

Owners Manual

CO Experts – Model 2016-10 Low-Level Carbon Monoxide Monitor

Read Carefully and Thoroughly

1. IMPORTANT CONSUMER NOTICE OF LIMITATIONS

Codes and By-laws

The CO Experts Model 2016-10 is not to be used as, nor implied to be used as a substitute for a UL-2034, CSA-6.19 or any other recognized standard “listed” carbon monoxide alarm where Local, State / Provincial, or Federal Codes or legislation mandate their use. The CO Experts Model 2016-10 is a supplemental carbon monoxide monitoring device only. Use of this device is at the consumers discretion and implies the understanding and acceptance of its limitations to adhere to codes or legislation where applicable.

Standards

This product is **NOT listed or certified** to, nor meets the parameters of UL-2034, CSA-6.19, or any other current known Industry or Safety Association Standards.

The pre-set audible alarm points and display values of the CO Experts model 2016-10 have been determined by CO Experts as relevant and useful to alert the user to the presence of carbon monoxide levels well below and in advance of the minimum levels permitted in standard “listed” alarms / detectors.

Gas / Smoke Detectors

CO Experts model 2016-10 is specifically designed to detect **Carbon Monoxide only** and is not to be used as or relied upon as a detection device for any other Gas, Smoke, Fire, or potentially dangerous air pollutants. Additional alarms and their installations may vary as to the consumers specific needs as well as jurisdictions, and the consumer should contact their local, Municipal, or State / Provincial Governing Departments to confirm their specific responsibilities to comply.

Appliance Maintenance

As is the case with any detection or safety device, use of this carbon monoxide monitor should NOT be considered a substitute for, or justification to avoid regular service and maintenance of all fossil fuel burning appliances in your home. All sources of combustion as well as venting should be inspected annually by a licenced professional to ensure they are performing efficiently and safely.

2. Intended Use

This product is specifically designed and intended for indoor use in a typical “Residential” application. It is not intended or implied to be used in environments where excess pollutants and / or temperatures are present such as outdoors, a Garage, Warehouse, or Manufacturing environment. Exposure to pollutants, dust, and significant temperature changes will affect the accuracy and performance of the unit overall and could result in false readings and / or audible alarms.

This product can be used as a portable device, and can be effective in applications such as Campers, Boats, Automobiles, and small aircraft.

However, the user should be conscious to remove the unit during any period of storage where it may be exposed to temperature or humidity changes.

3. What is Carbon Monoxide?

Carbon Monoxide (CO) is an extremely poisonous gas produced through the incomplete combustion of fossil fuels such as Natural Gas, Propane, Wood, Coal, Gasoline, Bio-fuels etc., essentially anything that “burns” can produce CO. The significant danger of Carbon Monoxide is that it is invisible, colorless, odourless and tasteless, and can only be detected using a mechanical / chemical detection device.

Properties of Carbon Monoxide

Carbon Monoxide (CO) is approx. 97% the same density and weight as the air that we breath at room temperature. CO will circulate easily through the home following the natural air flow of your HVAC system, and will rise with warm air and fall with cooling air. Therefore, a CO detector can be installed on a ceiling (typically in new home construction) or plugged into a standard outlet (retail plug-in models).

Affects of Carbon Monoxide

Carbon Monoxide affects the body by starving (suffocating) critical organs of oxygen. When CO is inhaled it attaches to the hemoglobin in the blood that normally carries oxygen throughout the body. CO permanently displaces the ability for oxygen molecules to attach to the hemoglobin, thus reducing oxygen to vital organs. The concentration level and time exposed to CO can vary its affects on the body, but experts agree even low levels of carbon monoxide exposure over prolonged periods can have serious and lasting affects to anyone’s overall health.

Who is at Risk?

Everyone is at risk to the affects of carbon monoxide poisoning. While persons with stronger cardiovascular or overall health can be less affected to the immediate symptoms of CO poisoning, its affects can be the same to their long-term health.

Especially at risk are children, from the fetal stage through infancy to adulthood. Many experts and studies site carbon Monoxide as a serious concern in this developmental stage of growth, that can result in long lasting or permanent mental and physical development issues.

Also, anyone with chronic health issues such as Lung or Heart conditions, Asthma, Bronchitis, Anemia, COPD, the elderly and / or infirmed. Those already suffering from such conditions are at a much greater vulnerability to CO, and its affects can be more immediate and cause serious and possible life-threatening complications to their current health status.

Symptoms of CO Poisoning

Carbon Monoxide is often difficult to recognize because its symptoms mimic the common Flu. What makes it more difficult is most CO incidents occur during the typical Cold / Flu season, Fall and Winter, when our combustion appliances are called on most frequently.

Common Symptoms (may include)

Mild Exposure: Slight headache, nausea, fatigue

Medium Exposure: Throbbing headache, drowsiness, confusion, vomiting and accelerated heart-rate

Extreme Exposure: Unconsciousness, Convulsions, Cardio-respiratory failure, death

Be conscious of these symptoms to help determine whether they may be caused by CO poisoning. Be aware if symptoms are greatly reduced during periods away from home, reappearing when returning.

If you suspect carbon monoxide may be present have a licenced HVAC or Appliance technician inspect your appliances using a professional analyzing device.

If you have an immediate health concern and suspect carbon monoxide as the cause you should evacuate the home and contact your local Fire Department for assistance.

4. Where to Install

The most critical factors to consider when choosing where to install / place your unit are:

- If only one CO unit in the home, install either in an occupied bedroom, or within 10 ft of all bedrooms in an adjoining hallway.
- Install in a location easily visible and often visited
- If Mounting to a wall, place at eye level for easy viewing and testing.
- If utilizing the 2016-10 accessory stand, place anywhere highly visible in frequented rooms. Ideally book shelf, end tables etc.

Important Note:

Carbon Monoxide is most dangerous when we sleep as even low levels can deepen the state of unconsciousness. Without the earliest detection, our ability to recognize and awaken to the sound of an alarm is reduced relevant to the level and time of exposure.

It is highly recommended to have at least one Low Level carbon monoxide device on each level of the home for the earliest detection.

Where NOT to install

As critical as where to install your carbon monoxide monitor it is just as important to avoid certain locations. Improper placement can result in your unit being unable to detect CO in your home.

- Never install outdoors, in an unheated area, or location open to the elements.
- Be sure your unit is in an unobstructed location, never behind curtains or furniture.
- Do not install within 6 feet of any fuel burning appliance.
- Do not install within 4 feet of any air vent, return air vent, exhaust system, or ceiling fans. Air movement in these areas can affect the sensors ability to detect levels accurately.
- Do not install within 2 feet of an inside wall corner. Air circulation can "roll" through this area and not allow a reasonable sample to reach the sensor.

5. Getting Started

What's in the Box

- 1 CO Experts model 2016-10
- 1 rear mounting plate
- 1 portable stand (optional use)
- 1 mounting hardware packet including:
- 3 screws / 3 anchors for "hard" wall mount
- 2 self-adhesive Velcro strips for removable wall mount
- 1 owners manual

Note: If all listed materials are not present contact us immediately.

6. Activating Your Monitor

Attach the rear mounting plate onto the back of the unit by inserting the 2 protruding points on the mounting plate into the long opening on the back of the unit, then slide the mounting plate upwards until it clicks into place.

This will immediately activate the sealed battery power, and the unit will emit 4 beeps to confirm activation, and the digital display will show "0". Your monitor is now activated and functioning.

De-activating Your Monitor

If for any reason you need to deactivate your monitor, simply depress the small plastic tab on the lower right side of the mounting plate and slide the unit upwards. This will unlock the mounting plate from the unit and deactivate the battery power to the unit.

7. Installation

Portable stand:

To allow easy portability throughout your home or for travel, simply attach the included portable stand to the bottom of the unit.

Wall Mount (2 options):

1. **Permanent:** Utilize the included mounting hardware (plugs and screws) for permanent mounting. Place the mounting plate in the desired location and use a pencil to mark the hole locations. Secure the mounting plate to the wall. Once secure, place the unit onto the mounting plate and pull down, locking the unit in place. Properly done, the unit will beep 4 times and the display will read "0" indicating the unit is now powered and operating.
2. **Removable:** Utilizing the included self-adhesive Velcro strips allows a wall mount installation with the option of easy removal for portability. With the mounting plate attached and unit activated, simply apply the Velcro to the back of the unit, and the wall in the desired location and press firmly to attach.

Note: Refer to section #3 for locations to install and avoid.

8. LED Indicators – Test / Silence - Display

LED Indicators:

- **Red / Alarm** – Flashes during, and in unison with audible alarms as well as in "Silence" mode (see section #8 "Silence" for patterns).
- **Green / Power** – Flashes once per minute.
- **Yellow / Fault** (detected) – Flashes once per minute along with a single audible beep.

Note: A "Fault" can result from 3 separate issues recognized by a coinciding digital display message.

1. An internal electronic fault detected will display "Bae".
2. A low battery voltage detected will display "Bat".
3. A sensor malfunction, or its "end-of-life" (5 years of use has elapsed) will display "End".

In the unlikely event of a "Fault" condition, please carefully note the digital display prior to contacting us.

Test / Silence:

- **Test** - To test your unit and audible alarm press the "Test/Silence" button and hold until the unit alarms (4 quick beeps). This procedure also initiates an internal circuitry test to confirm the unit is functioning properly.
- **Silence** – In the event of an audible alarm condition you can silence the alarm by pressing the "Test/Silence" button. (See section #8 "Silence" for durations).

Display (3 functions):

- **Normal** functioning mode - the display will constantly show a display of parts per million (PPM) as below:
 - Below 7 PPM the display will show "0".
 - 7 PPM through 50 PPM, "real-time" current levels.
 - Above 50 PPM the display will show "High".
- **Peak:** From the Normal PPM display, press the "Display" button once to move to the "Peak" level screen. This indicates and stores the highest CO levels detected within the previous 24 hr period.
- **COHb:** From the Peak screen, press the "Display" button once to move to the "COHb" screen. This is a "general calculation" of the level of CO saturation possible in the blood for an average person if present during the duration of a detected CO incident in the home.

Note: The COHb calculation is not to be considered an accurate diagnosis of a medical condition and is intended only as a general reference. If you suspect you have been subject to carbon monoxide for an extended period and are suffering from its affects, medical treatment should be sought out immediately.

9. Alarm Levels

The CO Experts Model 2016-10 is designed with multiple Low-Level audible alarm points that initiate an 85 decibel (at 10 ft) alarm pattern to alert occupants. The frequency of the alarm pattern is:

10 – 24 PPM – One set of 4 beeps – Once per minute

25 – 34 PPM – One set of 4 beeps – Once per minute

35 – 50 PPM – One set of 4 beeps – Twice per minute

Above 50 PPM “High” – One set of 4 beeps – Three per minute

Note: The Red “Alarm” LED will flash in unison with each alarm pattern listed above.

“Silence” Feature

If you are present during an alarm, you should immediately observe what readings are indicated on the digital display, then press the “Test/Silence” button to silence the audible alarm. The “Silence” periods as listed below will begin. If during the silence period the unit detects the levels have dropped below the lowest alarm point of 10PPM, the unit will return to normal functioning and the alarm pattern will not sound again.

“Automatic Silence” Feature

If you are not present during an alarm, and the unit is not put into “Silence” mode manually, it will initiate the Silence feature automatically after 4 minutes. The audible alarm pattern will reactivate after the predetermined period if CO levels are still detected above the minimum alarm points listed below. If the unit is not silenced manually it will automatically silence again. This feature is designed to reduce the possibility of the unit depleting its battery power in the event of an unaddressed alarm for a prolonged period. The reactivation of the audible alarm function and the related delays are set relative to the urgency the CO levels detected represent.

Silence Periods

10 -24 PPM – Silence - 24 Hours – Red LED once per Minute

25 - 34 PPM – Silence - 8 Hours – Red LED Once per Minute

35 - 50 PPM – Silence - 1 Hour – Red LED Twice per Minute

10. Reacting to an alarm

It's important to remember that carbon monoxide is colorless, tasteless, and odorless and therefore NOT detectable without use of a carbon monoxide device.

If your 2016-10 displays a reading, trust it, and take necessary steps to investigate and correct its source immediately.

Lower readings (i.e. below 25 PPM) are generally not an immediate health concern, but the residence should be ventilated immediately by opening windows until the source is located and corrected by a qualified technician.

Higher readings, or rapidly rising readings should be treated as an immediate safety issue. Evacuate the residence immediately and contact a licenced HVAC technician or your local Fire Department for assistance.

11. Alarm Specs

LED Indicators: Red / Alarm – Green / Power – Yellow / Fault

Audible Alarm: Piezo Horn – 85 decibels at 10 feet

Display Range: 7 – 50 Parts per Million (PPM) - above 50 “High”

Data Recall: Peak and COHb levels recorded in 24 Hours prior

Sensor: Electrochemical – 5 Year Life

Power: Sealed Lithium Battery / Non-Replaceable - 5 Year Life

Operating Humidity: 30% – 90% “Relative Humidity”

Operating Temperature: 32-104 F / 0 – 40 C

Unit Life: 5 Years “normal use”

12. Maintenance

Test Monthly: We recommend testing your monitor monthly to assure of proper functionality. Simply push the “Test/Silence” button and hold until the alarm pattern (4 beeps) sound then release.

Vacuum Often: Ensuring your monitor is cleaned on a regular basis can have a significant affect on its lasting performance and reliability. Common household dust, small insects etc., can accumulate in the air-flow areas that allow air to enter the sensor for current CO level detection. We recommend vacuuming with a soft brush accessory once a month.

13. Unit 5 Year “End of Life”

The model 2016-10 utilizes an internal digital Life-Clock that initiates upon powering the unit. This pre-set time frame of 5 Years use is designed to ensure the unit is not relied upon for extended periods past what we the manufacturer deem a reasonable period in which the unit can perform within its intended accuracy range. At the end of 5 Years use the unit will alert you by beeping once per minute, and displaying “End” on the digital display. When this occurs the unit should be disconnected from its mounting plate to disengage the battery, and disposed of according to local requirements.

14. Limited Warranty

The CO Experts model 2016-10 is warrantied to be free from defects as a result of parts or labour for a period of 3 Years from the date of purchase (Consumer purchase from authorized Dealer / Distributor). This date however is not to exceed 5 years from the date of manufacture of the unit.

All CO Experts models are date coded from the factory, and any returns being claimed without an original date of manufacture affixed may be considered invalid.

Note: Authorized Dealers, Distributors, or agents of CO Experts are not responsible for the return or replacement of any warranty claim. Providing this service is at their own discretion, and all terms, processes and costs below still apply.

Terms:

- An original Receipt, Bill of Sale, or Work-Order indicating the purchase date of the unit and name of the authorized Dealer or Distributor of CO Experts must accompany any warranty claim.
- Any monitor showing signs of modifying, dismantling, damage, neglect of maintenance, or contamination of any sort outside a normal operating condition will not be considered for replacement.

Process:

- To make a warranty claim contact CO Experts directly.
- If qualified by CO Experts to be a valid claim, a “Return Authorization” number (RA #) will be assigned and directions to return for inspection will be advised.
- Once inspected and considered a warranty replaceable claim, CO Experts will ship at no cost a replacement unit of the same model, or if no longer available an equivalent unit in features and value (or greater).

Note:

- All returns arriving must have a valid RA# written on the return package or it will not be accepted or received.
- All returns must be shipped pre-paid by the consumer to the facility advised.

CO Experts

Email: info@coexperts.ca

Web: www.coexperts.com

Toll Free: 1-833-269-7787