



Instruction Manual  
P/N: 0019-9371  
December 2, 2013  
Revision 0

# Snifit<sup>+</sup>

Carbon Monoxide  
Personal Safety  
Monitor Kit  
(P/N: 0019-7600)



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- Snifit<sup>+</sup> CO Gas Monitor.....0019-6108
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## OPTIONAL ACCESSORIES

- Calibration Adapter .....0019-6106
- Calibration Kit (Regulator and 4' Hose) .....0051-2978
- 100 ppm Calibration Gas Cylinder .....0051-1994

## SAFETY INFORMATION

**WARNING:** The Snifit<sup>+</sup> contains a lithium battery which may leak or explode if improperly used. Do not place the Snifit<sup>+</sup> in fire or incinerate.

**IMPORTANT:** Snifit<sup>+</sup> has no user-serviceable parts inside. Do not disassemble the instrument.

**IMPORTANT:** Verify operation each day by performing a functional (bump) test.

**IMPORTANT:** Keep all openings free of dirt, debris, and foreign objects.

**IMPORTANT:** Do not use if damaged or improperly operating. Contact a service representative immediately.

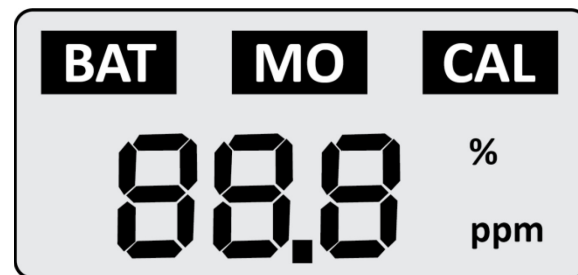
**IMPORTANT:** Zero the Snifit<sup>+</sup> only in a CO-free environment.

**IMPORTANT:** Dispose of the Snifit<sup>+</sup> properly.

## DESCRIPTION

The Snifit<sup>+</sup> is a rugged personal gas monitor for detecting carbon monoxide gas. Preset alarms provide visual, audible, and vibration alerts for low and high alarm conditions. Built-in time weighted average (TWA) alarms and short-term exposure limit (STEL) alarms provide an even greater margin of safety for the user. A custom display provides easy-to-view information including:

- gas concentration
- time remaining (months) until replacement is needed
- battery low alert
- calibration activation.



## SPECIFICATIONS

<b>Sensor:</b>	Carbon Monoxide (CO); Electrochemical
<b>Operating Temperature:</b>	-4 to 122° F (-20 to 50° C)
<b>Humidity:</b>	15 to 90% RH (Non-condensing)
<b>Duty Cycle:</b>	Continuous
<b>Display Resolution (Range):</b>	1 ppm (0-999 ppm); 0.01% Volume (1000-2000 ppm)
<b>Response:</b>	T <sub>90</sub> < 30 seconds
<b>Visual Alarm:</b>	LEDs and display (low battery, sensor life, calibration status)
<b>Sound Alarm:</b>	90dB @ 12" (30 cm)
<b>Touch Alarm:</b>	Vibration
<b>Power:</b>	Lithium battery
<b>Size:</b>	3.81" x 2.31" x 0.80" (9.67 cm x 5.87 cm x 2 cm)
<b>Weight:</b>	3.6 oz (105 g)
<b>Battery Life:</b>	2+ years
<b>Housing:</b>	IP65 environmental resistance; Rubberized and impact-resistant
<b>Mounting:</b>	Durable belt clip and lanyard loop

## FEATURES

**Construction:** The Snifit<sup>+</sup> is constructed of durable ABS plastic. The top housing is further protected with a shock absorbing material to protect the Snifit<sup>+</sup> from the rigors of field use. The unit is sealed for an IP65 environmental resistance rating.

**Operation:** Two buttons operate the Snifit<sup>+</sup>. The left button (⏻) is for power. The right (Z) is for zeroing and calibrating. The Snifit<sup>+</sup> supports "continuous on" operation. The CO sensor and battery are designed for 2 years of continuous normal use.

**Sensor:** The sensor opening is on the front of the Snifit<sup>+</sup>.



**Mounting:** The instrument may be attached using the metal lanyard loop or the sturdy suspender clip on the back of the instrument.

**Alarm Components:** The front of the instrument has an opening for the audible alarm (which is sealed to maintain the integrity of the IP65 rating). Multiple LEDs beneath the frosted area create a visual warning that is bright even in sunlight.

**NOTE:** The Snifit<sup>+</sup> cannot be powered off or zeroed when in alarm mode.

**Alarm Limits:** The Snifit<sup>+</sup> has two basic styles of alarm:

- Low Alarms: Indicators activate at 2 sec intervals
- High Alarms: Indicators activate at 1 sec intervals.

## FEATURES (CONTINUED)

The audible (sound), visual (LEDs), and vibrating alarms are sequenced during alarms. The alarm settings are defined during the set-up of the instrument. The instrument's default alarm limits are factory-preset to the values shown below:

<b>LOW:</b>	35 ppm	<b>TWA:</b>	50 ppm
<b>HIGH:</b>	200 ppm	<b>STEL:</b>	75 ppm

**Extended Range Operation:** All readings from 1000 ppm to 2000 ppm are displayed as "\_10%" to "\_19%". The underscore represents a decimal point. Levels detected above "\_19%" display "OL".

## STARTUP

Press ⏻ to start the Snifit<sup>+</sup> in an area known to be CO gas free and with normal oxygen content. The following will display as a normal start up sequence.

1. All segments and icons will activate.
2. Gas type to be sensed will be displayed.
3. Software version is shown.
4. Temperature in °C is shown.
5. Alarms will sound, illuminate and vibrate.
6. "LO" Low alarm setpoint displays.
7. "HI" High alarm setpoint displays.
8. "tA" TWA alarm setpoint displays (if applicable).
9. "StL" STEL alarm setpoint displays (if applicable).
10. "Sn" Serial Number displays.
11. Displays remaining life, in months.
12. All segments flash for 6 seconds indicating zeroing.
13. The working display is shown.

If the Snifit<sup>+</sup> is in an area that is not gas free, "BAD" will illuminate after the automatic zeroing followed by a reading based on factory zero set points.

## BUMP TEST

To verify the operation of the instrument, a bump test should be done prior to each day's use. Bump test failure may indicate a product failure or the need for calibration.

To perform a bump test, turn on the Snifit<sup>+</sup> and wait for the working display to be shown. Apply test gas using the calibration adapter. Flow should be 200-400 cc/min. Assuming an alarm setpoint is less than the applied gas concentration, an alarm should occur in less than 20 seconds.

## OPERATION OVERVIEW



**WARNING:** Follow federal, state, local and company regulations as they relate to the use of this product.

**PLACEMENT:** Attach the Snifit<sup>®</sup>+ to the outermost garment as close to your head/face as practical.

**ALARMS:** Alarms will indicate unsafe levels. The display will show concentration data in combination with audible, visual and vibration indications. TWA alarms can be acknowledged for 10-minute intervals by pressing either button.

**MANUAL ZERO:** Manual zeroing should only be done in an atmosphere known to be CO gas free and containing normal oxygen levels. Press **Z** for 2-3 seconds and release. All segments of the display will flash followed by the working display.

**OVER RANGE:** Exposure to CO gas in excess of 2000 ppm will result in "OL" being displayed with the high alarm activated.

**OPERATION TIME:** To view the remaining operation time, press **Z** for 2-3 seconds and release. The Snifit<sup>®</sup>+ will display the time remaining in months, then perform a zero.

**BATTERY DIAGNOSTICS:** BAT indicates low battery output and service will be needed soon.



**WARNING:** Only factory trained personnel should perform any internal servicing.

BAT + LO indicates that the Snifit<sup>®</sup>+ should be immediately taken out of service.

**SYSTEM DIAGNOSTICS:** I2C indicates a communication error in the EEPROM. Factory service is required.



**WARNING:** Only factory trained personnel should perform any internal servicing.

**SHUTDOWN:** To turn off, press and hold the POWER button (**P**) for approximately 6 seconds until "OFF" is displayed, then release the button. The Snifit<sup>®</sup>+ cannot be powered off (or zeroed) when in alarm mode.



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## ALARM ADJUSTMENT

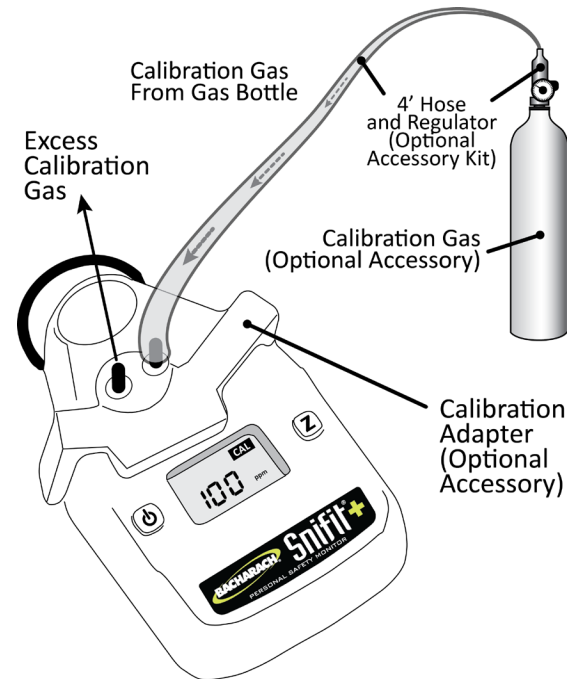
- When the Snifit<sup>®</sup>+ starts, press both buttons together (**P** + **Z**) after the Gas Type is displayed, then release... OR  
From the working display, push both buttons simultaneously (**P** + **Z**) and release. The unit will display "Pin". Press either key to display 900.
- Press **Z** to scroll up to 980, then push **P**. Roll-over occurs after 998 then restarts at 900. The display will show "Con" for Continuous On operation.
  - Press **P** to adjust mode.
  - Press **Z** to toggle mode (Yes or No). Note: Continuous On mode (Yes) disables the Power Button (**P**) and the TWA alarm.
  - Press **P** to save the setting.The display will now show "LO" for the low alarm.
- Press **P** to adjust the "LO" alarm. The current setting will be displayed.
- Press **Z** to adjust the alarm (roll-over after 300).
- Press **P** to save the alarm setting. The Snifit<sup>®</sup>+ will now display "HI".
- Press **P** to adjust the "HI" alarm. The current setting will be displayed.
- Press **Z** to adjust the alarm (roll-over after 300).
- Press **P** to save the alarm settings. The Snifit<sup>®</sup>+ will now display "tA" for TWA.
- Press **P** to adjust the TWA alarm. The current setting will be displayed.
- Press **Z** to adjust the alarm (roll-over after 125).
- Press **P** to save the alarm settings. The Snifit<sup>®</sup>+ will now display "StL" for STEL.
- Press **P** to adjust the STEL alarm. The current setting will be displayed.
- Press **Z** to adjust the alarm (roll-over after 300).
- Press **P** to save the alarm settings. Snifit<sup>®</sup>+ will exit the menu and perform an auto zero automatically.

## CALIBRATION

Turn on the Snifit<sup>®</sup>+. The working display is shown. Allow the unit to remain on for 2 minutes prior to beginning the calibration process.

- Prepare the 100 ppm CO gas cylinder and regulator with the calibration adapter attached. The flow should be 200-400 cc/min.
- Press and hold **Z** until the display reads "GAS".
- Attach the calibration adapter.
- Start the gas flow.
- Press **Z**. The CAL icon will flash.

## CALIBRATION (CONTINUED)



- Successful calibration is indicated when only the gas concentration is displayed. The CAL icon will no longer be illuminated. Bad calibration will be indicated by the word "BAD" and the CAL icon on the display. Press **P** to acknowledge a bad calibration, then retry.

## WARRANTY AND PRODUCT SUPPORT

Bacharach warrants to the buyer that the Snifit<sup>®</sup>+ will be free from material defects, free from manufacturing defects, and will conform substantially to Bacharach's applicable specifications at the time of delivery.

Bacharach's liability and the buyer's remedy under this warranty are limited to the repair or replacement, at Bacharach's option, of this product or parts thereof returned to Bacharach and shown to Bacharach's reasonable satisfaction to have been defective; provided that written notice of the defect is given by buyer to Bacharach within two (2) years after the date of delivery of this Product by Bacharach. Internal repair must be completed by a Bacharach authorized technician. Violation will void warranty.

Register your warranty by visiting  
[www.MyBacharach.com](http://www.MyBacharach.com)

For product support or additional information contact Bacharach at 724-334-5000 or 1-800-736-4666.

## SETTING DATE AND TIME

To adjust the date/time manually, enter the menu by simultaneously pressing both buttons (**P** + **Z**) then releasing them. (The Snifit<sup>®</sup>+ will force the user to update the time if it is invalid during startup.)

The Snifit<sup>®</sup>+ shows "Pin". Press and release either button to show "900". Press **Z** to increase the number to 925. The display rolls over to 900 when it exceeds 998. Press and release **P**. Next:

- The Snifit<sup>®</sup>+ will beep continuously if invalid at startup and show "rtc". Press either button.
- The display shows "Yr". Press either button. Snifit<sup>®</sup>+ shows the last two digits of the current year.
- Press **Z** to increase year (roll-over occurs after 50). Adjust to desired "Yr".
- Press **P** to accept the desired "Yr".
- The month icon and current month are displayed.
- Press **Z** to increase month (roll-over after 12). Adjust to desired "MO".
- Press **P** to accept the desired "MO".
- The display shows "dd". Press either button. Display shows the current date.
- Press **Z** to increase the day (roll-over after max number of days for selected month). Adjust to desired "dd".
- Press **P** to accept the desired "dd".
- The display shows "Hr". Press either button. Snifit<sup>®</sup>+ shows the current hour in the 24-Hour format (no AM/PM selection).
- Press **Z** to increase the hour (roll-over after 23). Adjust to desired "Hr".
- Press **P** to accept the desired "Hr".
- The display shows "nn". Press either button. Snifit<sup>®</sup>+ shows the current minute.
- Press **Z** to increase the minute (roll-over after 59). Adjust to desired "nn".
- Press **P** to accept the desired "nn".



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