



Portable Gas Detector
GX-Force
Data Logger Management Program
SW-GX-Force (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 Windows 10 and Windows 11. Please read the Windows manual and familiarize yourself with basic Windows operations before using the program.



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-Force into a personal computer (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 viewed in graph or table form.
- Allows graph and table data to be printed and stored as hard copies.
- Allows past data to be recorded.
- Eliminates the need to write down data on paper by hand.
- Helps identify devices that require calibration.
- Simplifies the management of multiple devices.

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2. Installing and Uninstalling

2-1. Operating environment precautions

This program is compatible with the Microsoft Windows 10 and 11 operating systems. 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 into 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.

The program uses a virtual PC COM port with a USB to UART bridge controller.

The USB to UART bridge controller used is the Silicon Laboratories CP2102N.

Serial port settings

Baud rate: 115200 bps, Data: 8 bits, Parity: Even, Stop bit: 1 bit

Obtaining the driver

Download the driver corresponding to the particular operating system you are using from the Silicon Laboratories website (see below) and install the driver.

<https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads>

2-2. Installing the software

Insert the installation 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 your PC does not support automatic CD-ROM startup:

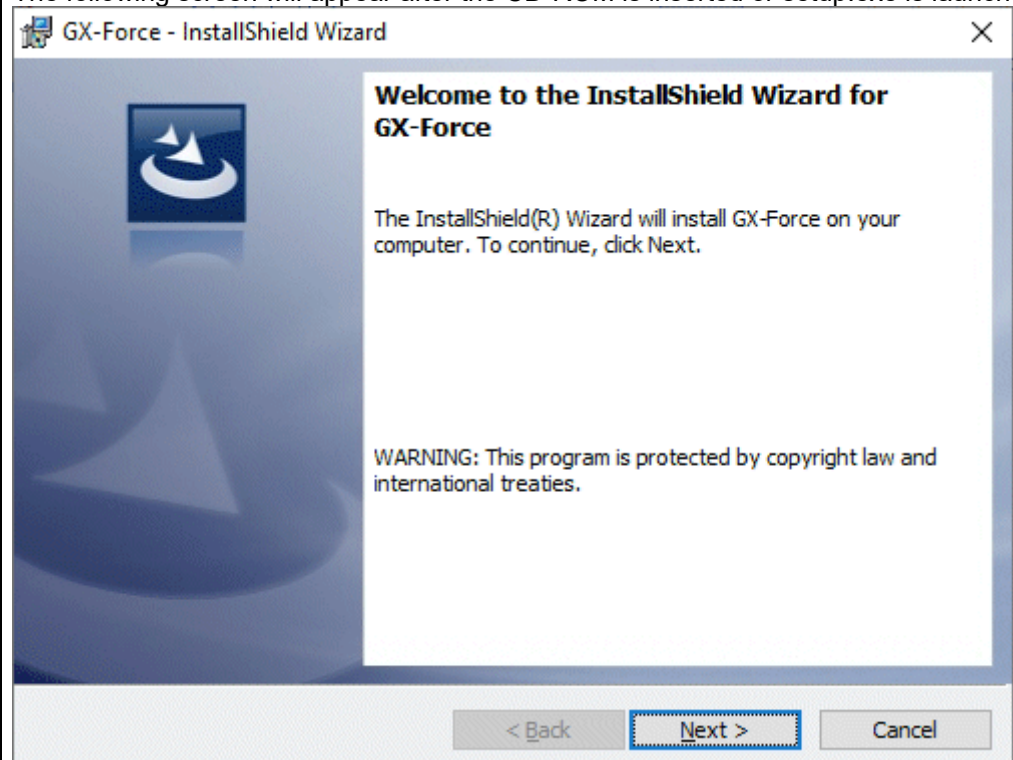
1. Open the CD-ROM drive in Explorer.
2. Double-click on the [setup.exe] file.

CAUTION: Install using a user account with administrator rights.

2-3. Installation procedure

- Launch setup

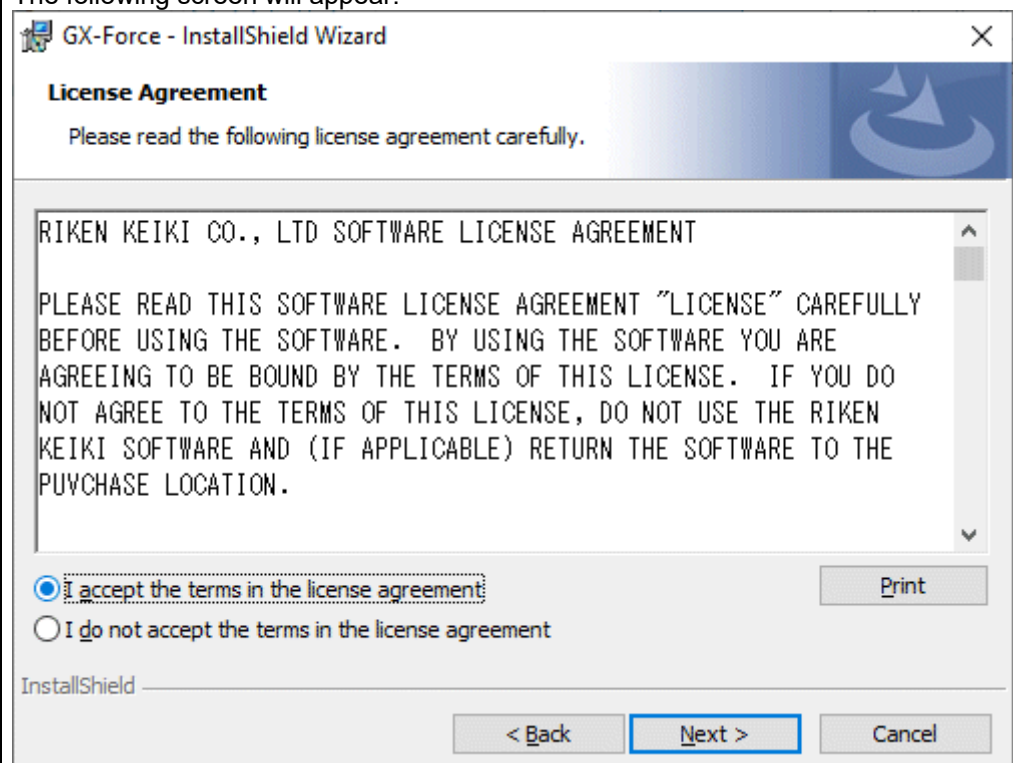
The following screen will appear after the CD-ROM is inserted or setup.exe is launched.



Click the [Next] button.

- Accept license agreement

The following screen will appear:



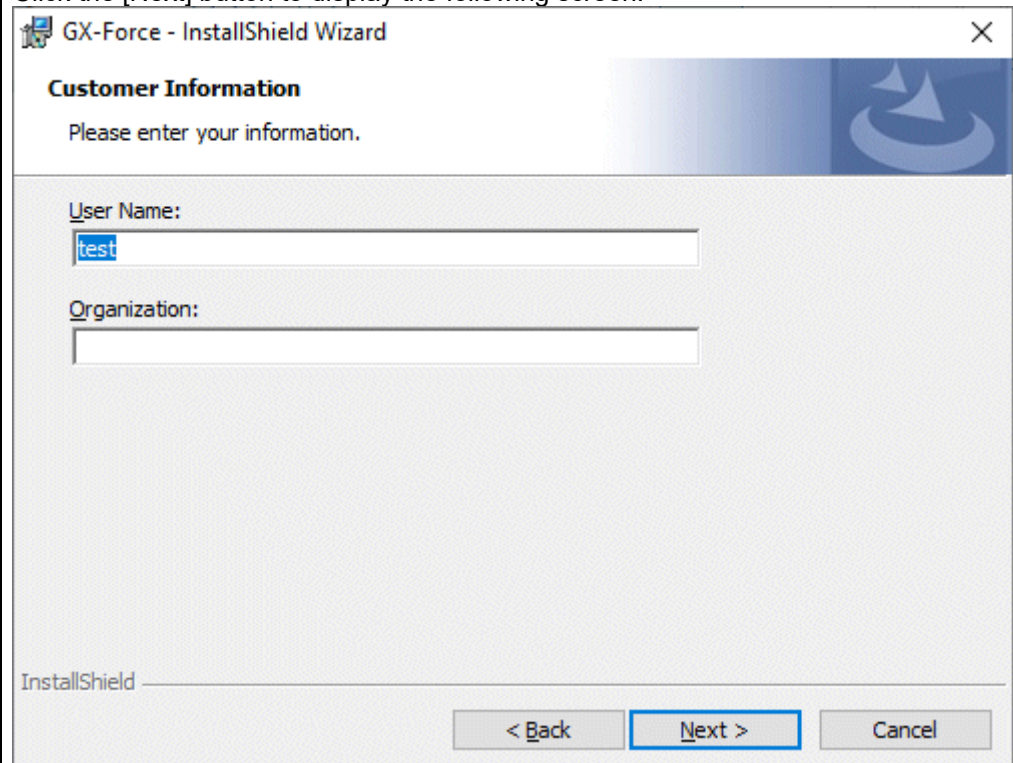
To install the software, click the [Next] button. To abort the process, click the [Cancel] button.

CAUTION:

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

- User information

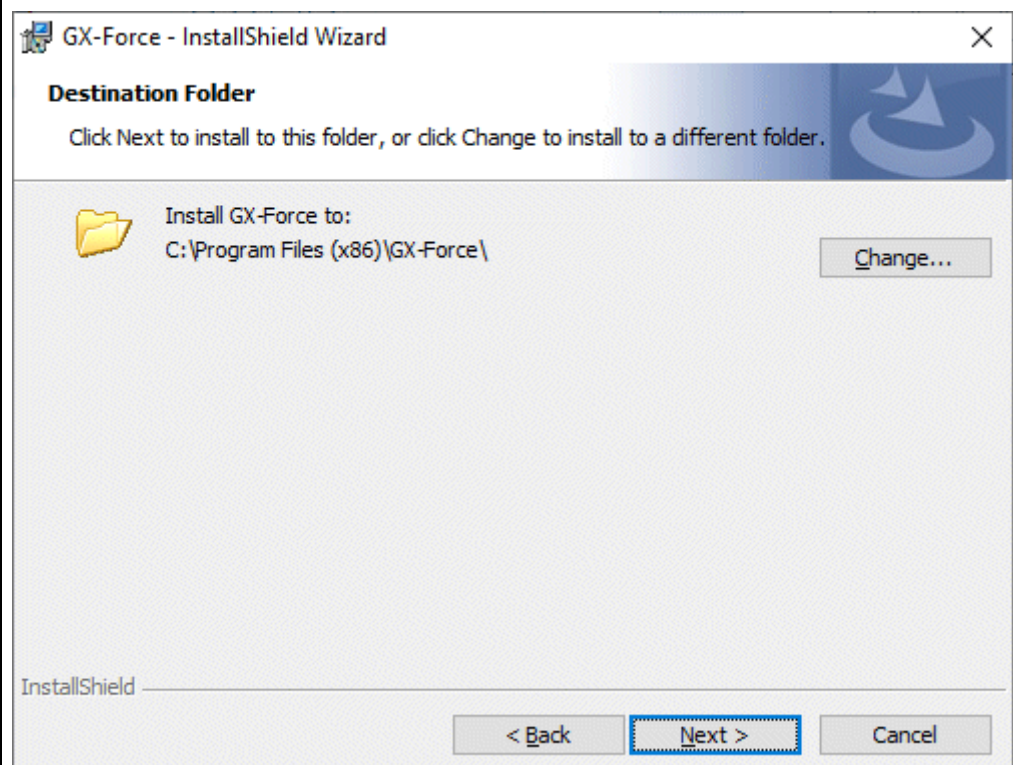
Click the [Next] button to display the following screen:



The screenshot shows the 'Customer Information' screen of the 'GX-Force - InstallShield Wizard'. The window title is 'GX-Force - InstallShield Wizard'. Below the title bar, there is a blue header with a GX-Force logo. The main area is titled 'Customer Information' and contains the instruction 'Please enter your information.' There are two text input fields: 'User Name:' with the text 'test' entered, and 'Organization:' which is empty. At the bottom, there is a status bar with the 'InstallShield' logo and three buttons: '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

- Destination folder

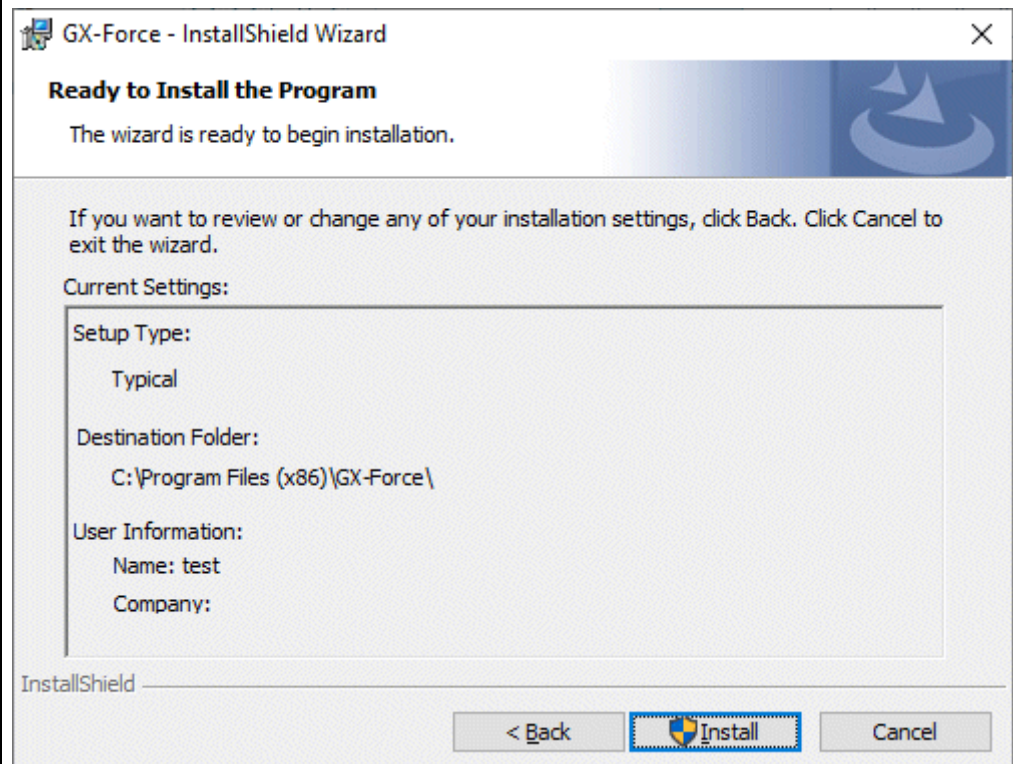
Enter the user information, then click the [Next] button to display the following screen:



The screenshot shows the 'Destination Folder' screen of the 'GX-Force - InstallShield Wizard'. The window title is 'GX-Force - InstallShield Wizard'. Below the title bar, there is a blue header with a GX-Force logo. The main area is titled 'Destination Folder' and contains the instruction 'Click Next to install to this folder, or click Change to install to a different folder.' There is a folder icon and the text 'Install GX-Force to: C:\Program Files (x86)\GX-Force\'. To the right of this text is a 'Change...' button. At the bottom, there is a status bar with the 'InstallShield' logo and three buttons: '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

To install in this folder, click the [Next] button. To install in a different folder, click the [Change...] button.

- Start setup

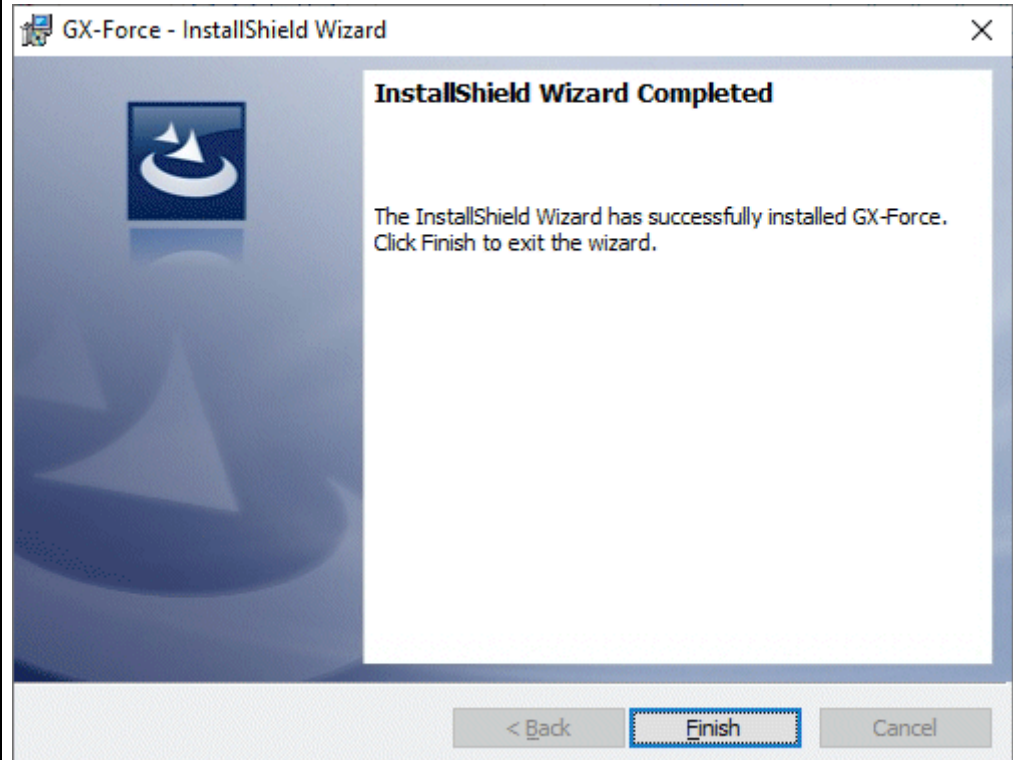


Click the [Install] button to begin installing.

* A User Account Control dialog is displayed. Click [Yes].

- Complete

The following screen will appear once setup is complete:



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

CAUTION**Saving past data before reinstalling**

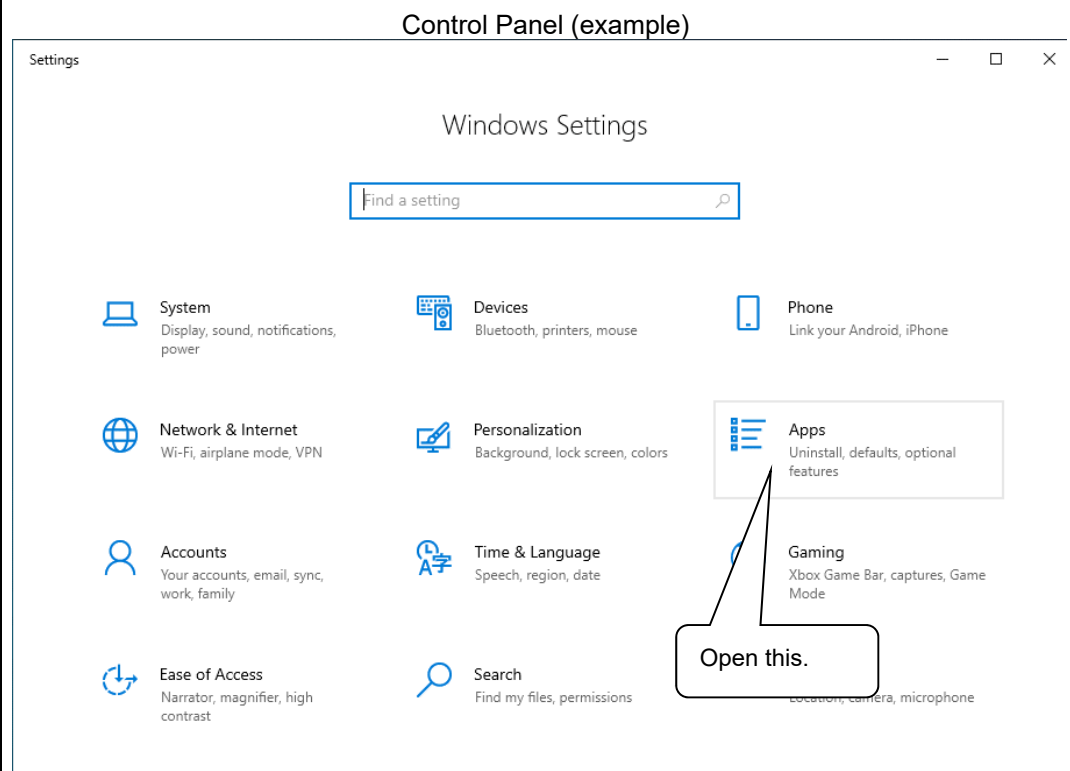
Note the following details when reinstalling the program:

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 [GXForce.mdb], which is a database file. If you wish to save past data, save these files to another location before deleting the folder.

2-4. Uninstallation procedure

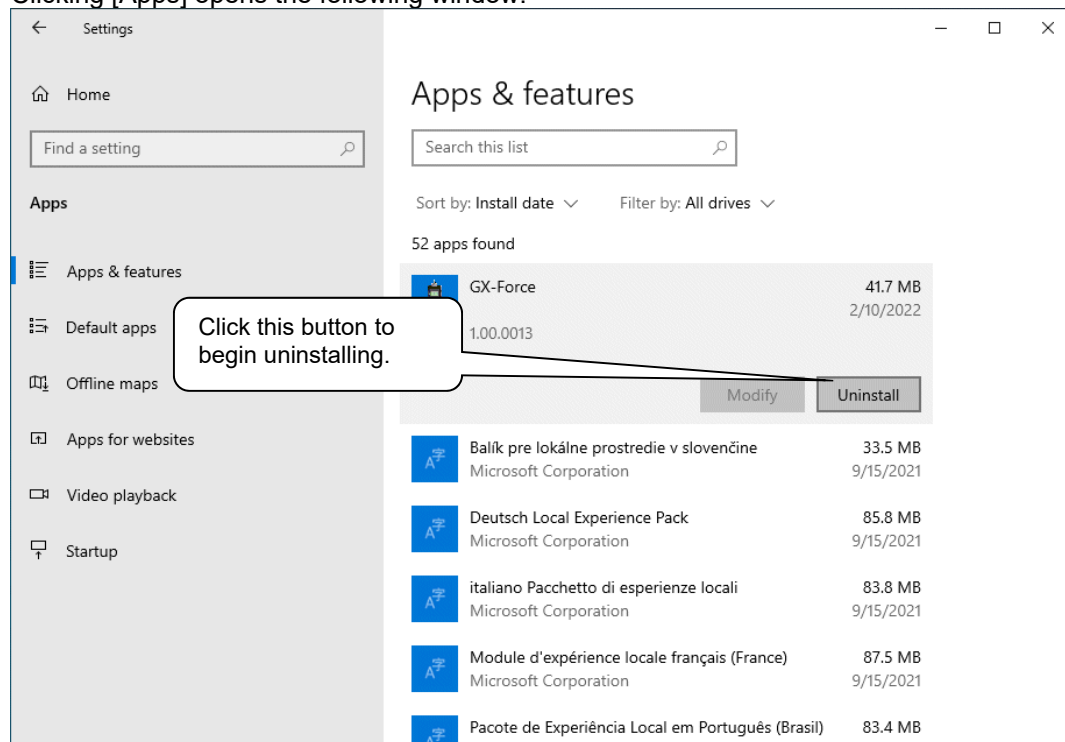
- Startup

To uninstall the software, click [Start] on the taskbar, click [Settings], and launch the Control Panel.
Click to open [Apps] in the Control Panel.



- Select GX-Force

Clicking [Apps] opens the following window:



- Start deletion

Select (click) [GX-Force], then click the [Uninstall] button.

Click [Uninstall] again in the confirmation window to begin uninstalling.

* A User Account Control dialog is displayed. Click [Yes].

CAUTION:

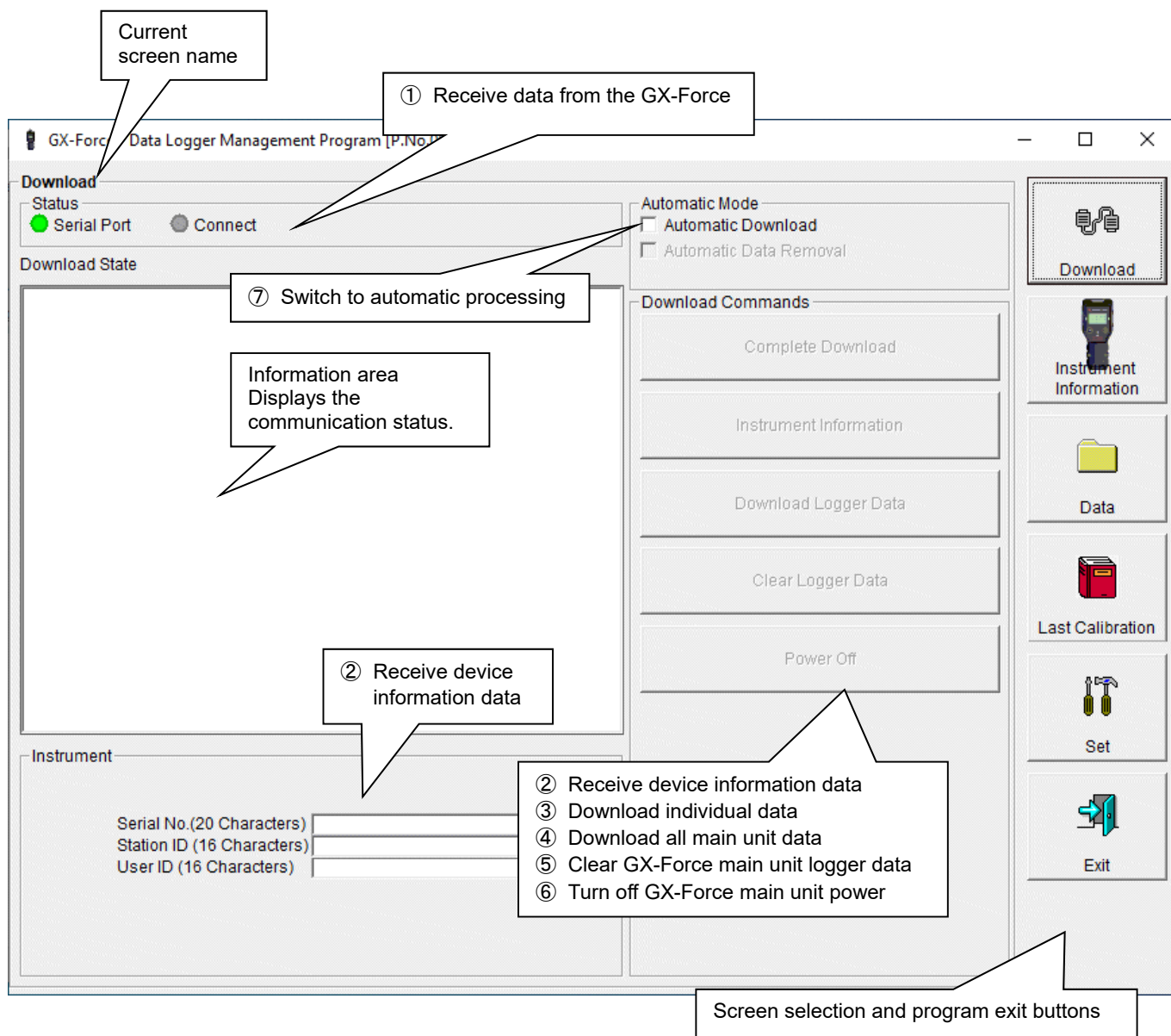
The message [Do you want to remove the shared file?] may appear during the uninstallation. Select [No]. Selecting [Yes] may affect other applications.

3. Operation method

Start the program by clicking the [GX-Force] 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, connect using a USB cable, start this program, and turn on the main unit. The program will automatically determine whether data communication is possible; if so, it will enter reception standby mode.

CAUTION:

If connection is not possible, either disconnect and then reconnect the USB cable, or restart the PC.

① Receive data from the GX-Force

● Main unit preparation

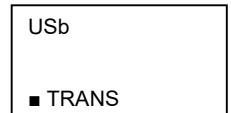
1. Start this software.
2. Connect the USB cable with the power to the GX-Force main unit turned off.
3. Turn on the GX-Force main unit power.

CAUTION:

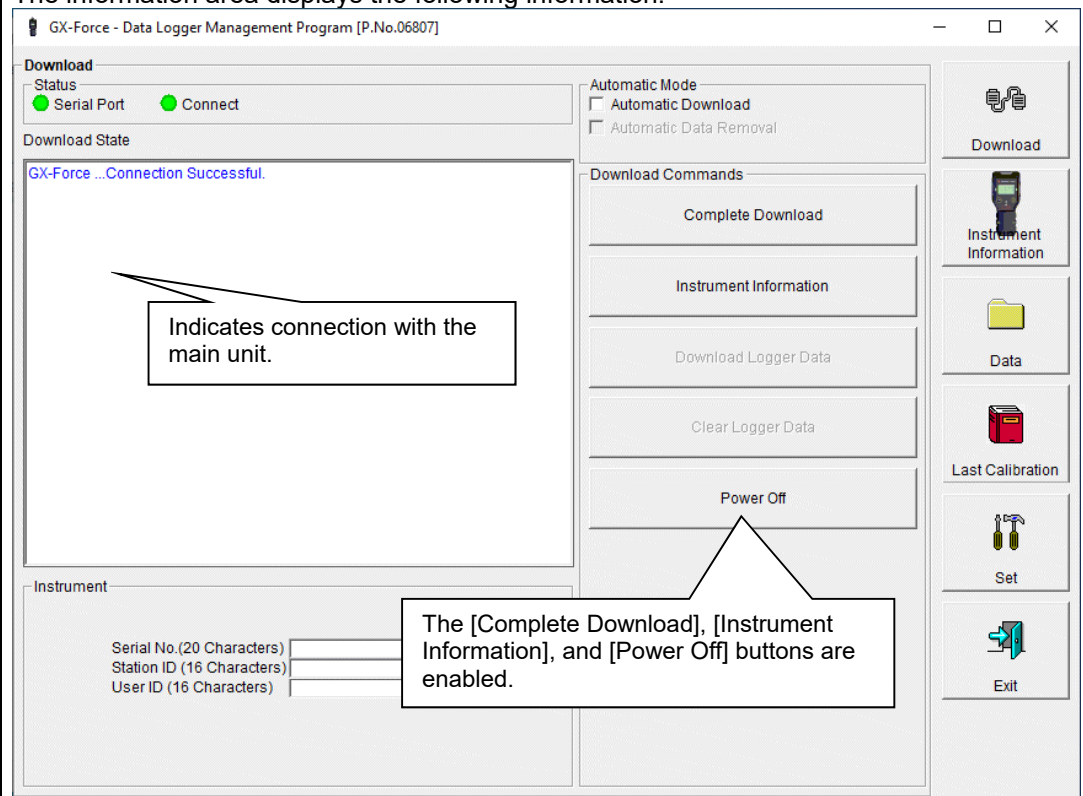
Be sure to connect the USB cable before turning on the GX-Force power.

The GX-Force main unit does not enter communication standby if it is connected to the PC using the USB cable with the main unit power turned on.

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



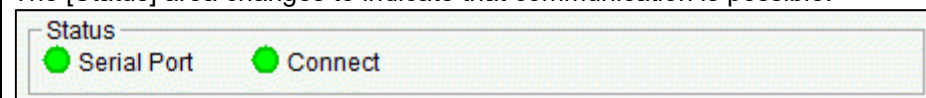
The information area displays the following information:



CAUTION:

If the details shown in the information area differ from those shown above, turn off the GX-Force main unit power and check the USB cable connection before turning on the power once again.

The [Status] area changes to indicate that communication is possible.

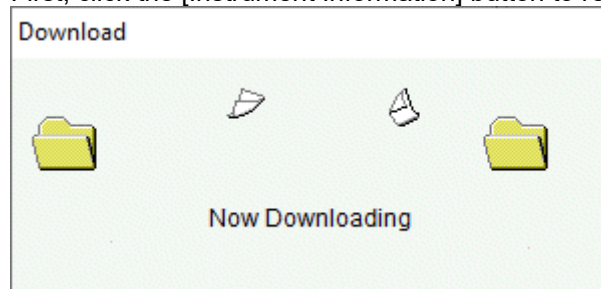


- Serial Port:
Communication possible: Green
Communication not possible: Red
- Connect:
Standby: Gray
Communicating: Green

② Receive device information data

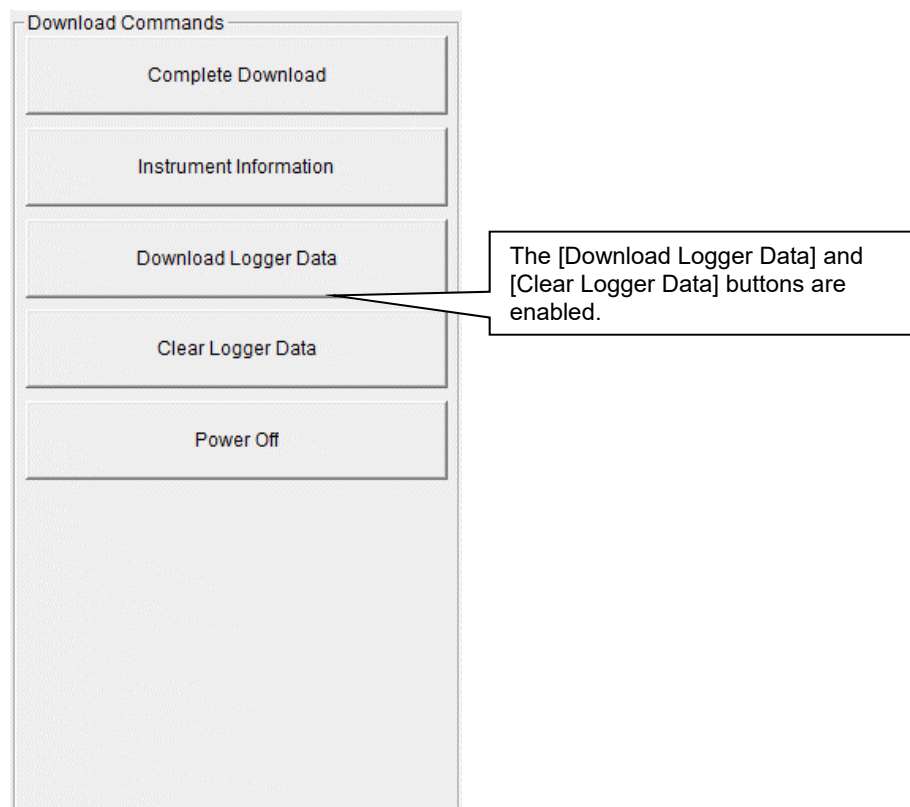
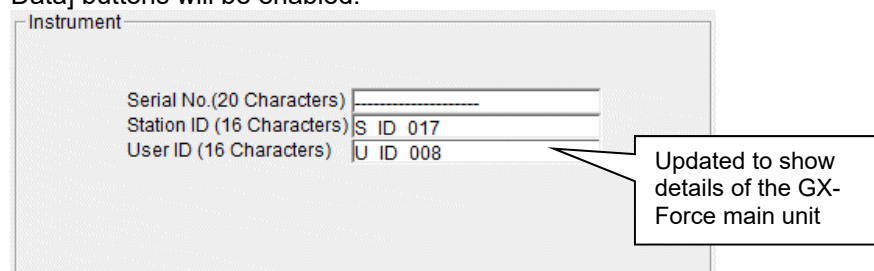
- Receive device information

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 will be enabled.

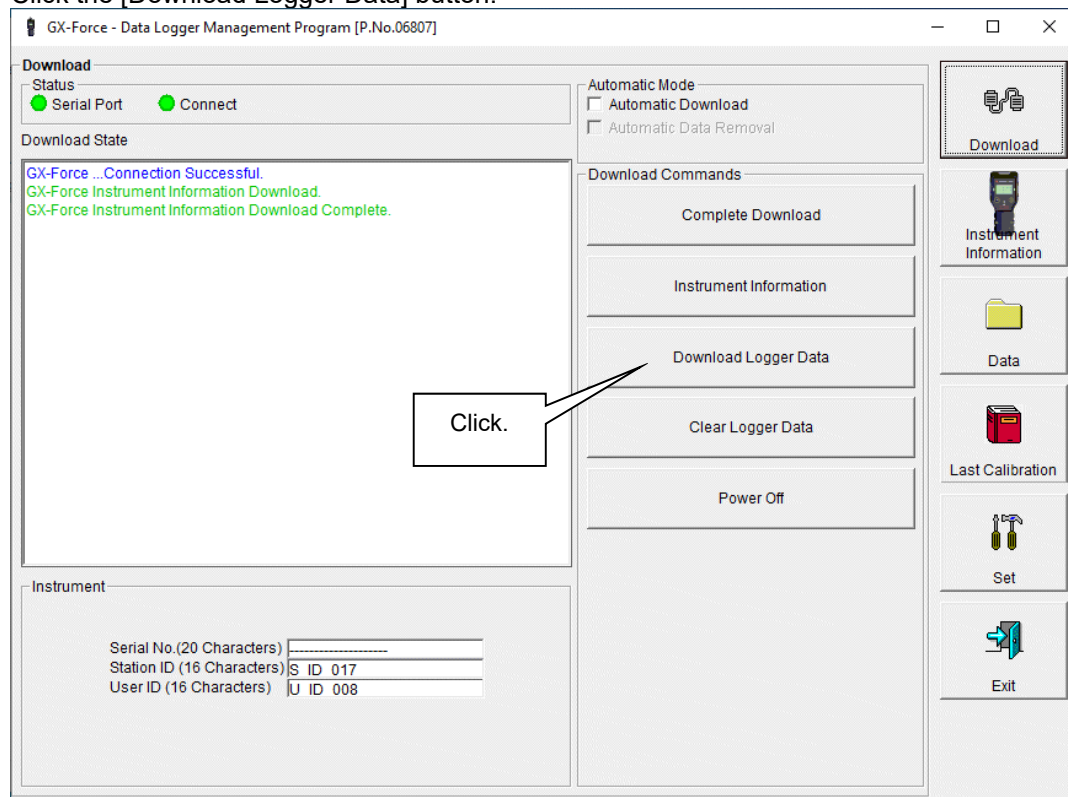


③ Download individual data

- Download trend data/event data

The [Download Logger Data] button is enabled after clicking the [Instrument Information] button and downloading the device information data.

Click the [Download Logger Data] button.



The information area displays the data receiving status.

CAUTION:

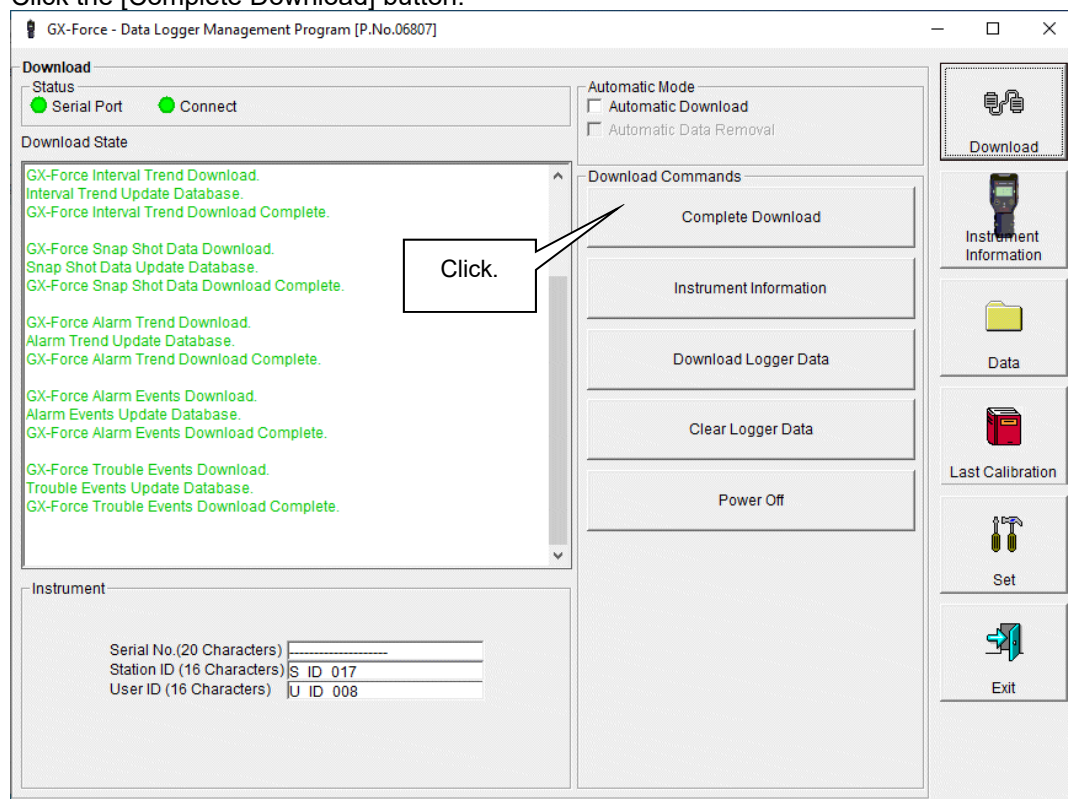
Other download buttons and the [Set] button are disabled while data is being downloaded, as access to other data is not permitted.

④ Download all main unit data

- Download all data

Clicking the [Complete Download] button downloads all data, including [Instrument Information], [Interval Trend], [Alarm Trend], [Alarm Events], [Trouble Events], and [Snap Shot] (Snap Log).

Click the [Complete Download] button.



The information area displays the data receiving status.

CAUTION:

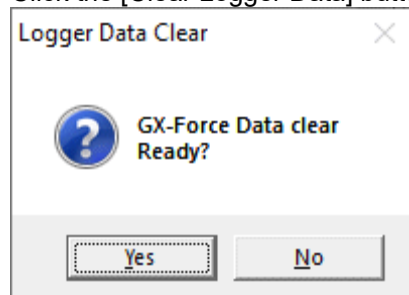
Other download buttons and the [Set] button are disabled while data is being downloaded, as access to other data is not permitted.

⑤ Clear GX-Force main unit logger data

- Clear device logger data

Clicking the [Clear Logger Data] button clears all data from the GX-Force.

Click the [Clear Logger Data] button.



Click [Yes] to begin clearing the data.

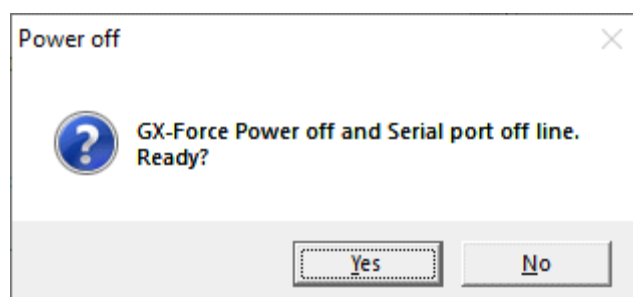
Once cleared, data cannot be restored. Store required data before clearing.

⑥ Turn off GX-Force main unit power

- Turn off main unit power

Clicking the [Power Off] button turns off the power for the GX-Force main unit and resets the PC serial port.

1. Click the [Power Off] button.

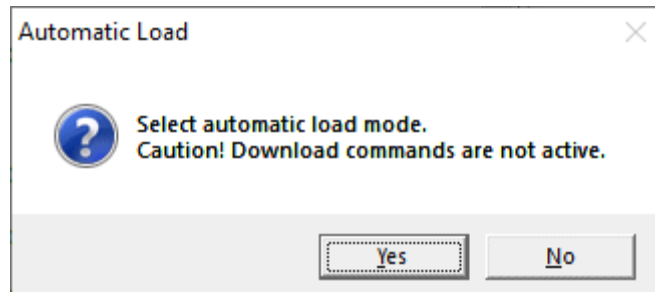
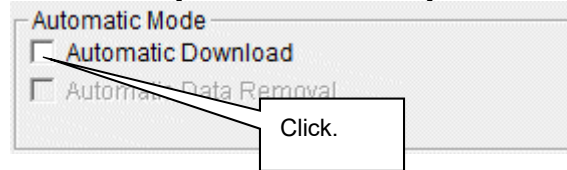


Click [Yes] to begin the process of turning off the GX-Force main unit power and to reset the PC serial port before switching to standby to await data from the main unit.

⑦ Switch to automatic processing

- Automatic download mode

1. Select the [Automatic Download] checkbox. (if not already selected)



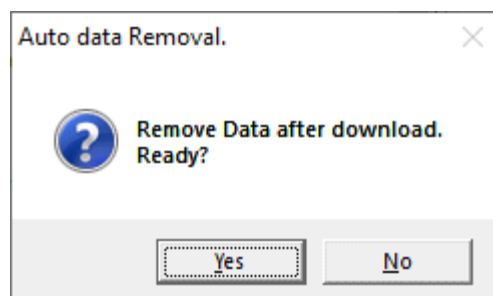
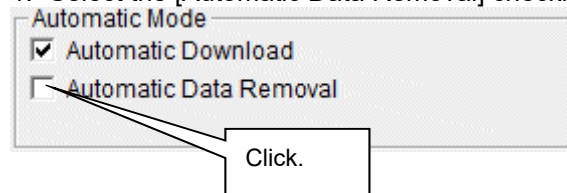
Click [Yes] to switch to automatic processing and download data from the main unit automatically when communication is next performed.
Click [No] to cancel the mode change.

- Automatic deletion of download data

All data is automatically downloaded to the PC when the GX-Force main unit power is turned on. The GX-Force main unit is then turned 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 logger data on the GX-Force after the data has been downloaded.

* This reduces 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-Force main unit.

① Data source type

② Status information

③ Calibration history information

Click this button.

④ Sensor alarm setpoint information

Instrument Information [Connected]

GX-Force Status

Serial No. (20 Characters)
 Station ID (16 Characters)
 User ID (16 Characters)
 UID (001)

Calibration History					
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
CH4(100%LEL)	1/1/2022	0	0	50	75
O2(40.0%)	9/16/2022 2:42:35 PM	18.2	18.0	12.0	334
H2S(200.0ppm)	1/1/2022	0.0	0.0	25.0	75
CO(2000ppm)	1/1/2022	0	0	50	75

Last Bump Test				
Gas	Bump Test Date	Test Result	Concentration	Bump Test Due(Days)
CH4(100%LEL)	1/1/2022	0	0	Now
O2(40.0%)	9/16/2022 2:42:35 PM	18.0	18.0	Now
H2S(200.0ppm)	1/1/2022	0.0	0.0	Now
CO(2000ppm)	1/1/2022	0	0	Now

Warning and Alarm point					
Gas	Warning	Alarm	AlarmH	STEL	TWA
CH4(100%LEL)	10	50	50	----	----
O2(40.0%)	19.5	18.0	25.0	----	----
H2S(200.0ppm)	1.0	10.0	10.0	5.0	1.0
CO(2000ppm)	25	50	50	200	25

Download

Instrument Information

Data

Last Calibration

Set

Exit

CAUTION:

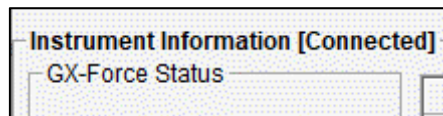
This screen is read-only. Data cannot be edited on this screen. → Refer to '3-6. Set Screen'.

Data is not displayed if the [Instrument Information] data has not been downloaded.

① Data source type

- [Connected] display

[Connected] is displayed when information about the connected multi-gas monitor main unit is displayed.

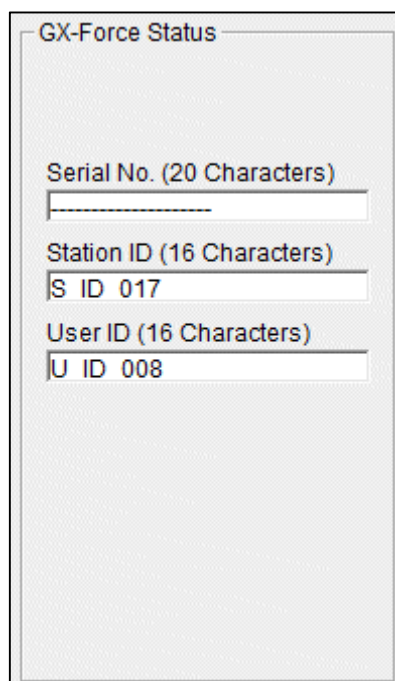


② Status information

- 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.

A screenshot of a device screen titled "GX-Force Status". The screen displays three read-only fields, each with a label and a text box. The first field is labeled "Serial No. (20 Characters)" and contains a dashed line. The second field is labeled "Station ID (16 Characters)" and contains "S ID 017". The third field is labeled "User ID (16 Characters)" and contains "U ID 008".

③ Calibration history information

● Calibration history details

Gas	Calibration History				
	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
CH4(100%LEL)	1/1/2022	0	0	50	Now
O2(40.0%)	1/1/2022	0.0	0.0	12.0	Now
H2S(200.0ppm)	1/1/2022	0.0	0.0	25.0	Now
CO(2000ppm)	1/1/2022	0	0	50	Now

Gas: Measured gas name (full-scale units)
 Calib.Date: Date of last calibration
 Before: Concentration before last calibration
 After: Concentration after last calibration/calibration failure
 A.Cal.: Automatic calibration concentration
 Cal.Due (Days): Remaining time for uncalibrated state (Background color will be red one month before expiry.)

● Bump test history details

Gas	Last Bump Test			
	Bump Test Date	Test Result	Concentration	Imp Test Due(Day)
CH4(100%LEL)	1/1/2022	0	0	Now
O2(40.0%)	1/1/2022	0.0	0.0	Now
H2S(200.0ppm)	1/1/2022	0.0	0.0	Now
CO(2000ppm)	1/1/2022	0	0	Now

Gas: Measured gas name (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): Remaining time for non-bump tested state (Background color will be red one month before expiry.)

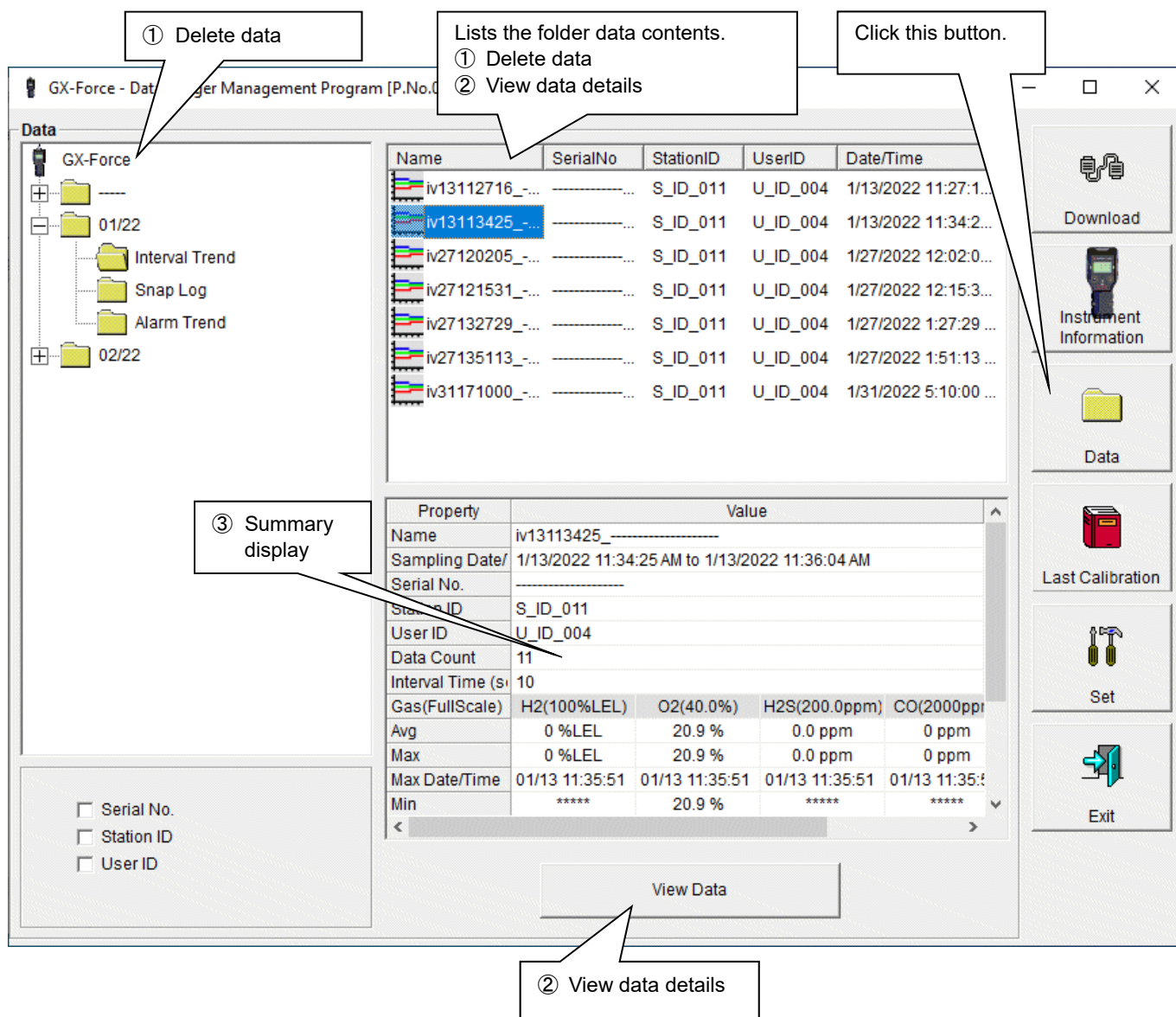
④ Sensor alarm setpoint information

Gas	Warning and Alarm point				
	Warning	Alarm	AlarmH	STEL	TWA
CH4(100%LEL)	10	50	50	----	----
O2(40.0%)	19.5	18.0	25.0	----	----
H2S(200.0ppm)	1.0	10.0	10.0	5.0	1.0
CO(2000ppm)	25	50	50	200	25

Gas: Measured gas name
 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 operated in the same way as Windows Explorer. However, the following operations are not available:

1. Renaming data
2. Moving data to other locations

The folders on the left-hand side of the screen are displayed hierarchically in order of serial number, station ID, and user ID.

The folder and data names have the following formats:

Folder name (example): 01/22 = Data for January 2022

File name (example): iv13112716 = Interval trend for 11:27:16 on 13th (date and time of logging start)
al26150419 = Alarm trend for 15:04:19 on 26th (date and time of alarm occurrence)

The number of data files that can be stored in folders depends on the PC memory.

CAUTION: Back up data files periodically, referring to '4. Data Maintenance'.

① Delete data

● Delete

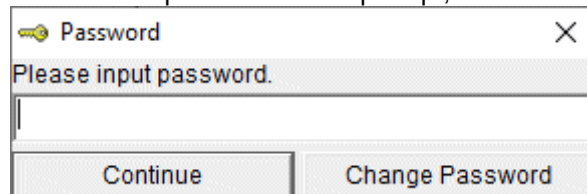
1. Click and select the data (folder) to delete.
2. Right-click without moving the mouse.

Name	SerialNo	StationID	UserID	Date/Time
iv13112716_...	-----	S_ID_011	U_ID_004	1/13/2022 11:27:1...
iv13113425_...	-----	S_ID_011	U_ID_004	1/13/2022 11:34:2...
iv27120205_...	-----	S_ID_011	U_ID_004	1/27/2022 12:02:0...
iv27121531_...	-----	S_ID_011	U_ID_004	1/27/2022 12:15:3...
iv27132729_...	-----	S_ID_011	U_ID_004	1/27/2022 1:27:29 ...
iv27135113_...	-----	S_ID_011	U_ID_004	1/27/2022 1:51:13 ...
iv31171000_...	-----	S_ID_011	U_ID_004	1/31/2022 5:10:00 ...

● Password input

Click [Delete] on the [Delete] menu that appears.

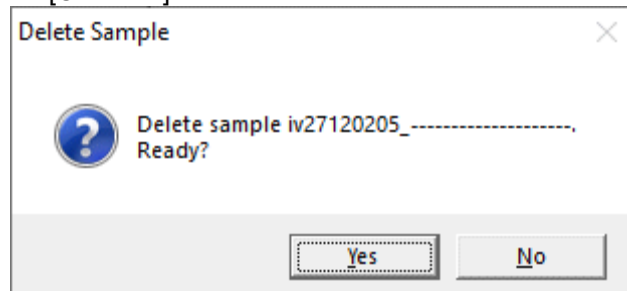
1. Enter the password at the prompt, then click the [Continue] button.



A dialog box titled "Password" with a close button (X) in the top right corner. The text "Please input password." is displayed above a text input field. Below the input field are two buttons: "Continue" and "Change Password".

CAUTION: Clicking [Continue] without entering a password will cancel deletion.

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



A dialog box titled "Delete Sample" with a close button (X) in the top right corner. It features a question mark icon and the text "Delete sample iv27120205_-----, Ready?". At the bottom are two buttons: "Yes" and "No".

Click the [Yes] button to delete the data.

Click the [No] button to cancel data deletion.

CAUTION:

The default password immediately after installation is [riken] (not case sensitive).

For details of how to change the password, refer to '④ Change password' in '3-5'.

② View 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 details of how to use data details: → 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	iv27120205_			
Sampling Date/	1/27/2022 12:02:05 PM to 1/27/2022 12:05:43 PM			
Serial No.				
Station ID	S_ID_011			
User ID	U_ID_004			
Data Count	29			
Interval Time (s)	10			
Gas(FullScale)	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
Avg	0 %LEL	20.8 %	0.0 ppm	0 ppm
Max	0 %LEL	20.9 %	0.0 ppm	0 ppm
Max Date/Time	01/27 12:05:03	01/27 12:05:03	01/27 12:05:03	01/27 12:05:03
Min	*****	20.9 %	*****	*****

Name: Data name
 Measurement date and time: Date and time of measurement start and end
 Serial No./Station ID/User ID: GX-Force main unit status
 Data Count: Number of data samples
 Interval Time (s): Sampling interval (seconds)
 Gas (FullScale): Gas (full scale)
 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
1/31/2022 5:12:05 PM	H2S(200.0ppm)	WARNING
1/27/2022 12:03:55 PM	H2S(200.0ppm)	WARNING
1/27/2022 12:02:12 PM	H2S(200.0ppm)	WARNING

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

Alarm trend

Property	Value			
Name	al27120212_-----			
Alarm Date/Tim	1/27/2022 12:02:12 PM			
Serial No.	-----			
Station ID	S_ID_011			
User ID	U_ID_004			
Data Count	720			
Interval Time (s)	5			
Gas(FullScale)	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
Value	0 %LEL	19.3 %	1.8 ppm	3 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

Name:	Data name
Alarm Date/Time:	Date and time of alarm occurrence
Serial No./Station ID/User ID:	GX-Force main unit status
Data Count:	Number of data samples
Interval Time (s):	Sampling interval
Gas (FullScale):	Gas (full scale)
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
2/7/2022 3:51:41 PM	CH4(100%LEL)	0 %LEL	----
2/7/2022 3:51:41 PM	O2(40.0%)	20.4 %	----
2/7/2022 3:51:41 PM	H2S(200.0ppm)	0.1 ppm	----
2/7/2022 3:51:41 PM	CO(2000ppm)	0 ppm	----
1/25/2022 2:27:21 PM	CH4(100%LEL)	0 %LEL	----
1/25/2022 2:27:21 PM	O2(40.0%)	20.8 %	----
1/25/2022 2:27:21 PM	H2S(200.0ppm)	0.0 ppm	----
1/25/2022 2:27:21 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
2/10/2022 9:18:28 AM	Body	Fail(FLOW)
2/7/2022 3:51:41 PM	CO(2000ppm)	Fail(Span)
2/7/2022 3:51:41 PM	H2S(200.0ppm)	Fail(Span)
2/7/2022 3:51:41 PM	O2(40.0%)	Fail(Span)
2/7/2022 3:51:41 PM	CH4(100%LEL)	Fail(Span)
1/27/2022 12:04:21 PM	Body	Fail(FLOW)
1/25/2022 2:27:21 PM	H2(100%LEL)	Fail(Span)
1/25/2022 2:27:21 PM	CO(2000ppm)	Fail(Span)
...	20 Datas	

DateTime: Date and time of event occurrence

Gas/Body: Gas generated or GX-Force main unit

Event: Event type

Bump test

DateTime	Gas	Test Result	Concentration	Judge
1/25/2022 2:26:21 P	CH4(100%LE	0 %LEL	50 %LEL	FAIL
1/25/2022 2:26:21 P	O2(40.0%)	20.7 %	12.0 %	FAIL
1/25/2022 2:26:21 P	H2S(200.0ppm)	1.1 ppm	25.0 ppm	FAIL
1/25/2022 2:26:21 P	CO(2000ppm)	1 ppm	50 ppm	FAIL

DateTime: Date and time of event occurrence

Gas: Gas

Test Result: Test result concentration

Concentration: Calibration gas concentration

Judge: Test assessment

Snap log

Property	Value			
Name	iv13112725_-----			
Sampling Date/	1/13/2022 11:27:25 AM			
Serial No.	-----			
Station ID	S_ID_011			
User ID	U_ID_004			
----	----			
----	----			
Gas(FullScale)	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
Concentration	0 %LEL	20.9 %	0.0 ppm	0 ppm
<div> <div><</div> <div></div> <div>></div> </div>				

Name:	Data name
Measurement date and time:	Date and time recorded
Serial No./Station ID/User ID:	GX-Force main unit status
Gas (FullScale):	Gas (full scale)
Concentration value:	Concentration recorded

3-4. Data View screen

This screen displays data details in table and graph format.

① Select table or graph ② Send to printer ③ Save to file ④ To view data summary at the same time

GX-Force - Data Logger Management Program [P.No.0680]

Data View (Interval Trend)

Table Graph Event Only Condensed Print Export Summary Return

No	Date/Time	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	Temperature
1	1/27/2022 12:02:12 PM	----	----	WARNING	----	----
2	1/27/2022 12:02:15 PM	0 %LEL	20.7 %	0.3 ppm	0 ppm	28.6 °C
3	1/27/2022 12:02:16 PM	----	----	-WARNING	----	----
4	1/27/2022 12:02:16 PM	----	----	NORMAL	----	----
5	1/27/2022 12:02:25 PM	0 %LEL	20.8 %	0.0 ppm	0 ppm	28.6 °C
6	1/27/2022 12:02:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
7	1/27/2022 12:02:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
8	1/27/2022 12:02:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
9	1/27/2022 12:03:05 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
10	1/27/2022 12:03:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
11	1/27/2022 12:03:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
12	1/27/2022 12:03:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
13	1/27/2022 12:03:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
14	1/27/2022 12:03:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
15	1/27/2022 12:03:55 PM	----	----	WARNING	----	----
16	1/27/2022 12:03:58 PM	----	----	-WARNING	----	----
17	1/27/2022 12:03:58 PM	----	----	NORMAL	----	----
18	1/27/2022 12:04:05 PM	0 %LEL	20.9 %	0.6 ppm	0 ppm	28.8 °C
19	1/27/2022 12:04:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
20	1/27/2022 12:04:21 PM	Fail(FLOW)	Fail(FLOW)	Fail(FLOW)	Fail(FLOW)	----
21	1/27/2022 12:04:22 PM	NORMAL	NORMAL	NORMAL	NORMAL	----
22	1/27/2022 12:04:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
23	1/27/2022 12:04:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
24	1/27/2022 12:04:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
25	1/27/2022 12:04:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
26	1/27/2022 12:05:05 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
27	1/27/2022 12:05:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C
28	1/27/2022 12:05:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C
29	1/27/2022 12:05:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C

Download

Instrument Information

Data

Last Calibration

Set

Exit

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 active alarms 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.

Data View (Alarm Trend)

Table Graph Event Only Condensed Print Export Summary Return

No	Date/Time	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	Temperature
347	1/27/2022 12:01:02 PM	----	----	----	----	----
348	1/27/2022 12:01:07 PM	----	----	----	----	----
349	1/27/2022 12:01:12 PM	----	----	----	----	----
350	1/27/2022 12:01:17 PM	----	----	----	----	----
351	1/27/2022 12:01:22 PM	----	----	----	----	----
352	1/27/2022 12:01:27 PM	----	----	----	----	----
353	1/27/2022 12:01:32 PM	----	----	----	----	----
354	1/27/2022 12:01:37 PM	----	----	----	----	----
355	1/27/2022 12:01:42 PM	----	----	----	----	----
356	1/27/2022 12:01:47 PM	----	----	----	----	----
357	1/27/2022 12:01:52 PM	----	----	----	----	----
358	1/27/2022 12:01:57 PM	----	----	----	----	----
359	1/27/2022 12:02:02 PM	----	----	----	----	----
360	1/27/2022 12:02:07 PM	----	----	----	----	----
361	1/27/2022 12:02:12 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.6 °C
362	1/27/2022 12:02:17 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.6 °C
363	1/27/2022 12:02:22 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
364	1/27/2022 12:02:27 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
365	1/27/2022 12:02:32 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
366	1/27/2022 12:02:37 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
367	1/27/2022 12:02:42 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
368	1/27/2022 12:02:47 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
369	1/27/2022 12:02:52 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
370	1/27/2022 12:02:57 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
371	1/27/2022 12:03:02 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
372	1/27/2022 12:03:07 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
373	1/27/2022 12:03:12 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
374	1/27/2022 12:03:17 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
375	1/27/2022 12:03:22 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
376	1/27/2022 12:03:27 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C

Download

Instrument Information

Data

Last Calibration

Set

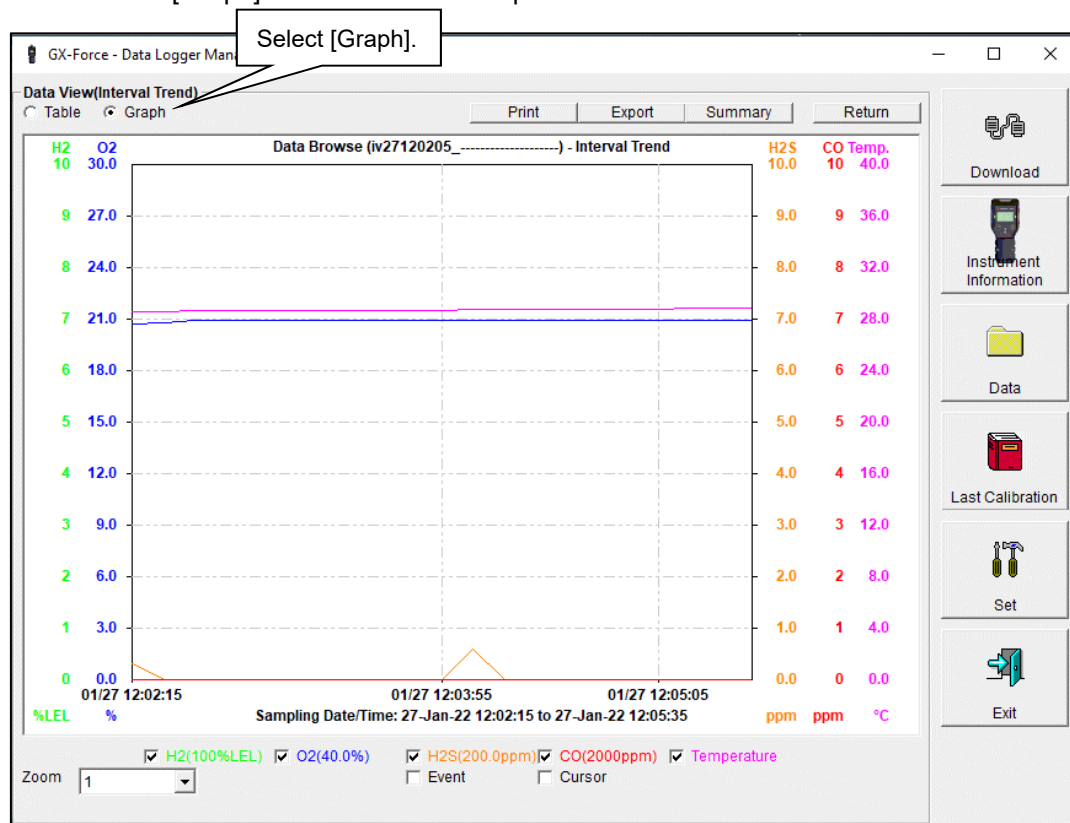
Exit

* The [Alarm Trend] data table highlights the locations of active alarms in red.

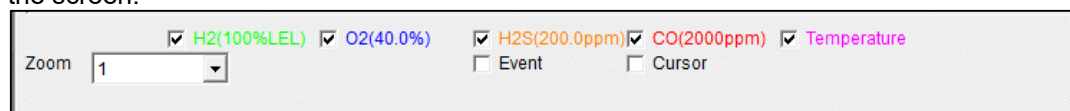
① Select table or graph

- Select graph

1. Select the [Graph] radio button 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):
[Zoom] combo box:

Display or hide the corresponding gas data.

Specify a horizontal axis scale factor to suit 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:

$Y_{max} = \{\text{int}(x / 10) + 1\} \times 10$, and for full scale under 10: $Y_{max} = \{\text{int}(x) + 1\}$
int: Decimal values are discarded.

CAUTION: The graph will not be drawn unless there are at least five normal concentration data samples.

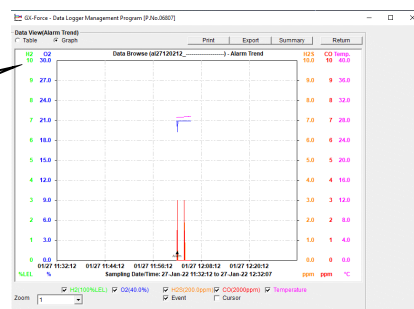
Data consisting only of events cannot be displayed in graph form because they do not contain concentration information.

The mouse cursor will appear as follows when hovered over [WARNING], [ALARM], or [OVER] event data. Click here to search for 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.

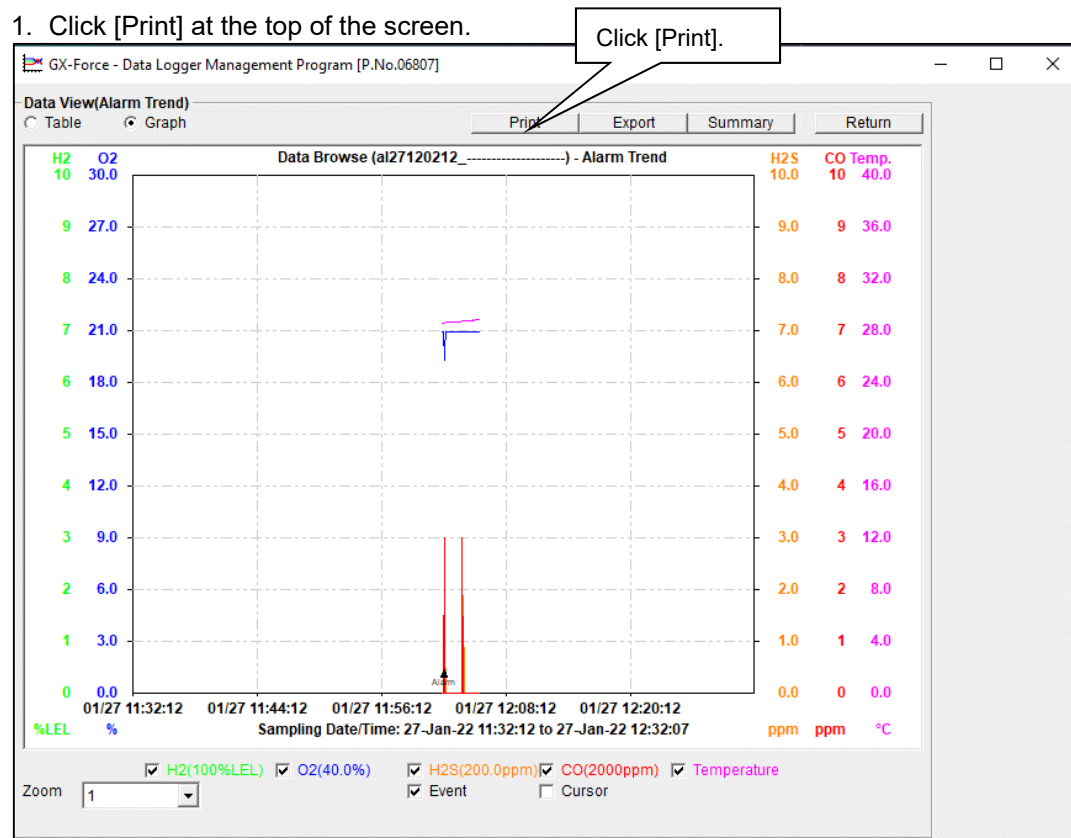


② Send to printer

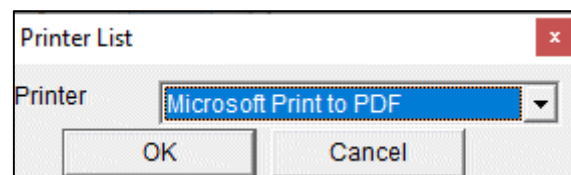
- Print

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

1. Click [Print] at the top of the screen.



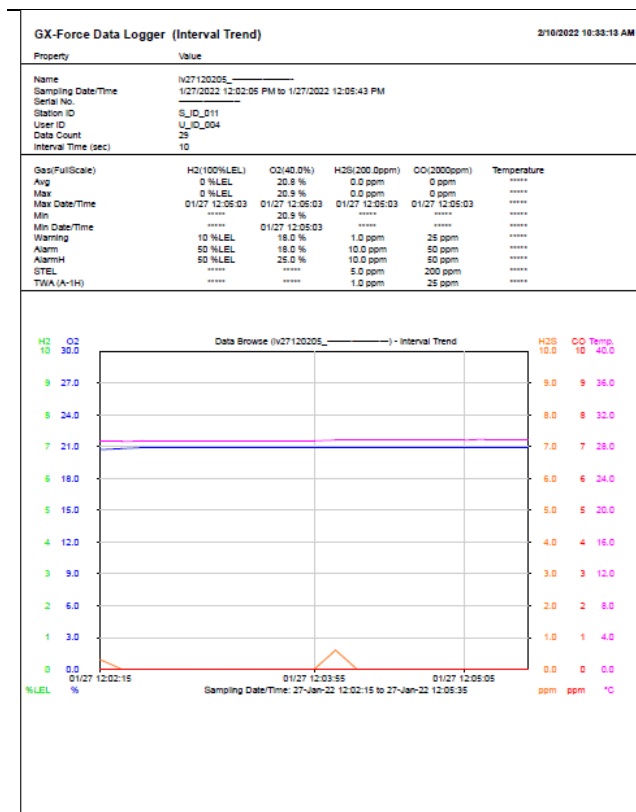
The printer selection window appears. Select the desired printer and click the [OK] button.



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)

GX-Force Data Logger (Interval Trend) 2/10/2022 10:33:25 AM

Property	Value
Name	IV27120205_
Sampling Date/Time	1/27/2022 12:02:05 PM to 1/27/2022 12:05:43 PM
Serial No.	
Station ID	S_ID_011
User ID	U_ID_004
Data Count	29
Interval Time (sec)	10

Gas/Fill(Scale)	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	Temperature
Avg	0 %LEL	20.8 %	0.0 ppm	0 ppm	-----
Max	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----
Max Date/Time	01/27 12:05:03	01/27 12:05:03	01/27 12:05:03	01/27 12:05:03	-----
Min	-----	20.9 %	-----	-----	-----
Min Date/Time	-----	01/27 12:05:03	-----	-----	-----
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	-----
TWA(A-1H)	-----	-----	1.0 ppm	25 ppm	-----

No	Date/Time	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	Temperature
1	1/27/2022 12:02:12 PM	0 %LEL	20.7 %	0.0 ppm	0 ppm	28.6 °C
2	1/27/2022 12:02:15 PM	0 %LEL	20.7 %	0.3 ppm	0 ppm	28.6 °C
3	1/27/2022 12:02:16 PM	-----	-----	-WARNING	-----	-----
4	1/27/2022 12:02:16 PM	-----	-----	NORMAL	-----	-----
5	1/27/2022 12:02:25 PM	0 %LEL	20.8 %	0.0 ppm	0 ppm	28.6 °C
6	1/27/2022 12:02:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
7	1/27/2022 12:02:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
8	1/27/2022 12:03:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
9	1/27/2022 12:03:05 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
10	1/27/2022 12:03:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
11	1/27/2022 12:03:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
12	1/27/2022 12:03:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
13	1/27/2022 12:03:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
14	1/27/2022 12:03:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
15	1/27/2022 12:03:55 PM	-----	-----	WARNING	-----	-----
16	1/27/2022 12:03:58 PM	-----	-----	-WARNING	-----	-----
17	1/27/2022 12:03:58 PM	-----	-----	NORMAL	-----	-----
18	1/27/2022 12:04:05 PM	0 %LEL	20.9 %	0.5 ppm	0 ppm	28.8 °C
19	1/27/2022 12:04:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
20	1/27/2022 12:04:21 PM	Fail(FLOW)	Fail(FLOW)	Fail(FLOW)	Fail(FLOW)	-----
21	1/27/2022 12:04:22 PM	NORMAL	NORMAL	NORMAL	NORMAL	-----
22	1/27/2022 12:04:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
23	1/27/2022 12:04:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
24	1/27/2022 12:04:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
25	1/27/2022 12:04:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
26	1/27/2022 12:05:05 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C
27	1/27/2022 12:05:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C
28	1/27/2022 12:05:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C
29	1/27/2022 12:05:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.9 °C

Sample printout (calibration history)

GX-Force Data Logger (Calibration History) 2/10/2022 10:33:41 AM

Property	Value
Serial No.	
Station ID	S_ID_011
User ID	U_ID_004
Last Download	2/10/2022 10:20:37 AM

No	Date/Time	Ch1	Ch2	Ch3	Ch4
1	2/7/2022 3:51:41 PM Gas Before	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
	After	0 %LEL	20.4 %	0.1 ppm	0 ppm
2	1/25/2022 2:27:21 PM Gas Before	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
	After	0 %LEL	20.8 %	0.0 ppm	0 ppm
3	1/19/2022 9:31:40 AM Gas Before	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
	After	0 %LEL	20.7 %	0.0 ppm	0 ppm

Sample printout (alarm events)

GX-Force Data Logger (Alarm Event) 2/10/2022 10:33:58 AM

Property	Value
Serial No.	
Station ID	S_ID_011
User ID	U_ID_004
Last Download	2/10/2022 10:20:36 AM

No	Date/Time	Gas	Event
1	1/31/2022 5:12:55 PM H2S(200.0ppm)		WARNING
2	1/27/2022 12:03:55 PM H2S(200.0ppm)		WARNING
3	1/27/2022 12:02:12 PM H2S(200.0ppm)		WARNING

Sample printout (bump tests)

GX-Force Data Logger (Bump Test) 2/10/2022 10:34:20 AM

Property	Value
Serial No.	
Station ID	S_ID_011
User ID	U_ID_004
Last Download	2/10/2022 10:20:37 AM

No	Date/Time	Ch1	Ch2	Ch3	Ch4
1	1/25/2022 2:28:21 PM Gas Test Result	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
	Concentration	0 %LEL	20.7 %	1.1 ppm	1 ppm
	Judge	FAIL	FAIL	FAIL	FAIL

Sample printout (trouble events)

GX-Force Data Logger (Trouble Event)

2/10/2022 10:34:38 AM

Property	Value
Serial No.	S_ID_011
Station ID	U_ID_004
User ID	
Last Download	2/10/2022 10:20:36 AM

No	Date/Time	Gas/Body	Event
1	2/10/2022 9:18:28 AM	Body	Fail(FLOW)
2	2/7/2022 3:51:41 PM	CO(2000ppm)	Fail(Span)
3	2/7/2022 3:51:41 PM	H2S(200.0ppm)	Fail(Span)
4	2/7/2022 3:51:41 PM	O2(40.0%)	Fail(Span)
5	2/7/2022 3:51:41 PM	CH4(100%LEL)	Fail(Span)
6	1/27/2022 12:04:21 PM	Body	Fail(FLOW)
7	1/25/2022 2:27:21 PM	H2(100%LEL)	Fail(Span)
8	1/25/2022 2:27:21 PM	CO(2000ppm)	Fail(Span)
9	1/25/2022 2:27:21 PM	H2S(200.0ppm)	Fail(Span)
10	1/25/2022 2:27:21 PM	O2(40.0%)	Fail(Span)
11	1/25/2022 2:26:21 PM	H2(100%LEL)	Fail(BUMP)
12	1/25/2022 2:26:21 PM	O2(40.0%)	Fail(BUMP)
13	1/25/2022 2:26:21 PM	CO(2000ppm)	Fail(BUMP)
14	1/25/2022 2:26:21 PM	H2S(200.0ppm)	Fail(BUMP)
15	1/19/2022 9:31:40 AM	CO(2000ppm)	Fail(Span)
16	1/19/2022 9:31:40 AM	H2S(200.0ppm)	Fail(Span)
17	1/19/2022 9:31:40 AM	O2(40.0%)	Fail(Span)
18	1/19/2022 9:31:40 AM	H2(100%LEL)	Fail(Span)
19	1/13/2022 11:35:08 AM	Body	Fail(FLOW)
20	1/13/2022 11:33:42 AM	Body	Fail(FLOW)

Sample printout (snap log)

GX-Force Data Logger (Snap Log)

2/10/2022 10:34:57 AM

Property	Value
Sampling Date/Time	1/13/2022 11:26:34 AM - 1/13/2022 11:27:57 AM
Serial No.	

No	User ID	Station ID	Date/Time	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	Temperature
1	U_ID_004	S_ID_011	1/13/2022 11:27:25 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C

Printer setup precautions

- ① The detailed printer settings will vary depending on the printer used. Refer to the printer instruction manual.
- 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 Print calibration certificate

- Calibration certificate

The calibration history can be printed as a Calibration Report.

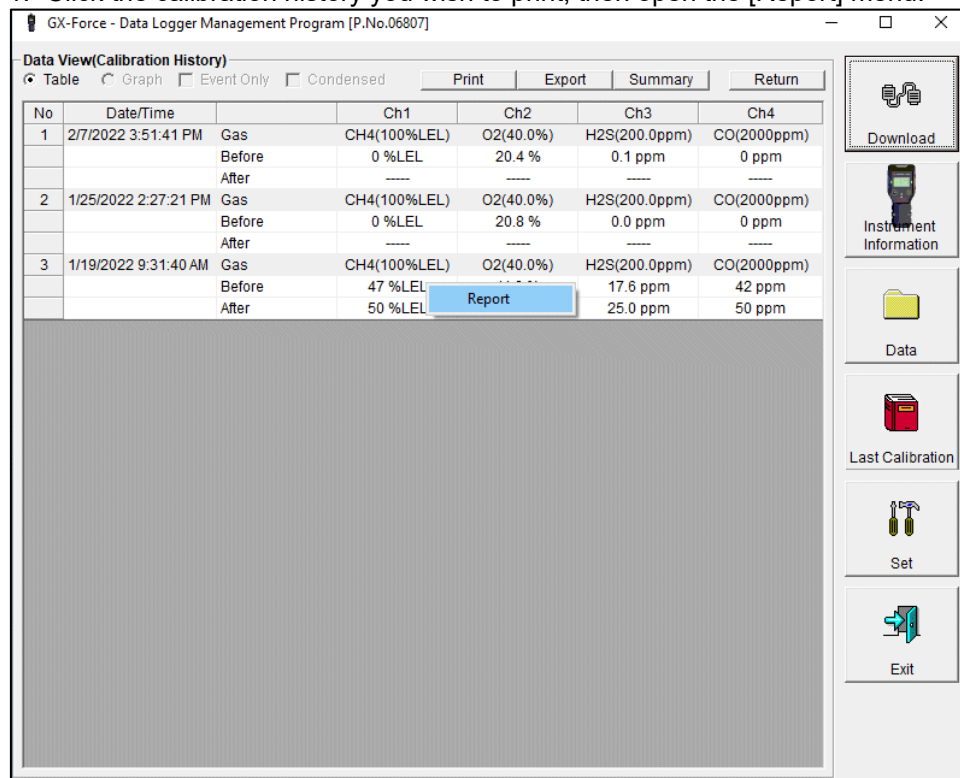
CALIBRATION REPORT					
ISSUE DATE	1/19/2022				
LABORATORY NAME					
LABORATORY ADDRESS					
REPORT NUMBER	483ebe86-46b6-46ea-b87d-92349829f194-3				
GAS DETECTOR DATA	Serial	*****			
	Manufacturer	RIKEN KEIKI			
	Model	GX-Force			
	Station ID	S_ID_011			
	User ID	U_ID_004			
STANDARD OR REGULATION USED					
TRACEABILITY					
CALIBRATION RESULT	GAS	CH4(%LEL)	CO(%)	H2S(ppm)	CD(ppm)
	Range	0-100%LEL	0-40.0%	0-200.0ppm	0-2000ppm
	Gas concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm
	Reading before calibration	47 %LEL	11.8 %	17.8 ppm	42 ppm
	Reading after calibration	50 %LEL	12.0 %	25.0 ppm	50 ppm
	Result	PASS	PASS	PASS	PASS
ENVIRONMENTAL CONDITIONS					
OBSERVATIONS					
EXECUTOR					

1/1

CAUTION: The calibration certificate cannot be printed out unless calibration has been correctly performed.

- Calibration certificate window

1. Click the calibration history you wish to print, then open the [Report] menu.



CAUTION: Values will appear for [Before] and [After] on the sheet if the calibration is performed correctly.

[.....] will be displayed if calibration failed or was not performed.

A calibration certificate cannot be issued if [.....] appears for all gas concentrations.

- Open the [Report] menu to show the Calibration Report window.
The following information can be entered by the user as necessary:

- LABORATORY NAME
- LABORATORY ADDRESS
- STANDARD OR REGULATION USED
- TRACEABILITY
- ENVIRONMENTAL CONDITIONS
- OBSERVATIONS
-

EXECUTOR

Calibration Report					
Align		<input checked="" type="radio"/> Left <input type="radio"/> Center <input type="button" value="Print"/> <input type="button" value="Close"/>			
ISSUE DATE	1/19/2022				
LABORATORY NAME					
LABORATORY ADDRESS					
REPORT NUMBER	483ebe86-f6b6-46ea-b87d-92349829f194-3				
GAS DETECTOR DATA	Serial			
	Manufacturer	RIKEN KEIKI			
	Model	GX-Force			
	Station ID	S_ID_011			
	User ID	U_ID_004			
STANDARD OR REGULATION USED					
TRACEABILITY					
CALIBRATION RESULT	GAS	CH4(%LEL)	O2(%)	H2S(ppm)	CO(ppm)
	Range	0-100%LEL	0-40.0%	0-200.0ppm	0-2000ppm
	Gas concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm
	Reading before calibration	47 %LEL	11.8 %	17.6 ppm	42 ppm
	Reading after calibration	50 %LEL	12.0 %	25.0 ppm	50 ppm
	Result	PASS	PASS	PASS	PASS
ENVIRONMENTAL CONDITIONS					
OBSERVATIONS					
EXECUTOR					

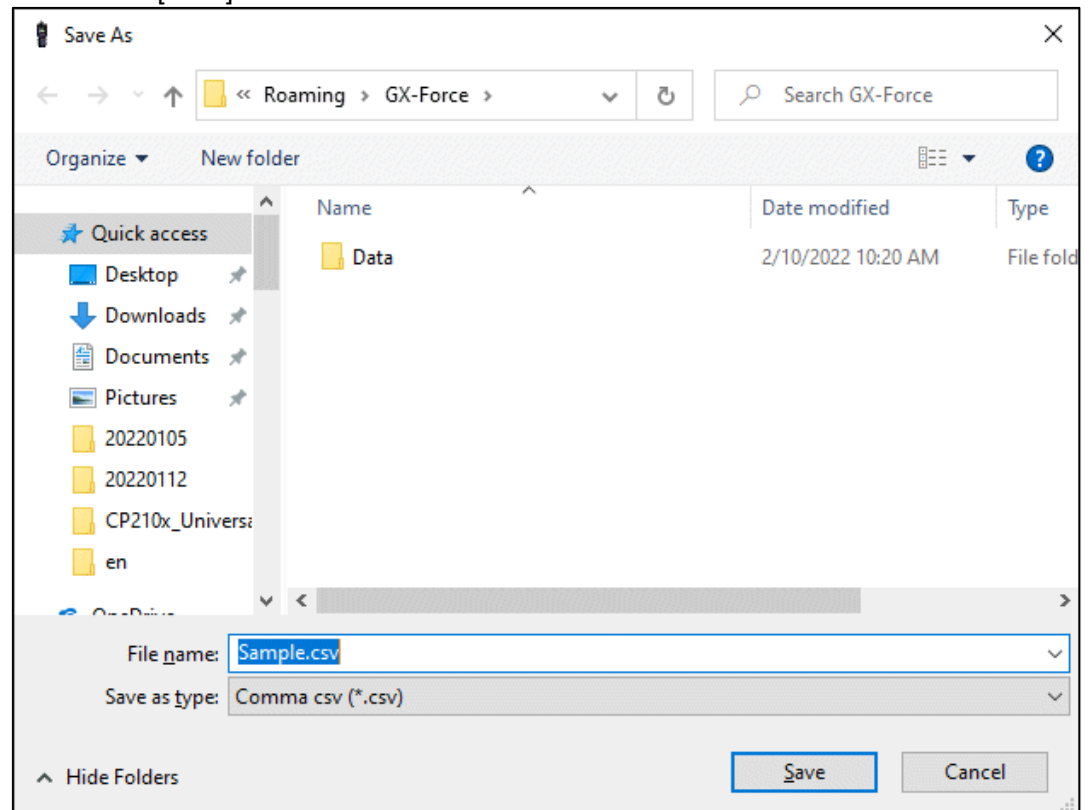
CAUTION: The information entered by the user will be saved if a calibration certificate is printed. The information will not be saved if no calibration certificate is printed or if [Close] is clicked.

Calibration certificates lacking information entered by the user will include information recently input for other calibration certificates.

④ Save to file

- Save

1. Click the [Save] button on 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 CSV format.
If a graph is displayed, the graph will be saved as a bitmap.

⑤ To view data summary at the same time

● Summary display

1. Click the [Summary] button at the top of the screen.

Click.

A summary is displayed.

GX-Force - Data Logger Management Program [P.No.06807]

Data View(Interval Trend)

Table Graph Event Only Condensed Print Export Summary Return

Property		Value			
Name	iv27120205_				
Sampling Date/Time	1/27/2022 12:02:05 PM to 1/27/2022 12:05:43 PM				
Serial No.					
Station ID	S_ID_011				
User ID	U_ID_004				
Data Count	29				
Interval Time (sec)	10				
Gas(FullScale)	H2(100%LEL)	O2(100%LEL)	H2S(200.0ppm)	CO(2000ppm)	Temperature
Avg	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C

No	Date/Time	H2(100%LEL)	O2(100%LEL)	H2S(200.0ppm)	CO(2000ppm)	Temperature
1	1/27/2022 12:02:12 PM	---	---	WARNING	---	---
2	1/27/2022 12:02:15 PM	---	---	0.3 ppm	0 ppm	28.6 °C
3	1/27/2022 12:02:16 PM	---	---	-WARNING	---	---
4	1/27/2022 12:02:16 PM	---	---	NORMAL	---	---
5	1/27/2022 12:02:25 PM	0 %LEL	20.8 %	0.0 ppm	0 ppm	28.6 °C
6	1/27/2022 12:02:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
7	1/27/2022 12:02:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
8	1/27/2022 12:02:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
9	1/27/2022 12:03:05 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
10	1/27/2022 12:03:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
11	1/27/2022 12:03:25 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
12	1/27/2022 12:03:35 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
13	1/27/2022 12:03:45 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
14	1/27/2022 12:03:55 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.7 °C
15	1/27/2022 12:03:55 PM	---	---	WARNING	---	---
16	1/27/2022 12:03:58 PM	---	---	-WARNING	---	---
17	1/27/2022 12:03:58 PM	---	---	NORMAL	---	---
18	1/27/2022 12:04:05 PM	0 %LEL	20.9 %	0.6 ppm	0 ppm	28.8 °C
19	1/27/2022 12:04:15 PM	0 %LEL	20.9 %	0.0 ppm	0 ppm	28.8 °C

Download

Instrument Information

Data

Last Calibration

Set

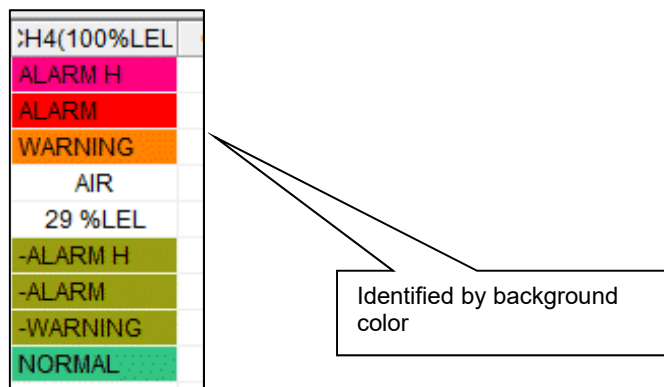
Exit

Clicking the [Summary] button while the summary is displayed hides the summary display.

⑥ 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.

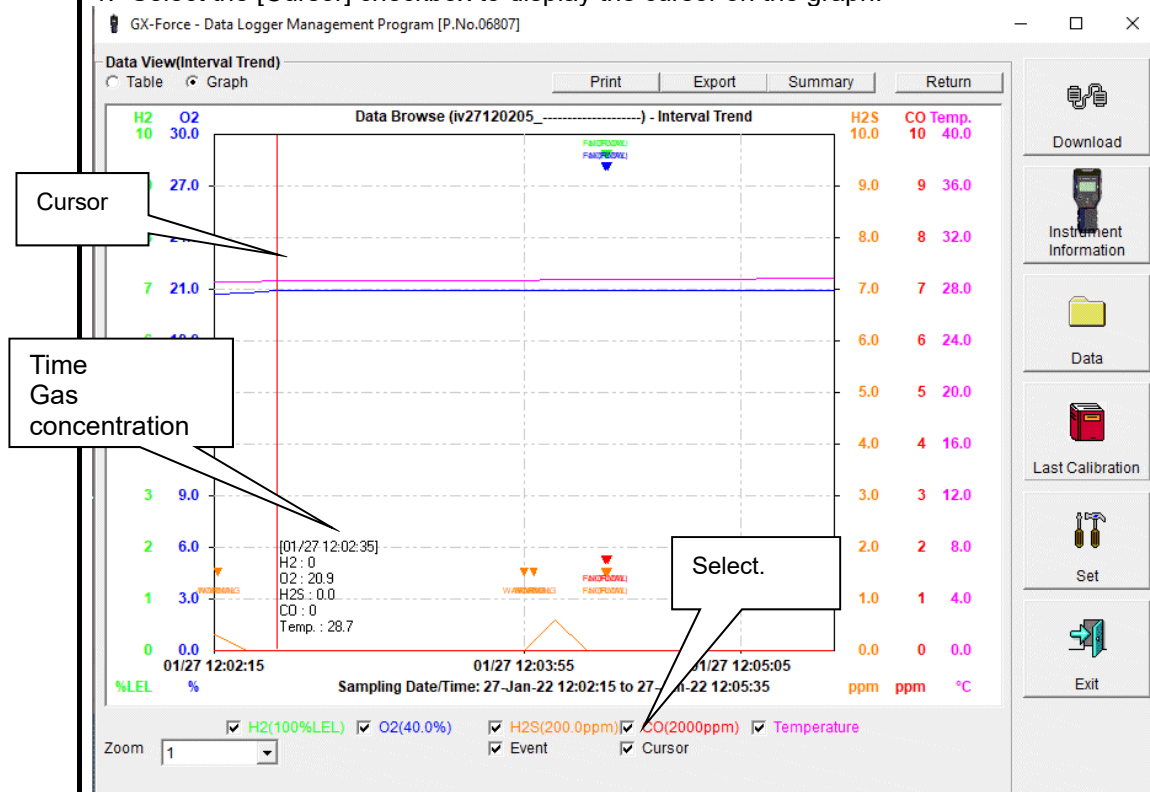


Display	Background color	Meaning
Fail	Gray	Fault
WARNING	Orange	1st alarm
ALARM	Red	2nd alarm
ALARM H	Magenta	3rd alarm
TWA	Light purple	TWA alarm
STEL	Pink	STEL alarm
NORMAL	Dark green	Restored from above statuses
OVER	Bright red	Full scale exceeded
MINUS	Bright red	Minus-scale over

⑦ Graph details

● Cursor

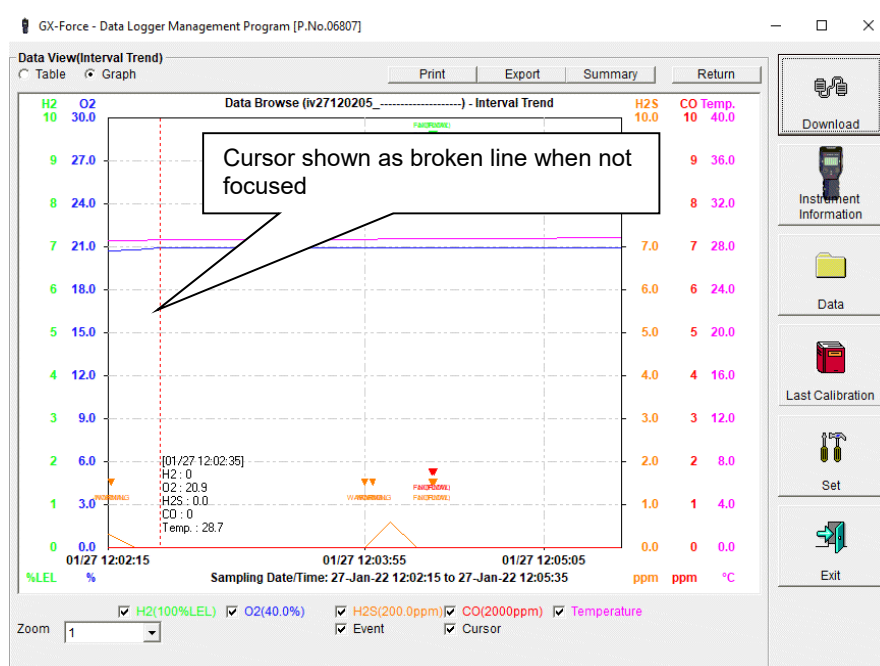
1. Select the [Cursor] checkbox to display the cursor on the graph.



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. Hold down the Shift key at the same time for faster cursor/display movement.

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.

The screenshot displays the GX-Force - Data Logger software interface. The main window is divided into two sections: "Last Calibration" and "Last Bump Test".

Last Calibration Section:

- Buttons: ☐ Need Calibration, ☐ Calibration Date, ☒ Calibration Record,
- Table:

No.	SerialNo	UserID	StationID	Gas	Before	After	A.Cal.	Cal.Due(Days)
1		U_ID_008	S_ID_017	CH4	0	0	50	Now
				O2	0.0	0.0	12.0	Now
				H2S	0.0	0.0	25.0	Now
				CO	0	0	50	Now

Last Bump Test Section:

- Buttons: ☐ Need Bump Test, ☐ Bump Test Date, ☒ Bump Test Record,
- Table:

No.	SerialNo	UserID	StationID	Gas	Test Result	Test Due(Days)
1		U_ID_008	S_ID_017	CH4	0	0
				O2	0.0	0.0
				H2S	0.0	0.0
				CO	0	0

Right Sidebar:

- Download
- Instrument Information
- Data
- Last Calibration
- Set
- Exit

Callouts:

- ① Select display details (points to the Calibration Record radio button)
- ② Send to printer (points to the Print button)
- ③ Delete data (points to the bottom of the Last Calibration table)
- ④ Change password (points to the bottom of the Last Calibration table)
- Click this button. (points to the Bump Test Record radio button)
- Bump test information (points to the bottom of the Last Bump Test table)

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

① Select display details

● Expired data

1. Click the [Need Calibration] radio button.

Last Calibration								
<input checked="" type="radio"/> Need Calibration <input type="radio"/> Calibration Date <input type="radio"/> Calibration Record <input type="button" value="Print"/>								
No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Downloa
1		U_ID_008	S_ID_017		2022	1/1/2022	1/1/2022	2/10/2022 10:

Calibration data is displayed for previously connected GX-Force main units (for which device information data has been downloaded) that have expired.

● List display

1. Click the [Calibration Date] radio button.

Last Calibration								
<input type="radio"/> Need Calibration <input checked="" type="radio"/> Calibration Date <input type="radio"/> Calibration Record <input type="button" value="Print"/>								
No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Downloa
1		U_ID_008	S_ID_017	1/1/2022	1/1/2022	1/1/2022	1/1/2022	2/10/2022 10:

Data is listed for previously connected GX-Force 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.

Last Calibration								
<input type="radio"/> Need Calibration <input type="radio"/> Calibration Date <input checked="" type="radio"/> Calibration Record <input type="button" value="Print"/>								
No.	SerialNo	UserID	StationID	Gas	Before	After	A.Cal.	Cal.Due(Days)
1		U_ID_008	S_ID_017	CH4	0	0	50	Now
				O2	0.0	0.0	12.0	Now
				H2S	0.0	0.0	25.0	Now
				CO	0	0	50	Now

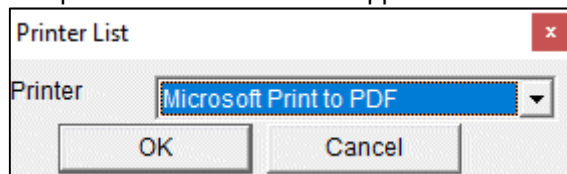
Data is listed for previously connected GX-Force main units in the same format as the Instrument Information screen.

For more information on display contents, refer to '③ Calibration history information' in '3-2. Instrument Information screen'.

② Send to printer

- Print

The most recent calibration dates can be printed after selecting the [Need Calibration] or [Calibration Date] radio button.
The printer selection window appears. Select the desired printer and click the [OK] button.



GX-Force Data Logger (Last Calibration)								2/10/2022 10:49:02 AM
No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Download
1		U_ID_008	S_ID_017	1/1/2022	1/1/2022	1/1/2022	1/1/2022	2/10/2022 10:19:44 AM

③ Delete data

● Delete

1. Right-click on the data to delete.

No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Downloa
1	-----	U_ID_008	S_ID_017	1/1/2	22	1/1/2022	1/1/2022	2/10/2022 10:

Click.

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.

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

Password

Please input password.

Continue Change Password

● Password input

CAUTION: Clicking [Continue] without entering a password will cancel deletion.

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

Delete History

Delete History : SerialNo=-----

Yes No

Click the [Yes] button to delete the data.

Click the [No] button to cancel data deletion.

CAUTION:

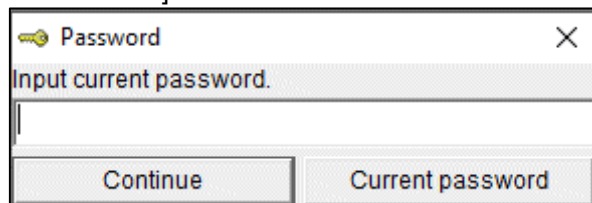
The default password immediately after installation is [riken] (not case sensitive).

For details of how to change the password, refer to '④ Change password' in '3-5. Last Calibration screen'.

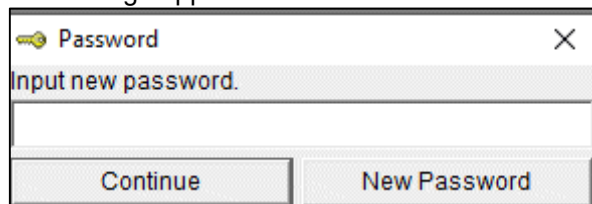
④ Change password

- 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. The password dialog will appear once again. Enter the same (new) password, then click the [New Password] button.

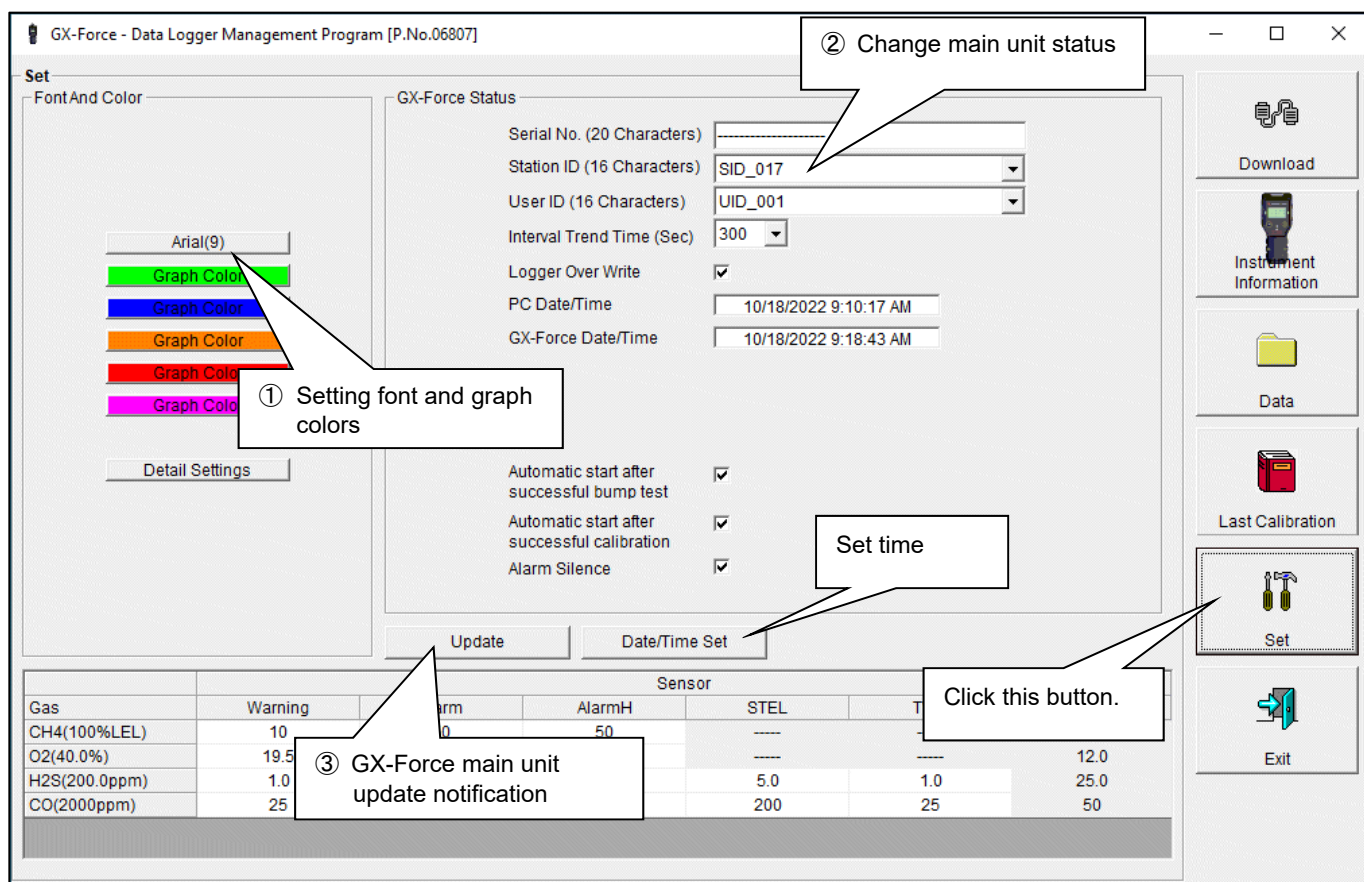


Lastly, click [OK] to update to the new password.

CAUTION: The default password immediately after installation is [riken].
(not case-sensitive).

3-6. Set screen

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



Use [Date/Time Set] to set the date and time for the GX-Force to the same date and time indicated by [PC Date/Time] in [GX-Force Status].

Click [Date/Time Set] to display a prompt asking whether you wish to change the setting. Click [Yes] to change it to the PC date and time.

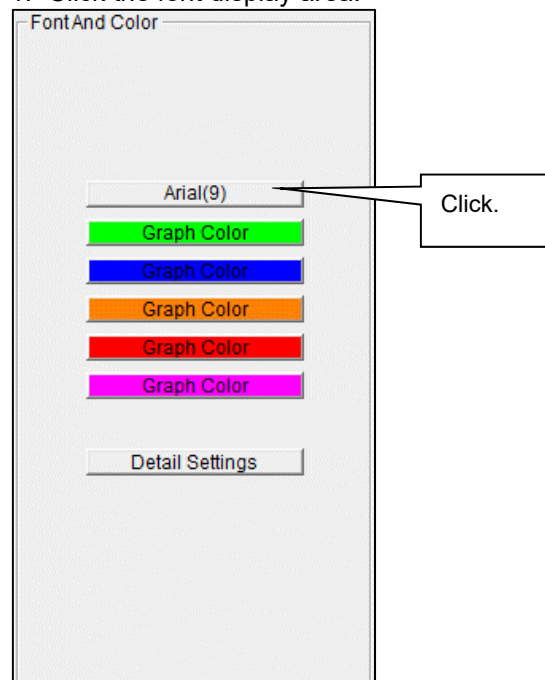
CAUTION: Data that has been set or changed must be sent to the GX-Force main unit by clicking the [Update] button.

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.



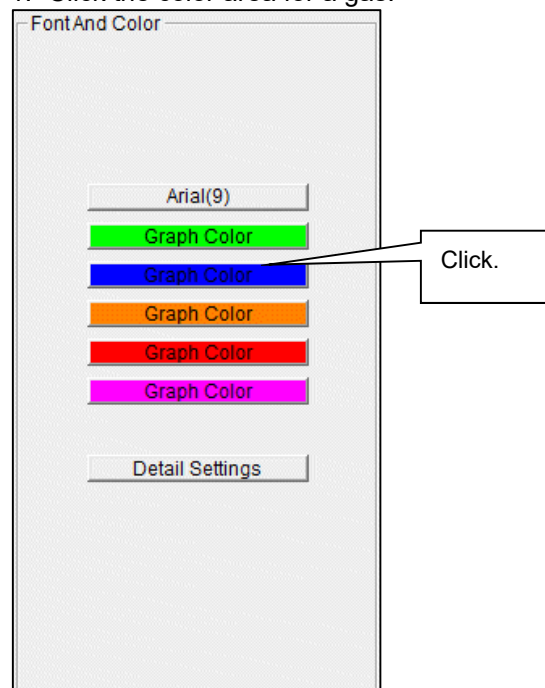
Set the desired font in the font setting dialog that appears.

CAUTION: The screen display may be 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 each gas on the graph can be changed.

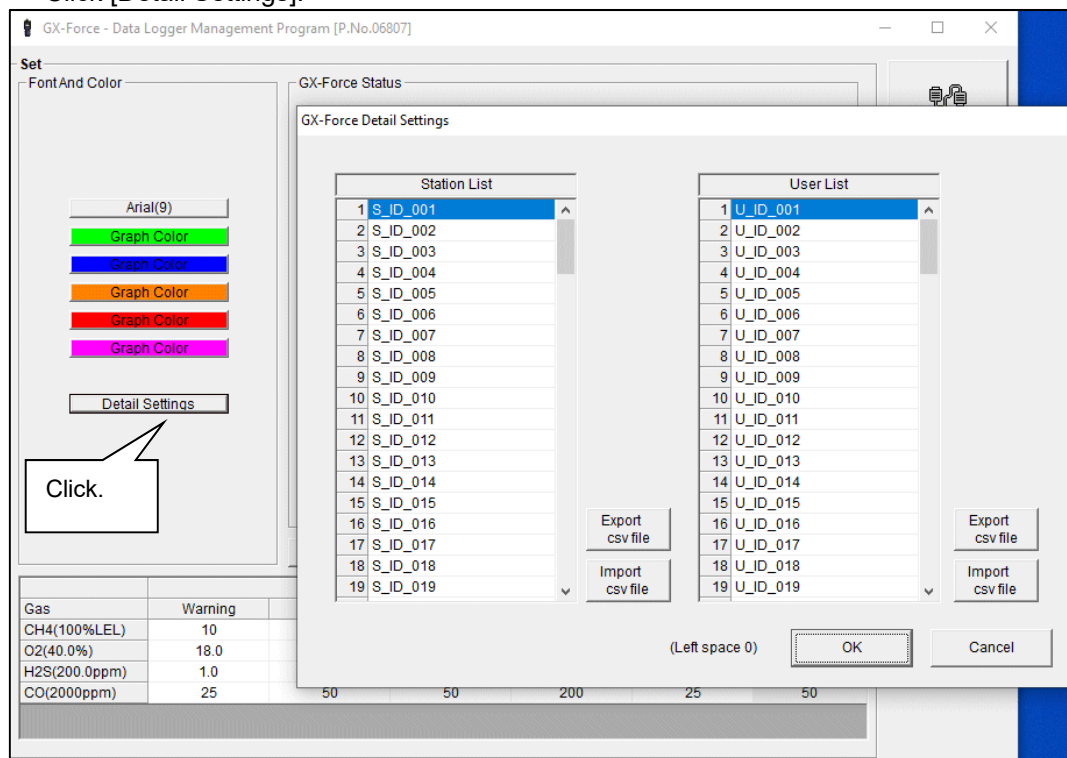
1. Click the color area for a gas.



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

- Edit station/user lists

1. Edit the station ID and user ID lists.
Click [Detail Settings].

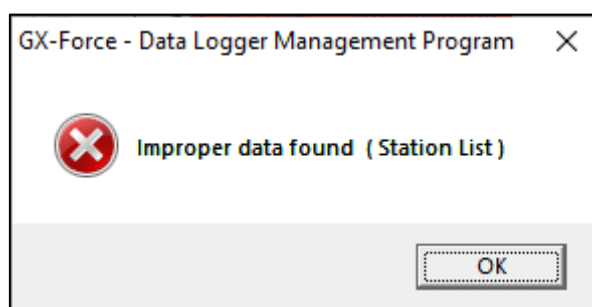


An edit dialog appears. The station list can contain up to 128 entries.
Up to 16 alphanumeric characters can be used, including the space, hyphen, and slash symbols (all single-byte characters).

Export csv file: Outputs to a file. Creates a number data text file.

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

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



② Change 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 do not exceed 16 characters in length.

[Interval Trend Time] can be changed by selecting from the pull-down list.

Use [Logger Over Write] to enable or disable the logger overwrite function.

The [Date/Time Set] button can be used to synchronize the PC time ([PC Date/Time]) with the GX-Force main unit internal clock ([GX-Force Date/Time]).

[Automatic start after successful bump test]/[Automatic start after successful calibration] can be selected to start automatic measurement once the corresponding processing is successful.

Use [Alarm Silence] to enable or disable the alarm muting function.

CAUTION: Dates and times cannot be entered directly into the date/time boxes.

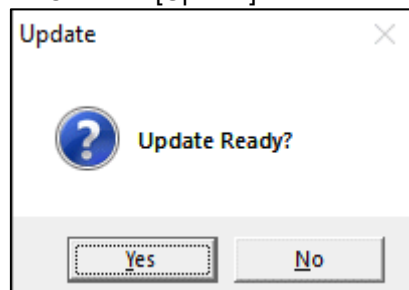
CAUTION: Apart from clock setting, changing the status data here alone will not update the same data in the GX-Force main unit.

Be sure to click [Update] to update (send) the changes to the main unit.

③ GX-Force main unit update notification

- Update notification

1. Click the [Update] button after making changes.



Click the [Yes] button to send the changes to the GX-Force main unit to be stored.

Click the [No] button to cancel update notification.

CAUTION: Details cannot be restored once they have been changed. If update notification has not yet been made, you can restore the main unit information 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—for example, if data is read in several times a day—this may increase both data volumes and data management burdens. Unforeseen problems with the PC may also lead to loss of valuable data.

We recommend backing up data periodically to protect against such data management problems.

4-1. Data storage configuration details

Data is stored in the installed GX-Force program folder.

- 1) File name: GXForce.mdb
File type: Microsoft JET 3.6 database file
- 2) File name: Data
File type: Individual trend data files (within each year and month folder)

4-2. Backing up

Although it depends on the usage pattern, we recommend copying data to a separate hard disk drive or external auxiliary storage device (for example, CD-R).

When restoring data, copy the data to the location to which the GX-Force 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 Connect the USB cable correctly for receiving data.
- ② Avoid using similar functions on other applications at the same time when data is being received.
- ③ Do not force-quit this program (e.g. using the Ctrl + Alt + Del operation). The program shutdown processing saves configuration parameters for the next time the program starts. Force-quitting the program may cause problems the next time the program starts.
- ④ Do not directly rewrite data files.

6. Troubleshooting

Symptom	Cause	Corrective action
Communication is not possible.	The USB cable is not correctly connected.	Confirm that it is correctly connected.
	The COM port is not recognized. *1	Install the correct driver.
	The driver is out of date.	Install the latest driver version.

*1: Normally recognized as Silicon Labs CP210x USB to UART Bridge (COM No.)

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

Visit our website for information on the nearest Riken Keiki office.

Website: <https://www.rikenkeiki.co.jp/english/>

7. File Organization

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

7-1. Current directory immediately after installation

File name	Details
GXForce.exe RKComm2.ocx RkIrDA11.ocx Filemove.avi	GX-Force program body Communication component Infrared communication component Animation file used during data reception

7-2. Current directory during operation

File name	Details
GXForce.exe RKComm2.ocx RkIrDA11.ocx Filemove.avi	GX-Force program body Communication component Infrared communication component Animation file used during data reception

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

File name	Details
GXForce.ini GXForce.dat GXForce.mdb Data Serial.log	GX-Force 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)

8. Software Function Specifications

Product name (Program name)	GX-Force Data Logger Management Program
Product model	SW-GX-Force (EX)
Executable file name	GXForce.EXE
Compatible operating systems	Microsoft Windows 10 or Windows 11
Program size	Main part approx. 4.8 MB, library approx. 5.2 MB (Uses up to 42 MB of hard disk space during installation.)
Communication with main unit	Serial interface (USB to UART) Baud rate: 115200 bps 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)
Supported language	English
Medium	CD-ROM ×1
Package contents	Operating Manual Product warranty registration card User license agreement

Revision history

Issue	Revision	Issue date
0	First issue	February 21, 2023