

CO Alarm

CO Alarm is a life-safety device that alarms when it detects carbon monoxide.

Features

- UL2034 and CSA 6.19-01 listings
- Detects carbon monoxide
- 5 year warranty

Key Instructions

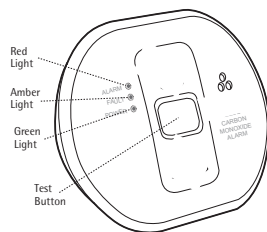
1. Review **sections 1 and 2** for information regarding the CO alarm.
2. Determine where to place the CO alarms per **Section 3**.
3. Install per **Section 4**.

Cryptix Enrolment:

4. Enroll the CO alarm into the panel:
 - Place panel in enrollment mode
 - Press and hold TEST button until you hear the sounder beep
 - The panel will learn the CO alarm
 - Press and hold TEST button until sounder is done sounding beeps
 - Panel will indicate a CO Test by sounding temporal 4 siren one time

Interlogix Compatible Enrollment

- Place panel in enrollment mode
- Press and hold TEST button until sounder is done sounding beeps
- Panel will learn the CO alarm-recommended group 34
- Test that the CO alarm is enrolled in the panel:
- Put panel into test mode
- Press and hold TEST button until sounder is done sounding beeps
- Panel will indicate a CO sensor has tripped



Attention

This manual should be read prior to use and retained for further information. Use the Helix installation guide to verify proper system setup.

Honeywell Compatible Enrollment

- Place panel in enrollment mode
- Zone type= Carbon Monoxide
- Input type= Supervised RF Transmitter
- When asked for a serial number: trip tamper twice
- To tamper, turn base counter-clockwise. Wait for two seconds and restore the base. Wait for three seconds and repeat steps.
- Select Loop 1 for CO
- Put panel into test mode
- Press and hold TEST button until sounder is done sounding beeps
- Panel will indicate a CO sensor has tripped

2GIG Compatible Enrollment

- Place panel in enrollment mode
- Q1: Select RF sensor number (01-48) zone number of your choice
- Select RF sensor type [14] 24 hour carbon monoxide (see control panel installation manual)
- Select RF sensor equip type [1]
- Select RF sensor equip code [0860] CO1-345 CO detector
- Select RF sensor serial number and press shift, press learn trip sensor
- Select RF sensor age [1] New
- Select RF sensor Loop number [1]
- Put panel into test mode
- Press and hold TEST button until sounder is done sounding beeps
- Panel will indicate a CO sensor has tripped

DSC Compatible Enrollment

- Place panel in enrollment mode
- Press and hold TEST button until sounder is done sounding beeps

- Panel will learn the CO alarm
 - Recommended group is 81
 - Test that the CO alarm is enrolled in the panel
 - Put panel into test mode
 - Press and hold TEST button until sounder is done sounding beeps
 - Panel will indicate a CO sensor has tripped
5. Test that the CO alarm is enrolled in the panel.
 6. Review **Section 5** for CO alarm testing and maintenance.
 - Test the functionality of the CO alarm weekly.
 7. Review **Sections 6 and 7** for information regarding what to do when the alarm sounds and information regarding how to protect your family.
 8. Review how to have your alarm serviced per **Section 8**.
 9. For troubleshooting information, refer to **Section 9**.

1. Read This First

Congratulations on becoming the owner of a carbon monoxide alarm. This will help protect you and your household from the dangerous effects of carbon monoxide - the silent killer.

- Wait 15 seconds after connecting the power before button testing. We recommend you:
- Install a CO alarm in every room that contains a fuel burning appliance, particularly rooms where people spend a lot of time, such as bedrooms, kitchens, etc.
- In rooms with an appliance, install (preferably) on the ceiling (300mm from walls) and between 1.5m to 3m horizontally away from the appliance. In rooms remote from the appliance, install at 'head height', where the light indicators can be seen.

- Test the alarm weekly by pressing the test/hush button. The horn will sound 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 label).
- Do not install alarm until all building work is completed to avoid contamination.
- Individuals with medical problems may consider warning devices which provide audible and visual signals for carbon monoxide concentrations under 30ppm.

2. Carbon Monoxide - The Silent Killer

2.1 What is 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/bottled gas, paraffin, wood, petrol, 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 draft-proofing which makes areas with fuel-burning appliances or fireplaces airtight
- Engines of cars, lawnmowers, etc. left running in confined spaces
- Portable paraffin or gas heaters in badly ventilated rooms

2.2 What happens when your CO Alarm detects Carbon Monoxide?

When the Alarm detects potentially dangerous levels of CO, it flashes the red alarm light immediately and then sounds a loud alarm if the CO persists. Table B shows how the CO Alarm reacts to different levels of CO gas and exposure time. At higher levels of CO the alarm turns on sooner. The rate of flashing of the red light indicates the level of CO. If your CO Alarm sounds, follow the instructions in Section 6. **NEVER IGNORE**

THE ALARM!

2.3 Symptoms of CO Poisoning

CO in PPM	Symptoms
35	The maximum allowable concentration exposure in any 8 hour period according to OSHA
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 an air free 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

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 so disoriented they are unable to save themselves by either exiting the building or calling for assistance.

Alarm Indicators

Condition	Indicator
Pre Alarm	Red LED flash only
CO Alarm	Red LED flash + sounder
Faults	Yellow LED flash + beeps

Table B: CO Alarm Response

CO Gas Level	Red Light	Horn/Sounder
0 - 30 ppm	Off (unless it has alarmed previously)	Off
>50 ppm	1 flash every 3 seconds	On within 60-240 minutes (typically 90 minutes)
>110 ppm	2 flashes every 3 seconds	On within 10-50 minutes (typically 30 minutes)
>250 ppm	3 flashes every 3 seconds	On within 4-15 minutes (typically 9 minutes)

Pre-Alarm (before horn sounds): When the Alarm detects over 50 ppm CO, the red light flashes in accordance with Table B. This helps locate CO leaks as the unit gives an indication straight away. (Without this feature the CO level would need to be at 50 ppm CO for typically 72 minutes for an alarm sound to be given). Note: the pre-alarm signal may be triggered by CO coming for example, from cooking with gas, from car engines, or from nearby barbecues. This is usually not a concern, unless the pre-alarm signal persists until the alarm sounds and the CO source is unknown.

NOTE: The CO Alarm may sound if cigarette smoke is blown into it, or aerosols are released nearby.

CO ALARM MEMORY

The CO Alarm memory is an important feature of the CO Alarm where even 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 light will flash at different rates every 50 seconds depending on the level of CO detected - see the CO Response Table.

Memory recall on demand: To review the memory status after initial 24 hours, press and hold the test button. The red

LED will flash in accordance to the CO Response Table. Display models will show the peak level of CO measured.

Reset Memory: Hold down the test

button until the red light stops and the green light starts flashing. Cover the horn with a cloth to muffle the alarm during this time. Please note that the memory will also be reset when the unit is switched off.

3. Where to Place CO Alarms

NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION

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

Carbon Monoxide Alarms should 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)

IMPORTANT!

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.

3.1 Ideally a Carbon Monoxide Alarm should be installed in:

- Every room containing a fuel burning appliance
- Remote rooms where occupants spend a considerable amount of time
- Every bedroom

However, 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):

- If there is an appliance in a room where

people sleep, place a CO Alarm in this room

- Locate a CO Alarm in a room containing a flueless or open-flued appliance, and
- Locate an Alarm in a room where the occupant(s) spend most of their time (e.g. sitting room)
- In a single room dwelling, the CO Alarm should be placed as far away from the cooking appliance as possible, but near to where the person sleeps
- If the appliance is in a room not normally used, such as a boiler room, the CO Alarm should be placed just outside the room so that the alarm will be heard more easily.

Figure 1

Location in room with a fuel burning appliance

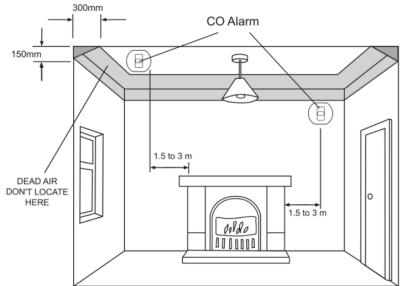


Figure 2

Location in room with sloped ceilings, the CO Alarm should be located at the high side of the room

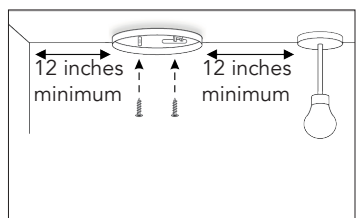
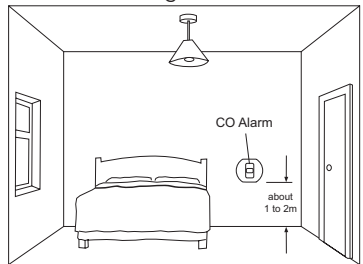
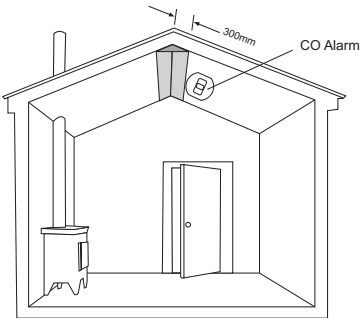


Figure 3 Position CO Alarm

Figure 4

Location in bedrooms & other rooms remote from the appliance (at breathing level)



3.2 Unsuitable Locations

Do not place the CO Alarm in any of the following areas:

1. In the immediate vicinity of a cooking appliance (keep it at least 1 meter horizontally from it).
2. Outside the building.
3. In an enclosed space (e.g. in or below a cupboard).
4. In a damp or humid area.
5. Directly above a sink or kitchen appliance.
6. Next to a door, window, air vent or anywhere that it would be affected by drafts.
7. Next to an extractor fan.
8. Over heat sources such as radiators or hot air vents.
9. Where it would be obstructed, e.g. by curtains or furniture.
10. In an area where the temperature could drop below 40°F (4.4°C) or rise above 100°F (37.8°C).
11. Where dirt or dust could block the sensor.
12. Where it could be easily knocked or damaged, or where it could be accidentally turned off or removed.
13. In a bathroom or other areas where the CO Alarm may be exposed to water splashes, dripping or condensation (e.g. above an electric kettle).
14. Near paint, thinners, solvent fumes or air fresheners.

3.31 If locating the CO Alarm in a room with a fuel burning appliance (See Figure 1)

- 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 150mm from the ceiling.
- If it is mounted on the ceiling it should be at least 300mm from any wall or light fitting.
- The CO Alarm should be a horizontal distance of between 1.5m and 3m 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.
- In rooms with sloped ceilings, the CO Alarm should be located at the high side of the room (see figure 2).

3.32 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 chosen make sure it is possible to view the three light 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.

4. Installation

4.1 Installation Procedure

1. Select a location complying with the advice in Section 3.
2. Remove the mounting plate from the packaging/Alarm.
3. Place the mounting plate on the ceiling/wall exactly where you want to mount the Alarm. With a pencil, mark the location of the two screw holes.
4. Taking care to avoid any electrical wiring in the ceiling, drill holes using a 5.0mm drill bit through the center of the marked locations. Push the plastic screw anchors provided into the drilled holes. Screw the mounting plate to the ceiling/wall.
5. Alternatively, if desired, the CO Alarm will also free stand on a flat surface with

the mounting plate attached.

6. Ensure the RF module is fitted correctly into the base of the Alarm.
7. Remove the battery door and gently pull the battery tab and replace the battery door.
8. Carefully line up the Alarm on the base, gently press home & twist on – see figure 4. (This connects the batteries). The red, amber & green lights will immediately flash in sequence to show they are working.
9. Press the Test button (after 15 seconds) to ensure that the Alarm works (see figure 5).
10. Install all the other Alarms similarly.

Figure 5



4.2 How to Tamperproof the Alarm

The Alarm can be made resistant to unauthorized removal. Break off the small pillar on the base as shown in figure 6A. To remove the Alarm from the ceiling it is necessary to use a small screwdriver to release the catch (push catch towards the ceiling) and then twist off the alarm (see figure 6B).

Figure 6A

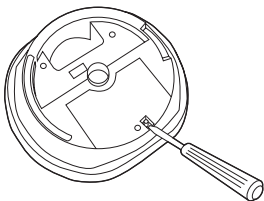
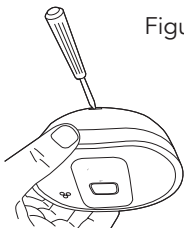


Figure 6B



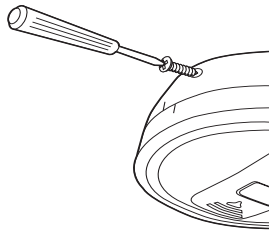
If necessary it is possible to further secure or tamper proof the Alarm by using a No.2 or No.4 (2 to 3mm diameter - not supplied) self tapping screw 6 to 8mm long to firmly lock the Alarm and its mounting plate together (see figure 6C).

5. Testing and Maintenance

Testing

Frequent testing of the system is a requirement to ensure its continued and safe operation. To test the Alarm press and hold the test button. The Green LED will flash and the horn will ramp up to full sound to indicate the Alarm is operating correctly. Guidelines and best practices for testing are as follows:

Figure 6C



1. After the system is installed
2. Once weekly thereafter
3. After prolonged absence from the dwelling (e.g. after a holiday period)
4. After repair or servicing of any of the systems elements or household electrical works

Silencing (Hush)

When the Alarm sounds after sensing CO, pressing the test/hush button will immediately stop the horn (the red light will continue to flash). If CO is still present, the red light and the horn will turn on again after about 4 minutes. The unit can only be silenced once during a CO incident. At levels > 300ppm CO, the unit cannot be silenced.

Monitoring

The CO alarm will self check (monitor) 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. If the Alarms are indicating a fault, pressing the test button will silence the beeps for a 24 hour period. This is for your convenience and can only be done once.

Maintenance

Clean the outside case 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 fluff 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

Check the 'Replace' label on the side wall - if it has been exceeded replace the entire unit. If the Replace by label on the side wall has not been exceeded, remove the Alarm from the mounting plate, remove the battery cover (see figure 7) and replace the batteries. Use **only** Duracell Alkaline MN2400BK AAA size batteries (obtainable from local retailers). Insert the new batteries with the orientation shown on the base. Replace the battery cover and replace the Alarm back on its mounting plate (this action automatically switches on the batteries). Button test the Alarm (after 15 seconds) to check the batteries are installed correctly and that they are not depleted.

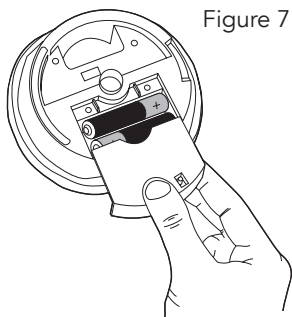


Figure 7

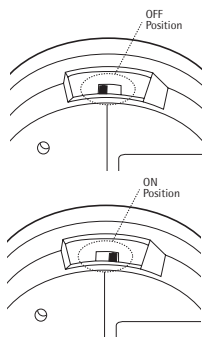


Figure 8

Warning!

Constant exposures to high or low temperatures or high humidity may reduce 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

Quick Test with Carbon Monoxide

The Carbon Monoxide Alarm checks for CO gas every 4 seconds and when exposed to the CO gas, the red light will flash (as per Table B) to confirm that it is detecting the CO gas. The Alarm can be tested with carbon monoxide gas by using one of the kits that comes with the gas either in a glass phial or aerosol can. Follow the instructions on the kit.

If a test gas kit is not readily available, it is also possible to gas test the Alarm using a joss stick or cigarette smoke. To do this, remove the Alarm from its base and slide the power switch to the ON position (see fig 8). Fill a suitable size plastic bag with smoke from the joss stick or cigarette. Insert the Alarm into the smoke filled bag and seal it closed. Within seconds, the red light will begin to flash (as per Table B) to confirm that the Alarm has detected the CO gas in the bag. To check the Alarm sound, momentarily press the test button and within seconds the horn will sound briefly. Slide the power switch to the OFF position and replace the Alarm on its mounting plate.

6. 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 an alarm signal sounds:

1. Operate reset/ Silence button.
2. Call your emergency services 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 re-enter the premises 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 a 24 hour period, repeat steps 1-3 and call a qualified appliance technician to investigate for 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 manufacturer 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.

7. How to Protect Your Family

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

1. Know and look out for tell-tale signs that Carbon Monoxide may be present.

These include:

- The CO Alarm warning of abnormal levels.
- Staining, sooting or discoloration on or around appliances.
- A pilot light frequently going out.
- A strange smell when an appliance is operating.
- A naked gas flame which is yellow or orange, instead of the normal blue.
- Family members (including pets) exhibiting the "flu-like" symptoms of CO poisoning described above. If any of

these signs are present get the appliance checked out by an expert before further use. If family members are ill get medical help.

2. Choose all appliances and vehicles which burn fossil fuels such as coal, oil, natural/bottled gas, paraffin, wood, petrol, diesel, charcoal, etc. with care and have them professionally installed and regularly maintained.
3. These appliances must "breathe in" air to burn the fuel properly. Know where the air comes from and ensure vents/ air bricks, etc. remain unobstructed (particularly after building work).
4. The appliances must also "breathe out" the 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.
5. 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.
6. Never adjust your own gas pilot lights.
7. Never use a gas cooker or a barbecue for home heating.
8. Children should be warned of the dangers of CO poisoning and instructed never to touch, or interfere with the CO Alarm. Do not allow small children to press the test/hush button as they could be subjected to excessive noise when the unit alarms.

9. Leaving windows or doors slightly open (even a few inches) will significantly reduce 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.

10. Install CO Alarms in all the areas recommended in this booklet.

11. 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.

8. Getting Your Alarm Serviced

If your CO Alarm fails to work after you have carefully read all the instructions, check that the unit has been installed correctly, and ensured that it has good

batteries connected.

1. The CO Alarm will not work without good batteries. If the batteries have been drained, the Alarm will not give protection. Button test the Alarm weekly and on return from holidays and other long absences.

2. Carbon Monoxide must enter the unit for it to be detected. There may be Carbon Monoxide in other areas of the house but not in the vicinity of the CO Alarm. Doors, air drafts and obstructions can prevent the CO reaching the Alarm. For these reasons we recommend CO Alarms are fitted both near and in bedrooms, particularly if bedroom doors are closed at night. Additionally, install in rooms where members of the household spend much of their time, with potential sources of CO gas.

3. 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. RF interconnecting CO Alarms greatly improves the probability that they will be heard. The Alarm may not wake up somebody who has taken alcohol or drugs. The alarm sound may be masked by other sounds such as T.V., stereo, traffic noise, etc. Fitting 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.

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

5. CO Alarms are not a substitute for life insurance. Homeowners are responsible for their own insurance. The CO Alarm warns of increasing CO levels, but we do not guarantee that this will protect everyone from CO poisoning.

6. 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.

7. The CO Alarm does not detect the presence of natural gas (methane),

bottled gas (propane, butane) or other combustible gases. Fit combustion Gas Alarms to detect these. **Note:** Carbon Monoxide Alarms with electrochemical sensors have a cross sensitivity to hydrogen. This means that they can alarm due to sensing hydrogen being produced by batteries being 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 500 ppm H₂ after between 10 and 40 minutes exposure.

This CO Alarm is intended for residential use. It is not intended for use in industrial applications where Occupational Safety and Health Administration (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.

9. Troubleshooting

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 that the Alarm is secured correctly on the mounting plate.
4. Replace batteries.

ALARM SOUNDS FOR NO APPARENT REASON:

Follow the detailed instructions in Section Entitled "What to do when the alarm sounds" 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 an aqueous emulsion such as Aminofunctional Siloxane, and Alkylalkoxysilane.

3. Ensure there is no outdoor source of CO in the vicinity such as a car with the engine running, heavy traffic, or heavy air pollution.

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 smoking devices.

6. Ensure that there are no problems with the other RF interconnected Alarms and that all Alarms are housecoded correctly.

7. Press the test/hush button to silence the alarm.

If the unit continues to sound, it is possibly defective and should be replaced (see section 8 "Getting the CO Alarm Serviced").

Specifications

Physical

Housing Dimensions	4.7 x 4.1 x 1.6 inches (12.0 x 10.4 x 4.1 centimeters)
Weight with Batteries	6.53 ounces (185 grams)
Mounting Fastener	#6 screws and anchors (provided)

Environmental

Operating Temperature	32°F to 104°F (0°C to 40°C)
Maximum Humidity	15% to 95% non-condensing relative humidity

Sensor Specifications

Frequencies	433.92 MHz,
Replacement Batteries	Two Alkaline AAA Batteries
Sensor Indications	Low Battery, Supervision, Removal Tamper
Audible Alarm	85 dBA at 10 feet (3m) minimum
Humidity Range	15% to 95% R.H. (Non-Condensing)

Certification

RE115, RE215, RE215T, RE315, RE615	FCC, IC, UL2034, CSA 6.19-01
------------------------------------	------------------------------

Specifications subject to change without notice.

FCC NOTICE

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference that may be received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Resolution Products, Inc. could void the user's authority to operate this equipment.

FCC ID: U5X-RE115, U5X-RE215, U5X-RE315

TRADEMARKS

INTERLOGIX, HONEYWELL, DSC, AND 2GIG ARE TRADEMARKS OWNED BY UNITED TECHNOLOGIES ELECTRONIC CONTROLS INC., HONEYWELL INTERNATIONAL INC., TYCO SAFETY PRODUCTS CANADA LTD, AND NORTEK SECURITY & CONTROL LLC, RESPECTIVELY. RESOLUTION PRODUCTS, INC. PRODUCTS WILL FUNCTION WITH ONE OF EITHER INTERLOGIX (FORMERLY GE), HONEYWELL, DSC, OR 2GIG SYSTEMS. HOWEVER, NO RESOLUTION PRODUCT IS PRODUCED BY, ENDORSED BY, NOR IS OFFICIALLY ASSOCIATED WITH INTERLOGIX (FORMERLY GE), HONEYWELL, DSC OR 2GIG. RESOLUTION RECOMMENDS VERIFYING PROPER ENROLLMENT AND OPERATION, PER CONTROL PANEL INSTALLATION INSTRUCTIONS, AT INSTALLATION.

IC NOTICE

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.

Le présent appareil est conforme aux cnr d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage, et
- (2) L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC: 8310A-RE115, 8310A-RE215, 8310A-RE315

WARRANTY

Resolution Products, Inc. will replace non-portable products that are defective in their first five (5) years and all defective portable products in their first two (2) years.