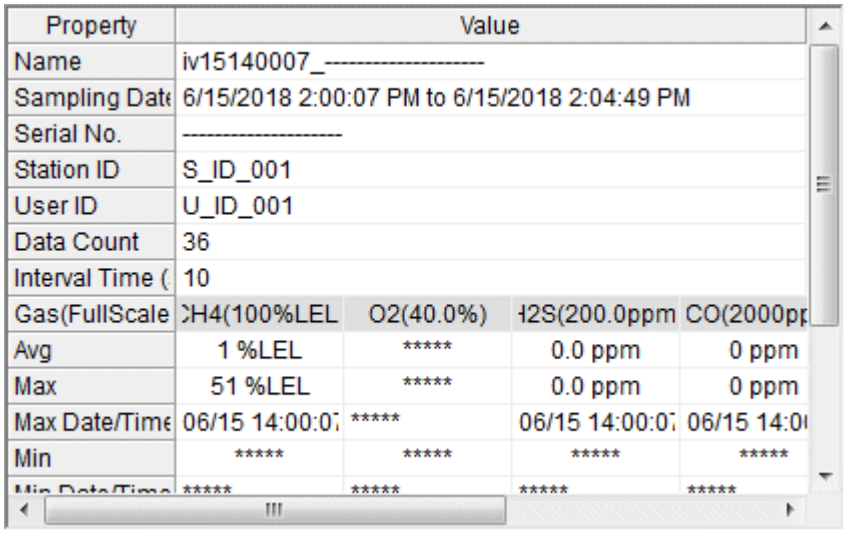
● To data details

1. Click the data the details of which you wish to view. Confirm that the summary appears in the summary display area, then click the “View Data” button.
Or:
2. Double-click the data the details of which you wish to view.
For information on how to operate the Data View screen: → Refer to **3-4. Data View screen**.

③ Summary display area

● Details

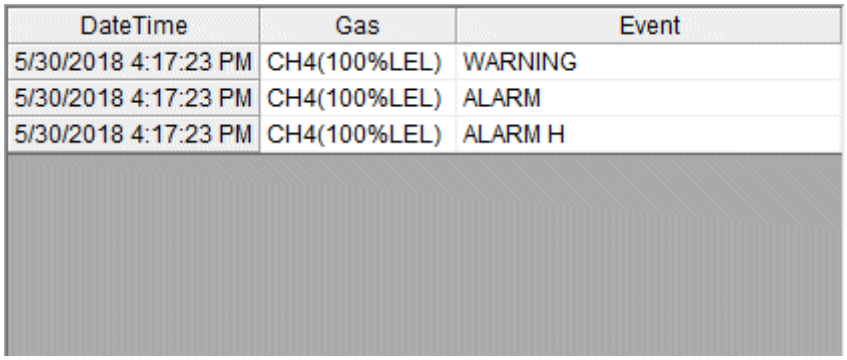
A summary of the data is displayed if the data selected is normal data.
Interval trend



Property	Value			
Name	iv15140007_----------			
Sampling Date	6/15/2018 2:00:07 PM to 6/15/2018 2:04:49 PM			
Serial No.	----------			
Station ID	S_ID_001			
User ID	U_ID_001			
Data Count	36			
Interval Time (	10			
Gas(FullScale	CH4(100%LEL	O2(40.0%)	H2S(200.0ppm	CO(2000pp
Avg	1 %LEL	*****	0.0 ppm	0 ppm
Max	51 %LEL	*****	0.0 ppm	0 ppm
Max Date/Time	06/15 14:00:07	*****	06/15 14:00:07	06/15 14:0
Min	*****	*****	*****	*****
Min Date/Time	*****	*****	*****	*****

Name: Data name
Sampling Date: Date and time of measurement start and end
Serial No./Station ID/User ID: GX-3R main unit status
Data Count: Number of data samples
Interval Time (sec): Sampling interval (seconds)
Gas (FullScale) - base: Gas (full-scale) - base
Avg: Gas average value
Max: Gas data maximum value
Max Date/Time: Date and time of maximum value detection
Min: Gas data minimum value
Min Date/Time: Date and time of minimum value detection
Warning: 1st alarm setpoint
Alarm: 2nd alarm setpoint
AlarmH: 3rd alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

Alarm events



DateTime	Gas	Event
5/30/2018 4:17:23 PM	CH4(100%LEL)	WARNING
5/30/2018 4:17:23 PM	CH4(100%LEL)	ALARM
5/30/2018 4:17:23 PM	CH4(100%LEL)	ALARM H

DateTime: Date and time of event occurrence
Gas: Gas generated
Event: Event type

Alarm trend

Property	Value			
Name	al15140008_----------			
Alarm Date/Tir	6/15/2018 2:00:08 PM			
Serial No.	----------			
Station ID	S_ID_001			
User ID	U_ID_001			
Data Count	720			
Interval Time (	5			
Gas(FullScale	43OH(100%LE	O2(40.0%)	42S(200.0ppm	CO(2000pp
Value	51 %LEL	*****	0.0 ppm	0 ppm
Warning	10 %LEL	18.0 %	1.0 ppm	25 ppm
Alarm	50 %LEL	18.0 %	10.0 ppm	50 ppm
AlarmH	50 %LEL	25.0 %	10.0 ppm	50 ppm
STEL	*****	*****	5.0 ppm	200 ppm

Name: Data name
Alarm Date/Time: Date and time of alarm occurrence
Serial No./Station ID/User ID: GX-3R main unit status
Data Count: Number of data samples
Interval Time (sec): Sampling interval
Gas (FullScale) - base: Gas (full-scale) - base
Value: Concentration at time of alarm occurrence
Warning: 1st alarm setpoint
Alarm: 2nd alarm setpoint
AlarmH: 3rd alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

Calibration history

DateTime	Gas	Before	After
6/14/2018 11:49:24 AM	CH4(100%LEL)	0 %LEL	-----
6/14/2018 11:49:24 AM	O2(40.0%)	20.9 %	-----
6/14/2018 11:49:24 AM	H2S(200.0ppm)	0.0 ppm	-----
6/14/2018 11:49:24 AM	CO(2000ppm)	0 ppm	-----
	----(---)	-----	-----
6/1/2018 2:29:44 PM	CH4(100%LEL)	0 %LEL	-----
6/1/2018 2:29:44 PM	O2(40.0%)	20.9 %	-----
6/1/2018 2:29:44 PM	H2S(200.0ppm)	0.0 ppm	-----
6/1/2018 2:29:44 PM	CO(2000ppm)	0 ppm	-----
	----(---)	-----	-----
...	Total	3	Datas

DateTime: Date and time of event occurrence
Gas: Gas
Before: Concentration before calibration
After: Concentration after calibration

Trouble events

DateTime	Gas/Body	Event
6/14/2018 11:49:24 AM	CO(2000ppm)	Fail(Span)
6/14/2018 11:49:24 AM	H2S(200.0ppm)	Fail(Span)
6/14/2018 11:49:24 AM	O2(40.0%)	Fail(Span)
6/14/2018 11:49:24 AM	CH3OH(100%LE	Fail(Span)
6/1/2018 2:29:44 PM	CO(2000ppm)	Fail(Span)
6/1/2018 2:29:44 PM	H2S(200.0ppm)	Fail(Span)
6/1/2018 2:29:44 PM	O2(40.0%)	Fail(Span)
6/1/2018 2:29:44 PM	CH4(100%LEL)	Fail(Span)
...	13 Datas	

DateTime: Date and time of event occurrence
Gas/Body: Gas generated or GX-3R main unit
Event: Event type

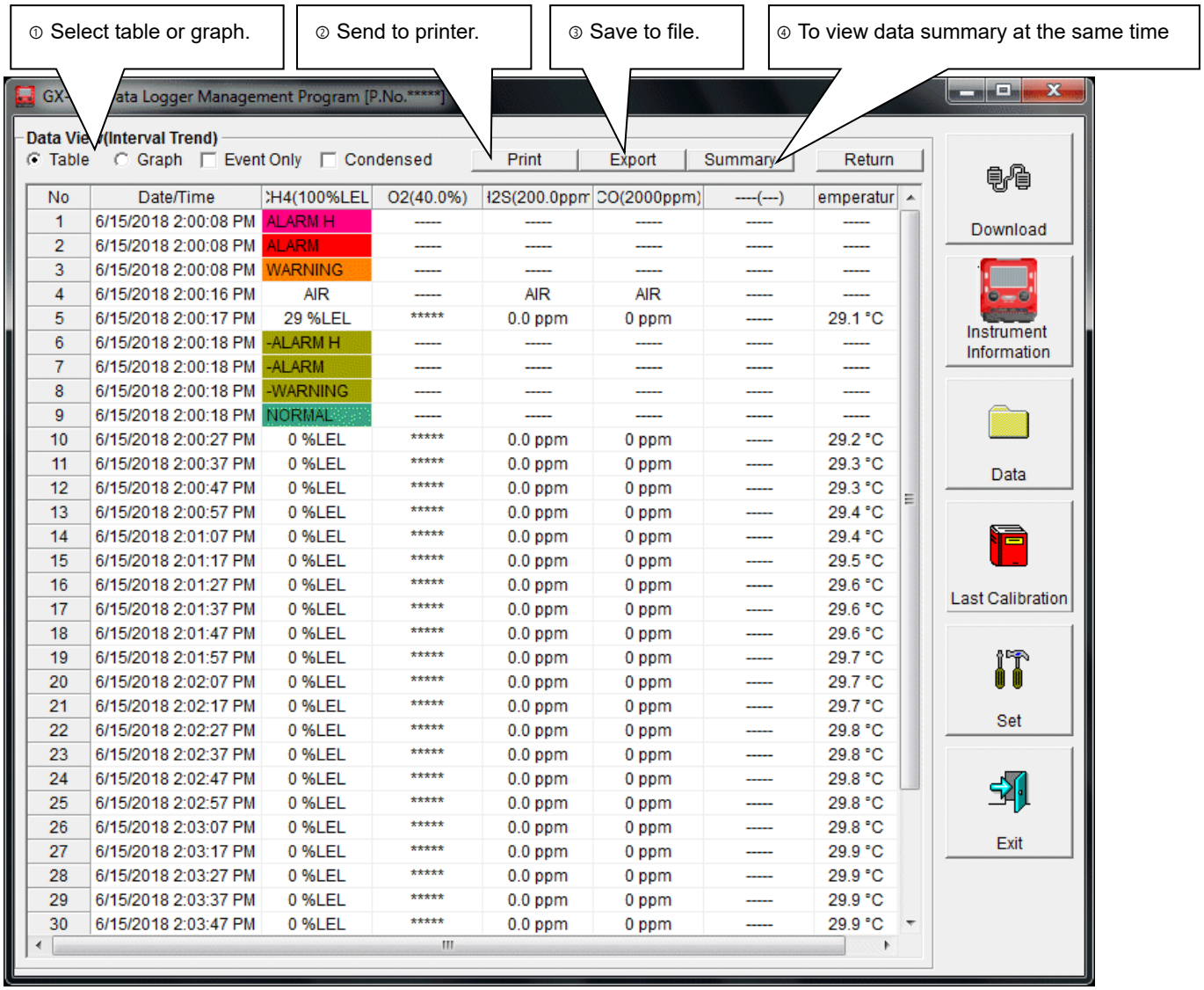
Bump tests

DateTime	Gas	Test Result	Concentration	Judge
6/14/2018 11:47:0	CH4(100%L	0 %LEL	50 %LEL	FAIL
6/14/2018 11:47:0	O2(40.0%)	21.1 %	12.0 %	FAIL
6/14/2018 11:47:0	H2S(200.0p	0.0 ppm	25.0 ppm	FAIL
6/14/2018 11:47:0	CO(2000ppr	0 ppm	50 ppm	FAIL
	----(---)	-----	-----	
6/1/2018 2:27:40 F	CH4(100%L	0 %LEL	50 %LEL	FAIL
6/1/2018 2:27:40 F	O2(40.0%)	20.9 %	12.0 %	FAIL
6/1/2018 2:27:40 F	H2S(200.0p	0.0 ppm	25.0 ppm	FAIL
6/1/2018 2:27:40 F	CO(2000ppr	0 ppm	50 ppm	FAIL
	----(---)	-----	-----	
...	Total	3	Datas	

DateTime: Date and time of event occurrence
Gas: Gas
Test Result: Test result concentration
Concentration: Calibration gas concentration
Judge: Test assessment

3-4. Data View screen

This screen displays data details in table and graph format.

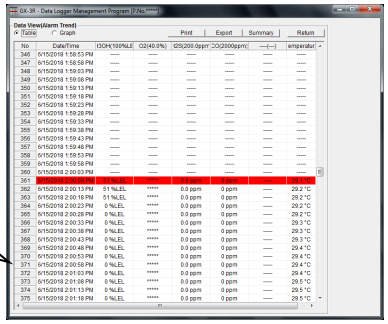


- ☐ Event Only: Displays event data only.
- ☐ Condensed: Displays only fluctuating sample data.

CAUTION: No graph will be drawn unless there are at least five samples.
The “Alarm Trend” data table highlights the locations of the alarms occurred in red.

The mouse cursor will appear as follows when hovered over “WARNING”, “ALARM”, or “OVER” event data.
Click on the cell here to search for corresponding trend data and to display the data (if any) in a separate window.

For WARNING, ALARM, and OVER



Separate window for WARNING, ALARM, and OVER
Click the “Return” button to exit the window.

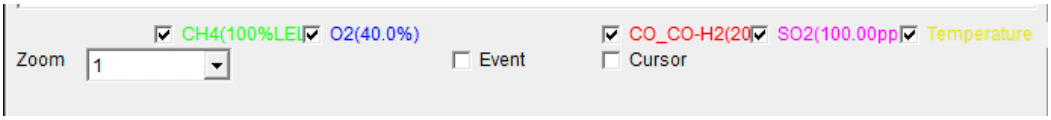
* The “Alarm Trend” data table highlights the locations of the alarms occurred in red.

① Selecting table or graph

● **Select graph**

1. Select “Graph” of the “Table” and “Graph” radio buttons at the top left of the screen.

Various operations are available using the checkboxes and combo boxes at the bottom of the screen.

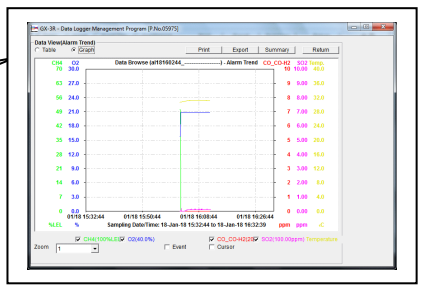


Upper checkboxes (gas names):	Displays or hides the corresponding gas data.
“Zoom” combo box:	Specify a horizontal axis scale factor appropriate for the number of samples.
“Event” checkbox:	Displays event information markers for alarms and other events.
“Cursor” checkbox:	Displays the cursor on the graph.

CAUTION:
The maximum value on the vertical axis of the graph is adjusted automatically based on the following formula:
If the maximum value for data with no events is “x” and the full scale is 10 or greater:
Ymax = {int (x / 10) + 1} × 10, and for full scale under 10: Ymax = {int (x) + 1}
“int”: Decimal values are discarded.

CAUTION:
No graph will be drawn unless there are five or more normal concentration data samples.
Data consisting only of events cannot be displayed in graph form because they do not contain concentration information.
The mouse cursor will appear as follows when hovered over “WARNING”, “ALARM”, or “OVER” event data. Click here to search for the corresponding trend data and to display the data (if any) in a separate window.

For WARNING, ALARM, and OVER



Separate window for WARNING, ALARM, and OVER
Click the “Return” button to exit the window.

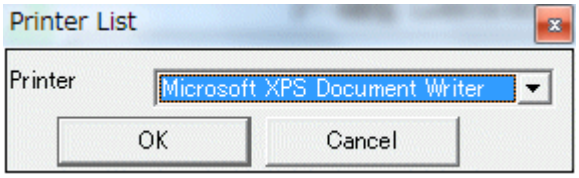
② Sending to printer

● Print

Details currently displayed on the Data View screen can be sent to the printer.

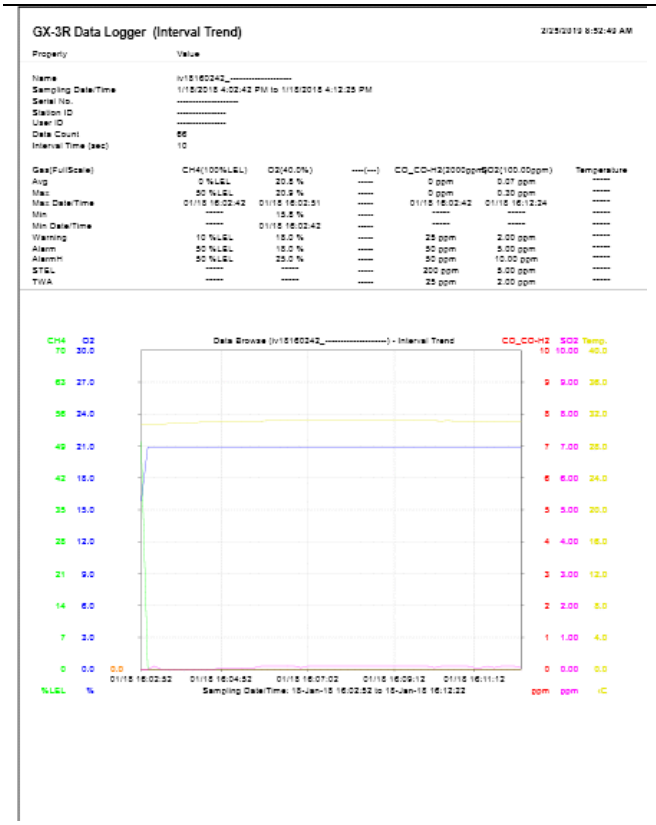
1. Click “Print” at the top of the screen.

The printer selection window appears. Select the desired printer and click the “OK” button.

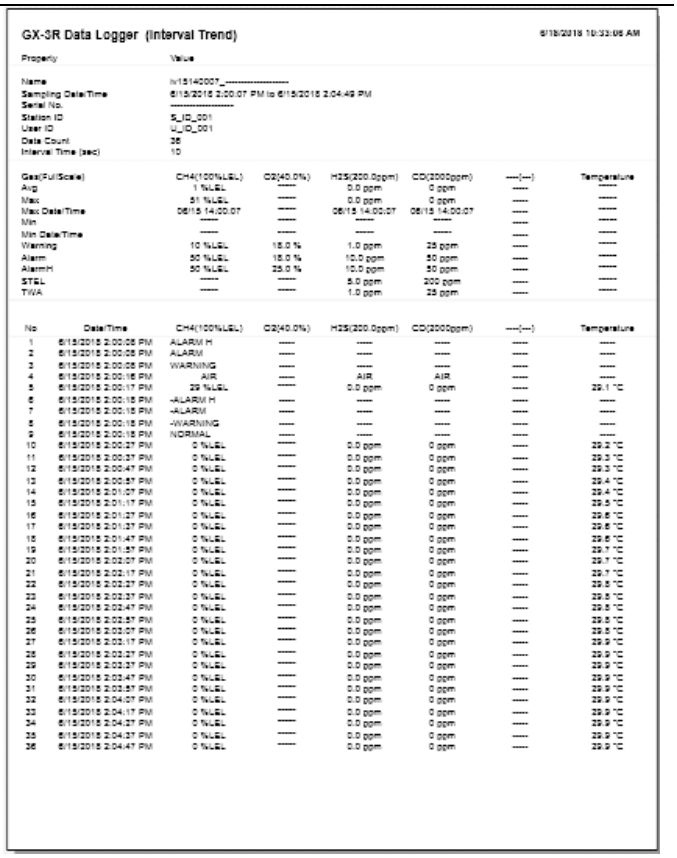


Click the “OK” button to begin printing.
Click the “Cancel” button to return to the Data View screen without printing.

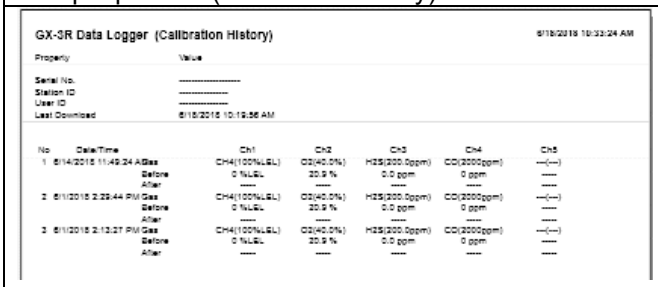
Sample printout (graph print)



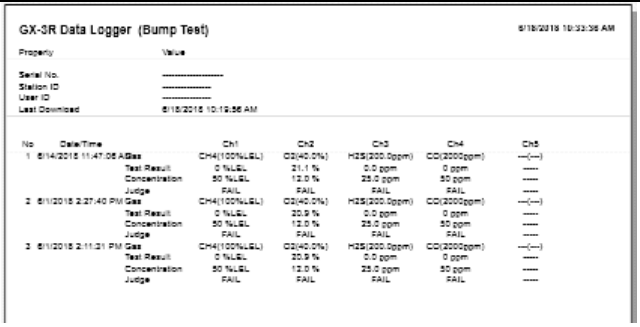
Sample printout (table print)



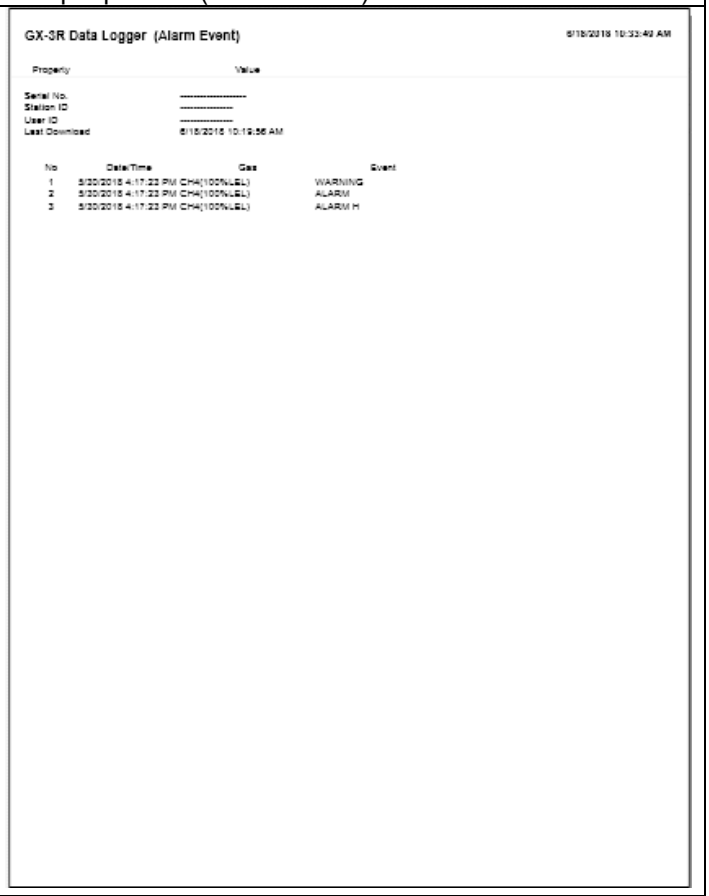
Sample printout (calibration history)

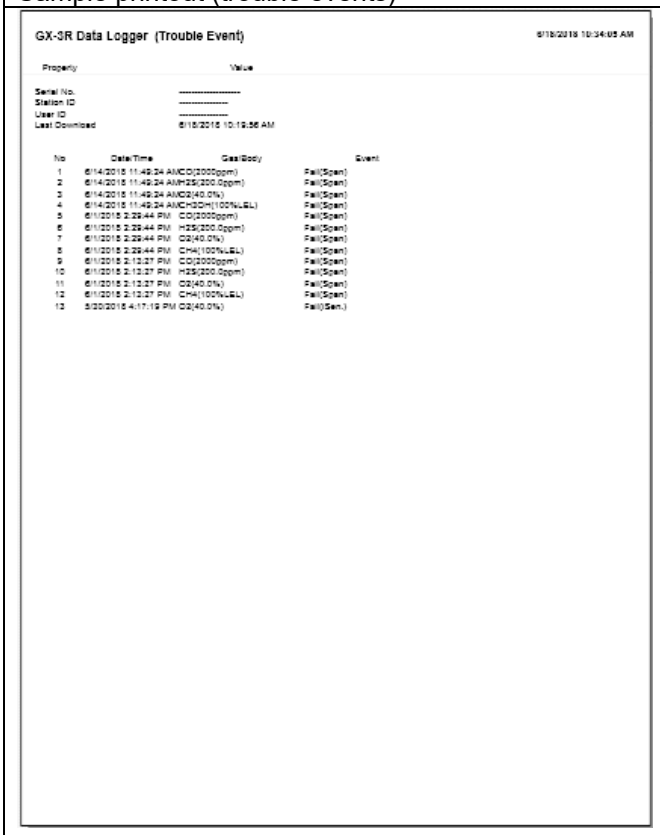


Sample printout (bump tests)



Sample printout (alarm events)



Sample printout (trouble events)	
	

GX-3R Data Logger (Trouble Event) 6/18/2018 10:34:05 AM

Property	Value
Serial No.	----------
Station ID	----------
User ID	----------
Last Download	6/18/2018 10:12:56 AM

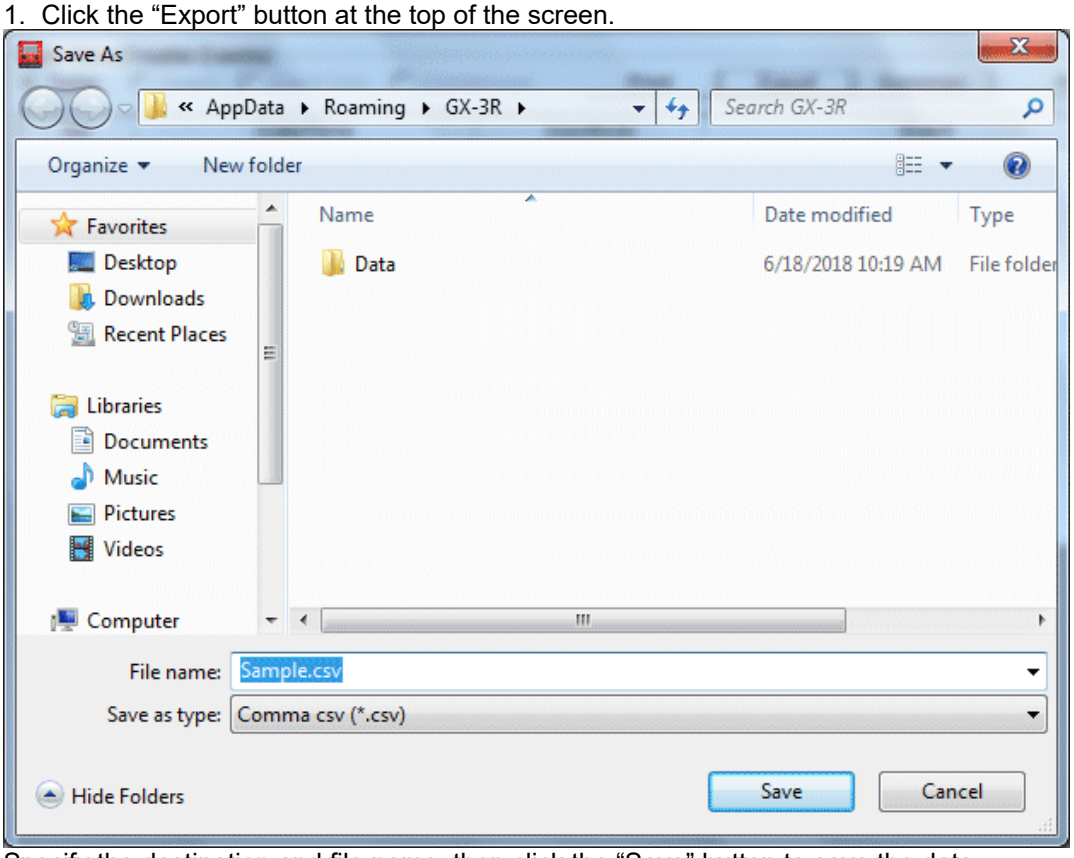
No	Date/Time	Gas/Body	Event
1	6/14/2015 11:49:24 AM	CO(2000ppm)	Fail(Span)
2	6/14/2015 11:49:24 AM	H2S(200.0ppm)	Fail(Span)
3	6/14/2015 11:49:24 AM	O2(40.0%)	Fail(Span)
4	6/14/2015 11:49:24 AM	CH4(100%LEL)	Fail(Span)
5	6/1/2015 2:29:44 PM	CO(2000ppm)	Fail(Span)
6	6/1/2015 2:29:44 PM	H2S(200.0ppm)	Fail(Span)
7	6/1/2015 2:29:44 PM	O2(40.0%)	Fail(Span)
8	6/1/2015 2:29:44 PM	CH4(100%LEL)	Fail(Span)
9	6/1/2015 2:13:27 PM	CO(2000ppm)	Fail(Span)
10	6/1/2015 2:13:27 PM	H2S(200.0ppm)	Fail(Span)
11	6/1/2015 2:13:27 PM	O2(40.0%)	Fail(Span)
12	6/1/2015 2:13:27 PM	CH4(100%LEL)	Fail(Span)
13	5/20/2015 4:17:19 PM	O2(40.0%)	Fail(Sen.)

Printer setup precautions
① The detailed printer settings vary depending on the printer used. Refer to the printer instruction manual for more information. ② This program does not allow the print area to be specified when printing. This means it is not possible to select and print only a certain part of the data view. ③ The setting for the number of copies can be edited only on printers that allow this. Changes in the settings made here will also apply to other applications subsequently used. (For example, if two copies were set here, two copies may also be printed out when using other applications.) When printing from other applications after changing the printer settings for this program, check the print settings for that application before printing.

③ Saving to file

● Save

1. Click the “Export” button at the top of the screen.



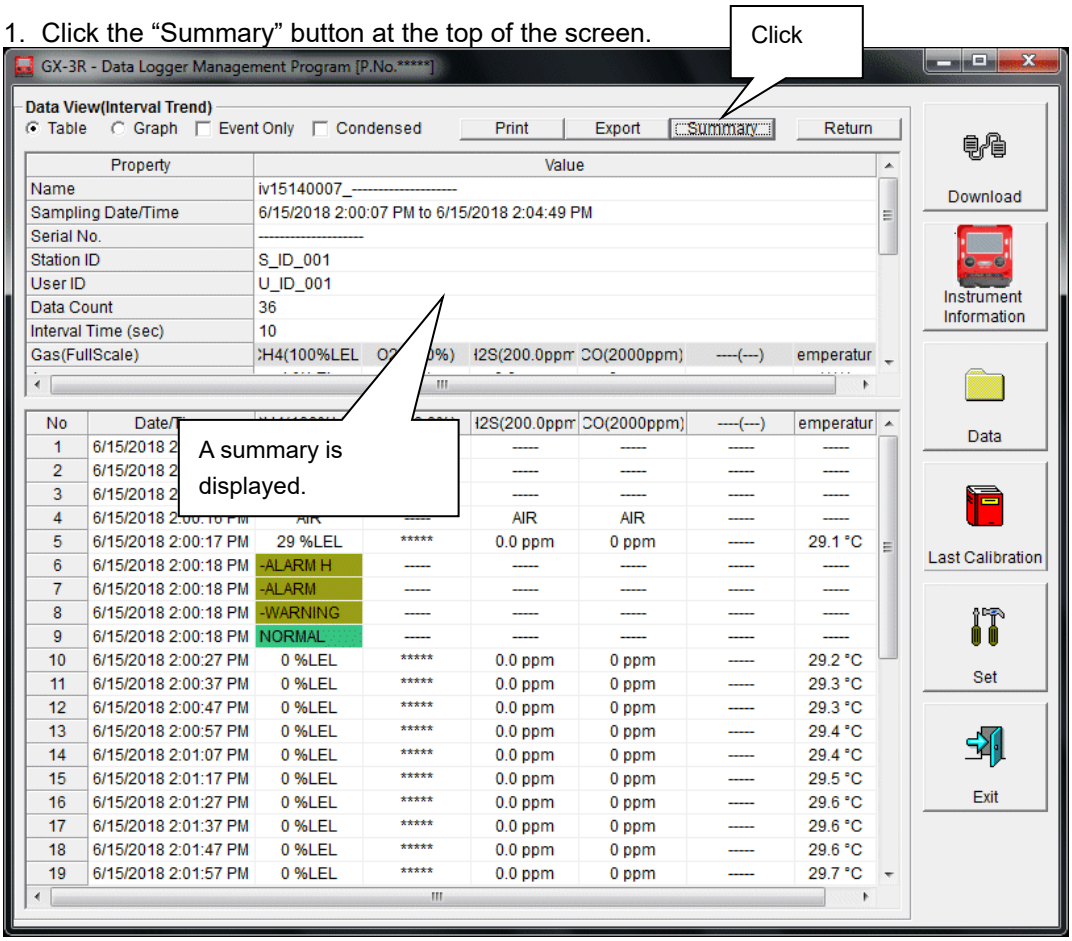
Specify the destination and file name, then click the “Save” button to save the data.
Click the “Cancel” button to cancel saving.

CAUTION:
If a table is displayed, the table contents will be saved in Excel CSV format.
If a graph is displayed, the graph will be saved as a bitmap.

④ Viewing data summary at the same time

● **Summary display**

1. Click the “Summary” button at the top of the screen.



Click the “Summary” button while the summary is displayed to hide the summary display.

⑤ Table details

● Event colors

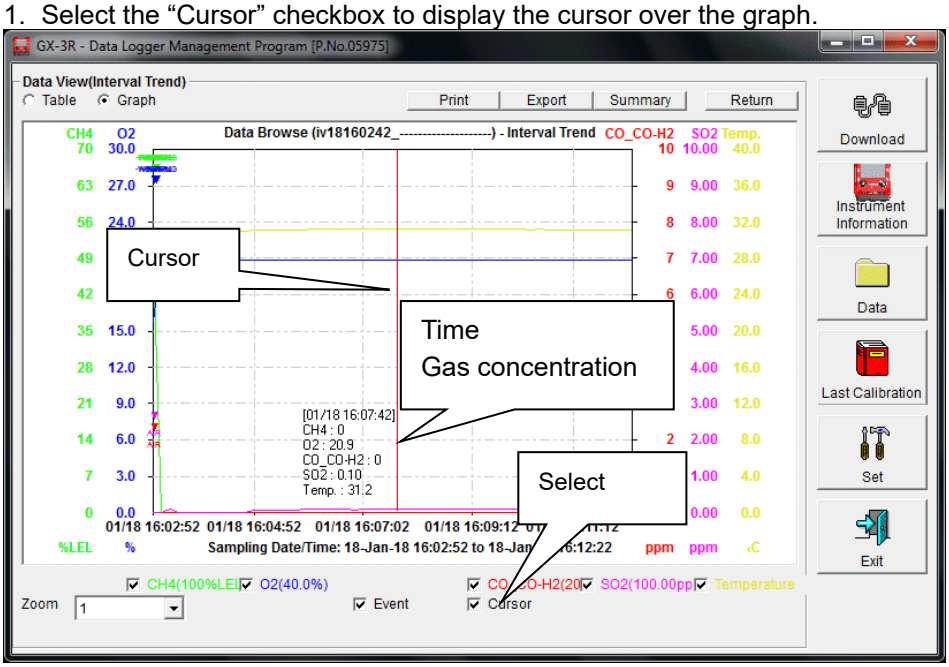
The concentration display cells for each gas in the table have different colored backgrounds based on the type of event that occurred.

Fail:	Gray	Trouble
Warning:	Orange	1st alarm
Alarm:	Red:	2nd alarm
AlarmH:	Magenta	3rd alarm
TWA:	Bright purple	TWA alarm
STEL:	Pink	STEL alarm
Normal:	Dark green	Restored from above statuses
Over:	Bright red	Full-scale over

⑥ Graph details

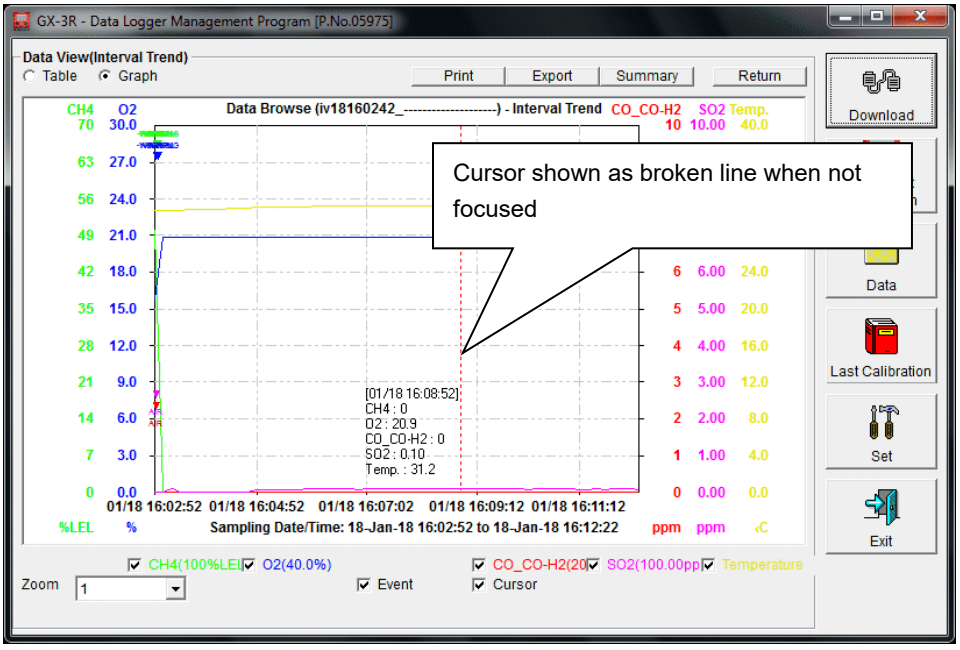
● Cursor

1. Select the “Cursor” checkbox to display the cursor over the graph.



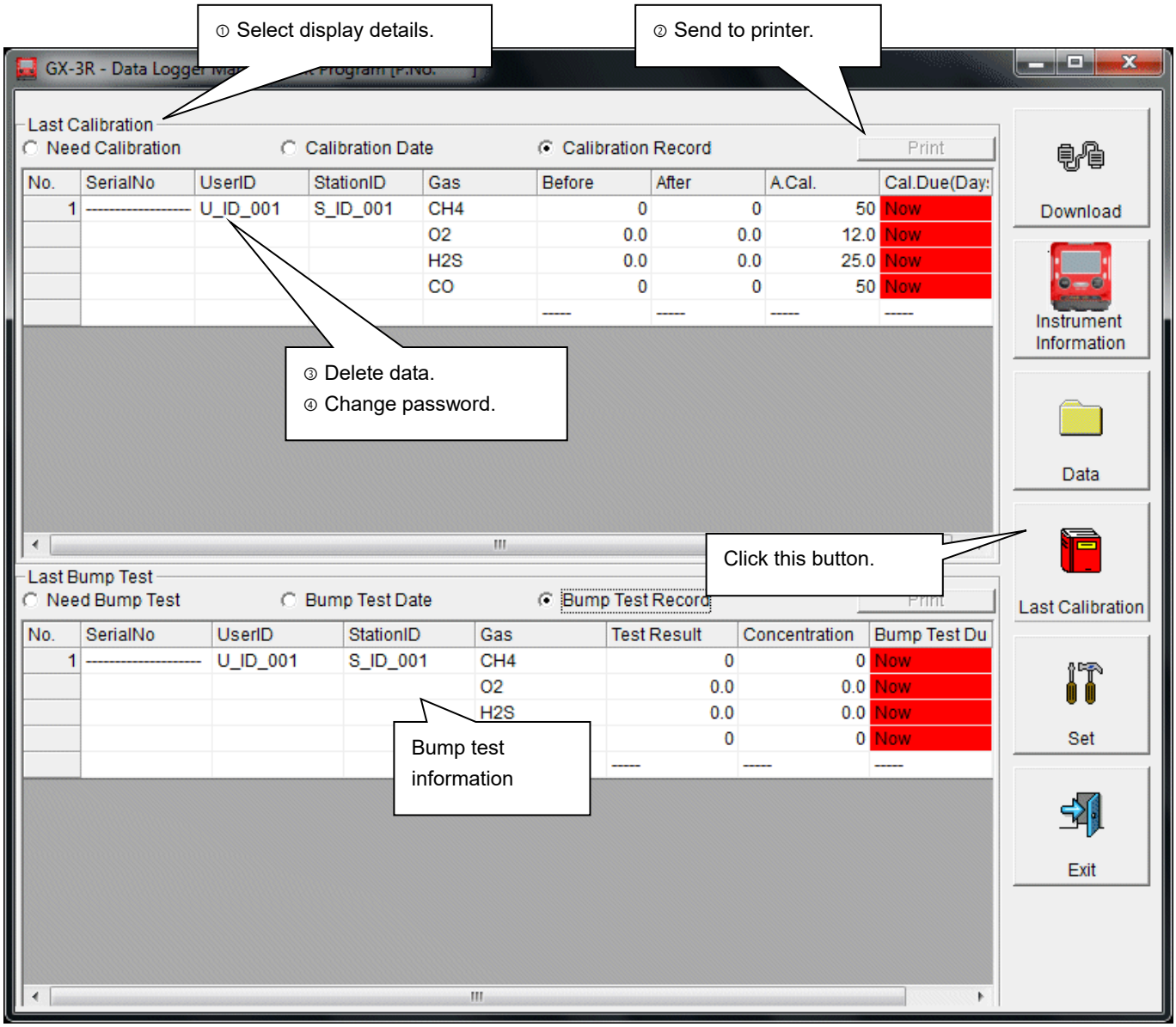
Use the “←” and “→” keys to move the cursor left and right. Use the “↑” and “↓” keys to move the time and concentration display up and down.
Press the “Shift” key at the same time to move the cursor faster.

CAUTION:
The cursor cannot be moved if a window for another program is opened and the focus is not currently on the graph area.
In this case, the cursor appears as a broken line. To return the focus, click anywhere within the graph area.



3-5. Last Calibration screen

This checks for the calibration expiration of previously downloaded main unit data. Bump tests are also displayed in the same way.

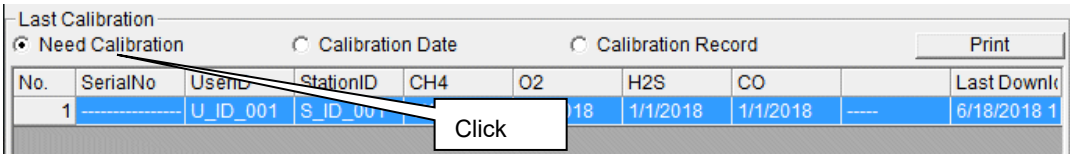


CAUTION: The table details are read-only and cannot be edited.

① Selecting display details

● Expired data

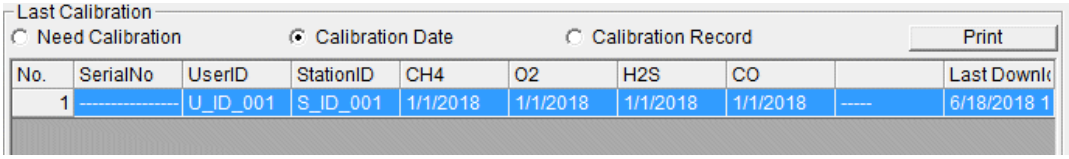
1. Click the “Need Calibration” radio button.



Displays calibrations for previously connected GX-3R main units (for which device information data has been downloaded) that have expired.

● List display

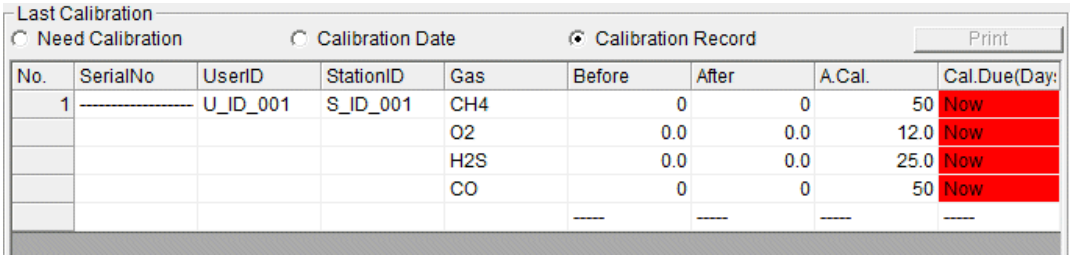
1. Click the “Calibration Date” radio button.



Lists data for previously connected GX-3R main units. (Only the most recent data is listed for units with the same serial number, user ID and station ID.)

● Detailed display

1. Click the “Calibration Record” radio button.



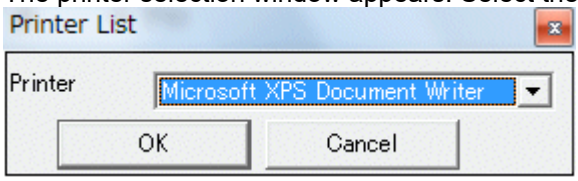
Displays data for previously connected GX-3R main units in the same format as the Instrument Information screen.

For more information on display contents: → Refer to ③ Calibration history information in 3-2. Instrument Information screen.

② Sending to printer

● **Print**

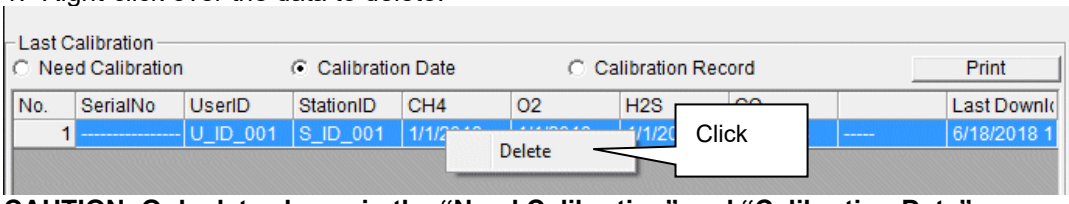
The most recent calibration dates shown in the “Need Calibration” and “Calibration Date” displays can be printed out.
The printer selection window appears. Select the desired printer and click the “OK” button.



③ Deleting data

● **Delete**

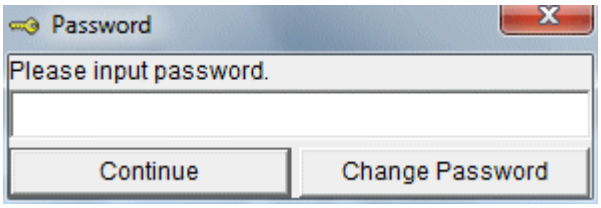
1. Right-click over the data to delete.



CAUTION: Only data shown in the "Need Calibration" and "Calibration Date" displays can be deleted.
Data cannot be deleted in the "Calibration Record" display.

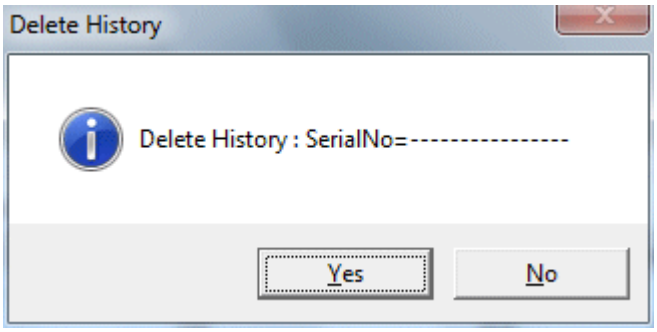
● **Password input**

1. Click the "Delete" button to display a password dialog. Enter the password, then click the "Continue" button.



CAUTION: Clicking "Continue" without entering a password will cancel the delete.

2. The following message will appear when you enter the correct password and click the "Continue" button.

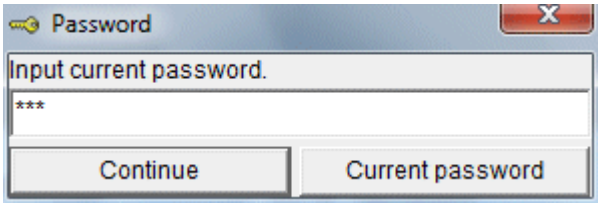


Click the "Yes" button to delete the data.
Click the "No" button to cancel data deletion.

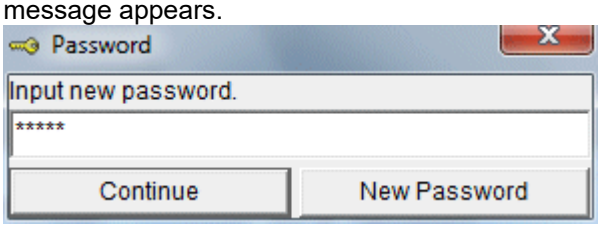
④ Changing the password

● **Password input**

1. Open the password dialog in the same way as for data deletion, then click the “Change Password” button.

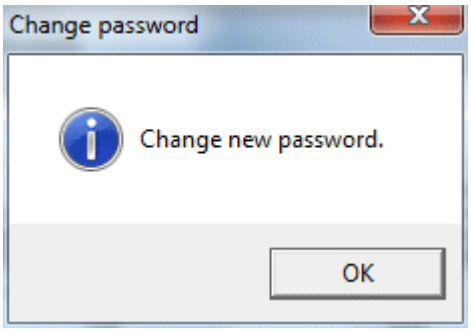


2. Enter the correct password, then click the “Current password” button. The following message appears.



3. Enter the new password here, then click the “New Password” button.

4. A password dialog will appear again. Enter the same (new) password, then click the “New Password” button.

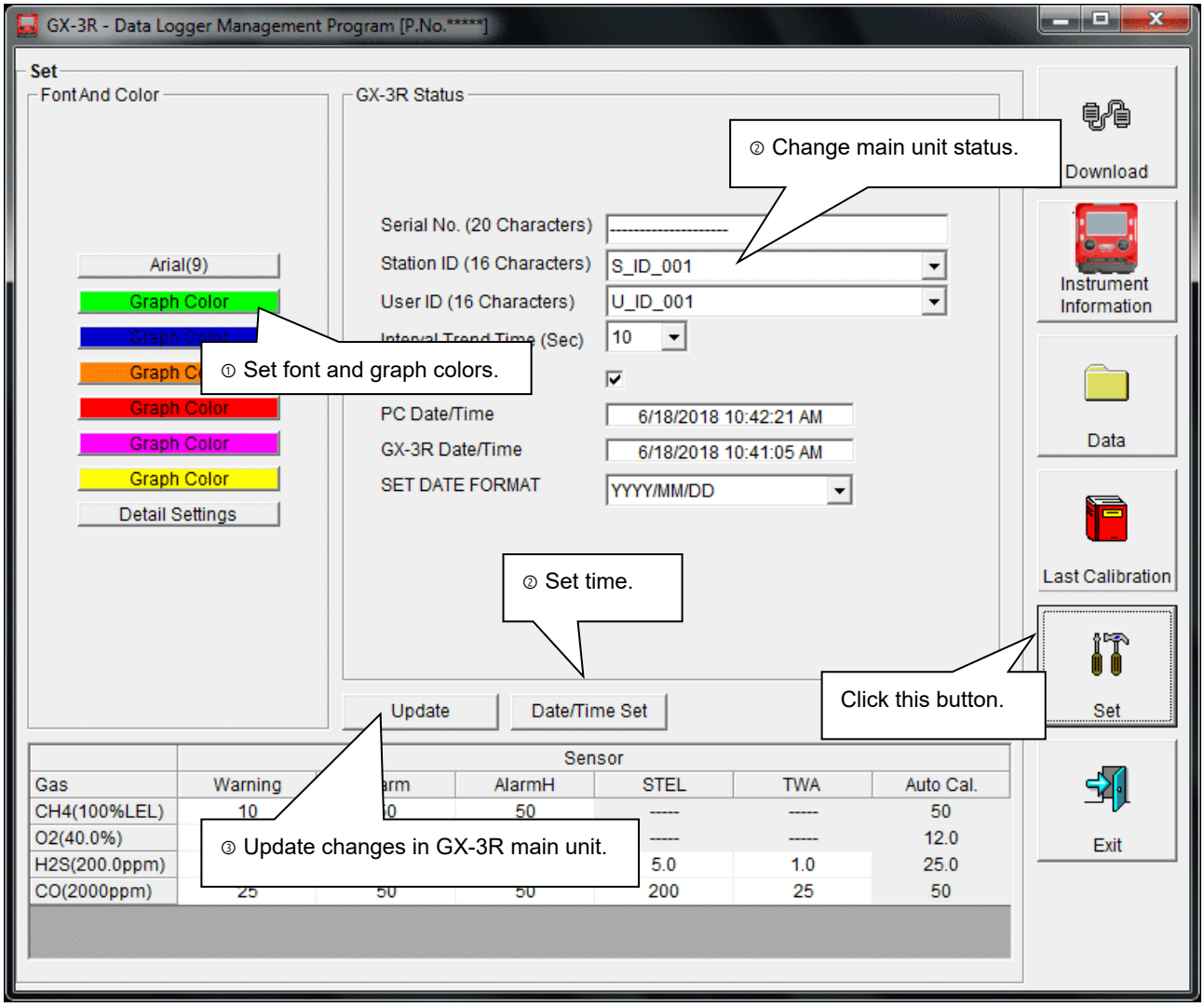


Lastly, click “OK” to update to the new password.

CAUTION: The default password immediately after installation is "Rki" (not case-sensitive).

3-6. Set screen

This screen is used to configure screen display settings and main unit status settings.



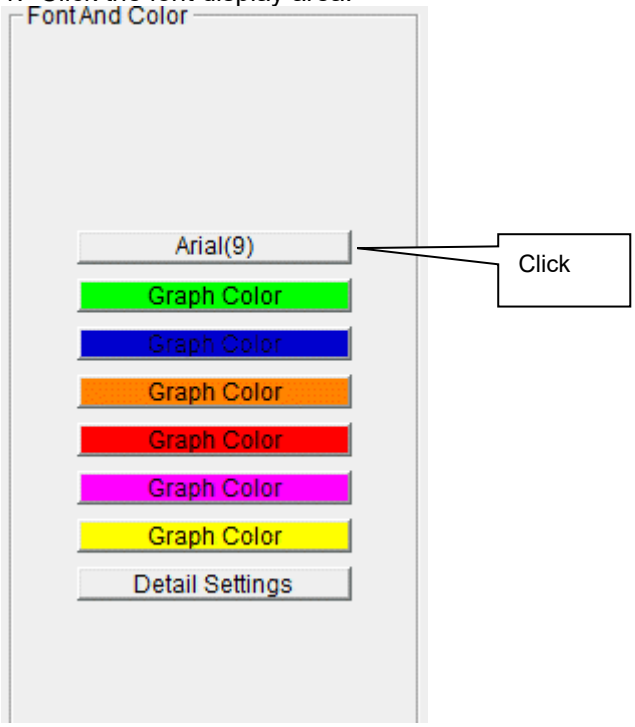
CAUTION: Data that has been set or changed must be sent to the GX-3R main unit by clicking the “Update” button.

CAUTION: Font settings will be applied from the next time the program is started.

① Setting font and graph colors

● Change font

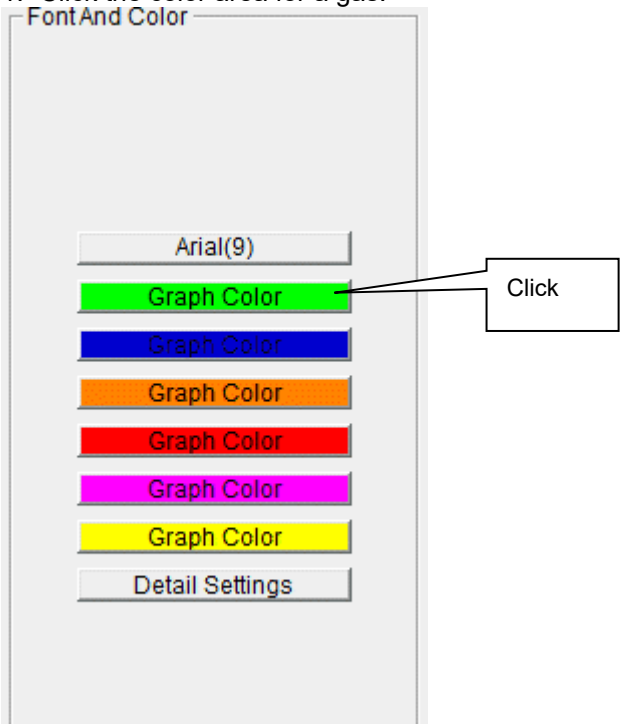
1. Click the font display area.



Set the desired font in the font setting dialog that appears.
CAUTION:
The screen display may become hard to read if you use an excessively large font.
Changes made here will be applied from the next time the program is started.

● Change graph color

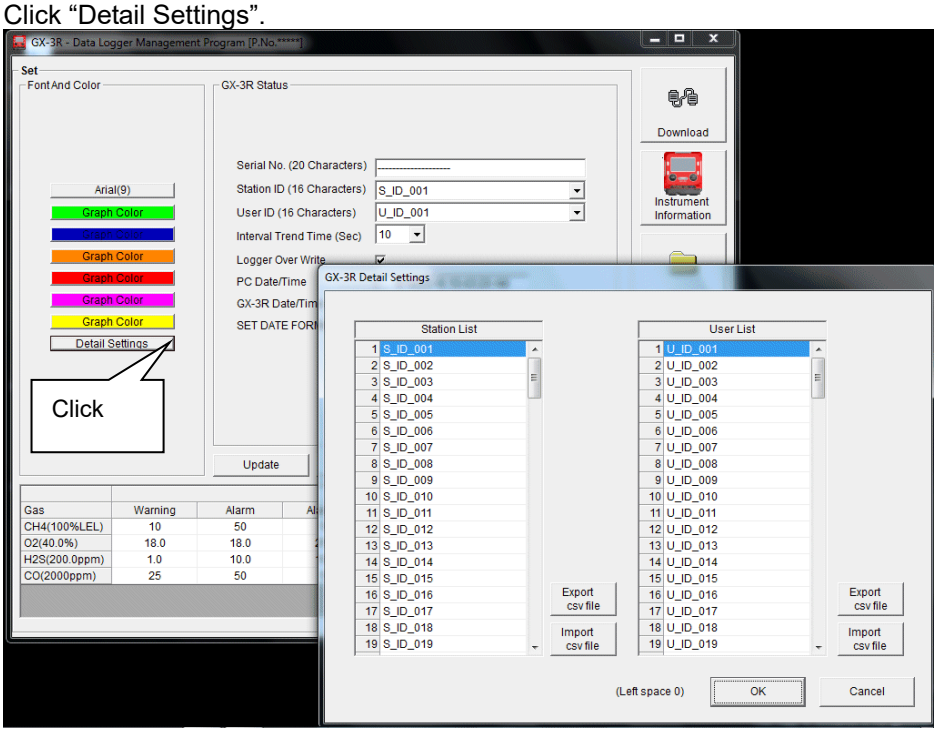
The display colors for respective gases can be changed on the graph.
1. Click the color area for a gas.



Select the desired color in the color selection dialog that appears.

● **Edit station/user lists**

1. The station ID and user ID lists can be edited.
Click “Detail Settings”.

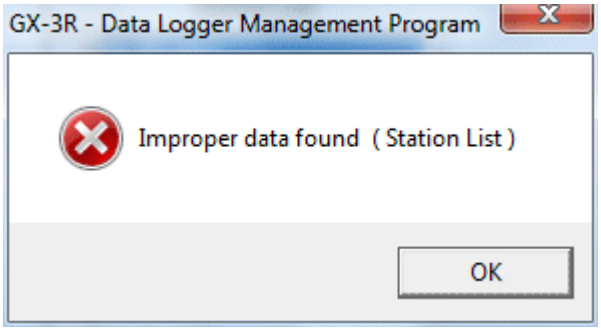


An edit dialog appears. The station list can contain up to 128 entries.
You can use up to 16 alphanumerical characters, including the space, hyphen, and slash symbols.

Export csv file : Outputs to file. Creates a text file containing the number and data entries.

Import csv file : Imports from a text file containing number and data entries. The background color will appear in red for entries with unsupported characters or too many characters.

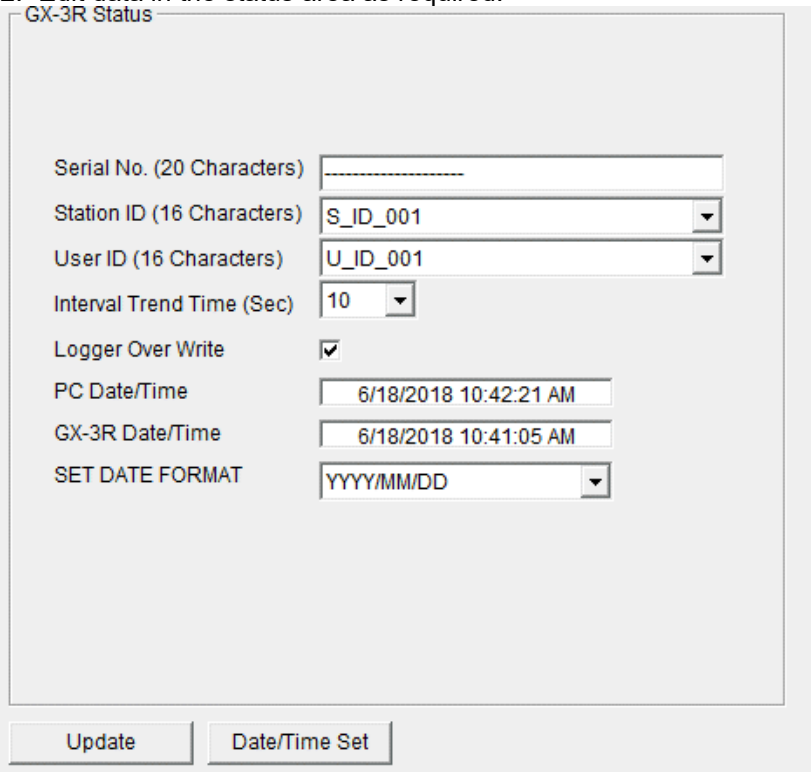
*** OK cannot be clicked if there are entries with a red background.**



② Changing main unit status

● **Edit**

2. Edit data in the status area as required.

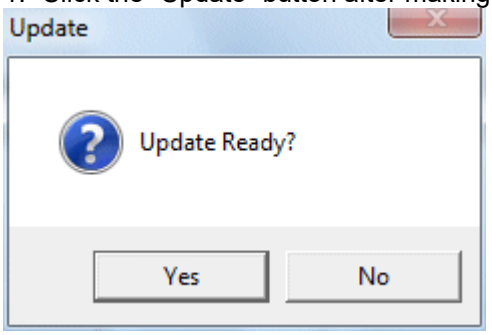


Details indicated for “Serial No.”, “Station ID”, and “User ID” can be edited provided they are within 16 characters.
“Interval Trend Time” can be changed by selecting from the pull-down list.
Click the “Date/Time Set” button to synchronize the PC time (“PC Date/Time”) with the GX-3R main unit internal clock (“GX-3R Date/Time”).
CAUTION: Dates and times cannot be entered directly into the date/time boxes.
CAUTION: Apart from clock setting, changing the status data here alone will not update the same data in the GX-3R main unit. Be sure to click “Update” to update the changes in the main unit.

③ Updating changes in GX-3R main unit

● **Notify of changes**

1. Click the “Update” button after making changes.



Click the “Yes” button to send the changes to the GX-3R main unit to be stored.
Click the “No” button to cancel update notification.

CAUTION: You cannot restore changed details. If “Update” has not yet been clicked, you can restore the changed details to the information on the main unit by clicking the “Instrument Information” button on the “Download” screen to download the device information data.

4. Data Maintenance

Depending on how the program is used, if data is read in several times a day, the growing volumes of data may make it harder to find specific data. Unforeseen problems with the PC may also lead to loss of valuable data.

We recommend backing up data periodically to protect against such circumstances.

4-1. Data storage configuration details

Data is contained within the installed GX-3R program folder.

1) File name: GX3R.mdb
   File type: Microsoft JET 3.6 database file

2) File name: Data
   File type: Folder. Individual trend data files are found within the corresponding year and month folders.

4-2. Backing up

Depending on the system configuration, we recommend copying data to a separate hard disk drive or external auxiliary storage device (for example, MO or CD-R).

When restoring data, copy the data to the location at which the GX-3R executable file is saved. This will allow data to be searched and viewed when the program is started.

5. Usage Precautions

Note the following precautions when using this program:
① Confirm that the GX-3R is in a suitable location for receiving data. Normal communication is not possible if it is not in a suitable location.

② Avoid using similar functions on other applications at the same time when data is being received. (For example, using infrared communication with other applications while data is being received)

③ Do not forcibly shut down this program. (For example, using the Ctrl + Alt + Del operation) The program performs shutdown processing in which it saves configuration parameters for use the next time the program starts. Forcibly shutting down the program may cause problems the next time the program starts.

④ Do not directly modify or overwrite data files.

6. Troubleshooting

Symptoms	Cause	Corrective action
Communication is not possible.	The main unit is not in a suitable location. Obstacles are in the way.	Reposition the main unit.
	Other devices using infrared are present.	Turn off the other devices or take other measures to prevent interference.
An error occurs during communication.	Disturbance light is present.	Remove any other devices that use infrared.
	The GX-3R main unit moves during communication.	Make sure the GX-3R main unit does not move during communication.
The communication data is erroneous.	Disturbance light is present.	Remove any other devices that use or emit infrared.

If the problems persist even after taking the action described here, please contact Riken Keiki.

7. IrDA Specifications

7-1. Infrared communication

Infrared communication (IrDA protocol) is used for communicating with the main unit.

Check whether the PC being used supports infrared communication.

Ensure a direct line of sight between the PC communication port and the infrared communication port on the main unit. Remove any other sources of light interference.

CAUTION:

This program is able to communicate with the GX-3R main unit only in environments that support IrDA. Confirm that the PC being used has a built-in IrDA device that is currently usable.

An IrDA USB adapter is required if you are using a PC that lacks a built-in IrDA device (for example, most desktop PCs and some laptop PCs).

8. File Organization

Details of the files present when the program is installed and the files present during operation are provided below.

8-1. Current directory immediately after installation

File name	Details
GX3R.exe RkIrDA11.ocx Filemove.avi	GX-3R program body Infrared communication component Animation file used during data reception

8-2. Current directory during operation

File name	Details
GX3R.exe RkIrDA11.ocx Filemove.avi	GX-3R program body Infrared communication component Animation file used during data reception
GX3R.ini GX3R.dat GX3R.mdb Data Serial.log	GX-3R initial setup file Data downloading file Database file (Microsoft Jet 3.6 database) Directory for saving trend data files Record of communication port details since the program was started (for investigation/maintenance use)

CAUTION: The files and directories listed below the double line are created after the program is started.

9. Software Function Specifications

Product name (Program name)	GX-3R Data Logger Management Program
Product model	
Executable file name	GX3R.EXE
Compatible operating systems	Microsoft Corporation Windows 7 Windows 8 Windows 10
Program size	Main program approx. 3 MB; libraries approx. 5.2 MB (Uses up to 40 MB of hard disk space during installation.)
Communication with main unit	Infrared (IrDA 1.1 protocol) compliant method Standard communication settings Baud rate 57,600 bps (upper limit) Data bits 8 bits Stop bit 1 bit Parity Even
Transmission time	Max. approx. 3 minutes (for maximum number of data samples and standard communication settings)
Medium	CD-ROM ×1
Package contents	Operating manual (this document) Product warranty registration card User license agreement

Manual Log

Rev.	Amendment	Issue data
0	First issue	2019/4/1