RKI

INSTRUMENTS

03 Series User Setup Program Operator's Manual

Part Number: 71-0324

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Warranty

RKI Instruments, Inc. warrants gas alarm equipment sold by us to be free from defects in materials and workmanship, and performance for a period of one year from date of shipment from RKI Instruments, Inc. Any parts found defective within that period will be repaired or replaced, at our option, free of charge. This warranty does not apply to those items which by their nature are subject to deterioration or consumption in normal service, and which must be cleaned, repaired, or replaced on a routine basis. Examples of such items are:

Absorbent cartridges   Batteries

Pump diaphragms and valves   Filter elements

Fuses

Warranty is voided by abuse including mechanical damage, alteration, rough handling, or repairs procedures not in accordance with the instruction manual. This warranty indicates the full extent of our liability, and we are not responsible for removal or replacement costs, local repair costs, transportation costs, or contingent expenses incurred without our prior approval.

This warranty is expressly in lieu of any and all other warranties and representations, expressed or implied, and all other obligations or liabilities on the part of RKI Instruments, Inc. including but not limited to the warranty of merchantability or fitness for a particular purpose. In no event shall RKI Instruments, Inc. be liable for indirect, incidental, or consequential loss or damage of any kind connected with the use of its products or failure of its products to function or operate properly.

This warranty covers instruments and parts sold to users only by authorized distributors, dealers, and representatives as appointed by RKI Instruments, Inc.

We do not assume indemnification for any accident or damage caused by the operation of this gas monitor and our warranty is limited to replacement of parts or our complete goods.

Table of Contents

Introduction

CAUTION: *Read and understand this manual before using the 03 Series User Setup Program. Also read and understand the 03 Series Operator's Manual or GP-03 Operator's Manual included with the 03 Series portable gas monitor.*

Using an advanced detection system, the 03 Series Personal Gas Monitor detects the presence of combustible gases, oxygen (O_2), carbon monoxide (CO), or hydrogen sulfide (H_2S). The 03 Series' compact size and easy-to-use design make it ideally suited for a wide range of applications as described in the 03 Series Operator's Manual and GP-03 Operator's Manual. Please read the 03 Series Operator's Manual or GP-03 Operator's Manual first before using the 03 Series User Setup Program.

The 03 Series User Setup Program allows you to change various instrument parameters not accessible in the 03 Series' Calibration Mode or Setup Mode. It also allows you to save parameter configuration files based on an instrument's 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 03 Series User Setup Program. You will learn how to:

- install and launch the program

- install the downloading cable (if needed)

- connect to the 03 Series with the program

- change parameters in the 03 Series

- save parameter configuration files that can be opened and viewed in a spread sheet program

- save parameter configuration files that can be uploaded to an instrument to change its parameter settings

- upload parameter configuration files to an instrument to change its parameter settings

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

CAUTION:	*The 03 Series detects oxygen deficiency or elevated levels of oxygen, combustible gases, carbon monoxide, or hydrogen sulfide, all of which can be dangerous or life threatening. When using the 03 Series, you must follow the instructions and warnings in the 03 Series Operator's Manual or GP-03 Operator's Manual 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 03 Series User Setup Software, 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:** 40 MB minimum

- **IrDA 1.1 compliant infrared port** or **USB port and a IrDA 1.1 compliant USB/IrDA adapter cable**

Installing the 03 Series User Setup Program

1. Launch Windows®.

2. Exit from all applications and open windows.

3. Go to www.rkiinstruments.com/03series.

4. Click on the **Download** tab.

5. Click the **User Setup Program Software** 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 User Setup Program, then the 03 Series Configuration for User InstallShield Wizard window appears to guide you through installation.
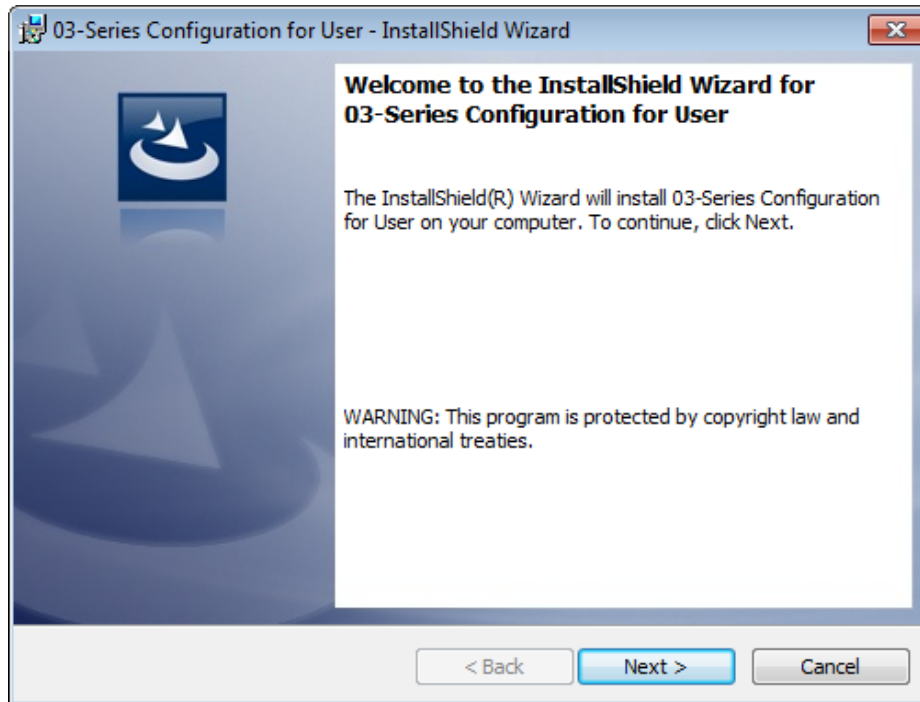

Figure 1: 03 Series User Setup Installation Program

10. Follow the on-screen instructions in the Installation 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.

13. During installation, a shortcut of the 03 Series User Setup Program is made on the Windows® desktop.

Installing a Newer Version of the 03 Series User Setup Program

If you are installing a more recent version of the 03 Series User Setup Program software, you must follow these instructions.

1. Uninstall the currently installed version of the software.

2. Install the new version of the User Setup program.

3. Run the User Setup program and ensure that it is operating correctly.

IrDA Downloading Cable

The 03 Series 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 a IrDA 1.1 compliant IrDA/USB adapter cable on your computer to use the 03 Series User Setup Program with your 03 Series. 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

After installing the 03 Series User Setup Program, you must install the driver for the IrDA/USB adapter cable. Make sure the cable driver is compatible with your Windows® operating system.

NOTE: Do not plug in 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.

Windows® Infrared Operation Note

When using an IrDA adapter cable and the 03 Series User Setup Program on a Windows® computer, it is necessary to make a special setting in the Infrared Configuration window for proper communication between the 03 Series and the 03 Series User Setup 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.

Follow these steps to make this setting:

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.

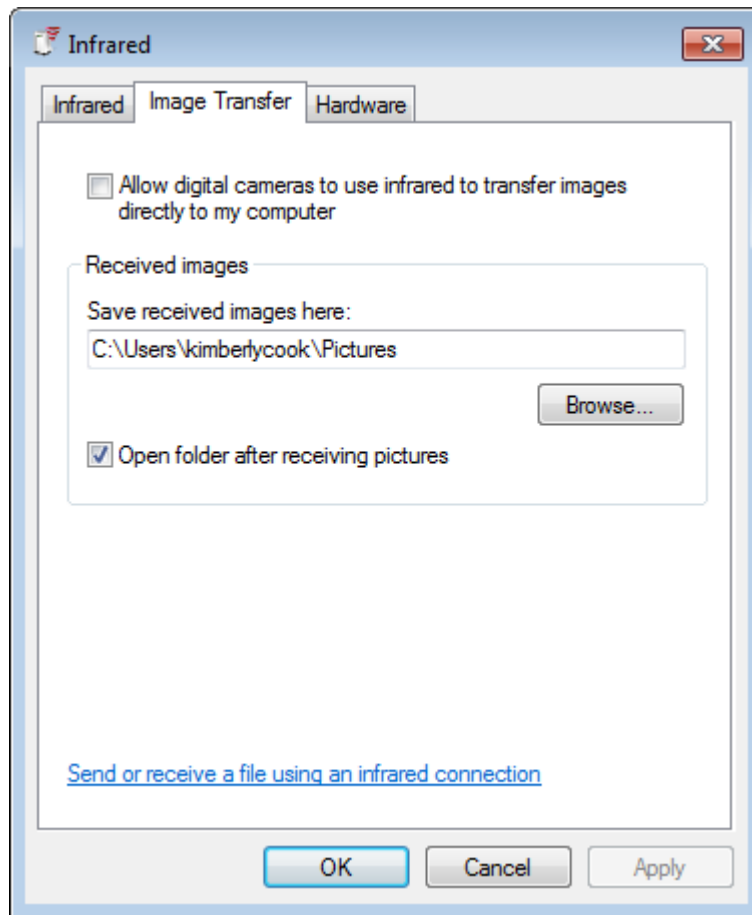5. Deselect the selection box for "Allow digital cameras to use infrared to transfer images directly to my computer."

Figure 2: Image Transfer Tab

6. Click **OK**.

7. Close the Control Panel window.

Launching the Program

1. For Windows® 7 computers, click the **Start** icon in the Windows® Icon Tray, then select **Programs**, then select **03 Series Config**. Your operating system may also have a shortcut installed in the **Start** menu.

   For Windows® 8 and Windows® 10 computers, click the **Start** icon in the Windows® Icon Tray, then click the downward-pointing arrow icon in the lower left corner of the screen, then select **03 Series Config** from the list of apps.

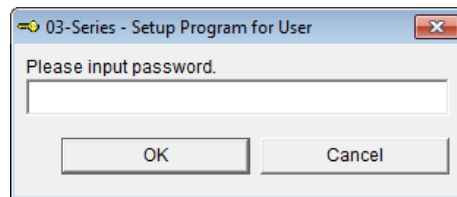2. The program will launch and the Password Window will appear.

Figure 3: Password Window

3. The password to enter the User Setup Program is "1994". Type in the password and click **OK** to proceed.
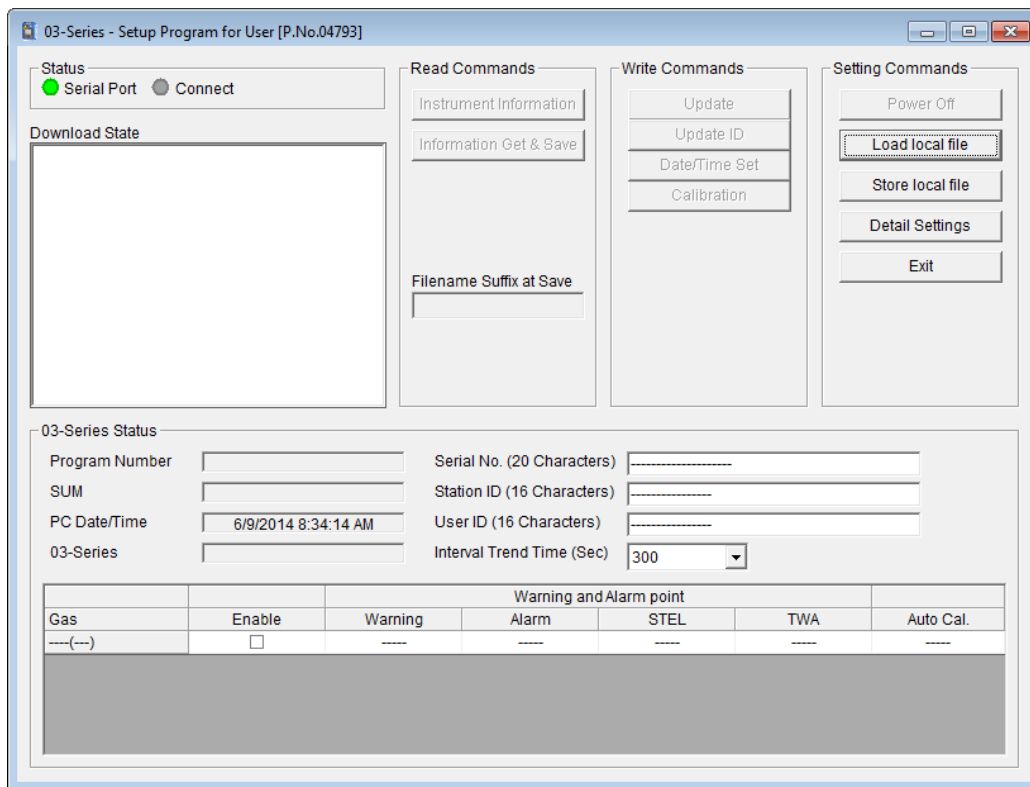
4. The Main Window will appear.

Figure 4: The Main Window

Connecting an 03 Series to the User Setup Program

Follow these steps to connect an 03 Series to the User Setup Program:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10. The Main Window displays.
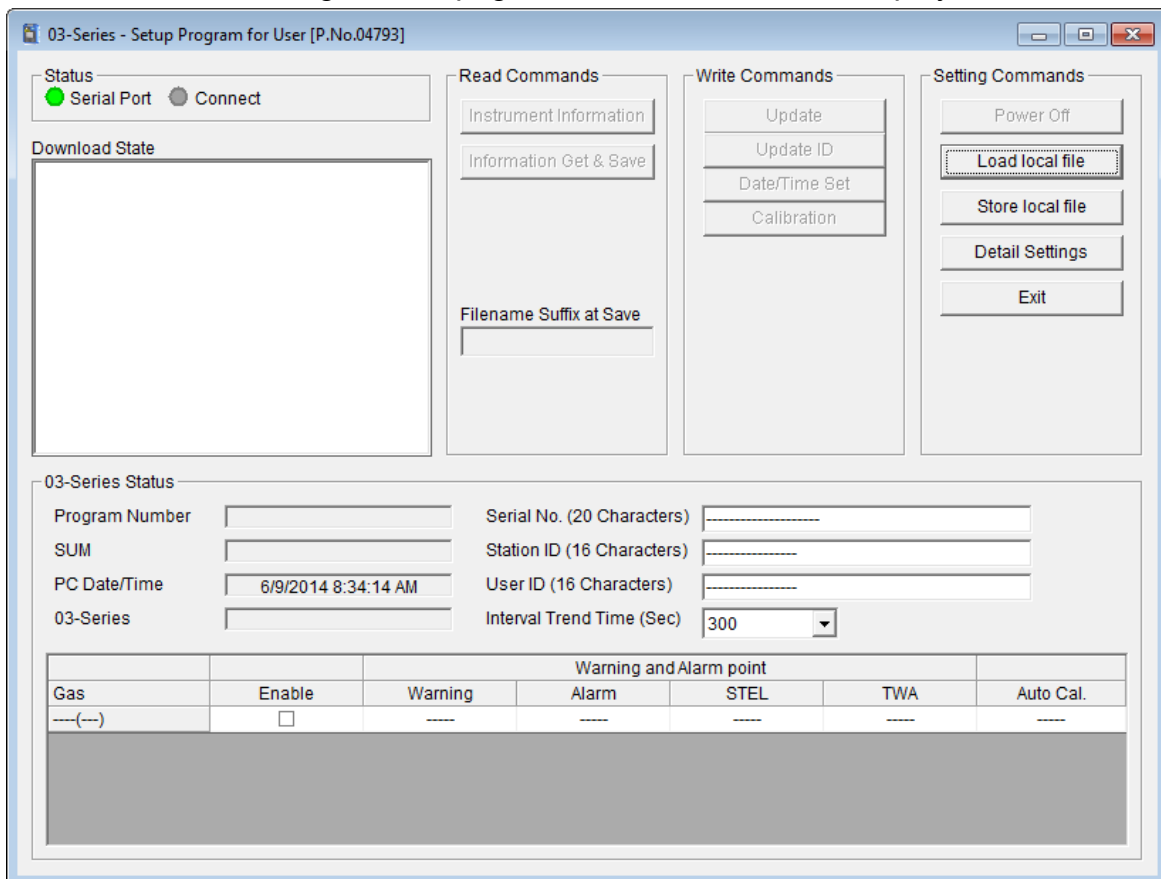

Figure 5: The Main Window

2. Place the 03 Series within an inch or two of the infrared port on your computer aligning the infrared port on the top of the 03 Series with the infrared port on your computer.
If your computer does not have a built in infrared port, plug the IrDA adapter cable into your computer's USB port, place the 03 Series within an inch or two of the infrared port on the IrDA adapter cable as shown in Figure 6 below, aligning the infrared port on the top of the 03 Series with the infrared port on the cable.

NOTE: Be sure that you have installed the IrDA adapter cable's driver as described in "Installing an IrDA Adapter Cable" on page 7 before plugging the IrDA adapter cable into your computer.
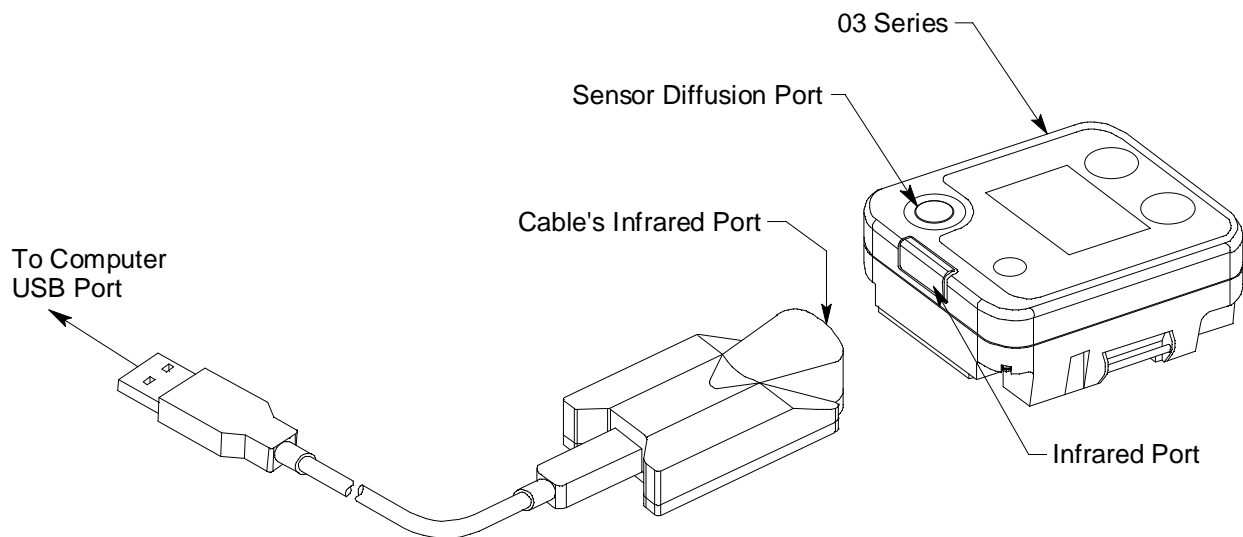

Figure 6: Aligning the 03 Series with the Cable Infrared Port

3. Press and hold the POWER MODE button on the 03 Series until you hear a beep, then release it. The 03 Series will begin its power up sequence (see exceptions below in step 4, step 5, and step 6). If a successful connection between the 03 Series and the computer occurs, the Connect Light in the Status area turns green after a few seconds and "03 Series . . . Connection Successful." displays in the Download State area. The following screen will appear on the 03
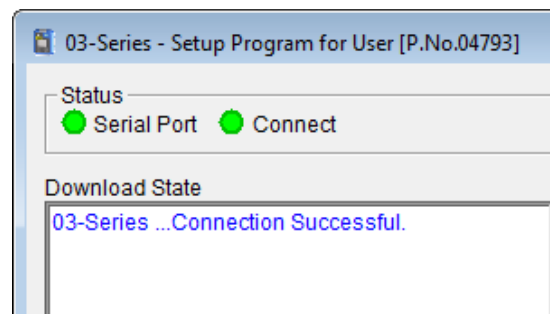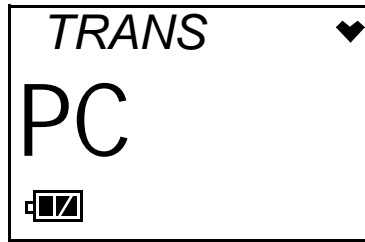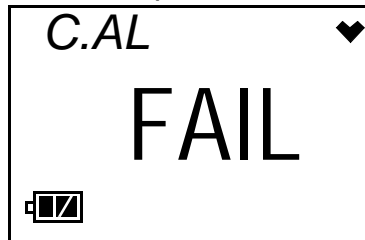

Figure 7: Connection Message

Series display and the Windows® icon tray on Windows® 7 computers will indicate that a wireless connection is in effect.

```
┌─────────────────┐
│ TRANS        ▼  │
│                 │
│ PC              │
│                 │
│  ▭▰/            │
└─────────────────┘
```
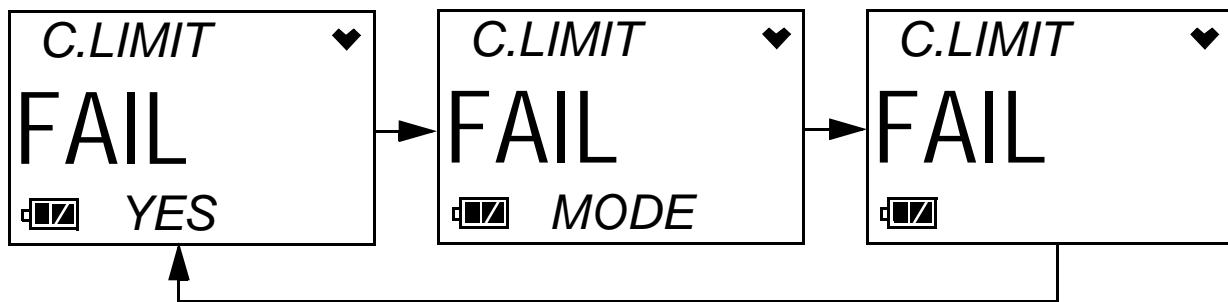
4. If **Bump Fail Behavior** is set to *Can Not Use* and the most recently performed bump test failed, the following screen will appear instead of the screen shown in step 3 above.

```
┌─────────────────┐
│ C.AL         ▼  │
│                 │
│      FAIL       │
│                 │
│  ▭▰/            │
└─────────────────┘
```

The instrument will not connect to the 03 Series User Setup Program until a successful bump test or calibration is performed by turning the instrument off and entering Calibration Mode. See the GP-03 Operator's Manual or the 03 Series Operator's Manual for bump test and calibration instructions.
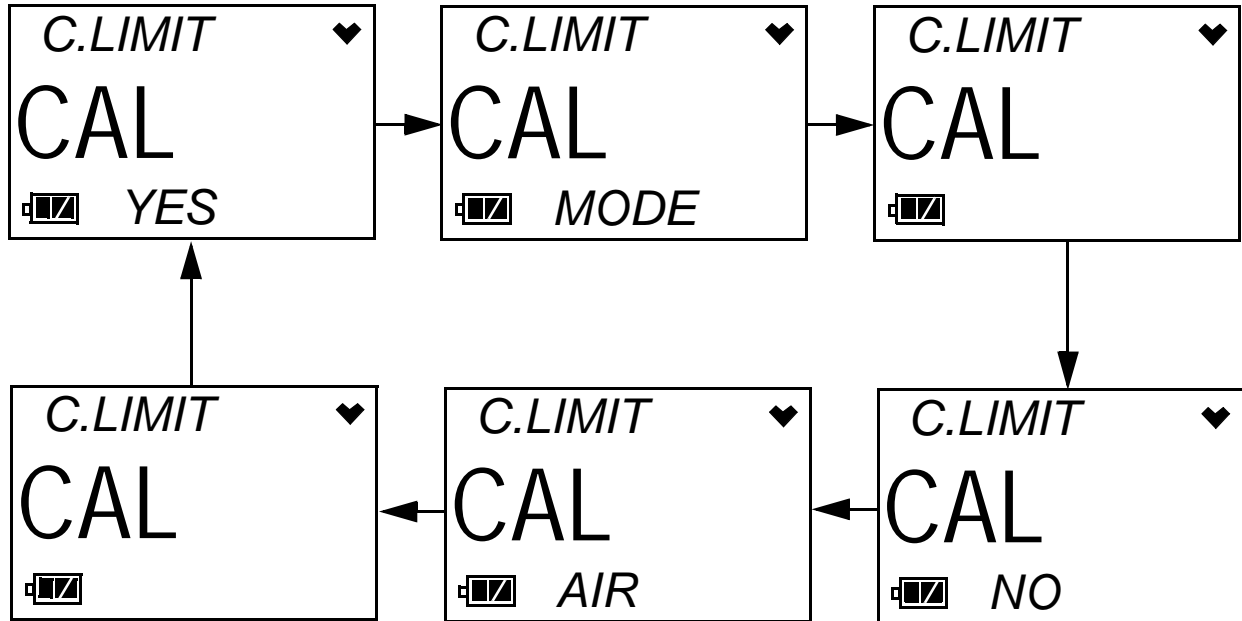
5. If **Bump Fail Behavior** is set to *None* or if it's set to *Can Not Use* but the most recently performed bump test passed, there are two exceptions to the sequence described in step 3 above when **Bump Test Limit Display** is set to *Off*. See "Detail Settings" on page 37 for a description of the **Bump Fail Behavior** and **Bump Test Limit Display** parameters described above and the **Cal. Limit Display** and **Cal. Limit Check** parameters described below.

• When **Cal. Limit Display** is set to *On* and **Cal. Limit Check** is set to *Can't Use*, if the 03 Series is due for calibration, the following screen sequence will occur.

```
┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│ C.LIMIT      ▼  │      │ C.LIMIT      ▼  │      │ C.LIMIT      ▼  │
│                 │      │                 │      │                 │
│ FAIL            │ ───▶ │ FAIL            │ ───▶ │ FAIL            │
│  ▭▰/   YES      │      │  ▭▰/   MODE     │      │  ▭▰/            │
└─────────────────┘      └─────────────────┘      └─────────────────┘
```
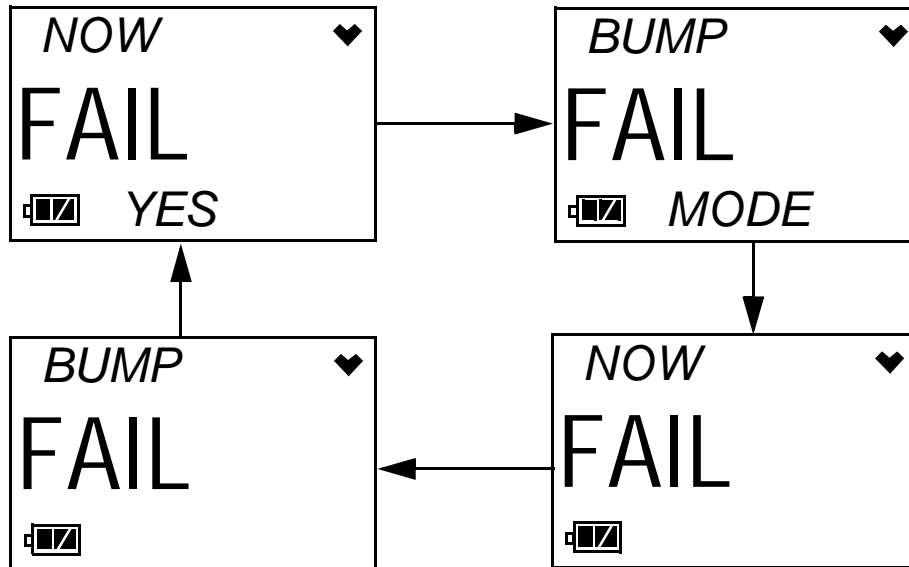
The alarm LED and buzzer will pulse several times before connecting to the program.

- When **Cal. Limit Display** is set to *On* and **Cal. Limit Check** is set to *Confirm to use*, if the 03 Series is due for calibration, the following screen sequence will occur. The alarm LED and buzzer will pulse several times before connecting to the program.

C.LIMIT ⬥		C.LIMIT ⬥		C.LIMIT ⬥
CAL	→	CAL	→	CAL
🔋 YES		🔋 MODE		🔋

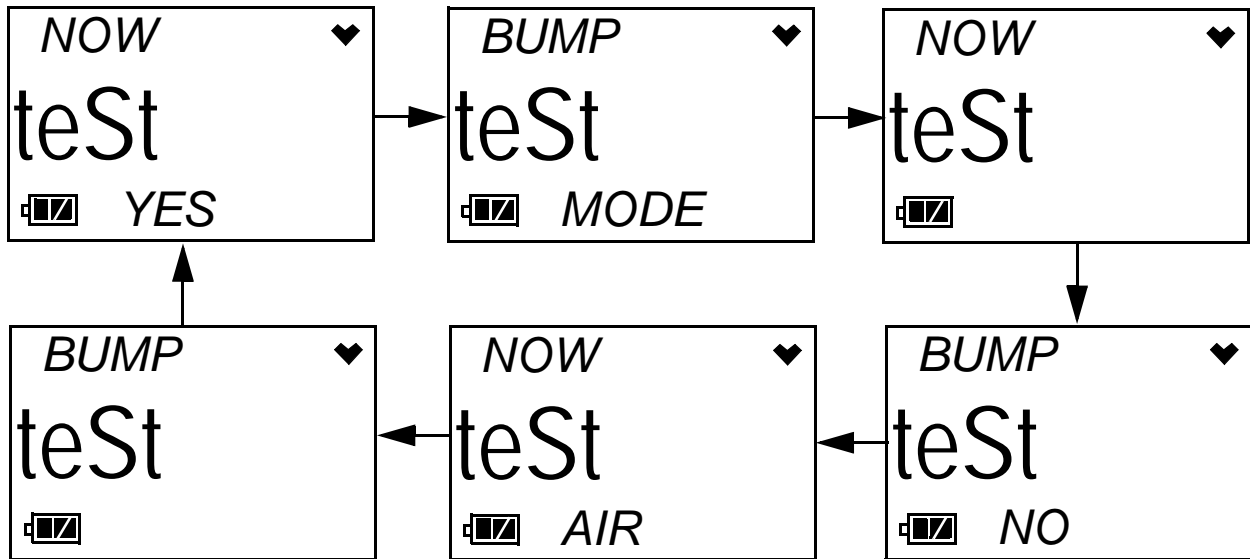| C.LIMIT ⬥		C.LIMIT ⬥		C.LIMIT ⬥
CAL	←	CAL	←	CAL
🔋		🔋 AIR		🔋 NO

6. There are two additional exceptions to the sequence described in step 3 above if **Bump Test Limit Display** is set to *On*. See "Detail Settings" on page 37 for a description of the **Bump Test Limit Display** and **Bump Test Limit Check** parameters.

  • When **Bump Test Limit Display** is set to *On* and **Bump Test Limit Check** is set to *Can't Use*, if the 03 Series is due for bump testing, the following screen sequence will occur.

```
┌─────────────────────┐           ┌─────────────────────┐
│ NOW            ❖    │           │    BUMP        ❖    │
│                     │           │                     │
│ FAIL                │  ──────▶  │ FAIL                │
│                     │           │                     │
│ ▭▱  YES             │           │ ▭▱   MODE           │
└─────────────────────┘           └─────────────────────┘
          ▲                                  │
          │                                  ▼
┌─────────────────────┐           ┌─────────────────────┐
│   BUMP         ❖    │           │ NOW            ❖    │
│                     │           │                     │
│ FAIL                │  ◀──────  │ FAIL                │
│                     │           │                     │
│ ▭▱                  │           │ ▭▱                  │
└─────────────────────┘           └─────────────────────┘
```

The alarm LED and buzzer will pulse several times before connecting to the program.

- When **Bump Test Limit Display** is set to *On* and **Bump Test Limit Check** is set to *Confirm to use*, if the 03 Series is due for bump testing, the following screen sequence will occur. The alarm LED and buzzer will pulse several times before connecting to the program.

NOW ❤ **teSt** 🔋 *YES*	→ *BUMP* ❤ **teSt** 🔋 *MODE*	→ *NOW* ❤ **teSt** 🔋
↑ *BUMP* ❤ **teSt** 🔋	← *NOW* ❤ **teSt** 🔋 *AIR*	← ↓ *BUMP* ❤ **teSt** 🔋 *NO*

You can now retrieve the connected instrument's configuration information using either the **Instrument Information** or the **Information Get & Save** command button as described in "Instrument Information" on page 18 and "Information Get & Save" on page 21. You must retrieve the connected instrument's configuration information before you can perform some operations such as saving the instrument's parameter configuration to a file and changing the instrument's parameter configuration. The three basic command sets for performing these operations are the Read Commands, Write Commands, and Setting Commands. These command sets are described in the sections that follow.

Read Commands

Use the Read Commands to retrieve parameter configuration information from an 03 Series so the program knows which instrument is connected to it and to save several of the instrument's parameter settings and most recent calibration information to a **.csv** (comma separated value) file. The two Read Commands are **Instrument Information** and **Information Get & Save**.
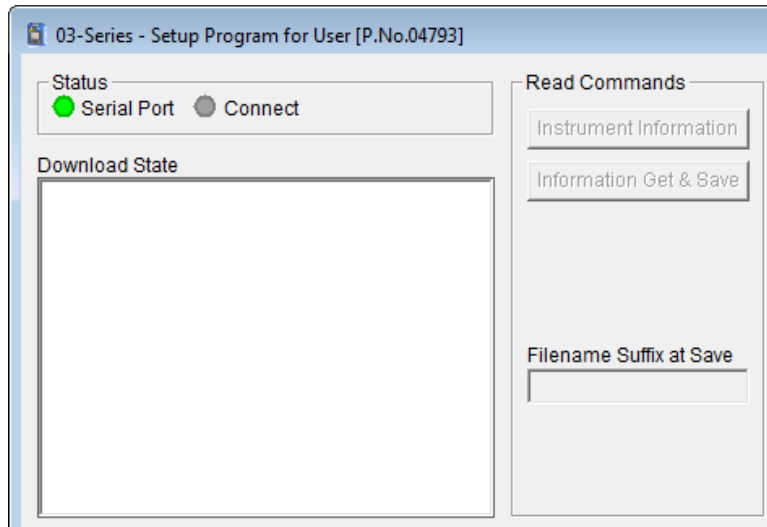

Figure 8: Read Commands, Blanked Out

When the User Setup Program is first launched, the Read Command control buttons are blanked out. They become active when an instrument is connected to the program.
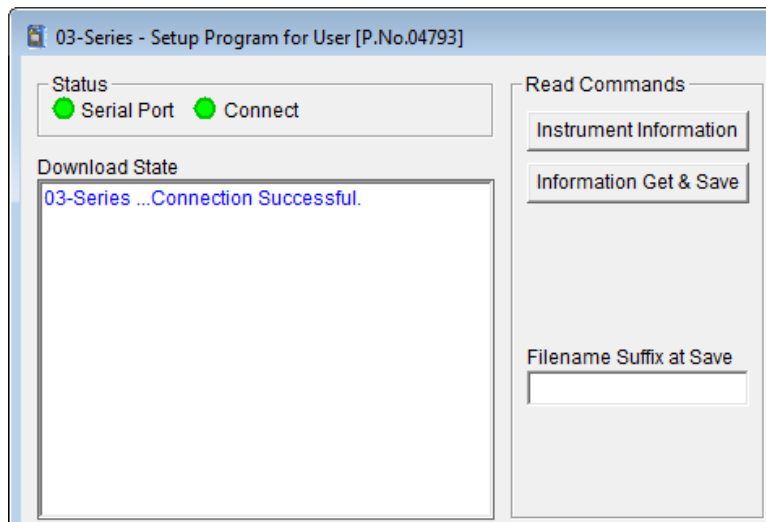

Figure 9: Read Commands, Active

Instrument Information

Use **Instrument Information** to load a connected instrument's parameter configuration into the User Setup Program so it can be updated if desired. Follow these steps to retrieve a connected instrument's parameter configuration and update parameters that are available in the 03 Series Status area:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

3. With the Read Command Buttons now active, click **Instrument Information** to retrieve the instrument's parameter configuration**.** The program indicates that it is downloading information from the instrument.
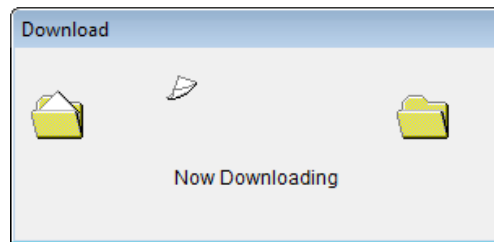

Figure 10: Instrument Information Downloading

4. The instrument's parameter configuration is now loaded in the User Setup Program and parameters are available for updating in the 03 Series Status area of the Main Window and in the Factory Settings Window. The Factory Settings Window is accessed using the **Detail Settings** command button in Setting Commands. See "Detail Settings" on page 37 for a description of **Detail Settings**.

5. Various parameters are available for updating in the 03 Series Status area. The fields for these parameters are white. Items in grey fields such as the Program Number and SUM cannot be edited.

Figure 11: Status Area

The following items can be changed:

- Serial No., Station ID, and User ID
  Click in the field and type in the desired string. If the maximum allowable number of characters are already in the field, you must delete characters before being able to type new characters.

- Interval Trend Time
  Click in the field. A drop down menu will appear. Select the desired value.

- Alarm Points & Auto Cal. Value
  Double click in the field and type in the desired setting.

- Enable Status
  Clicking the check mark in the Enable Status box brings up a window that will indicate the full scale value of that channel.

Figure 12: Gas Select Screen

For GP-03, OX-03, and CO-03 instruments, this box does not have a function. For HS-03 instruments, you can choose between two full scale values. The factory setting is 100 ppm.

6. Once you have made the desired parameter edits, click **Update** in the Write Commands.The following window appears prompting you to confirm that you want to make the update.

Figure 13: Update Window

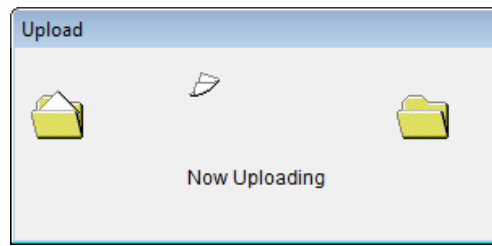7. Click **Yes** to proceed. The program will indicate that it is uploading information to the 03 Series.

Figure 14: Upload Window

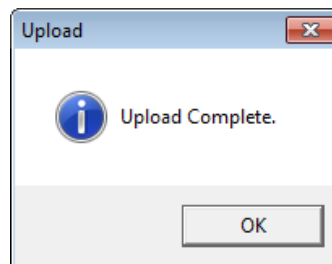8. When the uploading is complete, the program will indicate that it is done.

Figure 15: Upload Complete Window

9. Click **OK**. The program will return to the Main Window.

Information Get & Save

Use **Information Get & Save** to load a connected instrument's parameter configuration into the User Setup Program and edit parameters, just like **Instrument Information**. In addition, you can save an instrument's parameter configuration and most recent calibration information to a **.csv** (comma separated value) file which can be opened with a spread sheet application such as Microsoft Excel. Follow these steps to retrieve a connected instrument's parameter configuration, update parameters in the 03 Series Status area, and save the parameter information and most recent calibration information to a **.csv** file:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect an 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11. The Read Command buttons are now active and the Filename Suffix at Save field is available for entering a filename suffix.

3. Click in the Filename Suffix at Save field and enter a file name suffix. When you use **Instrument Get & Save**, the program saves a connected instrument's parameter configuration and most recent calibration information to a **.csv** file with the file name "GP03_Setting[suffix].csv". You can add the instrument's parameter configuration to an existing file or create a new file by using the Filename Suffix at Save field. The entered suffix is added to the end of the filename, before the file extension. If you do not type in a suffix, then the program will save the parameter configuration to the file "GP03_Setting.csv". If the filename corresponds to an existing file, the program will add a connected instrument's parameter configuration to the file. If the filename does not exist, the program will create a new file and save the instrument's parameter configuration to it. The suffix allows you to differentiate the **.csv** files from one another, such as between different instruments or between different downloads of the same instrument. The file that the instrument's parameter configuration is saved to by **Instrument Get & Save** is located in this file path: *C:\Users\[username]\AppData\Roaming\ 03-SeriesUserConfig\GP03_Setting[suffix].csv.*

4. Click **Information Get & Save**. The program indicates that it is downloading information from the instrument.
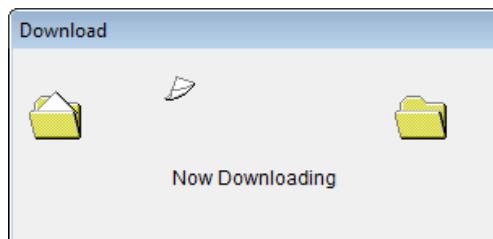

Figure 16: Information Get & Save Downloading

5. The program will retrieve the instrument's parameter configuration and most recent calibration information then add them to an existing **.csv** file or save a new **.csv** file with the instrument's parameter configuration and most recent calibration information as described in step 3 above.

6. Use a spreadsheet program such as Microsoft Excel to open and view the saved **.csv** files.

7. The instrument's parameter configuration is now loaded in the User Setup Program and the parameters are available for updating in the 03 Series Status area of the Main Window and in the Factory Settings Window. The Factory Settings Window is accessed using the **Detail Settings** command button in Setting Commands. See "Detail Settings" on page 37 for a description of **Detail Settings**.

8. See step 5 through step 9 in "Instrument Information" on page 18 for instructions to update parameters in the 03 Series Status area of the Main Window.

Write Commands

Use the Write Commands to upload parameter changes and calibration adjustments to a connected instrument.The four Write Commands are **Update**, **Update ID**, **Date/Time Set**, and **Calibration**.
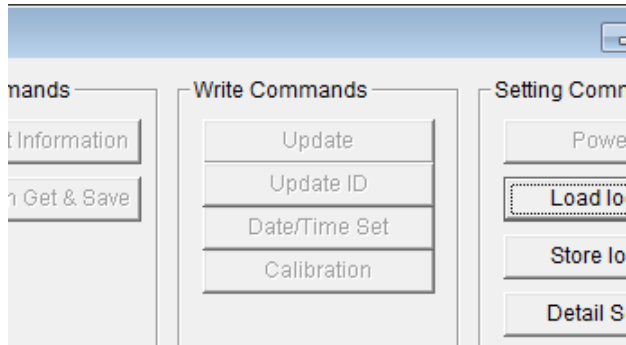

Figure 17: Write Commands, Blanked Out

When the User Setup program is first launched, the Write Command control buttons are blanked out. They become active when an instrument is connected to the program.
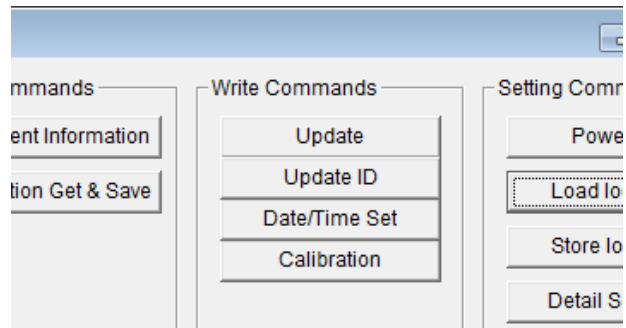

Figure 18: Write Commands, Active

Update

Use **Update** to upload changes that have been made to parameters in the 03 Series Status Area of the Main Window other than the serial number, station ID, or user ID or in the Factory Settings Window. The Factory Settings Window is accessed using the **Detail Settings** command button in Setting Commands. See "Detail Settings" on page 37 for a description of **Detail Settings**. When you click **Update**, any changes that have been made to a connected instrument's parameters will be uploaded to the instrument. The use of **Update** at the appropriate time is described in various other sections in this manual.

NOTE: Using the **Update** command will not upload any changes made to the serial number, station ID, or user ID to the instrument.

Update ID

Use **Update ID** to upload changes that have been made to the serial number, station ID, or user ID. Follow these steps to update an instrument's serial number, station ID, or user ID.

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

3. Click in the serial number or ID box you want to change.

4. Delete the existing characters.

5. Type in the desired characters.
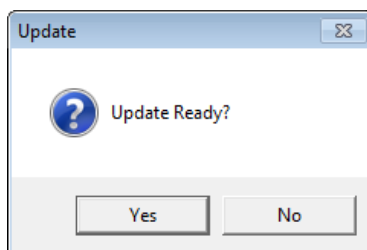
6. Click **Update ID**. The following window will appear.

Figure 19: Update Window

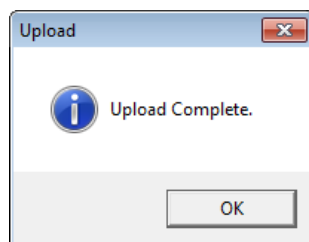7. Click **Yes**. The program will update the serial number, station ID, and user ID then display the following window.

Figure 20: Upload Complete Window

8. Click **OK**. The program will return to the Main Window.

Date/Time Set

Use **Date/Time Set** to update the date and time in a connected instrument to match the computer's date and time. Follow these steps to update an instrument's date and time:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

NOTE: It is not necessary to use **Instrument Information** or **Instrument Get & Save** in order to update the date and time. Although it is not necessary to use I**nstrument Information** or **Instrument Get & Save** before updating the instrument's date and time, you can update the date and time after using either of these commands if desired.

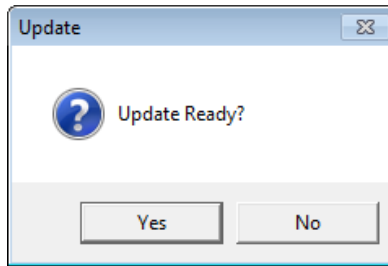3. Click **Date/Time Set**. The following window will appear.

Figure 21: Update Window

4. Click **Yes**. The program will update the instrument's date and time to match the computer's, then display the following window.
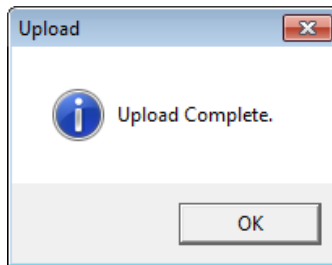

Figure 22: Upload Complete Window

5. Click **OK**. The program will return to the Main Window.

Calibration

Use **Calibration** to calibrate an instrument by adjusting the instrument's zero (fresh air for OX-03) and span (zero for OX-03) settings. Performing a span (zero for OX-03) adjustment requires the use of a calibration kit. The procedure below describes a span adjustment using a calibration kit that includes:

• A gas cylinder with an appropriate concentration of the target gas for the CO-03 or HS-03, or a cylinder of 100% nitrogen for the OX-03.

NOTE: On the OX-03, instead of 100% nitrogen (0% oxygen), it is allowable to use higher than 0% oxygen to set the zero level. RKI Instruments, Inc. recommends 18% oxygen or lower.

• a fixed-flow regulator with a flow rate of 0.5 LPM (liters per minute)

WARNING: *Use a 0.5 LPM (liters per minute) fixed flow regulator when calibrating. Using a different flow rate may adversely affect the accuracy of the calibration.*

- non-absorbent tubing

- calibration adapter that will fit over the 03 Series' sensor

The area where you perform the calibration must be a fresh air environment, an environment of normal oxygen content (20.9%) that is free of toxic and combustible gases. Typical desktop computer locations such as an office or laboratory are fresh air environments, but if you are in the field using a laptop to calibrate an instrument, be sure to confirm that the area is a fresh air environment.

Follow these steps to calibrate an instrument:

1. Confirm that the area where you will perform the calibration is a fresh air environment.

2. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

3. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

NOTE: It is not necessary to use **Instrument Information** or **Instrument Get & Save** in order to perform a calibration. Although it is not necessary to use I**nstrument Information** or **Instrument Get & Save** before performing a calibration, you can perform a calibration after using either of these commands if desired.

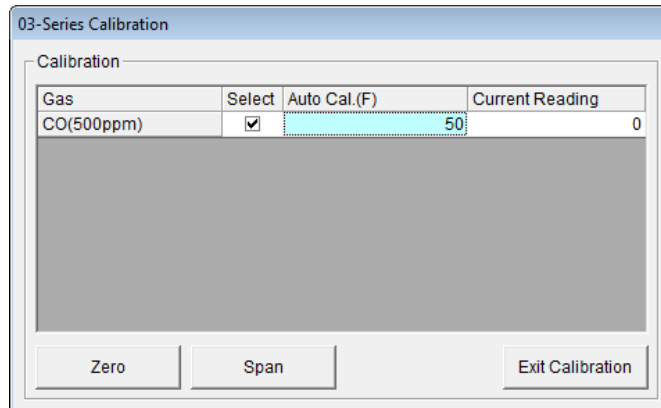4. Click **Calibration**. The 03 Series Calibration Window will appear.

Figure 23: 03 Series Calibration Window

There are four column headings and three control buttons in the 03 Series Calibration Window.

- Gas
  The Gas column shows the target gas and the detection range full scale value.

- Select
  The Select column has a selection box that allows you to select or deselect the channel for zero and span adjustments.

- Auto Cal.
  The Auto Cal. column displays the auto calibration value. This value is retrieved from the instrument when a connection is established. It cannot be changed in the Calibration Window.

- Current Reading
  The Current Reading column displays the current real time gas reading.

- **Zero** Button
  Click **Zero** at the appropriate time to perform a zero (fresh air for OX-03) adjustment on the instrument's selected channel.

- **Span** Button
  Click **Span** at the appropriate time to perform a span (zero for OX-03) adjustment on the instrument's selected channel.

- **Exit Calibration** Button
  Click **Exit Calibration** to close the 03 Series Calibration Window and return to the Main Window.

5. Click **Zero**. The program will take a few seconds to adjust the instrument's zero (fresh air for OX-03) setting. The Adjusting Zero Window will appear during this period.

NOTE: For OX-03 instruments, the **Zero** operation actually performs a fresh air adjustment and sets the fresh air reading to 20.9%.
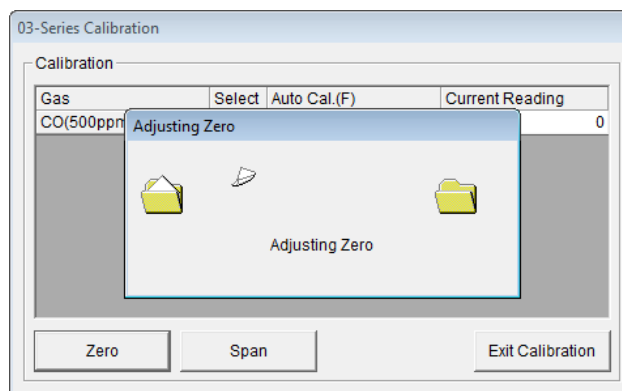

Figure 24: Adjusting Zero Window

6. When the zero adjustment is complete, the Adjustment Complete Window will indicate that the adjustment was completed if it was successful. Click **OK** to return to the Calibration window.

Figure 25: Adjustment Complete Window, Zero

If the instrument failed the zero adjustment, the message in the Adjustment Window will indicate that the zero adjustment failed. Click **OK** to return to the Calibration Window. See the 03 Series Operator's Manual or GP-03 Operator's Manual for troubleshooting suggestions.

7. Use the calibration kit sample tubing to connect the calibration adapter to the regulator. Attach the tubing to the calibration adapter on the inlet side as shown below in Figure 26.
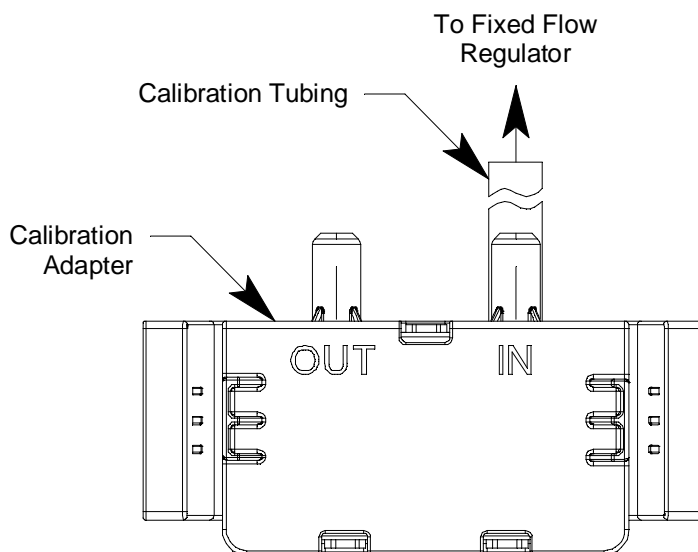
Figure 26: Calibration Kit Assembly

8. Confirm that the regulator on/off knob is turned all the way clockwise (closed) and screw the calibration gas cylinder onto the regulator.

9. Hold the 03 Series in place with one hand while pushing the calibration adapter onto the 03 Series' sensor face with the other to avoid moving the 03 Series excessively and losing the connection to the computer. Make sure the calibration adapter is oriented as shown in Figure 27 below.
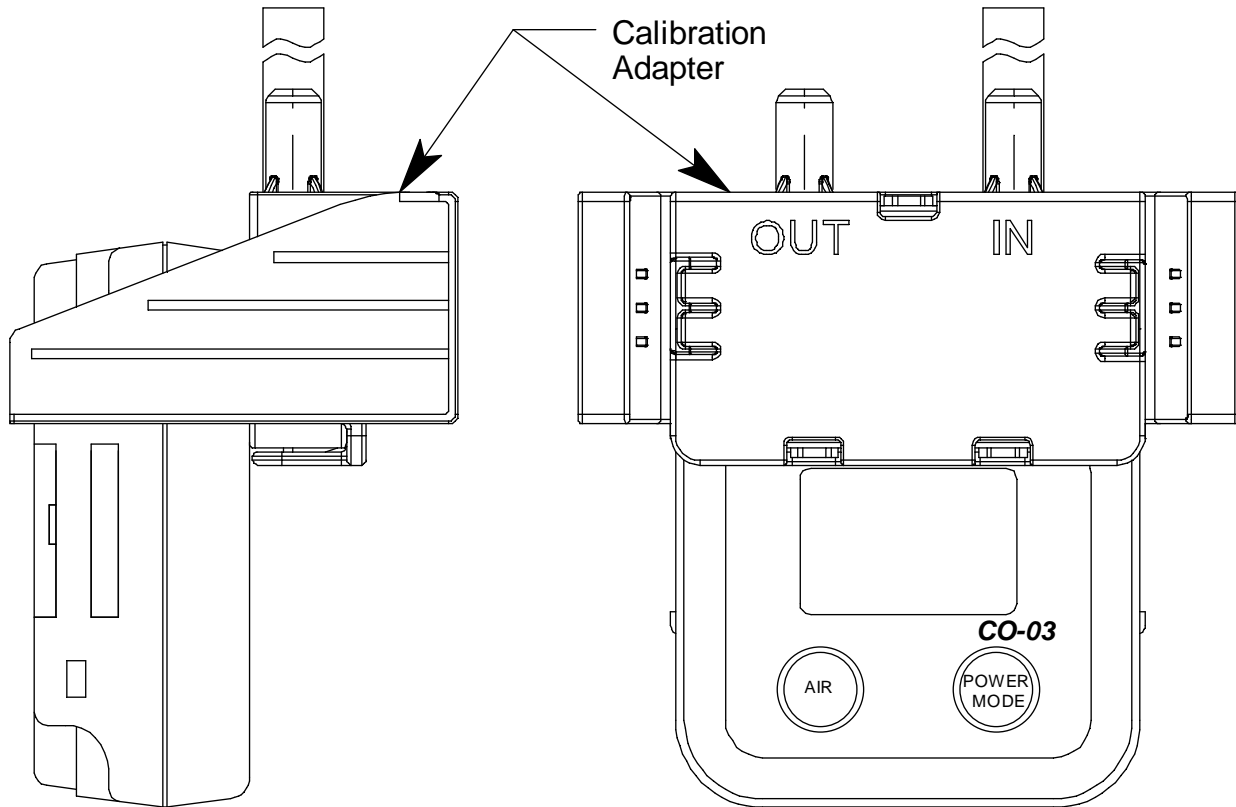
Figure 27: Installing the Calibration Adapter, Auto Cal

10. Turn the regulator on/off knob counterclockwise to open it. Calibration gas will begin to flow.

11. Allow the gas to flow for two minutes.

12. Click **Span**. The program will take a few seconds to adjust the instrument's span (zero for OX-03) setting. The Adjusting Span Window will appear during this period.

NOTE: For OX-03 instruments, the **Span** operation actually performs a zero adjustment at the instrument.
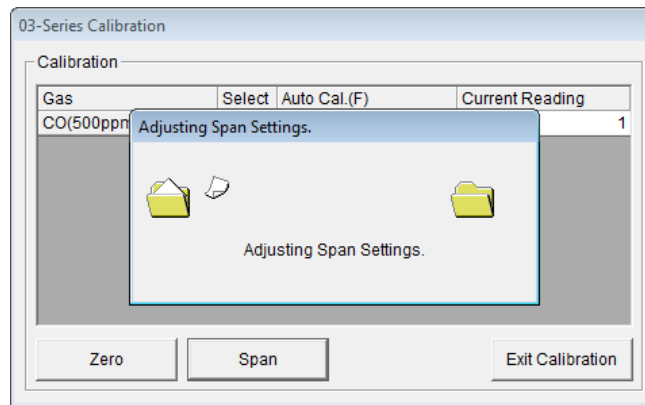
Figure 28: Adjusting Span Window

13. When the span adjustment is complete, the Adjustment Complete Window will indicate that the adjustment was completed if it was successful. Click **OK** to return to the Calibration Window.
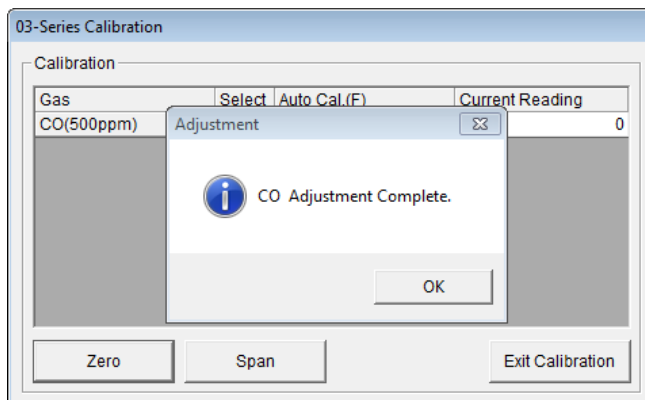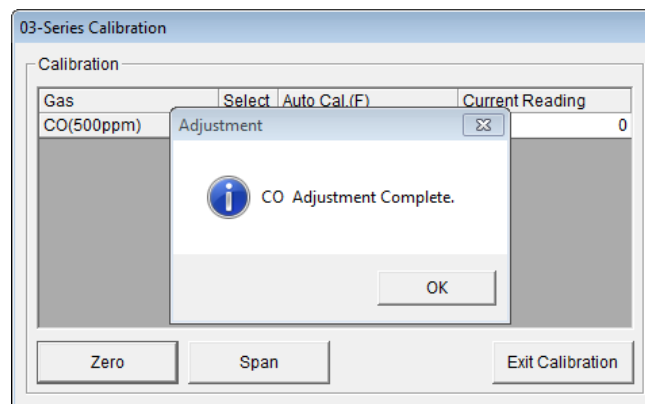

Figure 29: Adjustment Complete Window, Span

If the instrument fails the span adjustment, the message in the Adjustment Window will indicate that the span adjustment failed. Click **OK** to return to the Calibration Window. See the 03 Series Operator's Manual or 03 Series Operator's Manual for trouble shooting suggestions.

14. Turn the regulator on/off knob clockwise to close it.

15. Hold the 03 Series in place with one hand while removing the calibration adapter from the 03 Series' sensor face with the other to avoid moving the 03 Series excessively and losing the connection to the computer

16. Remove the regulator from the calibration gas cylinder.

17. Leave the regulator connected to the calibration adapter for convenience.

18. Store the components of the calibration kit in a safe and convenient place.

19. Click **Exit Calibration**. The program will return to the Main Window.

Setting Commands

Use the Setting Commands to turn off an instrument, load a selected parameter configuration file to an instrument, save a parameter configuration file based on an instrument's settings, change various instrument parameter settings that can be uploaded to an instrument, or exit the program. The five Setting Commands are **Power Off**, **Load local file**, **Store local file**, **Detail Settings**, and **Exit**.

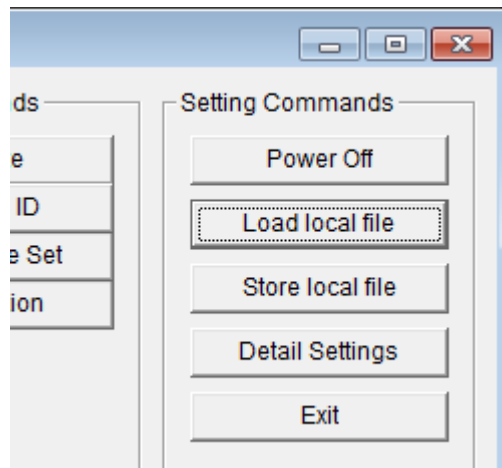
Figure 30: Setting Commands

Power Off

Use **Power Off** to turn off an instrument that is connected to the program. The **Power Off** button is blanked out if no instrument is connected to the program. If an instrument is connected, **Power Off** becomes active. Follow these steps to turn off a connected instrument:

1. With an instrument connected to the program, click **Power Off**.

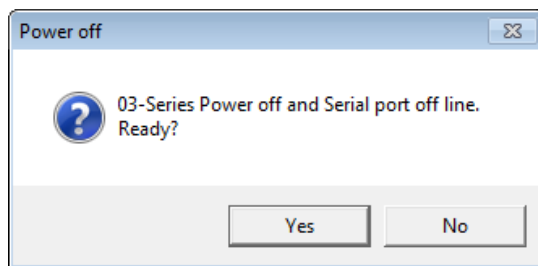2. The following window will appear prompting you to confirm that you want to turn off the instrument.

Figure 31: Power Off Confirmation

3. Click **Yes**. The program will take several seconds to turn off the instrument. The Connect Light in the Status area will turn gray indicating no connection to an instrument and the parameter fields in the 03 Series Status area will become empty except for the PC Date/Time and the Interval Trend Time fields.

Load Local File

Use **Load Local File** to load a parameter configuration file to the program so that you can upload it to an instrument. The parameter configuration files have a **.seq** extension and are only readable by the 03 Series User Setup Program. The parameter configuration files are user created by using the **Store Local File** button to save a file based on a connected instrument's parameter settings. See "Store Local File" on page 35 for a description of how to create and save a parameter configuration file.

NOTE: If an 03 Series' default settings have been reset, a saved parameter configuration file can be loaded to restore the original settings. See "Store Local File" on page 35 for instructions. If a file was not saved prior to resetting the defaults, a file containing RKI standard settings can be found on the 03 Series Product CD.

When you upload a parameter configuration file to an instrument, you are uploading instrument parameters such as alarm points, alarm pattern, calibration frequency, etc. Uploading a parameter configuration file to an instrument will *not* change the instrument identification parameters, serial number, user ID, and station ID, if the file was created from a different instrument.

Follow these steps to load a parameter configuration file to the program and upload it to an instrument:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

NOTE: It is not necessary to use **Instrument Information** or **Instrument Get & Save** in order to load a parameter configuration file and upload it to an instrument. Although it is not necessary to use **Instrument Information** or **Instrument Get & Save** before loading a file and uploading it to an instrument, you can do so after using either of these functions if desired.

3. Click **Load local file**. The Open Window will appear allowing you to navigate to a file location and select a file to load.
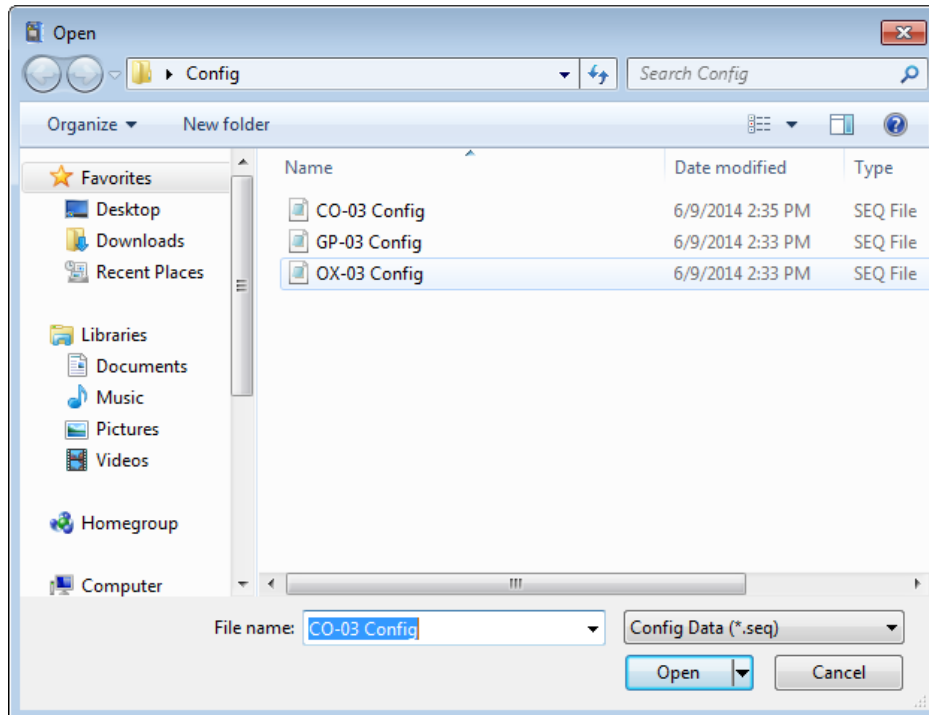
Figure 32: Open Window

4. Use the Open Window to navigate to the location of the file you wish to load.

5. Select the file you wish to load and click **Open**. The program will load the parameter configuration file and all of the parameter fields that can be uploaded from a parameter configuration file will be populated by the file's settings.

6. Click **Update** in the Write Commands. The Update Window will appear prompting you to confirm that you want to update the instrument.
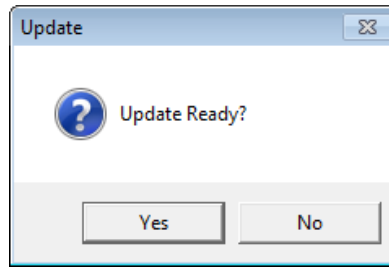
Figure 33: Update Window

7. Click Yes. The program will indicate that uploading is taking place with the Upload Window.
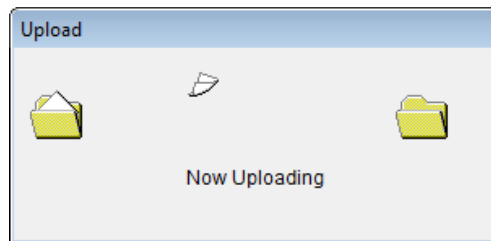
Figure 34: Upload Window

8. When the uploading is complete, the program will indicate that it is done.
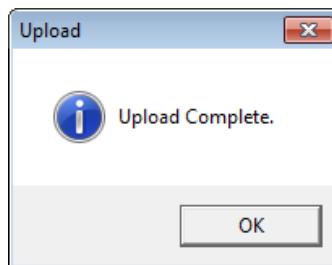
Figure 35: Upload Complete Window

9. Click **OK**. The program will return to the Main Window. The instrument's parameters have now been updated based on the loaded parameter configuration file.

Store Local File

Use Store Local File to save a parameter configuration file based on an instrument's parameter settings. The file can then be uploaded at a later time to another instrument to make its parameter settings match the original instrument's parameter settings or to restore the parameter settings of the original instrument if they have been changed. The instrument identification parameters, serial number, station ID, and user ID, are not saved in the parameter configuration files and they will not be changed when a file is uploaded to an instrument.

A parameter configuration file that contains your specific configuration information should be saved in case consultation with the factory determines that the instrument's default settings need to be reset.

NOTE: Consult RKI Instruments, Inc. before resetting the 03 Series' default settings.

Once the defaults have been reset, the saved parameter configuration file can be loaded into the 03 Series as described in "Load Local File" on page 32. A parameter configuration file containing RKI standard settings can be found on the 03 Series Product CD and can be used after a default reset if a parameter configuration file was not saved. Once the RKI standard setting file is loaded, the settings can be changed to match the original configuration of the 03 Series.

The parameter configuration files that are created have a **.seq** file extension. These files can only be used by the User Setup Program. When you use **Store Local File**, you can save the created files to any accessible location on your hard drive. Make sure to define a convenient location on your hard drive for these files if you use this feature so that you can conveniently find them when you want to upload a file to an instrument. When you select names for these files, you may want to structure the file names so you can identify from which instrument the file was saved or so that you can identify a particular parameter configuration. Structure the file names so that you can easily identify the files as containing the information that is important to you.

Follow these steps to create a parameter configuration file based on a connected instrument:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

3. With the Read Command Buttons now active, click **Instrument Information** to retrieve the instrument's parameter configuration. The program indicates that it is downloading information from the instrument.
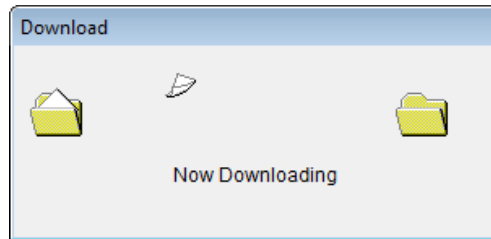
Figure 36: Instrument Information Downloading

4. The instrument's parameter configuration is now loaded in the User Setup Program.

5. Click **Store local file**. The Save As Window will appear allowing you to navigate to a file location and save a file to the selected location.
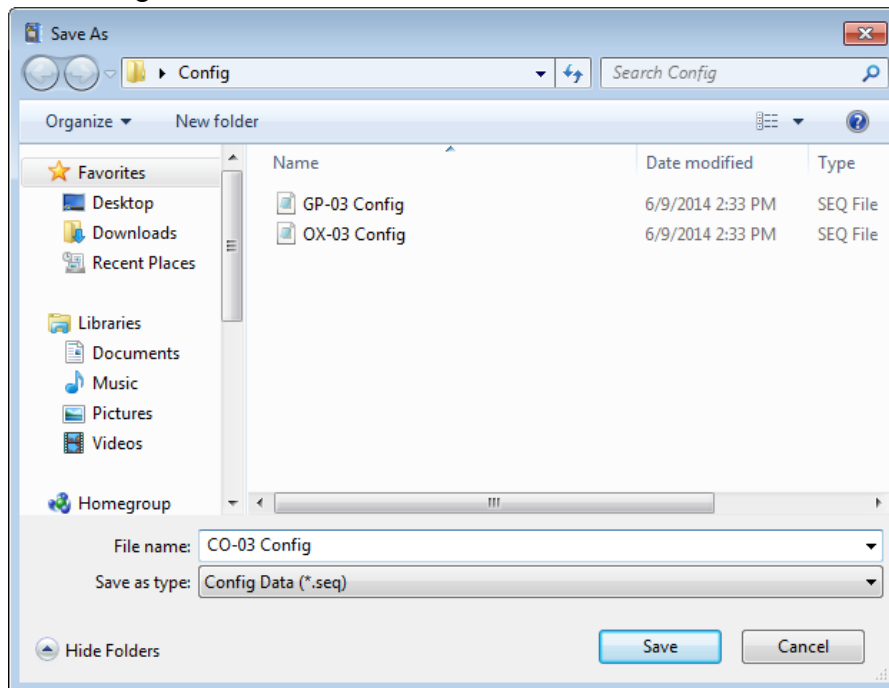
Figure 37: Save As Window

6. Use the Save As Window to navigate to the location where you want to save the file.

7. Type in a file name in the file name field. If you forget to include the **.seq** file extension, the program will automatically include it when it saves the file.

8. Click **Save**. The program will save the file and return to the Main Window.

Detail Settings

Use **Detail Settings** to set a variety of instrument parameters that are not accessible through the 03 Series' operation modes. The factory settings for these parameters may not be how you want them set for your instrument(s). These parameters would typically only be changed when an instrument is received as new if the factory settings for them are not how you want them.

The Factory Settings Window that is accessible with the **Detail Settings** button is shown below with the factory settings for each of these instrument parameters. If any of these settings is not set as you want, see the instructions in "Updating an Instrument's Detail Settings" on page 46 to change them. The Detail Settings are described below.

| 03-Series Factory Setting	
Spec No	SPE-2511
Alarm pattern(1st)	Latch
Alarm pattern(2nd)	Latch
Auto Awakening	Off
Awakening Date Time	0000000000
One Touch Cal. Time(0-120sec)	0
Buzzer Volume Selection	Off
Logger Over Write	On
Calibration Time Limit(1-365days)	90
Cal.Limit Display	On
Cal.Limit Check	Confirm to use
Bump Test Function	Off
Bump Test Time Limit(0-30days)	30
Bump Test Limit Display	Off
Bump Test Limit Check	Confirm to use
LCD Backlight Time(1-255sec)	30
Bump Test Time(5-90sec)	30
Bump Test Threshold(10-50%)	30
Calibration Time(60-120sec) after Bump Test Failed	60
Calibration after Bump Test Failed	On
Auto Zero Adjustment	Off
Zero Adjustment on demand	On
Maximum Span	Off
Bump Fail Behavior	None
Sensor use start day	000101
Power Off Password Protection	Off
Enable User Password	Off
User Password	0300
Confirmation Lamp	Off

OK   Cancel

Figure 38: 03 Series Factory Settings Window, GP-03 Type

Figure 39: 03 Series Factory Settings Window, OX-03 Type

03-Series Factory Setting	
Spec No	
Alarm pattern(1st)	Latch
Alarm pattern(2nd)	Latch
Auto Awakening	Off
Awakening Date Time	0000000000
One Touch Cal. Time(0-120sec)	0
Buzzer Volume Selection	Off
Logger Over Write	On
Calibration Time Limit(1-365days)	90
Cal.Limit Display	On
Cal.Limit Check	Confirm to use
Bump Test Function	Off
Bump Test Time Limit(0-30days)	30
Bump Test Limit Display	Off
Bump Test Limit Check	Confirm to use
LCD Backlight Time(1-255sec)	30
Bump Test Time(5-90sec)	30
Bump Test Threshold(10-50%)	30
Calibration Time(60-120sec) after Bump Test Failed	60
Calibration after Bump Test Failed	On
Auto Zero Adjustment	Off
Zero Adjustment on demand	On
Maximum Span	Off
Bump Fail Behavior	None
Sensor use start day	000101
Power Off Password Protection	Off
Enable User Password	Off
User Password	0300
Confirmation Lamp	Off
TWA/A-1H	TWA

OK   Cancel

Figure 40: 03 Series Factory Settings Window, CO-03 and HS-03 Type

Spec No

The **Spec No** setting is a code for the destination of the unit and is for factory use only.

Alarm Pattern(1st)

The **Alarm Pattern(1st)** setting applies to the Warning indication.

With **Alarm Pattern(1st)** set to *Latch* (factory setting), the 03 Series remains in a warning condition until the warning condition passes *and* the POWER MODE button is pressed and released.

With **Alarm Pattern(1st)** set to *Reset*, the 03 Series automatically resets an alarm when the warning condition passes.

Alarm Pattern(2nd)

The **Alarm Pattern(2nd)** setting applies to the Alarm indication.

With **Alarm Pattern(2nd)** set to *Latch* (factory setting), the 03 Series remains in an alarm condition until the alarm condition passes *and* the POWER MODE button is pressed and released.

With **Alarm Pattern(2nd)** set to *Reset*, the 03 Series automatically resets an alarm when the alarm condition passes.

Auto Awakening

With **Auto Awakening** set to *On*, the instrument will turn on automatically at the date/time entered in **Awakening Date Time**. If the instrument finds an IrDA source to connect to upon startup, it will enter its PC Transmit mode. If there is no IrDA source to connect to, the instrument will turn off again.

With **Auto Awakening** set to *Off* (factory setting), the instrument will not turn on automatically.

Awakening Date Time

Use **Awakening Date Time** to specify the date and/or time for the automatic startup of the instrument. **Auto Awakening** must be set to *On* in order for this parameter to have any effect. The format is year (XX) + month (XX) + day (XX) + hour (XX) + minute (XX). Entering "00" for the year, month, and day will turn the instrument on every day. The hour and minute are on a 24-hour clock. If you want the instrument to start up at 7:30 every day, the value entered would be 0000000730.

One Touch Cal. Time(0-120sec)

With **One Touch Cal. Time** set to 0 seconds (factory setting), the One Touch Cal. feature is not active and the A--CAL menu item will appear in Calibration Mode.

With **One Touch Cal. Time** set to anything other than 0 seconds, the One Touch Cal. feature becomes active and the E--CAL menu item will appear in Calibration Mode instead of A--CAL. The value entered into the **One Touch Cal. Time** field is how long the instrument will sample gas before performing a calibration. The countdown starts once gas is applied. See the GP-03 Operator's Manual or the 03 Series Operator's Manual for more description of the E--CAL function and for operation instructions.

Buzzer Volume Selection

With **Buzzer Volume Selection** set to *On*, the buzzer volume can be adjusted during Normal Operation. See the GP-03 Operator's Manual or the 03 Series Operator's Manual for instructions to change the buzzer volume.

Withe **Buzzer Volume Selection** set to *Off* (factory setting), the buzzer volume cannot be adjusted.

Logger Over Write

With **Logger Over Write** set to *On* (factory setting), the 03 Series writes over the oldest data with new data when the data logger memory is full.

With **Logger Over Write** set to *Off*, the 03 Series stops saving data to the data logger when the data logger memory is full to avoid overwriting old data.

Calibration Time Limit(1-365days)

This setting defines the amount of time between calibrations. The minimum setting is 1 day and the maximum setting is 365 days. The factory setting is 90 days.

Cal. Limit Display

With **Cal. Limit Display** set to *On* (factory setting), the 03 Series will give an indication at start up if it is due for calibration. The type of indication will depend on the **Cal. Limit Check** setting (see next item below).

With **Cal. Limit Display** set to *OFF*, if an instrument is due for calibration, it will give no indication at startup that it is due for calibration.

Cal. Limit Check

This item defines what indication is given during start up when calibration is due and **Cal. Limit Display** is set to *On.*

With **Cal. Limit Check** set to *Confirm to use* (factory setting), the 03 Series will give an indication at start up if calibration is due and require the user to press and release the AIR button to continue or press and release the POWER MODE button to perform a calibration.

With **Cal. Limit Check** set to *Can't use*, if the unit is due for calibration, the 03 Series will give an indication at start up that calibration is due and the unit cannot be used until it is calibrated. With this setting, it is necessary to calibrate the instrument before it can be used. You may calibrate the instrument using the User Setup Program or the 03 Series' Calibration Mode or Setup Mode. See "Calibration" on page 25 for instructions to calibrate an instrument using the User Setup Program. See the 03 Series Operator's Manual or the GP-03 Operator's Manual for instructions to calibrate an instrument using Calibration Mode or Setup Mode.

With **Cal. Limit Check** set to *None*, no confirmation during startup or calibration is required to use the 03 Series if it is past due for calibration.

Bump Test Function

This item turns the bump test function on or off. With **Bump Test Function** set to *On*, the BUMP item will appear in the Calibration Mode menu. This menu item allows you to bump test the 03 Series. With **Bump Test Function** set to *Off* (factory setting), the BUMP item will not appear in the Calibration Mode menu.

Bump Test Time Limit(0-30days)

This setting defines the amount of time between bump tests. The minimum setting is 0 days and the maximum setting is 30 days. If it is set for 0 days, a bump test will always be due. The factory setting is 30 days.

NOTE: If a successful calibration is performed, the next bump test date is reset and starts over even though a bump test was not performed.

Bump Test Limit Display

With **Bump Test Limit Display** set to *On*, the 03 Series will give an indication at start up if it is due for bump testing. The type of indication will depend on the **Bump Test Limit Check** setting.

NOTE: If **Bump Test Function** is set to *Off* and the **Bump Test Limit Display** is set to *On*, the 03 Series will still alert you during the startup sequence when a bump test is due.

With **Bump Test Limit Display** set to *OFF* (factory setting), if an instrument is due for bump testing, it will give no indication at startup that it is due for bump testing.

Bump Test Limit Check

This item defines what indication is given during start up when bump testing is due and **Bump Test Limit Display** is set to *On*.

With **Bump Test Limit Check** set to *Confirm to use* (factory setting), the 03 Series will give an indication at start up if bump testing is due and require the user to press and release the AIR button to continue or press and release the POWER MODE button to perform a bump test.

With **Bump Test Limit Check** set to *Can't use,* if the unit is due for bump testing, the 03 Series will give an indication at start up that bump testing is due and the unit cannot be used until it is bump tested. With this setting, it is necessary to bump test the instrument before it can be used. You may bump test the instrument using the BUMP menu item in Calibration Mode.

With **Bump Test Limit Check** set to *None,* no confirmation during startup or bump testing is required to use the 03 Series if it is past due for bump testing.

LCD Backlight Time

This setting indicates the length of time the LCD backlight is on after when you press any button. The minimum setting is 0 seconds. The maximum setting is 60 seconds. The factory setting is 30 seconds.

Bump Test Time(5-90sec)

Length of time gas is applied during a bump test. The factory setting is 30 seconds.

Bump Test Threshold(10-50%)

Percentage that the gas reading may differ from the actual gas value to pass a bump test. The factory setting is 30%.

Calibration Time(60-120sec) after Bump Test Failed

Length of time gas is applied during calibration after a bump test has failed if **Calibration after Bump Test Failed** is set to On. The factory setting is 60 seconds. This time includes the time that the unit was being bump tested. If **Cal. Time After Bump Fail Inc. Bump Time** is set to 60 seconds and the **Bump Test Time** is set to 30 seconds, the unit will sample gas for an additional 30 seconds if the bump test fails to bring the total exposure time to 60 seconds.

Calibration after Bump Test Failed

If **Calibration after Bump Test Failed** is set to *On* (factory setting), a calibration will automatically begin after a failed bump test.

If **Calibration after Bump Test Failed** is set to *Off*, a calibration will not automatically begin after a failed bump test.

Auto Zero Adjustment

With **Auto Zero Adjustment** set to *Off* (factory setting), no automatic fresh air adjustment will take place during an 03 Series' startup sequence when it is turned on.

With **Auto Zero Adjustment** set to *On*, the 03 Series will perform an automatic fresh air adjustment during the startup sequence when it is turned on.

Zero Adjustment On Demand

With **Zero Adjustment on demand** set to *On* (factory setting), you can perform a fresh air adjustment in Measuring Mode by using the 03 Series' AIR button.

With **Zero Adjustment on demand** set to *Off*, the 03 Series' AIR button is not operational in Measuring Mode, so it is not possible to perform a fresh air adjustment in Measuring Mode. You can still perform a fresh air adjustment in Calibration Mode and Setup Mode.

Maximum Span

If **Maximum Span** is set to *On*, after an automatic span adjustment, the instrument will display the highest reading it could have adjusted the sensor to.

If **Maximum Span** is set to *Off* (factory setting), the instrument will not display the highest reading it could have adjusted the sensor to during an automatic span adjustment.

Bump Fail Behavior

If **Bump Fail Behavior** is set to *Can Not Use* and if the most recently performed bump test failed, the instrument will not go into its warmup sequence and will instead display "C.AL FAIL". A successful bump test or calibration must be performed by turning the instrument off and then entering Calibration Mode before the instrument can be used.

NOTE: If **Bump Test Function** is set to *Off*, **Bump Fail Behavior** is set to *Can Not Use*, and if the most recently performed bump test failed, the 03 Series will still display "C.AL FAIL" and will not go into its warmup sequence.

If **Bump Fail Behavior** is set to *None* (factory setting), the instrument will enter its warmup sequence regardless of the status of the most recently performed bump test.

Sensor Use Start Day

The **Sensor Use Start Day** parameter allows the user to keep track of when the sensor in an instrument is replaced. This field will not automatically update once a new sensor is installed and must be manually updated. The format is year (XX) + month (XX) + day (XX). If the sensor was replaced on May 15, 2014, the value entered would be 140515. This parameter is saved in the instrument but is only viewable using the 03 Series User Setup Program.

Power Off Password Protection

If **Power Off Password Protection** is set to *On,* a password is required to turn the 03 Series off.

If **Power Off Password Protection** is set to *Off* (factory setting), no password is required to turn the 03 Series off.

Enable User Password

With **Enable User Password** set to *On*, the 03 Series prompts you for a password when you enter Setup Mode.

With **Enable User Password** set to *Off* (factory setting), no password is required to enter Setup Mode.

User Password

User Password allows you to define the password that allows you to enter Setup Mode if **Enable User Password** is set to *On* and also to turn off the instrument if **Power Off Password Protection** is set to *On*. The factory set password is 0300. If you change the password and forget what it is, contact RKI Instruments, Inc.

Confirmation Lamp

If **Confirmation Lamp** is set to *On*, the instrument's alarm LED will flash once every 5 minutes to confirm the instrument is still on.

If **Confirmation Lamp** is set to *Off* (factory setting), there will be no confirmation that the instrument is still on.

OXY Alarm Type

The **OXY Alarm Type** setting is only applicable to OX-03 instruments.

If **OXY Alarm Type** is set to L-H (factory setting), the warning setpoint is a decreasing alarm and the alarm setpoint is an increasing alarm.

If **OXY Alarm Type** is set to L-LL, both the warning and alarm setpoints will be decreasing alarms.

If **OXY Alarm Type** is set to H-HH, both the warning and alarm setpoints will be increasing alarms.

TWA/A-1H

The **TWA/A1-H** setting is only applicable to CO-03 and HS-03 instruments.

If **TWA/A1-H** is set to TWA (factory setting), the instrument will give a warning indication if the gas exposure is above the acceptable 8-hour average.

If **TWA/A1-H** is set to A1-H, the instrument will give a warning indication if the gas exposure is above the acceptable 1-hour average.

Updating an Instrument's Detail Settings

Follow these steps to update an instrument's detail settings:

1. Launch the 03 Series User Setup Program as described in "Launching the Program" on page 10.

2. Connect the 03 Series to the User Setup Program as described in "Connecting an 03 Series to the User Setup Program" on page 11.

3. With the Read Command Buttons now active, click **Instrument Information** to retrieve the instrument's parameter configuration**.** The program indicates that it is downloading information from the instrument.
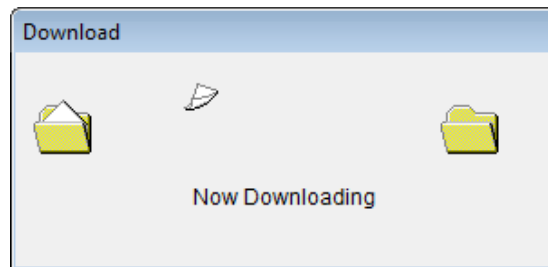

Figure 41: Instrument Information Downloading

4. The instrument's parameter configuration is now loaded in the User Setup Program.

5. Click **Detail Settings**. The 03 Series Factory Setting Window will appear.

Spec No	
Alarm pattern(1st)	Latch
Alarm pattern(2nd)	Latch
Auto Awakening	Off
Awakening Date Time	0000000000
One Touch Cal. Time(0-120sec)	0
Buzzer Volume Selection	Off
Logger Over Write	On
Calibration Time Limit(1-365days)	90
Cal.Limit Display	On
Cal.Limit Check	Confirm to use
Bump Test Function	Off
Bump Test Time Limit(0-30days)	30
Bump Test Limit Display	Off
Bump Test Limit Check	Confirm to use
LCD Backlight Time(1-255sec)	30
Bump Test Time(5-90sec)	30
Bump Test Threshold(10-50%)	30
Calibration Time(60-120sec) after Bump Test Failed	60
Calibration after Bump Test Failed	On
Auto Zero Adjustment	Off
Zero Adjustment on demand	On
Maximum Span	Off
Bump Fail Behavior	None
Sensor use start day	000101
Power Off Password Protection	Off
Enable User Password	Off
User Password	0300
Confirmation Lamp	Off
TWA/A-1H	TWA

Figure 42: 03 Series Factory Settings Window

6. Select the parameter or parameters that you want to change and update them. If you click a parameter setting field and there are multiple choices for that parameter setting, a drop down menu will appear so that you can choose the setting you want. If a parameter setting is a numerical value, you can click in the field for that parameter setting and enter the desired value.

7. Once you have made the desired changes, click **OK** to return to the Main Window.

8. Click **Update** in the Write Commands. The following window appears prompting you to confirm that you want to make the update.

Figure 43: Update Window

9. Click **Yes** to proceed. The program will indicate that it is uploading information to the 03 Series.
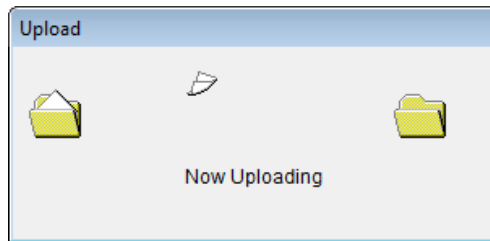

Figure 44: Upload Window

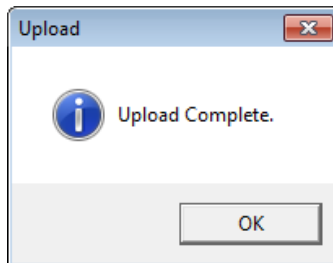10. When the uploading is complete, the program will indicate that it is done.

Figure 45: Upload Complete Window

11. Click **OK**. The program will return to the Main Window.

Exit

Click **Exit** to shut down the User Setup Program. If an instrument is connected to the program, make sure to turn off the instrument before shutting down the program to avoid leaving the instrument on in PC Mode and draining the battery.

Troubleshooting

The troubleshooting table below symptoms, probable causes, and recommended actions for problems you may encounter while using the 03 Series User Setup Program.

Table 1: Troubleshooting

Symptoms	Probable Causes	Recommended Action
Communication cannot be established	1. The 03 Series is not positioned correctly in front of the IrDA port or IrDA/USB adapter cable. 2. Another device that uses IrDA communication is near the 03 Series or IrDA port or IrDA/USB adapter cable. 3. Strong sunlight is hitting the 03 Series or IrDA port or IrDA/USB adapter cable.	1. Adjust the orientation of the 03 Series so that its IrDA port is in line with the computer's IrDA port or IrDA/USB adapter cable. 2. Remove any device using IrDA communication. 3. Move the 03 Series and the computer's IrDA port or the IrDA/USB adapter cable so that sunlight is no longer hitting either of them.
An error occurs during download or the "Connect" light in the Download window turned grey	1. The 03 Series moved during downloading and is no longer positioned correctly in front of the IrDA port or IrDA/USB adapter cable. 2. An object is positioned between the 03 Series and the IrDA port or IrDA/USB adapter cable and is blocking communication. 3. Another device that uses IrDA protocol is near the 03 Series or IrDA port or IrDA/USB adapter cable. 4. Strong sunlight is hitting the 03 Series or IrDA port or IrDA/USB adapter cable.	1. Adjust the orientation of the 03 Series so that its IrDA port is in line with the computer's IrDA port or IrDA/USB adapter cable. 2. Remove any object that is between the 03 Series and the IrDA port or IrDA/USB adapter cable. 3. Remove any device using IrDA communication. 4. Move the 03 Series and the computer's IrDA port or the IrDA/USB adapter cable so that sunlight is no longer hitting either of them. 5. If the difficulties continue, turn off the 03 Series, restart the User Setup program, and attempt to connect the 03 Series again.

Spare Parts List

Table 2: Spare Parts List

Part Number	Description
06-1248RK-03	Calibration kit tubing, 3 foot length
47-5084RK	USB/IrDA adapter module, Legasic, for use with all premier portables (without USB cable)
47-5084RK-01	USB/IrDA adapter assembly, Legasic, for use with all premier portables (with module and USB cable)
47-5085RK	Cable, USB A to USB mini, 6 feet, for USB/IrDA adapter module
47-5093	USB/IrDA adapter with cable and CD (not for use with Eagle 2)
71-0303	GP-03 Operator's Manual
71-0304	03 Series Operator's Manual
71-0324	03 Series User Setup Program Operator's Manual (this document)
71-8008	03 Series Product CD, Includes the 03 Series Data Logger Management Program, the 03 Series User Setup Program, and Operator's Manuals for each
81-007RK-01	Calibration cylinder, 15% LEL hexane in air, 34 liter steel
81-0012RK-01	Calibration cylinder, 50% LEL methane in air, 34 liter steel
81-0012RK-03	Calibration cylinder, 50% LEL methane in air, 103 liter
81-0064RK-01	Calibration cylinder, 50 ppm CO in air, 34 liter steel
81-0064RK-03	Calibration cylinder, 50 ppm CO in air, 103 liter
81-0078RK-01	Calibration cylinder, 100% nitrogen, 34 liter steel
81-0078RK-03	Calibration cylinder, 100% nitrogen, 103 liter
81-0151RK-02	Calibration cylinder, 25 ppm H_2S in nitrogen, 58 liter
81-0151RK-04	Calibration cylinder, 25 ppm H_2S in nitrogen, 34 liter aluminum

Table 2: Spare Parts List

Part Number	Description
81-1050RK	Regulator, with gauge and knob, 0.5 liter/minute continuous flow, for 17 liter and 34 liter steel calibration cylinders (cylinders with external threads)
81-1051RK	Regulator, with gauge and knob, 0.5 liter/minute continuous flow, for 34 liter aluminum/58 liter/103 liter calibration cylinders (cylinders with internal threads)
81-1146	Calibration adapter for 03 Series
81-CO03	Calibration kit for CO-03 containing: one 103-liter gas cylinder (50 ppm CO in air), regulator, calibration adapter, case, tubing
81-CO03-LV	Calibration kit for CO-03 containing: one 34-liter steel gas cylinder (50 ppm CO in air), regulator, calibration adapter, case, tubing
81-GP03	Calibration kit for GP-03 containing: one 103-liter gas cylinder (50 %LEL methane in air), regulator, calibration adapter, case, tubing
81-GP03-LV	Calibration kit for GP-03 containing: one 34-liter steel gas cylinder (50 %LEL methane in air), regulator, calibration adapter, case, tubing
81-GP03H-LV	Calibration kit for GP-03 containing: one 34-liter steel gas cylinder (15 %LEL hexane in air), regulator, calibration adapter, case, tubing
81-HS03	Calibration kit for HS-03 containing: one 58-liter gas cylinder (25 ppm H_2S in nitrogen), regulator, calibration adapter, case, & tubing
81-HS03-LV	Calibration kit for HS-03 containing: one 34-liter aluminum gas cylinder (25 ppm H_2S in nitrogen), regulator, calibration adapter, case, & tubing
81-OX03	Calibration kit for OX-03 containing: one 103-liter gas cylinder (100% nitrogen), regulator, calibration adapter, case, tubing
81-OX03-LV	Calibration kit for OX-03 containing: one 34-liter steel gas cylinder (100% nitrogen), regulator, calibration adapter, case, tubing