INSTRUMENTS

GX-3R Data Logger Management Program Operator's Manual

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Table of Contents

Chapter 1: Introduction 4

Overview 4

System Requirements 5

GX-3R Data Logging Capacity 5

Overwriting Data in the GX-3R 6

Chapter 2: Setup 7

Installing the GX-3R Data Logger Management Program 7

Accessing a Common Database 8

IrDA Downloading Cable 11

Installing an IrDA Adapter Cable 11

Windows® Infrared Operation Note 11

Chapter 3: Operation 13

Launching the Program 13

Connecting an Instrument 14

Downloading Data 15

Turning Off an Instrument 17

Chapter 4: Instrument Information Window 18

Chapter 5: Data Window 19

Bump Test Data 20

Calibration History 22

Event Data 24

Interval Trend Data 26

Alarm Trend Data 31

Deleting Data in the Data Window 35

Changing the Delete Password 36

Chapter 6: Last Calibration Window 38

Need Calibration/Need Bump Test View 38

Calibration Date/Bump Test Date View 40

Calibration Record/Bump Test Record View 41

Deleting Last Calibration Data 42
Chapter 7: Set Window (Instrument Parameters). 43
Changing Instrument Parameters 43
Changing User and Station IDs 45
Chapter 8: Set Window (Program Appearance) 51
Changing the Font. 52
Changing Graph Colors 53
Chapter 9: Spare Parts List 55

CAUTION: *Read and understand this manual before using the GX-3R Data Logger Management Program. Also read and understand the GX-3R Operator's Manual included with the GX-3R portable gas detection unit.*

Chapter 1: Introduction

Overview

Using an advanced detection system consisting of up to three gas sensors for the GX-3R and four gas sensors for the GX-3R Pro, the GX-3R and GX-3R Pro detect the presence of combustible gases, oxygen (O_2), carbon monoxide (CO), hydrogen sulfide (H_2S), and various other toxic gases (GX-3R Pro only) simultaneously. The compact size and easy-to-use design make them ideally suited for a wide range of applications as described in the GX-3R and GX-3R Pro Operator's Manuals. Please read the GX-3R and/or GX-3R Pro Operator's Manual first before using the GX-3R Data Logger Management Program.

The GX-3R Data Logger Management Program downloads stored data in the GX-3R (Pro) to a Windows-based PC. Data can be viewed, saved, or printed using your computer and the GX-3R Data Logger Management Program.

The purpose of this manual is to explain how to use and set up the GX-3R Data Logger Management Program. You will learn how to:

- install and launch the software
- install the downloading cable (if needed)
- access and store data in a common database
- download data from the GX-3R
- view, print, and save data
- change data logging parameters
- create user and station IDs
- change the appearance of the program screens
- change the color of graphed readings for a particular gas

Before you get started, be sure to review the system requirements in the next section.

CAUTION: *The GX-3R and GX-3R Pro unit detects oxygen deficiency and elevated levels of oxygen, combustible gases, carbon monoxide, hydrogen sulfide, and various toxic gases (GX-3R Pro only), all of which can be dangerous or life threatening. When using the GX-3R or GX-3R Pro, you must follow the instructions and warnings in the GX-3R and GX-3R Pro Operator's Manuals to assure proper and safe operation of the unit and to minimize the risk of personal injury.*

CAUTION: *The operator of this instrument is advised that if the equipment is used in a manner not specified in this manual, the protection provided by the equipment may be impaired.*

System Requirements

To use the GX-3R Data Logger Management Program, your personal computer must meet the following requirements:

- **Operating Systems:** Windows® 7, Windows® 8, or Windows® 10
- **Processor:** IBM® compatible PC running Pentium® 2 or higher.
- **Memory:** 32 MB RAM minimum
- **Available Hard Disk Space:** 32 MB minimum
- Infrared port or USB port and a USB/IrDA adapter cable

GX-3R Data Logging Capacity

Table 1 below lists the GX-3R (Pro)'s data logging capacity for each interval trend time setting assuming no alarms or other events. The interval trend time setting can be set using the Set Window (see "Changing Instrument Parameters" on page 43).

Table 1: GX-3R Data Logging Capacity

Interval Trend Time	Data Logging Hours
10 seconds	10 hours
20 seconds	20 hours
30 seconds	30 hours
60 seconds	60 hours
180 seconds (3 minutes)	180 hours
300 seconds (5 minutes), factory setting	300 hours
600 seconds (10 minutes)	600 hours

Overwriting Data in the GX-3R

The instrument's **Data Log Overwrite** setting is factory-set to *On* so that when the instrument's data logging memory becomes full, it begins to overwrite the oldest interval trend data with new interval trend data.

The **Data Log Overwrite** setting applies only to interval trend data. All other data, such as alarm trend data, event data, or calibration data, will continue to be saved when the memory is full. If the maximum number of each of these types of data is reached, the oldest data gets overwritten regardless of the **Data Log Overwrite** setting.

The **Data Log Overwrite** setting is accessible in the Datalogging Program's Set window. When **Data Log Overwrite** is set to *Off*, the instrument will stop saving data when its data logging memory is full.

Chapter 2: Setup

Installing the GX-3R Data Logger Management Program

1. Launch Windows®.
2. Exit from all applications and open windows.
3. Go to www.rkiinstruments.com/gx3r.
4. Click on the **Download** tab.
5. Click the **GX-3R Datalogging Program** link.
6. A .zip file will begin to download. Select whether you want to open or save the .zip file.
7. Extract the contents of the .zip file.
8. Double click the **setup.exe** file.
9. Follow the on-screen instructions in the InstallShield Wizard Window to install the program.
10. If the InstallShield Wizard finds versions of Windows® files on your computer newer than those in the downloaded .zip file, it will ask you if you want to keep these newer files. Click **Yes**.
11. When the InstallShield Wizard indicates that installation is complete, click the **Finish** button.

Accessing a Common Database

The Datalogging Program automatically stores downloaded data in a database file on the computer's hard drive in the same folder as the Datalogging Program. In this configuration, a computer has access to its own database but no other computer's. Only data downloaded to that computer may be viewed.

The Datalogging Program can map its database to another file location on the same computer or on a network. Putting the database on a network location allows multiple users to save data to and access data from the same location. All computers accessing that database can view all data that is downloaded from any computer.

NOTE: Only one software installation mapped to a common database can be running at a time. If two installations attempt to access the same database, an error indication will appear when the second program is launched.

1. Determine where the database is going to be located and make a note of that file path.
2. If the Datalogging Program hasn't been launched on the computer yet, you must launch and close the program. This creates a GX3R.ini file that contains configuration settings.
3. Locate the GX3R.ini file by searching your C drive for "GX3R.ini".

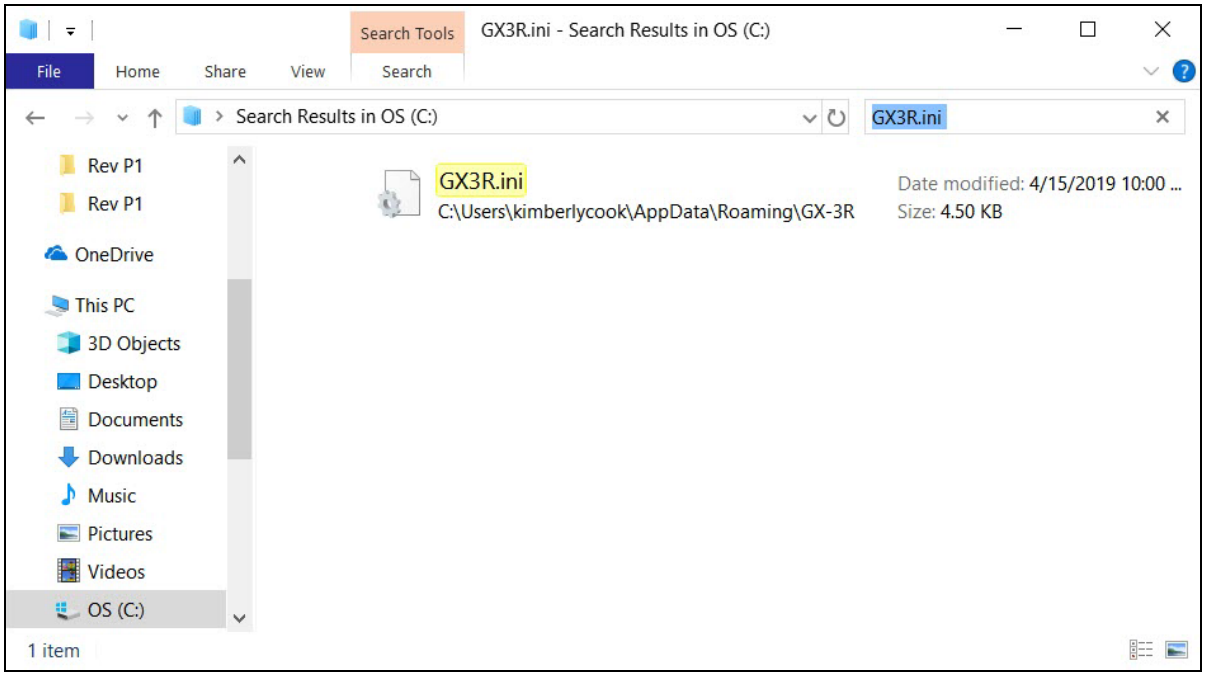


Figure 1: GX3R.ini File Found on C Drive

4. Double click the GX3R.ini file and open it in Notepad.

5. Scroll down to the very last line. This line is the Data Location path. An example of the path created by the program is shown in Figure 2.

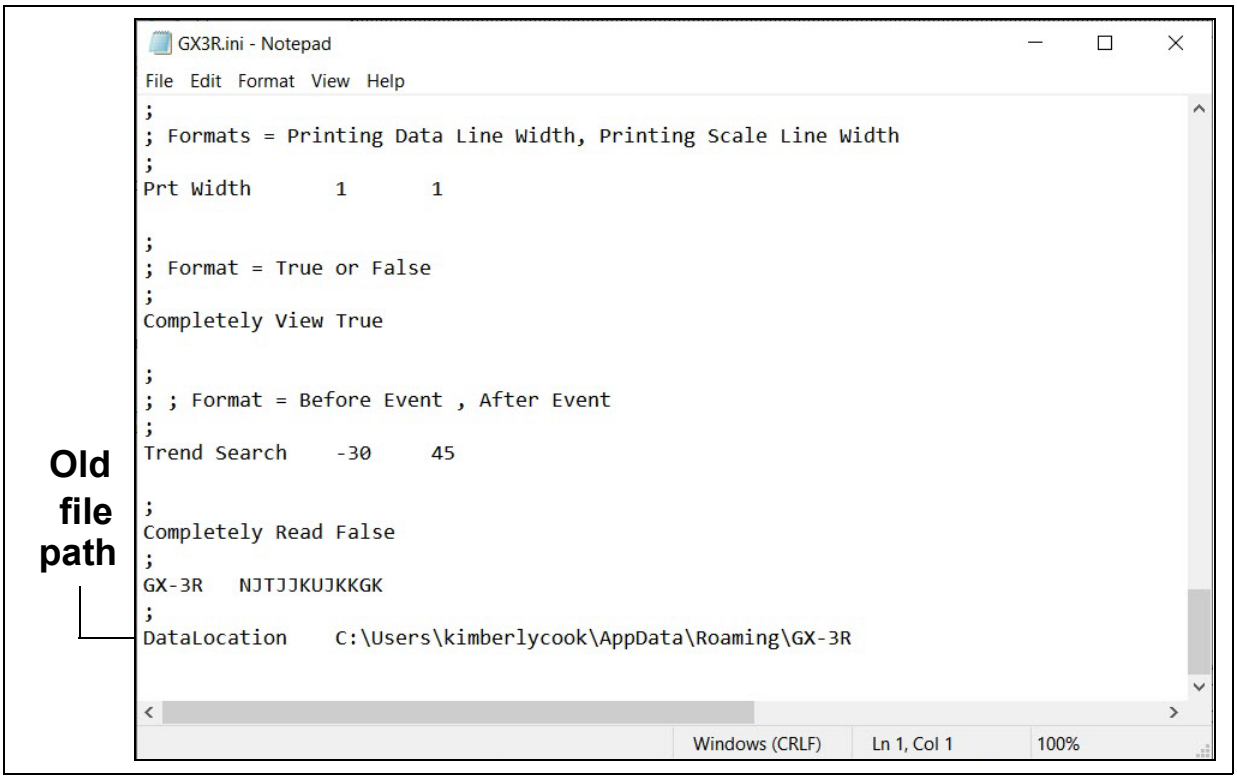


Figure 2: GX3R.ini File with Original Path

6. Replace the current path with the desired path.

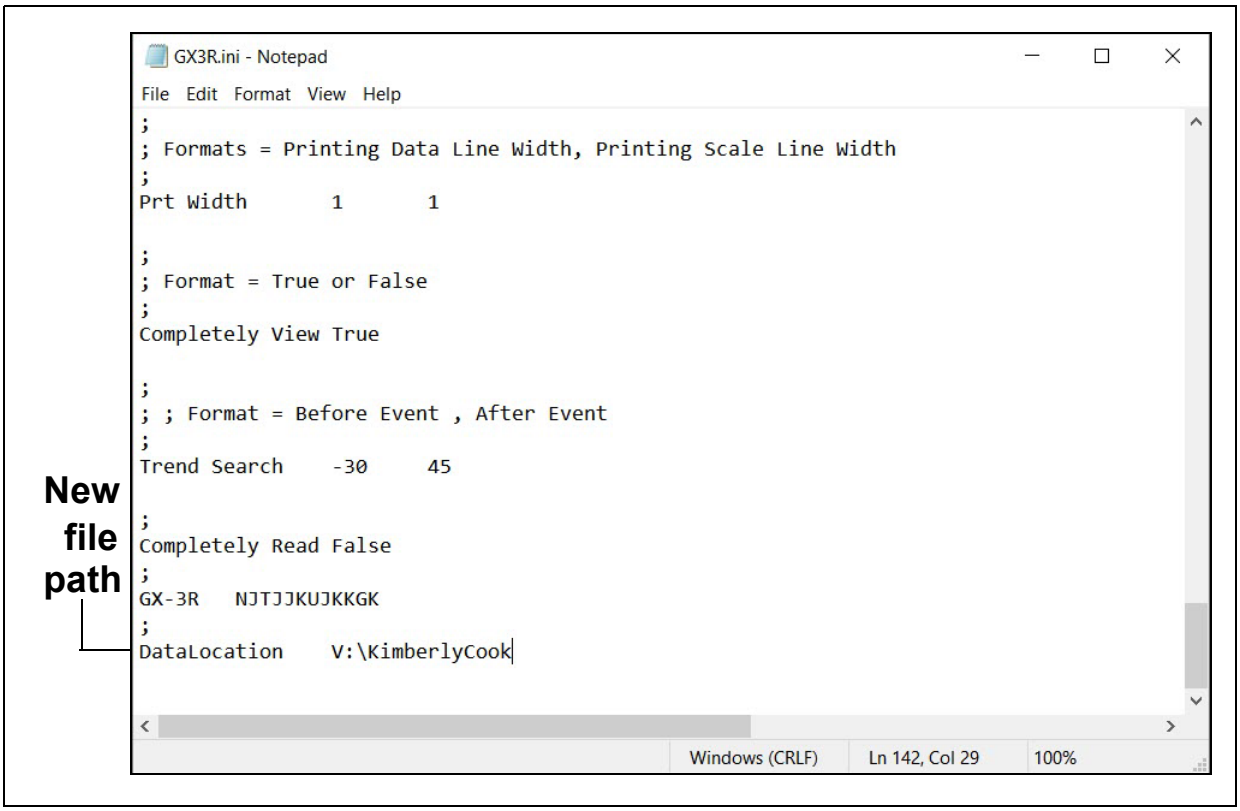


Figure 3: GX3R.ini File with New Path

7. Save the file and reopen the Datalogging Program.
8. When you launch the program again, a database will be created in the specified location.
9. Repeat steps 2-5 for all installations that need access to the common database.

IrDA Downloading Cable

The instrument communicates with a computer via an on-board infrared communication port that complies with IrDA 1.1 protocol standards.

NOTE: If your computer has a built-in infrared port that complies with IrDA 1.1 protocol, you do not need an adapter cable to download data.

If your computer does not have an infrared port, you will need to install an IrDA 1.1 compliant IrDA/USB adapter cable on your computer. An IrDA/USB cable is available from RKI Instruments, Inc. See the Spare Parts List at the end of this manual for the RKI part number.

Installing an IrDA Adapter Cable

NOTE: Do not plug the IrDA/USB adapter cable into your computer before installing the driver.

Follow the manufacturer's instructions for installing the cable on your computer. If you do not have instructions from the cable manufacturer for installing your cable, see your Windows documentation. In general, you must go to the Control Panel and use the Add Hardware Wizard to install the cable drivers. RKI makes no warranty for the operation or compatibility of the drivers with any particular device.

Windows® Infrared Operation Note

When using an IrDA adapter cable and the Datalogging Program, it is necessary to make a special setting in the Wireless Link Configuration window for proper communication between the instrument and the Datalogging Program. This must be done before attempting to use the program.

NOTE: If you have a Windows 7 computer, the Infrared Configuration window may not appear. If the Infrared Configuration window does not appear, disregard the directions below.

1. Click **Start** on the Windows® Icon Tray.
2. If **Control Panel** is available to select in the **Start** menu, select it. The Control Panel will appear.

   If **Control Pane**l is not selectable in the Start menu but **Settings** is, select **Settings**, then select **Control Panel**. The Control Panel will appear.

3. If the Control Panel is viewed by category, open the **Hardware and Sound** folder then click “Send or Receive a File” under the **Infrared** section. The Infrared Configuration window will appear.

   If the Control Panel is viewed by icon, click the **Infrared** icon. The Infrared Configuration window will appear.

4. Click on the Image Transfer tab.
5. Deselect the selection box for “Allow digital cameras to use infrared to transfer images directly to my computer”.

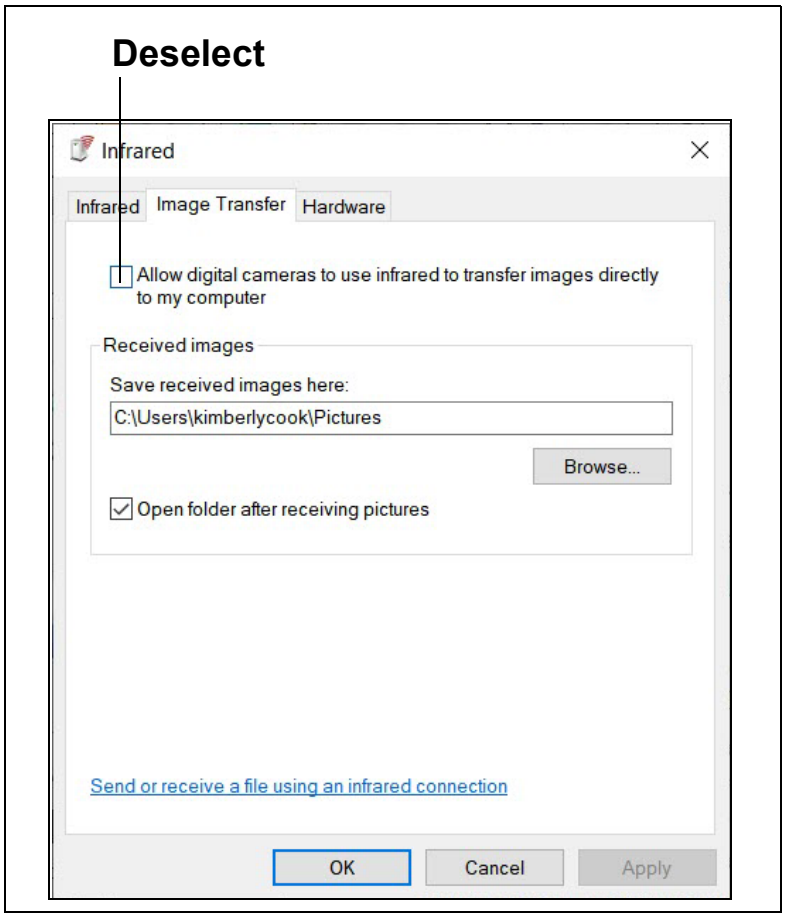


Figure 4: Image Transfer Tab

6. Click **OK**.
7. Close the Control Panel window.

Chapter 3: Operation

Launching the Program

1. Double click the **GX-3R** shortcut on the computer desktop or navigate to the **GX-3R** program using the **Start** menu.
2. The program will launch and the Download window will appear.

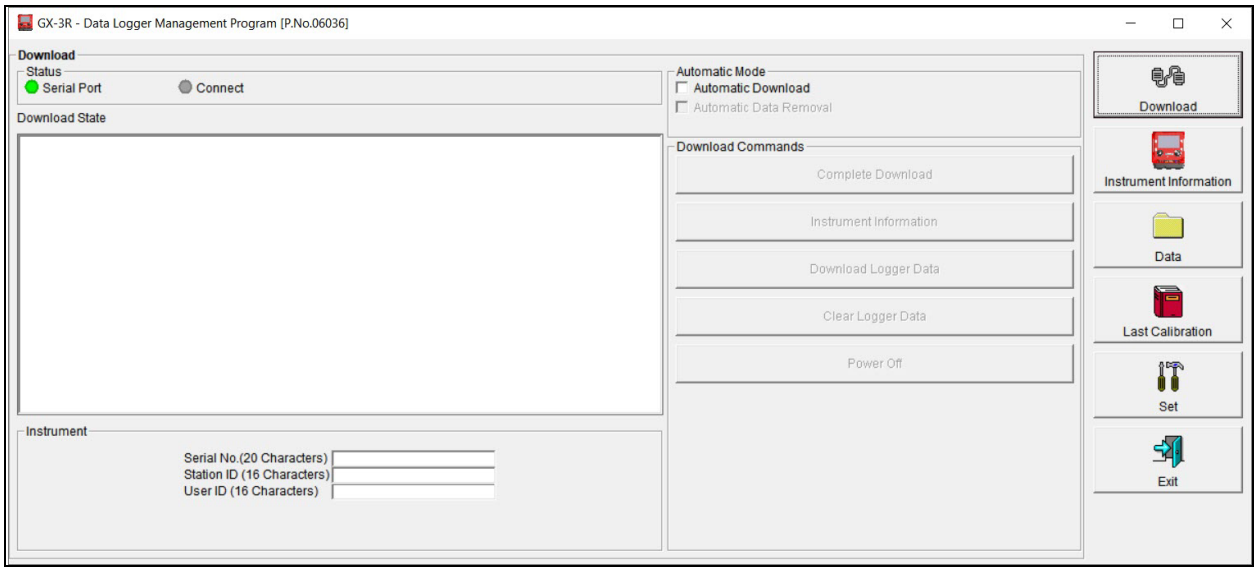


Figure 5: The Download Window

Connecting an Instrument

1. Launch the GX-3R Datalogging Program.
2. Place the instrument an inch or two away from the infrared port on your computer or on the IrDA/USB cable and align the infrared ports. The GX-3R (Pro)'s infrared port is at the top of the instrument.

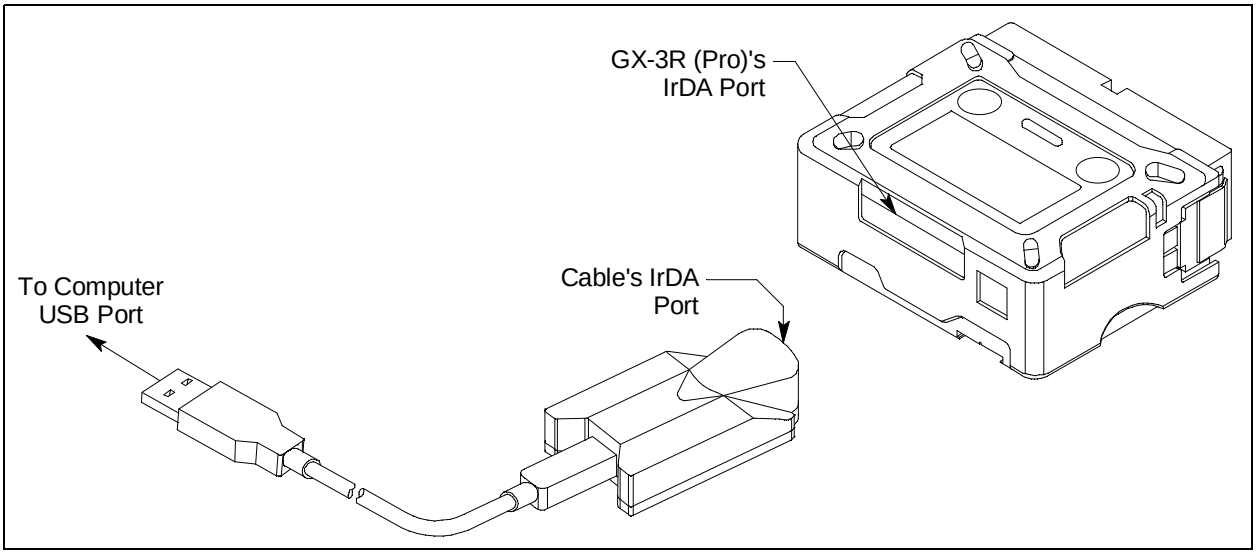


Figure 6: Aligning IrDA Ports

3. Press and hold the POWER MODE button on the instrument until you hear a beep, then release it.
4. When a successful connection between the instrument and the computer occurs, the Connect light turns green and "Connection Successful." displays.

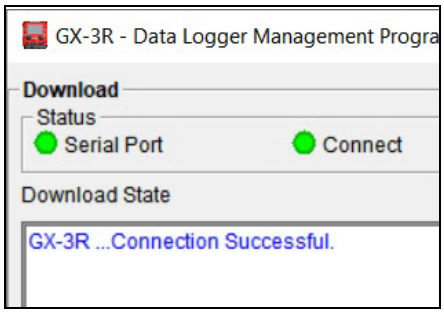


Figure 7: Connection Message

Downloading Data from an Instrument

Automatic Downloading

1. Select the **Automatic Download** selection box.

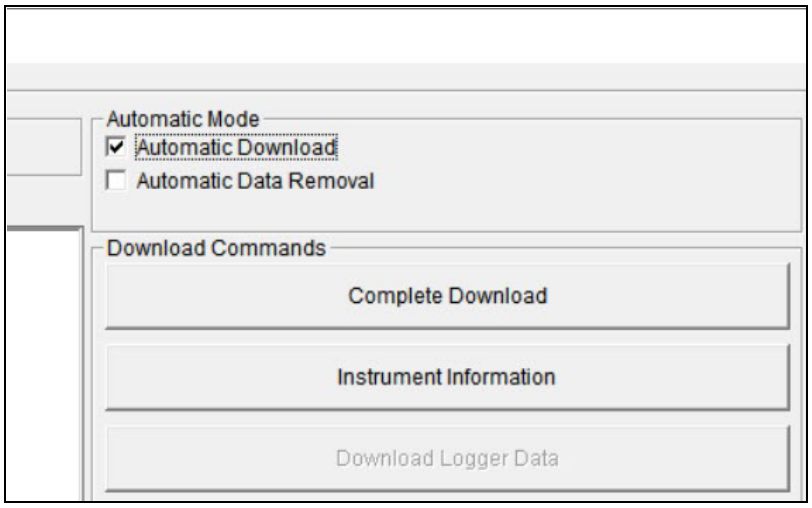


Figure 8: Automatic Download Selection Box

2. A caution message appears. If **Automatic Download** is selected, the download commands are not active. However, if a GX-3R (Pro) is connected when you select the **Automatic Download** box, the download commands will remain active until that instrument is disconnected.

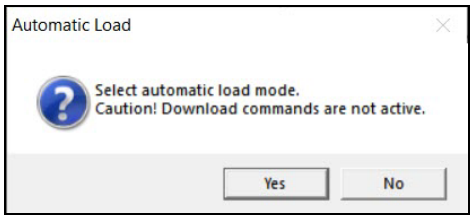


Figure 9: Automatic Download Selection Box

3. If you want the data in the instrument to be automatically cleared after an automatic download, select the **Automatic Data Removal** box. The **Automatic Data Removal** box is only available for selection if the **Automatic Download** box is selected.
4. Connect an instrument as described in “Connecting an Instrument” on page 14.
5. A download begins automatically after a successful connection is made.
6. The instrument will turn off automatically after the data has been downloaded.

Manual Downloading

1. To download logged data and instrument information from the instrument, click **Complete Download**.
2. To download instrument information only, click **Instrument Information.**
3. To download logged data only, click **Download Logger Data. Download Logger Data** becomes selectable only after doing a Complete Download or Instrument Information Download.

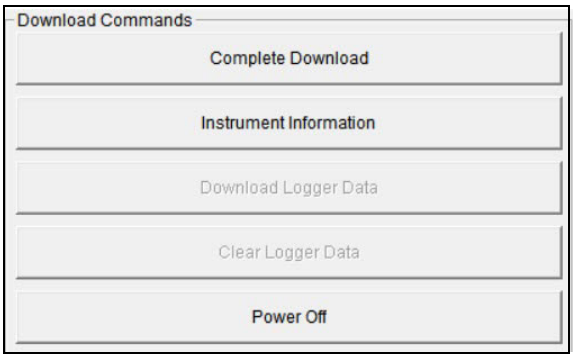


Figure 10: Download Commands

4. While the data is downloading, the message area of the Download window indicates program actions, communication or downloading problems, and what type of information has been downloaded.

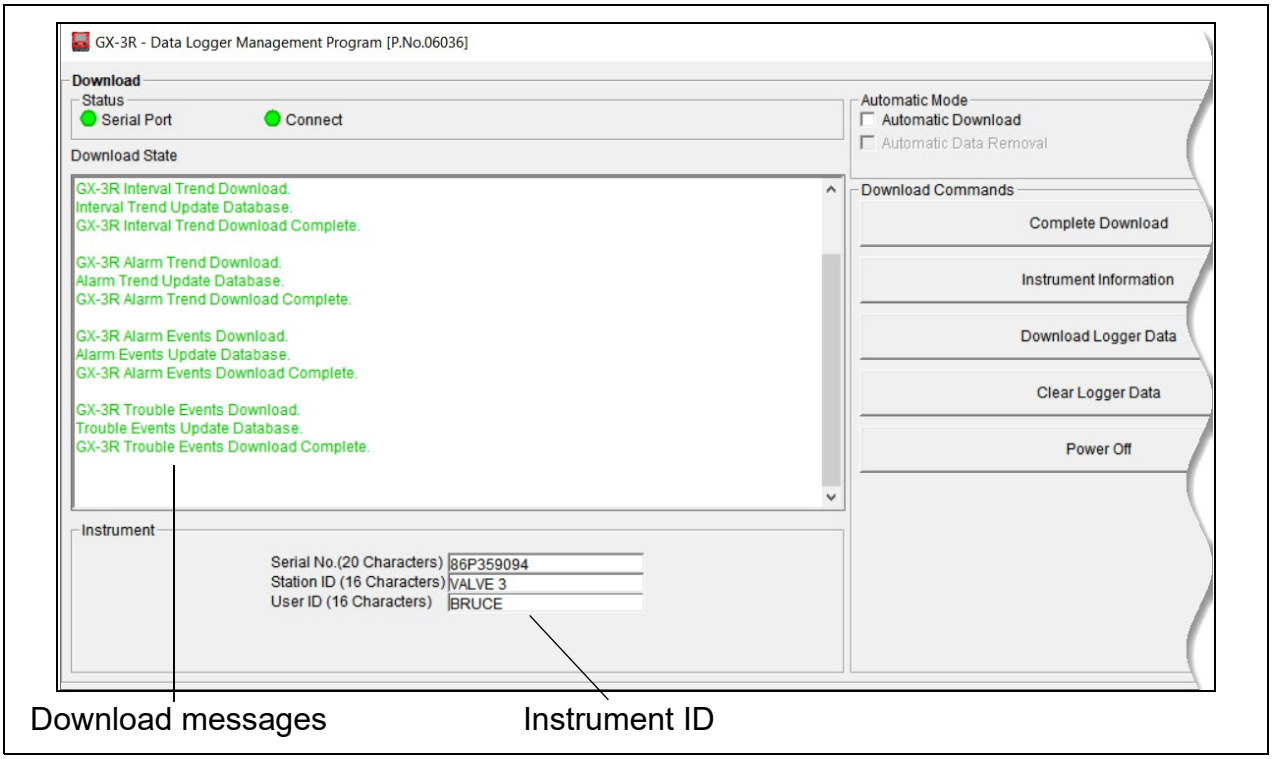


Figure 11: Download Messages & Download Commands

5. After downloading data from an instrument, you can delete all the data in the instrument by clicking **Clear Logger Data**. This will not delete instrument parameters such as serial number, alarm settings, or auto calibration settings.

WARNING: ***If you click Clear Logger Data, all data is erased in the instrument, but not in your computer's memory. So it's advisable that you download the data from the instrument first before clearing the data.***

Turning Off an Instrument

1. Click **Download**.
2. Click **Power Off**. The instrument will shut off.
3. Click **Exit** in the bottom right corner of the program.

NOTE: If you shut down the Datalogging Program without turning off the instrument, the instrument will go into alarm after 3 minutes to indicate that it is still on but not connected to a program. Reset the alarm by either a) starting up the Datalogging Program and establishing a connection or b) using the instrument's POWER MODE button to turn the instrument off.

Chapter 4: Instrument Information Window

1. Connect an instrument and manually perform a **Complete Download** or **Instrument Information** download as described in “Connecting an Instrument” on page 14 and “Manual Downloading” on page 16.
2. Click **Instrument Information**.

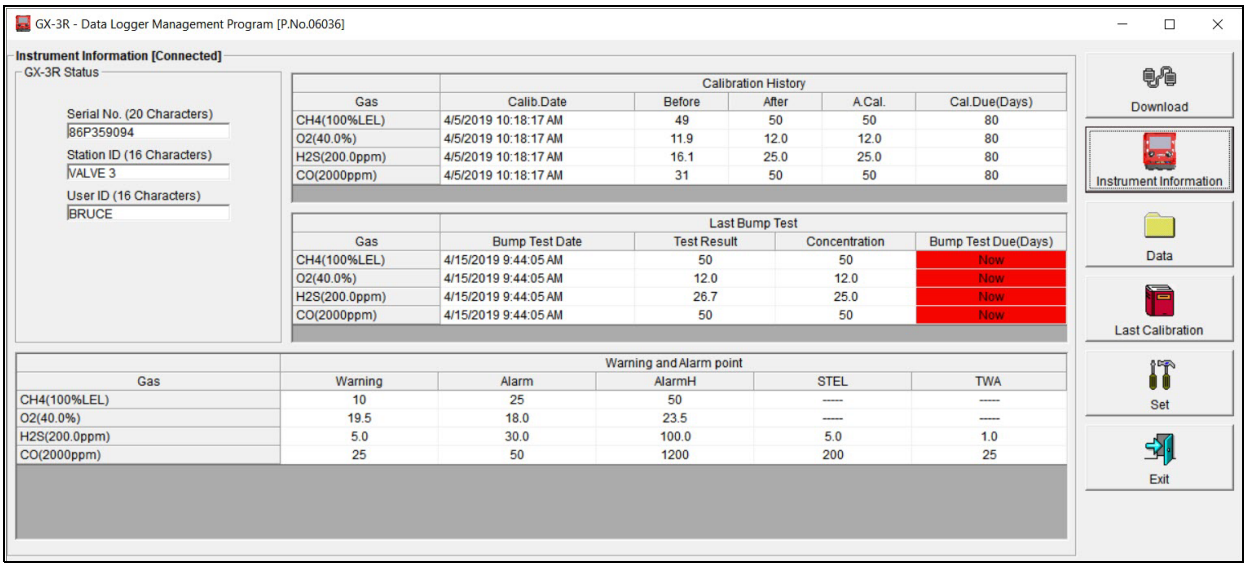


Figure 12: Instrument Information Window

3. The serial number, station ID, user ID, calibration and bump test history, and alarm points for the connected instrument will be visible.
4. If the instrument is turned off after being connected to the program, the information in the **Instrument Information** window will disappear.

Chapter 5: Data Window

The instrument logs five types of data files: bump test data, calibration history, event data, interval trend data, and alarm trend data.

You can view, print, export (save to a file), and delete each of these types of data files. The deleting of files is password protected and is described in “Deleting Data in the Data Window” on page 35.

NOTE: If the Datalogging Program database is on the user’s computer (default setting), data will only appear for instruments downloaded to that computer. If the database is on a network, data will appear for all instruments downloaded to that database. See “Accessing a Common Database” on page 8 for more instruction.

1. Click **Data** on the right side of the program window.

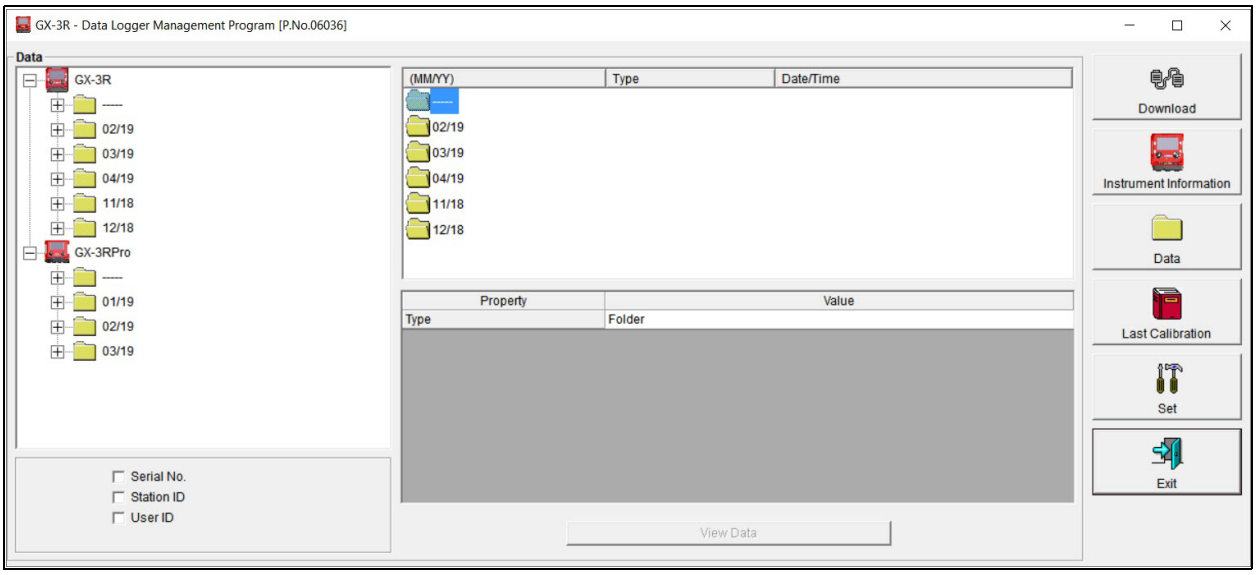


Figure 13: Data Window

2. Click the selection box or boxes in the lower left frame to organize the data as desired. The data may be organized by one or more of the following parameters: serial number, station ID, or user ID. If none of the boxes are selected, then the data is organized as shown in Figure 13.

NOTE: In the examples that follow, the data will be shown organized by serial number. Your Data Window may appear slightly different.

Bump Test Data

The instrument saves information for up to 100 of the most recent bump tests and calibrations combined. This bump test history is retrieved using either the **Complete Download** download command or the **Download Logger Data** download command.

All downloaded bump test data for all downloaded instruments is available in the Bump Test folders in the Data Window. The Bump Test folder is located in an untitled folder for each instrument. The bump test information available here is more comprehensive than that in the **Last Calibration** window.

1. Click **Data** at the right side of the program window. The Data Window will appear.

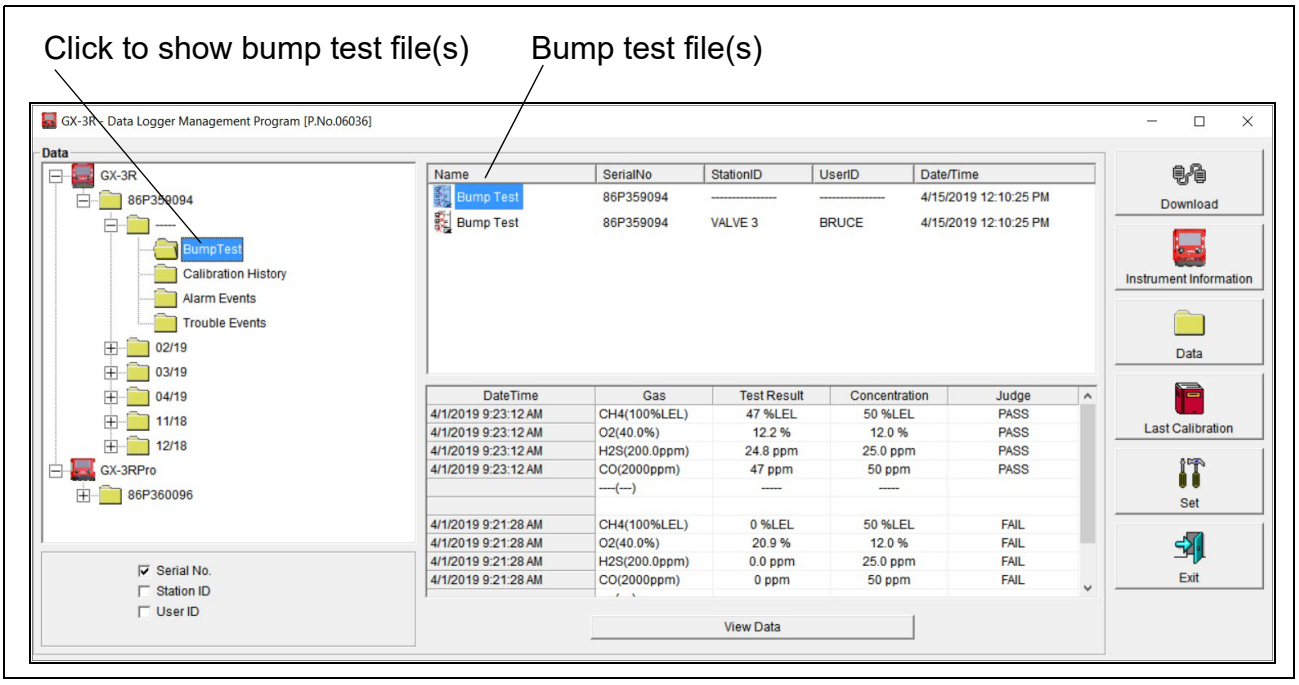


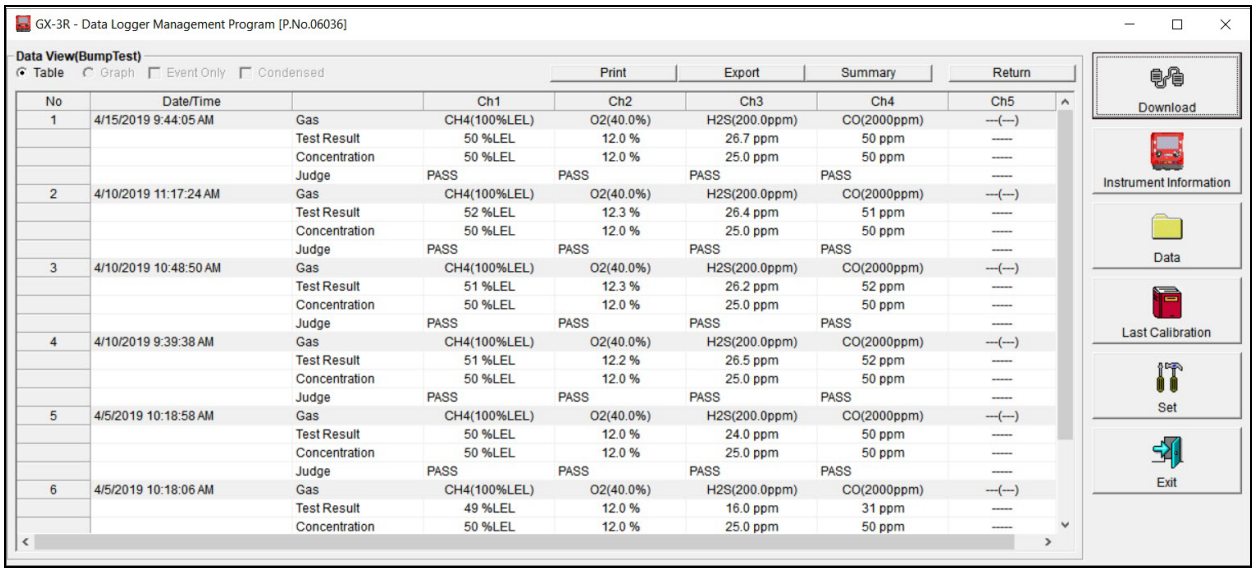
Figure 14: Data Window - Selecting Bump Test Files

2. Expand the folders for the desired instrument type (GX-3R or GX-3R Pro) and serial number by double-clicking or using the (+) button next to each folder.
3. Open the untitled folder by double-clicking it or using the (+) button.
4. Click the **Bump Test** folder. The Bump Test file(s) for that instrument will appear in the top right frame. If multiple Station IDs or User IDs are used for an instrument, then more than one Bump Test file will appear.

   The date/time displayed on each line corresponds to the date and time of the instrument download and not a date or time of a bump test.
5. Click a file to select it. The first two bump tests saved will be shown in the bottom right frame along with the total number of bump tests saved if it is more than two.

   Each saved bump test shows the date/time of the bump test, the gas, the test result, the concentration of gas used, and the result of the bump test.

6. To view the Bump Test file in table format, double click the Bump Test file or click **View Data**.



No	Date/Time		Ch1	Ch2	Ch3	Ch4	Ch5
1	4/15/2019 9:44:05 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	50 %LEL	12.0 %	26.7 ppm	50 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
		Judge	PASS	PASS	PASS	PASS	-----
2	4/10/2019 11:17:24 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	52 %LEL	12.3 %	26.4 ppm	51 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
		Judge	PASS	PASS	PASS	PASS	-----
3	4/10/2019 10:48:50 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	51 %LEL	12.3 %	26.2 ppm	52 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
		Judge	PASS	PASS	PASS	PASS	-----
4	4/10/2019 9:39:38 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	51 %LEL	12.2 %	26.5 ppm	52 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
		Judge	PASS	PASS	PASS	PASS	-----
5	4/5/2019 10:18:58 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	50 %LEL	12.0 %	24.0 ppm	50 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
		Judge	PASS	PASS	PASS	PASS	-----
6	4/5/2019 10:18:06 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Test Result	49 %LEL	12.0 %	16.0 ppm	31 ppm	-----
		Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----

Figure 15: Data View, Bump Test

Printing Data

1. Click **Print**.
2. Select a printer in the window that appears and click **OK**.

Exporting Data

1. Click **Export**.
2. Specify the filename and file location. The default file type is ".csv" (comma-separated values).
3. Click **Save**.

Calibration History

The instrument saves information for up to 100 of the most recent bump tests and calibrations combined. This calibration history is retrieved using either the **Complete Download** download command or the **Download Logger Data** download command.

All downloaded calibration information for all downloaded instruments is available in the Calibration History folders in the Data Window. This information is saved in a Calibration History Folder that is located in an untitled folder for each instrument. The calibration history files are differentiated by instrument. The calibration information available here is more comprehensive than that in the Last Calibration Window. The calibration information for all calibrations downloaded, whether successful or not, is saved instead of just the most recent successful calibration for each instrument.

1. Click **Data** along the right side of the program window. The Data Window will appear.

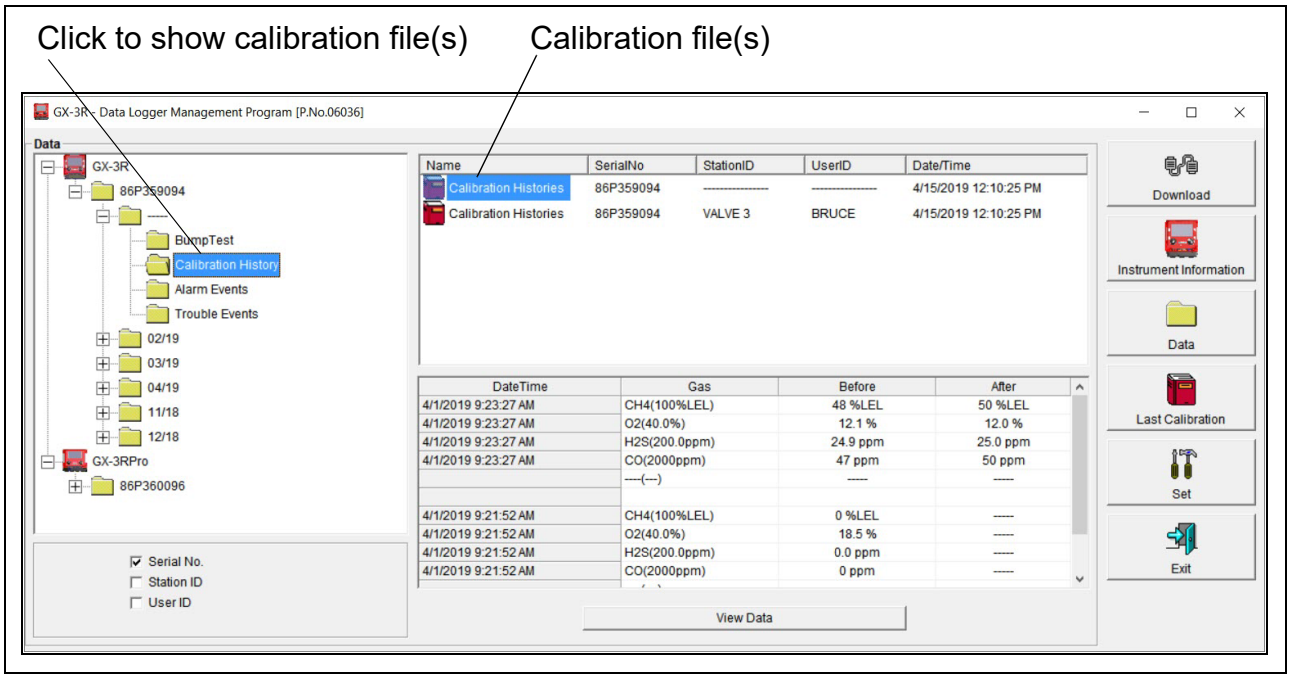


Figure 16: Data Window - Selecting Calibration History Files

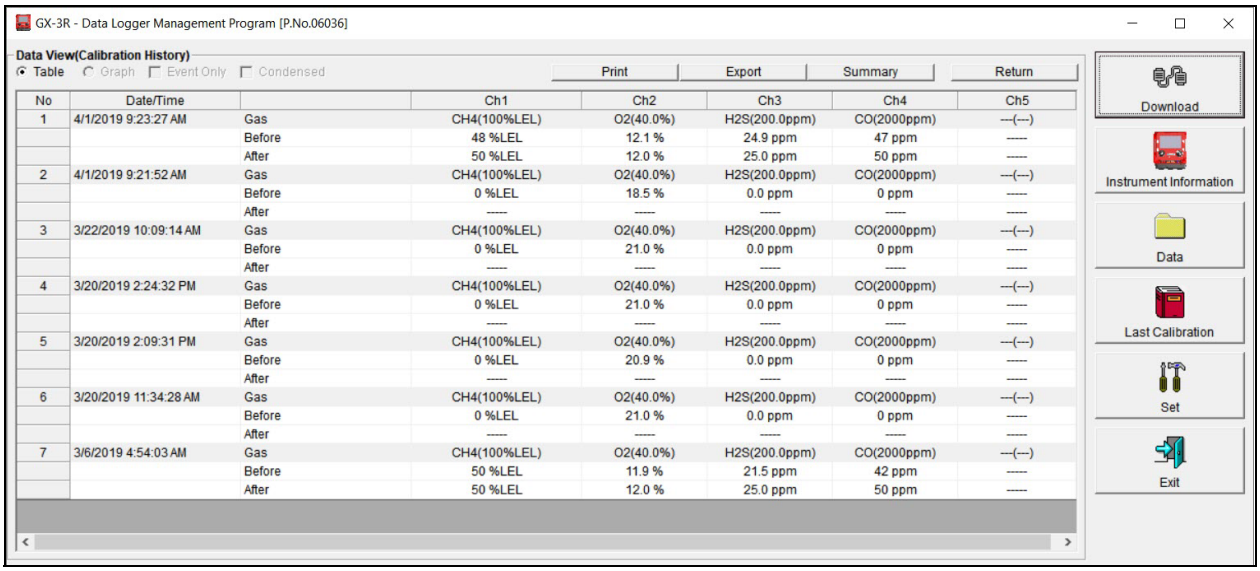
2. Expand the folders for the desired instrument type (GX-3R or GX-3R Pro) and serial number by double-clicking or using the (+) button next to each folder.
3. Open the untitled folder by double-clicking it or using the (+) button.
4. Click the **Calibration History** folder. The Calibration Histories file(s) for that instrument will appear in the top right frame. If multiple Station IDs or User IDs are used for an instrument, then more than one Calibration Histories file will appear.

   The date/time displayed on each line corresponds to the date and time of the instrument download and not a date or time of a calibration.

5. Click the file to select it. The first two calibrations saved will be shown in the bottom right frame along with the total number of calibrations saved if it is more than two.

   Each saved calibration shows the date/time of calibration, the gas, the concentration before calibration, and the concentration after calibration. If a calibration failed, dashes will appear in the After column rather than gas concentrations. If a channel was not included in calibration, dashes will appear in the Before and After columns.

6. To view the Calibration Histories file in table format, double click the Calibration Histories file or click **View Data**. Calibration Histories files can only be viewed in table format.



No	Date/Time		Ch1	Ch2	Ch3	Ch4	Ch5
1	4/1/2019 9:23:27 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	48 %LEL	12.1 %	24.9 ppm	47 ppm	-----
		After	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----
2	4/1/2019 9:21:52 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	0 %LEL	18.5 %	0.0 ppm	0 ppm	-----
		After	-----	-----	-----	-----	-----
3	3/22/2019 10:09:14 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	0 %LEL	21.0 %	0.0 ppm	0 ppm	-----
		After	-----	-----	-----	-----	-----
4	3/20/2019 2:24:32 PM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	0 %LEL	21.0 %	0.0 ppm	0 ppm	-----
		After	-----	-----	-----	-----	-----
5	3/20/2019 2:09:31 PM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----
		After	-----	-----	-----	-----	-----
6	3/20/2019 11:34:28 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	0 %LEL	21.0 %	0.0 ppm	0 ppm	-----
		After	-----	-----	-----	-----	-----
7	3/6/2019 4:54:03 AM	Gas	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	---(---)
		Before	50 %LEL	11.9 %	21.5 ppm	42 ppm	-----
		After	50 %LEL	12.0 %	25.0 ppm	50 ppm	-----

Figure 17: Data View, Calibration History

Printing Data

1. Click **Print**.
2. Select a printer in the window that appears and click **OK**.

Exporting Data

1. Click **Export**.
2. Specify the filename and file location. The default file type is “.csv” (comma-separated values).
3. Click **Save**.

Event Data

The instrument saves the 100 most recent alarm events and the 100 most recent trouble events. When an instrument is downloaded, the Datalogging Program retrieves these events from that instrument and saves them in alarm event files and trouble event files for each instrument.

Alarm event files save the time, instrument channel, and alarm type of every gas alarm event that occurs on a particular instrument. Warning, Alarm, Alarm 1H, STEL, TWA, and overscale events are saved.

Trouble event files note the time, whether the event is an instrument system failure or sensor failure and the specific type of failure. Dead battery alarms and sensor failures are among the trouble events that are saved.

1. Click **Data** along the right side of the program window. The Data Window will appear.

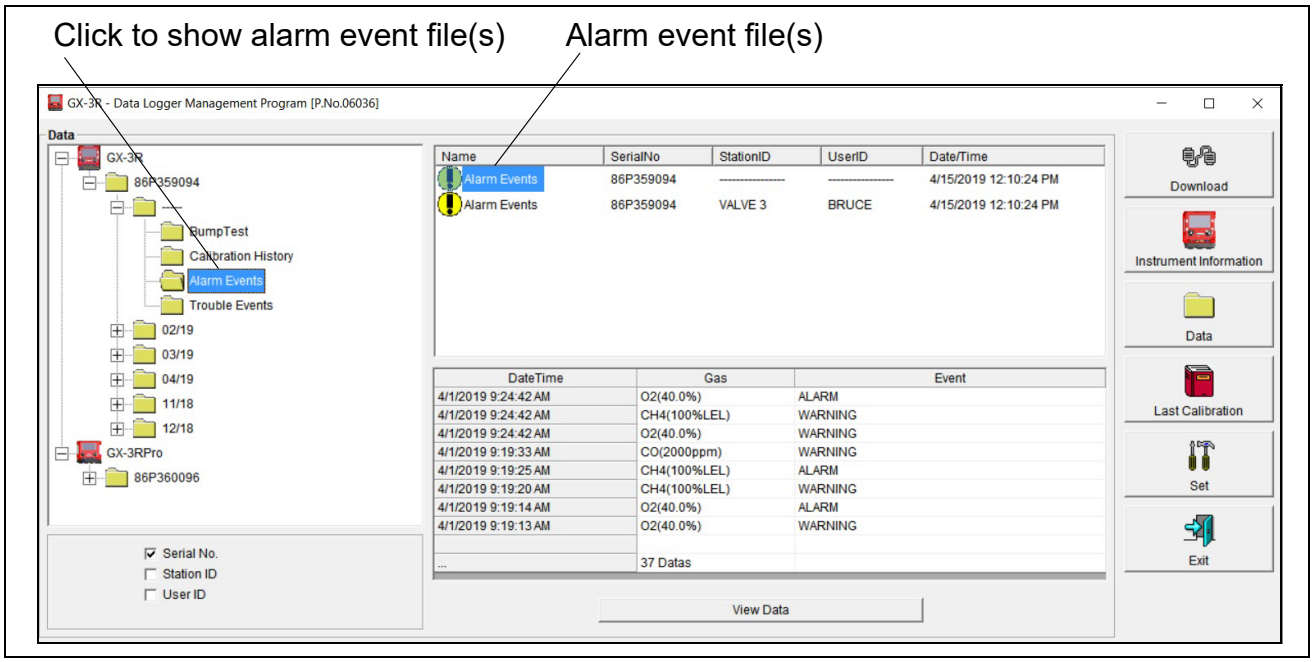


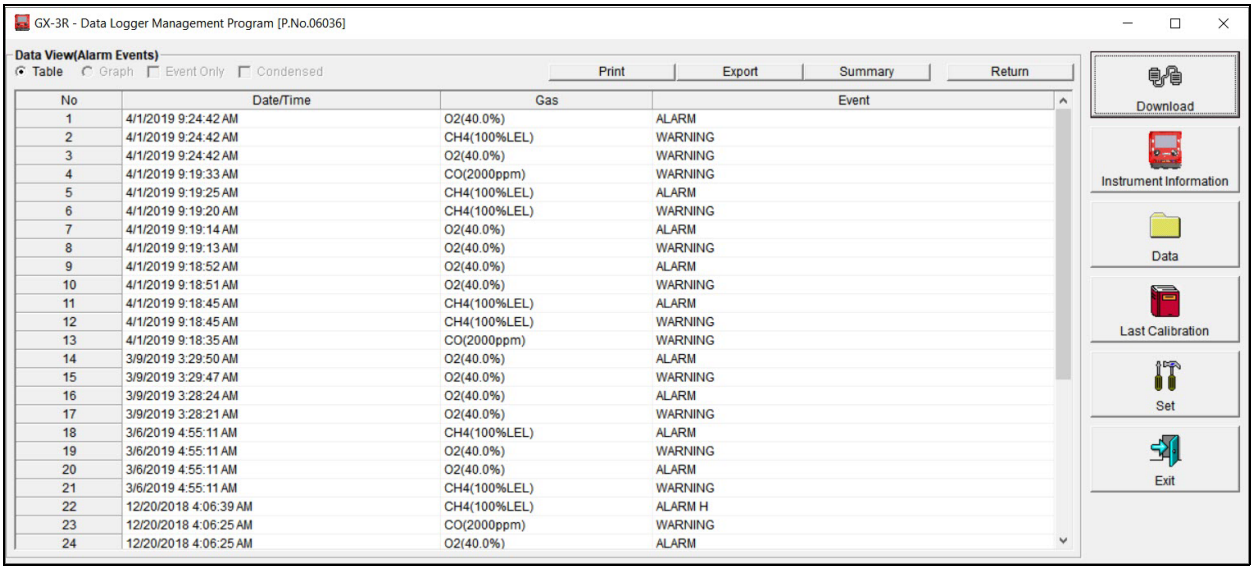
Figure 18: Data Window - Selecting Event Data Files

2. Expand the folders for the desired instrument type (GX-3R or GX-3R Pro) and serial number by double-clicking or using the (+) button next to each folder.
3. Open the untitled folder by double-clicking it or using the (+) button.
4. Click the **Alarm Events** or **Trouble Events** folder. The Alarm Events or Trouble Events file(s) for that instrument will appear in the top right frame. If multiple Station IDs or User IDs are used for an instrument, then more than one Alarm Events or Trouble Events file will appear.

   The date/time displayed on each line corresponds to the date and time of the instrument download and not a date or time of an alarm or trouble event.

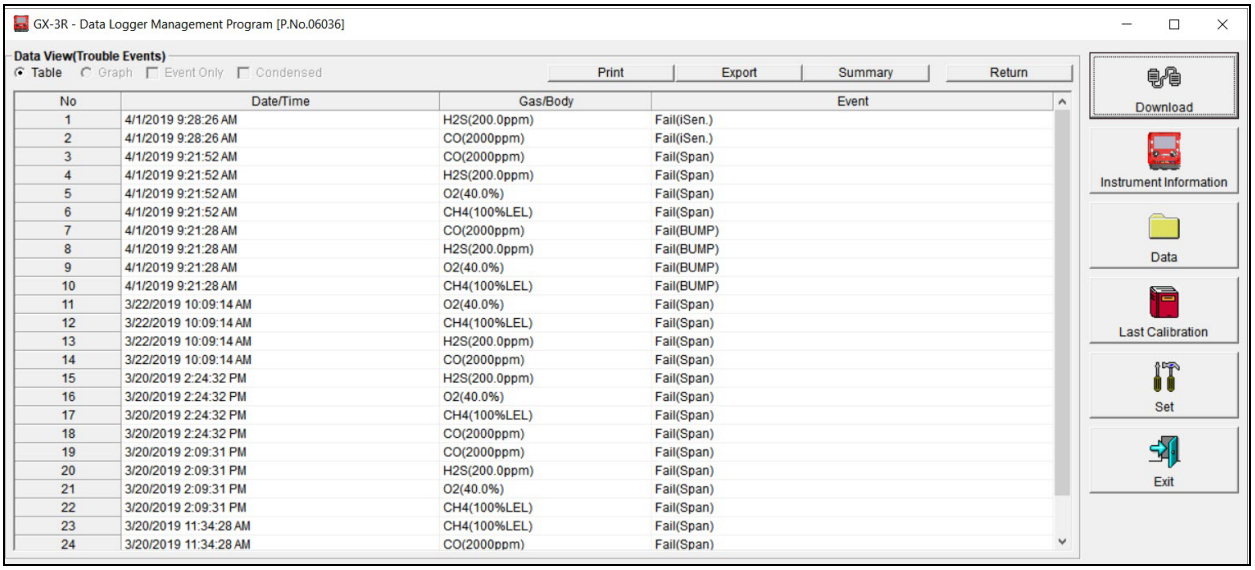
5. Click the desired event file to select it. An event list will appear in the bottom right frame with the date, time, channel, and event type for the first eight events saved in the selected file. If more than eight events are saved, the first eight events are shown and the total number of events in the file is shown at the bottom of the list.

6. Click **View Data** at the bottom of the Data Window or double-click the event file name to open the file and view it in table format. Event files can only be viewed in table format.



No	Date/Time	Gas	Event
1	4/1/2019 9:24:42 AM	O2(40.0%)	ALARM
2	4/1/2019 9:24:42 AM	CH4(100%LEL)	WARNING
3	4/1/2019 9:24:42 AM	O2(40.0%)	WARNING
4	4/1/2019 9:19:33 AM	CO(2000ppm)	WARNING
5	4/1/2019 9:19:25 AM	CH4(100%LEL)	ALARM
6	4/1/2019 9:19:20 AM	CH4(100%LEL)	WARNING
7	4/1/2019 9:19:14 AM	O2(40.0%)	ALARM
8	4/1/2019 9:19:13 AM	O2(40.0%)	WARNING
9	4/1/2019 9:18:52 AM	O2(40.0%)	ALARM
10	4/1/2019 9:18:51 AM	O2(40.0%)	WARNING
11	4/1/2019 9:18:45 AM	CH4(100%LEL)	ALARM
12	4/1/2019 9:18:45 AM	CH4(100%LEL)	WARNING
13	4/1/2019 9:18:35 AM	CO(2000ppm)	WARNING
14	3/9/2019 3:29:50 AM	O2(40.0%)	ALARM
15	3/9/2019 3:29:47 AM	O2(40.0%)	WARNING
16	3/9/2019 3:28:24 AM	O2(40.0%)	ALARM
17	3/9/2019 3:28:21 AM	O2(40.0%)	WARNING
18	3/6/2019 4:55:11 AM	CH4(100%LEL)	ALARM
19	3/6/2019 4:55:11 AM	O2(40.0%)	WARNING
20	3/6/2019 4:55:11 AM	O2(40.0%)	ALARM
21	3/6/2019 4:55:11 AM	CH4(100%LEL)	WARNING
22	12/20/2018 4:06:39 AM	CH4(100%LEL)	ALARM H
23	12/20/2018 4:06:25 AM	CO(2000ppm)	WARNING
24	12/20/2018 4:06:25 AM	O2(40.0%)	ALARM

Figure 19: Data View - Alarm Events



No	Date/Time	Gas/Body	Event
1	4/1/2019 9:28:26 AM	H2S(200.0ppm)	Fail(iSen.)
2	4/1/2019 9:28:26 AM	CO(2000ppm)	Fail(iSen.)
3	4/1/2019 9:21:52 AM	CO(2000ppm)	Fail(Span)
4	4/1/2019 9:21:52 AM	H2S(200.0ppm)	Fail(Span)
5	4/1/2019 9:21:52 AM	O2(40.0%)	Fail(Span)
6	4/1/2019 9:21:52 AM	CH4(100%LEL)	Fail(Span)
7	4/1/2019 9:21:28 AM	CO(2000ppm)	Fail(BUMP)
8	4/1/2019 9:21:28 AM	H2S(200.0ppm)	Fail(BUMP)
9	4/1/2019 9:21:28 AM	O2(40.0%)	Fail(BUMP)
10	4/1/2019 9:21:28 AM	CH4(100%LEL)	Fail(BUMP)
11	3/22/2019 10:09:14 AM	O2(40.0%)	Fail(Span)
12	3/22/2019 10:09:14 AM	CH4(100%LEL)	Fail(Span)
13	3/22/2019 10:09:14 AM	H2S(200.0ppm)	Fail(Span)
14	3/22/2019 10:09:14 AM	CO(2000ppm)	Fail(Span)
15	3/20/2019 2:24:32 PM	H2S(200.0ppm)	Fail(Span)
16	3/20/2019 2:24:32 PM	O2(40.0%)	Fail(Span)
17	3/20/2019 2:24:32 PM	CH4(100%LEL)	Fail(Span)
18	3/20/2019 2:24:32 PM	CO(2000ppm)	Fail(Span)
19	3/20/2019 2:09:31 PM	CO(2000ppm)	Fail(Span)
20	3/20/2019 2:09:31 PM	H2S(200.0ppm)	Fail(Span)
21	3/20/2019 2:09:31 PM	O2(40.0%)	Fail(Span)
22	3/20/2019 2:09:31 PM	CH4(100%LEL)	Fail(Span)
23	3/20/2019 11:34:28 AM	CH4(100%LEL)	Fail(Span)
24	3/20/2019 11:34:28 AM	CO(2000ppm)	Fail(Span)

Figure 20: Data View - Trouble Events

7. Click **Summary** to show instrument information above the event table.

Printing Data

1. Click **Print**.
2. Select a printer in the window that appears and click **OK**.

Exporting Data

1. Click **Export**.
2. Specify the filename and file location. The default file type is ".csv" (comma-separated values).
3. Click **Save**.

Interval Trend Data

Average gas concentrations over the user-defined interval trend time are logged in the interval trend data files. The interval trend time can be changed in the **Set** window. See "Changing Instrument Parameters" on page 43 to change the interval trend time. Events such as gas alarms or sensor failures are saved in the interval trend data file when they occur. The table below outlines how many hours of datalogging are available per interval trend time.

Interval Time	Data Logging Time
10 seconds	10 hours
20 seconds	20 hours
30 seconds	30 hours
1 minute	60 hours
3 minutes	180 hours
5 minutes (factory setting)	300 hours
10 minutes	600 hours

An interval trend data file is created and saved in the instrument when the instrument is turned *off*. The serial number, user ID, and station ID that are entered in the instrument when it is turned *on* are saved for the corresponding interval trend file. If the instrument's serial number, user ID, or station ID are changed in the Set window, any interval trend files that result from subsequent operating sessions will have the new serial number, user ID, or station ID saved in them.

When the station ID of the instrument is changed during operation, is it shown as an event in the interval trend file.

The data may be viewed either in table format or graph format if at least 5 scheduled data points have been logged at the programmed interval trend time. This does not include events.

If an interval data file has fewer than five scheduled data points, the graph controls are not functional and the data cannot be graphed.

1. Click **Data** along the right side of the program window. The Data Window will appear.

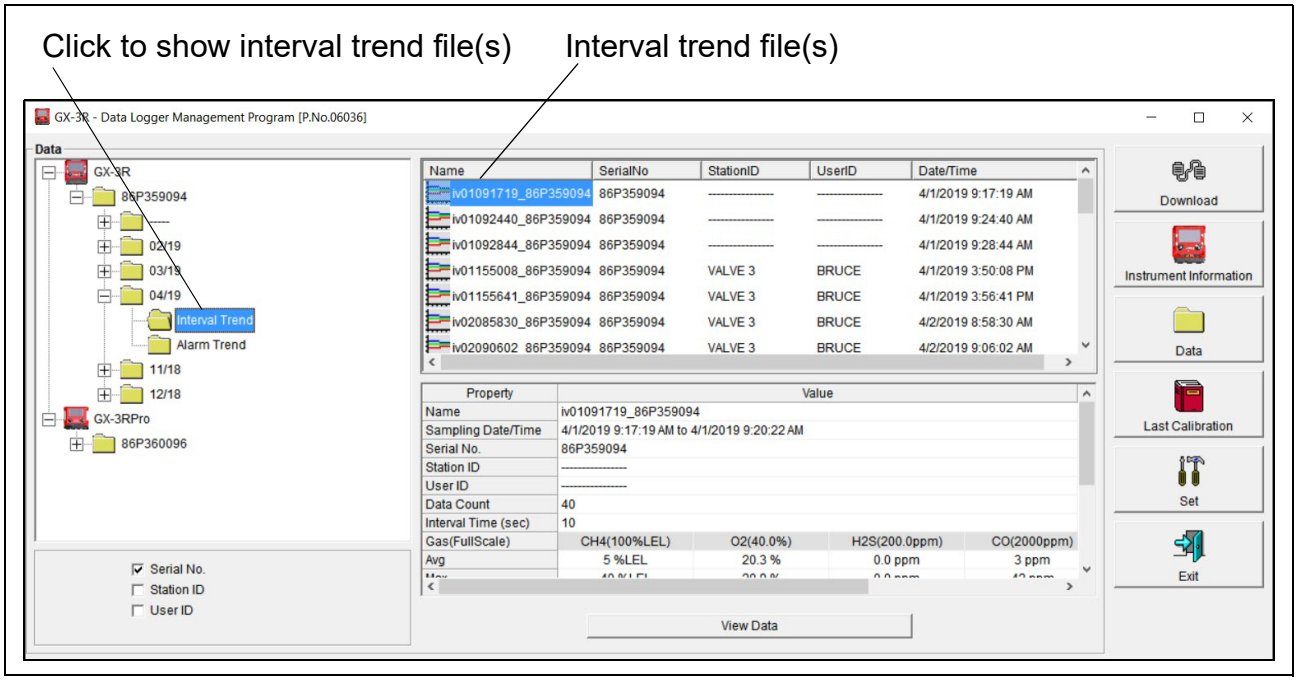


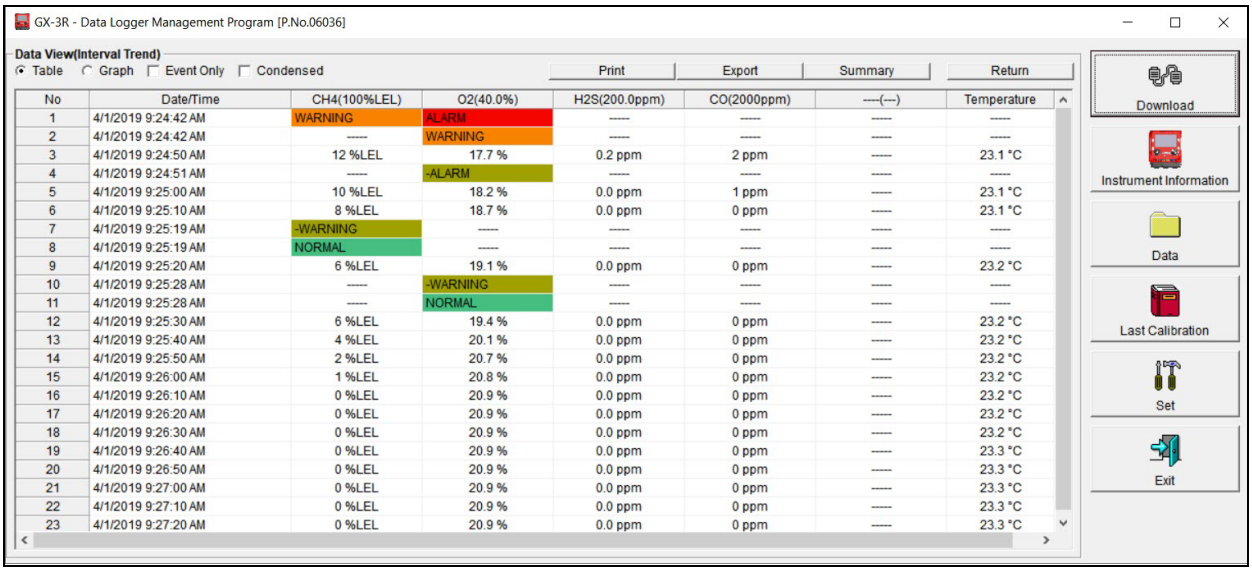
Figure 21: Data Window - Selecting Interval Trend Files

2. Expand the folders for the desired instrument type (GX-3R or GX-3R Pro) and serial number by double-clicking or using the (+) button next to each folder.
3. Open the dated folder (month/year) whose contents you want to see by double-clicking it or using the (+) button.
4. Click the **Interval Trend** folder. The Interval Trend file(s) for that instrument will appear in the top right frame.

   The date/time indicated on each line is the date/time that data recording started.
5. Click one of the interval trend data file names. A summary will appear in the bottom right frame with instrument and alarm setting information. If you want to view, graph, print, or export the interval trend data, double-click the filename or click the **View Data** button at the bottom of the window.
6. Interval trend data can be viewed in either table or graph format by selecting the **Table** or **Graph** selection buttons.

Table Format

1. To view the data in table format, click the **Table** selection button.



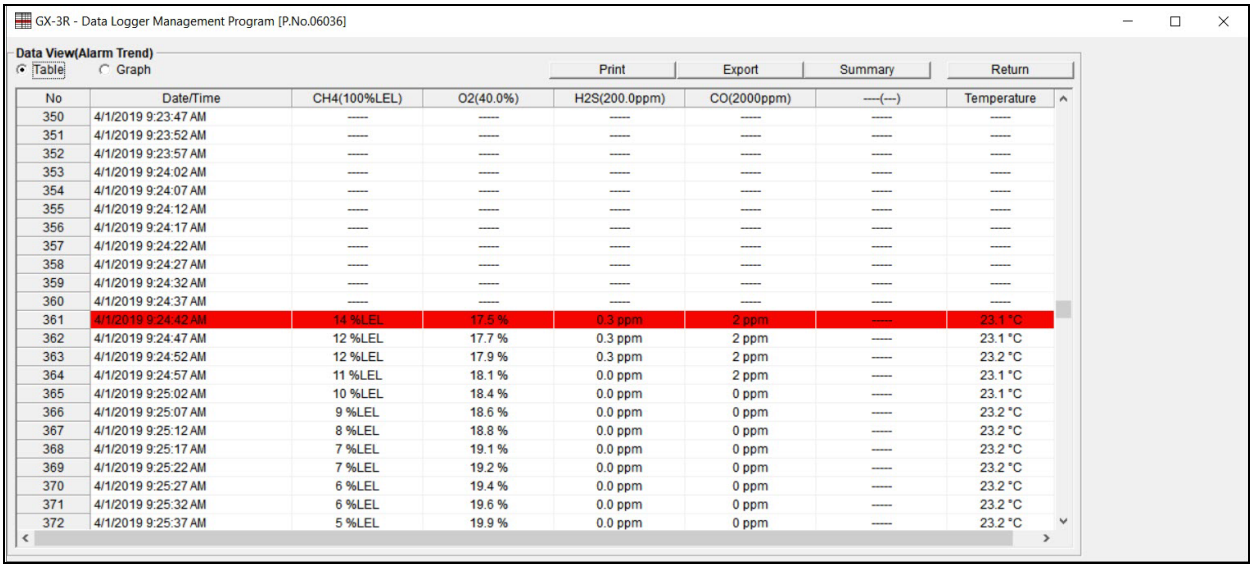
No	Date/Time	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	----(---)	Temperature
1	4/1/2019 9:24:42 AM	WARNING	ALARM	-----	-----	-----	-----
2	4/1/2019 9:24:42 AM	-----	WARNING	-----	-----	-----	-----
3	4/1/2019 9:24:50 AM	12 %LEL	17.7 %	0.2 ppm	2 ppm	-----	23.1 °C
4	4/1/2019 9:24:51 AM	-----	-ALARM	-----	-----	-----	-----
5	4/1/2019 9:25:00 AM	10 %LEL	18.2 %	0.0 ppm	1 ppm	-----	23.1 °C
6	4/1/2019 9:25:10 AM	8 %LEL	18.7 %	0.0 ppm	0 ppm	-----	23.1 °C
7	4/1/2019 9:25:19 AM	-WARNING	-----	-----	-----	-----	-----
8	4/1/2019 9:25:19 AM	NORMAL	-----	-----	-----	-----	-----
9	4/1/2019 9:25:20 AM	6 %LEL	19.1 %	0.0 ppm	0 ppm	-----	23.2 °C
10	4/1/2019 9:25:28 AM	-----	-WARNING	-----	-----	-----	-----
11	4/1/2019 9:25:28 AM	-----	NORMAL	-----	-----	-----	-----
12	4/1/2019 9:25:30 AM	6 %LEL	19.4 %	0.0 ppm	0 ppm	-----	23.2 °C
13	4/1/2019 9:25:40 AM	4 %LEL	20.1 %	0.0 ppm	0 ppm	-----	23.2 °C
14	4/1/2019 9:25:50 AM	2 %LEL	20.7 %	0.0 ppm	0 ppm	-----	23.2 °C
15	4/1/2019 9:26:00 AM	1 %LEL	20.8 %	0.0 ppm	0 ppm	-----	23.2 °C
16	4/1/2019 9:26:10 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.2 °C
17	4/1/2019 9:26:20 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.2 °C
18	4/1/2019 9:26:30 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.2 °C
19	4/1/2019 9:26:40 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.3 °C
20	4/1/2019 9:26:50 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.3 °C
21	4/1/2019 9:27:00 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.3 °C
22	4/1/2019 9:27:10 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.3 °C
23	4/1/2019 9:27:20 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	-----	23.3 °C

Figure 22: Interval Trend Data in Table Format

2. Interval trend data is shown as the average gas readings over the user defined interval trend time. So if the data logging session started at 4:13:38 PM and the interval time is set to 1 minute, then the readings logged at 4:14:38 PM are the average reading for each channel over that one minute period.
3. Events are displayed on the screen under the channel in which they occur and with the time of the event. Events are displayed whether they occurred at scheduled log times or in between them. Events include:
   - Gas alarms (Warning, Alarm, Alarm H, STEL, TWA)
   - Trouble conditions (sensor failure, low battery, etc.)
   - Man down
   - Panic
   - “Normal” indication after alarm condition is reset
   - Station ID changed during operation
4. Click **Summary** to show instrument information above the interval trend data table.
5. Click the **Events Only** selection box to view only events.
6. Click the **Condensed** selection box to view the interval trend data in condensed form. When the data is condensed, the software shows only important and eventful data as follows:
   - The first and last scheduled data points in the session are shown.
   - If there are more than two consecutive data points with the same readings for all channels, only the first and last of these consecutive data points are shown.

- All events, such as gas alarms or sensor failures, are shown.
- For any event, the data point before and after the event is always shown.

7. Click on an alarm event to view the alarm trend data file. To return to the interval trend data file, click the **Return** button or click the “X” in the upper right corner of the new window to close the window.



No	Date/Time	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	----(---)	Temperature
350	4/1/2019 9:23:47 AM	-----	-----	-----	-----	-----	-----
351	4/1/2019 9:23:52 AM	-----	-----	-----	-----	-----	-----
352	4/1/2019 9:23:57 AM	-----	-----	-----	-----	-----	-----
353	4/1/2019 9:24:02 AM	-----	-----	-----	-----	-----	-----
354	4/1/2019 9:24:07 AM	-----	-----	-----	-----	-----	-----
355	4/1/2019 9:24:12 AM	-----	-----	-----	-----	-----	-----
356	4/1/2019 9:24:17 AM	-----	-----	-----	-----	-----	-----
357	4/1/2019 9:24:22 AM	-----	-----	-----	-----	-----	-----
358	4/1/2019 9:24:27 AM	-----	-----	-----	-----	-----	-----
359	4/1/2019 9:24:32 AM	-----	-----	-----	-----	-----	-----
360	4/1/2019 9:24:37 AM	-----	-----	-----	-----	-----	-----
361	4/1/2019 9:24:42 AM	14 %LEL	17.5 %	0.3 ppm	2 ppm	-----	23.1 °C
362	4/1/2019 9:24:47 AM	12 %LEL	17.7 %	0.3 ppm	2 ppm	-----	23.1 °C
363	4/1/2019 9:24:52 AM	12 %LEL	17.9 %	0.3 ppm	2 ppm	-----	23.2 °C
364	4/1/2019 9:24:57 AM	11 %LEL	18.1 %	0.0 ppm	2 ppm	-----	23.1 °C
365	4/1/2019 9:25:02 AM	10 %LEL	18.4 %	0.0 ppm	0 ppm	-----	23.1 °C
366	4/1/2019 9:25:07 AM	9 %LEL	18.6 %	0.0 ppm	0 ppm	-----	23.2 °C
367	4/1/2019 9:25:12 AM	8 %LEL	18.8 %	0.0 ppm	0 ppm	-----	23.2 °C
368	4/1/2019 9:25:17 AM	7 %LEL	19.1 %	0.0 ppm	0 ppm	-----	23.2 °C
369	4/1/2019 9:25:22 AM	7 %LEL	19.2 %	0.0 ppm	0 ppm	-----	23.2 °C
370	4/1/2019 9:25:27 AM	6 %LEL	19.4 %	0.0 ppm	0 ppm	-----	23.2 °C
371	4/1/2019 9:25:32 AM	6 %LEL	19.6 %	0.0 ppm	0 ppm	-----	23.2 °C
372	4/1/2019 9:25:37 AM	5 %LEL	19.9 %	0.0 ppm	0 ppm	-----	23.2 °C

Figure 23: Data Displayed by Alarm Trend Cursor Symbol

Graph Format

1. To view the data in graph format, click the **Graph** selection button. Five or more scheduled data points are required to display an interval trend data file in graph format.

NOTE: The data count shown in Figure 21 includes scheduled data points and events. A data count above 5 does not guarantee enough scheduled data points for a graph.

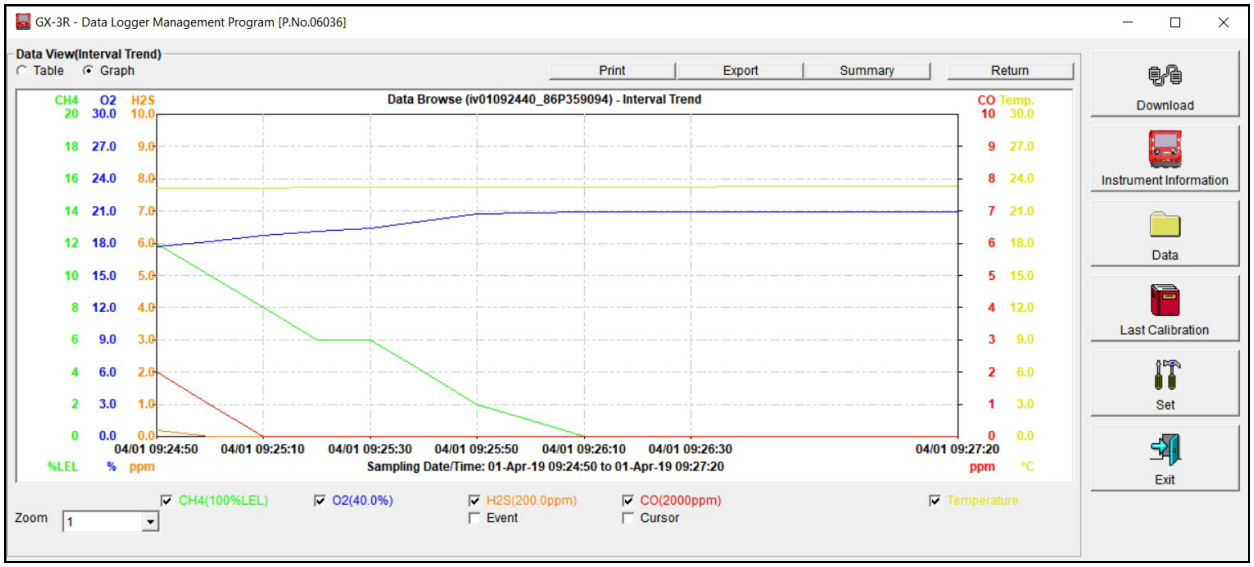


Figure 24: Interval Trend Data in Graph Format

2. Select or deselect gases to show on the graph.
3. Choose the zoom level. Zooming in shows greater detail relative to time.
4. Select **Event**, to see indications for warning, alarm, start of calibration, or end of calibration. Each indication is color coded to the gas color.
5. Select **Cursor** to view the gas reading and log time for the data point at the cursor location. Use the left and right arrow buttons on your keyboard to move the cursor across the graph horizontally. Use the up and down arrows on the keyboard to move the readings up or down on the screen.
6. Click **Summary** to show instrument information above the interval trend data graph.

Printing Data

1. Click **Print**.
2. Select a printer in the window that appears and click **OK**. Data displayed in Graph view will print as a graph and data displayed in Table view will print as a table.

Exporting Data

1. Click **Export**.
2. Specify the file name, file location, and file type. For Graph view, the export file type is ".bmp" (Windows bitmap). For Table view, the default file type is ".csv" (comma-separated values).
3. Click **Save**.

Alarm Trend Data

The instrument saves up to 8 files that describe the most recent alarm events (Warning, Alarm, Alarm H, STEL, TWA, man down, or panic). If an alarm event occurs, then an alarm trend file that is centered around the event is saved separately from the interval trend data files.

It shows the readings up to 30 minutes before and 30 minutes after the event, with the log interval time every five seconds. The gas readings logged at the alarm event time are highlighted in red and the gas readings logged every 5 seconds around the alarm event are the peak (minimum for oxygen) readings for the previous five seconds. If the instrument has not been on for 30 minutes before the alarm event occurs, the data during this time is left blank. If the instrument is turned off less than 30 minutes after an alarm event occurs, the data file will only have logged data until the unit was turned off.

If the gas readings highlighted in red are fresh air readings, then a man down or a panic alarm triggered the alarm trend file.

When an alarm event triggers an alarm trend file to be saved, subsequent alarm events must occur 15 minutes after the previous triggering event in order to trigger the saving of another alarm trend file.

If 8 alarm trend files are already saved in the instrument's memory, the oldest alarm trend file is overwritten when a new alarm trend file is saved.

Alarm trend data can always be displayed in either table or graph format.

1. Click **Data** along the right side of the program window. The Data Window will appear.

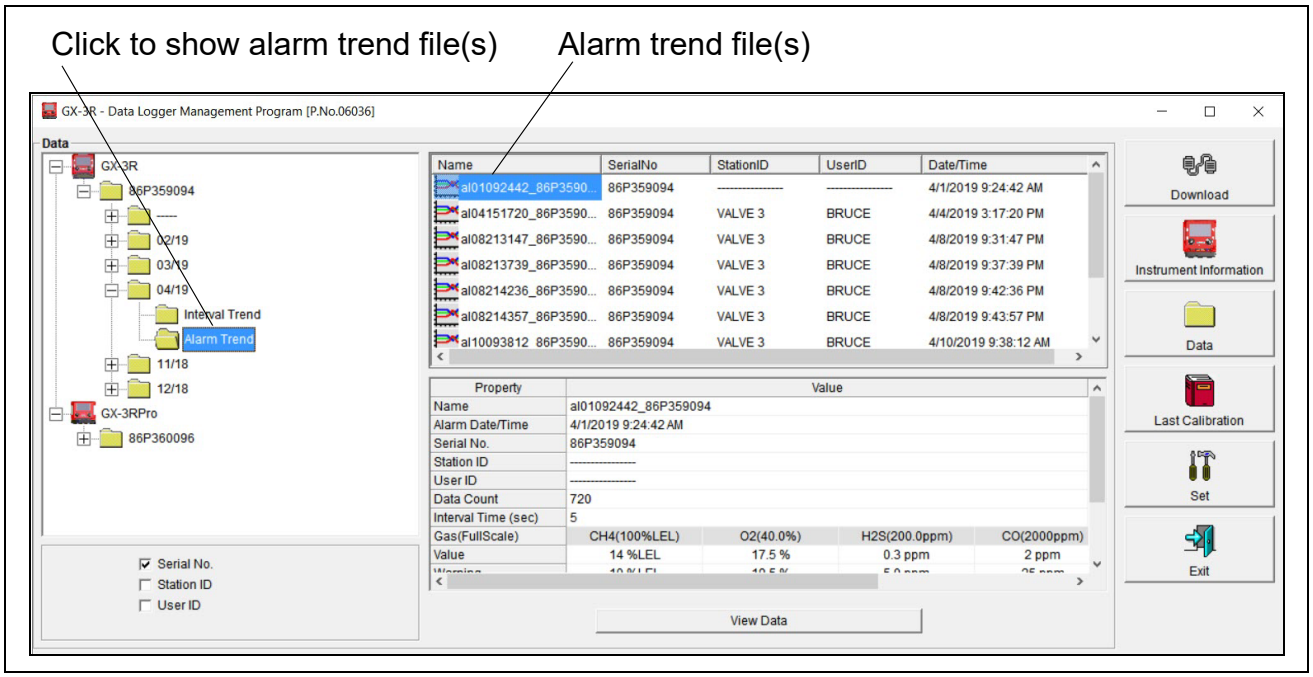


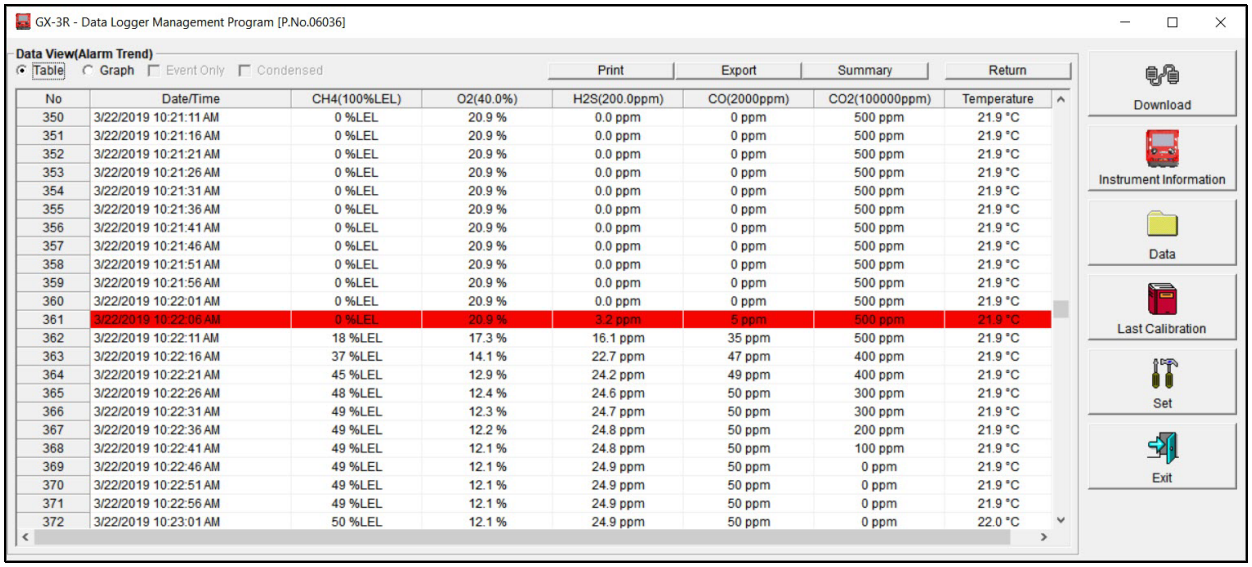
Figure 25: Data Window - Selecting Alarm Trend Files

2. Expand the folders for the desired instrument type (GX-3R or GX-3R Pro) and serial number by double-clicking or using the (+) button next to each folder.
3. Open the dated folder (month/year) whose contents you want to see by double-clicking it or using the (+) button.
4. Click the **Alarm Trend** folder. The Alarm Trend file(s) for that instrument will appear in the top right frame.

   The date/time indicated on each line is the date/time that data recording started.
5. Click one of the alarm trend data file names. A summary will appear in the bottom right frame with instrument and alarm setting information. If you want to view, graph, print, or export the alarm trend data, double-click the filename or click the **View Data** button at the bottom of the window.
6. Alarm trend data can be viewed in either table or graph format by selecting **Table** or **Graph**.

Table Format

1. To view the data in table format, click the **Table** selection button.



No	Date/Time	CH4(100%LEL)	O2(40.0%)	H2S(200.0ppm)	CO(2000ppm)	CO2(100000ppm)	Temperature
350	3/22/2019 10:21:11 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
351	3/22/2019 10:21:16 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
352	3/22/2019 10:21:21 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
353	3/22/2019 10:21:26 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
354	3/22/2019 10:21:31 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
355	3/22/2019 10:21:36 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
356	3/22/2019 10:21:41 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
357	3/22/2019 10:21:46 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
358	3/22/2019 10:21:51 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
359	3/22/2019 10:21:56 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
360	3/22/2019 10:22:01 AM	0 %LEL	20.9 %	0.0 ppm	0 ppm	500 ppm	21.9 °C
361	3/22/2019 10:22:06 AM	0 %LEL	20.9 %	3.2 ppm	5 ppm	500 ppm	21.9 °C
362	3/22/2019 10:22:11 AM	18 %LEL	17.3 %	16.1 ppm	35 ppm	500 ppm	21.9 °C
363	3/22/2019 10:22:16 AM	37 %LEL	14.1 %	22.7 ppm	47 ppm	400 ppm	21.9 °C
364	3/22/2019 10:22:21 AM	45 %LEL	12.9 %	24.2 ppm	49 ppm	400 ppm	21.9 °C
365	3/22/2019 10:22:26 AM	48 %LEL	12.4 %	24.6 ppm	50 ppm	300 ppm	21.9 °C
366	3/22/2019 10:22:31 AM	49 %LEL	12.3 %	24.7 ppm	50 ppm	300 ppm	21.9 °C
367	3/22/2019 10:22:36 AM	49 %LEL	12.2 %	24.8 ppm	50 ppm	200 ppm	21.9 °C
368	3/22/2019 10:22:41 AM	49 %LEL	12.1 %	24.8 ppm	50 ppm	100 ppm	21.9 °C
369	3/22/2019 10:22:46 AM	49 %LEL	12.1 %	24.9 ppm	50 ppm	0 ppm	21.9 °C
370	3/22/2019 10:22:51 AM	49 %LEL	12.1 %	24.9 ppm	50 ppm	0 ppm	21.9 °C
371	3/22/2019 10:22:56 AM	49 %LEL	12.1 %	24.9 ppm	50 ppm	0 ppm	21.9 °C
372	3/22/2019 10:23:01 AM	50 %LEL	12.1 %	24.9 ppm	50 ppm	0 ppm	22.0 °C

Figure 26: Alarm Trend Data in Table Format

2. The log times are shown along with the peak (minimum for oxygen) gas readings for the previous five seconds.
3. The gas readings at the time of the alarm event that triggered the saving of the alarm trend file are highlighted in red and are the instantaneous readings at that time. If the gas readings highlighted in red are fresh air readings, then a man down or a panic alarm triggered the alarm trend file.
4. Click **Summary** to show instrument information above the alarm trend data table.

Graph Format

1. To view the data in graph format, click the **Graph** button. An alarm trend file can always be graphed regardless of the number of logged points.

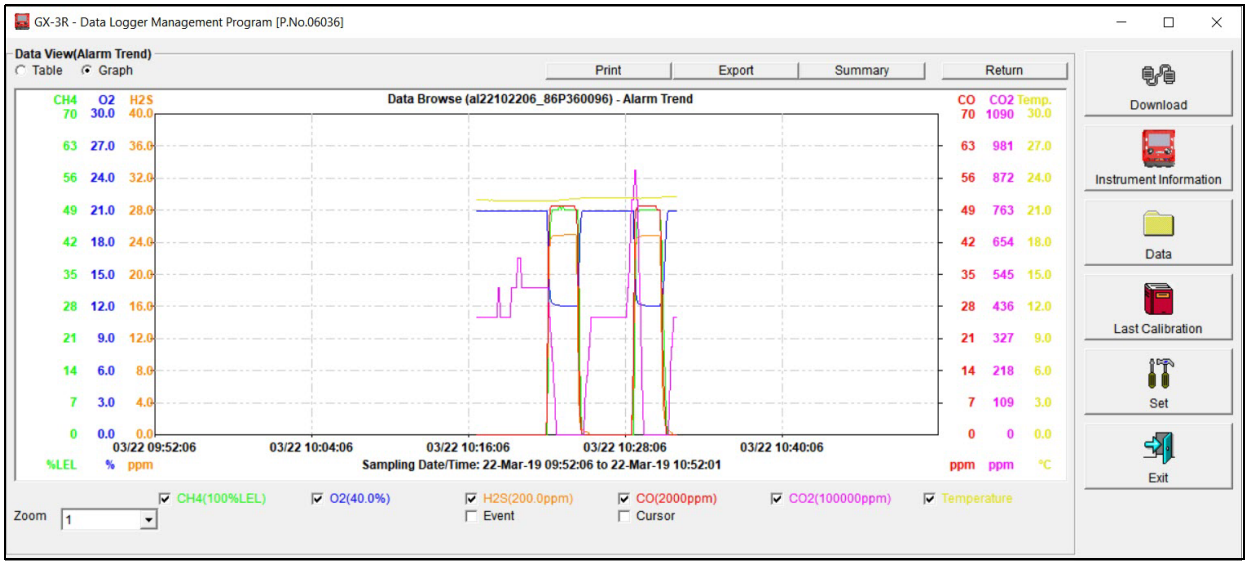


Figure 27: Alarm Trend Data in Graph Format

2. Select or deselect gases to show on the graph.
3. Choose the zoom level. Zooming in shows greater detail relative to time.
4. Select **Event** so see an indication for the alarm event that triggered the saving of the alarm trend file.
5. Select **Cursor** to view the gas reading and log time for the data point at the cursor location. Use the left and right arrow buttons on your keyboard to move the cursor across the graph horizontally. Use the up and down arrows on the keyboard to move the readings up or down on the screen.
6. Click **Summary** to show instrument information above the alarm trend data graph.

Printing Data

1. Click **Print**.
2. Select a printer in the window that appears and click **OK**. Data displayed in Graph view will print as a graph and data displayed in Table view will print as a table.

Exporting Data

1. Click **Export**.
2. Specify the file name, file location, and file type. For Graph view, the export file type is ".bmp" (Windows bitmap). For Table view, the default file type is ".csv" (comma-separated values).
3. Click **Save**.

Deleting Data in the Data Window

1. Click **Data** on the right side of the program window.
2. Right click the folder or file you want to delete.
3. The Delete box appears.

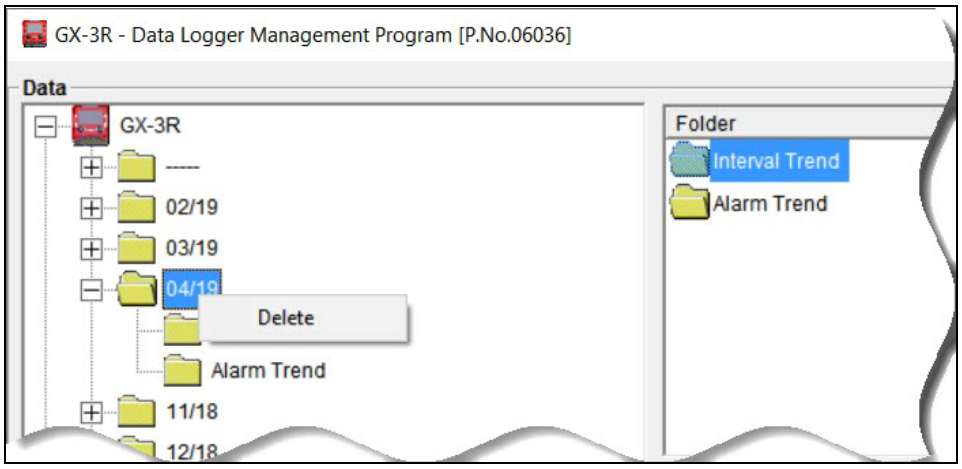


Figure 28: Delete Box

4. Click **Delete**. The Password Window appears.

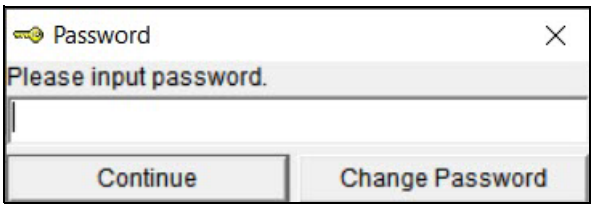


Figure 29: Password Window

5. Enter the password and click **Continue**. The factory-set, case-sensitive password is “rki”. See “Changing the Delete Password” on page 36 for instructions to change the password.
6. Click **Yes** in the confirmation window to confirm that want to delete the folder or file.

Changing the Delete Password

CAUTION: *Changing the password requires use of the Delete box. Take care to avoid accidentally deleting data.*

1. Right-click a data folder, data file, or event file. The Delete box will appear.

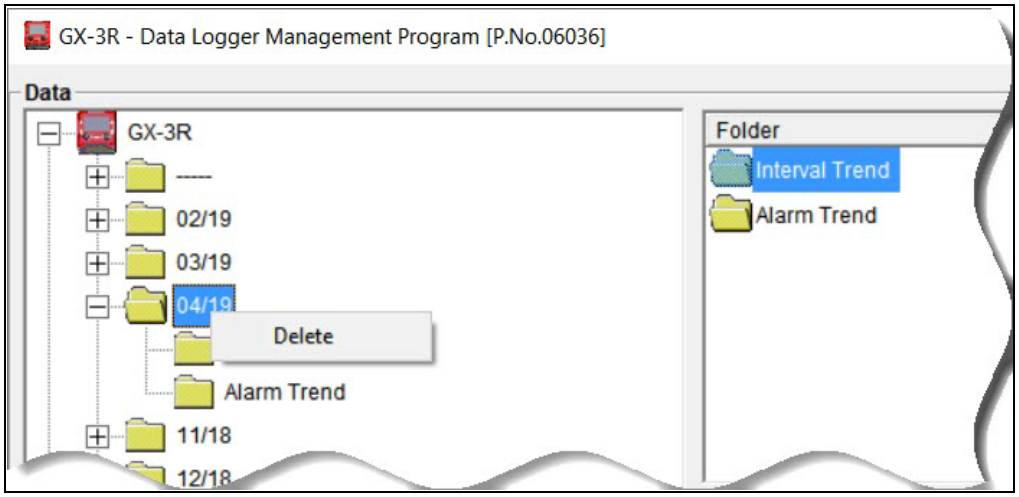


Figure 30: Delete Box

2. Click **Delete**. The Password Window appears.

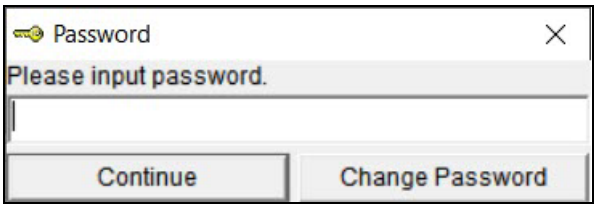


Figure 31: Password Window

3. Click **Change Password**. The Password Window asks you to input the current password.

Figure 32: Inputting Current Password

4. Type the current password, then click **Current password**. The Password Window asks you to input the new password.

Figure 33: Inputting New Password

5. Type the new password and click **New Password**. The Password Window asks you to input the new password again to confirm it.

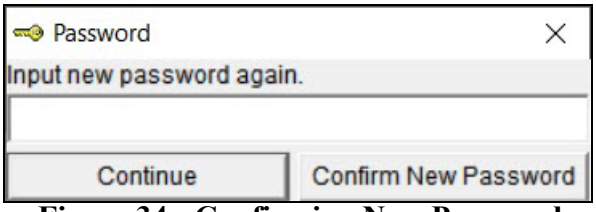


Figure 34: Confirming New Password

6. Type the new password again, then click **Confirm New Password**.
7. Click **OK** when the program confirms that you have changed the password.

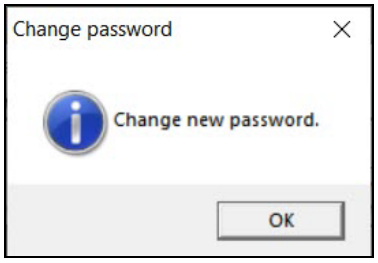


Figure 35: Confirming New Password

8. Close the Password Window by clicking the red “X” in the upper right corner of the window.

Chapter 6: Last Calibration Window

The Last Calibration Window stores the information for the most recent successful calibration and for the most recent successful bump test for each downloaded instrument. Calibration data is displayed in the top part of the screen while bump test data is displayed in the bottom part.

You can display the information three ways by using the **Need Calibration/Need Bump Test**, **Calibration Date/Bump Test Date**, or **Calibration Record/Bump Test Record** selection buttons. You can also print the information if you select the **Need Calibration/Need Bump Test** or **Calibration Date/Bump Test Date** view.

NOTE: If the Datalogging Program database is on the user's computer (default setting), data will only appear for instruments downloaded to that computer. If the database is on a network, data will appear for all instruments downloaded to that database. See "Accessing a Common Database" on page 8 for more instruction.

Need Calibration/Need Bump Test View

Selecting this view shows the last calibration date, last bump test date, and the last download date for the instruments that are due for calibration or bump testing.

The instruments that are due for calibration or bump testing (in the case of the **Need Calibration/Need Bump Test** view, that will be all of them), will have their last calibration date or last bump test date highlighted in red. The instruments that have not been downloaded for more than 90 days will have their last download date highlighted in purple.

NOTE: The calibration interval, the number of days after a calibration that a new calibration is due, is saved in the instrument but it is only accessible in the instrument's User Mode. The Datalogging Program will not recognize a changed calibration interval until that instrument's information is downloaded again.

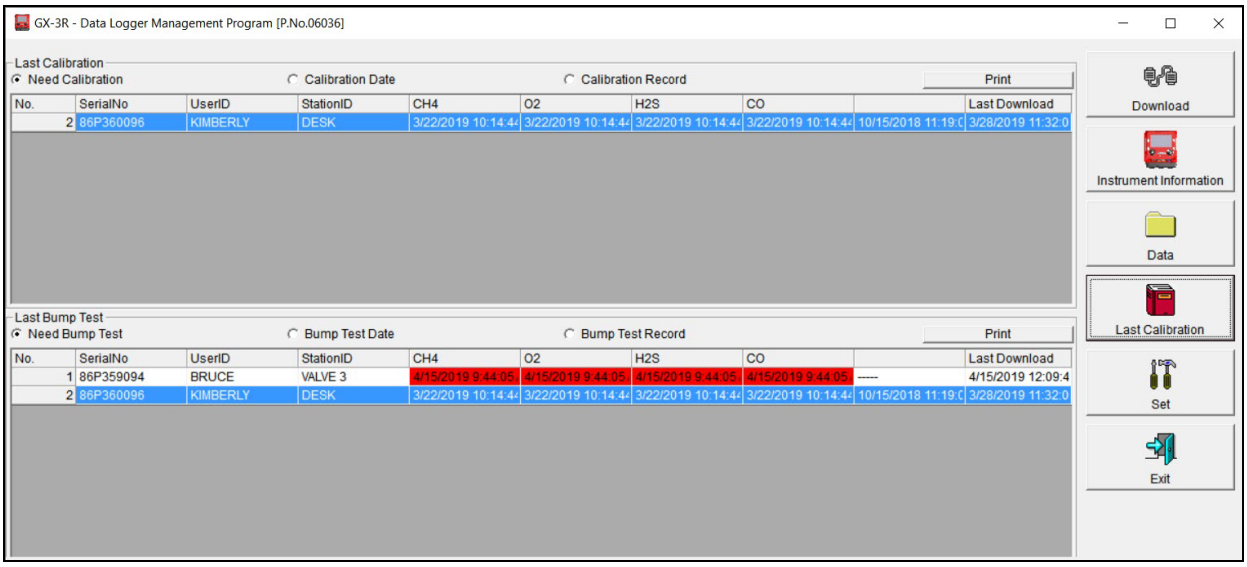


Figure 36: Last Calibration Window: Need Calibration View

1. The **Need Calibration/Need Bump Test** view shows the following fields for both calibration and bump test data:
   - No.: Number assigned to downloaded instrument. The most recently downloaded instrument will be No. 1.
   - SerialNo: Instrument's serial number
   - UserID: The instrument's user ID.
   - StationID: The instrument's station ID.
   - Target Gases: Date of calibration or bump test for each sensor in MM/DD/YYYY and 12-hour format.
   - Last Downloaded: Date of last download in MM/DD/YYYY and 12-hour format.
2. To print a list of the instruments shown in the **Need Calibration/Need Bump Test** view along with their user ID and last calibration date or last bump test date, click the **Print** button. A Printer List dialog box will appear.

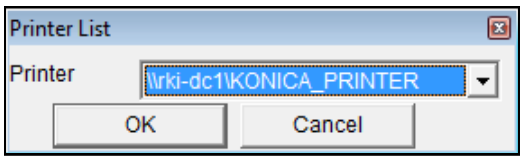


Figure 37: Printer List Dialog Box

3. Select a printer and click the **OK** button to print the instrument list.

Calibration Date/Bump Test Date View

Selecting this view shows the last calibration date, last bump test date, and the last download date for all the instruments that are in the program's database.

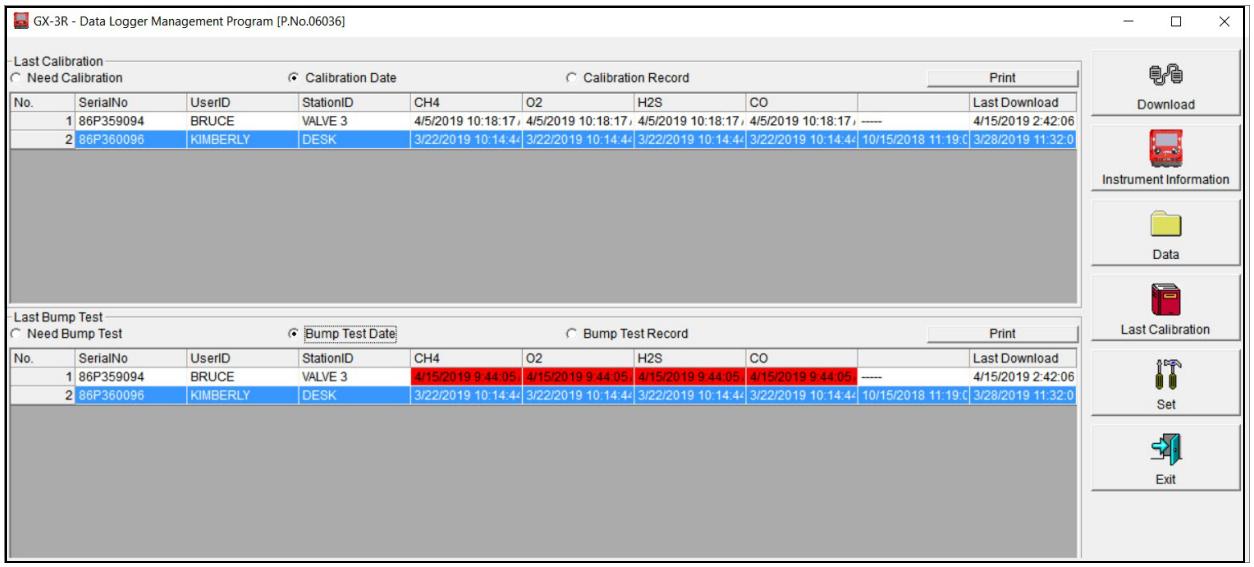


Figure 38: Last Calibration Window: Calibration Date View

1. The **Calibration Date/Bump Test Date** view shows the following fields for both calibration and bump test data:
   - No.: Number assigned to downloaded instrument. The most recently downloaded instrument will be No. 1.
   - SerialNo: Instrument's serial number
   - UserID: The instrument's user ID.
   - StationID: The instrument's station ID.
   - Target Gases: Date of calibration or bump test for each sensor in MM/DD/YYYY and 12-hour format.
   - Last Downloaded: Date of last download in MM/DD/YYYY and 12-hour format.
2. To print a list of the instruments shown in the **Calibration Date/Bump Test Date** view along with their user ID and last calibration date or last bump test date, click the **Print** button. A Printer List dialog box will appear.

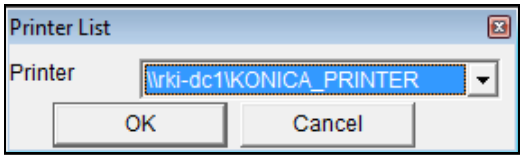


Figure 39: Printer List Dialog Box

3. Select a printer and click the **OK** button to print the instrument list.

Calibration Record/Bump Test Record View

Selecting the Calibration Record/Bump Test Record view shows detailed calibration or bump test information for each instrument's most recent successful calibration or bump test.

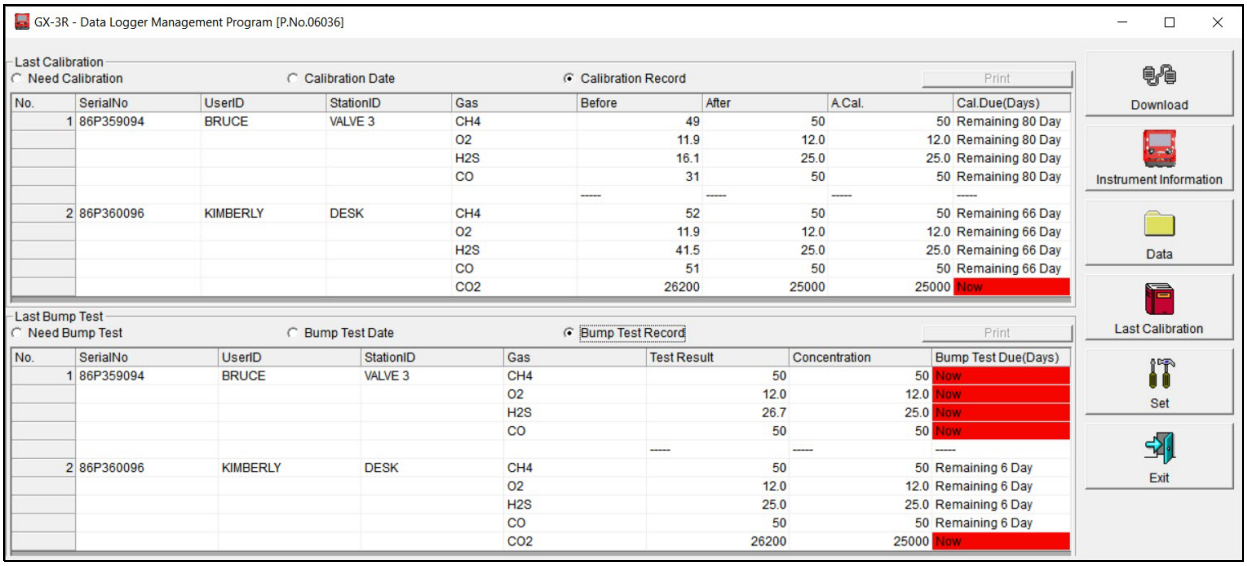


Figure 40: Last Calibration Window: Calibration Record View

1. The calibration field shows:
   - SerialNo: Instrument's serial number
   - UserID: The instrument's user ID.
   - StationID: The instrument's station ID.
   - Gas: Instrument's active gases.
   - Before: Gas reading prior to calibration.
   - After: Gas reading after calibration.
   - A. Cal.: Auto calibration value for each gas. The "After" column should match the "A. Cal." column.
   - Cal. Due (Days): Days left before calibration is due. If the instrument is due now, the box will be highlighted in red.
2. The bump test field shows:
   - SerialNo: Instrument's serial number
   - UserID: The instrument's user ID.
   - StationID: The instrument's station ID.
   - Gas: Instrument's active gases.
   - Test Result: The reading for each channel at the end of the bump test.

- Concentration: Applied gas concentration for each gas.
- Bump Test Due: Days left before bump test is due. If the instrument is due now, the box will be highlighted in red.

3. It is not possible to print any information when the Calibration Record/Bump Test Record view is selected. To view and print all past calibrations for an instrument, see "Calibration History" on page 22.

Deleting Last Calibration Data

1. Click **Last Calibration** on the right side of the program window.
2. Select the **Need Calibration/Need Bump Test** or **Calibration Date/Bump Test Date** view.
3. Click the row for the instrument whose calibration or bump test information you want to delete to select it. It will be highlighted to show that it is selected.
4. Right click the selected instrument.

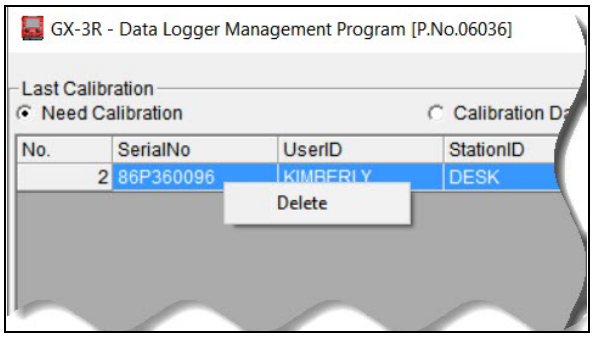


Figure 41: Delete Box

5. Click **Delete**.
6. Enter the password and click **Continue**. The factory-set, case-sensitive password is "rki". See "Changing the Delete Password" on page 36 for instructions to change the password.

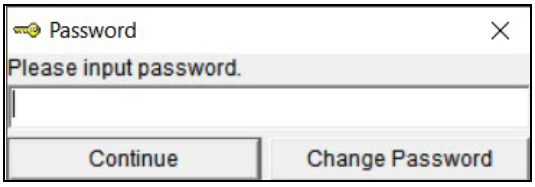


Figure 42: Password Window

7. Click **Yes** in the confirmation window.

NOTE: Deleting instrument data in the **Data** window will not delete calibration data from the **Last Calibration** window. Data in the **Last Calibration** window must be deleted separately.

Chapter 7: Set Window (Instrument Parameters)

In the **Set** window, you can change the following instrument parameters:

- serial number
- station ID
- user ID
- interval trend time
- logger overwrite setting
- date/time
- date format
- BLE auto shutoff when idle
- auto start after successful bump
- auto start after successful cal
- alarm points
- auto calibration value

Changing Instrument Parameters

1. Launch the Datalogging Program.
2. If the **Automatic Download** selection box is selected, deselect it.
3. Connect an instrument as described in “Connecting an Instrument” on page 14.
4. Click **Instrument Information** (instrument information only) or **Complete Download** (instrument information and instrument data).

5. Click **Set**.

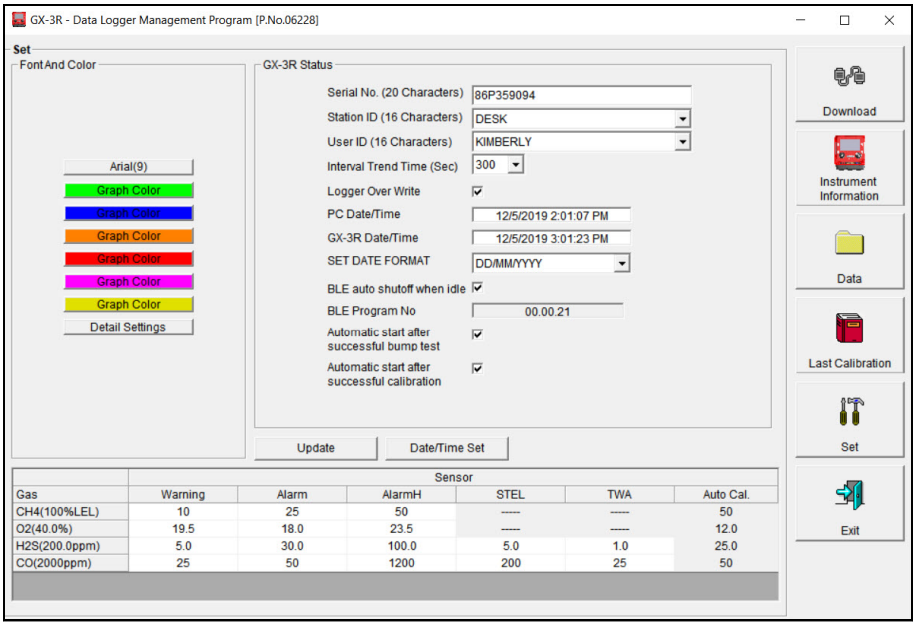


Figure 43: Set Window

6. To change the serial number stored in the instrument, click the serial number field and use the backspace key to remove the current entry, then type the new serial number.
7. Use the drop down menu to select a new station ID or user ID from the list. The available station and user IDs are ones that are stored in the instrument's memory.
8. Use the drop down menu to set the **Interval Trend Time**. The available choices are 10, 20, 30, 60, 180, 300, and 600 seconds. The table below outlines how many hours of datalogging are available per interval trend time.

Interval Time	Data Logging Time
10 seconds	10 hours
20 seconds	20 hours
30 seconds	30 hours
1 minute	60 hours
3 minutes	180 hours
5 minutes (factory setting)	300 hours
10 minutes	600 hours

9. Select or deselect **Logger Over Write**. When selected, oldest data is overwritten by new data once the datalogger is full. When deselected, data stops being saved once the datalogger is full.

10. Use the drop down menu to select the date format. The choices are **DD/MM/YYYY** (day/month/year), **MM/DD/YYYY** (month, day, year), and **YYYY/MM/DD** (year/month/day).
11. Select or deselect **BLE auto shutoff when idle** (GX-3R Pro only).

    Selected (factory setting): If the GX-3R Pro does not pair to a phone in the first 5 minutes after startup, the GX-3R Pro's Bluetooth gets shut off to conserve battery life.

    Deselected: If the GX-3R Pro does not pair to a phone, the GX-3R Pro's Bluetooth stays on indefinitely.
12. Select or deselect **Auto start after successful bump test** and **Auto start after successful cal**.

    Selected (factory setting): If only one calibration cylinder is assigned, the GX-3R (Pro) automatically starts its warmup sequence after a successful bump test or calibration. If multiple calibration cylinders are assigned, these parameters have no effect on operation.

    Deselected: The GX-3R (Pro) does not automatically start its warmup sequence after a successful bump test or calibration.
13. To change alarm points and the auto calibration value for each channel, double-click the field you wish to change (e.g. H2S AutoCal.) then type in the new information.
14. Click **Update** and then **Yes** in the confirmation window to upload the changes to the instrument.
15. To update the instrument's date and time to match the computer's, click **Date/Time Set** and then click the **Yes** in the confirmation window.

Changing User and Station IDs

The Detail Settings button in the Set window allows the user to create or change a User ID list or Station ID list and upload it to an instrument.

1. Launch the Datalogging Program.
2. If the **Automatic Download** selection box is selected, deselect it.
3. Connect an instrument as described in "Connecting an Instrument" on page 14.
4. Click **Instrument Information** (instrument information only) or **Complete Download** (instrument information and instrument data).

5. Click **Set**.

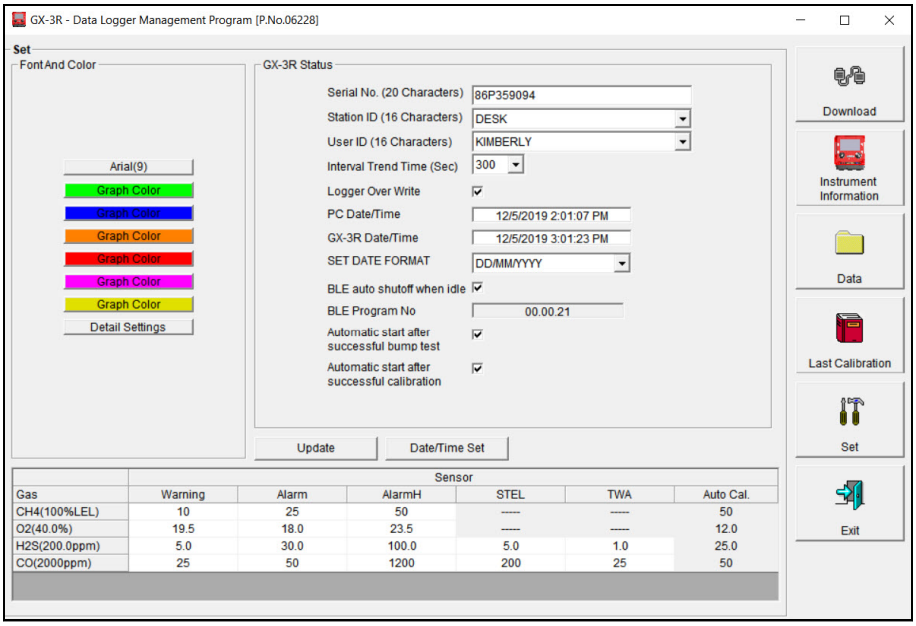


Figure 44: Set Window

Directly Editing Station and User ID Lists

The station and user ID lists can be edited directly or through the use of .csv files. Editing them directly is often more convenient if your station or user ID list is short. For longer ID lists, using .csv files will be more convenient. See “Updating Station and User ID Lists Using .csv Files” on page 48 for instructions to use .csv files.

1. Click the **Detail Settings** button in the Set window. If you do not currently have any user-defined User IDs or Station IDs programmed into the instrument, the screen will appear as shown below.

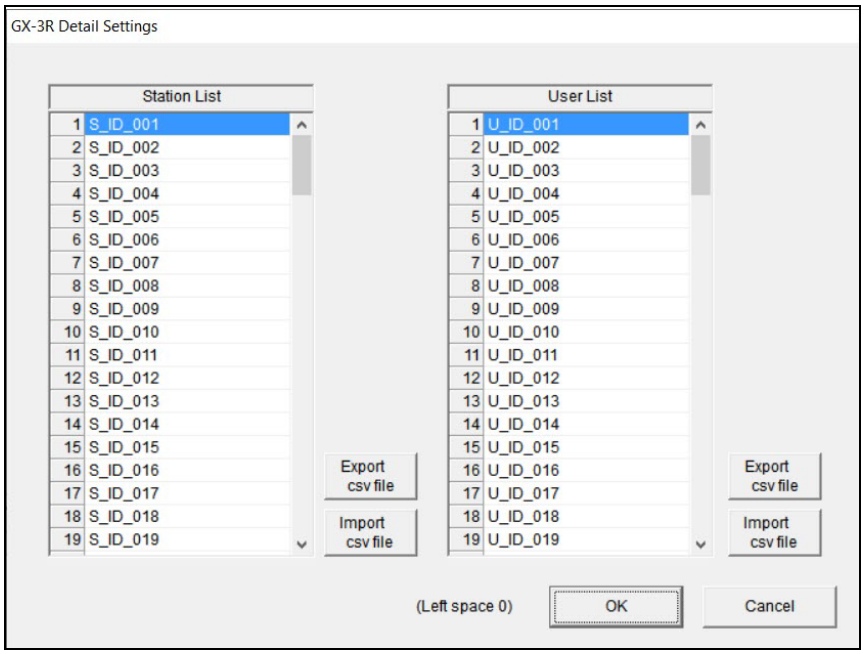


Figure 45: Detail Settings Window

The Station ID list is shown on the left and the User ID list is shown on the right. Both lists have **Export csv file** and **Import csv file** buttons located to the right of each list.

If the instrument had any user-defined station or user IDs, they would be displayed in the appropriate list.

2. Double click the station or user ID you wish to change and delete the existing information. Type in the new station or user ID. Each ID can be up to 16 characters long and can contain uppercase letters or numbers.
3. Click **OK** to save the changes and return to the Set window.
4. The new station and user ID lists will be visible in the Station ID and User ID selection boxes in the Set window. Use the drop down menu to select a current station and user ID for the instrument.
5. To upload the updated station and/or user ID list to the instrument and upload any other changes you have made, click **Update** and click **OK** when the confirmation box appears.

Updating Station and User ID Lists Using .csv Files

Station and user ID lists can also be edited by using .csv files.

1. Click the **Detail Settings** button in the Set window. If you do not currently have any user-defined User IDs or Station IDs programmed into the instrument, the screen will appear as shown below.

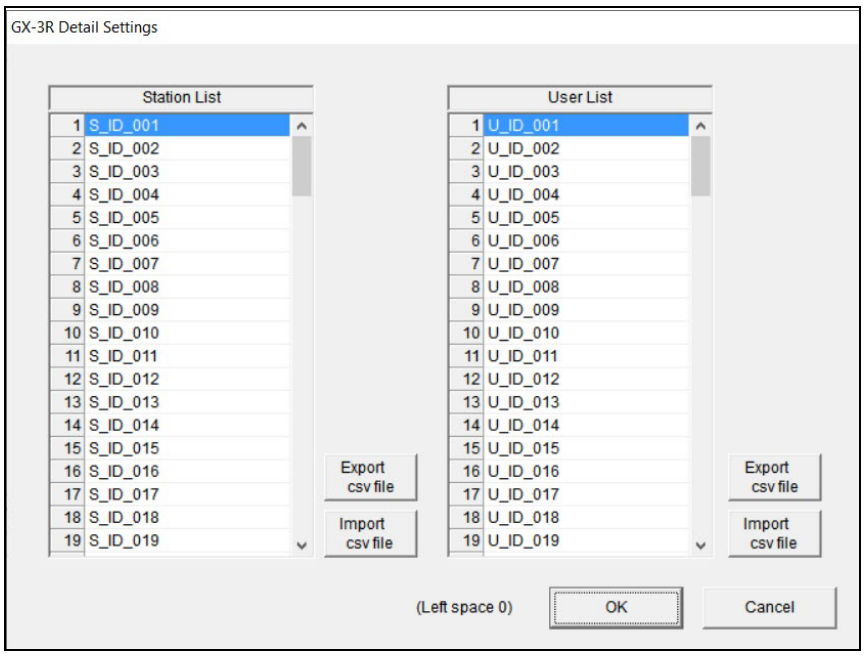


Figure 46: Detail Settings Window

The Station ID list is shown on the left and the User ID list is shown on the right. Both lists have **Export csv file** and **Import csv file** buttons located to their right.

2. To create a new ID list, click the appropriate **Export csv file** button. In the example below, the Station ID's **Export csv file** button was clicked.

3. Navigate to the file storage location, type in a file name, and click **Save**.

4. Open the .csv file in a word processing program such as Word, WordPad, or Notepad. Below is an example of the Station .csv file opened in Notepad.

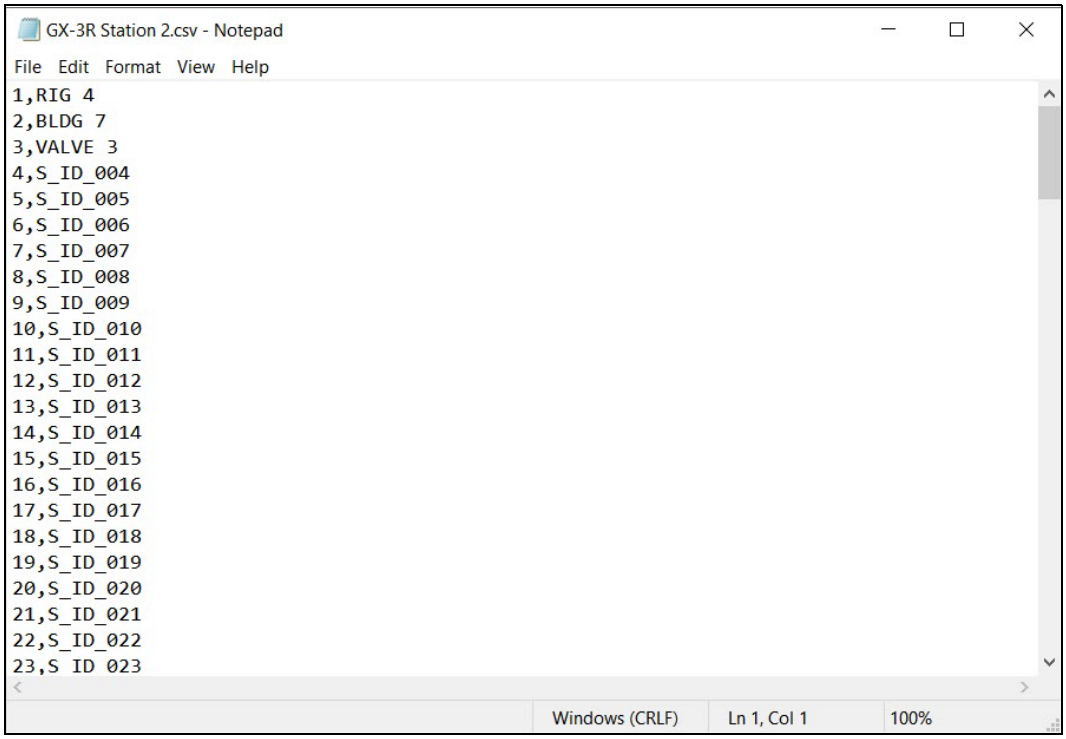


Figure 47: Station ID .csv File Opened in Notepad

5. Any existing Station or User IDs are displayed. Factory-loaded Station or User IDs have a S_ID_XXX or U_ID_XXX appearance.
6. Delete the existing name and replace it with the desired name. The name can be up to 16 characters long and may be any uppercase letter or number.

Importing .csv Files

1. Locate an existing Station ID or User ID .csv file. See above for instructions to generate a .csv file.
2. In the Detail Settings window, click the appropriate **Import csv file**.

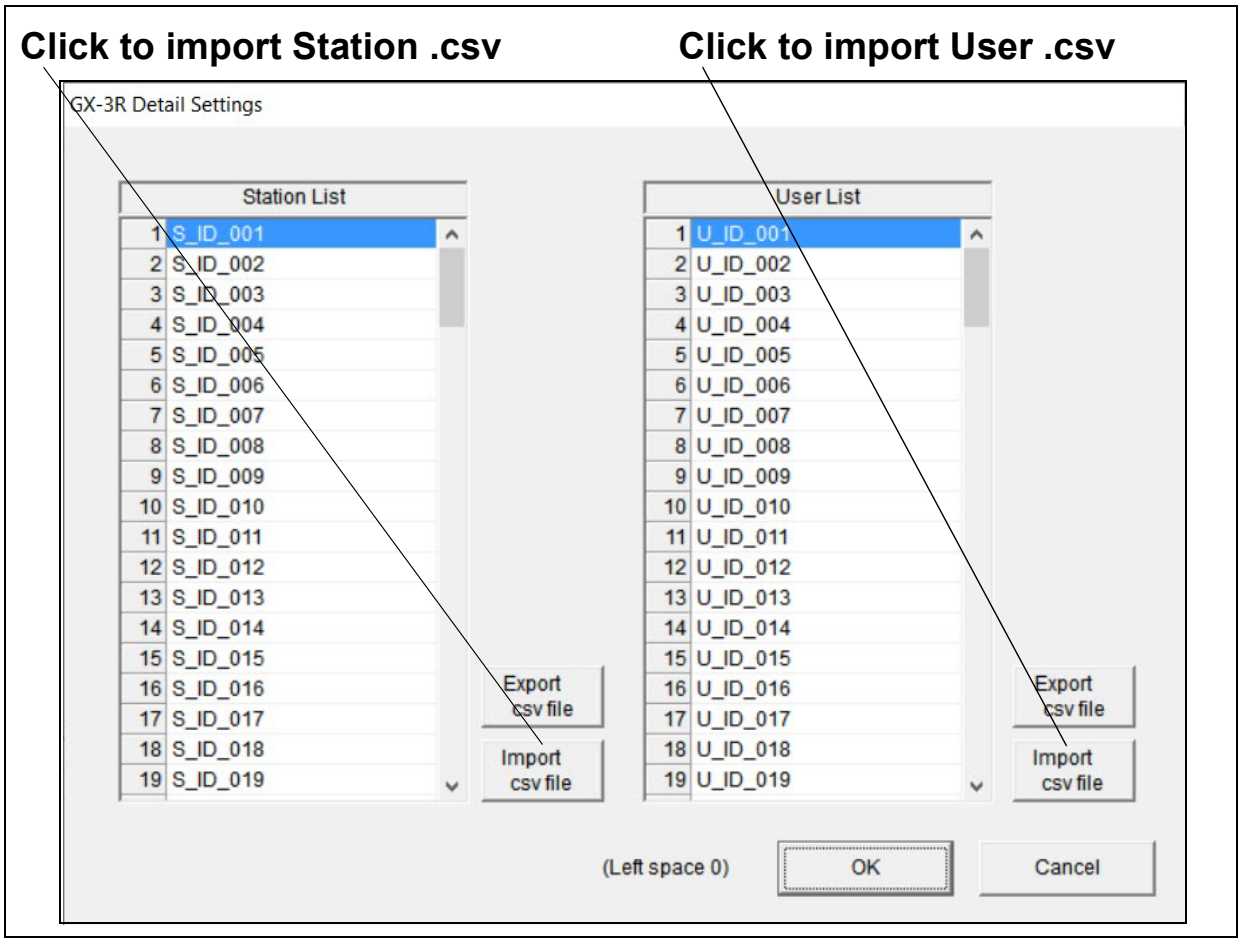


Figure 48: Import csv File

3. Select the file you want to import and click **Open**.
4. Click **OK** to save changes and return to the Set window.
5. The new station and user ID lists will be visible in the Set window's Station ID and User ID selection boxes. Use the drop down menu to select a current station and user ID.
6. Click **Update** and then **Yes** in the confirmation window to upload the changes to the instrument.

Chapter 8: Set Window (Program Appearance)

The program font and the graph colors can be changed using the Set window.

1. Launch the Datalogging Program.
2. Click **Set**.

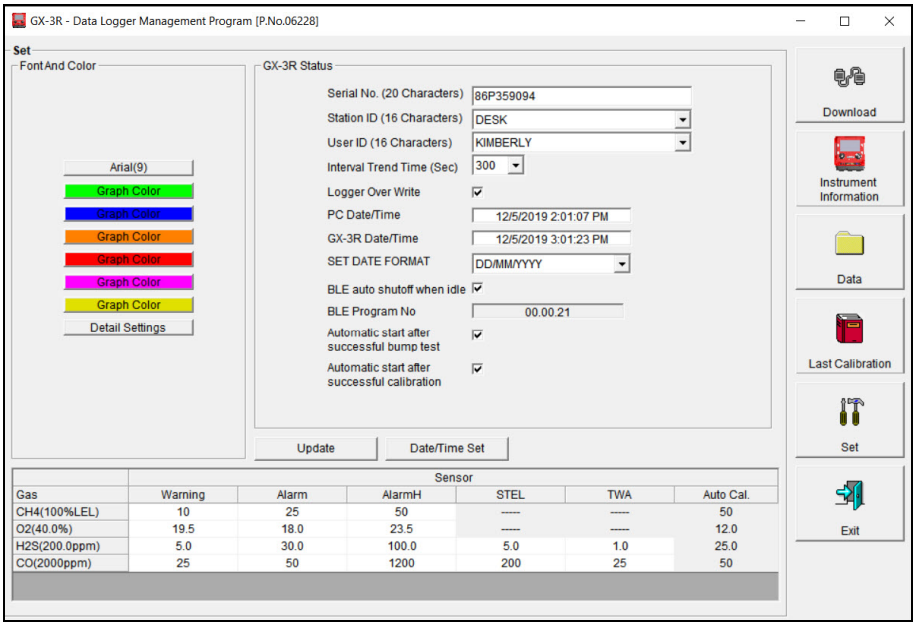


Figure 49: Set Window

Changing the Font

1. Click the font name button.

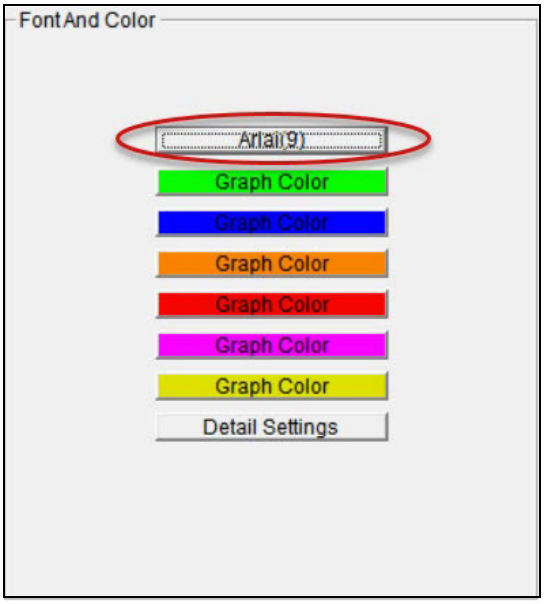


Figure 50: Font Button

2. Choose the font type, style, size, and script in the Font Window.

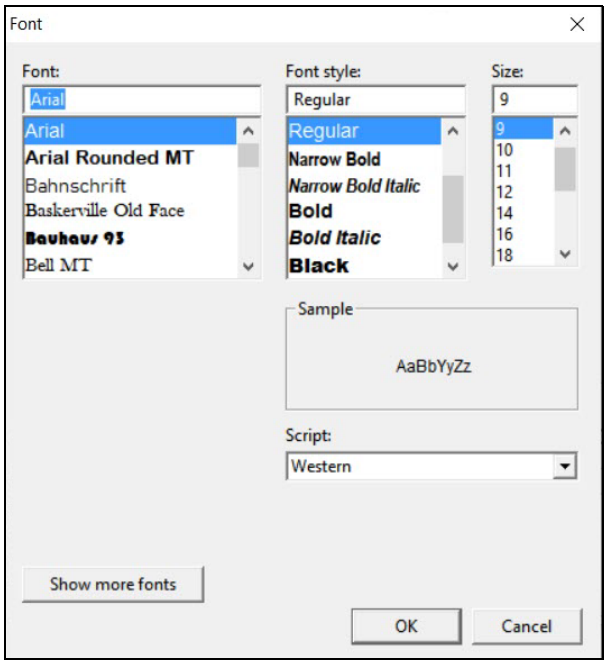


Figure 51: Font Window

3. Click **OK**.
4. The changes will take effect after you exit and restart the program.

Changing Graph Colors

1. Click the appropriate **Graph Color** button on the left side of the Set Window.

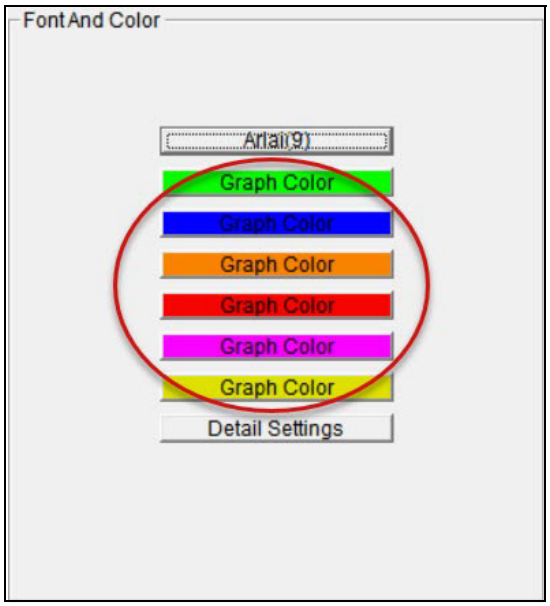


Figure 52: Graph Color Buttons

2. Pick a new graph color from the Color Window.

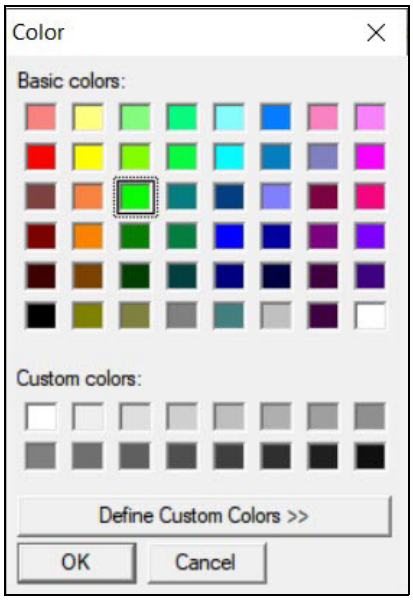


Figure 53: Color Windows

3. If you want to define a custom color, click the **Define Custom Colors** button and the Custom Color Window replaces the Color Window.

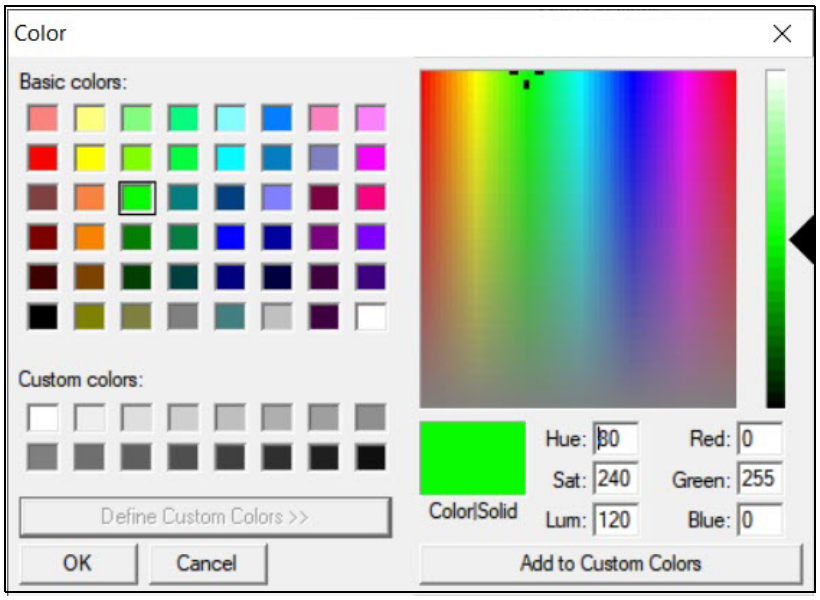


Figure 54: Custom Color Windows

4. Click **OK**.
5. The changes will take effect after you exit and restart the program.

Chapter 9: Spare Parts List

Table 2: Spare Parts List

Part Number	Description
47-5084	USB/IrDA adapter, Legasic, module only (for use with all premier portables)
47-5084RK-01	USB/IrDA adapter, Legasic, module and cable (for use with all premier portables)
47-5085RK	USB A to USB mini cable, 6 feet, for 47-5084RK USB/IrDA adapter
71-0491	GX-3R Data Logger Management Program Operator's Manual (this document)