



**INSTRUMENTS**

# **GX-6100 Configuration Program Operator's Manual**

*Part Number: 71-0700*

*Revision: P1*

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# Introduction

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**CAUTION:** *Read and understand this manual before using the GX-6100 Configuration Program. Also read and understand the GX-6100 Operator's Manual included with the GX-6100 portable gas monitor.*

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Using an advanced detection system consisting of up to six gas sensors, the GX-6100 personal gas monitor detects the presence of combustible gases, oxygen (O<sub>2</sub>), carbon monoxide (CO), and hydrogen sulfide (H<sub>2</sub>S) simultaneously. The GX-6100's compact size and easy-to-use design make it ideally suited for a wide range of applications as described in the GX-6100 Operator's Manual. Please read the *GX-6100 Operator's Manual* first before using the GX-6100 Configuration Program.

The GX-6100 Configuration Program allows you to change various instrument parameters not accessible in the GX-6100's user interface. It also allows you to save parameter configuration files based on instruments' parameter settings that can be viewed or used to update another instrument's parameter settings.

The purpose of this manual is to explain how to use the GX-6100 Configuration Program. You will learn how to:

- install and launch the program
- install the downloading cable (if needed)
- connect to the GX-6100 with the program
- change parameters in the GX-6100

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

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**CAUTION:** *The GX-6100 detects oxygen deficiency and elevated levels of oxygen, combustible gases, carbon monoxide, and hydrogen sulfide, all of which can be dangerous or life threatening. When using the GX-6100, you must follow the instructions and warnings in the GX-6100 Operator's Manual to assure proper and safe operation of the unit and to minimize the risk of personal injury.*

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**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.*

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## System Requirements

To use the GX-6100 Configuration Program, your personal computer must meet the following requirements:

- **Operating Systems:** Windows<sup>®</sup> 8, Windows<sup>®</sup> 10, Windows<sup>®</sup> 11
- **Processor:** IBM<sup>®</sup> compatible PC running Pentium<sup>®</sup> 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**

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## Installing the GX-6100 Configuration Program

1. Launch Windows®.
2. Exit from all applications and open windows.
3. Go to <https://www.rkiinstruments.com/product/gx-6100-multi-gas-detector/>.
4. Click on the **Download** tab.
5. Click the **GX-6100 Configuration** 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. After a few seconds, a screen appears indicating that the InstallShield Wizard is preparing to install the GX-6100 Configuration Program, then the GX-6100 Configuration InstallShield Wizard window appears to guide you through installation.



**Figure 1: GX-6100 Configuration InstallShield Wizard**

10. Follow the on-screen instructions in the InstallShield Wizard Window to install the program.
11. 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**.
12. When the InstallShield Wizard indicates that installation is complete, click the **Finish** button.

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## IrDA Downloading Cable

The GX-6100 communicates with a computer via an on-board infrared communication port that complies with IrDA protocol standards.

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**NOTE:** If your computer has a built-in infrared port, you do not need an adapter cable to download data.

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If your computer does not have an infrared port, you will need to install an IrDA/USB adapter cable on your computer to use the GX-6100 Configuration Program with your GX-6100. The 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.

Some versions of Windows<sup>®</sup> already have several infrared device drivers loaded in Windows<sup>®</sup> and will automatically recognize a cable during the installation process and guide you in installing the drivers. Other versions of Windows<sup>®</sup> will require you to load device drivers provided by the manufacturer of the cable during the installation process. RKI makes no warranty for the operation or compatibility of the drivers with any particular device.

### *Installing an IrDA Adapter Cable*

After installing the GX-6100 Configuration Program, connect the IrDA/USB cable to your computer and follow the manufacturer's instructions for installing the cable on your computer. Make sure the cable is compatible with your Windows<sup>®</sup> operating system.

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 Device Manager to install the cable drivers.

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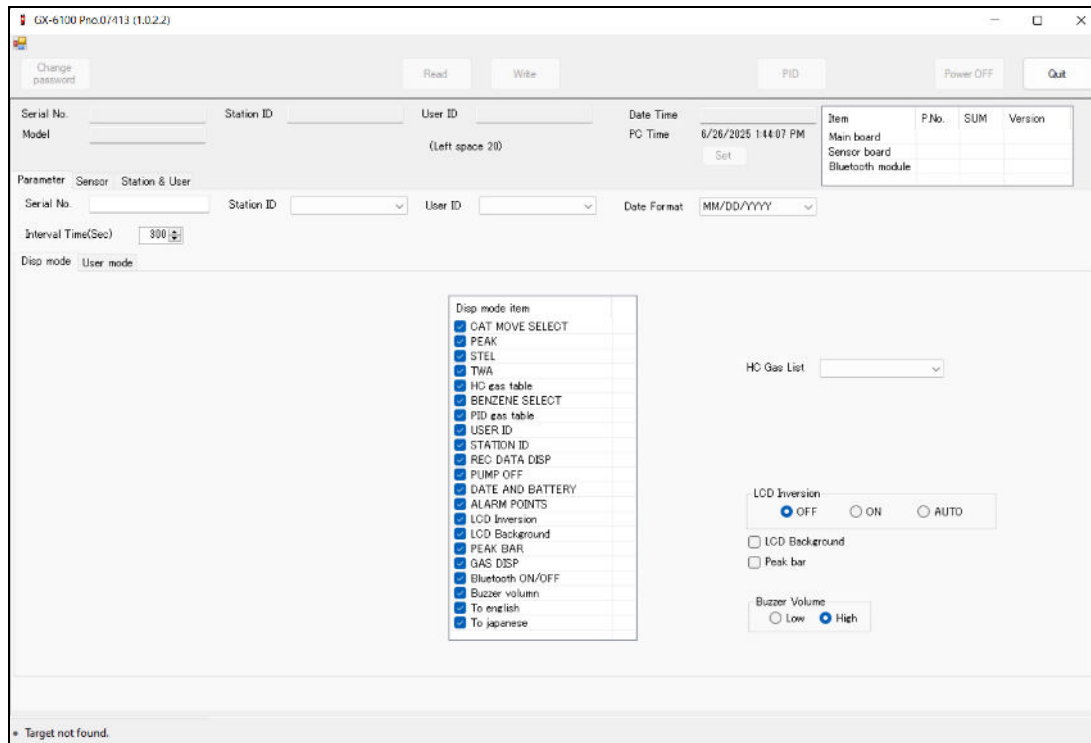
## Launching the Program

1. For Windows<sup>®</sup> 8 and Windows<sup>®</sup> 10 computers, click the **Start** icon in the Windows<sup>®</sup> Icon Tray, then click the downward-pointing arrow icon in the lower left corner of the screen, then select **GX-6100 Configuration** from the list of apps.

For Windows<sup>®</sup> 11, click on the Search bar in the toolbar at the bottom of the screen. Type in "**GX-6100 Configuration**" until the program appears. Click on the application to open it.

2. A prompt for the password appears.  
For User Mode, enter **1939**. For Maintenance Mode, enter **0315**.

3. The main display window will appear.



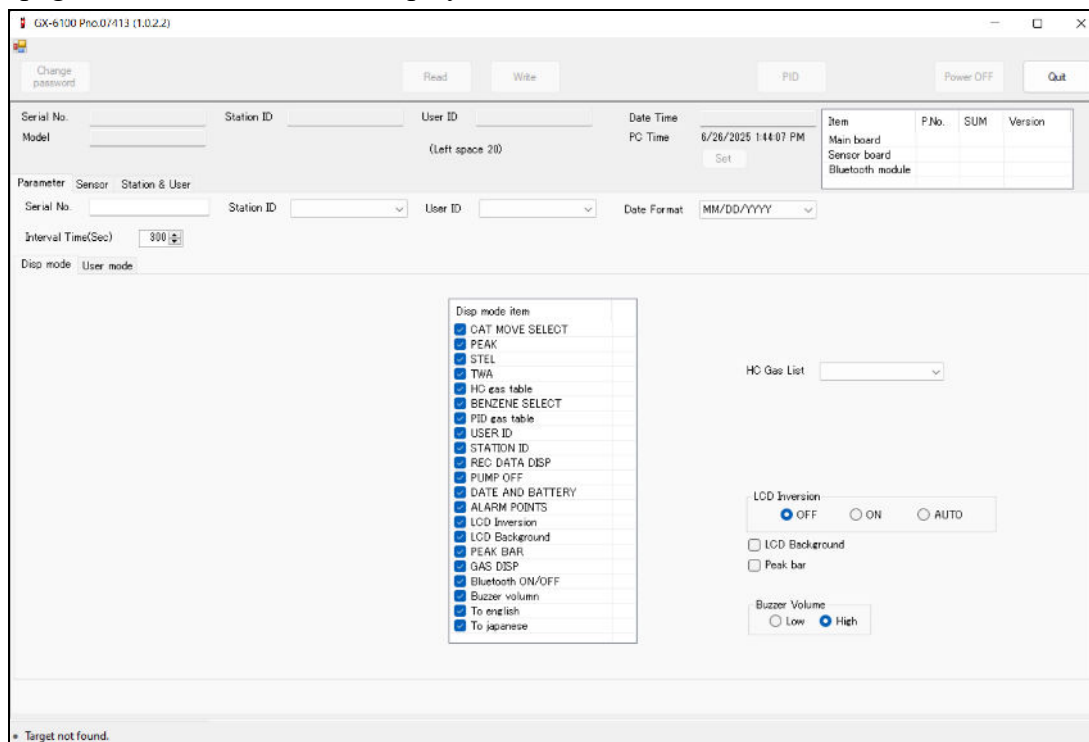
**Figure 2: The Main Window**

4. For convenience, make a shortcut of the GX-6100 Configuration Program and place it on the Windows<sup>®</sup> desktop. See your Windows<sup>®</sup> documentation for information about making shortcuts.

# Connecting the GX-6100 to the Configuration Program

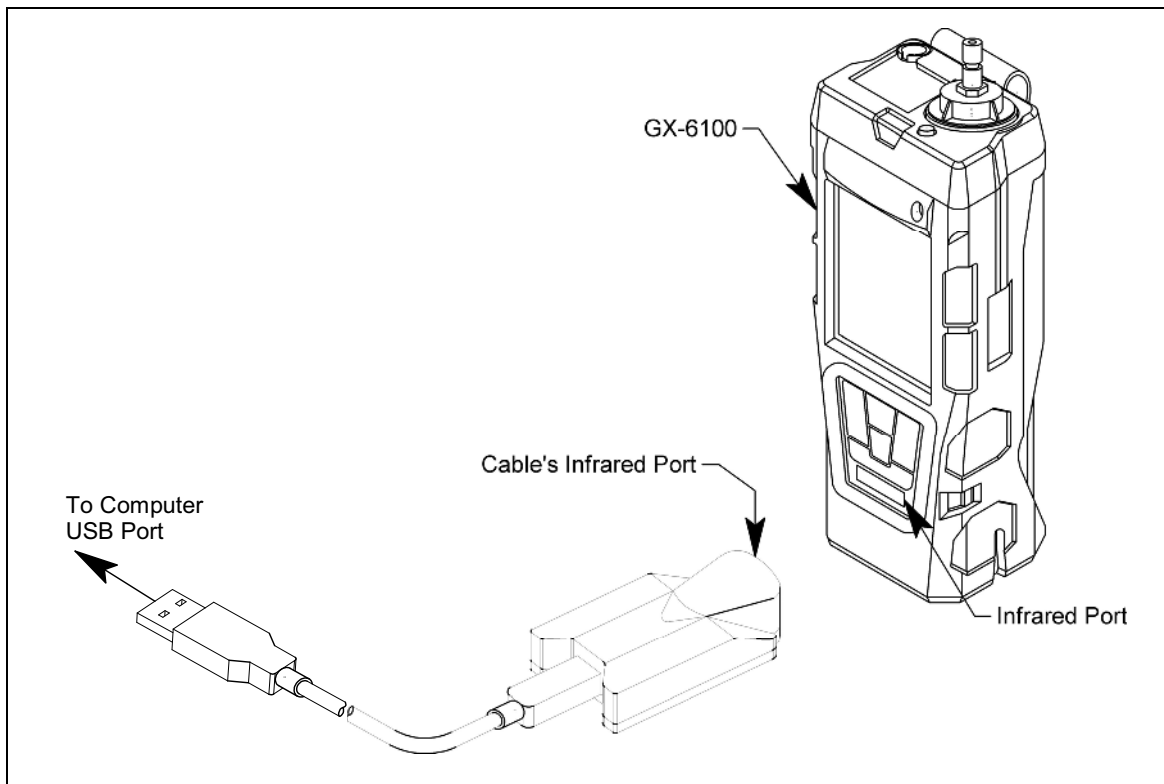
Follow these steps to connect an GX-6100 to the Configuration Program:

1. Insert the IrDA adapter's USB cable into the computer's USB port.
2. Launch the GX-6100 Configuration Program as described in "Launching the Program" on page 5. The Main Window displays.



**Figure 3: The Main Window**

3. Place the GX-6100 within an inch or two of the infrared port on your computer aligning the GX-6100's infrared port below the LCD with the infrared port on your computer. If your computer does not have a built in infrared port, place the GX-6100 within an inch or two of the infrared port on the IrDA adapter cable as shown in Figure 4 below, aligning the infrared port on the front of the GX-6100 with the infrared port on the cable.



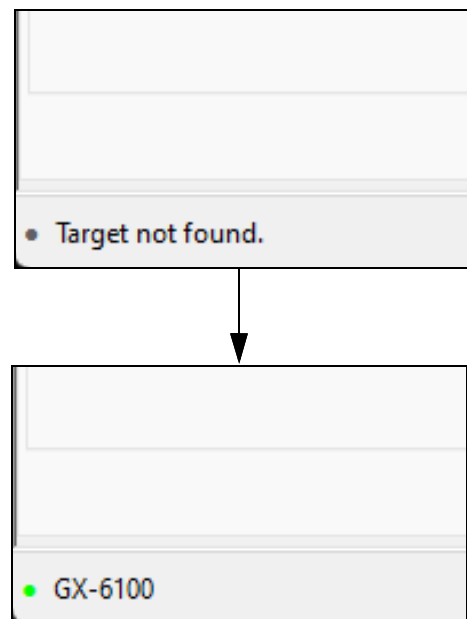
**Figure 4: Aligning the GX-6100 with the Cable Infrared Port**

4. Press and hold the POWER ENTER RESET button on the GX-6100 until you hear a beep, then release it.
5. The GX-6100 will begin its power up sequence. If **Leak Check Mode** or **Bar Hole Mode** are enabled, the Mode Select screen appears. Press POWER MODE to continue the power up sequence.

If you do not press a button for 20 seconds, the instrument will automatically continue. If a successful connection between the GX-6100 and the computer occurs, the **Read** control button becomes active.

The connection status is displayed in the bottom left corner of the program window.

6. You can now retrieve the connected instrument's configuration information using the **Read** control button. You must retrieve the connected instrument's configuration information before you can perform any operation.



**Figure 5: Connection Status**



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# Control Buttons

There are 6 control buttons on the main screen: **Change password**, **Read**, **Write**, **PID**, **Power OFF**, and **Quit**. These buttons are used for communication between the GX-6100 and the GX-6100 Configuration Program.



**Figure 6: Main Program Buttons**

## ***Change Password***

Use **Change Password** to change the password needed to enter the Configuration program. The default password is **1939** for User Mode and **0315** for Maintenance Mode.

If you accessed the Configuration program with the User Mode password, clicking **Change Password** will change the password required for accessing User Mode.

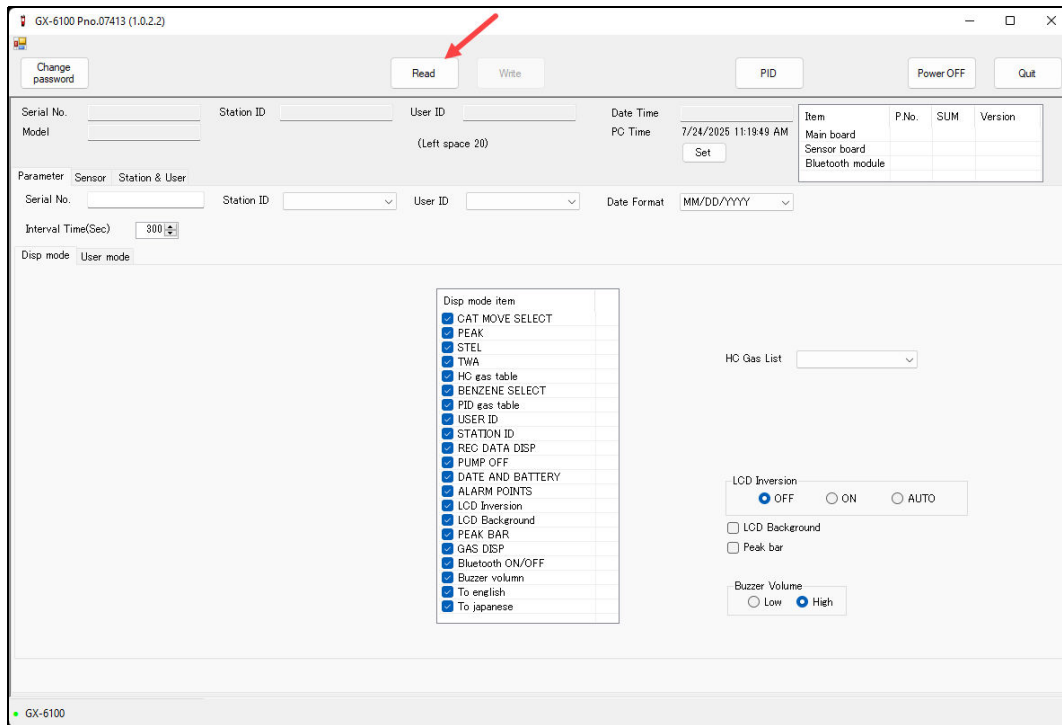
If you accessed the Configuration program with the Maintenance Mode password, clicking **Change Password** will change the password required for accessing Maintenance Mode.

## ***Reading GX-6100 Data (Read)***

Use **Read** to retrieve a connected instrument's general parameters, sensor information, and PID user-defined gas parameter configuration so they can be updated if desired. Follow these steps to read a connected instrument's parameter configuration and update parameters:

1. Launch the GX-6100 Configuration Program as described in "Launching the Program" on page 5.
2. Connect the GX-6100 to the Configuration Program as described in "Connecting the GX-6100 to the Configuration Program" on page 7.

- Click **Read** to retrieve the instrument's general parameters, sensor information, and PID user-defined gas parameter configuration. The program indicates that it is downloading information from the instrument.



**Figure 7: Downloading Parameter Tab Information**

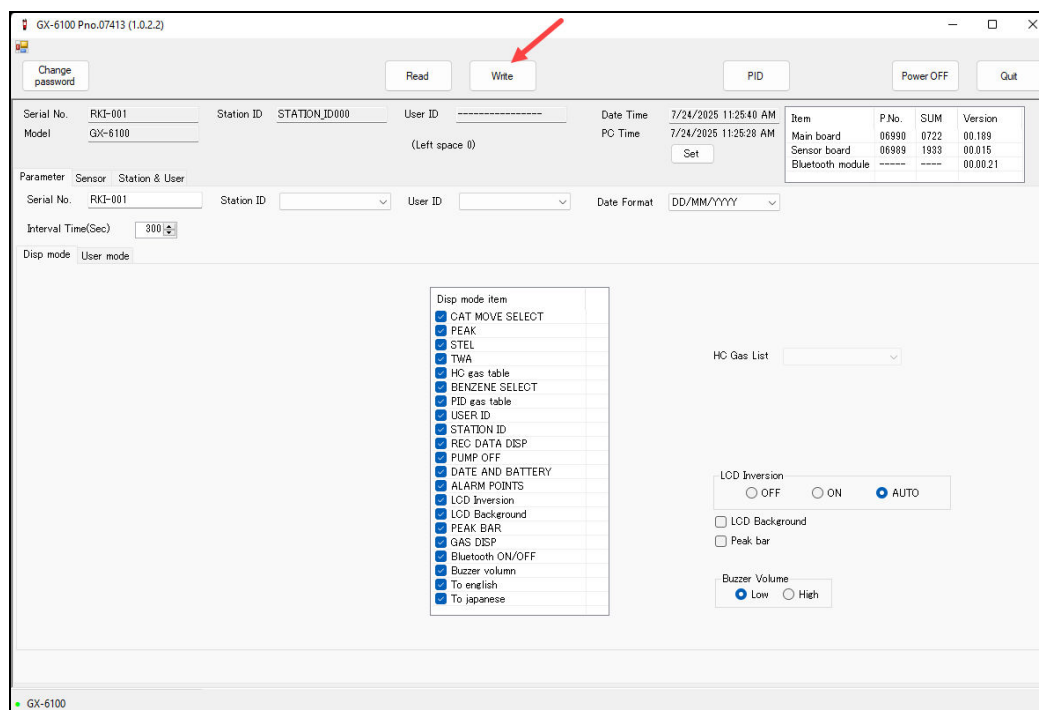
- The instrument's catalytic combustible user-defined gases, sensor information, and PID user-defined gas parameter configuration are now loaded in the Configuration Program. These parameters are available for updating.

## ***Writing to the GX-6100 (Write)***

Use **Write** to upload changes made using the Configuration program. This button only becomes enabled after data has been downloaded to the Configuration Program.

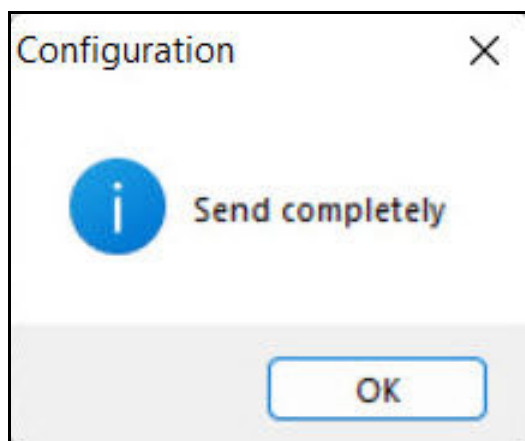
- Launch the GX-6100 Configuration Program as described in “Launching the Program” on page 5.
- Connect the GX-6100 to the Configuration Program as described in “Connecting the GX-6100 to the Configuration Program” on page 7.
- Use the GX-6100 Configuration Program to read settings from the instrument as described in “Reading GX-6100 Data (Read)” on page 9.
- Make any desired changes to the parameters in the Parameter, Sensor, or Station & User tabs.

- Click **Write** to transmit all changes to the instrument. The program indicates that it is writing information to the instrument.



**Figure 8: Writing Parameter Tab Information to the Instrument**

- The program displays a prompt when the information has been sent. Click **OK**.



**Figure 9: Writing Parameter Tab Information to the Instrument**

## PID

The **PID** button displays the pre-defined list of relative responses used for 10.6 eV, 10.0 eV, and 11.7 eV PID sensors. These responses can be re-defined and loaded onto the connected instrument. This button only becomes enabled after a GX-6100 is read with the Configuration Program.

See “PID Sensor Tab” on page 41 for a description of the PID list functionality.

## **Power OFF**

Use **Power OFF** to turn off the GX-6100 after all desired updates have been made. A prompt will appear asking for confirmation to turn off the instrument.

## **Quit**

Use **Quit** to close the GX-6100 Configuration Program. A prompt will appear asking for confirmation to close the program.

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**NOTE:** Be sure to turn off the GX-6100 instrument before closing the Configuration Program to prevent the GX-6100 from remaining on and draining battery voltage.

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## **Parameter Tab**

The **Parameter** tab contains parameters that are accessible through the Display Mode and User Mode (and Maintenance Mode if the Maintenance Mode password was entered at program startup). In addition, the following fields at the top of the Parameters tab are user-adjustable:

- Serial No.
- Station ID
- User ID
- Date Format
- Interval Time

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**NOTE:** Any adjustments made to the **Parameter** tab items must be written to the instrument in order for the instrument to register the parameter changes.

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# Display Mode Parameters

**Figure 10: Display Mode Section**

This section describes each parameter available in the Display Mode section.

The Display Mode parameters available for editing are in Table 1 along with their available choices and factory settings:

**Table 1: Display Mode Parameters**

Parameter Name	Available Choices	Factory Setting
Showing Display Mode Items	<ul style="list-style-type: none"> <li>• CAT MOVE SELECT (HC Select) Screen</li> <li>• PEAK Screen</li> <li>• STEL Screen</li> <li>• TWA Screen</li> <li>• HC Gas Table Screen</li> <li>• Benzene Select Screen</li> <li>• PID Gas Table Screen</li> <li>• User ID Screen</li> <li>• Station ID Screen</li> <li>• Rec Data Disp Screen</li> <li>• Pump Off Screen</li> <li>• Date and Battery Screen</li> <li>• Alarm Points Screen</li> <li>• LCD Inversion Screen</li> <li>• LCD Background Screen</li> <li>• Peak Bar Screen</li> <li>• Gas Disp Screen</li> <li>• Bluetooth ON/OFF Screen</li> <li>• Buzzer Volume Screen</li> <li>• To English Screen</li> <li>• To Japanese Screen</li> </ul>	All items enabled

**Table 1: Display Mode Parameters**

Parameter Name	Available Choices	Factory Setting
HC Gas List	<ul style="list-style-type: none"> <li style="width: 50%;">• CH4</li> <li style="width: 50%;">• n-C6H14</li> <li style="width: 50%;">• i-C4H10</li> <li style="width: 50%;">• C7H8</li> <li style="width: 50%;">• H2</li> <li style="width: 50%;">• n-C7H16</li> <li style="width: 50%;">• CH3OH</li> <li style="width: 50%;">• C8H10</li> <li style="width: 50%;">• C2H2</li> <li style="width: 50%;">• n-C9H20</li> <li style="width: 50%;">• C2H4</li> <li style="width: 50%;">• EtAc</li> <li style="width: 50%;">• C2H6</li> <li style="width: 50%;">• IPA</li> <li style="width: 50%;">• C2H5OH</li> <li style="width: 50%;">• MEK</li> <li style="width: 50%;">• C3H6</li> <li style="width: 50%;">• MMA</li> <li style="width: 50%;">• C3H6O</li> <li style="width: 50%;">• DME</li> <li style="width: 50%;">• C3H8</li> <li style="width: 50%;">• MIBK</li> <li style="width: 50%;">• C4H6</li> <li style="width: 50%;">• THF</li> <li style="width: 50%;">• C5H10</li> <li style="width: 50%;">• n-C5H12</li> <li style="width: 50%;">• C6H6</li> </ul>	CH4
LCD Inversion	OFF, ON, AUTO	OFF
LCD Background	On / Off	Off
Peak Bar	On / Off	Off
Buzzer Volume	Low / High	High

## **Showing Display Mode Items**

The Display Mode section contains a list of each Display Mode item. Selecting an item makes the menu item display when using the GX-6100 in Display Mode. The factory setting for all Display Mode screen in the list is **Selected/On**. The following sections describes each Display Mode screen.

### **• CAT MOVE SELECT (HC Select) Screen**

The **HC Select** screen is for selecting the unit of measurement for the combustible gas channel(s). This setting will only be displayed if both a catalytic and TC sensor are installed.

### **• PEAK Screen**

The peak screen displays the highest (lowest for oxygen) concentrations detected since the GX-6100 was turned on. Peak readings are stored in the GX-6100's memory until a higher level is detected (lower for oxygen), the peak reading is cleared, or the GX-6100 is turned off.

- **STEL Screen**

The STEL screen displays the short term exposure limit (STEL) readings for all channels that support a STEL reading. The STEL reading is the average reading over the last 15 minutes.

- **TWA Screen**

The TWA screen displays the time weighted average (TWA) readings for all channels that support a TWA reading.

The TWA reading is the average reading *over the last 8 hours*. If 8 hours have not elapsed since the last time the TWA reading was cleared, the average is still calculated over 8 hours. The missing time is assigned a 0 value for readings. If **Lunch Break** is set to **OFF**, the TWA is cleared when the GX-6100 is turned off.

If **Lunch Break** is set to **ON**, the GX-6100 will remember TWA readings when it is turned off so it can continue them when it is turned on again.

- **HC Gas Table Screen**

The **HC Gas Table** screen is for selecting the catalytic LEL channel's target gas. The settings are **CH<sub>4</sub>** (factory setting) if the instrument was calibrated to CH<sub>4</sub> and isobutane if the instrument was calibrated to isobutane.

- **Benzene Select Screen**

When selected, the Benzene Select screen allows the user to access Benzene Select Mode. Refer to the *GX-6100 Operator's Manual* for procedures on operating in Benzene Select Mode.

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**NOTE:** A PID-003L 10.0 eV/benzene sensor must be installed in order for the Benzene Select Mode screen to appear.

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- **PID Gas Table Screen**

The standard PID channel is configured for and calibrated to isobutylene.

If you select a different gas in the PID Gas Table in Display Mode, the instrument will retain that configuration until you change it again. Turning the instrument off and on does not change this setting.

If there are 2 PID sensors installed in your GX-6100, the PID Gas Name Screens will appear in Display Mode in the following order regardless of their position in the flow system: 10.0 eV/benzene, 10.6 eV, 11.7 eV.

- **User ID Screen**

Use this screen to select a user ID from the user ID list in the GX-6100's memory. The current user ID is displayed. A user ID can be up to 16 characters long. The GX-6100 can store up to 128 user IDs.

The user ID provides a way to identify the user during a data logging session.

- **Station ID Screen**

Use this screen to select a station ID from the station ID list in the GX-6100's memory. The current station ID is displayed. A station ID can be up to 16 characters long. The GX-6100 can store up to 128 station IDs.

The station ID provides a way to identify the location where a data logging session occurred.

- **Rec Data Disp Screen**

The Snap Logging screen displays data from previous snap logs stored on the instrument.

- **Pump Off Screen**

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**NOTE:** The GX-6100 is not a gas monitoring device while the pump is off.

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This menu item turns the internal pump off to prevent draining the battery while the instrument is not in active use. This can be useful if the instrument is being used intermittently throughout a monitoring session.

- **Date and Battery Screen**

The Battery Voltage screen displays the current battery voltage. Fully charged alkaline batteries typically indicate around 6.0 V; a fully charged Li-ion battery pack typically indicate 4.1 V. This screen also displays during the startup sequence.

- **Alarm Points Screen**

The Alarm Settings screen gives you the option to view the gas alarm settings for all active channels.

- **LCD Inversion Screen**

If LCD Inversion is set to **ON**, the instrument's LCD will automatically flip if the instrument is turned upside down.

- **LCD Background Screen**

With LCD Background enabled, the GX-6100's LCD colors will flip. The background will be black instead of white and the text will be white instead of black. With LCD Background disabled (factory setting), the LCD background will be white and the LCD text will be black.

- **Peak Bar Screen**

The Peak Bar screen allows you to show the peak readings for each channel in bar graph format. If the function is turned on, the peak bar appears along the right side of each gas reading in Measuring Mode and on the Peak Screen in Display Mode.

- **Gas Disp Screen**

The Gas Display screen allows the user to choose how the gas readings are displayed in Measuring Mode. The instrument returns to **DISPLAY ALL** when it is turned off and turned back on.



- **Bluetooth ON/OFF Screen**

The **BLUETOOTH** screen turns the GX-6100's Bluetooth functionality on and off.

- **Buzzer Volume Screen**

The **BUZZER VOLUME** screen allows you to adjust the volume of the instrument's buzzer: **HIGH** (factory setting) or **LOW**.

- **To English Screen**

If the GX-6100's screen language is not English, this menu item changes the language to English.

- **To Japanese Screen**

If the GX-6100's screen language is not Japanese, this menu item changes the language to Japanese.

## **HC Gas List**

This parameter allows you to set one of the following target gases for the %LEL sensor.

- |   |  |
|---|--|
| • CH <sub>4</sub> (methane)                     | • n-C <sub>6</sub> H <sub>14</sub> (hexane)    |
| • i-C <sub>4</sub> H <sub>10</sub> (isobutane)  | • C <sub>7</sub> H <sub>8</sub> (toluene)      |
| • H <sub>2</sub> (hydrogen)                     | • n-C <sub>7</sub> H <sub>16</sub> (heptane)   |
| • CH <sub>3</sub> OH (methanol)                 | • C <sub>8</sub> H <sub>10</sub> (xylene)      |
| • C <sub>2</sub> H <sub>2</sub> (acetylene)     | • n-C <sub>9</sub> H <sub>20</sub> (nonane)    |
| • C <sub>2</sub> H <sub>4</sub> (ethylene)      | • EtAc (ethyl acetate)                         |
| • C <sub>2</sub> H <sub>6</sub> (ethane)        | • IPA (isopropyl alcohol)                      |
| • C <sub>2</sub> H <sub>5</sub> OH (ethanol)    | • MEK (methyl ethyl ketone)                    |
| • C <sub>3</sub> H <sub>6</sub> (propylene)     | • MMA (methyl methacrylate)                    |
| • C <sub>3</sub> H <sub>6</sub> O (acetone)     | • DME (dimethyl ether)                         |
| • C <sub>3</sub> H <sub>8</sub> (propane)       | • MIBK (methyl isobutyl ketone)                |
| • C <sub>4</sub> H <sub>6</sub> (butyne)        | • THF (tetrahydrofuran)                        |
| • C <sub>5</sub> H <sub>10</sub> (cyclopentane) | • n-C <sub>5</sub> H <sub>12</sub> (n-pentane) |
| • C <sub>6</sub> H <sub>6</sub> (benzene)       |  |

## **LCD Inversion**

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**NOTE:** Even if **LCD Inversion** is set to **ON** or **AUTO**, all screens in User Mode and Maintenance Mode will not flip if the instrument is turned upside down.

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- **OFF** (factory setting): The GX-6100's LCD does not flip upside down regardless of the instrument's orientation. A **LOCK** symbol will appear at the top of the screen to indicate that the LCD's position is fixed.

- **ON:** The GX-6100's LCD is flipped upside down regardless of the instrument's orientation. A **LOCK** symbol will appear at the top of the screen to indicate that the LCD's position is fixed.
- **AUTO:** The LCD will automatically flip if the instrument is turned upside down. This allows for the LCD to be read with the instrument right side up or upside down. If desired, holding down the DISP/LOCK button will lock the screen in its current position and keep it from flipping.  
A **LOCK** symbol will flash at the top of the screen to indicate that the LCD's position is fixed. To unlock the LCD, hold the DISP/LOCK button until the **LOCK** symbol disappears.

## **LCD Background**

With **LCD Background** selected, the GX-6100's LCD colors will flip. The background will be black instead of white and the text will be white instead of black. With **LCD Background** not selected (factory setting), the LCD background will be white and the LCD text will be black.

## **Peak Bar**

The **Peak Bar** parameter allows you to turn the peak bar on or off (factory setting). If the function is selected, the peak bar appears on the GX-6100's LCD, along the right side of each gas reading in Measuring Mode and on the Peak Screen in Display Mode. It shows the peak readings for each channel in bar graph format. The factory setting is not selected.

## **Buzzer Volume**

The **Buzzer Volume** screen allows you to select the volume of the instrument's buzzer: **HIGH** (factory setting) or **LOW**.

# User Mode Parameters

GX-6100 Pno.08319 (1.0.2.8)

Change password Read Write PID Power OFF Quit

Serial No. 55Q0081301-9RN Station ID ----- User ID ----- Date Time 8/14/2025 5:12:16 AM  
 Model GX-6100 (Left space 0) PC Time 8/13/2025 1:12:35 PM  
 Set

Item	P.No.	SUM	Version
Main board	08283	7B10	01.002
Sensor board	06989	026F	01.000
Bluetooth module	-----	-----	00.00.21

Parameter Sensor Station & User Status

Serial No. 55Q0081301-9RN Station ID ----- User ID ----- Date Format MM/DD/YYYY

Interval Time(Sec) 300

Disp mode User mode Maintenance mode

Backlight Time(Sec) 30  
 Beep Time(Sec) 300  
 Beep Select Off  
☐ Need to get Bump Log  
☒ Automatic start after successful bump test  
☒ Automatic start after successful calibration  
☐ Lunch break  
☐ Alarm silence ☐ Leak alarm silence  
☐ Adjust CO2 sensor with air calibration  
☒ Key tone  
 Language English

☐ User Mode Password 0000  
☐ Stealth  
☐ Stealth vibration  
☐ Auto Fresh Air Adj  
☒ Zero Adjustment on demand  
☒ Gas alarm function  
☒ Gas alarm Latching  
☐ Panic  
☐ Man Down  
 Man Down 1 60  
 Man Down 2 75  
 Man Down Alarm 90

Bluetooth mode  
☐ Off  
☒ On(Advertising)  
☒ Auto shutoff when idle

Inert alarm  
 1st 5.0 %  
 2nd 10.0 %  
 3rd 10.0 %

☒ Cal Reminder  
 Cal Interval(Day) 365  
 Check gas  
☒ CH4  
☒ O2  
☒ H2S  
☒ CO  
☒ ----  
☒ ----  
☒ ----  
☒ ----  
 Cal past due Act  
☒ Confirm to Cal  
☐ Must Calibrate  
☐ Notification Only

☐ Bump Reminder  
 Bump Test Interval(Day) 30  
 Check gas  
☒ CH4  
☒ O2  
☒ H2S  
☒ CO  
☒ ----  
☒ ----  
☒ ----  
☒ ----  
 Bump Test Parameter  
 Bump Test Time(Sec) 30 Bump Test Threshold(%) 50  
☒ Calibration after Bump Test Failed Calibration Time(sec) after Bump Test Failed 90

Bump Test past due Act  
☒ Confirm to Bump  
☐ Must Bump Test  
☐ Notification Only

GX-6100

Figure 11: User Mode Section

The User Mode tab contains a group of general parameters as well as parameters for calibration and bump testing. The User Mode parameters available for adjustment are shown in Table 2 along with their choices and factory settings:

**Table 2: User Mode Bump/Cal Parameters**

	<b>Parameter Name</b>	<b>Available Choices</b>	<b>Factory Setting</b>
<b>General Parameters</b>	Backlight Time	0 - 255 (seconds)	30 (seconds)
	Beep Time	5 - 3600 (seconds)	300 (seconds)
	Beep Select	<ul style="list-style-type: none"> <li>• Off</li> <li>• LED</li> <li>• Buzzer</li> <li>• LED + Buzzer</li> <li>• Bump/Cal</li> <li>• Alarm Alert</li> <li>• Bump/Cal/Alarm</li> </ul>	Off
	Need to get Bump Log	On / Off	Off
	Auto Start After Successful Bump Test/Calibration	On / Off	On
	Lunch Break	On / Off	Off
	Alarm Silence	On / Off	On
	Leak Alarm Silence	On / Off	Off
	Adjust CO2 Sensor with Air Calibration	On / Off	Off
	Key Tone	On / Off	On
	Language	English, Japanese, Italian, Spanish, German, French, Portuguese, Russian, Korean, Chinese (SC), Chinese (TC), Vietnamese, Polish, Turkish, Slovak, Czech	English
	Bluetooth Mode	On / Off	On
	Bluetooth Auto Shutoff When Idle	On / Off	On
	User Mode Password	Four-digit password, (0-9)	0000

**Table 2: User Mode Bump/Cal Parameters**

	<b>Parameter Name</b>	<b>Available Choices</b>	<b>Factory Setting</b>
<b>General Parameters</b>	Stealth	On / Off	Off
	Stealth Vibration	On / Off	Off
	Auto Fresh Air Adjust	On / Off	Off
	Zero Adjustment on Demand	On / Off	On
	Gas Alarm Function	On / Off	On
	Gas Alarm Latching	On / Off	On
	Panic	On / Off	On
	Man Down Alarms	On / Off	Off
		Man Down 1: 10 - 250 (seconds)	60 (seconds)
		Man Down 2: 10 - 250 (seconds)	75 (seconds)
		Man Down Alarm: 10 - 250 (seconds)	90 (seconds)
	Inert Mode Alarms	0.0% - 100.0% (Alarm 1 < Alarm 2 < Alarm 3)	5.0%
		0.0% - 100.0% (Alarm 1 < Alarm 2 < Alarm 3)	10.0%
		0.0% - 100.0% (Alarm 1 < Alarm 2 < Alarm 3)	10.0%
<b>Bump Test/Calibration Parameters</b>	Bump/Cal Reminder	On / Off	Bump Reminder: Off Cal Reminder: On
	Bump/Cal Interval (Day)	0 - 365	Bump Interval: 30 (days) Cal Interval: 90 (days)
	Check Gas (Bump and Cal)	On / Off	All gases enabled
	Bump/Cal Past Due Action	<ul style="list-style-type: none"> <li>• Confirm to Cal</li> <li>• Must Calibrate</li> <li>• Notification Only</li> </ul>	Confirm to Bump Test/Cal
	Bump Test Time (Sec)	30, 45, 60, 90 (seconds)	30 (seconds)
	Bump Test Threshold(%)	10 - 50%	50%

**Table 2: User Mode Bump/Cal Parameters**

	<b>Parameter Name</b>	<b>Available Choices</b>	<b>Factory Setting</b>
<b>Bump Test/ Calibration Parameters</b>	Auto Cal If Bump Fails	On / Off	On
	Calibration Time After Failed Bump	90 - 120 (seconds)	90 (seconds)

## **Backlight Time**

This setting indicates the length of time the LCD illuminates when any button is pressed. The minimum setting is **0**; the maximum setting is **255** seconds. The factory setting is **30** seconds.

## **Beep Time**

The **Beep Time** parameter defines how often the confirmation alert or non-compliance indicator selected in **Beep Select** occurs. This setting only applies if the **Beep Select** parameter is set to something other than **Off**. The range of available values are **5-3600** minutes in 1-second increments. The factory setting is **300** seconds.

## **Beep Select**

**Beep Select** defines what kind of confirmation or non-compliance indication you want to occur in Measuring Mode. The available choices are:

- **Off** (factory setting): The GX-6100 does not provide a confirmation alert or non-compliance indicator.
- **LED**: The GX-6100's LEDs double flash as often as defined by the **Beep Time** parameter to verify that the instrument is operating.
- **Buzzer**: The GX-6100's buzzer double beeps as often as defined by the **Beep Time** parameter to verify that the instrument is operating.
- **LED+Buzzer**: The GX-6100's LEDs double flash and the buzzer double beeps as often as defined by the **Beep Time** parameter to verify that the instrument is operating.
- **Bump/Cal**: If a bump test or a calibration is due and if **Bump/Cal Reminder** is set to **CONFIRM** or **NONE**, the GX-6100's LEDs double flash as often as defined by the **Beep Time** parameter to indicate a non-compliance. Once a bump test or calibration (depending on which is due) is done, the LEDs stop flashing.
- **Alarm Alert**: If the instrument goes into any gas alarm, the LEDs double flash as often as defined by the **Beep Time** parameter to indicate a non-compliance. Once a successful bump test or calibration is done, the LEDs stop flashing.
- **Bump/Cal/Alarm**: The LEDs double flash to indicate a non-compliance if any of the following are true:
  - **Bump/Cal Past Due Action** is set to **Confirm To Bump Test/Cal** or **Notification Only** and a bump test/calibration is due (cleared by successful bump test/calibration).
  - The instrument goes into any gas alarm (cleared by successful bump test or calibration).

## **Need to get Bump Log**

- **Selected:** In order to clear an alarm non-compliance, you must perform a successful bump test or calibration and download the instrument data. Instrument data can be downloaded being either a) connecting to the PC Program and performing a **Download** operation or b) connecting to the GX-6100 Data Logger program and performing a **Complete Download**.
- **Deselected** (factory setting): In order to clear an alarm non-compliance, you must only perform a successful bump test or calibration.

## **Auto Start After Successful Bump Test/Calibration**

- **Selected** (factory setting): If only one calibration cylinder is assigned, the GX-6100 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-6100 does not automatically start its warmup sequence after a successful bump test or calibration.

## **Lunch Break**

- **Deselected** (factory setting): The GX-6100 automatically starts new TWA and PEAK reading collection and resets the time in operation at startup.
- **Selected:** The **Lunch Break** screen displays during startup. From this screen, you can choose to continue accumulating TWA and PEAK readings and the time in operation from the last time the GX-6100 was used or start collecting new readings and reset the time in operation.

## **Alarm Silence**

- **Selected** (factory setting): Pressing and releasing the RESET button silences the buzzer when the GX-6100 is in alarm. The LEDs continue to flash, the vibrator continues to pulse, and the display continues to show the alarm. If you enter Display Mode during an alarm condition, the buzzer will be silenced but the LEDs will continue to flash and the vibrator will continue to pulse. If you return to Measuring Mode and there is still an alarm condition, the LEDs will continue to flash, the vibrator will continue to pulse, and the buzzer will remain off.
- **Deselected:** You cannot silence the buzzer. If you enter Display Mode during an alarm condition, the buzzer will not be silenced, the LEDs will continue to flash, and the vibrator will continue to pulse.

## **Leak Alarm Silence**

This setting only applies to Leak Check Mode and does not affect buzzer operation in Normal Mode. When the buzzer is turned off, **NO ALARM** appears at the top of the screen. If the **Alarm Silence** parameter is deselected, then it will remain off in Leak Check Mode even if you enter Normal Mode and return to Leak Check Mode or turn the unit off and on unless the buzzer is manually turned on.

## **Adjust CO<sub>2</sub> Sensor with Air Calibration**

- **Selected:** CO<sub>2</sub> channel is set to 400 ppm (0.04% VOL.) during a demand zero, auto zero, or **AIR CAL**.
- **Deselected** (factory setting): CO<sub>2</sub> channel is not adjusted during a demand zero, auto zero, or **AIR CAL**.

## **Key Tone**

- **Selected** (factory setting): The instrument will beep every time a button is pressed.
- **Deselected:** The instrument will not beep when a button is pressed.

## **Language**

This parameter affects the language used in the GX-6100 displays. The following languages are supported: English (factory setting), Japanese, Italian, Spanish, German, French, Portuguese, Russian, Korean, Chinese (SC), Chinese (TC), Vietnamese, Polish, Turkish, Slovak, and Czech.

## **Bluetooth Mode**

The **BLUETOOTH** screen turns the GX-6100's Bluetooth functionality on and off.

- **ON** (factory setting): Turns Bluetooth functionality on, allowing for connection to the RK Link app on your phone
- **OFF:** Bluetooth functionality is turned off.

## **Bluetooth Auto Shutoff When Idle**

Select or deselect **BLE auto shutoff when idle**.

- **Selected** (factory setting): If the GX-6100 does not pair to a phone in the first 5 minutes after startup, the GX-6100's Bluetooth gets shut off to conserve battery life.
- **Deselected:** If the GX-6100 does not pair to a phone, the GX-6100's Bluetooth stays on indefinitely.

## **User Mode Password**

If **User Mode Password** is selected (factory setting), a password will be required to enter the GX-6100 User Mode. If **User Mode Password** is set to not selected, no password is required to enter the GX-6100 User Mode. The default password is **0000**.

## **Stealth**

- **Selected:** The instrument's backlight does not come on, regardless of the **Backlight Time** setting. The instrument's LEDs do not come on for any reason, even alarm conditions. The instrument's buzzer does not sound for any reason, even alarm conditions.
- **Deselected** (factory setting): The instrument's backlight and LEDs operate normally.



## **Stealth Vibration**

The **Stealth Vibration** setting only affects instrument operation if **Stealth** is set to **On**.

- **ON:** The vibrator activates for alarm conditions. It can be useful to have this feature turned on if you have also turned **Stealth** on.
- **OFF** (factory setting): The vibrator does not activate for any reason.

## **Auto Fresh Air Adjust**

With **Auto Fresh Air Adjust** selected, the GX-6100 will prompt you to perform a fresh air adjustment after the start up sequence. If **Auto Fresh Air Adjust** is not selected (factory setting), the GX-6100 will not perform a fresh air adjustment after the start up sequence.

## **Zero Adjustment on Demand**

With Zero Adjust on Demand selected (factory setting), you can manually perform a fresh air adjust in Measuring Mode by pressing the ▲ AIR button. With Zero Adjust on Demand not selected, you cannot manually perform a fresh air adjust in Measuring Mode.

## **Gas Alarm Function**

- **Selected** (factory setting): The instrument's gas alarms operate as normal.
- **Deselected:** The gas alarms will not operate during alarm conditions. **NO ALM** will be displayed at the top of the LCD.

---

**NOTE:** Fault alarms will always operate normally, regardless of the **Gas Alarm Function** setting.

---

## **Gas Alarm Latching**

- **Selected** (factory setting): The GX-6100 remains in alarm condition until the alarm condition passes *and* the RESET button is pressed.
- **Deselected:** The GX-6100 automatically resets an alarm when the alarm condition passes.

## **Panic**

- **Selected** (factory setting): A Panic Alarm can be manually initiated by holding down the SHIFT ▼(PANIC) button.
- **Deselected:** A Panic Alarm cannot be manually initiated.

## **Man Down Alarms**

- **Selected:** The **Man Down** alarm can be triggered if the instrument detects no motion for the period of time defined by **Man Down 1**, **Man Down 2**, and **Man Down Alarm**. When setting the Man Down alarms, keep in mind that **Man Down 1 < Man Down 2 < Man Down Alarm**.
- **Deselected** (factory setting): The **Man Down** alarms cannot be triggered.

## **Inert Mode Alarms**

Alarm points used in the Inert Mode can be defined for the oxygen channel. The factory settings are **5.0%** for the **1st** alarm and **10.0%** for the **2nd** and **3rd**. When setting the Inert Mode alarms, keep in mind that Alarm 1 < Alarm 2 < Alarm 3.

## **Bump/Cal Reminder**

- **Selected** (factory setting for **Cal Reminder**): The GX-6100 will give an indication at start up if it is due for bump test/calibration. The type of indication will depend on the **Cal/Bump Past Due Action** settings.
- **Deselected** (factory setting for **Bump Test Reminder**): The GX-6100 will not give an indication at start up if it is due for calibration.

## **Bump/Cal Interval (Day)**

This setting defines the amount of time between bump test/calibration reminders. The time can be set in 1-day increments. The minimum setting is **1** day and the maximum setting is **365** days. The factory setting for the **Bump Interval** is **30** days. The factory setting for the **Cal Interval** is **90** days.

## **Check Gas (Bump and Cal)**

This item defines which sensors' bump test and calibration data are used to update the bump test/calibration reminder screens. Each sensor can be individually selected or deselected. The factory setting for all sensors is **Selected**.

## **Bump/Cal Past Due Action**

This item defines what indication is given during start up when a bump test or calibration is due and **Bump/Cal Reminder** is selected.

- **Confirm to Bump Test/Cal** (factory setting for **Bump/Cal Reminder**): The GX-6100 will give an indication at start up if bump test/calibration is past due and will require the user to decide whether to perform a bump test/calibration or continue and use the GX-6100 without bump testing/calibrating. Press and release RESET to continue without bump testing/calibrating or POWER/ENTER to perform a bump test/calibration.
- **Must Bump Test/Calibrate**: If the unit is due for bump test/calibration, the GX-6100 will give an indication at start up that bump test/calibration is past due and will prompt you to enter User Mode and perform a bump test/calibration.
- **Notification Only**: The GX-6100 will give an indication at startup that bump test/calibration is past due. If desired, the POWER/ENTER button can be pressed to enter User Mode and perform a bump test/calibration but it is not necessary to acknowledge the notification.

## **Bump Test Time (Sec)**

The **Bump Test Time** is the amount of time that the instrument is exposed to gas during a bump test. The available choices are **30** seconds (factory setting), **45** seconds, **60** seconds, and **90** seconds.

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**NOTE:** RKI Instruments, Inc. recommends a **Bump Test Time (Sec)** of **60** seconds for instruments with Cl<sub>2</sub> or NH<sub>3</sub> sensors.

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## **Bump Test Threshold(%)**

The **Bump Test Threshold** is the bump test tolerance value and is represented as a percentage. It is the percentage that the bump test reading can differ from the actual gas concentration for a bump test to be considered successful. If the bump test reading differs more, the bump test will fail. The available values are **10%**, **20%**, **30%**, **40%**, and **50%** (factory setting).

## **Auto Cal If Bump Fails**

- **Selected** (factory setting): If a bump test fails, the unit will automatically begin a calibration.
- **Deselected**: If a bump test fails, a calibration does not automatically start.

## **Calibration Time After Failed Bump**

The **Calibration Time After Failed Bump** is the total time the instrument is exposed to calibration gas when a bump test fails if **Auto Cal If Bump Fails** is set to **ON**. The bump test time is deducted from the calibration time.

For example, if this parameter is set to 90 seconds and the **Bump Test Time** is set to 30 seconds, if the bump test fails, the GX-6100 will only be exposed to gas for an additional 60 seconds. The available values are **90** seconds (factory setting), and **120** seconds.

# Maintenance Mode Parameters

GX-6100 Pno.07413 (1.0.2.2)

Change password Read Write PID Power OFF Quit

Serial No. RKT-001 Station ID STATION\_ID000 User ID (Left space 0) Date Time 7/16/2025 9:25:28 AM  
Model GX-6100 PC Time 7/16/2025 9:25:21 AM

Parameter Sensor Station & User Status

Serial No. RKT-001 Station ID User ID Date Format DD/MM/YYYY

Interval Time(Sec) 300

Disp mode User mode Maintenance mode

LCD Contrast 25

Maintenance Password 9999

DES sensor fixed at low range

Mode selection: Inert (checked), Leak, Bar hole

Leak display: Peak only (checked), with CO, with O2

Bar hole Measuring(Sec) 30

Maintenance Notice: Interval(Day) 365

Check gas: CH4 (checked), O2 (checked), H2S (checked), CO (checked), CH4 (checked), CO2 (checked), CH4 (checked)

Past due Act: Confirm to Cal (checked), Must Calibrate, Notification Only

Notice date: CH1 8/17/2023, CH2 8/17/2023, CH3 8/17/2023, CH4 8/17/2023, CH5 8/17/2023, CH6 8/17/2023, CH7 8/17/2023

Restore Def

Item P.No. SUM Version  
Main board 06990 0722 00.189  
Sensor board 06989 1933 00.015  
Bluetooth module 00000 0000 00.0021

GX-6100

**Figure 12: Maintenance Mode Section**

This section describes each parameter available in the Maintenance Mode section.

The Maintenance Mode parameters available for editing are shown in Table 3 along with their choices and factory settings:

**Table 3: Maintenance Mode Parameters**

Parameter Name	Available Choices	Factory Setting
LCD Contrast	1 - 50	25
Mode Selection	Inert (On / Off) Leak (On / Off) Bar Hole (On / Off)	Deselected (Unless specified when ordering)
Bar Hole Measuring Time	30, 45, 60 (seconds)	30 (seconds)
Leak Display	• Peak Only • With CO • With O2	Peak Only
Maintenance Password	On / Off, Four-digit password, (0-9)	On, 9999
DES Sensor Fixed At Low Range	On / Off	Off

## **LCD Contrast**

Use the **LCD** menu to adjust the contrast of the instrument display. The contrast settings range from **1** to **50** (factory default is **25**).

## **Mode Selection**

Selecting one or more of the following items displays the mode in the Mode Select screen when the unit is turned on.

- **Inert Mode**
- **Bar Hole Mode**
- **Leak Check Mode**

The modes are all deselected when a unit is shipped, unless a particular mode is requested to be enabled when ordering.

---

**NOTE:** Bar Hole Mode will only appear as a choice in the Mode Select screen if **Bar Hole Mode** is selected and an IR CH<sub>4</sub> or IR HC sensor is installed in the Smart Sensor 1 Position. A MOS or catalytic sensor has to be installed for **Leak Check Mode** to appear as a choice in startup.

---

## **Bar Hole Measuring Time**

The Bar Hole Measuring Time is the duration of a bar hole operation. The available choices are **30** seconds (factory setting), **45** seconds, and **60** seconds.

## **Leak Display**

- **Peak Only:** The peak screen displays the highest concentrations detected since the GX-6100 was turned on. Peak readings are stored in the GX-6100's memory until a higher level is detected, the peak reading is cleared, or the GX-6100 is turned off.
- **With CO:** The CO channel is displayed with the combustible gas channel
- **With O2:** The O<sub>2</sub> channel is displayed with the combustible gas channel

## **Maintenance Password**

If **Maintenance Password** is selected (factory setting), a password will be required to enter the GX-6100 Maintenance Mode. If **Maintenance Password** is not selected, no password is required to enter the GX-6100 Maintenance Mode. The default password is **9999**.

## **DES Sensor Fixed At Low Range**

- **Selected:** The DES sensor (CH<sub>4</sub> or HC) channel only displays %LEL measurements.
- **Deselected** (factory setting): The DES sensor (CH<sub>4</sub> or HC) channel can display %LEL to %VOL measurements.

# Sensor Tab

Figure 13: Sensor Tab

The Sensor tab is broken up into 7 sections, one for each available channel and an additional section for the TE sensor. After the instrument is read, channels will be populated with data if the corresponding sensor is installed in the GX-6100.

## Target Gas/Detection Range/Sensor Name

Each channel's target gas and range will be displayed in each section.

### Combustible Gas Channel Setting

The combustible gas channel sensor profiles can be switched between the NCR (catalytic %LEL) and TE (%VOL) types by clicking on the **NC** or **TE** tabs.

Figure 14: Switching Between NCR and TE Sensors Tabs

## Sensor Position Setting

The sensors installed in the GX-6100 can be re-assigned to different positions using the **Position** dropdown in the each section, which affect their channel reading placement on the LCD. Refer to the following figure for each sensor placement on the instrument LCD.

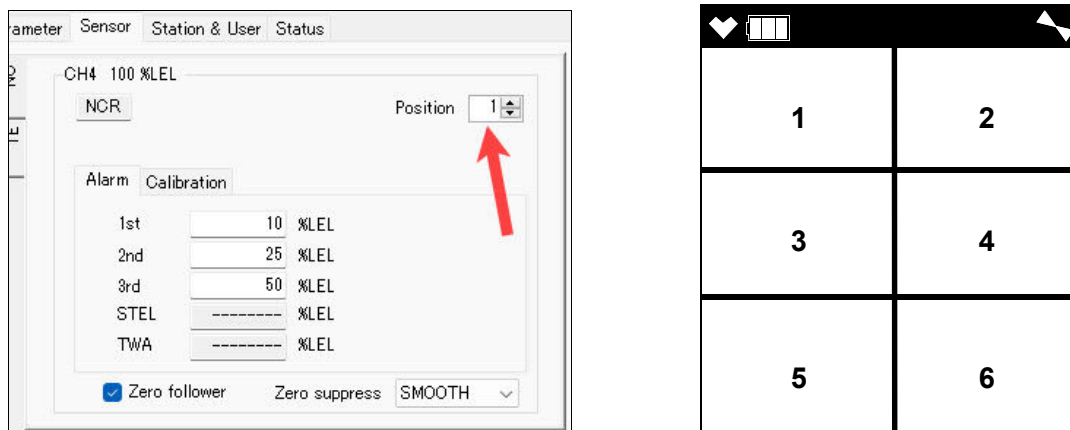


Figure 15: Sensor Positions

## Alarm Parameters

The factory settings for each alarm type are sensor-dependent. Refer to the following table for each alarm's available range and factory setting.

Gas / Sensor		Lowest Alarm Point	Highest Alarm Point
Methane (CH <sub>4</sub> ) Propane (C <sub>3</sub> H <sub>8</sub> )	NCR-6309	1% LEL	60% LEL
Oxygen (O <sub>2</sub> )	ESR-X13P	0.0%	25.0%
Hydrogen Sulfide (H <sub>2</sub> S)	ESR-A13i/ESR-A1DP	0.5 ppm	200.0 ppm
Carbon Monoxide (CO)	ESR-A13P/ESR-A1DP/ESR-A1CP	12 ppm	2,000 ppm
Sulfur Dioxide (SO <sub>2</sub> )	ESS-03DH	0.00 ppm	99.90 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	ESS-03DH	0.00 ppm	20.00 ppm
Hydrogen Cyanide (HCN)	ESS-03DH	0.0 ppm	15.0 ppm
Ammonia (NH <sub>3</sub> )	ESS-B332	0.0 ppm	400.0 ppm
Chlorine (Cl <sub>2</sub> )	ESS-B335	0.00 ppm	10.00 ppm
Phosphine (PH <sub>3</sub> )	ESS-03DH	0.00 ppm	20.00 ppm
Isobutane (HC (i-C <sub>4</sub> H <sub>10</sub> ))	DES-3311-2	0% LEL	30.0 VOL%
Methane (CH <sub>4</sub> )	DES-3311-3	0% LEL	100.0 VOL%

Gas / Sensor		Lowest Alarm Point	Highest Alarm Point
Carbon Dioxide (CO <sub>2</sub> , VOL%)	DES-3311-1	0.00 VOL%	10.00 VOL%
Carbon Dioxide (CO <sub>2</sub> , ppm)	DES-3311-4	0 ppm	10,000 ppm
Volatile Organic Compounds (VOCs), (10.6 eV, 40 ppm)	PID-001A	0 ppb	40,000 ppb
VOCs (10.6 eV, 40,000 ppm)	PID-002A	0.0 ppm	4,000 ppm
VOCs (10.0 eV, 100 ppm)	PID-003	0.00 ppm	100.0 ppm
VOCs (11.7 eV, 1000 ppm)	PID-004	0.0 ppm	1,000 ppm

## ***Reset Alarm Point Button***

Use **Reset Alarm Point** to reset all alarm points to their factory settings.

## ***Calibration Parameters***

The Configuration Program includes two parameters for calibrating each channel: the gas concentration used during calibration and the cylinder assignment for each channel.

### **Cal Concentration**

The calibration concentration can be adjusted by editing the value in the channel's calibration value field.

### **Cylinder Assignment (A-G)**

The cylinder assignment allows you to group channels together for calibration. As shipped from the factory, the standard 4 channels (combustible gas, O<sub>2</sub>, H<sub>2</sub>S, and CO) are assigned to Cylinder A, H<sub>2</sub> for the H<sub>2</sub>-compensated CO sensor is assigned to Cylinder D, and installed TE sensors are assigned to Cylinder G.

There are 7 cylinder assignments available: A, B, C, D, E, F, and G. To calibrate each channel with separate cylinders, assign each channel to a different cylinder (i.e. Cylinder A: combustible gas, Cylinder B: O<sub>2</sub>, Cylinder C: H<sub>2</sub>S, Cylinder D: CO).

## ***Zero Follower***

The zero points for the sensors used in the product may fluctuate when used for extended periods. The zero follower function stabilizes the zero point by adjusting reading fluctuations at the zero point that result from extended periods of use.

All sensors except catalytic, TC, and O<sub>2</sub> sensors have zero follower enabled by default.



## Zero Suppression

The zero suppression function is designed to suppress notifications of reading fluctuations around zero. The function suppresses reading fluctuations below the set value and displays zero instead (or 20.9% for an oxygen sensor).

The factory setting is sensor-dependent. This parameter has the following 3 settings:

- **OFF**: Readings will appear as they are measured, without any suppression or smoothing.
- **CUT**: Readings below the zero suppression value will appear as 0. Readings at the zero suppression value and above will appear as they are measured.
- **SMOOTH**: Readings between 0 and the zero suppression level will slowly ramp up to the zero suppression level.

Even when enabled, the zero suppression function will function only in Measurement Mode and Display Mode.

All readings in the range from zero to the negative suppression value indicated in the following table are suppressed. Values from the negative suppression value to the **M OVER** value will be displayed, but accurate measurements cannot be achieved in this state. Fresh air adjustment should be performed.

Suppression is not applied with the thermal conductivity type sensor (TE sensor) even when the suppression function is enabled in the configuration program.

Due to export restrictions, hydrogen cyanide sensors indicate concentrations of less than 0.4 ppm as 0.0 ppm, regardless of the suppression function setting.

The **Zero Suppress** setting is not intended for field adjustment. The zero suppression values for each channel are shown below:

**Table 4: Zero Suppression Settings**

Sensor	Detection Target gas	Suppression Value	Suppression Type (Factory Setting)	Negative Suppression Value
NCR-6309	Methane (CH <sub>4</sub> ) Propane (C <sub>3</sub> H <sub>8</sub> )	2% LEL	SMOOTH	-5% LEL
ESR-X13P	Oxygen (O <sub>2</sub> )	20.9% ± 0.5% (20.4 – 21.4%)	SMOOTH	-0.5%
ESR-A13i	Hydrogen sulfide (H <sub>2</sub> S)	0.3 ppm	CUT	-1.5 ppm
ESR-A1DP	Hydrogen sulfide (H <sub>2</sub> S)	0.3 ppm	CUT	-1.5 ppm
ESR-A1DP	Carbon monoxide (CO)	2 ppm	CUT	-25 ppm
ESR-A13P	Carbon monoxide (CO)	2 ppm	CUT	-25 ppm

**Table 4: Zero Suppression Settings**

<b>Sensor</b>	<b>Detection Target gas</b>	<b>Suppression Value</b>	<b>Suppression Type (Factory Setting)</b>	<b>Negative Suppression Value</b>
ESR-A1CP	Carbon monoxide (CO)	2 ppm	CUT	-25 ppm
PID-001LA	Volatile organic compounds (VOC, 10.6 eV, ppb)	N/A	N/A	-200 ppb
PID-002LA	Volatile organic compounds (VOC, 10.6 eV, ppm)	N/A	N/A	-20.0 ppm
PID-003	Volatile organic compounds (VOC, 10.0 eV, ppm)	N/A	N/A	-0.50 ppm
DES-3311-2	Isobutane (HC (i-C <sub>4</sub> H <sub>10</sub> ))	2% LEL	SMOOTH	-5% LEL
DES-3311-3	Methane (CH <sub>4</sub> )	2% LEL	SMOOTH	-5% LEL
DES-3311-1	Carbon dioxide (CO <sub>2</sub> , vol%)	N/A	N/A	-0.5 vol%
DES-3311-4	Carbon dioxide (CO <sub>2</sub> , ppm)	N/A	N/A	-500 ppm
ESS-03DH	Sulfur dioxide (SO <sub>2</sub> )	0.10 ppm	SMOOTH	-4.99 ppm
ESS-03DH	Nitrogen dioxide (NO <sub>2</sub> )	0.15 ppm	SMOOTH	-1.00 ppm
ESS-03DH	Hydrogen cyanide (HCN)	N/A	N/A	-0.7 ppm
ESS-03DH	Phosphine (PH <sub>3</sub> )	0.02 ppm	SMOOTH	-0.25 ppm
ESS-B332	Ammonia (NH <sub>3</sub> )	2.0 ppm	SMOOTH	-20.0 ppm
ESS-B335	Chlorine (Cl <sub>2</sub> )	0.20 ppm	SMOOTH	-0.50 ppm
SHS-8661	Isobutane (HC (i-C <sub>4</sub> H <sub>10</sub> ))	N/A	N/A	-100 ppm
SHS-8661	Methane (CH <sub>4</sub> )	N/A	N/A	-250 ppm

# Station & User Tab

The Station & User tab displays a list of Station IDs and User IDs. A generic list of Station/User IDs are loaded into the GX-6100 at the factory. These are user-defined parameters that may only be configured using the Configuration Program. Up to 128 Station IDs and up to 32 User IDs may be defined. When connecting an instrument, the lists will be blank. In order to access either the User or Station ID lists from the instrument, press the **Read** button to download each list.

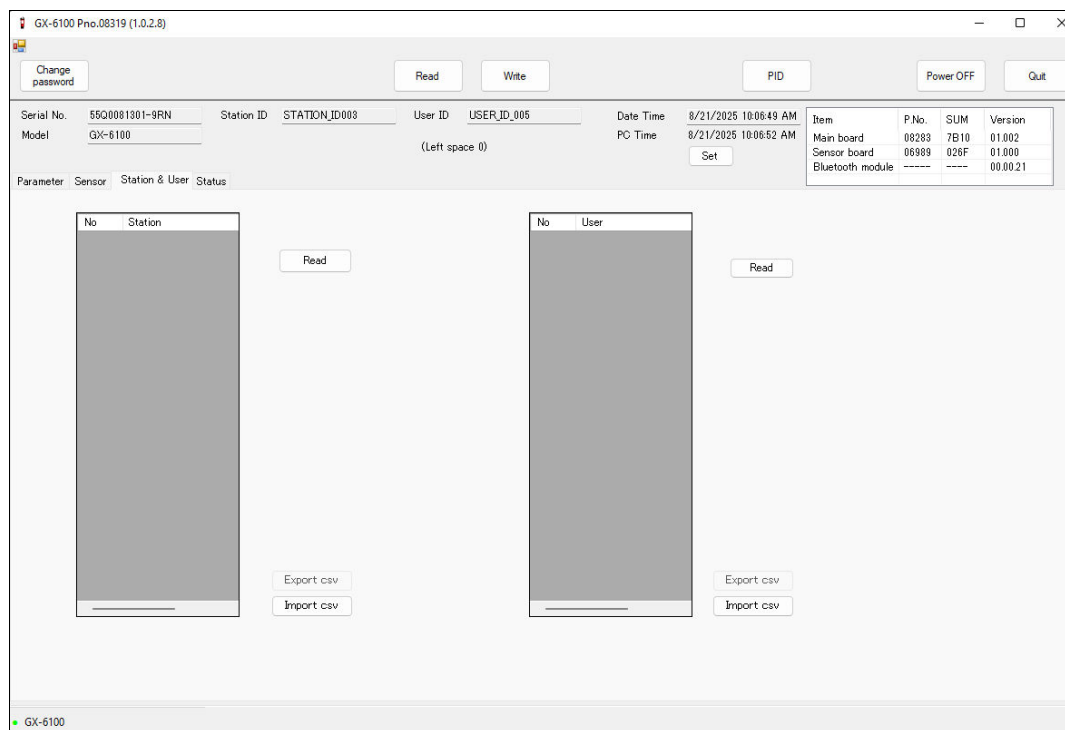


Figure 16: Station & User Tab (Empty Lists)

## Reading User and Station IDs

To load an instrument's User and Station IDs into the program, do the following:

1. Launch the GX-6100 Configuration Program and connect the instrument as described in "Connecting the GX-6100 to the Configuration Program" on page 7.
2. Download the instrument data to the program by pressing **Read**.
3. Click **Station & User**. Two columns for the Station and User ID lists will be displayed without data.
4. Click **Read** next to the Station ID column to retrieve this information from the unit. The instrument's Station IDs will appear.
5. Click **Read** next to the User ID column to retrieve this information from the unit. The instrument's User IDs will appear.

6. The instrument’s user and station ID lists are now loaded in the Configuration Program.

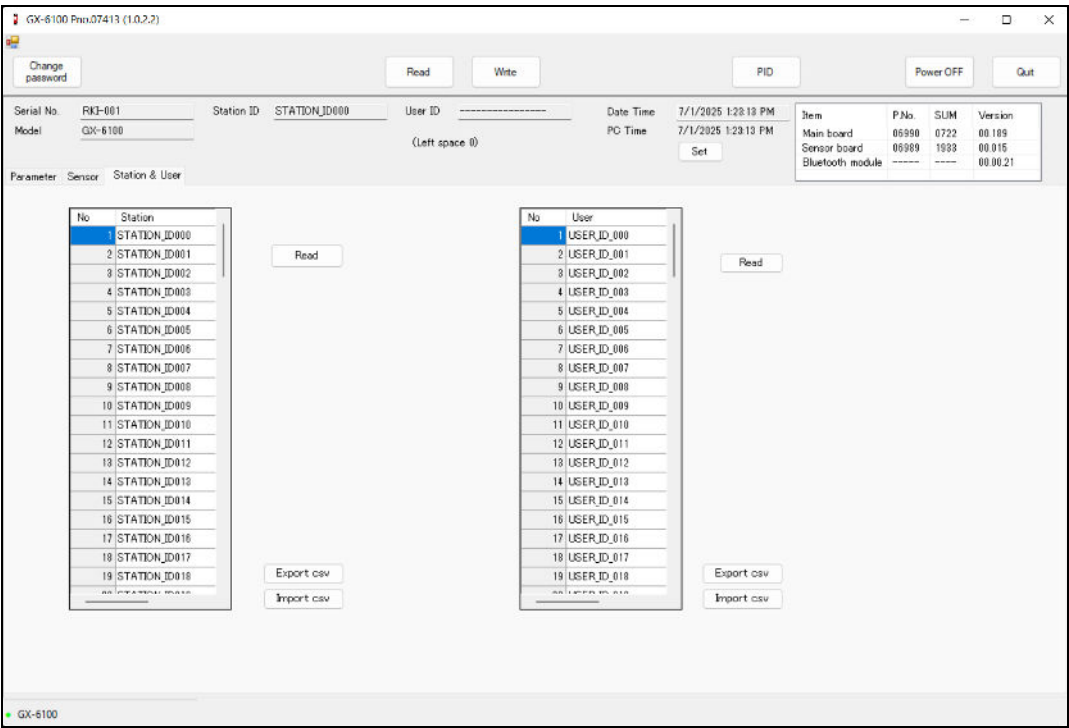


Figure 17: Station & User Tab (Lists Loaded)

7. Station/User ID lists can be edited either directly in the GX-6100 Configuration Program or by editing and importing CSV files. The following sections cover each method.

## Editing the Station/User IDs Directly with the Configuration Program

To edit and assign an instrument’s User and Station IDs using the program, do the following:

1. Load the instrument’s user and station ID lists as described in “Reading User and Station IDs” on page 35.
2. After loading in the list(s), select an ID’s text field by clicking its text. Select the entire text and delete it.

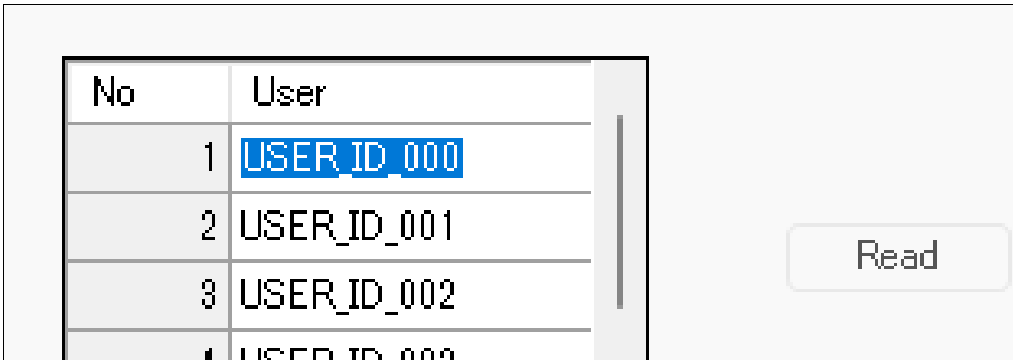
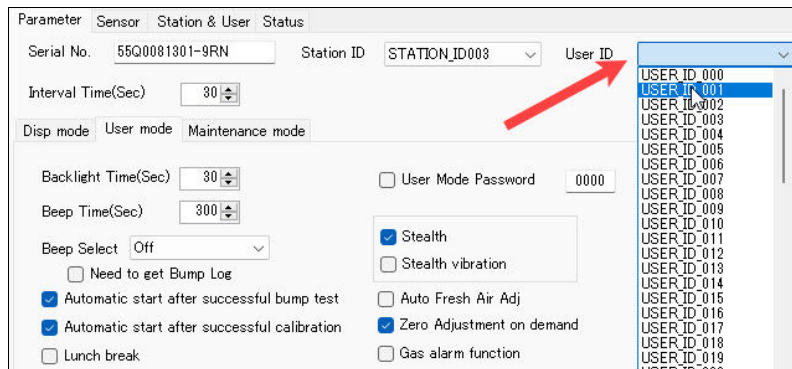


Figure 18: User ID Text Edit

3. Enter the desired Station/User ID.
4. Click **Write** to transfer the ID list to the instrument.
5. Once the Station ID and User ID lists have been generated, click on the **Parameter** tab and open the ID dropdown list.
6. Click on the Station ID and User ID dropdown menus to select each ID.



**Figure 19: User ID Dropdown**

7. Click on the desired ID and click **Write** again to save the assignment to the instrument.
8. Turn off the GX-6100 by pressing the **Power OFF** button.

## ***Editing the Station/User IDs Using CSV Files***

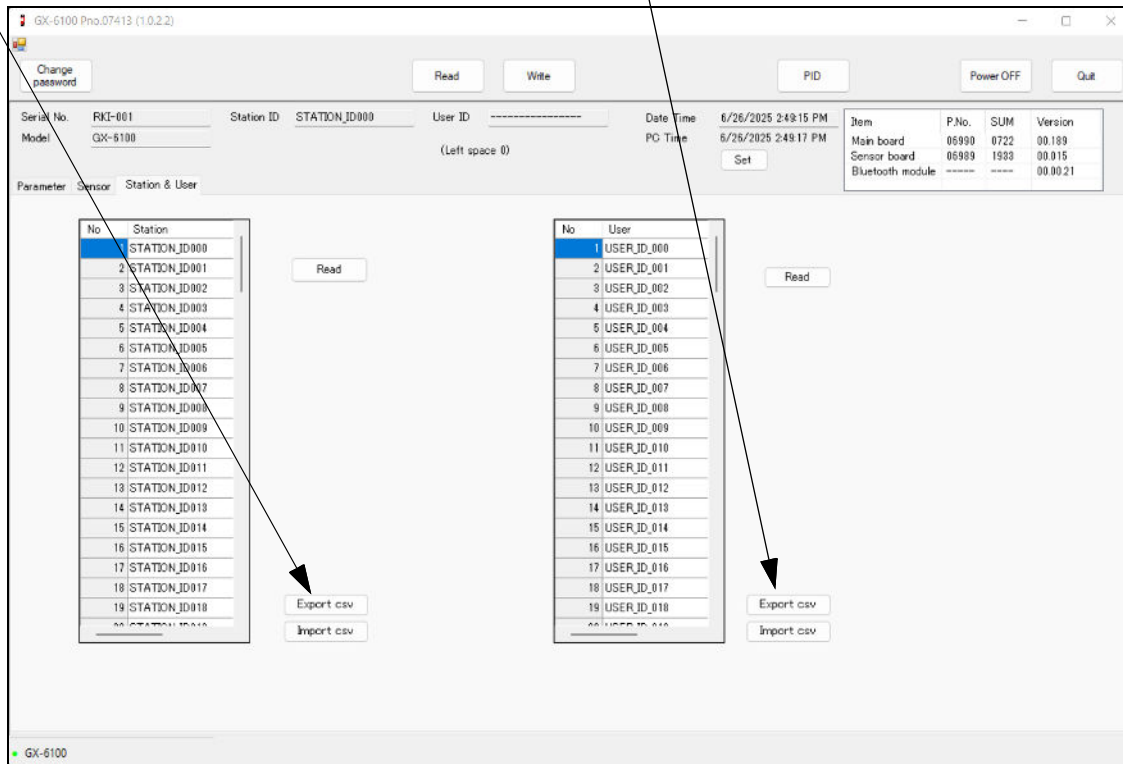
To edit and assign an instrument's User and Station IDs by editing and importing CSV files, do the following:

1. Load the instrument's user and station ID lists as described in "Reading User and Station IDs" on page 35.
2. After loading in the list(s), locate an existing Station or User CSV file or generate a new one for editing.

- To generate a new one, press **Export csv** in the Station and User tab for both the Station ID and User ID lists and save the files in a convenient place.

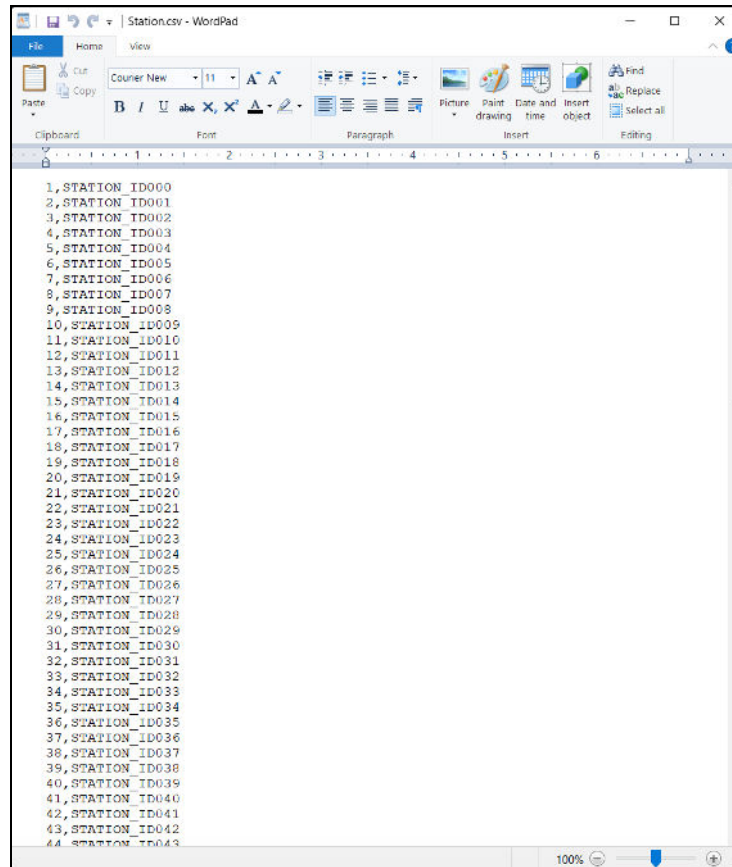
**Press to generate Station CSV file**

**Press to generate User CSV file**



**Figure 20: Export Station/User CSV File**

4. Open the saved files in Word, WordPad, or Notepad, enter new Station or User IDs, and save the files.

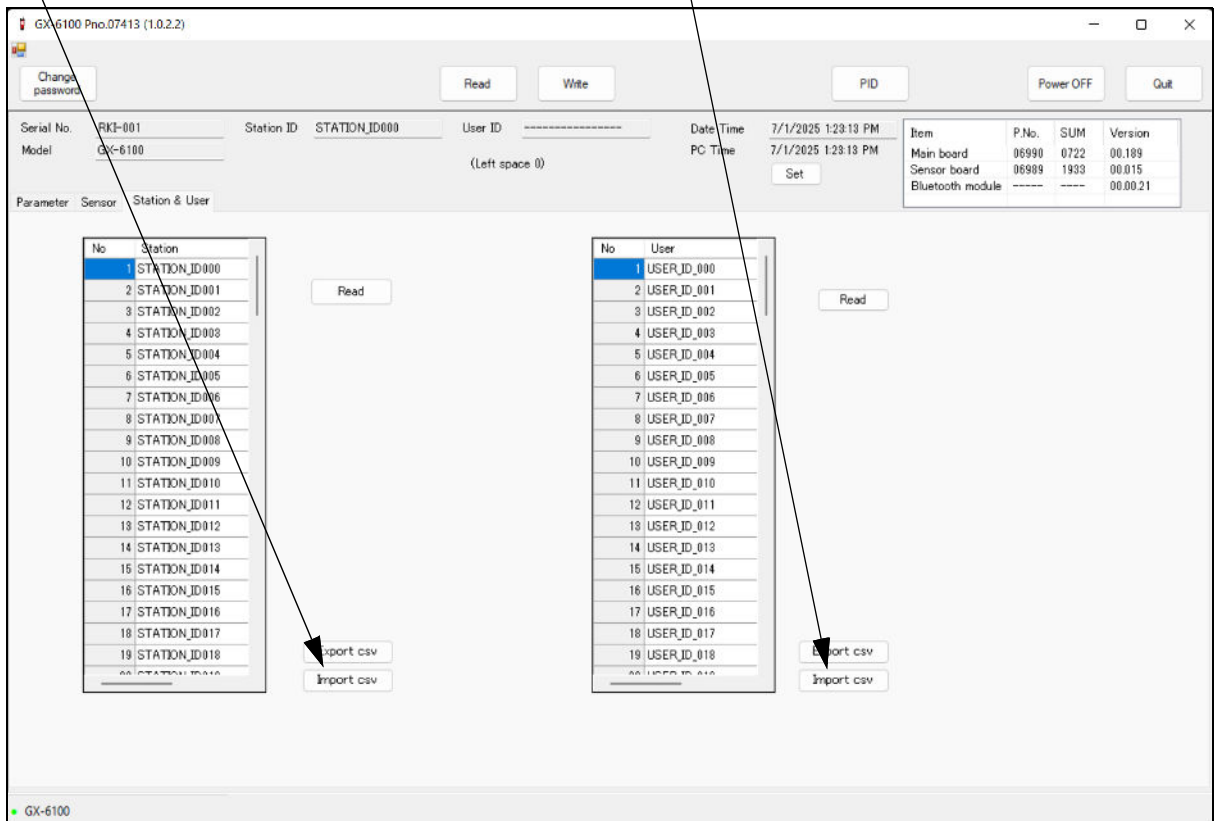


**Figure 21: Station CSV File**

5. In the Station & User tab, press **Import csv** for both the Station ID and User ID and select the respective newly edited CSV file for each.

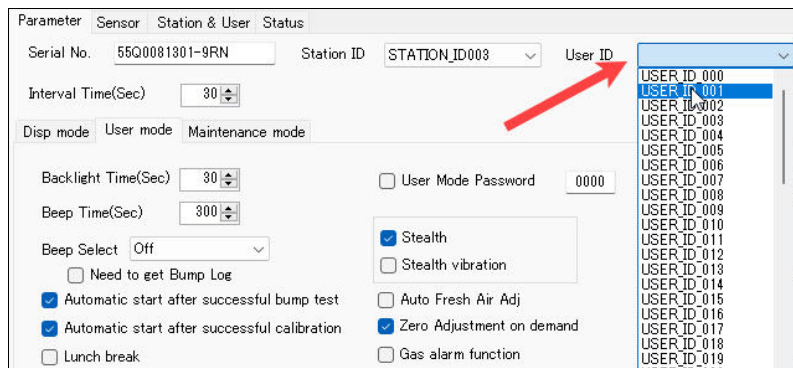
**Press to import Station CSV file**

**Press to import User CSV file**



**Figure 22: Import CSV File**

6. Once the Station ID and User ID lists have been generated, click on the **Parameter** tab and open the ID dropdown list.
7. Click on the Station ID and User ID dropdown menus to select each ID.



**Figure 23: User ID Dropdown**

8. Click on the desired ID and click **Write** again to save the assignment to the instrument. A confirmation window will appear.
9. Turn off the GX-6100 by pressing the **Power OFF** button.



# PID Sensor Tab

The PID Sensor tab is used to view the pre-defined relative response gases and load multiple instruments with the same responses for 10.6 eV, 10.0 eV, and 11.7 eV sensors.

S	Gas name	Formula	Factor	MolecularWeight	Short name	[ppb] 1st Alarm	[ppb] 2nd Alarm	[ppb] STEL	[ppb] TWA	[ppm] 1st Alarm	[ppm] 2nd Alarm
	Acetone	C3H6O	1.20	58.08004	VOC	-	-	-	-	5.00	7.50
	Allyl alcohol	C3H6O	4.00	58.08004	VOC	-	-	-	-	5.00	10.00
	Amyl acetate	C7H14O2	9.00	130.187	VOC	-	-	-	-	5.00	10.00
	Amyl alcohol	C5H12O	10.00	88.14968	VOC	-	-	-	-	5.00	10.00
	Amyl alcohol, tert-	C5H12O	2.80	88.14968	VOC	-	-	-	-	5.00	10.00
	Aniline	C6H7N	0.80	93.12832	VOC	-	-	-	-	5.00	10.00
	Anisole	C7H8O	0.59	108.1399	VOC	-	-	-	-	5.00	10.00
	Benzaldehyde	C7H6O	0.90	106.124	VOC	-	-	-	-	5.00	10.00
	Benzene	C6H6	0.54	78.11364	BNZ	-	-	-	-	0.50	2.50
	Benzene thiol	C6H5SH	0.80	0	VOC	-	-	-	-	5.00	10.00
	Benzonitrile	C7H5N	0.80	103.1234	VOC	-	-	-	-	5.00	10.00
	Benzyl alcohol	C7H8O	1.60	108.1399	VOC	-	-	-	-	5.00	10.00
	Benzyl chloride	C7H7Cl	0.70	126.5853	VOC	-	-	-	-	5.00	10.00
	Biphenyl	C12H10	0.60	154.2114	VOC	-	-	-	-	5.00	10.00
	Bromobenzene	C6H5Br	0.32	157.0097	VOC	-	-	-	-	5.00	10.00
	Bromobutane, 1-	C4H9Br	14.00	137.0195	VOC	-	-	-	-	5.00	10.00
	Bromobutane, 2-	C4H9Br	1.60	137.0195	VOC	-	-	-	-	5.00	10.00
	Bromopentane, 1-	C5H11Br	3.50	151.0463	VOC	-	-	-	-	5.00	10.00
	Bromopropane, 1-	C3H7Br	70.00	122.9926	VOC	-	-	-	-	5.00	10.00
	Butadiene, 1,3-	C4H6	0.80	54.09164	VOC	-	-	-	-	5.00	10.00
	Butanediol, 2,3-	C4H10O2	0.87	86.09044	VOC	-	-	-	-	5.00	10.00
	Butanol, 1-	C4H10O	25.00	74.1228	VOC	-	-	-	-	5.00	10.00
	Butanol, 2-	C4H10O	8.00	74.1228	VOC	-	-	-	-	5.00	10.00
	Buten-3-ol, 1-	C4H8O	3.00	72.10692	VOC	-	-	-	-	5.00	10.00
	Butyl acetate	C6H12O2	12.00	116.1601	VOC	-	-	-	-	5.00	10.00
	Butyl acetate, sec-	C6H12O2	5.50	116.1601	VOC	-	-	-	-	5.00	10.00
	Butyl acetate, tert-	C6H12O2	1.65	116.1601	VOC	-	-	-	-	5.00	10.00

Figure 24: PID Sensor Tab

There are 13 columns:

- **Gas Name**  
The Gas Name column is used to better describe the target gas. It may contain any character in upper- or lower-case.
- **Formula**  
Lists the molecular formula for each VOC
- **Factor**  
This value is the Relative Response Factor for the PID channel. The factor for each pre-defined gas is factory defined.
- **Molecular Weight**  
Lists the chemical's molecular weight.
- **Short Name**  
This is what will appear in the Relative Response list of gases. The user-editable name can be up to 3 characters long and the characters must be upper case letters or numbers. No special characters may be used in the Name column.
- **1st Alarm (ppb)**  
This column is for the low alarm point of each gas in ppb units.

- 2nd Alarm (ppb)  
This column is for the high alarm point of each gas in ppb units.
- STEL Alarm (ppb)  
The STEL column displays the STEL values for each gas in ppb units.
- TWA Alarm (ppb)  
The TWA column displays the TWA values for each gas in ppb units.
- 1st Alarm (ppm)  
This column is for the low alarm point of each gas in ppm units.
- 2nd Alarm (ppm)  
This column is for the high alarm point of each gas in ppm units.
- STEL Alarm (ppm)  
The STEL column displays the STEL values for each gas in ppm units.
- TWA Alarm (ppm)  
The TWA column displays the TWA values for each gas in ppm units.

## Editing Gas Alarm Points and Short Names

1. Launch the Configuration Program and connect the GX-6100 as described in page 7.
2. Download the instrument data to the program by pressing **Read**.
3. Click **PID**. A table displaying the 10.6 eV sensor response factors will appear.
4. Make sure the desired sensor list is selected (10.6 eV, 10.0 eV, or 11.7 eV). If no list is displayed, click **Read**.
5. Double-click on the desired gas. A **Gas Detail** window will appear.

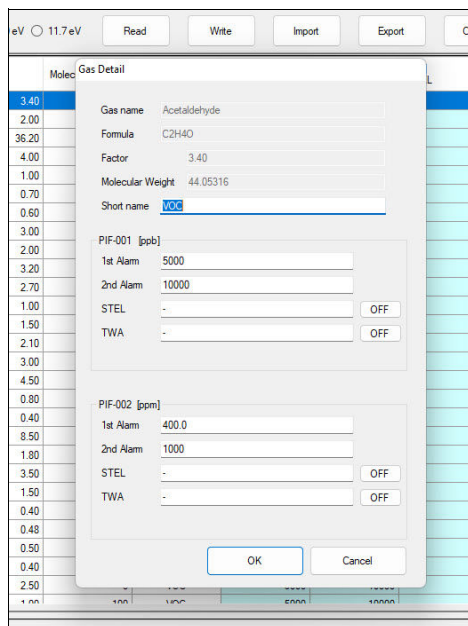


Figure 25: PID List Loading In-Progress

6. To change the short name of the gas, delete the highlighted text and enter the desired, 3-character name.

7. Repeat this for any of the following alarm points:
  - **1st Alarm** (ppm or ppb ranges)
  - **2nd Alarm** (ppm or ppb ranges)
  - **STEL** (if applicable, ppm or ppb ranges)
  - **TWA** (if applicable, ppm or ppb ranges)
8. Click **OK** to save any adjustments made.
9. Repeat Step 5 through Step 8 for any other gases in the sensor list.
10. When finished, click **Write**.
11. The upload will take approximately 3 minutes. The progress bar is displayed at the bottom left of the program window.

Gas name	Formula	Factor	Molecular Weight	Short name	1st Alarm	2nd Alarm	STEL	TWA	1st Alarm	2nd Alarm
Acetaldehyde	C2H4O	1.00	44.0532	VOC	5000	10000			4000.0	10000
Acetone	C3H6O	2.50	58.0824	VOC	5000	10000			4000.0	10000
Acetic acid	C2H4O2	36.30	60.0516	VOC	5000	10000			4000.0	10000
Acetic anhydride	C4H6O3	4.00	102.0896	VOC	5000	10000			4000.0	10000
Acetone	C3H6O	1.00	58.0824	VOC	5000	10000			4000.0	10000
Acetone	C3H6O	0.70	58.0824	VOC	5000	7500			300	750
Acetophenone	C8H8O	0.80	120.1556	VOC	5000	10000			4000.0	10000
Acetyl bromide	C2H3BrO	3.30	122.9480	VOC	5000	10000			4000.0	10000
Acetyl chloride	C2H3ClO	2.90	117.1545	VOC	5000	10000			4000.0	10000
Acetone	C3H6O	3.30	58.0824	VOC	5000	10000			4000.0	10000
Acrylic Acid	C3H4O2	2.70	72.0636	VOC	5000	10000			4000.0	10000
Aluminum, m. Cl-	C6H12O2	1.00	0	VOC	5000	10000			4000.0	10000
Allyl acetate	C7H12O2	1.50	142.1546	VOC	5000	10000			4000.0	10000
Allyl alcohol	C3H6O	2.10	58.0824	VOC	5000	10000			4000.0	10000
Allyl isocyanide	C3H5N	3.00	120.1787	VOC	5000	10000			4000.0	10000
Allyl isocyanide	C3H5N	4.30	76.0264	VOC	5000	10000			4000.0	10000
Allyl phenyl ether	C9H10O	0.80	114.1442	VOC	5000	10000			4000.0	10000
Allyl propyl disulfide	C6H12S2	0.40	146.2353	VOC	5000	10000			4000.0	10000
Aluminum	H4S	8.50	17.0356	VOC	5000	10000			4000.0	10000
Allyl acetate	C7H12O2	1.80	130.1877	VOC	5000	10000			4000.0	10000
Allyl alcohol	C3H6O	3.50	58.0824	VOC	5000	10000			4000.0	10000
Allyl alcohol, var.	C3H6O	1.50	58.0824	VOC	5000	10000			4000.0	10000
Aldehyde	C10H12O	0.40	146.2047	VOC	5000	10000			4000.0	10000
Aldehyde	C6H7N	0.48	93.1232	VOC	5000	10000			4000.0	10000
Aldehyde	C7H8O	0.50	106.1299	VOC	5000	10000			4000.0	10000
Allyl alcohol	C3H6O	0.40	58.0824	VOC	5000	10000			4000.0	10000
Allyl	H4S	2.50	0	VOC	5000	10000			4000.0	10000

Figure 26: PID List Loading In-Progress

12. A window will pop up indicating that the upload to the instrument is complete. Click **OK**.

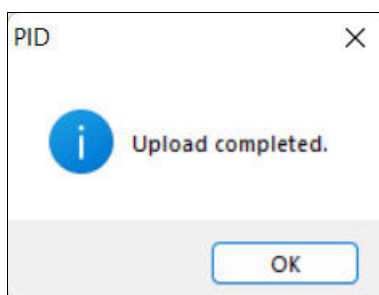


Figure 27: PID List Upload Confirmation

13. If another list needs to be adjusted and updated on the instrument, repeat Step 4 through Step 12.
14. When finished, click **Power OFF** to turn off the instrument.

Adjustments made to the PID List in the Configuration Program can also be exported then imported when connecting other GX-6100 instruments. This allows the same PID list/configuration to be shared among multiple instruments.

- ☐ Show User List   
 ☒ 10.0 eV   
 ☐ 10.0 eV   
 ☐ 11.7 eV   
 Read   
 Write   
 Ingot   
 Export   
 Config   
 Power OFF   
 Quit

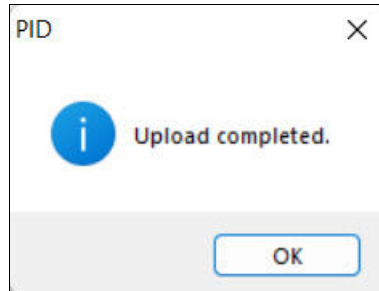
S	G name	Formula	Factor	MolecularWeight	Shot name	Isot 1st Aurs	Isot 2nd Aurs	Isot 3rd Aurs	Isot 1st Aurs	Isot 2nd Aurs	Isot 3rd Aurs	
1	Acetabromide	C2H3BrO	0.40	144.03130	VOC	5000	10000	-	-	-	400.0	1000
2	Acetamide	C2H5NO	2.00	59.07674	VOC	5000	10000	-	-	-	400.0	1000
3	Acetic acid	C2H4O2	36.20	60.05256	VOC	5000	10000	-	-	-	400.0	1000
4	Acetic anhydride	C4H6O3	4.00	102.0888	VOC	5000	10000	-	-	-	400.0	1000
5	Acetan	C4H8O2	1.00	88.10632	VOC	5000	10000	-	-	-	400.0	1000
6	Acetone	C3H6O	0.70	58.08054	VOC	5000	7500	-	-	-	500	750
7	Acetophenone	C8H8O	0.60	120.1509	VOC	5000	10000	-	-	-	400.0	1000
8	Acetyl bromide	C2H3BrO	3.00	122.9432	VOC	5000	10000	-	-	-	400.0	1000
9	Acetylchloride	C2H3ClO	2.00	117.1045	VOC	5000	10000	-	-	-	400.0	1000
10	Acrylon	C3H4O	3.30	56.06116	VOC	5000	10000	-	-	-	400.0	1000
11	Acryl Acid	C3H4O2	2.70	72.06356	VOC	5000	10000	-	-	-	400.0	1000
12	Alkanes, n- C5-	C5H12	1.00	0	VOC	5000	10000	-	-	-	400.0	1000
13	Allyl acetate	C7H10O2	1.50	142.1546	VOC	5000	10000	-	-	-	400.0	1000
14	Allyl alcohol	C3H6O	2.10	58.08054	VOC	5000	10000	-	-	-	400.0	1000
15	Allyl bromide	C3H5Br	3.00	120.9767	VOC	5000	10000	-	-	-	400.0	1000
16	Allyl chloride	C3H5Cl	4.50	76.5254	VOC	5000	10000	-	-	-	400.0	1000
17	Allyl glycid ether	C5H8O2	0.80	114.1442	VOC	5000	10000	-	-	-	400.0	1000
18	Allyl propyl disulfide	C9H18S2	0.40	146.2393	VOC	5000	10000	-	-	-	400.0	1000
19	Asarone	C15H14O	6.50	177.05556	VOC	5000	10000	-	-	-	400.0	1000
20	Amyl acetate	C7H14O2	1.80	130.187	VOC	5000	10000	-	-	-	400.0	1000
21	Amyl alcohol	C5H12O	3.50	88.14968	VOC	5000	10000	-	-	-	400.0	1000
22	Amyl alcohol, ter-	C5H12O	1.50	88.14968	VOC	5000	10000	-	-	-	400.0	1000
23	Anethole	C10H12O	0.40	146.2047	VOC	5000	10000	-	-	-	400.0	1000
24	Aniline	C6H7N	0.48	93.12832	VOC	5000	10000	-	-	-	400.0	1000
25	Anisole	C7H8O	0.50	108.1399	VOC	5000	10000	-	-	-	400.0	1000
26	Arayl aldehyde	C8H8O2	0.40	136.1303	VOC	5000	10000	-	-	-	400.0	1000
27	Asene	AsH3	2.50	0	VOC	5000	10000	-	-	-	400.0	1000

702/702 beam(s)    0 error(s)   
 Data/Version    0.0.0.0   
 Check All

6. Repeat Step 3 through Step 5 for the other two PID lists if necessary.
7. Click **Power OFF** to turn off the instrument.
8. Connect another GX-6100 as described in page 7.
9. With the desired sensor list (10.6 eV, 10.0 eV, or 11.7 eV) selected, click **Import** and select the desired PID list file.

10. Click **Write** to transmit the PID list to the connected GX-6100.

11. A window will pop up indicating that the upload to the instrument is complete. Click **OK**.



**Figure 29: PID List Upload Confirmation**

12. Click **Power OFF** to turn off the instrument.

13. Repeat Step 8 through Step 12 for any other GX-6100 instruments.

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# Spare Parts List

**Table 5: Spare Parts List**

<b>Part Number</b>	<b>Description</b>
47-5124	USB/IrDA adapter module, Legasic, for use with all premier portables (without USB cable)
47-5124-01	USB/IrDA adapter assembly, Legasic, for use with all premier portables (with module and USB cable)
47-5125	Cable, USB A to USB mini, 6 feet, for USB/IrDA adapter module
71-0638	<i>GX-6100 Operator's Manual</i>
71-0700	<i>GX-6100 Configuration Program Operator's Manual</i> (this document)