Honeywell

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5800CO Carbon Monoxide Detector with Built-in Wireless Transmitter

INSTALLATION AND SETUP GUIDE

GENERAL INFORMATION

The 5800CO is a 3V battery powered wireless Carbon Monoxide (CO) detector intended for use with wireless alarm systems that support 5800 series devices. Refer to control/communicator installation instructions for compatibility.

The detector consists of an electrochemical carbon monoxide sensor assembly coupled to a wireless transmitter. The transmitter can send alarm, trouble, tamper, and battery condition messages to the system's receiver. Refer to the wireless system's instructions for the maximum number of transmitters that can be supported.

NOTICE: This manual should be left with the owner/user of this equipment.

IMPORTANT: This detector must be tested and maintained regularly following NFPA 72 requirements.

WARNING: This product is intended for use in ordinary indoor locations of dwelling units, including homes, residential buildings, hotels, schools, dormitories, and day care centers. It is not intended for use in industrial factories or commercial parking garages.

Detector Description

- Listed to UL standard 2075 (pending)
- Supervised
- Local sounder
- Dual LED's
- Test/Hush button
- Surface mount to wall or ceiling
- Optional drywall anchors included

The 5800CO contains a piezoelectric horn which generates the ANSI S3.41 temporal 4 pattern in an alarm condition (see note below Table 1 for temporal 4 pattern). In alarm, a message is also sent to the wireless control panel and the detector's zone number is displayed at the console. The alarm message is transmitted every 4 seconds until the carbon monoxide condition has cleared and the detector has reset. During an alarm condition, pressing the detector's test button will silence the piezoelectric horn for 5 minutes. Once the detector has reset, a RESTORE message is transmitted to the control panel and the transmitter's zone number can be cleared from the panel. The mounting base installation is simplified by the incorporation of features compatible with drywall fasteners or other methods that provide a method for securing the detector in place.

During initial power-up, the red and green LEDs will blink together once every 10 seconds up to four times. It takess about 30 seconds for the detector's CO sensor to stabilize (see Table 1).

After power-up has completed and the detector is functioning normally within its listed sensitivity range, the green LED blinks once every 10 seconds. The LED indication must not be used in place of the tests specified under **TESTING THE DETECTOR.** In a trouble condition, the red LED will blink once every 10 seconds (refer to Table 1). If the detector senses a low battery condition, the red LED blinks once every 45 seconds.

Two LEDs and a sounder on the detector provide local visual and audible indication of the detector's status as listed in Table 1.

Table 1: Detector LED Modes

	Green LED	Red LED	Sounder
Normal (standby)	Blinks every 10 seconds	Off	Off
Alarm/Test	Off	Blinks every 1 second	Temporal 4 Pattern†
Low Battery	Off	Blinks every 45 seconds	Chirp every 45 sec after LED blinks for 7 days
Communication Fail	Off	Blinks every 5 seconds	Off
Trouble	Off	Blinks every 5 seconds	One chirp every 45 seconds
Detector End-of-Life	Off	Blinks every 10 seconds	Off
Power Up	Blinks every 10 secs†† (w/red LED)	Blinks every 10 secs †† (w/green LED)	Off

† Temp 4 pattern is repeated pattern of four short beeps followed by a five second pause. When the detector has been in alarm for 30 minutes, the alarm signal will be given once every minute. If ambient conditions return to normal, the detector will self-restore out of alarm and into Normal (standby) mode.

†† Red and green LEDs blink a total of four times, once every 10 seconds.

Hush feature: If required, the audible alarm can be silenced for 5 minutes by pushing the button marked "Test/Hush". The red alarm light will continue to flash in temp-4 pattern. If carbon monoxide is still present after the 5 minute hush period, the audible alarm will sound. The hush feature will not operate at levels above 350 ppm (parts per million) carbon monoxide.

Trouble feature: When the sensor supervision is in a trouble condition, the detector will send a trouble signal to the panel. Trouble conditions include an open circuit, sensor removal (tamper), and sensor end of life.

End of Life Timer feature: When the detector has reached the end of its life, the trouble contact will open. This indicates that the CO sensor inside the detector has passed the end of its life and must be replaced. This detector's lifespan is approximately six years from the date of manufacture. Refer to Detector Replacement section

Low Battery Detection: The 5800CO is powered by a single 3-volt CR123A or DL123A Lithium battery (included). The detector checks for a low battery at least every 65 minutes. If a low battery is detected, the transmitter sends a low battery message to the control panel, which beeps and displays the detector's zone number. In addition, the red LED of the detector will blink every 45 seconds and the test button will be disabled. This condition will exist for a minimum of 7 days, and then the detector's horn will "chirp" about every 45 seconds. Pressing the test button during this time will silence the chirps for 12 hours. The battery should be replaced BEFORE the chirps begin. Be sure to replace the battery with a fresh one.

BATTERY INSTALLATION AND REPLACEMENT

To replace the battery:

1. Remove the detector from its mounting base by twisting the detector counterclockwise. Remove the battery, and dispose properly.
2. To ensure proper power-down sequence, wait a minimum of 20 seconds before installing new battery.
3. Install a new 3-volt CR123A Lithium battery in the battery compartment. Follow the polarity diagram inside the compartment.
4. Reinstall the detector onto the mounting base by turning the detector clockwise.
5. Test the detector as described in the TESTING SIGNAL STRENGTH section of this manual. The green LED should blink about once every 10 seconds to indicate normal operation. If the battery is not installed correctly, the detector will not operate and the battery may be damaged. If the detector does not appear to be sending a signal during any of the tests, check for correct battery installation and for a fully charged battery.

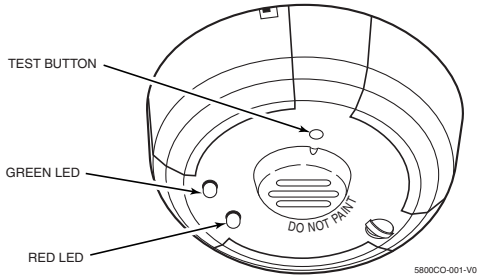

Figure 1. 5800CO Wireless Carbon Monoxide Detector

PROGRAMMING

The detector must be enrolled in the control panel before it can operate in the system. The detector's protection zone must be enrolled as Loop 1 and "Input Type" 3 (supervised RF).

A tamper condition is transmitted as Loop 4, but does not require programming.

1. Enter the control's Zone Programming mode.
2. Enter the zone number to be programmed.
3. Enter the applicable zone type when prompted. For Honeywell residential controls, program loop 1 as carbon monoxide zone type 14).
4. When prompted, enter Input Type 03 (3 on some controls) – Supervised RF Transmitter.
5. When prompted for the serial number, transmit from the detector by activating the tamper switch. To do this, hold the base of the detector in one hand, and rotate the detector counter-clockwise on the base until it snaps open. Then return to clockwise position until the detector snaps into place.
6. When the serial number is displayed, transmit from the detector a second time by activating the tamper switch again as described in Step 5. The current loop number (4) will begin to flash.
7. Manually change the loop number to the desired loop number for the zone (according to the application).

WARNING: The carbon monoxide protection zone enrolled must always be Loop 1. Otherwise, annunciations will not be reported by the control.

8. Exit Programming mode when programming is complete, and test the detector. Refer to the Testing Section.

See the control unit's installation instructions for further details.

MOUNTING THE DETECTOR

First, determine the best location for the detector, one that provides proper gas detection (see Figure 4 for suggested detection locations) and a strong wireless transmission path.

Proper Gas Detection Location

In a wall location, the detector should be at least as high as a light switch, and at least six inches from the ceiling. In a ceiling location, the detector should be at least 12 inches from any wall.

Where to install, ideally:

- Within 10 feet of all sleeping areas
- Inside the bedroom if it contains a fuel burning appliance
- On every floor of the building
- Ideally, install in any room that contains a fuel burning appliance
- If the appliance in the room is not normally used, such as the boiler room, the detector should be placed just outside the room so the alarm can be heard more easily

Where NOT to install, ideally:

- Detectors operate best if not installed within 10 feet of any cooking appliance
- Directly above a sink, cooker, stove or oven
- Next to a door or window that would be affected by drafts i.e. extractor fan or air vent
- Outside
- Do not install in any environment that does not comply with the detector's environmental specifications
- In or below a cupboard
- Where air flow would be obstructed by curtains or furniture
- Where dirt or dust could collect and block the sensor
- Where it could be knocked, damaged, or inadvertently removed

Good Transmission Path

A GOOD TRANSMISSION PATH MUST BE ESTABLISHED FROM THE PROPOSED MOUNTING LOCATION BEFORE PERMANENTLY INSTALLING THE DETECTOR. To check, perform the test described in the TESTING SIGNAL STRENGTH section. Prior to mounting the detector to the mounting base, you must "enroll" the detector's serial number into the system (see the PROGRAMMING section).

Mounting Procedure

To mount the detector, perform the following steps:

1. Once a suitable location has been determined, install the mounting base on the ceiling or on the wall (if local ordinances permit). Use the two screws and anchors provided.
2. Turn the detector in a clockwise direction in the mounting base until it clicks into place.
3. Test the detector immediately after completing the installation (as described in the **TESTING THE DETECTOR** section of this manual) and refer to the control system's instructions for additional information concerning the use of wireless devices.

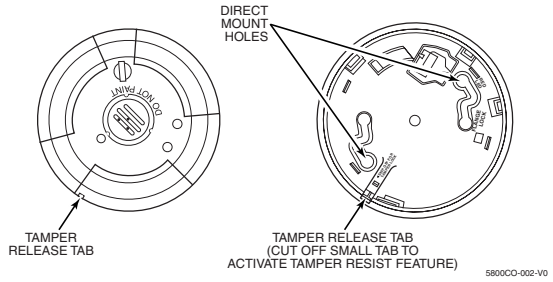

Figure 2. Detector Mounting Base

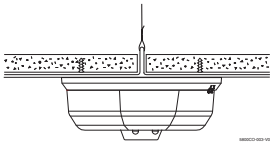

Figure 3. Mount Detector Across Ceiling Panel Support

DO NOT attach the detector to removable ceiling panels. Attach the detector across panel support as shown in Figure 3.

CAUTION
Airborne dust particles can enter the detector. Honeywell recommends the removal of detectors before beginning construction or any other dust producing activity. Carbon monoxide detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

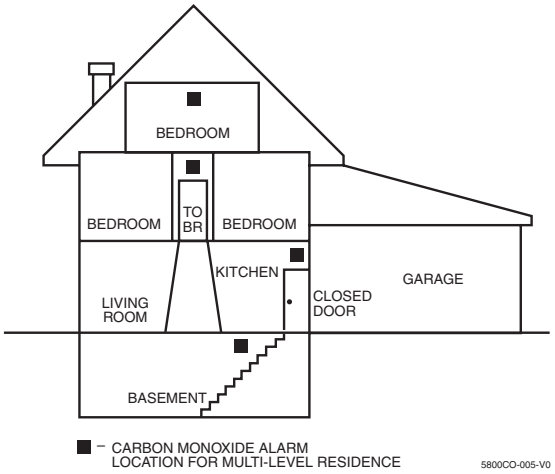

Figure4. Detector Location Diagram

Tamper Protection

This detector has a built-in tamper switch that will cause a CHECK signal to be displayed at the console of the alarm system if it is removed from its mounting base. The 5800CO detector includes a tamper-resistant feature that prevents removal from the mounting base without the use of a tool. To engage the tamper-resistant feature, cut the small plastic tab located on the mounting base (Figure 2), and then install the detector. To remove the detector from the base once it has been made tamper resistant, use a small screwdriver to depress the square tamper release tab, located on the skirt of the mounting base, and turn the detector counterclockwise.

TESTING THE DETECTOR

NOTE: Before testing, notify the central station that the detector system is undergoing maintenance, in order to prevent unwanted alarms. Testing the detector will activate an alarm and send a signal to the panel.

The manufacturer cannot recommend a specific agent with which to test the detector.

Detectors must be tested after installation and following periodic maintenance.

Testing the Sensor

1. A recessed test button is located on the detector housing (see Figure 5).
2. Push and hold the recessed test button for a minimum of 5 seconds. Use a small screwdriver or Allen key with maximum diameter of 0.18 inch (the alarm panel will trigger and then the detector will go into alarm. If the tool is removed from the recessed button the sounder will shut off.)

   If the detector is within the listed sensitivity limits, the LED on the detector should blink once per second and the horn should sound within 3 seconds.

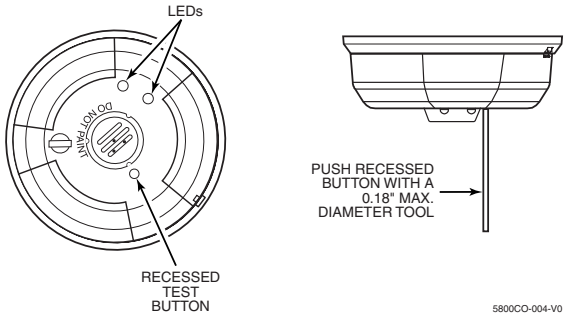

Figure 5. Recessed Test Button Opening

Testing Signal Strength

NOTE: Remove battery tab before installation.

This test should be performed before installation to determine a strong communication path with the control panel and after installation is complete. Also, the owner/user should test the unit at least weekly.

1. Activate the wireless system's GO/NO GO TEST mode from the keypad.
2. Depress and hold the detector's TEST button. If the detector has not previously detected a low battery condition and it is within proper sensitivity limits, the detector should immediately transmit an alarm signal to the control panel. The built-in horn will start to sound about 2.5 seconds after depressing the button.
3. The wireless system's keypad should emit at least three audible sounds when the alarm transmission is received and will display the transmitting detector's zone number.
4. When the console has received the test signal, release the TEST button. The horn will immediately stop and a few seconds later the detector's zone number will clear from the console display.
5. If the console does not respond as noted, check the polarity of the battery and be sure it is fresh. If this is an initial installation, try moving the detector to another location that provides proper reception. Also be sure that the detector has been "enrolled" by the control panel (see PROGRAMMING). Then, repeat the test.
6. Turn off the system's TEST mode from the keypad (security code + OFF).

Testing Programmed Loops

This test should be performed before installation to ensure that the detector has been programmed and is operational in the system.

1. Activate the system's TRANSMITTER ID SNIFFER mode from the keypad (see the control panel's instructions). All programmed wireless zones will be displayed, one by one, on the system keypad. Make sure the detector zone is displayed in the sequence. (If not, recheck that the detector zone has been properly programmed.)
2. With the detector mounted to the bracket, press the detector's TEST button. The zone associated with the detector should disappear from the keypad on the next display cycle. This means that the system has received a transmission from the detector zone you programmed.
3. When testing is complete, enter the Installer code + the OFF key to exit TEST mode.

When all system testing has been completed, notify the central station that the system is back on line.

CAUTION: Carbon Monoxide Gas and its Detection

This carbon monoxide detector is designed for indoor use only. Do not expose to rain or moisture. Do not knock or drop the detector. Do not open or tamper with the detector as this could cause malfunction. The detector will not protect against the risk of carbon monoxide poisoning if not properly installed. The detector will only indicate the presence of carbon monoxide gas at the sensor.

Carbon monoxide gas may be present in other areas.
This carbon monoxide detector is NOT:

- Designed to detect smoke, fire or any gas other than carbon monoxide
- To be seen as a substitute for the proper servicing of fuel-burning appliances or the sweeping of chimneys.
- To be used on an intermittent basis, or as a portable alarm for the spillage of combustion products from fuel-burning appliances or chimneys.

Carbon monoxide gas is a highly poisonous gas which is released when fuels are burnt. It is invisible, has no smell and is therefore impossible to detect with the human senses. Under normal conditions in a room where fuel burning appliances are well maintained and correctly ventilated, the amount of carbon monoxide released into the room by appliances should not be dangerous.

Symptoms of carbon monoxide poisoning: Carbon monoxide bonds to the hemoglobin in the blood and reduces the amount of oxygen being circulated in the body. The following symptoms are related to carbon monoxide poisoning and should be discussed with all members of the household:
Mild exposure: Slight headache, nausea, vomiting, fatigue (often described as "flu-like" symptoms).
Medium exposure: Sever throbbing headache, drowsiness, confusion, fast heart rate.
Extreme exposure: Unconsciousness, convulsions, cardio respiratory failure, death.
Many causes of reported carbon monoxide poisoning indicate that while victims are aware that they are not well, they become so disoriented that they are unable to save themselves by either exiting the building or calling for assistance.
Also young children and pets may be the first to be affected.

What to do if the carbon monoxide detector goes into alarm: Immediately move to a spot where fresh air is available, preferably outdoors. Find a phone in an area where the air is safe and call your security service provider. Tell your provider the detector alarm status, and that you require professional assistance in ridding your home of the carbon monoxide.

IMPORTANT: This detector should be tested and maintained regularly following National Fire Protection Association (NFPA) 720 requirements. (Generally this detector should be tested at least once per month.)

MAINTENANCE

Occasionally clean the outside casing with a cloth. Ensure that the holes on the front of the alarm are not blocked with dirt and dust. **Do not paint, and do not use cleaning agents, bleach, or polish on the detector.**

DETECTOR REPLACEMENT

This detector is manufactured with a long-life carbon monoxide sensor. Over time the sensor will lose sensitivity, and will need to be replaced with a new carbon monoxide detector. This detector's lifespan is approximately six years from the date of manufacture.

Periodically check the detector's replacement date. Remove the detector cover and refer to the ID sticker placed on the inside of the detector. The sticker will indicate the date that the detector should be replaced.

The detector will also cause a trouble condition once it has reached the end of its useful life. If this occurs, it is time to replace the detector.

NOTE: Before replacing the detector, notify the proper authorities that maintenance is being performed and the system will be temporarily out of service. Disable the zone or system undergoing maintenance to prevent any unwanted alarms. Dispose of detector in accordance with any local regulations.

CAUTION

It should be noted the installation, operation, testing and maintenance of the 5800CO is different than conventional 4-wire smoke detectors. Per NFPA 720 section 5.3.7.2 the detector shall not be connected to a zone that signals a fire condition (i.e. smoke detector zones). Therefore, the 5800CO detector must be programmed as a non-fire zone. See the control's Installation Instructions for the appropriate carbon monoxide zone type to be programmed.

SPECIFICATIONS

Power Source:	One 3-volt CR123A Lithium Battery (included). (Replace with Duracell DL123A, Sanyo CR123A, Panasonic CR123A or ADEMCO 466.)
Audible Signal (temp 4 tone):	85 dBA min. in alarm (at 10ft)
Height:	2.3 inches (58 mm)
Diameter:	5.3 inches (135 mm) with mounting base
Weight:	7 oz. (241 g) without battery
Operating Ambient Temperature Range:	32° to 100°F (0° to 50°C)
Operating Humidity Range:	15% to 95% Relative Humidity, non-condensing
Agency Listings:	
Patent numbers:	5,155,469; 5,004,999

Please refer to insert for the Limitations of Carbon Monoxide Detectors.

FOR WARRANTY INFORMATION AND FOR DETAILS REGARDING THE LIMITATIONS OF THE ENTIRE ALARM SYSTEM, REFER TO THE INSTALLATION INSTRUCTIONS FOR THE RECEIVER/CONTROL WITH WHICH THIS DEVICE IS USED.

This device complies with Part 15 of the FCC rules and RSS210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modifications could void the user's authority to operate the equipment.

K14631 2/07 Rev. A

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