



# ClareOne Carbon Monoxide Detector Installation Sheet



**Last modified:** 05/28/20

**Model number:** CLR-C1-CO

## Description

The ClareOne Carbon Monoxide Detector (CLR-C1- CO) is a battery powered carbon monoxide detector and alarm device. This device is designed to protect you and your household from the dangerous effects of Carbon Monoxide.

### To activate/turn on the CO detector:

1. Remove the battery pull tab to engage the batteries.
2. Carefully rotate the CO alarm onto the mounting plate. This activates the On/Off switch.

The red, yellow, and green LEDs immediately flash in sequence.

**Note:** For the display models, the LCD screen displays all icons).

3. Wait 15 seconds after connecting the power before button testing.

### Notes

- Install a CO alarm in every room that contains a fuel burning appliance, particularly high occupancy areas e.g. bedrooms, kitchens etc.
- In rooms with a fuel burning appliance, install (preferably) on the ceiling, (1 ft (300 mm) from walls) and between 5 ft to 10 ft horizontally from the appliance. In rooms remote from the appliance install the detector at 'head height', where the alarm indicators can be seen.
- Test the alarm weekly by pressing the Test/Hush button, the alarm sounds (at a diminished sound output level initially and then quickly reach maximum sound output level).

- Replace alarm after approximately 10 years operation (see 'Replace by' date on side wall label).
- Avoid contamination by waiting until all construction is completed before fitting the alarm.
- Individuals with health issues may consider warning devices which provide audible and visual signals for carbon monoxide concentrations under 30ppm.

## Carbon monoxide

Many people are killed each year, and many more suffer ill health from Carbon Monoxide (CO) poisoning. CO is an invisible, odorless, tasteless and extremely toxic gas. It is produced by appliances and vehicles burning fuels, such as coal, oil, natural gas, propane, kerosene, paraffin, wood, gasoline, diesel, charcoal, etc. CO is absorbed by red blood cells in the lungs in preference to oxygen - this results in rapid damage to the heart and brain from oxygen starvation.

High levels of CO in a house can be caused by:

- Incorrectly or poorly installed fuel-burning appliances.
- Blocked or cracked chimneys/flues.
- Blocked vents or draught-proofing which makes areas with fuel burning appliances or fireplaces airtight.
- Engines of cars, lawnmowers etc. that are left running in confined spaces.
- Portable kerosene or propane heaters in poorly ventilated rooms.

### What happens when the CO alarm detects Carbon Monoxide?

When the alarm detects potentially dangerous levels of CO, it flashes the red alarm LED immediately and then sounds a loud alarm if the CO persists. Table 2 shows how the CO alarm reacts to different levels of CO gas and exposure time. At higher levels of CO, the alarm sounds sooner. The rate of flashing of the red LED indicates the level of CO. If your CO alarm sounds, follow the instructions on page 7, "When the alarm sounds."

---

**WARNING:** Never ignore the CO alarm.

---

## Carbon monoxide exposure and symptoms

The following symptoms may be related to Carbon Monoxide poisoning and should be discussed with all members of the household:

**Mild exposure:** Headaches, running nose, sore eyes, often described as “flu-like” symptoms.

**Medium exposure:** Dizziness, drowsiness, vomiting.

**Extreme Exposure:** Unconsciousness, brain damage, death.

Many cases of reported Carbon Monoxide poisoning indicate that while victims are aware, they are not well. They become disoriented and are unable to save themselves by either exiting the building or calling for assistance.

**Table 1: CO Inhalation time (approx.) and symptoms**

Concentration of CO in the air – PPM [1]	Symptoms
35	The maximum allowable concentration for continuous exposure in any 8-hour period according to Occupational Safety and Health Administration (OSHA) [2].
150	Slight headache after 1.5 hours.
200	Slight headache, fatigue, dizziness, nausea after 2-3 hours.
400	Frontal headaches within 1-2 hours, life threatening after 3 hours, also maximum parts per million in flue gas (on free air basis) according to US Environmental Protection Agency.
800	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours.
1600	Headache, dizziness and nausea within 20 minutes. Death within 1 hour.
3200	Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes.
6400	Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes.
12800	Death within 1-3 minutes.

[1] PPM – Parts per million

[2] OSHA – Occupational Safety & Health Association

**Table 2: ClareOne CO alarm response**

CO gas level	Red light	Display icon (before sounder)	Display icon (after sounder)	Alarm/Sounder
≈ 30 ppm	Off	Blank	Blank	Off
≈ 70 ppm	1 flash every 3 seconds			On within 60 to 240 minutes (typically 90 mins).

≈ 150 ppm	1 flash every 2 seconds			On withing 10 to 50 minutes (typically 30 minutes).
≈ 400 ppm	1 flash every second			On within 4 to 15 minutes (typically 9 minutes).
≈ 750 ppm	1 flash every second			On within 3 minutes (typically 2 minutes).

\*Unless it has alarmed previously, ppm values shown in the table are for example purposes only. See “CO alarm memory”.

### Alarm indicators

**Co Present:** Red LED flash only

**Co Alarm:** Red LED flash + sounder

**Faults:** Yellow LED Flash + beeps

### CO present (before alarm sounds)

When the alarm detects CO the red LED flashes in accordance with Table 2. This helps locate CO leaks as the unit gives an immediate indication. (Without this feature the CO would need to be present for typically 90 minutes for an alarm sound to be given).

**Note:** The red LED flashes may be triggered by CO produced by gas appliances, from car engines or from nearby barbecues. This is usually not a concern, unless the red LED flashes persist until the alarm sounds and the CO source is unknown.

The display models display CO concentrations greater than 30ppm in accordance with Table 2.

**Note:** The CO alarm may sound if cigarette smoke is blown into it or if aerosols are released nearby.

### CO alarm memory

The CO alarm memory is an important feature of the CO alarm. If the house is unoccupied during an alarm condition, it warns the homeowner that the unit has previously detected CO gas and been in alarm. The memory feature has two operation modes:

- Memory indication for 24-hour period after alarm
- Memory recall on demand

**24-hour memory indicators:** After alarm, the red LED flashes at different rates every 50 seconds depending on the level of CO detected - see Table 3.

**Memory recall on demand:** To review the memory status after initial 24 hours, press and hold the Test button, the red LED flashes in accordance to Table 3. Display models show the peak level of CO measured.

**Reset Memory:** Hold down the Test button until the red LED stops and the green LED starts flashing. Cover the Alarm with a cloth to muffle the sounder during this time.

**Note:** The memory is reset when the unit is switched off.

**Table 3: CO alarm memory indicators**

CO gas level	Red light response	
	24-hours	On demand (button press)
≈ 70 ppm	1 flash every 50 seconds	1 flash
≈ 150 ppm	2 flashes every 50 seconds	2 flashes
≈ 400 ppm	4 flashes every 50 seconds	4 flashes
≈ 750 ppm	4 flashes every 50 seconds	4 flashes

## CO alarm location

### NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION

For your information the National Fire Protection Association's Standard 720 advises as follows:

Carbon Monoxide Alarms shall be installed as follows:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom.
2. On every occupiable level of a dwelling unit, including basements but excluding attics and crawl spaces.
3. Other locations where required by applicable laws, codes, or standards.

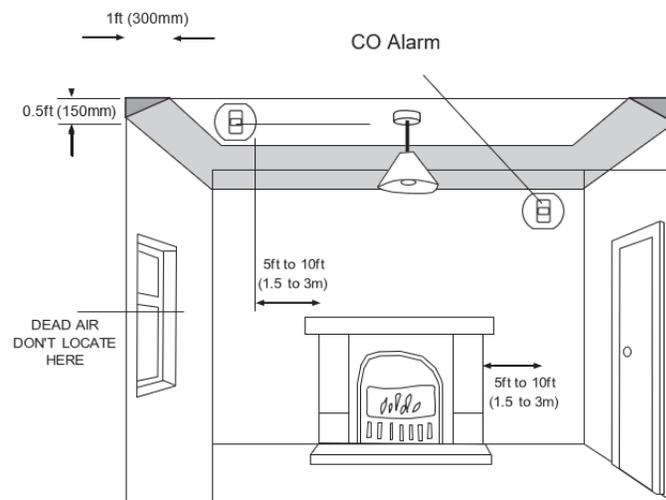
The equipment should be installed using wiring methods in accordance with the National Fire Protection Association's Standard 72, 720. (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

**Note:** Specific requirements for Carbon Monoxide alarm installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area.

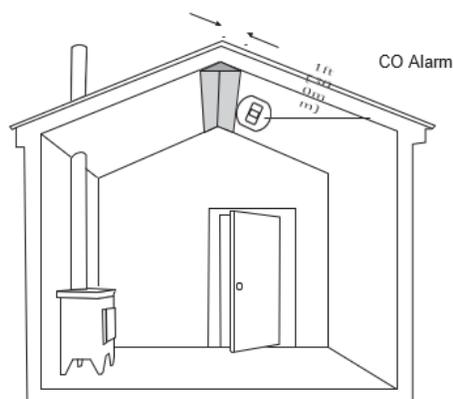
### Recommended installation location

- Every room containing a fuel burning appliance, and remote rooms where occupants spend a considerable amount of time
- In every bedroom. If the number of Carbon Monoxide alarms to be fitted is limited, the following points should be considered when deciding where best to fit the alarm(s)
  - Place a CO alarm in the room if there is an appliance where people sleep.
  - Place a CO alarm in a room containing a flueless or open-flued appliance.
  - Place an alarm in a room where the occupant(s) spend most of their time (e.g. family room).
- In a studio apartment, the CO alarm should be placed as far away from the cooking appliance as possible, but near where the person sleeps.
- If the appliance is in a room not normally used, such as a furnace room, the CO alarm should be placed immediately outside the room so that the alarm is heard more easily.

**Figure 1: Location of CO alarm in a room with a fuel burning appliance**

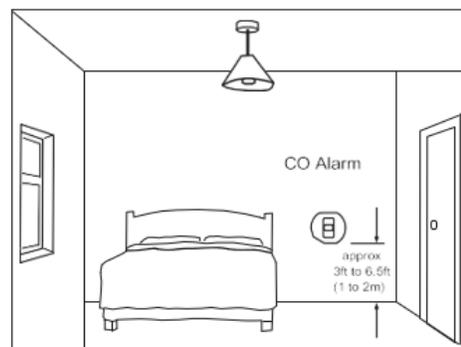


**Figure 2: CO alarm in a room with sloped ceilings**



**Note:** The CO Alarm should be located at the high side of the room.

**Figure 3: CO alarm in bedrooms and other rooms away from appliances (i.e. at breathing level)**



## Poor installation placement

Do not place the CO alarm in any of the following areas.

- In the immediate vicinity of a cooking appliance (keep it at least 3 ft (1 m) horizontally from it)
- Outside the building
- In an enclosed space (e.g. in or below a cupboard)
- In a damp or humid area
- Directly above a sink, stovetop, or oven
- Next to a door, window, air vent or anywhere that it could be affected by draughts
- Next to a ceiling or exhaust fan or air conditioning vents
- Above heat sources such as radiators or heating vents
- Where it would be obstructed, e.g. by curtains or furniture
- In an area where the temperature could drop below 40°F (4.4°C) or rise above 100°F (37.8°C)
- Where dirt or dust could block the sensor
- Where it could be easily knocked/damaged, or where it could be accidentally turned off /removed
- In a bathroom or other areas where the CO Alarm may be exposed to water splashes, dripping or condensation
- Near paint, thinners, solvent fumes, or air fresheners

## Using the CO alarm in a room with a fuel burning appliance

**Note:** See Figure 1 for a visual representation on CO alarm placement.

- If it is mounted on a wall, it should be located at a height greater than the height of any door or window but still be at least 0.5 ft (150 mm) from the ceiling.
- If it is mounted on the ceiling it should be at least 1 ft (300 mm) from any wall or light fixture.
- The CO alarm should be a horizontal distance of between 5 ft to 10 ft (1.5 m and 3 m) from the potential CO source.
- If there is a partition in the room, the CO alarm should be located on the same side of the partition as the potential source of carbon monoxide.
- In rooms with sloped ceilings and fuel burning appliances, the CO alarm should be located at the high side of the room, see Figure 2.
  - If locating the CO alarm in a bedroom or in rooms remote from a fuel burning appliance, see Figure 3.
- Mount the CO alarm relatively close to the breathing zone of the occupants.
- Whatever position is selected make sure it is possible to view the three LED indicators when in the vicinity of the Alarm.

---

**WARNING:** A CO Alarm should not be used as a substitute for proper installation, use and maintenance of fuel-burning appliances, including appropriate ventilation and exhaust systems.

**WARNING:** Your CO alarm is intended for use in ordinary indoor locations of family units. It is not designed to measure compliance with OSHA commercial or industrial standards.

---

## Programming

To add the sensor to your panel and for detailed programming instructions, refer to the [ClareOne Wireless Security and Smart Home Panel User Manual \(DOC ID 1871\)](#).

### To add the alarm:

1. Put the ClareOne panel in “add mode” and follow the displayed instructions for adding the sensor.
2. Press the Test button.
  - Or –
  - Twist the alarm’s body away from the base.
3. Exit “add mode.”

## Installation

---

**WARNING:** The Installation of this apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

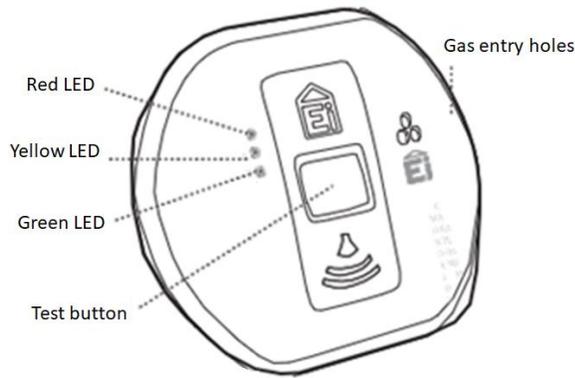
---

### To install the CO alarm:

1. Select a location, see CO alarm location on page 3.
2. Remove the mounting plate from the packaging.
3. Place the mounting plate on the ceiling/wall in the desired mount position.
4. Use a pencil and mark the location of the two screw holes.
5. Taking care to avoid any electrical wiring in the ceiling, drill holes using a 13/64 in (5.0 mm) drill bit through the center of the marked locations.
6. Push the plastic screw anchors provided into the drilled holes, and then screw the mounting plate to the ceiling/wall.
  - Or –
  - If desired, the CO alarm sets atop flat surfaces with the mounting plate attached.
7. Carefully align the alarm with the base, gently pressing it into place, twisting it on the plate, connecting the batteries.

The red, yellow, and green LEDs immediately flash in sequence to show the alarm is powered correctly. In addition, the icons on the LCD display on the display models also become visible.

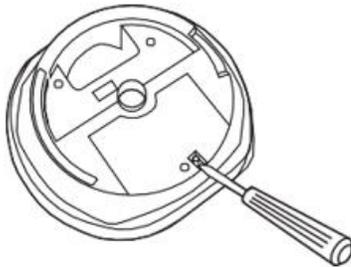
- Wait 15 seconds, and then press the **Test** button.



- Install other alarms similarly.

#### To tamperproof the alarm:

- Break off the small pillar on the base.



- To remove the alarm once installed, it is now necessary to use a small screwdriver, to release the catch (push catch towards the ceiling) and then twist off the alarm.



- If necessary it is possible to further secure or tamperproof the alarm by using a No.2 or No.4 3/32 to 7/64 in (2 to 3 mm) diameter - not supplied self-tapping screw 1/4 to 5/16 in (6 to 8 mm) long to firmly lock the alarm and its mounting plate together.

## Testing the CO detector

Test the system frequently to ensure its continued and safe operation.

**To test the detector:** Press and hold the **Test** button.

The green LED flashes and the sounder ramps up to full sound, indicating that the detector is operating correctly.

#### Testing recommendations

- Immediately after the system is installed or upgraded
- Once weekly thereafter
- After prolonged absence from the dwelling (e.g. after extended vacation)
- After any significant home repairs or remodeling work

#### Silencing (Hush)

When the alarm sounds, after sensing CO, pressing the Test/Hush button immediately silences the alarm (the red LED continues to flash). If CO is still present the red LED and sounder activate again after 4 minutes. The alarm can only be silenced once during a CO incident. At levels > 250 ppm CO the alarm cannot be silenced.

## CO detector monitoring

The CO alarm self-checks (monitors) itself and give a status update every 50 seconds if there are any problems.

The status of the alarm can also be checked on demand by using the test button. Table 4 shows the status response to both the self-check and on demand testing.

**Note:** If the alarms indicate a fault, pressing the Test button silences the beeps for a 24-hour period. This is for your convenience and can only be done once.

**Table 4: ClareOne CO monitoring summary**

Red LED	Yellow LED (fault)	Green LED (power)	Sounder	LCD display	Action
Standby - No visual or audible indication if unit is ok.					
Unit OK (button test)					
Off	Off	On	Ramp up to full sound		
Low battery					
Off	1 flash	Off	1 beep		Replace batteries
Sensor fault					
Off	2 flashes	Off	2 beeps	<b>REPLACE UNIT</b>	Replace unit
End of life (EOL)					
Off	3 flashes	Off	3 beeps	<b>REPLACE UNIT</b>	Replace unit

## CO detector maintenance

Clean the outside housing by occasionally wiping with a clean damp cloth. Do not use any cleaning agents, bleaches, detergents, or polishes including those in aerosol cans. Avoid spraying air fresheners, hair spray, paint, or other aerosols near the CO alarm. Do not place air fresheners near the unit.

Use the narrow nozzle of a vacuum cleaner to remove dust and other contamination from the cover slots and gas entry holes.

**CAUTION:** Do not paint the CO alarm.

Remove the CO alarm when decorating. Do not allow water or dust to contaminate the alarm.

**WARNING:** Do not open or tamper with the CO alarm. There are no user serviceable parts inside, and this can damage the alarm.

## Battery replacement

If the alarm indicates a yellow flash with a single beep or the low battery icon is displayed on the LCD display, the battery needs attention.

### To replace the battery:

1. Remove the alarm from the mounting plate.
2. Remove the battery cover, and then remove the current batteries. Note the battery polarity.
3. Insert new batteries, noting the polarity.

**Note:** Use only Duracell Alkaline MN2400BK AAA size batteries (from a local retailer).

4. Replace the battery cover.

5. Carefully align the alarm on the base, and then gently press and twist on. This connects the batteries.

The red, yellow, and green LEDs immediately flash in sequence to show the batteries are connected properly. In addition, the icons on the LCD display on the display models light up.

6. Wait 15 seconds, and then press the **Test** button to ensure that the alarm works.

### Notes

- If the alarm still indicates a yellow flash with a single beep or the low battery icon is displayed on display alarms the batteries may be depleted. Replace them with fresh batteries.
- If the red, yellow, and green LEDs do not flash in sequence and there is no display on the LCD display units, the batteries may be installed incorrectly (reverse polarity). Remove the Alarm from the mounting bracket, remove the battery cover and check if the batteries are installed correctly. If the batteries were connected incorrectly and after correcting the polarity of the batteries, for the first hour the alarm may indicate CO is present by a flashing red LED for non-display alarms; for display models the alarm may indicate CO level readings and/or random icons. Please note that during this period the alarm activates as required during an actual CO event.

**WARNING:** Constant exposures to high/low temperatures or high humidity reduces battery life. Use only batteries specified in marking. Use of a different battery may have a detrimental effect on alarm operation.

For environmentally sound disposal, remove the alarm from its mounting plate models, open the battery door and remove the batteries) and dispose in accordance with best practice and guidance on WEEE disposal and recycling.

### Functional gas test

The Carbon Monoxide alarm checks for CO gas every 4 seconds. When exposed to the CO gas, the red LED flashes (as per Table 2) to confirm that it is detecting the CO gas. Solo C6 brand canned CO testing agent may be used to verify the alarm's ability to sense CO.

**To gas test the CO detector:** Spray canned CO within .25 in of the gas entry holes for 3 seconds.



Within seconds, the red LED begins to flash (as per Table 2) confirming that the alarm has detected the CO.

**To enter accelerated functional gas test mode:** Press the **Test** button momentarily (approximately 1 second) while the alarm is indicating CO presence.

The alarm will sound 2 x 4 temporal tone patterns to indicate an alarm condition.

**To return the unit to standby:**

Place the alarm in clean air for a few minutes until the red LED is no longer flashing.

## When the alarm sounds

---

**WARNING:** Actuation of your CO alarm indicates the presence of carbon monoxide (CO) which can cause death.

---

Act immediately when the CO detector alarms.

**When the alarm sounds:**

1. Press **Reset/Silence** button (only operational at concentrations < 250ppm).
2. Call your local Fire Department or 911.
3. Immediately move to fresh air – outdoors or by an open door/window. Do a head count to ensure that all persons are accounted for. DO NOT re-enter the premises until the first responders have arrived, the premises have been aired out, and your alarm returns to its normal condition.
4. After following steps 1-3, if your alarm reactivates within a 24-hour period, repeat steps 1-3 and call a qualified appliance technician to investigate for sources of CO from fuel burning equipment/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 manufactures' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

**Note:** When ventilation is provided by leaving the window and doors open, the CO build up may have dissipated by the time help arrives and the alarm may have stopped sounding. Although your problem may appear temporarily solved it is crucial that the source of the CO is determined, and appropriate repairs made.

## Protecting your family

Follow these guidelines to reduce the risk of Carbon Monoxide poisoning.

- Know and look out for warning signs that Carbon Monoxide may be present. These include:
  - The CO alarm warning of abnormal levels
  - Staining, soot marks or discoloration on or around appliances

- A pilot light frequently going out
  - A strange smell when an appliance is operating
  - A gas flame which is yellow or orange, instead of the normal blue
  - Family members (including pets) exhibiting the “flu-like” symptoms of CO poisoning as described above. If any of these signs are present, get the appliance serviced before further use. If feeling ill, get immediate medical help.
- Choose all appliances and vehicles which burn fossil fuels such as coal, oil, natural gas, propane, kerosene, wood, gasoline, diesel, charcoal, etc. with care and have them professionally installed and regularly maintained.
  - These appliances must “breathe in” air to burn the fuel properly. Know where the air comes from and ensure vents remain unobstructed (particularly after any construction or remodeling work).
  - The appliances must also “breathe out” waste gases (including the CO) – usually through a flue or chimney. Ensure chimneys and flues are not blocked or leaking and get them checked every year. Check for excessive rust or cracks on appliances and pipe work.
  - Never leave your car, motor bike or lawnmower engine running in the garage with the garage door closed. Never leave the door from the house to the garage open if the car is running.
  - Never adjust your own gas pilot lights.
  - Never use a gas stove, cooktop or a barbecue grill for home heating.
  - Children should be warned of the dangers of CO poisoning and instructed never to touch or interfere with CO alarms. Do not allow small children to press the Test/Hush button as they could be subjected to excessive noise when the alarm sounds.
  - Leaving windows or doors slightly open (even a few inches) significantly reduces the risk of high levels of CO occurring. The high levels of draught-proofing in modern houses reduces ventilation and can allow dangerous gases to build up.
  - Install CO alarms in all the areas recommended in this booklet.
  - Recognize that CO poisoning may be the cause when family members suffer from “flu-like” symptoms when at home but feel better when they are away for extended periods.

## Specifications

Compatible panel	ClareOne (CLR-C1-PNL1)
Transmitter frequency	433 MHz
Encrypted	Yes
Visual indicators	Low battery, sensor fault, end of life
Audible indicators	Low battery, sensor fault, end of life
Test/Hush button	Checks the electronics, sounder, sensor, and batteries
Audible alarm	85 dB at 3 meters
CO alarm memory	Indicates if the unit was previously in alarm
Battery type	(2x) AAA (Alkaline)
Battery life	Should be changed annually (extreme temperatures affect battery life)
Expected life span	10 years
Operating environment	
Temperature	40 to 100°F (4.5 to 38°C)
Humidity range	15 to 95% R.H. noncondensing
Dimensions (W x H x D)	4.72 x 4.13 x 1.77 in. (120 x 105 x 40 mm)
Certifications	FCC: 15.109 Class B 15.231, Industry Canada: ICES-003, RSS-210, conforms to UL-2034, CSA Std 6.19-01

## Servicing the CO detector

If your CO alarm fails to work after you have carefully read all the instructions, verified that the unit has been installed correctly, and ensured that it has good batteries connected, return it for repair or replacement from the original purchasing location.

Some states or jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, or limitations on how long an implied warranty last so the above limitation may not apply to you.

Do not interfere with the alarm or attempt to tamper with it. This will invalidate the guarantee, but more importantly may expose the user to shock or fire hazards. This guarantee is in addition to your statutory rights as a consumer.

## CO detector limitations

The CO alarm will not work without good batteries or if the batteries are placed in reverse polarity. If the batteries have been drained the alarm will not give protection. Button test the alarm weekly and on return from vacations or other long absences.

Carbon Monoxide must enter the unit for it to be detected. There may be Carbon Monoxide in other areas of the house (e.g. downstairs, in a closed room, etc.) but not in the vicinity of the CO alarm. Doors, air drafts and obstructions can prevent CO from reaching the alarm. For these reasons we recommend CO alarms are installed both near and in bedrooms, particularly if bedroom doors are closed at night. Additionally, install detectors in rooms where members of the

household spend much of their time, and in rooms with potential sources of CO gas.

The CO alarm may not be heard. The sound output is loud but it may not be heard behind a closed door or if it is too far away. The alarm may not wake up someone who is impaired by alcohol or medications. The alarm sound may be masked by other sounds such as T.V., stereo, traffic noise etc. Installing CO alarms on either side of closed doors will improve their chance of being heard. This CO alarm is not designed for people with impaired hearing.

CO alarms don't last indefinitely. CO alarms are sophisticated electronic devices with many parts. Although CO alarms and their component parts have undergone stringent testing, and are designed to be very reliable, it is possible that parts can fail. Therefore, you should test your CO alarms weekly. CO Alarms must be replaced after 10 years of operation.

CO alarms are not a substitute for life insurance. Householders are responsible for their own insurance. CO alarms warn of increasing CO levels, but we do not guarantee that this will protect everyone from CO poisoning.

CO alarms are not suitable as early warning smoke alarms. Some fires produce Carbon Monoxide, but the response characteristics of these CO alarms are such that they would not give sufficient warning of fire. Smoke alarms must be fitted to give early warning of fire.

CO alarms do not detect the presence of natural gas (methane), propane, butane, or other combustible gases. Install combustible gas alarms to detect such gases.

**Note:** Carbon Monoxide alarms, with electrochemical sensors have a cross sensitivity to hydrogen. This means that they can alarm due to sensing hydrogen produced by batteries which are incorrectly charged, such as on boats or with battery back-up systems such as those used with alternative energy systems. The unit will alarm with 500ppm H<sub>2</sub> after between 10- and 40-minutes exposure.

This CO alarm is intended for residential use. It is not intended for the use in industrial applications where OSHA requirements for carbon monoxide detectors must be met.

This carbon monoxide alarming device is designed to detect carbon monoxide gas from any source of combustion. It is not designed to detect smoke, fire, or any other gases.

---

**WARNING:** THIS CO ALARM 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.

---

## Troubleshooting

### The alarm does not work with the test button

1. Wait 15 seconds after connecting the power before button testing.
2. Hold button down firmly for at least 5 seconds.

3. Check the alarm is secured correctly on the mounting plate.
4. Check if batteries are inserted in the correct polarity.
5. Replace batteries.

**Alarm sounds for no reason**

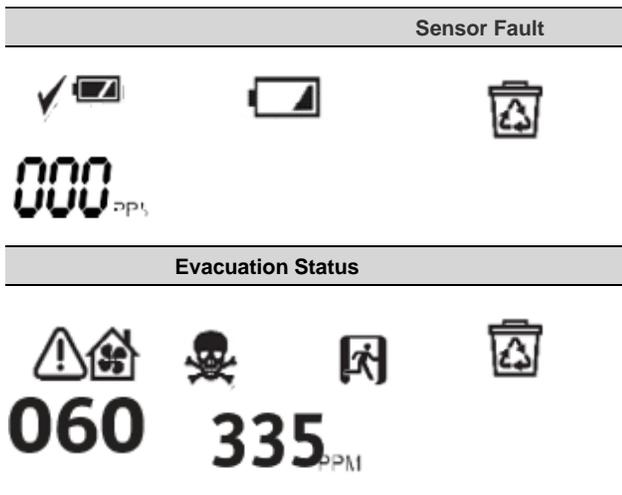
See When the alarm sounds on page 7.

If there are still problems:

1. Ensure there are no fuel burning appliances in the vicinity which could be leaking CO gas (e.g. even from next door).
2. Ensure there are no fumes in the area (e.g. paint, thinners, hair spray, chemical cleaners aerosol sprays, damp proofing done with and aqueous emulsion such as amino functional siloxane and alkylalkoxysilane).
3. Ensure there is no outdoor source of CO in the vicinity (e.g. a car with engine running, heavy traffic, heavy air pollution, barbecue fumes, etc.).
4. Ensure there is no source of hydrogen such as batteries being charged (e.g. on boats or in Uninterruptable Power Supplies (UPS)).
5. Ensure there is not excessive smoke or fumes from devices such as Egyptian shisha or hookah pipes, especially those that use coal or charcoal to heat the tobacco.
6. If the alarm is installed with an RF Module, ensure that there are no problems with the other RF interconnected devices.
7. Press the Test/Hush button to silence the alarm.

If the unit continues to sound it is possibly defective and should be replaced.

**Display and indicator summary**



**Table 5: ClareOne CO indicator summary**

Operation/mode	Red LEDs	Yellow LEDs	Green LEDs	Sounder
<b>Normal operation</b>				
Power up	1 flash	1 flash	1 flash	Off
Standby	Off	Off	Off	Off
Button test (weekly)	Off	Off	Flashing (every second)	Temporal full sound
Unit sensing CO has itself	Flashing (as per table 2)	Off	Off	Temporal full sound
Sensing CO through RF interconnect	Off	Off	Off	Temporal full sound
<b>Fault mode</b>				
Low battery condition	Off	1 flash (every 50 seconds)	Off	1 beep with flash
Sensor fault condition	Off	2 flashes (every 50 seconds)	Off	2 beeps with flash
End of life condition	Off	3 flashes (every 50 seconds)	Off	3 beeps with flash

**Table 6: ClareOne CO service diagnostics**

Diagnostic modes	Action	Red LED	Yellow LED	Sounder	Action
<b>Fault checks</b>					
Low battery	Press and hold button	1 flash	1 flash	Off	
Faulty sensors	Press and hold button	Off	Off	Off	
End of Life	Press and hold button	Off	Off	Temporal full sound	
Alarm memory	Action	Red LED	Green LED	Sounder	LCD display
24 hours after event		Flashers per table 3	Off	Off	Off
Long term memory	Press and hold button	Flashers per table 3	Off	Temporal full sound	CO ppm
Memory erase	Keep button pressed after long term test	Flashers per table 3	Wait for green light then release button	Temporal full sound	CO ppm

## Regulatory information

Manufacturer	Clare Controls, LLC. 7519 Pennsylvania Ave, Suite 104 Sarasota, FL 34243
North American standards	Conforms to UL-2034, CSA Std 6.19-01
FCC compliance	<p>This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.</p> <p>This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.</p> <p>If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:</p> <ul style="list-style-type: none"> <li>• Reorient or relocate the receiving antenna.</li> <li>• Increase the separation between the equipment and receiver.</li> <li>• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.</li> <li>• Consult the dealer or an experienced radio/TV technician for help.</li> </ul> <p>This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.</p> <p>Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS</p> <p>(s). Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris celles pouvant causer un mauvais fonctionnement de l'appareil.</p> <p>In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 cm is maintained from the general population.</p> <p>FCC: 2ABBZ-RF-UTCO-433 IC: 11817A-RFUTCO433</p> <p>This Class B digital apparatus complies with Canadian ICES-3B.</p> <p>Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p>

MANUFACTURER HEREBY DISCLAIMS ALL WARRANTIES AND REPRESENTATIONS, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE INCLUDING (BUT NOT LIMITED TO) ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THESE PRODUCTS AND ANY RELATED SOFTWARE. MANUFACTURER FURTHER DISCLAIMS ANY OTHER IMPLIED WARRANTY UNDER THE UNIFORM COMPUTER INFORMATION TRANSACTIONS ACT OR SIMILAR LAW AS ENACTED BY ANY STATE.

(USA only) SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. THIS

WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS THAT VARY FROM STATE TO STATE. MANUFACTURER MAKES NO REPRESENTATION, WARRANTY, COVENANT OR PROMISE THAT ITS ALARM PRODUCTS AND/OR RELATED SOFTWARE (I) WILL NOT BE HACKED, COMPROMISED AND/OR CIRCUMVENTED; (II) WILL PREVENT, OR PROVIDE ADEQUATE WARNING OR PROTECTION FROM, BREAK-INS, BURGLARY, ROBBERY, FIRE; OR (III) WILL WORK PROPERLY IN ALL.

Environmental class	UL: Indoor dry IEC: 3K5
EU compliance	
EN 54	EN 54-00:0000
European Union directives	1999/5/EC (R&TTE directive): Hereby, Clare Controls declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
	2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: <a href="http://www.recyclethis.info">www.recyclethis.info</a> .
	2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: <a href="http://www.recyclethis.info">www.recyclethis.info</a> .

## Warranty information

Clare Controls offers a two (2) year limited warranty on original Clare Controls components, from the date of shipment from Clare Controls.

## Contact information

Clare Controls, LLC.  
7519 Pennsylvania Ave, Suite 104  
Sarasota, FL 34243

General: 941.328.3991  
Fax: 941.870.9646  
[www.clarecontrols.com](http://www.clarecontrols.com)

Integrator/Dealer Support: 941.404.1072  
[claresupport@clarecontrols.com](mailto:claresupport@clarecontrols.com)

Homeowner Support (ClareCare): 941.315.2273 (CARE)  
[help@clarecontrols.com](mailto:help@clarecontrols.com)