UPGRADING EVERYDAY SECURITY

2-Way Wireless Carbon Monoxide Detector
(Model EL-4764)

Introduction

Electronics Line Ltd.'s 2-Way   Wireless Carbon Monoxide Detector (CO) is an effective device for detecting the buildup of Carbon Monoxide. Upon detecting the CO gas, the unit emits an alarm and notifies the control panel. The main features of your CO gas detector include the following:

❖ Integrated transmitter designed for use with EL's wireless alarm systems
❖ Easy to install
❖ Monitoring of carbon monoxide in a continuous manner.
❖ Loud alarm (85 dB) when detecting a buildup of carbon monoxide
❖ Test button
❖ Continuous Self-testing function

What 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, 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 closed 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_2), 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:
(a) An adequate supply of air for complete combustion.
(b) 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:
(a) Equipment problems, due to defects, poor maintenance, damaged and cracked heat exchangers
(b) Collapsed or blocked chimneys or flues, dislodged, disconnected or damaged vents
(c) Downdraft in chimneys or flues. This can be caused by very long or circuitous flue runs, improper location of flue exhaust or wind conditions
(d) Improper installation or operation of equipment, chimney or vents
(e) Air tightness of house envelop/inadequate combustion of air
(f) Inadequate exhaust of space heaters or appliances
(g) 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.

Installing the Detector

Selecting the installation location

Since CO gas moves freely in the air, the suggested location is in or as near as possible to sleeping areas of the home, 30 cm (12 inch) below the ceiling . For maximum protection, a CO detector should be located outside the primary sleeping areas or on each level of your home (see Fig 1 for suggested locations).
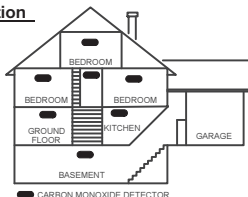

Fig. 1

Do not place the detector in the following areas:
(a) Where the temperature may drop below 4°C (39°F) or exceed 38°C (100°F).
(b) Near paint thinner fumes
(c) Within 1.5 meter (5 feet) of open flame appliances such as furnaces, stoves and fireplaces
(d) In exhaust streams from gas engines, vents, flues or chimneys
(e) Do not place in proximity to an automobile exhaust pipe; this will damage the detector

To install the detector:

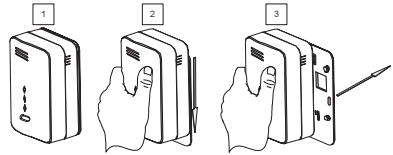1. Remove the mounting bracket from your unit according to Fig. 2.

Fig. 2

2. Hold the Mounting bracket against the wall as a template and mark the locations for the 2 mounting holes.
3. Using a 5 mm (3/16-inch) drill bit, drill two holes at the marks and insert wall plugs (Fig 3).
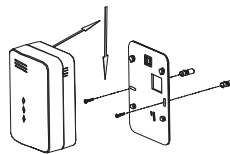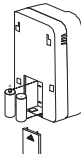

Fig. 3   *Fig. 4*

4. Secure the mounting bracket to the wall.
5. Open the battery cover by pushing down on the battery snaps (Fig. 4).
6. Insert the batteries (supplied) into the battery compartment. Pay attention to the correct battery polarity (+) (-) and close the battery compartment
7. Line up the side slot of the bracket and the detector. Push the detector onto the mounting bracket until a click is heard (see arrow direction, Fig 3).
8. Pull the detector outwards to make sure that it is securely attached to the mounting bracket.

Registration

The EL-4764 must identify itself to the iConnect 2-Way receiver as follows
1. Set the system to registration mode.
2. Go to the main menu and select [9]>[1]>[1] (Programming > Devices > Zones)
3. Select a zone and press '✓'
4. Ensure batteries are in place (as per Installation instructions above). The detector will send a transmission. If the transmission is successfully received by the system it will play a confirmation sound. If no confirmation sound is heard, send another transmission by pressing and releasing the tamper switch of the device.
5. After the detector is successfully registered the display shows: Save? Press ✓ to confirm.
   Note: Due to the occurrence of voltage delay in lithium batteries that have been in storage, the batteries may initially appear to be dead. In this case, leave the unit in Test mode for a few minutes until the battery voltage level is stabilized

LED & BUZZER Indication

The LED light and the buzzer turn on and/or off to indicate various situations. There are four different light and buzzer operations:

LED	LED Status	Buzzer	Meaning
Green (Power)	Flashing On and Off every 30 seconds		Normal condition
RED (Alarm)	Flashing	Sequential Alarm Sound	Alarm
Orange (service)	Flashing On and Off	Sequential Alarm Sound	Internal self test fail - service required
All LED's	Flashing	3 beeps for a period of 3 seconds	Test mode

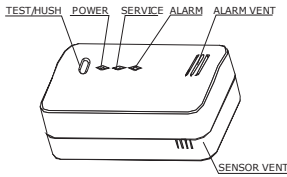TEST/HUSH POWER SERVICE ALARM ALARM VENT

SENSOR VENT

Fig. 5

Testing And Resetting Your Detector

A green power light indicates that power is supplied. To test the detector, press the Test button. The detector will beep intermittently and the three LEDs will flash. Release the Test button. The beep and the three LEDs will stop and the green LED remains on or flashes every 60 seconds.

Muting Your Detector

You can partially mute the detector in an event of alarm by pressing the Test Button. The Red LED will continue to flash and a short beep will be heard every 16 seconds.

Detector Malfunctioning

A malfunctioning unit is indicated by beep-sounding on and off sequentially, i.e., beeping for 3 seconds with 3 seconds delay between two beeps. If this occurs, remove the batteries from the unit for 10 seconds and then install them again. Should the unit again beep intermittently, DO NOT use this detector. Send the malfunctioning unit to the manufacturer for servicing.

Taking Care Of Your Detector

You have to maintain the detector to ensure proper operation:
1. Use a vacuum cleaner to clean the air vents occasionally to keep them free of dust.
2. Press the Test button on your detector to test its operation once every week.

Actions to Take When Alarm Sounding

In case of harmful levels of CO gas being detected, your detector will go into a continuous full alarm. Try to take the following necessary actions immediately:
(a) 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 emergency service department right away. You should evacuate all the people in the premises immediately. Do a head count to check that everybody is present.
(b) 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.
(c) 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 in page 1.
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 is Corrected

Once the problem of the CO gas presence in the premises has been corrected, the detector alarm should be off. After waiting for 10 minutes, push the Test button to test the detector, and by that, being confident that the detector is working properly again.

Technical Information

The Carbon Monoxide Detector is engineered to be able to provide alarm sounds based on the UL standards due to various exposure times at different level of carbon monoxide concentrations.
According to the Underwriters Laboratories Inc. the carbon monoxide concentrations and exposure time standards for the alarms have been established and specified below:
A full alarm is activated under the following conditions:
- between 60 and 90 minutes at exposures of 70 ppm
- between 10 and 30 minutes at exposures of 150 ppm
- between 4 and 10 minutes at exposures of 400 ppm

SPECIFICATIONS
Electrical
Battery Type:	2 x CR 123, 3V Lithium Battery
Current Consumption:	20 µA standby, 30mA Alarm
Frequency:	433.92 MHz or 868.65 MHz
Signal Volume:	85 dB at a distance of 3 meters (10 feet)
Battery Life:	3 years typical

Physical
Size (L X W X H):	140 X 80 X 49 mm
	(5.5 inch x 3.2 inch x 2 inch)

Environmental
Operating Temperature:	4°C to 38°C (39°F to 100°F)
Storage Temperature:	-20°C to 60°C (-4°F to 140°F)

Based on the requirements of UL 2034 Standard
Specifications are subject to change without prior notice. Should any questions arise please contact your supplier.

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 30 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. EL's Carbon Monoxide Detector will not work if the batteries are removed 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 (see the section "Testing Your Detector").

Electronics Line Ltd.Limited Warranty

EL and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 24 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by the Seller, Seller can not guarantee the performance of the security system which uses this product. Sellers' obligation and liability under this warranty is expressly limited to repairing and replacing, at Sellers option, within a reasonable time after the date of delivery, any product not meeting the specifications. Seller makes no other warranty, expressed or implied, and makes no warranty of merchantability or of fitness for any particular purpose. In no case shall seller be liable for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Sellers obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or not be compromised or circumvented; that the product will prevent any person; injury or property loss by intruder, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of intruder, robbery or fire without warning, but is not insurance or a guaranty that such will not occur or that there will be no personal injury or property loss as a result. Consequently seller shall have no liability for any personal injury, property damage or loss based on a claim that the product fails to give warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage arising from under this limited warranty or otherwise, regardless of cause or origin, sellers maximum liability shall not exceed the purchase price of the product, which shall be complete and exclusive remedy against seller. No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week. Furthermore, this CO detector has a limited life span and should be replaced after five years.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to local regulations.

CE ♻

(CE is for 868.65 MHz model only)

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