Carbon Monoxide Detector CO-15

● *Parts Identification*

1 *Triple Color LED (Green / Red / Yellow)*

Green LED

- When power is ON, the Green LED will flash once every 45 seconds.

Red LED

- While the Carbon Monoxide Detector is transmitting signal, the Red LED will flash
- While Carbon Monoxide is alarming, the Red LED will flash quickly.
- When the batteries are exhausted, the Red and Yellow LED will flash on every 4 seconds.

Yellow LED

- When the battery voltage is low, the Yellow LED will flash once along with one beep every 45 seconds.
- When the detector has fault, the Yellow LED will flash twice along with two beeps every minute.
- When the detector has been used for 10 years, the Yellow LED will start flashing 3 times along with 3 beeps every minute to indicate End-of-Life.
- When the batteries are exhausted, the Red and Yellow LED will flash on every 4 seconds.

2 *Learn/Test Button*

- Press the button to:
- ✓ Transmit a learn/test signal for device learning or radio range test.
- ✓ To silence the alarm temporarily after alarm activation.

3 *Battery Compartment Cover*

- The Carbon Monoxide Detector has a foolproof mechanism which prohibits cover closure without first installing batteries. Press down the tab and insert three batteries into the compartment.

4 *Mounting Holes*

5 *Mounting Bracket*
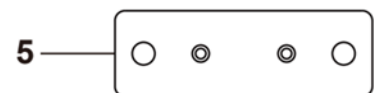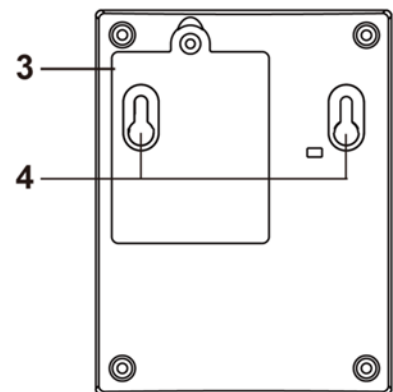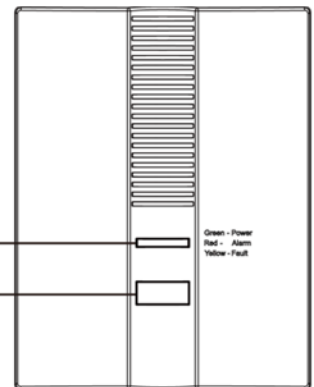
● *Battery*

- **Three AA Alkaline 1.5 V batteries** are used to supply power. The Carbon Monoxide Detector has a foolproof mechanism which prohibits cover closure without first installing batteries. Press down the tab and insert three batteries into the compartment.

- When Carbon Monoxide Detector detects low battery voltage, a low battery signal will be transmitted along with regular signal transmissions. The Yellow LED will flash and the Carbon Monoxide Detector will emit a beep every 45 seconds.

- When the batteries are exhausted, the Red and Yellow LED will flash every 4 seconds.

● *Supervision*

The Carbon Monoxide Detector is supervised by sending a periodic supervision signal to the Control Panel. When the Control Panel fails to receive a supervision signal from the Carbon Monoxide Detector within the preprogrammed period, a fault will be indicated by the Control Panel.

- ## *Carbon Monoxide Detection*
  - The alarm will be activated after CO concentration is detected according to time length in following table:

CO concentration level	Time taken before alarming
30 ppm	N/A
50 ppm	60~90 minutes
100 ppm	10~40 minutes
300 ppm	Under 3 minutes

  - Once the alarm is activated, the Carbon Monoxide Detector will transmit alarm signal and activates its buzzer to raise alarm. The Red LED will begin to flash rapidly.
  - After alarm activation, the Carbon Monoxide Detector will continue to sound alarm and resend alarm signal every 10 minutes until the CO concentration drops below 30 ppm. When the concentration drops below 30 ppm, the carbon Monoxide Detector will stop sounding alarm and transmit a restore signal.

- ## *Alarm Silence*

  - When the alarming is sounding, pressing the Test button will put the Carbon Monoxide Detector into Alarm Silence mode to silence the alarm for 9 minutes. The buzzer will only stop sounding after the alarm has been activated for at least 1-minute. If the button is pressed before alarm time reaches 1 minute, the Carbon Monoxide Detector will wait until alarm time has reached 1 minute before silencing it.
  - During the 9-minute Alarm Silence period, the Red LED will continue flashing rapidly. The Carbon Monoxide Detector will continue to monitor CO concentration during this period.
  - After this 9-minute silence period ends, if the Carbon Monoxide concentration is still above the set threshold, the detector will sound the warning alarm again. If not, it returns to normal operation mode and transmit restore signal.
  - **Note:** If alarm is activated by a CO concentration level above 300 ppm, the alarm **cannot** be silenced.

- ## *Self-diagnostics*

  The Carbon Monoxide Detector will perform self-diagnostics every 12 hours. The user can also press and hold the test button for 10 seconds to perform self-diagnostics. If any fault is detected, the Carbon Monoxide Detector will transmit signal to the Control Panel, and the Yellow LED will flash twice along with two beeps every minute. The following three conditions of Carbon Monoxide Sensor can be detected via self-diagnostics.

Condition	Description	Report to Panel
Good Sensor	The CO Detector functions normally.	No
Short Sensor	The CO Detector fails to function normally because the positive and negative poles are connected together.	Yes
Open Sensor	The CO Detector fails to function normally because it has come off or either the positive pole or the negative pole is broken.	Yes

- ## *Learning*

  Step 1   Insert three AA 1.5V alkaline batteries into the battery compartment, following the polarity indications on the battery holder.

  Step 2   When the batteries are inserted, the Carbon Monoxide Detector will sound 2 short beeps, and the Red LED will flash once.

  Step 3   Put the Control Panel into **Learning** mode, refer to Control Panel manual for detail.

Step 4   Press the Learn/Test Button on the Carbon Monoxide Detector to transmit a signal to the Control Panel for learn-in process. The Red LED will flash once with a beep.

Step 5   Refer to the operation manual to finish learning process.

● *Walk Test*

Test the Carbon Monoxide Detector signal range using the Walk Test function.

Step 1   Put the Control Panel into Walk Test mode. Refer to panel manual for detail.

Step 2   Press the Learn/Test button to transmit a signal. The Red LED will flash once with a beep. If the Red LED does not flash and no beep is heard, it means the detector is out of order or the batteries are exhausted.

Step 3   If the Control Panel successfully receives the signal, it will display device signal strength accordingly. Exit Walk Test mode to complete test. If the signal is not received, it means the panel is outside Carbon Monoxide detector signal range; relocate the detector and try again.

● *Installation Guideline*

It is recommended to install the Carbon Monoxide Detector in following locations.

● Install the Carbon Monoxide Detector in your bedrooms to protect your safety.

● For houses with garage, also mount near the internal door to garage and the room above the garage for protection in case when car engin is not turned off.

Avoid mounting in the following locations:

● Inside kitchen and garage – to avoid false alarm.

● Corner or location with stagnant air – to avoid false alarm.

● Fireplace – Keep at least 4.5 meters of distance to avoid false alarm.

● *Installation*

(It is recommended to install CO-15 by a competent person).

A mounting bracket is provided in the package for mounting the Carbon Monoxide Detector on the wall.

Step 1   Put the Carbon Monoxide Detector at desired installation location, use the Walk Test function to confirm signal strength is satisfactory.

Step 2   Use the mounting bracket as template to mark the two holes on the wall at chosen location for installing screws.

Step 3   Screw the mounting bracket onto the wall according to marked location. Install wall plugs if necessary.

Step 4   Hook the Carbon Monoxide Detector onto the mounting bracket. Installation is now complete.

● *Sensor Life*

● The Carbon Monoxide Detector uses its built-in electrochemical sensor for Carbon Monoxide detection.

● Under normal use, the detector can operate for a period of 10 years from the date the user places it into service. The unit will start to indicate end-of-life by flashing Yellow LED three times and emit 3 beeps every minute. **Replace the Alarm immediately**.

● *Maintenence*

● Clean the front cover of the device regularly to avoid dust or debris which may affect air sampling. Wipe the surface with a cloth dampened with clean water when cleaning, do not use cleaning agents, detergents or solvents.

● Avoid using aerosols near the device.

● Do not paint the device, the painting may block the detector the vent hole and affects its ability to sample air.

⚠️ WARNING

- Prevent CO-15 from colliding or falling that could damage the device.
- This Apparatus is designed to protect individuals from the acute effects of carbon monoxide exposure. It will not fully safeguard individuals with specific medical conditions. If in doubt consult a medical practitioner.
- In case of an alarm, promptly hold your breath to prevent inhaling carbon monoxide and open the doors / windows to clear the air, then leave your premises for safety.
- Exposed to carbon monoxide could result in CO poisoning, causing headaches, dizziness, vomiting as effects. Inhaling large amount of CO could even result in severe conditions such as heart rate rises, unconsciousness and respiratory failures even death.
- You must **NOT** modify the apparatus under any circumstances.
- The apparatus should be installed for regular home environment; it should not be substituted / used for other purposes such as maintenance of fuel burning appliances, boilers, chimneys.
- The operating temperature is -10°C to 50°C, operation humidity up to 85% non-condensing.

Federal Communication Commission Interference Statement

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.

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. 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 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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, and (2) This device must accept any interference received, including interference that may cause undesired operation.