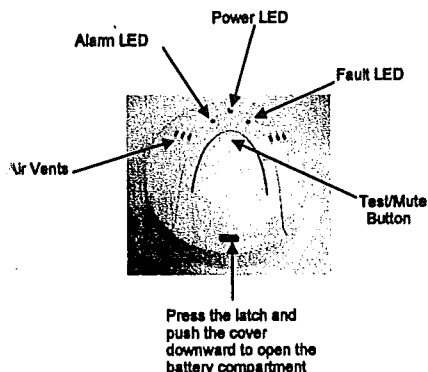


# CARBON MONOXIDE DETECTOR MODEL CO-M330 USER'S MANUAL



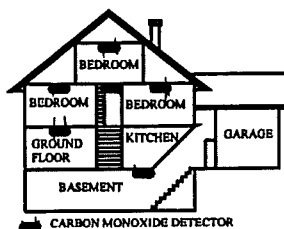
## INTRODUCTION

The CO-M330 electrochemical Carbon Monoxide Detector is effective for detecting any buildup of carbon monoxide, also known as CO gas, in your home or office. The features of CO-M330 detector includes:

- 1 Easy to install.
- 2 Monitoring for carbon monoxide in a continuous manner.
- 3 Giving a loud alarm (85 dB) when it detects a buildup of carbon monoxide. Inform users and CMS through LS-30 alarm panel.
- 4 Available Test Button for you to test the detector anytime.
- 5 Self-testing its operative function continuously.
- 6 Complying the requirements of UL Standard 2034, EN50291.

## LOCATIONS TO INSTALL YOUR DETECTOR

Since CO gas moves freely in the air, the suggested location is in or as near as possible to sleeping areas of the home. The human body is most vulnerable to the effects of CO gas during sleeping hours. For maximum protection, a CO detector should be located outside primary sleeping areas or on each level of your home. In the figure below, are suggested locations in the home. The electronic sensor detects carbon monoxide, measures the concentration and sounds a loud alarm before a potentially harmful level is reached.



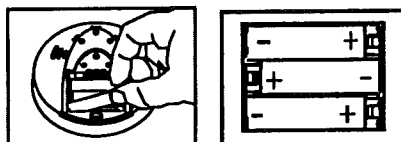
Do NOT place the detector in the following areas:

- 1 Where the temperature may drop below 40°F (4.4°C) or exceed 100°F (37.8°C)
- 2 Near paint thinner fumes
- 3 Within 5 feet (1.5 meter) of open flame appliances such as furnaces, stoves and fireplaces
- 4 In exhaust streams from gas engines, vents, flues or chimneys
- 5 Do not place in close proximity to an automobile exhaust pipe; this will damage the detector

## BATTERY INSTALLATION/REPLACEMENT

To install or replace the batteries in CO-M330 unit please perform the following steps:

- 1 Press the latch and push the front cover downward to expose the battery compartment.
- 2 Remove the old batteries and properly dispose of them as recommended by the battery manufacturer.



- 3 When install the new batteries, note the polarity illustration in the bottom of the battery compartment. If applicable, the unit will chirp for approximately one second and all the LED will flash for one second.
- 4 Gently close the front cover. Note that the front cover of the CO-M330 unit can't be closed if all three AA batteries are not properly installed.

## ENROLLING CO DETECTOR TO LS-30

Refer to LS-30 manual, select "Installer Mode" on LS-30 base unit, enter installer code and gain access authority. Then select \Set Device\Enroll Device\Fire Sensor\Enter Zone No. to enroll the ID of the CO detector by pressing its TEST button. You may change its various attributes under \Set Device\Change Device Setting\Fire Sensor Change, to fulfill different requirements. However, for initial installation, programming through PC with supplied software is recommended, since it's much easier.

## INSTALLING YOUR DETECTOR

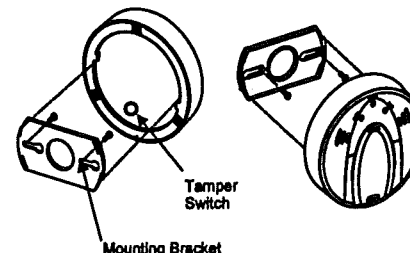
The CO-M330 detector is easy to install to protect you and your family in your home, cottage, cabin and office.

To install the detector:

- 1 At the place where you are going to install the detector, draw a horizontal line six (6) inches long.
- 2 Remove the mounting bracket from your unit by rotating it counterclockwise.
- 3 Place the bracket so that the two longest hole slots are aligned on the line. In each of keyhole slots, draw a mark to locate a mounting plug and screw.
- 4 Remove the bracket.
- 5 Using a 3/16-inch (5mm) drill bit, drill two holes at the marks and insert wall plugs.
- 6 Using the two screws and wall plugs (all supplied), attach the bracket to the wall.

- 7 Line up the side slot of the bracket and the detector. Push the detector onto the mounting bracket and turn it clockwise to fix it into place. Pull outward on the detector to make sure it is securely attached to the mounting bracket.

**NOTE:** 1) The CO-M330 detector must be kept within effective radio range away from the LS-30 base unit. If the CO-M330 radio signal can't reach the base unit, you have to relocate the a place or use a repeater. 2) There is back tamper switch inside the main body of the CO-M330, if the detector is removed from the mounting bracket, the buzzer would beep for warning.



## TESTING AND RESETTING YOUR DETECTOR

A green light flashing every minute to indicate that power is supplied. To test the detector, press the Test Button and the detector will beep intermittently and three LED will flash. Release the Test button, the beep will stop and three LED goes back to power on status. Meanwhile, the LS-30 would activate Fire Alarm when it receives the radio signal from the CO-M330 detector.

In addition, The CO-M330 detector is designed to do a continuous self diagnostic check of its microprocessor circuitry when in use.

## TAKING CARE OF YOUR DETECTOR

You have to maintain the CO-M330 detector frequently to ensure it working properly. Few tips are provided for you to take care of your detector:

- 1 Use a vacuum cleaner to clean the air vents regularly to keep them free of dust.
- 2 Push the Test Button on your detector to test its operating function once every week. You can set the LS-30 to "Test Mode" to avoid triggering siren and calling.

## MEANINGS OF LED LIGHT & BUZZER

The red and green, yellow LED light and buzzer turn on and/or off to indicate various situations. There are a few different LED light and buzzer operations:

When stand-by, the green LED flashes once in every 60 seconds.

When alarm, the red LED flashes and beep 4 times in every 5 seconds.

Low battery warning, the yellow LED flashes and beep once in every 60 seconds.

If malfunction, the yellow LED flashes 3 times and beep once in every 60 seconds.

In alarm, low battery or malfunction conditions a corresponding RF signal will be sent out and the LS-30 base unit will record the status and react properly.

## ACTIONS TO TAKE WHEN ALARM SOUNDING

In case of harmful levels of CO gas being detected, The CO-M330 detector will go into a continuous full alarm. Try to take the following necessary actions immediately:

- 1 If there is anyone experiencing the effects of carbon monoxide poisoning such as headache, dizziness, nausea or other flu-like symptoms, call your fire department or 911 right away. You should evacuate all the people in the premises immediately. Do a head count to check that everybody is accounted for.
- 2 Do not re-enter the premises until the problem has been corrected and the CO gas has been dispersed out and a safe level is reached.
- 3 If no symptoms exist, Immediately ventilate the home by opening windows and doors. Turn off fuel burning appliances and call a qualified technician or your utility company to inspect and repair your problem before restarting appliances.

**WARNING:** Normally an activation of the detector indicates the presence of CO gas. However, the CO gas can be extremely fatal, if it is not detected. The source of the CO gas may come from several possible situations, please refer to the list of sources of carbon monoxide on page 3.

**CAUTION:** This detector will only indicate the presence of CO gas at the sensor. However, you have to be aware that the CO gas may be present in other areas in the premises.

## ACTIONS TO TAKE AFTER THE PROBLEM BEING CORRECTED

Once the problem about the CO gas presence in the premises has been corrected, the alarm of the detector should be off. After waiting for 10 minutes, push the Test button to test the CO-M330 detector so that you can make sure that the detector is working properly again.

## TECHNICAL INFORMATION

The CO-M330 Detector is engineered to be able to provide alarm sounds based on the BS standards due to various exposure time at different level of carbon monoxide concentrations.

UL2034 and EN50291 have already established the carbon monoxide concentrations and exposure time standards for the alarms, which is specified below:

A full alarm is activated under the following conditions:

- In less than 30 minutes at exposures of 150 ppm
- In less than 6 minutes at exposures of 350 ppm

## Specifications:

North America version (complies with UL2034)

70ppm 60-240 minutes  
150ppm 10-60 minutes  
400ppm 4-15 minutes

Europe version (complies with EN50291)

50ppm 60-90 minutes  
100ppm 10-40 minutes  
150ppm within 3 minutes

Power: AA Alkaline battery x 3pcs

Current: 30uA@standby, 30mA@activation

Battery life: about 2.5 years

Temperature: -10°C to 50°C

Size: φ124mm x H 31mm

Weight: About 142g (w/o battery)

## YOU SHOULD KNOW ABOUT CARBON MONOXIDE

Carbon monoxide, also known as "CO" by the chemical form, is considered to be a highly dangerous poisonous gas, because it is colorless, odorless or tasteless and very toxic. In general, biochemistry phenomena have shown that the presence of CO gas inhibits the blood's capacity to transport oxygen throughout the body, which can eventually lead to brain damage.

In any enclosed space (home, office, recreational vehicle or boat) even a small accumulation of CO gas can be quite dangerous.

Although many products of combustion can cause discomfort and adverse health effects, it is CO gas which presents the greatest threat to life.

Carbon monoxide is produced by the incomplete combustion of fuels such as natural gas, propane, heating oil, kerosene, coal, charcoal, gasoline, or wood. The incomplete combustion of fuel can occur in any device which depends on burning for energy or heat such as furnaces, boilers, room heaters, hot water heaters, stoves, grills, and in any gasoline powered vehicle or engine (e.g. generator set, lawnmower). Tobacco smoke also adds CO to the air you breathe.

When properly installed and maintained, your natural gas furnace and hot water heater do not pollute your air space with CO. Natural gas is known as a "clean burning" fuel because under correct operating conditions, the combustion products are water vapor and carbon dioxide (CO<sub>2</sub>), which is not toxic. The products of combustion are exhausted from furnaces and water heaters to the outside by means of a fuel duct or chimney.

Correct operation of any burning equipment requires two key conditions:

1. An adequate supply of air for complete combustion.
2. Proper venting of the products of combustion from the furnace through the chimney, vent or duct to the outside.

Typical carbon monoxide gas problems are summarized here:

1. Equipment problems, due to defects, poor maintenance, damaged and cracked heat exchangers
2. Collapsed or blocked chimneys or flues, dislodged, disconnected or damaged vents
3. Downdraft in chimneys or flues. This can be caused by very long or circuitous flue runs, improper location of flue exhaust or wind conditions
4. Improper installation or operation of equipment, chimney or vents
5. Air tightness of house envelop/inadequate combustion of air
6. Inadequate exhaust of space heaters or appliances
7. Exhaust ventilation/fireplace competing for air supply

Potential sources of carbon monoxide in your home or office include clogged chimney, wood stove, wood or gas fireplace, automobile and garage, gas water heater, gas appliance, gas or kerosene heater, gas or oil furnace, and cigarette smoke.

## POSSIBLE SYMPTOMS OF CARBON MONOXIDE POISONING

Carbon monoxide is colorless, odorless, tasteless, and very toxic. When inhaled, it produces an effect known as chemical asphyxiation. Injury is due to the combining of CO with the available hemoglobin in the blood, lowering the oxygen-carrying capacity of the blood. In the presence of CO gas, the body is quickly affected by oxygen starvation.

The following symptoms are related to CO poisoning and should be discussed with all members of the household so that you know what to look for:

1. Extreme exposure: unconsciousness, convulsions, cardio respiratory failure, death.
2. Medium exposure: severe throbbing headache, drowsiness,

confusion, vomiting, fast heart rate.

3. Mild exposure: slight headache, nausea, fatigue (similar to "flu-like" symptoms).

Young children and household pets may be the first affected. Exposure during sleep is particularly dangerous, because the victim usually does not awaken.

## WARNING AND LIMITATION

This detector may not alarm at low carbon monoxide levels. The Occupational Safety and Health Association (OSHA) has established that continuous exposure levels of 50 ppm should not be exceeded in an 8 hours period. Individuals with a medical problem may consider more sensitive detection devices.

The CO gas detector is not suitable as a smoke or fire detector. This detector is not suitable to install in a hazardous location, as defined in the National Electrical Code.

This detector will not work without power. The CO-M330 detector will not work if the battery is disconnected or bad for any reason. Additionally, carbon monoxide must reach the detector for the proper performance of CO gas detection.

Carbon monoxide detectors may wear out because they contain electronic parts that fail at any time. Test your detector at least every week (see the section "TESTING YOUR DETECTOR").

*Important notice: The CO-M330 uses an electrochemical sensor whose life is about 5 years, the user should replace a new CO-M330 before its life time expires.*

## WARRANTY INFORMATION

*Limited Warranty:* Scientech Electronics Co., Ltd. warrants its CO-M330 Carbon Monoxide Detector to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of purchase. The warranty is limited to repair or replacement of any part of the detector that is found to be defective in materials or workmanship under normal use and service during warranty period.

The Company shall not be obligated to repair or replacement units which are found to be in need of repair because of damage, unreasonable use, modifications, or alterations occurring after the date of purchase.

In no case shall the Company be liable for any consequential or incidental damages for breach of this or other warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault.

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## WARRANTY

The Manufacturer warrants its products (hereinafter referred to as the Product) to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period. At its option, to repair or replace the Product or and part thereof. To exercise the warranty the Product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall apply to the Product only. All Products, accessories or attachments of others used in conjunction with the Products, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to Products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.

**NOTE:** The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to 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.

