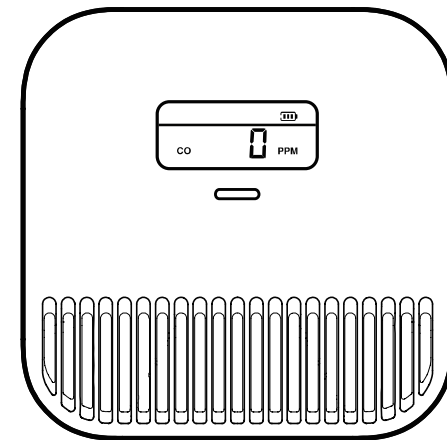




X-Sense Electronics Co., Ltd.
Email: support@x-sense.com

X-SENSE

Model: XC0K-SN



User Manual

Carbon Monoxide Alarm

Non-replaceable Battery (10-Year)

F800004000156 V1.0

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This user manual contains important information regarding the installation and operation of your carbon monoxide alarm. Please take a few minutes to thoroughly read this manual which should be saved for future reference. If you are installing the carbon monoxide alarm for use by others, you must leave this manual—or a copy of it—with the end user.

1 Introduction

This device is a battery-powered CO (carbon monoxide) alarm with an advanced electrochemical sensor for domestic use.

Please note that this carbon monoxide alarm is designed to detect carbon monoxide gas from any combustion source. This device does not detect smoke, heat, flames or any hazardous gas other than carbon monoxide even though carbon monoxide can be generated by fire. For this reason you must install smoke alarms to provide early warning of fire and to protect you and your family from fire and its related hazards.

WARNING

1. CAUTION: READ THE INSTRUCTIONS CAREFULLY BEFORE OPERATING OR SERVICING.
2. THE INSTALLATION OF THE

APPARATUS SHOULD NOT BE USED AS A SUBSTITUTE FOR PROPER INSTALLATION, USE AND MAINTENANCE OF FUEL-BURNING APPLIANCES INCLUDING APPROPRIATE VENTILATION AND EXHAUST SYSTEMS.

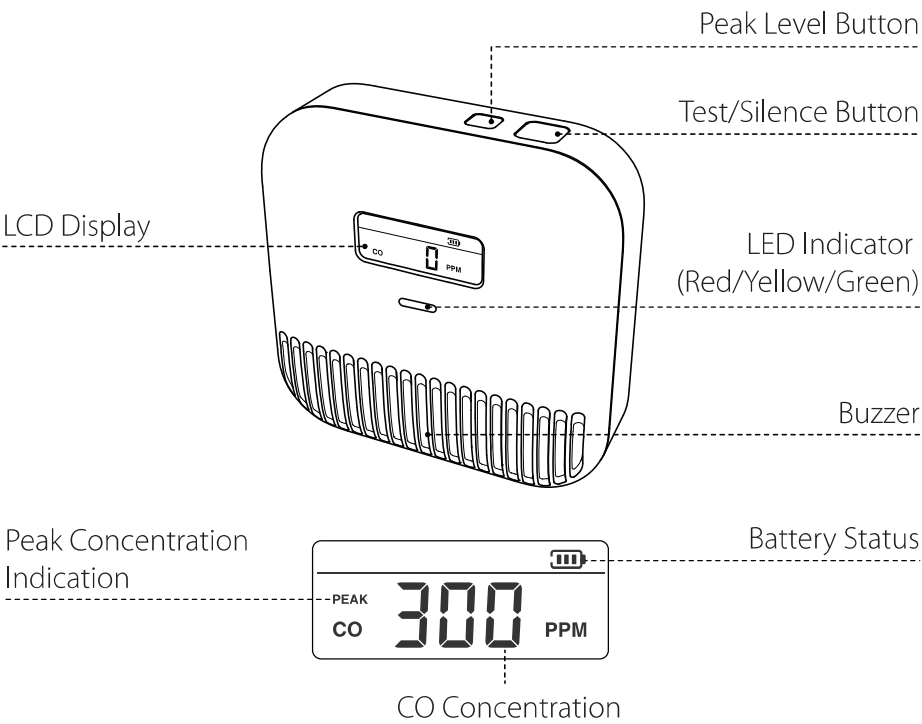
3. THIS APPARATUS SHOULD BE INSTALLED BY QUALIFIED PERSONNEL.
4. IF THE DEVICE IS TAMPERED WITH, THERE MAY BE A RISK OF ELECTRIC SHOCK OR MALFUNCTION.
5. IT IS NOT TESTED FOR USE IN A CARAVAN OR BOAT.

6. THIS PRODUCT IS INTENDED FOR USE IN ORDINARY INDOOR LOCATIONS OF FAMILY LIVING UNITS. IT IS NOT DESIGNED TO MEASURE COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) COMMERCIAL OR INDUSTRIAL STANDARDS.

CAUTION

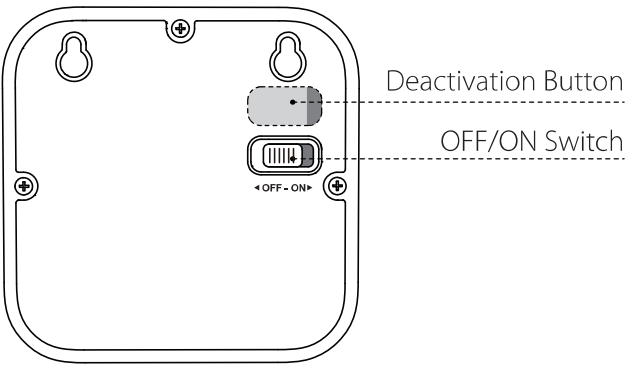
This alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

1.1 Product Overview



1.2 Technical Specifications

Power Supply	3 V (==) CR123A lithium battery × 1 (non-replaceable)
Battery Life	10 years (test once a week)
Maximum Service Life	10 years
Sensor Type	CO: Electrochemical
CO Alarm Response Time	70 ppm: 60–240 minutes
	150 ppm: 10–50 minutes
	400 ppm: 4–15 minutes
Operating Temperature	40–100°F (4.4–37.8°C)



Operating Relative Humidity	10%-85% RH (non-condensing)
Storage and Transport	This apparatus should be stored at 14-122°F (-10-50°C), 5%-95% RH (non-condensing)
Alarm Noise Level	≥ 85 dB at 10 ft (3 m) @ 3.2 ± 0.3 kHz pulsing alarm
Silence Duration	≤ 9 minutes

1.3 Package Contents



CO Alarm



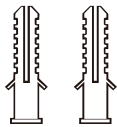
Drill Hole Spacing
Indicator Label



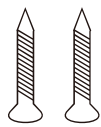
Non-replaceable
CR123A Battery



User Manual



Anchor Plugs



Screws



Warranty Card



Carbon Monoxide
Safety Stickers

1.4 CO Concentration and Symptoms

The following symptoms are related to **CARBON MONOXIDE POISONING** and are to be discussed with **ALL** members of the household:

Levels of Exposure	Symptoms
Mild Exposure	Slight headache, nausea, vomiting, fatigue (often described as “flu-like” symptoms).
Medium Exposure	Severe throbbing headache, drowsiness, confusion, fast heart rate.
Extreme Exposure	Unconsciousness, convulsions, cardio-respiratory failure, death.

WARNING

1. THIS APPARATUS IS DESIGNED TO PROTECT INDIVIDUALS FROM THE ACUTE EFFECTS OF CARBON MONOXIDE EXPOSURE. IT WILL NOT FULLY SAFEGUARD INDIVIDUALS WITH SPECIFIC MEDICAL CONDITIONS. IF IN

DOUBT, CONSULT A MEDICAL PRACTITIONER.

2. MANY CASES OF REPORTED CARBON MONOXIDE POISONING INDICATE THAT WHILE VICTIMS ARE AWARE THEY ARE NOT WELL, THEY BECOME SO DISORIENTED THEY ARE UNABLE TO SAVE THEMSELVES BY EITHER EXITING THE BUILDING OR CALLING FOR ASSISTANCE. YOUNG CHILDREN AND HOUSEHOLD PETS ARE TYPICALLY THE FIRST AFFECTED.

1.5 What to Do When the Alarm Sounds

WARNING

Actuation of your CO alarm indicates the presence of carbon monoxide (CO) which can KILL YOU. If alarm signal sounds:

1. Operate test/silence button;
2. Call your emergency services (Telephone Number) [fire department or 911];
3. Immediately move to fresh air-outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not reenter the premises

nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition;

4. After following steps 1-3, if your alarm reactivates within 24 hours, repeat steps 1-3 and call a qualified appliance technician (Telephone Number) to investigate sources of CO from fuel-burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection,

have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, operating in an attached garage or adjacent to the residence.

1.6 More Detailed Information on Conditions Which Can Result in Transient CO Situations, Such as:

1. Excessive spillage or reverse venting of fuel-burning appliances caused by:
 - 1) Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles).
 - 2) Negative pressure differential resulting from the use of exhaust fans.

- 3) Simultaneous operation of several fuel-burning appliances competing for limited internal air.
- 4) Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
- 5) Obstructions in unconventional vent pipe designs amplify the above situations.
2. Extended operation of unvented fuel-burning devices (range, oven, fireplace, etc.).
3. Temperature inversions which can trap exhaust gases near the ground.
4. Car idling in an open or closed attached garage, or near a home.

2 How to Install

2.1 Where to Install

Ideally, a carbon monoxide alarm should be installed in every room containing a fuel-burning appliance, and one in every bedroom. However, if the number of carbon monoxide alarms available is limited, the following guidelines should be considered when choosing the best places to install an alarm(s):

1. If there is a fuel-burning appliance in a bedroom, a CO monitor should be installed.
2. Install an alarm in rooms containing a flueless or open-flued appliance.
3. Install an alarm where residents spend most of their time.
4. In a studio apartment, a CO alarm should be placed as far away from the cooking appliances as possible, but close to where the person sleeps.
5. If the appliance is in a room not normally used (such as a boiler room), the CO alarm should be placed just outside of this room so that the alarm can be heard more easily.

2.2 Improper Location to Install

Improper location can affect the sensitive electronic components in this alarm. To avoid causing damage to the unit, to provide optimum performance and to prevent unnecessary nuisance alarms, **do not locate CO alarms** in the following areas:

1. In garages or in any extremely dusty, dirty or greasy areas.
2. Where there is the possibility of smoke or fumes under normal operating circumstances.
3. In poorly ventilated kitchens, garages and furnace rooms. Keep the CO alarms at least 5 feet (1.5 m) from potential smoke or fume sources (e.g. stoves, furnaces, water heaters, space heaters) if possible.
4. In areas where a 5 feet (1.5 m) distance from a potential smoke or fume source is not possible. In modular, mobile or smaller houses, it is recommended the CO alarm be placed as far from any potential smoke or fume sources.
5. Within 5 feet (1.5 m) of any cooking appliance.
6. In extremely humid areas. This alarm should be at least 10 feet (3 m) from a bath or shower, sauna, humidifier, vaporizer, dishwasher, laundry room, utility room or other source of high humidity.
7. In areas where the temperature is colder than 40°F (4.4°C) or hotter than 100°F (37.8°C). For example, non-air-conditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, porches and garages.
8. Where the air is turbulent, such as near ceiling fans, heat vents, air conditioner vents, fresh air return vents, or open windows. Excessive air flow may prevent any CO from reaching the sensors.
9. In direct sunlight.

2.3 Specific Location of Installation

Installing a CO alarm in a room with a fuel-burning appliance (see Figure 1):

1. If it is mounted on a wall, it should be installed at a height greater than the height of any door or window, but should still be at least 5.9 inches (150 mm) below the ceiling.
2. The CO alarm should have a horizontal distance between 3.3 feet (1 m) and 10 feet (3 m) from any potential CO source.
3. If there is a partition in the room, the CO alarm should be installed on the same side of the partition as the potential CO source.

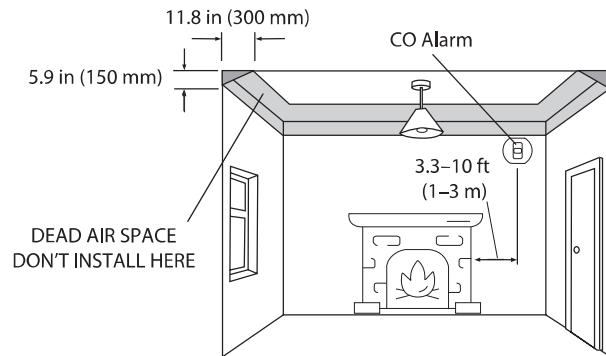


Figure 1: Installation in a room with a fuel-burning appliance

Installing the CO alarm in a bedroom or room without a fuel-burning appliance (see Figure 2):

1. Mount the CO alarm relatively close to the breathing zone of the

occupant.

2. Install the alarm such that the LED indicator is viewable when the occupant is near the alarm.

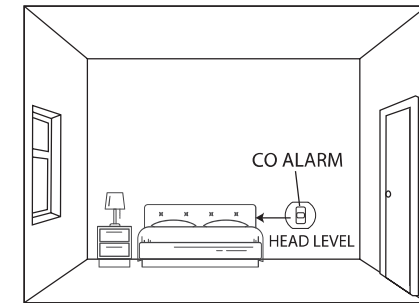


Figure 2: Installation in a bedroom or room without a fuel-burning appliance (installed at head level)

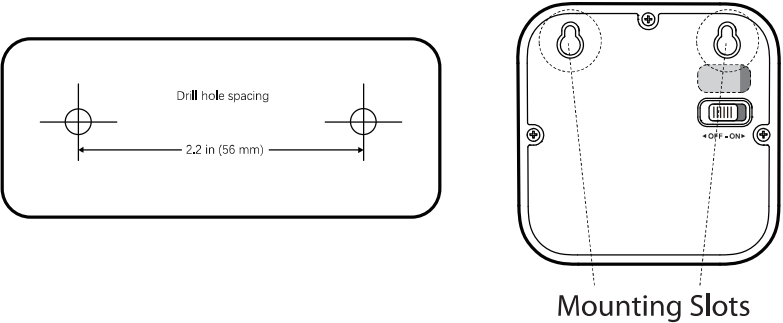
NOTE: Due to the product's unique design and unfixed installation, it is not recommended to install it on a ceiling, as it is prone to falling off and causing injuries to people.

2.4 Installation Instructions

Wall Mounting

1. Choose a suitable installation location by referring to the “**How to Install**” section.
2. Remove the indication sticker from the packaging and refer to the hole locations on the sticker. Draw two screw holes according to the size and layout of the mounting holes on the back of the product. Drill the screw holes 1.18 inches (30 mm) deep using a Ø 1/4 inch (6 mm) drill bit. Note

that the distance between the center of the two holes is 2.2 inches (56 mm).

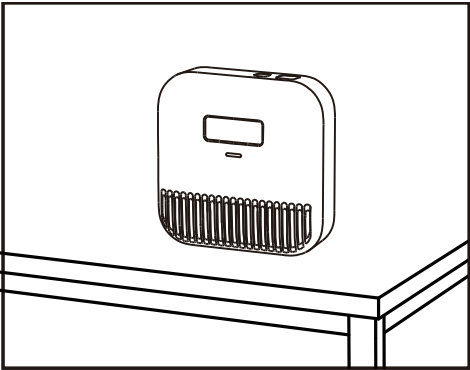


Mounting Slots

3. Insert the anchor plug into the screw hole and hammer it in until the head of the anchor plug is flush with the wall.
4. Use the two provided screws or 3.5 × 25 mm countersunk screws to screw into the two anchor plugs. Be sure to leave a 1/5 inch (5 mm) gap between the head of the anchor plugs and the screws, which will allow for easy device mounting.
5. Mount and lock the device onto the wall by aligning the two mounting slots on the back of the device with the screws on the wall.
6. Test the device by pushing the test button to make sure that the device is functioning properly.

Installation on a Table

The detector’s base is designed to stand directly on a flat surface (e.g., a desktop) without additional support.



NOTE: When placing on a shelf, please adhere to the recommended placement as described in “How to Install.”

2.5 Alarm Testing

Be sure to test your CO alarms when you turn them on for the first time or when the installation is finished. In addition to the weekly test you should perform, it is also recommended to test the alarm after returning from a long trip or vacation.

Type	XC0K-SN
Action	Short or long press the Test/Silence button. If the LCD is off, press the Test/Silence button once to wake it, then press the button again to start the self-test.

Device Response	When the LCD lights up, the device runs a sensor self-check. If a sensor fault is detected, the LED will flash yellow twice every 60 seconds accompanied by two beeps, and the LCD will display "E03/E04". If no sensor fault is detected, the LED will flash red 4 times continuously with beeps, repeating for 2 cycles. During this period, the LCD sequentially displays "---", "PAS", then the backlight turns off. The LCD returns to standby mode indicating normal working status. 1. If there is an error during the self-test, the LCD will display corresponding patterns according to the current device status, such as low battery and end of life, displaying "Lb" and "End" respectively. 2. When the test mode is finished and the device is functional, it will beep once with the LED flashing green once. <i>NOTE: If the device has previously triggered an alarm, it will store an alarm memory. After the LED flashes green at the end of the self-test, the LED will stay on red for 2 seconds, and the LCD screen will display the peak CO alarm value.</i>
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NOTE: The test function accurately tests the alarm's CO-sensing circuit without the need to test CO. If your CO alarm fails to emit an audible test signal, refer to the "Troubleshooting" section at the end of this manual immediately.

2.6 Battery Warning

WARNING

1. KEEP NEW OR OLD USED BATTERIES OUT OF REACH OF CHILDREN.
2. In the event of a battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice immediately.
3. This alarm is powered by a non-replaceable 10-year battery and once deactivated the alarm is

incapable of being reactivated
and must be replaced.

3 Function Introduction

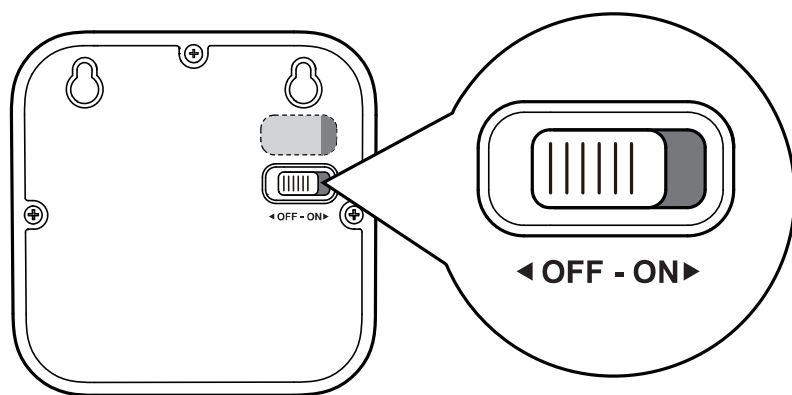
3.1 Power On/Off

How to Power On

Before use, slide the OFF/ON switch on the back of the device to the right to turn it on. After the device is turned on, the buzzer will beep once, the LCD backlight will light up, and the LED indicator will flash through 2 cycles (red/yellow/green). The device will then enter standby mode.

How to Power Off

According to the standard requirements, the device cannot be powered off once it is turned on.



3.2 Test/Silence Button

The test/silence button is used to test the unit's electronics and to silence the unit during an alarm.

Short press the test/silence button and you will hear a short beep, indicating that the alarm has entered the test mode. When the LCD is off, press the test/silence button once to wake it, then press the button again to start the test.

Please refer to the “**2.5 Alarm Testing**” section for further information. The alarm goes back to the standby mode after testing.

NOTE: After a test has begun, the alarm will sound and the LED indicator will flash red. This does not indicate that CO is present. If you press the test button during an alarm state, the unit will enter the silence mode.

3.3 CO Alarm Levels and Alarm Mode

CO Alarm Levels

This X-Sense carbon monoxide alarm is programmed to sound an alarm at the following CO concentrations within the periods listed:

70 ppm for 60–240 minutes,

150 ppm for 10–50 minutes,

400 ppm for 4–15 minutes.

When CO is detected and the alarm sounds, the CO concentration will be displayed on the LCD and a blue backlight will be lit. The LED indicator will flash red and the alarm will issue 4 short beeps, repeating the cycle every 5.8 seconds.

Alarm Mode

When the device detects CO, and the CO ppm reaches a certain level for a while, the unit will sound an alarm, beep 4 times every 5.8 seconds, and the LED will flash red.

When the carbon monoxide concentration drops below the alarm threshold, the alarm sound will stop. Then, it will automatically enter standby mode.

3.4 Peak Concentration Memory and Reset

The peak CO concentration feature is helpful in identifying if there have been any dangerous CO readings since a peak CO concentration reset. Press the Peak Level button once and the device will perform a brief test. The LCD backlight will turn on and display the maximum value recorded since the last peak data reset. The “Peak” indicator will appear on the left side of the LCD. The peak data will be shown for 5 seconds. If no further action is taken within those 5 seconds, the device will automatically return to standby mode.

In the example, 300 ppm was the maximum CO concentration recorded since the unit was last reset.



Peak CO Concentration Reset: During the 5 seconds when the LCD displays the peak CO concentration, press and hold the Peak Level

button for 3 seconds, the device will beep, the LED will flash green, and the peak CO concentration will be reset with LCD displaying “0”.

NOTES:

1. *If the carbon monoxide concentration is lower than 30 ppm, it will not be recorded in the peak CO concentration.*
2. *To show the peak value, you need to press the Peak Level button briefly (less than 3 seconds). If you press it for a long time (3 seconds or more), the peak display will not be triggered.*

3.5 Memory Mode

If an alarm occurred but stopped on its own before being noticed as the CO level drops below the threshold, the device will save an alarm memory. When alarm memory is present, short or long press the Test/Silence button to initiate a self-test. After the test, the LED will remain red for 2 seconds, and the peak value will be displayed.

If alarm memory is detected, the user should check the area where the alarm was triggered to identify and resolve any potential safety hazards. This helps prevent similar risks from occurring again. If the issue has been resolved or the previous alarm is confirmed to be a false alarm, the user can press the Test/Silence button 3 times in succession to clear the alarm memory. When the memory is successfully cleared, the LED will remain red for 1 second to indicate that the alarm memory has been removed.

NOTE: *The device only stores the most recent alarm memory; new alarm memories will overwrite previous records.*

3.6 Silence Mode

If there is a false alarm, you can temporarily silence it by pressing the test/silence button on the device. The LED will flash red 4 times every 5.8 seconds to remind you that the alarm has been silenced. The alarm will automatically exit silence mode after 9 minutes.

During silence mode, if the carbon monoxide concentration remains greater than 70 ppm after 6 minutes, the device will be triggered again; if not, the device will automatically exit the silence mode after 9 minutes. If the CO concentration exceeds 300 ppm, the silence function cannot be enabled.

 **WARNING:** If there is any doubt about the cause of the alarm, it should be assumed that the alarm was triggered by dangerous levels of carbon monoxide, and the residence should be evacuated.

3.7 Low-Battery Mode

If the battery is low, the unit will chirp once and the LED indicator will flash yellow once every 60 seconds to indicate that the device has entered low

battery mode.

If you press the test button when the battery is low, the chirp will temporarily stop for 10 hours, but the LED flashes yellow once every 60 seconds; if you press the test button again, the unit will enter the test mode and then exit silence mode during the low battery condition.

The LCD screen will stay on in low battery mode.

3.8 Fault Mode

When the device sensor fails (including sensor open circuit and short circuit), the LED will flash yellow twice every 60 seconds, accompanied by two alarm sounds.

The fault code E04 indicates a short circuit, while E03 indicates an open circuit.

3.9 End-of-Life Mode

Once the maximum lifetime (10 years) is reached, the alarm will emit 3 beeps and the LED indicator will flash yellow 3 times every 60 seconds. This end-of-life signal can be silenced temporarily for 22 hours by pressing the test button. During the silence period, the LED will flash yellow 3 times every 60 seconds.

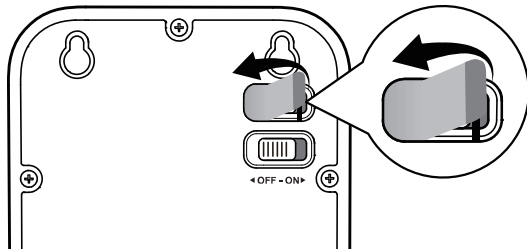
The end-of-life silence feature can only be used for a total of 30 days. After 30 days, the end-of-life signal cannot be silenced. During this end-of-life hush period, your alarm continues monitoring CO and providing protection as usual. After 30 days, the device will be completely deactivated and will

no longer perform any functions, including CO detection and alarm.

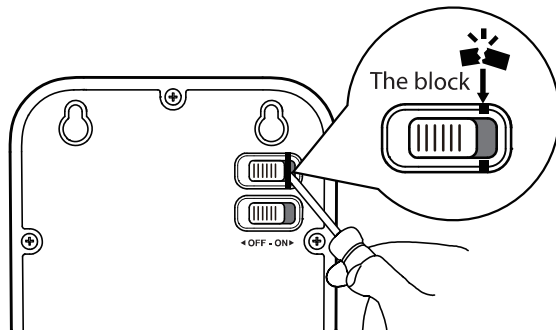
3.10 Device Deactivation

When the product needs to be deactivated or has reached the end of its service life and must be deactivated: peel off the sticker inside the perforated box on the right. Break the block, then slide the deactivation button to the right to enter deactivation mode. At this point, the device will be permanently disabled and can no longer be used. Follow the steps below to complete the deactivation process:

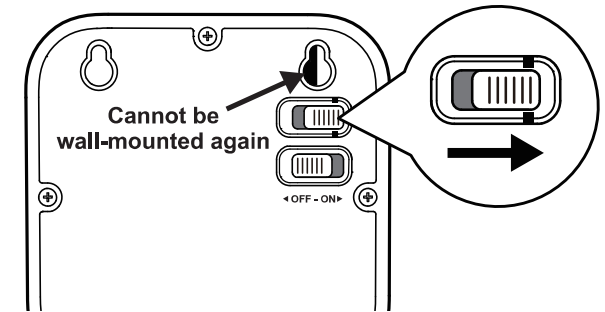
1. Peel off the designated sticker.



2. Use a tool to break the block shown in the diagram.



3. Slide the button to the right to complete the deactivation process.



⚠ WARNING: Do not use this button before the device's end of life. It will permanently disable the device, drain the battery, and prevent wall mounting. This action cannot be undone.

4 Daily Maintenance

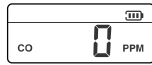
To keep your alarm in good working order, you should adhere to the following steps.

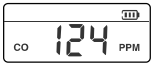
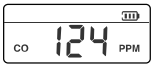
1. Test the alarm once a week by pressing the test/silence button.
2. Vacuum the alarm cover once every three months to remove any accumulated dust.
3. Never use detergents or solvents to clean the alarm. Chemicals can permanently damage or temporarily contaminate the sensor.
4. Avoid spraying air fresheners, hair spray, paint or other aerosols near the alarm.
5. Do not paint the unit. Paint may clog the openings to the sensing chamber and prevent the unit from operating properly.

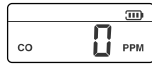
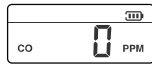
⚠ WARNING: DO NOT TAMPER WITH THE APPARATUS, AS THERE IS A RISK OF ELECTRIC SHOCK OR MALFUNCTION.

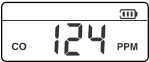
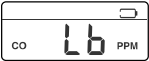
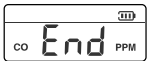
5 Sound & Light Indication Reference

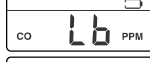
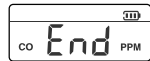
The table below shows how the LCD display, LED indicator, and buzzer respond in different device modes.

Mode	LCD Display	LED Indicator	Audible Alarm	Remarks
Powering On	 (Backlight on)	Runs through 2 cycles (red/yellow/green) in sequence.	1 quick beep.	Make sure the device is turned on.
Standby Mode	 (No backlight)	Flashes green once every 60 seconds.	None.	The LCD screen will turn off automatically after 5 minutes of inactivity and no alerts. Once turned off, it will no longer display any content.

Alarm Mode	 (Backlight on) displays actual values.	A CO concentration ranging from 70 to 999 ppm has been present for a certain time period. And the LED indicator flashes red 4 times every 5.8 seconds.	4 quick beeps repeating every 5.8 seconds.	Dangerous CO concentration is detected, and has reached the alarm status. Please refer to “1.5 What to Do When the Alarm Sounds”.
	 (No backlight) displays actual values.	A CO concentration level ranging from 70 to 999 ppm has been detected, but for less than the required detection period.	None.	Dangerous CO concentration is detected, but has not reached the alarm status. Potential dangerous CO conditions exist. Please locate the CO source immediately.

Test Mode	 (Backlight on)	Flashes red 4 times every 5.8 seconds, repeated for two cycles.	4 quick beeps every 5.8 seconds, repeated for two cycles.	The LED flashes red and the buzzer beeps simultaneously.
Peak Level Check	Peak level:  Clear to zero:  (Backlight on)	None.	None.	LCD backlight remains lit for 5 seconds; if the peak level button is pressed and held for more than 3 seconds during the 5-second display, the device emits a beep, the LED flashes green once, and the existing recorded data is reset to zero. The peak CO level recorded since the previous reset.

Silence Mode	 (Backlight on) displays actual values.	Flashes red 4 times every 5.8 seconds.	None.	CO silence mode: After 9 minutes, the unit will exit silence mode.
	 (No backlight)	Flashes yellow once every 60 seconds.	None.	Silence mode during low battery: After 10 hours, the unit will exit silence mode.
	 (No backlight)	Flashes yellow 3 times every 60 seconds.	None.	Silence mode during the end of the cycle: After 22 hours, the unit will exit silence mode.

Low Battery	 (No backlight)	The LED indicator flashes yellow once every 60 seconds.	1 quick beep every 60 seconds.	Replace the alarm immediately.
Fault Mode	 (No backlight)	Flashes yellow 2 times every 60 seconds.	2 beeps every 60 seconds.	If the “E03/E04” message is still displayed, the unit has malfunctioned and must be replaced immediately.
End-of-Life Mode	 (No backlight)	Flashes yellow 3 times every 60 seconds.	3 quick beeps every 60 seconds.	Replace the alarm immediately.

Memory Mode	 (No backlight)	Stays on red for 2 seconds.	None.	The memory mode is triggered via the self-test function. If an alarm has previously occurred but was automatically silenced because the concentration dropped below the alarm threshold before being noticed, the device will retain the alarm memory.
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6 Troubleshooting

Serial Number	Problem	Solution
1	The device cannot be powered on and the LCD shows nothing.	Cause: The device isn't powering on properly. Solution: Please make sure the switch on the back of the product is pushed to the right to the "ON" position.
2	After the test is completed, instead of displaying "PAS", it shows "Lb", "E03/04", or "End".	Cause: Self-test abnormal. Solution: Look at what's shown on the LCD to figure out why there's a problem. It might be because the battery is low, there's an error, or the device has reached its end of life.
3	There is no response when the test/silence button or peak level button is pressed.	Cause 1: The button is not pressed properly. Solution: Make sure the button is pressed firmly. When the button is pressed properly, you will hear beeps or the LCD backlight will turn on. Cause 2: The Peak Level button was held down for an extended period; it only works when pressed briefly. Solution: Press the Peak Level button briefly, do not hold it down.

4	After the device detects CO, pressing the Peak Level button again still shows a concentration of "0".	When the CO concentration is below 30 ppm, it will not be recorded in the historical peak data.
5	The LCD no longer displays numerical values, instead showing "Lb", while the LED flashes yellow once every 60 seconds paired with a single alarm sound.	Cause: When the battery voltage is below the threshold, the product enters low battery warning mode. Solution: Replace the alarm immediately.
6	When the battery is low, pressing the test/silence button cannot silence it.	When the battery is too low, it cannot be silenced.

7	The LCD no longer displays numerical values, instead showing "E03" or "E04", while the LED flashes yellow twice every 60 seconds paired with two alarm sounds.	Cause: The device malfunctions, displaying "E04", for short circuit and "E03" for open circuit. Solution: Replace the alarm immediately.
8	The LCD no longer displays numerical values, instead showing "End", while the LED flashes yellow 3 times every 60 seconds paired with 3 alarm sounds.	Cause: The device has reached its end of life. Solution: Replace the alarm immediately.

9	In the presence of a CO environment, the device is not triggered.	Cause 1: The CO concentration is not high, or the duration of exposure is insufficient to trigger an alarm. Solution: Ensure there is a sufficient CO concentration and maintain exposure for an adequate duration. Cause 2: The device is in a 'fault' state. Solution: Check if the corresponding error code appears on the LCD. If so, the device needs to be replaced.
10	The device shows a reading of "0" on the LCD in the presence of a CO environment.	The LCD displays 0 ppm when the CO concentration is below 30 ppm.

7 Limitations of CO Alarm

1. CO alarms may not wake up all individuals. If children or others do not readily awaken to the sound of the CO alarm, or if there are infants or family members with mobility limitations, make sure that someone assists them in the event of an emergency.
2. This CO alarm will not sense carbon monoxide that does not reach the sensor. It will only detect CO that reaches the sensor. CO may be present in other areas. Doors or other obstructions may affect the rate at which CO reaches the CO alarm. For this reason, if bedroom doors are usually

closed at night, it is recommended that you install a CO alarm in each bedroom and in the hallway between them.

3. CO alarms may not sense CO on another floor of the house. For example, a CO alarm on the second floor, near the bedrooms, may not sense CO in the basement. For this reason, one CO alarm may not give an adequate warning. Complete coverage is recommended by placing CO alarms on each floor of the house.
4. CO alarms may not be heard. The alarm buzzer noise level is over 85 dB at a distance of 3 m (10 feet). However, if the CO alarm is installed outside the bedroom, it may not awaken a sound sleeper or one who has recently used drugs or has been drinking alcohol. This is especially true if the door is closed or only partially open. Even persons who are awake may not hear the alarm horn if the sound is blocked by distance or closed doors. Noise from traffic, stereos, radios, televisions, air conditioners, or other appliances may even prevent alert persons from hearing the alarm horn. This CO alarm is not intended for people who are hearing impaired.
5. CO alarms are not a substitute for a smoke alarm. Although fire is a source of carbon monoxide, this CO alarm does not sense smoke or fire. This CO alarm senses CO that may be escaping unnoticed from malfunctioning furnaces, appliances, or other possible sources of incomplete combustion. The installation of a smoke alarm is required for an early warning of fire.
6. CO alarms are not a substitute for life insurance. Though these CO alarms warn against increasing CO levels, we do not warrant or imply in any way that they will protect lives from CO poisoning. Homeowners and renters must still insure their lives.
7. CO alarms have a limited life. Although the CO alarm and all of its parts have passed many stringent tests and are designed to be as reliable as possible, any of these parts could fail at any time. Therefore, you are

strongly recommended to test your CO alarm weekly.

8. CO alarms are not foolproof. Like all other electronic devices, CO alarms have limitations. They can only detect CO that reaches their sensors. They may not give early warning of rising CO levels if the CO is coming from a remote part of the house, or is at some distance from the CO alarm.

8 Statement

Environmental Protection

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, or accumulators must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws and rules in your area.



9 Manufacturer and Service Information

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