

# Portable Gas Detector GX-6100 Data Logger Management Program SW-GX-6100

**Operating Manual** 

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Introduction Introduction

# 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 operating manual.

This operating manual omits descriptions of basic operations like command selection and dialog box settings for Microsoft Windows 10 and Microsoft Windows 11.

Please read the Windows manual and familiarize yourself with basic Windows operations before using the program.

Keep this operating manual on hand to allow ready reference during use.

For basic operation of the GX-6100 main unit, refer to the following instruction manual.

Portable Gas Detector GX-6100 Operating Manual (PT0E-252)

# **AWARNING**

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-6100 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 viewed 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 identify devices that require adjustment.
- 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 Windows 11 operating systems. The program is not compatible with other operating systems.

This program requires up to approximately 41 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

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: 921,600 bps, Data: 8 bits, Parity: None, Stop bit: 1

Obtaining the driver:

Download the CP210x USB Virtual COM Port (VCP) from the Silicon Laboratories website (see below) and install the driver.

https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers

## 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:

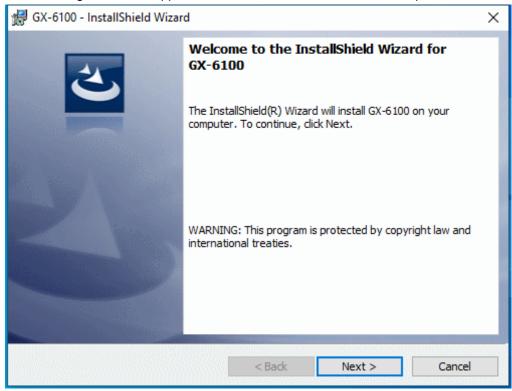
- Open the CD-ROM drive in Explorer.
- 2. Double-click on the [setup.exe] file.

Note: 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:

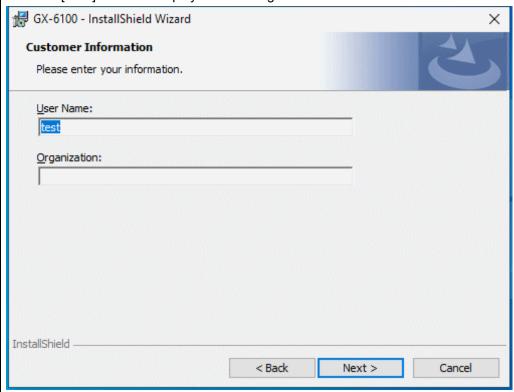


To install the software, click the [Next] button. To abort the process, click the [Cancel] button.

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

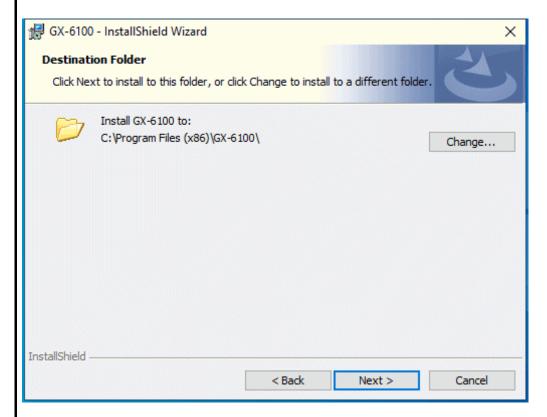
User information

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



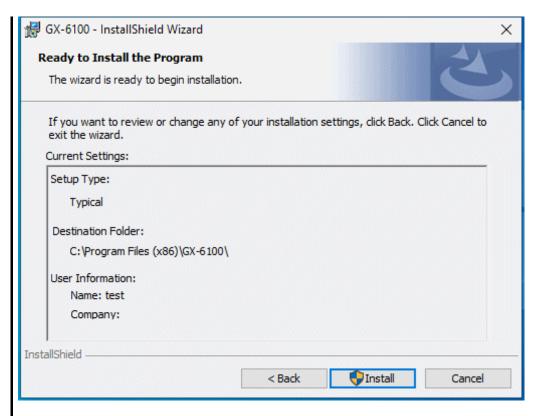
Enter user information on the Customer Information screen, then click the [Next] button to display the following screen:

Destination folder



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

#### Start setup

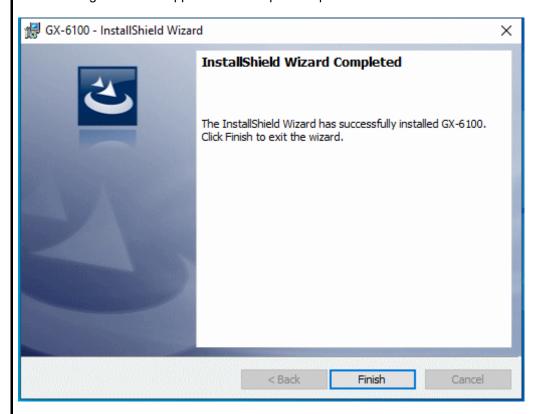


Click the [Install] button to begin installing.

\* The User Account Control window 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

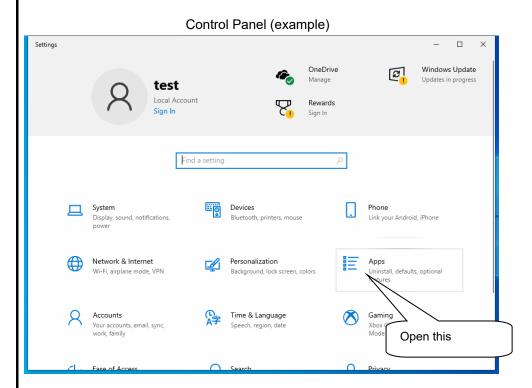
Note the following precautions if reinstalling the program:

- 1. Uninstall the program before reinstalling.
- If the program is uninstalled after it has been used, certain files will remain undeleted. These include the [GX-6100.mdb] database file and [Data] folder. If you wish to save past data, save this file to another location before deleting the folder.

# 2-4. Uninstallation procedure

Startup

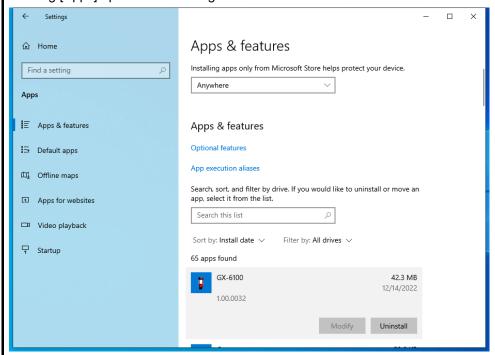
To uninstall the software, click [Start] on the taskbar, click [Settings], and launch the Control Panel.



Click to open [Apps] in the Control Panel.

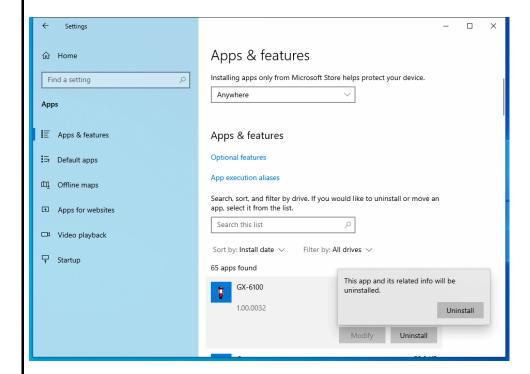
#### ● Select GX-6100

Clicking [Apps] opens the following window:



Click [GX-6100].

#### Start deletion



Click [Uninstall] to display the confirmation window.

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

\* The User Account Control window is displayed. Click [Yes].

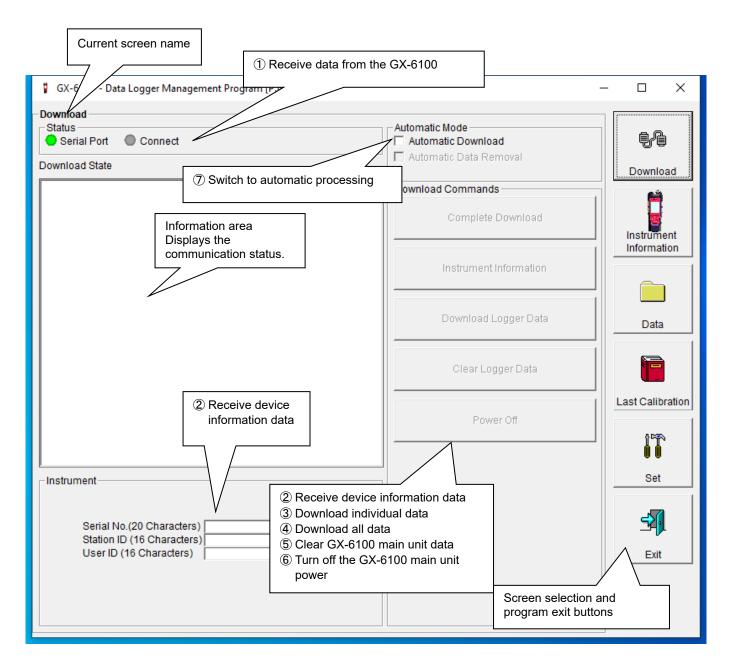
CAUTION: The message [Do you want to remove the shared file?] may appear during the uninstallation. Select [No]. Selecting [Yes] may affect other applications.

# 3. Operating Procedures

Start the program by double-clicking the [GX-6100] 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 the dedicated IrDACOM adapter, 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 becomes no longer possible, either change the position of the main unit or remove and reinsert the IrDACOM adapter.

# (1) Receive data from the GX-6100

- Main unit preparation
- 1. Start this software.
- Place the GX-6100 in a location where communication is possible with the power turned off.
- 3. Turn on the power for the GX-6100 main unit.

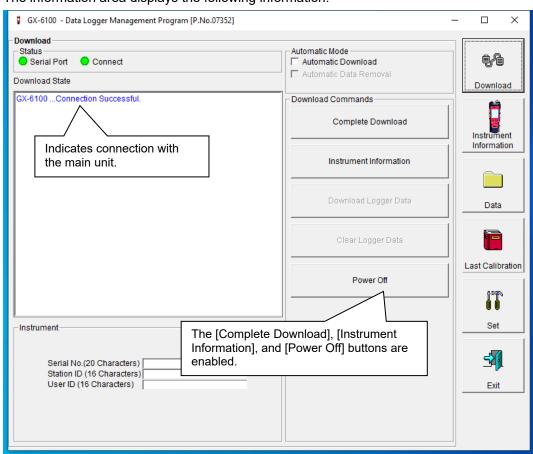
CAUTION: Be sure to place the GX-6100 in a location where communication is possible before turning on the power.

The GX-6100 does not enter communication standby mode even if moved to a location where communication is possible with the power already on.

The LCD on the GX-6100 main unit will appear as shown on the right.  $\,\rightarrow\,$ 

PC TRANSMIT

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-6100 main unit power and check the connection of the IrDACOM adapter before turning on the power once again.

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



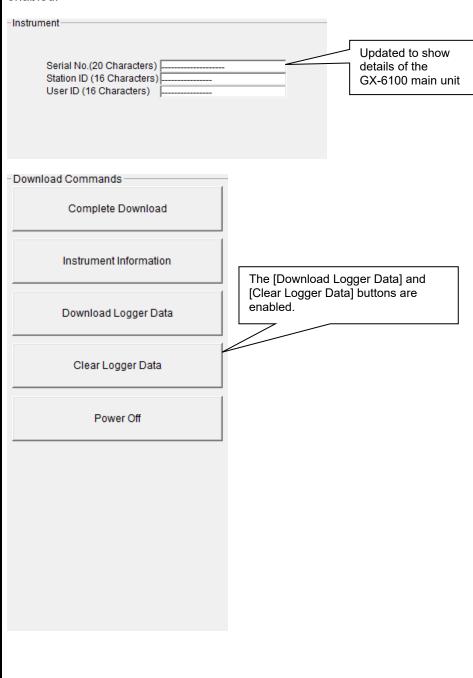
# 2) Receive device information data

 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 device 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.

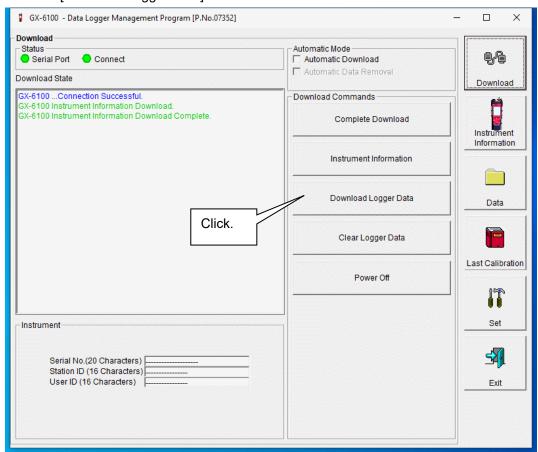


# 3 Download individual data

- 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.

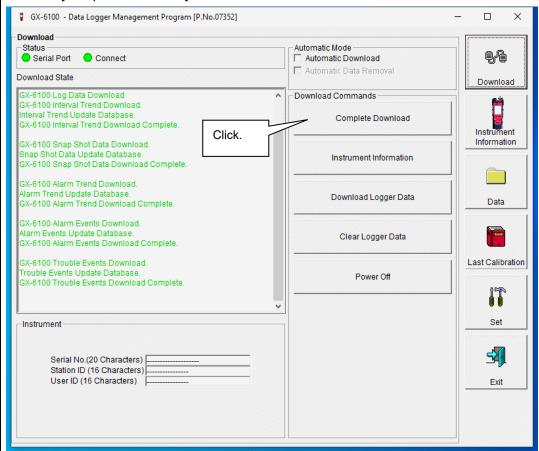
CAUTION: While data is being downloaded, other download buttons and the [Set] button are disabled to prohibit access to other data.

# 4 Download all main unit data

All data

Clicking the [Complete Download] button downloads all data, including device information, interval trend, alarm trend, trouble event, and snapshot data.

Click the [Complete Download] button.



The information area displays the data receiving status.

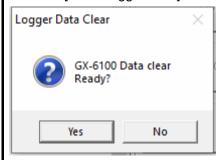
CAUTION: While data is being downloaded, other download buttons and the [Set] button are disabled to prohibit access to other data.

# 5 Clear GX-6100 main unit data

Clear data

Clicking the [Clear Logger Data] button clears all data on the GX-6100.

Click the [Clear Logger Data] button.



Click [Yes] to begin clearing data.

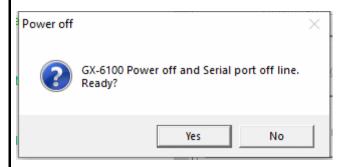
Once cleared, data cannot be restored. Store required data before clearing.

# 6 Turn off the GX-6100 main unit power

Power off

Clicking the [Power Off] button turns off the power for the GX-6100 main unit and resets the PC serial port.

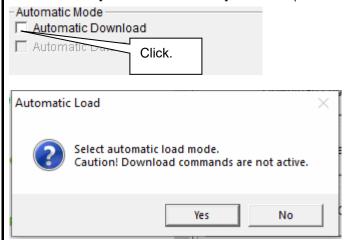
1. Click the [Power Off] button.



Click [Yes] to begin the process of turning off the GX-6100 main unit power and to reset the PC serial port before switching to standby to await data from the main unit.

# 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 performed next.

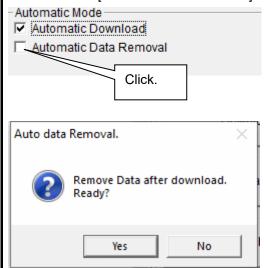
Click [No] to cancel the mode change.

 Automatic deletion after downloading All data is automatically downloaded to the PC when the GX-6100 main unit power is turned on. The GX-6100 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.

Select the [Automatic Data Removal] checkbox.

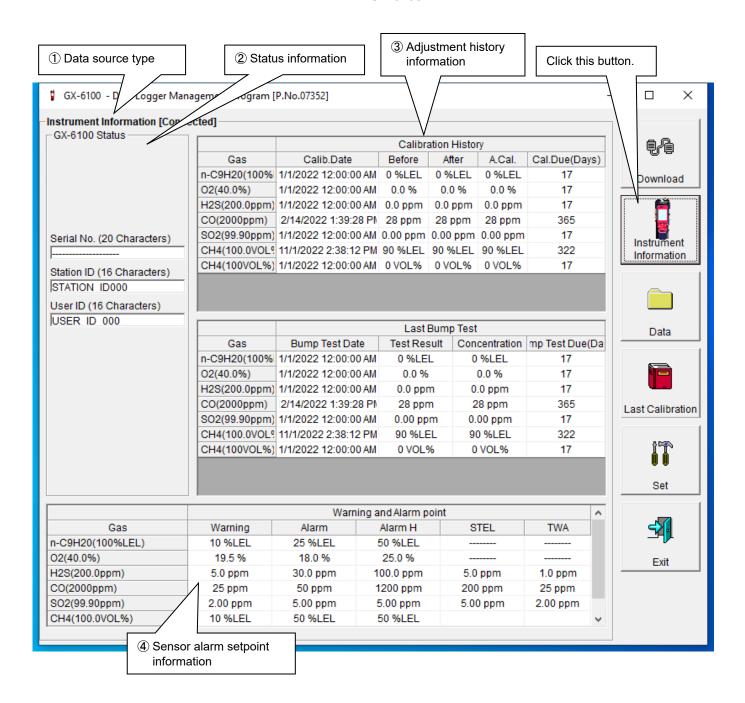


Click [Yes] to automatically delete all data on the GX-6100 after the data is downloaded.

\* You can shorten the download time by repeating the download  $\rightarrow$  delete  $\rightarrow$  download process 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-6100 main unit.



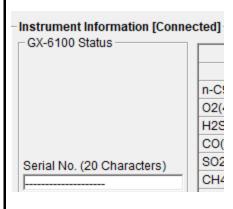
CAUTION: This screen is view-only. Data cannot be edited. → Refer to '3-6. Set screen'.

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

# ① Data source type

Data source information

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

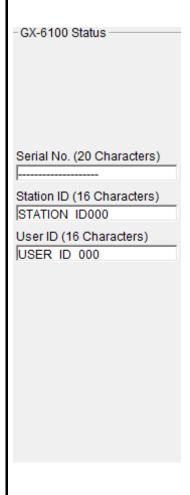


# ② Status information

Information details

Displays the [Serial No.], [Station ID], and [User ID] stored inside the main unit.

CAUTION: These boxes are view-only and cannot be edited.



# 3 Adjustment history information

# Adjustment history details

	Calibration History				
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
n-C9H20(100%	1/1/2022 12:00:00 AM	0 %LEL	0 %LEL	0 %LEL	17
O2(40.0%)	1/1/2022 12:00:00 AM	0.0 %	0.0 %	0.0 %	17
H2S(200.0ppm)	1/1/2022 12:00:00 AM	0.0 ppm	0.0 ppm	0.0 ppm	17
CO(2000ppm)	2/14/2022 1:39:28 PM	28 ppm	28 ppm	28 ppm	365
SO2(99.90ppm)	1/1/2022 12:00:00 AM	0.00 ppm	0.00 ppm	0.00 ppm	17
CH4(100.0VOL9	11/1/2022 2:38:12 PM	90 %LEL	90 %LEL	90 %LEL	322
CH4(100VOL%)	1/1/2022 12:00:00 AM	0 VOL%	0 VOL%	0 VOL%	17

Details:

Gas: Measured gas names (full-scale units)

Calib.Date: Date of last adjustment

Before: Concentration before last adjustment

After: Concentration after last adjustment/adjustment failure

A.Cal.: Automatic adjustment concentration

Cal.Due (Days): Remaining period in unadjusted state (A warning is displayed in

red when adjustment expires.)

# Bump test history details

	Last Bump Test			
Gas	Bump Test Date	Test Result	Concentration	mp Test Due(Da
n-C9H20(100%	1/1/2022 12:00:00 AM	0 %LEL	0 %LEL	17
O2(40.0%)	1/1/2022 12:00:00 AM	0.0 %	0.0 %	17
H2S(200.0ppm)	1/1/2022 12:00:00 AM	0.0 ppm	0.0 ppm	17
CO(2000ppm)	2/14/2022 1:39:28 PN	28 ppm	28 ppm	365
SO2(99.90ppm)	1/1/2022 12:00:00 AM	0.00 ppm	0.00 ppm	17
CH4(100.0VOL9	11/1/2022 2:38:12 PM	90 %LEL	90 %LEL	322
CH4(100VOL%)	1/1/2022 12:00:00 AM	0 VOL%	0 VOL%	17

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): Remaining period in no bump test state (A warning is displayed

in red when the bump test expires.)

# 4 Sensor alarm setpoint information

#### Details

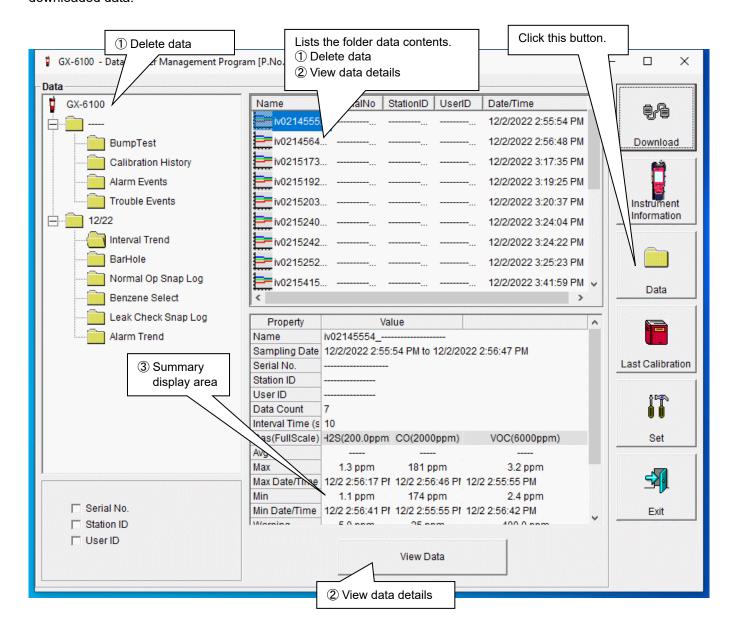
	Warning and Alarm point					
Gas	Warning	Warning Alarm Alarm H STEL TWA				
n-C9H20(100%LEL)	10 %LEL	25 %LEL	50 %LEL			
O2(40.0%)	19.5 %	18.0 %	25.0 %			
H2S(200.0ppm)	5.0 ppm	30.0 ppm	100.0 ppm	5.0 ppm	1.0 ppm	
CO(2000ppm)	25 ppm	50 ppm	1200 ppm	200 ppm	25 ppm	
SO2(99.90ppm)	2.00 ppm	5.00 ppm	5.00 ppm	5.00 ppm	2.00 ppm	
CH4(100.0VOL%)	10 %LEL	50 %LEL	50 %LEL			
CH4(100VOL%)						

Details:

Gas: Measured gas names (full-scale units)
Warning: 1st alarm setpoint concentration
Alarm: 2nd alarm setpoint concentration
Alarm H: 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 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: 12/22 = Data for December 2022

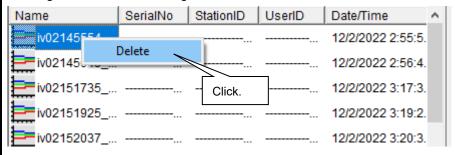
File name: 22111930 3EB = Interval trend for 11:19:30 on 22nd (date and time of logging start)

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. Refer to '4. Data Maintenance'.

## 1 Delete 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.

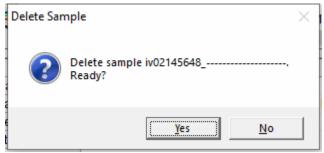
Password input

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



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

2. The following dialog 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.

CAUTION: The default password immediately after installation is "Riken" (not case-sensitive). For instructions on how to change the password, refer to '(4) Change password' in '3-5 Last Calibration screen'.

# ② View data details

Or:

- 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.
- . 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				۸
Name	iv05091153	iv05091153			
Sampling Date/T	12/5/2022 9:11:5	3 AM to 12/5/2022	9:15:39 AM		
Serial No.					
Station ID					
UserID					
Data Count	29				
Interval Time (se	10	10			
Gas(FullScale)	H2(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppr	
Avg	0 %LEL	21.5 %	0.0 ppm	17 ppm	
Max	0 %LEL	21.8 %	0.0 ppm	57 ppm	
Max Date/Time	12/5 9:11:54 AM	12/5 9:14:00 AM	12/5 9:12:45 AM	12/5 9:12:49 /	
Min	0 %LEL	18.5 %	-1.7 ppm	0 ppm	
Min Date/Time	12/5 9:11:54 AM	12/5 9:12:49 AM	12/5 9:12:55 AM	12/5 9:15:14 /	
Warning	10 %LEL	19.5 %	5.0 ppm	25 ppm	
Alarm	25 %LEL	18.0 %	30.0 ppm	50 ppm	
Alorm II	E0 0/1 F1	0E 0 0/	400 0 nnm	1000 000	~
<				>	

Name: Data name

Sampling Date/Time: Date and time of measurement start and end

Serial No./Station ID/User ID: GX-6100 main unit status
Data Count: Number of data samples
Interval Time (sec): Sampling interval (seconds)

Gas(FullScale):

Avg:
Gas (full scale)

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
Alarm H: 3rd alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

#### Alarm events

DateTime	Ch	Gas	Event
12/5/2022 12:05:07 PM	4	CO(2000ppm)	WARNING
12/5/2022 12:05:06 PM	2	O2(40.0%)	WARNING
12/5/2022 10:50:43 AM	4	CO(2000ppm)	WARNING
12/5/2022 10:43:44 AM	4	CO(2000ppm)	WARNING
12/5/2022 10:39:57 AM	4	CO(2000ppm)	WARNING
12/5/2022 10:39:57 AM	4	CO(2000ppm)	ALARM
12/5/2022 10:32:24 AM	4	CO(2000ppm)	WARNING
12/5/2022 10:32:24 AM	4	CO(2000ppm)	ALARM
	Total	51 Datas	

Date Time: Date and time of event occurrence

Ch: Channel
Gas: Gas generated
Event: Event type

#### Alarm trend

Property	Value			
Name	al05120506			
Alarm Date/Time	12/5/2022 12:05:0	06 PM		
Serial No.				
Station ID				
UserID				
Data Count	720			
Interval Time (se	5			
Gas(FullScale)	CH4(100vol%)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)
Value	0 %LEL	18.2 %	0.3 ppm	40 ppm
Warning	10 %LEL	19.5 %	5.0 ppm	25 ppm
Alarm	25 %LEL	18.0 %	30.0 ppm	50 ppm
Alarm H	50 %LEL	25.0 %	100.0 ppm	1200 ppm
STEL			5.0 ppm	200 ppm
TWA			1.0 ppm	25 ppm
<				>
`				/

Name: Data name

Alarm Date/Time: Date and time of alarm occurrence

Serial No./Station ID/User ID: GX-6100 main unit status Data Count: Number of data samples

Interval Time (sec): Sampling interval Gas(FullScale): Gas (full scale)

Value: Concentration at time of alarm occurrence

Warning: 1st alarm setpoint
Alarm: 2nd alarm setpoint
Alarm H: 3rd alarm setpoint
STEL: STEL alarm setpoint
TWA: TWA alarm setpoint

# Adjustment history

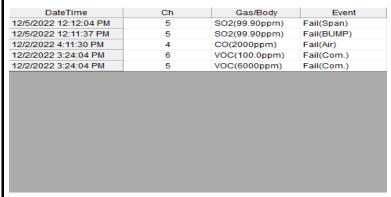
DateTime	Gas	Before	After
12/5/2022 12:12:04 PM	CH4(100vol%)		
12/5/2022 12:12:04 PM	O2(40.0%)		
12/5/2022 12:12:04 PM	H2S(200.0ppm)	0.0 ppm	0.0 ppm
12/5/2022 12:12:04 PM	CO(2000ppm)		
12/5/2022 12:12:04 PM	SO2(99.90ppm)		
12/5/2022 12:12:04 PM	CH4(100.0vol%)		
	()		

Date Time: Date and time of event occurrence

Gas: Gas

Before: Concentration before adjustment After: Concentration after adjustment

#### Trouble events



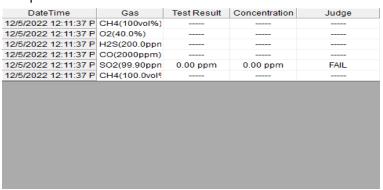
DateTime: Date and time of event occurrence

Ch: Channel

Gas/Body: Gas generated or GX-6100 main unit

Event: Event type

#### Bump test



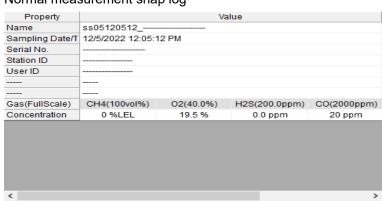
DateTime: Date and time of event occurrence

Gas: Gas

Test Result: Test result concentration
Concentration: Calibration gas concentration

Judge: Test assessment

# Normal measurement snap log



Name: Data name
Sampling Date/Time: Time recorded

Serial No./Station ID/User ID: GX-6100 main unit status

Gas(FullScale): Gas (full scale)

Concentration: Concentration recorded

\* Click the [View Data] button to display a list of data for the same measurement time, including alarm status data.

#### Bar hole Property iv05123016\_---Name Sampling Date/T 12/5/2022 12:30:16 PM to 12/5/2022 12:30:46 PM Serial No. Station ID UserID Interval Time (se 30 Gas(FullScale) CH4(100vol%) O2(40.0%) H2S(200.0ppm) CO(2000ppm) Max 20.9 % Max Date/Time 12/5 12:30:16 PN -----Min 20.9 % Min Date/Time 12/5 12:30:16 PN -

Name: Data name
Sampling Date/Time: Time recorded

Serial No./Station ID/User ID: GX-6100 main unit status

Gas(FullScale): Gas (full scale)

Interval Time (sec): Sampling interval (seconds)

Gas(FullScale): Gas (full scale)

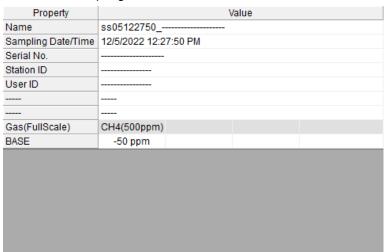
Max: Gas data maximum value

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

#### Leak check snap log



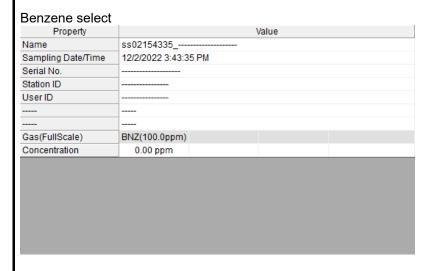
Name: Data name
Sampling Date/Time: Time recorded

Serial No./Station ID/User ID: GX-6100 main unit status

Gas(FullScale): Gas (full scale)

BASE: Base record concentration

\* Click the [View Data] button to display a list of data for the same measurement time, including peak data.



Name: Data name Sampling Date/Time: Time recorded

Serial No./Station ID/User ID: GX-6100 main unit status

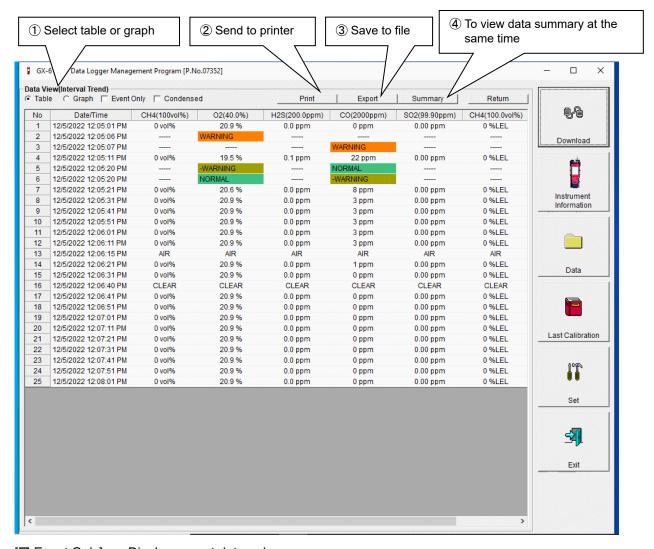
Gas(FullScale): Gas (full scale)

Concentration: Concentration recorded at time of measurement

\* Click the [View Data] button to display a list of data for the same measurement time, including STEL data.

#### 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 active alarms in red.

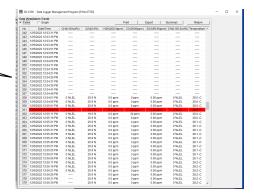


For [WARNING], [ALARM], and [OVER]

Separate window for [WARNING], [ALARM], and [OVER]
Click the [Return] button to exit the window.

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

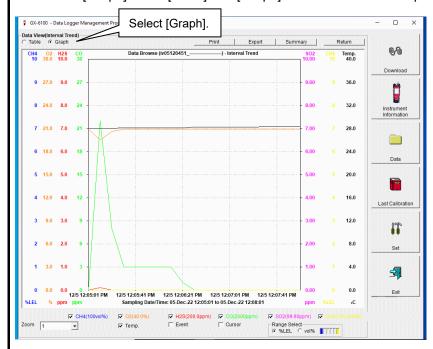
Click on the cell here to search for corresponding event data and to display the data (if any) in a separate window.



# 1 Select 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 box at the bottom of the screen.

Upper checkboxes (gas names): Display or hide 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: 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 event data and to display the data (if any) in a separate window.



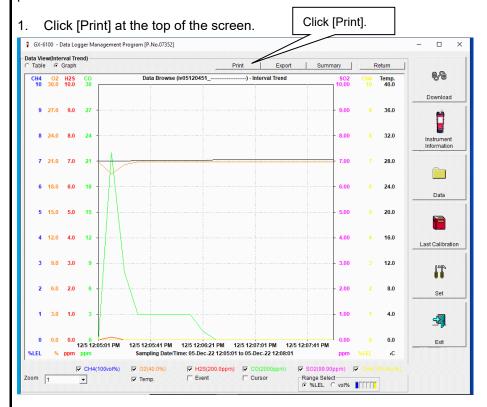
For [WARNING], [ALARM], and [OVER]

Separate window for [WARNING],
[ALARM], and [OVER]
Click the [Return] button to exit the window.

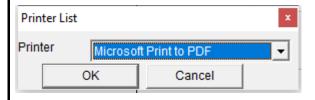
# 2 Send to printer

Print

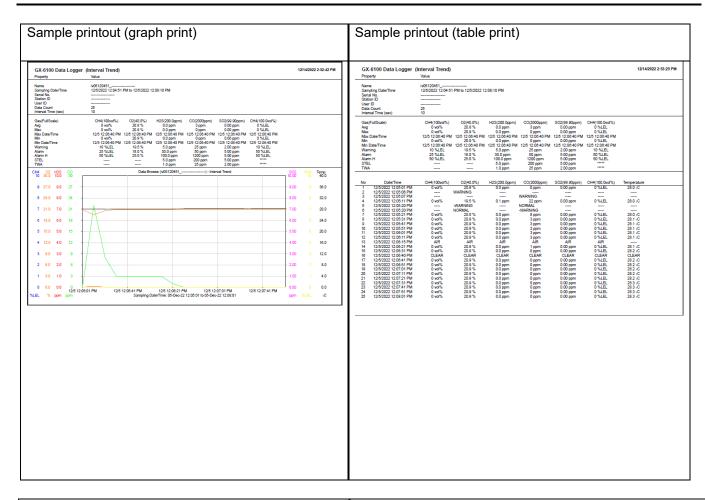
Details currently displayed on the Data View screen can be sent to the printer to be printed.

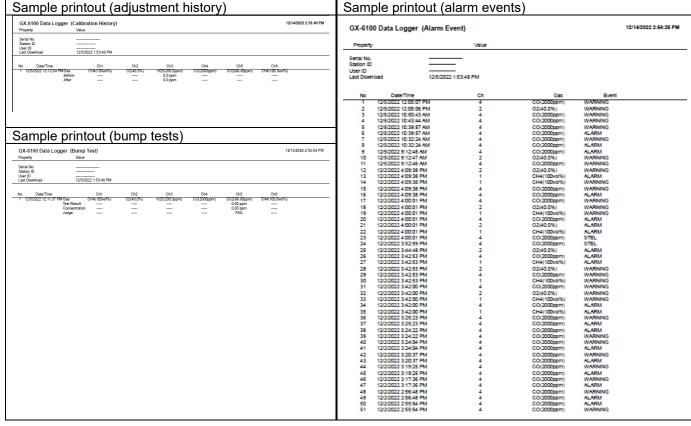


The printer selection window appears. Select the desired printer and click the [OK] button.



Click the [OK] button to begin printing. Click the [Cancel] button to return to the Data View screen without printing.





Sample printout (trouble events)	Sample printout (normal measurement snap)
GX-6100 Data Logger (Trouble Event) 12/14/2022 2:54-48 PM Property Value	GX.6100 Data Logger (Normal Op Snap Log) 12/14/26/22 3:08:43 PM Property Value 12/14/26/22 3:08:43 PM Swerping Date Time 12/20/22 3:41:50 PM - 12/20/22/2 3:42:47 PM Serial No. 12/20/22/2 3:41:50 PM - 12/20/22/2 3:42:47 PM
Serial No.   Salian In	No User ID Station ID Date Time CH4(100.cd*). 02(40.0%) k29(200.05ppm) VCC(100.0ppm) Temperature  1
Sample printout (leak check snap)	Sample printout (benzene select)
GX-6100 Data Logger (Leak Check Snap Log)   12/14/2022 2:55 09 PM	GX-6100 Data Logger (Benzene Select)   12/14/2622 3:08:61 PM
Sample printout (bar hole)	
GX-6100 Data Logger (Bar Hole) 12/14/2022 3:07:33 PM Property Value	
Name	

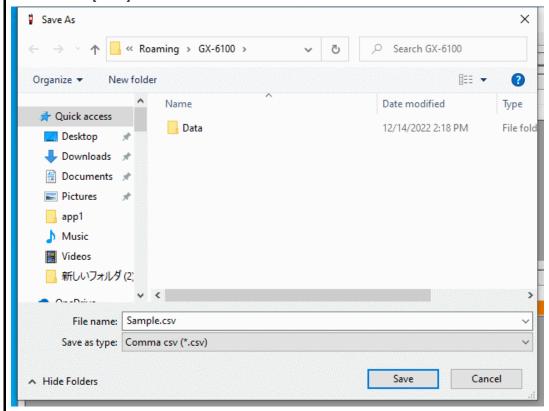
#### Printer setup precautions

- ① The detailed printer settings 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 Save to file

Save

1. Click the [Save] button on the screen.

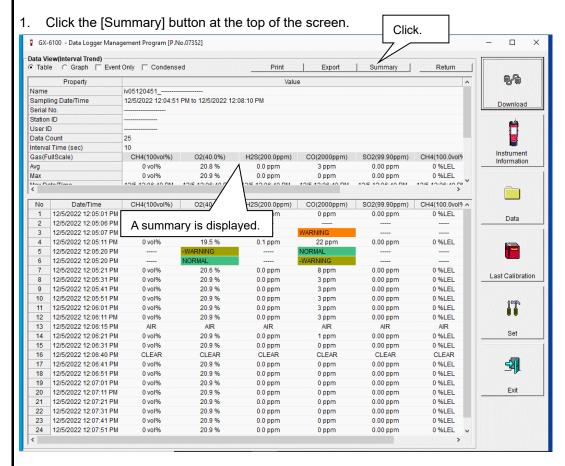


Specify the destination and file name, then click the [Save] button to save the data. Click the [Cancel] button to cancel saving.

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.

# 4 To view data summary at the same time

Summary display

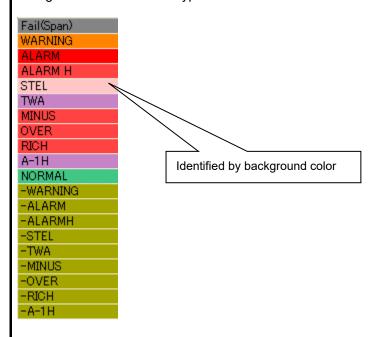


Clicking the [Summary] button while the summary is displayed hides the summary display.

# (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 [ALARM H]: Bright red 3rd alarm [STEL]: Pink STEL alarm [TWA]: Bright purple TWA alarm [MINUS]: Bright red Minus-scale over [OVER]: Bright red Full-scale over Full-scale over Bright red [RICH]:

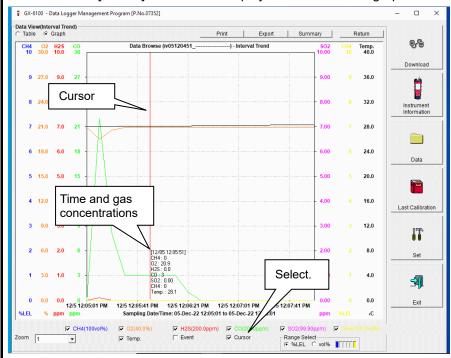
[NORMAL]: Green Restored

[-xxx]: Dark green Restored from above statuses

# 6 Graph details

Cursor

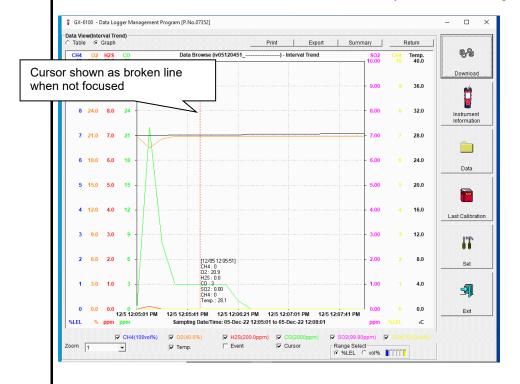
1. Select the [Cursor] checkbox to display the cursor on the graph.



Use the  $\leftarrow$  and  $\rightarrow$  keys to move the cursor left and right. Use the  $\uparrow$  and  $\downarrow$  keys to move the time and concentration display up and down.

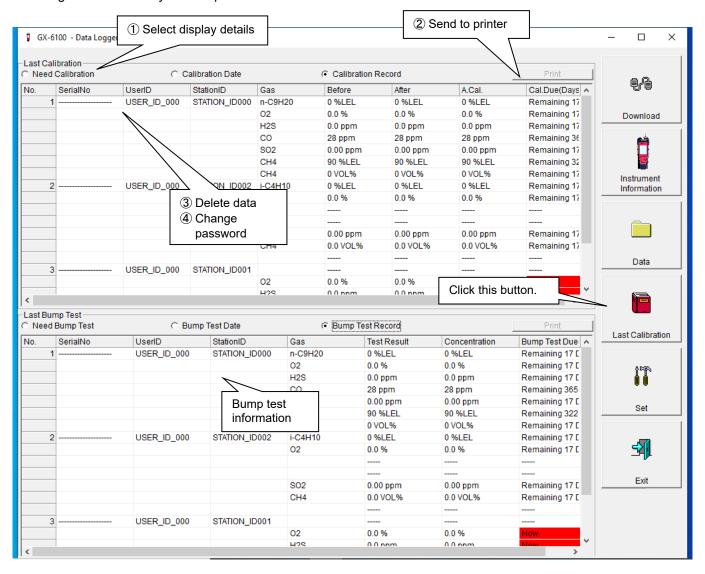
Hold down the Shift key at the same time for faster cursor/display movement.

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

Use this screen to check the adjustment expiration of previously downloaded main unit data. The screen allows checking in the same way for bump tests.

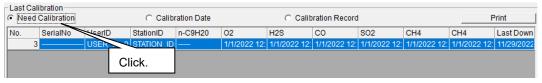


CAUTION: The table details are view-only and cannot be edited.

#### Select display details

#### Expired data

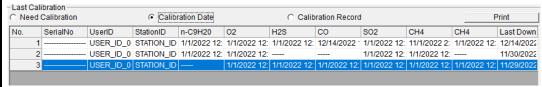
1. Click the [Need Calibration] radio button.



Displays adjustment data for previously connected GX-6100 main units (for which device information data has been downloaded) that have expired.

List display

1. Click the [Calibration Date] radio button.

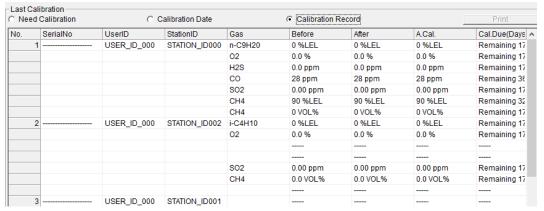


Lists data for previously connected GX-6100 main units.

(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-6100 main units in the same format as the Instrument Information screen.

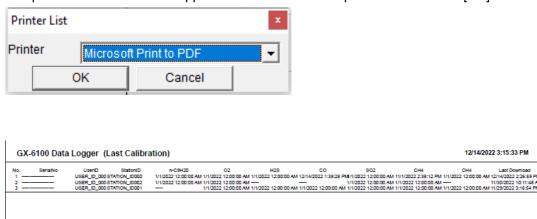
For more information on display contents, refer to '③ Adjustment history information' in '3-2. Instrument Information screen'.

# 2 Send to printer

#### Print

The most recent adjustment dates can be printed after selecting the [Need Calibration] or [Calibration Date] radio button.

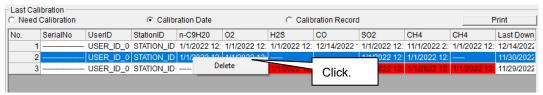
The printer selection window appears. Select the desired printer and click the [OK] button.



#### 3 Delete data

Delete

1. Right-click on the data to delete.

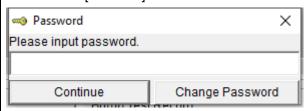


CAUTION: Data can be deleted only when [Need Calibration] or [Calibration Date] is selected on the screen.

Data cannot be deleted when [Calibration Record] is selected.

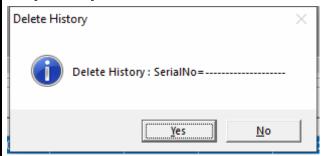
Password input

1. Clicking the [Delete] button displays a password dialog. Enter the password, then click the [Continue] button.



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

2. The following dialog 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.

CAUTION: The default password immediately after installation is "Riken" (not case-sensitive). For instructions on how to change the password, refer to '4 Change password' in '3-5. Last Calibration screen'.

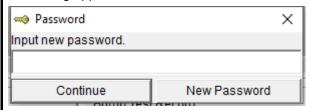
### 4 Change password

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 dialog 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.

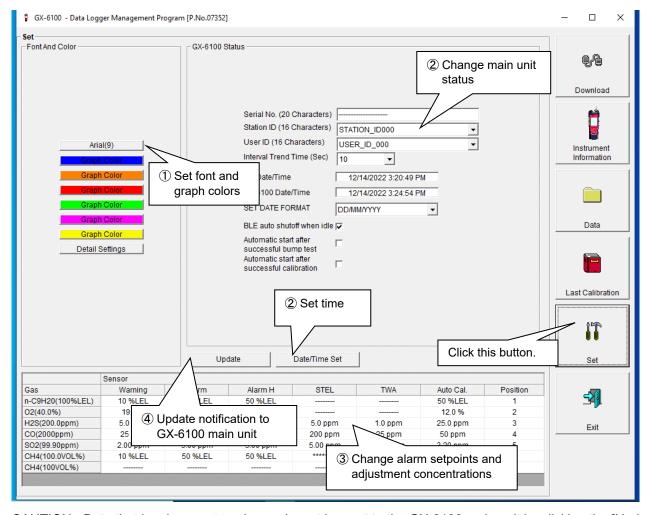


Click [OK] to update to the new password.

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.



CAUTION: Data that has been set or changed must be sent to the GX-6100 main unit by clicking the [Update]

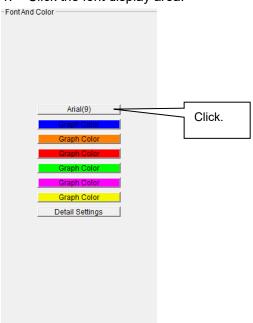
button.

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

CAUTION: [BLE auto shutoff when idle] is displayed only when the BLE function is enabled.

- ① Change font and graph colors
- Change font

1. Click the font display area.



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

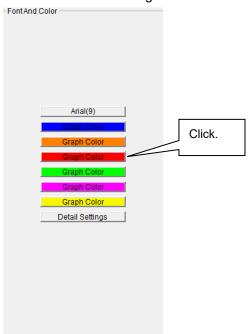
CAUTION: The screen display may be hard to read if you use an excessively large font.

Changes made here will be applied from the next time the program is started.

Change graph colors

The display colors for each gas on the graph can be changed.

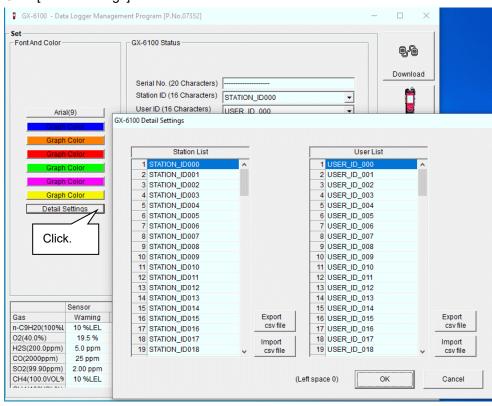
1. Click the area for a gas.



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

Edit station/user lists

 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 alphanumerical characters can be used, including the space, hyphen, and slash symbols (all single-byte characters).

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

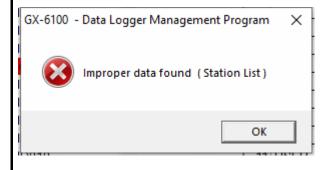
entries.

[Import csv file]: Imports from a text file containing number and data entries. The

background color will be red for entries with unsupported characters

or too many characters.

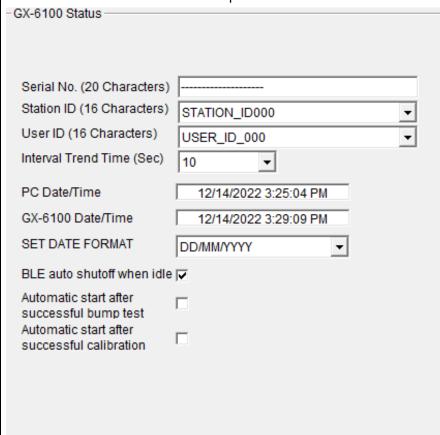
\* [OK] cannot be executed if there are entries with a red background.



#### ② Change main unit status

Edit

1. 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 (Sec)] 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-6100 main unit internal clock ([GX-6100 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-6100 main unit.

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

[BLE auto shutoff when idle]: Displayed only when the BLE function is enabled.

Connection processing is disabled when BLE connection

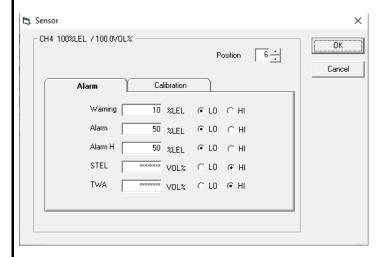
is not possible.

[Automatic start after successful bump test]/[Automatic start after successful calibration]:

Automatically enters measurement mode once the

corresponding processing is successful.

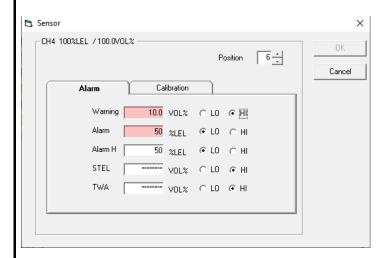
- 3 Change alarm setpoints and adjustment concentrations
- Call up edit screen
- 1. Click the sensor row to be changed to display the edit screen.



[Position] is the number indicated on the GX-6100 main unit. Edit this number to avoid duplicating sensors.

The [LO]/[HI] selection is displayed if the sensor has a double range.

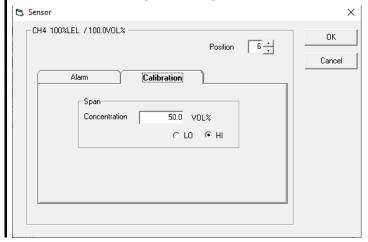
Edit alarm setpoints



If the magnitude relationship between the warning and alarm setpoint values is inappropriate for the [LO]/[HI] or alarm type selection, the values are displayed with a pink background and the [OK] button is disabled.

Edit adjustment concentrations

Edit the values on the [Calibration] tab.



# 4 Update notification to GX-6100 main unit

Update notification

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



Click the [Yes] button to send the changes to the GX-6100 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.

Data Maintenance Data Maintenance

#### 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 contained within the folder indicated in the work folder field within the shortcut properties for the installed GX-6100 program.

(C:\Users\Login name\AppData\Roaming\GX-6100)

1) File name: GX-6100.mdb

File type: Microsoft Jet 3.6 database file

2) Folder name: Data

File type: Individual event 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, specify the location of the relevant folder as that indicated in the work folder field as described above so that the data can be viewed.

Usage Precautions Usage Precautions

# 5. Usage Precautions

Note the following precautions when using this program:

① Confirm that the GX-6100 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.
- ③ Do not forcibly shut down 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 modify or overwrite data files.

Troubleshooting Troubleshooting

# 6. Troubleshooting

Symptom	Cause	Corrective action	
Communication is not possible.	The main unit is not in a suitable location. Obstacles are in the way.	Confirm that it is correctly connected.	
	Other devices using infrared are present.	Turn off the other devices or take other measures to prevent interference.	
	The COM port is not recognized. *1	Install the correct driver.	
	The driver is out of date.	Install the latest driver version.	

<sup>\*1</sup> Normally recognized as Silicon Labs CP210x USB to UART Bridge (COM No.)

If the problems persist even after taking the action described above, please contact RIKEN KEIKI.

File Organization File Organization

# 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
GX-6100.exe RKComm2.ocx Filemove.avi RkIrDA11.ocx	GX-6100 program body Communication component Animation file used during data reception Infrared communication component

# 7-2. Current directory during operation

File name	Details
GX-6100.ini GX6100.dat GX-6100.mdb Data Seriallog.log	GX-6100 initial setup file Data downloading file Database file (Microsoft Jet 3.6 database) Directory for saving event data files Record of communication port details since the program was started (for investigation/maintenance use)

CAUTION: The files and subdirectories in the current directory during operation are created after the program is started.

# 8. Software Function Specifications

Product name (Program name)	GX-6100 Data Logger Management Program
Product model	SW-GX-6100
Executable file name	GX-6100.exe
Compatible operating systems	Microsoft Corporation Windows 10 Windows 11
Program size	Main unit approx. 4.8 MB, library approx. 5.2 MB (Uses up to 42 MB of hard disk space during installation.)
Communication conditions	Serial interface (USB to UART) (IrDACOM adapter) Baud rate: 921,600 bps Data bits: 8 bits Stop bit: 1 bit Parity: None
Transmission time	Max. approx. 4 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

# Revision history

Issu	Revision	Issue date
0	First issue	June 16, 2025