

# eSeries.

2GIG-C08E-345

## CARBON MONOXIDE ALARM WITH ENHANCED SECURITY

### **GENERAL INFORMATION**

The Carbon Monoxide Alarm (2GIG-C08E-345) is a battery powered wireless device for detecting the dangerous levels of Carbon Monoxide. It is one of the e-Series devices from Nortek Security and Control providing enhanced security with encrypted communications to the control panel using the 345Mhz frequency. The intended use is with compatible 2GIG wireless alarm systems.

To know the maximum number of transmitters that can be supported, see the appropriate 2GIG Security System Installation Guide.

**IMPORTANT:** This CO Alarm must be tested and maintained regularly following NFPA 720 requirements. This device 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, It 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.

Verify that the package includes the following:

- 1-Wireless CO Alarm and Mounting Plate
- 2—Plastic wall anchors
- 2—Phillips Screws
- 3—AAA batteries (installed). Replace only with Duracell MN2400 Alkaline AAA size batteries (obtainable from local retailer).

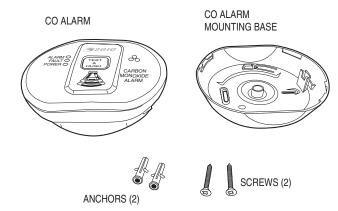
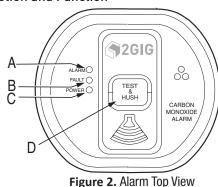


Figure 1. Box Contents

Installation Tools Required

- Phillips Screw Driver
- Variable Speed Drill with 1/16" Drill Bit
- Flat Blade Tool (optional)
- CO Alarm Description and Function



- A. ALARM: Red LED **B**. FAULT: Amber LED
- C. POWER: Green LED
- D. Test/Hush Button

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

See Table 1 for Symptoms from Carbon Monoxide Poisoning.

Symptoms of Carbon Monoxide Poisoning

CO Parts per Million (ppm)	Inhalation Time (approx.) & Symptoms Developed
35ppm	The maximum allowable concentration for continuous exposure in any 8 hr. period according to Occupation Safety & Health Association
150ppm	Slight headache after 1 1/2 hours
200ppm	Slight headache, fatigue, dizziness, nausea after 2-3 hours
400ppm	Frontal headache within 1-2 hours, life threatening after 3 hours, also maximum ppm in flue gas (on air free basis) according to US Environmental Protection Agency
800ppm	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours
1.600ppm	Headache, dizziness and nausea within 20 minutes. Death within (1) one hour
3,200ppm	Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes
6,400ppm	Headaches, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes
12,800ppm	Death within (3) three minutes

Table 1. Carbon Monoxide Symptoms

# Placement of CO Alarm

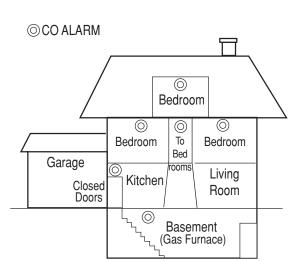
Ideally a Carbon Monoxide Alarm should be installed in:

- 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
- Locate a CO Alarm in a room containing a flueless or open-flued appliance. Locate an Alarm in a room where the occupant(s) spend most of their time
- In a bedsite, 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.

Suggested Alarm locations are shown in Figure 3.



CO ALARM LOCATIONS

Figure 3 Alarm Locations

Unsuitable Locations for CO Alarms

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 3 feet 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 cooker.
- 6. Next to a door, window, air vent or anywhere that it would be affected by
- 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 -15°F or rise above 105°F.
- 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.

## If locating the CO Alarm in a room with a fuel burning appliance:

- 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 6 inches from the ceiling. If it is mounted on the ceiling it should be at least 12 feet from any wall or
- The CO Alarm should be a horizontal distance of between 3 feet and 9 feet 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.

### If locating the CO Alarm in a bedroom or in rooms remote from a fuel burning appliance:

• 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.

detector for the leakage of combustion products from fuel burning appliances or Test the CO Alarm weekly by pressing and holding the test button for a few seconds.

WARNING: Do not use the CO Alarm on an intermittent basis, or as a portable

Replace Alarm when the "REPLACE UNIT BY" date has been reached. Check the label on the side of the Alarm.

Do not fit Alarm until all building work is completed to avoid contamination. Installation of CO Alarm/Wall or Ceiling Mounting

Rotate CO alarm **COUNTER CLOCKWISE** to remove it from mounting plate.

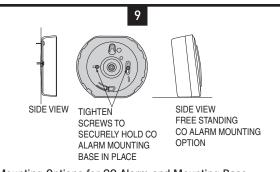
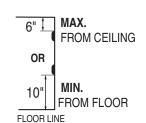
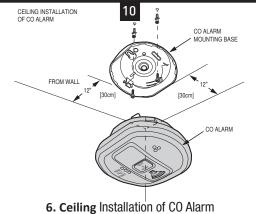


Figure 4. Mounting Options for CO Alarm and Mounting Base Select a wall or ceiling location for the CO Alarm. Screw CO Alarm mounting base to wall or ceiling. Another alternative, if desired, is to allow the CO Alarm to free stand on a flat surface with the mounting base attached (See Figure 4).



Figure 5. Wall Installation of CO Alarm





### How to Tamper Proof the Alarm

The 2GIG-C08E-345 alarm can be made tamper proof. Break off the small pillar on the base of the CO Alarm (Figure 7). This will allow the tamper catch release to be activated and in the position shown in Figure 8. To remove Alarm from wall or ceiling it is now necessary to use a small flat tool (See Figure 9) to release the catch release. Follow the procedure for removing the alarm that is shown in Figure 10. If necessary it is possible to further tamper proof the Alarm by using a #2 or #4 1/4 inch self tapping screw (not included) and installing it into the indent of the mounting base (Figure 11).

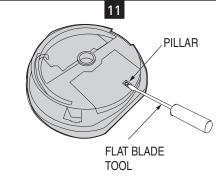
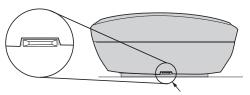


Figure 7. Breaking Off Tamper proof Pillar



TAMPER CATCH RELEASE IN ACTIVATE POSITION AFTER BREAKING OFF PILLAR

Figure 8 Tamper Catch in ACTIVATE position.

TAMPER CATCH RELEASE IN **DEACTIVATE** POSITION

USING FLAT TOOL TO PRY TOWARD WALL

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Figure 9. Tamper Catch in **DEACTIVATE** position.

**ROTATE CO ALARM COUNTERCLOCKWISE** ON BASE UNTIL MARKS ON SIDE ALIGN



Figure 10. Tamper DEACTIVATION Procedure

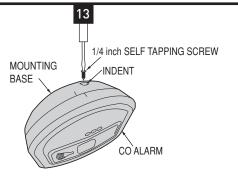
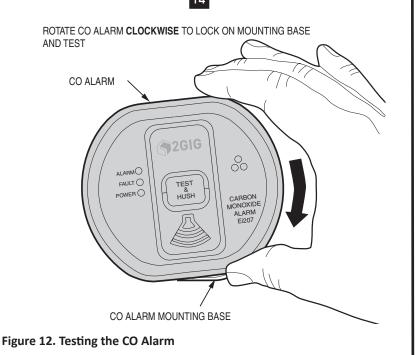


Figure 11. Tamper Option Using Screw to Fasten Mounting Base to Alarm

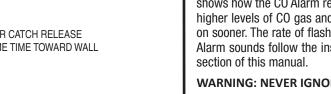
What happens when your CO Alarm detects Carbon Monoxide? When the CO Alarm detects potentially dangerous levels of CO, if flashes the red alarm light immediately and then sounds a loud alarm if the CO persists. Table 2 shows how the CO Alarm reacts to different levels of CO gas and exposure time. At higher levels of CO 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 the "What to do when the Alarm Sounds"



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Red Light	Sounder	
(Pre-Alarm)	(Alarm)	
Off*	Off	
1 flash	on within 60 - 240 min	
every 3 secs	(typical 90 min)	
2 flashes	on within 10 - 50 min	
every 3 secs	(typical 30 min)	
3 flashes	on within 4 - 15 min	
every 3 secs	(typical 9 min)	
	Red Light (Pre-Alarm)  Off*  1 flash every 3 secs  2 flashes every 3 secs  3 flashes	

Table 2. CO Alarm Response

NOTE: Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.



WARNING: NEVER IGNORE THE ALARM!

### Pre-Alarm

When the Alarm detects over 43 ppm CO the red light flashes in accordance with Table 2. This helps locate CO leaks as the CO Alarm gives an indication straight away. (Without this feature the CO level would need to be at 43ppm 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 CO Alarm 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 minute (approx) 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 will flash in accordance to Table 3.

CO Gas Level	Red Light Response		
	24 Hours	On Demand (Button Press)	
ppm > 50 ppm	1 flash every 50 sec.	1 flashes	
ppm > 110 ppm	2 flashes every 50 sec.	2 flashes	
ppm > 250 ppm	4 flashes every 50 sec.	4 flashes	

**Table 3.** CO Alarm Memory Indicators

### Monitoring

The CO Alarm self checks vital functions to ensure that it is operating correctly.

- 1. Low Battery Fault the battery voltage is measured and compared against a low voltage threshold.
- 2. Sensor Fault the sensor is checked for electrical continuity and open circuit
- 3. End of Life fault (EOL) The Alarm is programmed to check when the useful life of the Alarm has been exceeded.

Monitoring and Testing Summary				
Status Result	Red LED (Alarm)	Amber LED (Fault)	Green LED Power	Sounder
Standby	No visual or audible indication if unit is OK			
Unit OK (Button Test)	Off	Off	On	On
Low Battery	Off	1 flash	Off	1 beep
Sensor Fault	Off	2 flashes	Off	2 beeps
End of Life (EOL)	Off	3 flashes	Off	3 beeps
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**Table 4.** Monitoring and Testing Summary

### Low Battery:

When the battery is starting to be depleted the CO Alarm will beep and the Amber LED will flash every minute.

The low battery beeps can be suppressed for 24 hours by pressing the test/hush

**IMPORTANT:** It is recommended that this is done until a replacement CO Alarm is available so as to maintain protection against CO leaks.

Frequent testing of the Alarm is a requirement to ensure its power is present and the Alarm is functioning. The 2GIG-C08E-345 Carbon Monoxide Alarm can be tested by rotating the Alarm clockwise on the mounting base (Figure 12). This activates the on/ off switch. The (3) three indicator lights will immediately flash in sequence to show that they are working. Wait 15 seconds after connecting the power before button testing. The power light is not illuminated during standby. It will flash green when the test button is pressed to indicate that power is present and alarm is functioning.

Guidelines and best practices for testing are as follows:

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

To test the Alarm press and hold the test button. The Alarm will respond with one of the following status conditions:

- 1. The green LED will flash and the horn will sound to indicate the Alarm is powered and operating correctly.
- 2. If there is a fault condition the amber LED will flash and the horn will beep in
- accordance to Table 4.
- 3. If the memory has been set the RED light will flash and the horn will give a full alarm sound (see section 2 - CO Alarm Memory.

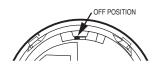
The Carbon Monoxide Alarm checks for CO gas every 4 seconds and when exposed to the CO gas, the red light will flash (as per Table 2) to confirm that it is detecting the CO gas.

## Quick Test with Carbon Monoxide:

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 Figure 9). Fill a suitable size plastic bag with smoke from a 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 2) 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 (left) position (See Figure 13) and replace the Alarm on its mounting base.



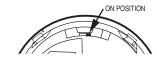


Figure 13. Power ON or Power OFF Switch Position on CO Alarm Maintenance

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 CO Alarm can only be silenced once during a CO incident. At levels > 150ppm CO the CO Alarm cannot be silenced.

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 CO Alarm.

What to do when the Alarm sounds

- (1) Open the doors and windows to ventilate the area (see note).
- (2) Turn off all fuel appliances where possible and stop using them. (The Alarm can be silenced immediately by pushing the test/hush button provided the CO level is less than 150ppm).
- (3) Evacuate the property leaving the doors and windows open.
- (4) Get medical help immediately for anyone suffering the effects of Carbon Monoxide poisoning (headache, nausea), and advise that Carbon Monoxide poisoning is suspected.
- (5) Call your gas or other fuel supplier on their emergency number. Keep the number in a prominent place.
- (6) Do not re-enter the property until the Alarm has stopped. (If the Alarm has been silenced by pressing the test/hush button, wait at least 5 minutes so the Alarm can check that the CO has cleared).
- (7) Do not use the fuel appliances again until they have been checked by a registered installer or equivalent expert.

/ 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. 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.
- 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 CO Alarm sounds.
- (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 draft-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.

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# Limitations of CO Alarms

- 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 CO Alarm 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 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, and in rooms 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 TV, 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 when the "REPLACE UNIT BY" date has been reached. Check the label on the side of the Alarm.

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- (5) CO Alarms are not a substitute for life insurance. House-holders 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 CO Alarm will alarm with 500 ppm H2 after between 10 and 40 minutes exposure. 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**

- ALARM DOES NOT WORK WITH THE TEST BUTTON:
- (1) Check the Alarm is secured correctly on the mounting plate. (2) Wait 15 seconds after connecting the power before button testing.
- (3) Hold button down firmly for at least 5 seconds.

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### ALARM SOUNDS FOR NO APPARENT REASON:

Follow the detailed instructions in 'What to do when the alarm sounds' section. 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 Uninterruptible Power Supplies (UPS)).
- (5) Ensure there is not excessive smoke or fumes from devices such as Egyptian shisha, hookah or water pipes, especially those that use coal or charcoal to heat (6) If the Alarm is fitted with an RF Module, ensure that there are no problems with
- the other RF interconnected Alarms and that all Alarms are house coded correctly. (7) Press the test/hush button to silence the Alarm. If the CO Alarm continues to sound it is possibly defective and should be replaced.
- WHAT TO DO IF THE ALARM BEEPS: The CO Alarm will beep and the amber light will flash to indicate a fault condition.

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Indicator Summary				
Normal Operation	Red LED	Amber LED	Green LED	Sounder
Power Up	1 flash	1 flash	1 flash	Off
Standby	Off	Off	Off	Off
Button Test (Weekly)	Off	Off	1 Flash (every second)	On
Unit Sensing CO gas itself	Flashing (as per table 3)	Off	Off	On
Fault Mode				
Low Battery Condition	Off	1 flash (every 50 sec)	Off	1 beep with one amber flash
Sensor Fault Condition	Off	2 flashes (every 50 sec)	Off	2 beeps with 2 amber flashes
End of Life Condition	Off	3 flashes (every 50 sec)	Off	3 beeps with 3 amber flashes
	Operation Power Up Standby Button Test (Weekly) Unit Sensing CO gas itself Fault Mode Low Battery Condition Sensor Fault Condition End of Life	Operation Power Up 1 flash Standby Off Button Test (Weekly) Unit Sensing CO gas itself Low Battery Condition Sensor Fault Condition End of Life Off 1 flash Off Flashing (as per table 3) Off Off Off Off Off Off	Normal Operation Red LED Amber LED  Power Up 1 flash 1 flash Standby Off Off Button Test (Weekly) Off Off Unit Sensing CO gas itself (as per table 3) Off Fault Mode Low Battery Condition Off (every 50 sec) Sensor Fault Condition Off 2 flashes (every 50 sec) End of Life Off 3 flashes	Normal Operation Red LED Amber LED Green LED  Power Up 1 flash 1 flash 1 flash 1 flash Standby Off Off Off Off Off Off Off Off Off Of

Table 5. Indicator Summary

Service Diagnostics					
Diagnostics Modes	Action	Red LED	Yellow LED	Sounder	Action
Fault Checks					
Low Battery	Press & hold button	Off	1 flash	1 beep with flash	Replace Batteries
Faulty Sensor	Press & hold button	Off	2 flashes	2 beeps with flashes	Replace Alarm
End of Life (EOL)	Press & hold	Off	3 flashes	3 beeps with flashes	Replace Alarm
Alarm Memory	Action	Red LED	Green LED	Sounder	
Up to 24 hours after event		Flashes as per Table 3	Off	Off	
Long Term Memory	Press & hold button	Flashes as per Table 3	Off	On	
Memory Erase	Keep button pressed after long	Flashes per Table 3	Wait for Green light then release	On	

button

**Table 6.** Service Diagnostics

### **CO Alarm Fault Chart Fault Condition** Fault Indication Action Low Battery 1 beep with 1 amber flash Replace Battery Replace Alarm Faulty Sensor 2 beeps with 2 amber flashes End of Life 3 beeps with 3 amber flashes Replace Alarm

Table 7. Alarm Fault Chart

Technical Specifications			
Power	Battery (included)		
Transmitter Frequency	345 MHz (crystal controlled)		
Unique ID Codes	Over (1) one million different code combinations		
Supervisory Intervals	70 minutes		
Test/Hush Button	Checks electronics and horn		
Operating Temperature	40°F to 100°F (4°C to 38°C)		
Humidity Range	15% to 95% R.H. (non-condensing)		
Audible Alarm	85dB(A) at 3m minimum		
Regulatory Listing	UL2034, CSA 6.19-01, FCC Part 15 and IC.		
CO Alarm Memory	Indicates if CO Alarm was previously in alarm		
Dimensions	4.724" x 4.134"x1.575" (120mm x 105mm x40mm)		
Weight	6.279oz (178g)		
<b>Equipment Code</b>	2860		

# REGULATORY INFORMATION

### FCC & IC Notice

This device complies with Part 15 of the FCC Rules and Industry Canada license exempt standard(s). Operation is subject to the following

This device may not cause harmful interference, and This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est aul'appareil ne doit pas produire de brouillage, et

ateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en comprom

le fonctionnement. This Class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada 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 This equipment use been tested and toland a comply with the immission a classes building eviewer, pursuant to a first of the Fornius. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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

- nstallation. 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:
- Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help. Warning: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

### LIMITED WARRANTY

This Nortek Security & Control LLC product is warranted against defects in material and workmanship for two (2) years. This warranty extends only to wholesale customers who buy direct from Nortek Security & Control LLC or through Nortek Security & Control LLC's norma listribution channels. Nortek Security & Control LLC does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any.

There are no obligations or liabilities on the part of Nortek Security & Control LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation, All implied warranties for functionality, are valid only until the warranty expires. This Nortek Security & Contro LLC Warranty is in lieu of all other warranties expressed or implied

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For technical support outside of the USA and Canada:

Contact your regional distributor.

Visit <a href="www.2gig.com/dealers/">www.2gig.com/dealers/</a> for a list of distributors in your region.



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