

# Wireless Carbon Monoxide Detector ELK-6051



## ELK-6051 Wireless Carbon Monoxide Detector

### Instructions

Read carefully and retain for as long as the product is being used. It contains vital information on the operation and installation of your Detector. This booklet should be regarded as part of the product. If you are just installing the Detector, this booklet must be given to the homeowner. This booklet is to be given to any subsequent user.

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# 1. Read This First

- Congratulations on becoming the owner of an Elk Carbon Monoxide Detector. This product will help protect you and your household from the dangerous effects of Carbon Monoxide- the silent killer.
- Remove the battery pulltab to engage the batteries. The Carbon Monoxide Detector is powered up by carefully rotating it onto the mounting plate which activates the on/off switch. The red, amber & green lights will immediately flash in sequence to show they are working. Then wait 15 seconds after connecting the power before button testing.
- Install a CO Detector in every room that contains a fuel burning appliance, particularly high occupancy areas e.g. bedrooms, kitchens etc.
- In rooms with a fuel burning appliance, install (preferably) on the ceiling, (1ft (300mm) from walls) and between 5ft to 10ft horizontally from appliance. In rooms remote from the appliance install at 'head height', where the Detector indicators can be seen.
- Test the Detector weekly by pressing the test/hush button, the horn will sound (at a diminished sound output level initially and then quickly reach maximum sound output level).
- Replace Detector after approx. 10 years operation (see 'Replace by' date on side wall label).
- Do not install Detector until all construction is completed to avoid contamination.
- Individuals with health issues may consider warning devices which provide audible and visual signals for carbon monoxide concentrations under 30ppm.

## 2. Carbon Monoxide – The Silent Killer

### 2.1 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 gas, propane, kerosene, paraffin, wood, gasoline, 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 kerosene or propane heaters in poorly ventilated rooms.

### 2.2 What happens when your CO Detector detects Carbon Monoxide?

When the Detector detects potentially dangerous levels of CO, it flashes the red alarm LED immediately and then sounds a loud alarm if the CO persists. Table B below shows how the CO Detector reacts to different levels of CO gas and exposure time. At higher levels of CO the alarm turns on sooner. The rate of flashing of the red LED indicates the level of CO. If your CO Detector sounds follow the instructions on page 20. **NEVER IGNORE THE ALARM!**

## 2.3 Symptoms of Carbon Monoxide Poisoning

Table A

Concentration of CO in Air ▲ ppm	Inhalation Time (approx) and Symptoms Developed
35	The maximum allowable concentration for continuous exposure in any 8 hour period according to OSHA *.
150	Slight headache after 1.5 hours.
200	Slight headache, fatigue, dizziness, nausea after 2-3 hours.
400	Frontal headaches within 1-2 hours, life threatening after 3 hours, also maximum parts per million in flue gas (on an air free basis) according to US Environmental Protection Agency.
800	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours.
1,600	Headache, dizziness and nausea within 20 minutes. Death within 1 hour.
3,200	Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes.
3,400	Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes.
12,800	Death within 1-3 minutes.

The following symptoms may be related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

**Mild exposure:** Headaches, running nose, sore eyes, often described as "flu" -like symptoms;

**Medium exposure:** Dizziness, drowsiness, vomiting;

**Extreme Exposure:** Unconsciousness, brain damage, death.

Many cases of reported CARBON MONOXIDE POISONING indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance.

▲ ppm = parts per million \*OSHA Occupational Safety & Health Association

**Table B: CO Detector Response**

<b>CO Gas Level</b>	<b>Red LED</b>	<b>Horn/Sounder</b>
0 ppm to < 30 ppm	OFF *	OFF *
> 45 ppm	1 flash every 3 secs.	on within 60-240 minutes (typ 90 mins)
> 100 ppm	2 flashes every 3 secs.	on within 10-50 mins (typ 30 minutes)
> 250 ppm	3 flashes every 3 secs.	on within 4-15 mins (typ 9 mins)
> 750 ppm	3 flashes every 3 secs.	on within 3 mins (typ 2 mins)

\* unless it has alarmed previously (see CO Alarm Memory below) ppm values shown in table are for example purposes only

<b>Detector Indicators</b>	
CO Present:	Red LED flash only
CO Alarm:	Red LED flash + sounder
Faults:	Yellow LED flash + beeps

**CO present (before horn sounds):** When the Detector detects over 45 ppm CO the red LED flashes in accordance with Table B. This helps locate CO leaks as the unit gives an immediate indication.

(Without this feature the CO level would need to be at 45 ppm CO for typically 90 minutes for an alarm sound to be given). Note the red LED flashes may be triggered by CO produced by gas appliances, from car engines or nearby barbecues. This is usually not a concern, unless the red LED flashes persist until the Detector sounds and the CO source is unknown.

**NOTE:** The CO Detector may sound if cigarette smoke is blown into it, or aerosols are released nearby.

## **ALARM MEMORY**

The alarm memory is an important feature of the CO Detector where even if the house is unoccupied during an alarm condition it warns the homeowner that the unit 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 LED will flash at different rates every 50 seconds depending on the level of CO detected - see Table C.

**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 C.

**Table C: CO Detector Memory Indicators**

CO Gas Level	Red LED Response	
	24 Hours	On Bemand (Button Press)
ppm > 45 ppm	1 flash every 50 sec	1 flash
ppm > 100 ppm	2 flashes every 50 sec	2 flashes
ppm > 250 ppm	4 flashes every 50 sec	4 flashes
ppm > 750 ppm	4 flashes every 50 sec	4 flashes

**Reset Memory:** Hold down the test button until the red LED stops and green LED starts flashing. Cover the Detector with a cloth to muffle the sounder during this time. Please note that the memory will also be reset when the unit is switched off.

### 3. Where to Place CO Detectors

NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION  
For your information the National Fire Protection Association's Standard 720 advises as follows:

Carbon Monoxide Detectors shall be installed as follows:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom.
2. On every occupiable level of a dwelling unit, including basements but excluding attics and crawl spaces.
3. Other locations where required by applicable laws, codes or standards. The equipment should be installed using wiring methods in accordance with the National Fire Protection Association's Standard 72, 720. (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269)

## **IMPORTANT!**

Specific requirements for Carbon Monoxide Detector installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area.

### **3.1** Ideally a Carbon Monoxide Detector should be installed in:

- Every room containing a fuel burning appliance, and
- Remote rooms where occupants spend a considerable amount of time
- Every bedroom.

However if the number of Carbon Monoxide Detectors to be fitted is limited, the following points should be considered when deciding where best to fit the Detector(s)

- If there is an appliance in a room where people sleep, place a CO Detector in this room
- Locate a CO Detector in a room containing a flueless or open-flued appliance, and
- Locate a CO Detector in a room where the occupant(s) spend most of their time (e.g. family room)
- In a studio apartment, the CO Detector 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 furnace room, the CO Detector should be placed immediately outside the room so that the Detector will be heard more easily.

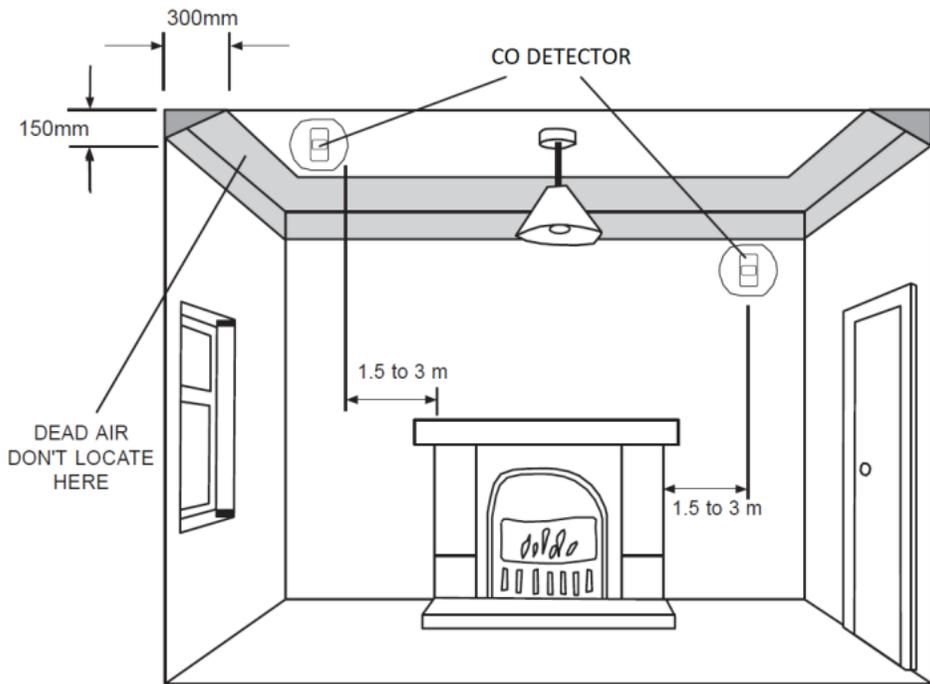
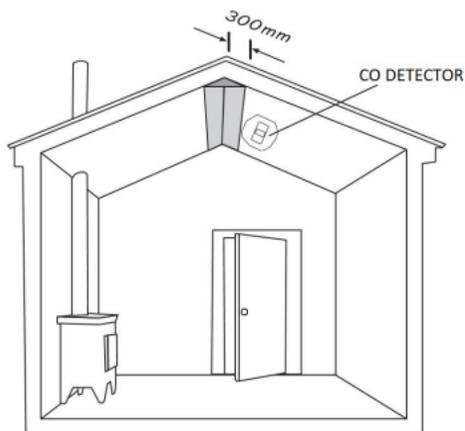
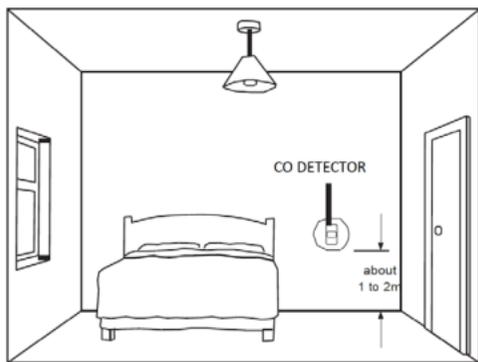


Figure 1  
Location in room with a fuel burning appliance



**Figure 2**

Location in rooms with sloped ceilings, the CO Detector should be located at the high side of the room



**Figure 3**

Location in bedrooms & other rooms remote from the appliance (i.e. at breathing level)

### **3.2 Unsuitable Locations**

Do not place the CO Detector in any of the following areas.

1. In the immediate vicinity of a cooking appliance (keep it at least 3ft (1 metre) 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, stovetop or oven.
6. Next to a door, window, air vent or anywhere that it could be affected by drafts.
7. Next to a ceiling or exhaust fan or air conditioning vents.
8. Over heat sources such as radiators or heating vents.
9. Where it would be obstructed, e.g. by curtains or furniture.
10. In an area where the temperature could drop below 40°F (4.4°C) or rise above 100°F (37.8°C).
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 Detector may be exposed to water splashes, dripping or condensation (e.g. above an electric kettle).
14. Near paint, thinners, solvent fumes or air fresheners.

### **3.31 If locating the CO Detector in a room with a fuel burning appliance (see figure 1)**

- 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 0.5ft (150mm) from the ceiling.
- If it is mounted on the ceiling it should be at least 1ft (300mm) from any wall or light fixture.
- The CO Detector should be a horizontal distance of between 5ft to 10ft (1.5m and 3m) from the potential CO source.
- If there is a partition in the room, the CO Detector should be located on the same side of the partition as the potential source of carbon monoxide.
- In rooms with sloped ceilings and fuel burning appliances, the CO Detector should be located at the high side of the room (see fig 2).

### **3.32 If locating the CO Detector in a bedroom or in rooms remote from a fuel burning appliance (see figure3)**

- Mount the CO Detector relatively close to the breathing zone of the occupants. Whatever position is chosen make sure it is possible to view the three LED indicators, when in the vicinity of the Detector.

**WARNING:** A CO Detector should not be used as a substitute for proper installation, use and maintenance of fuel-burning appliances, including appropriate ventilation and exhaust systems.

**WARNING:** Your CO Detector is intended for use in ordinary indoor locations of family units. It is not designed to measure compliance with OSHA commercial or industrial standards.

## 4. Installation

**Warning:** The Installation of this apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

### 4.1 Installation Procedure

1. Select a location complying with the advice in Section 3.
2. Remove the mounting plate from the packaging/ Detector.
3. Place the mounting plate on the ceiling/wall exactly where you want to mount the Detector. With a pencil, mark the location of the two screw holes.
4. Taking care to avoid any electrical wiring in the ceiling, drill holes using a 13/64" (5.0mm) drill bit through the center of the marked locations. Push the plastic screw anchors provided into the drilled holes. Screw the mounting plate to the ceiling/ wall.
5. Alternatively, if desired, the CO Detector will also free stand on a flat surface with the mounting plate attached.
6. This CO Detector is designed for use with an ELK-M1 Control and ELK-M1XRFTWM Wireless RF Receiver. It must be RF enrolled into the M1 Control using the instructions which accompany the ELK Control and/or Receiver.



Figure 4

7. Carefully align the Detector with the base, gently press home & twist on - see Figure 4. (This connects the batteries). The red, amber & green LEDs will immediately flash in sequence to show the Detector is powered correctly.
8. Press the Test button (after 15 seconds) to ensure that the Detector is functioning correctly (see Figure 5).
9. Install all the other Detectors similarly.

#### 4.2 How to Tamperproof the Detector

The Detector can be made resistant to unauthorized removal. Break off the small pillar on the base as shown in Figure 6a. To remove the Detector once installed, it is now necessary to use a small screwdriver, to release the catch (push catch towards the ceiling) and then twist off the Detector (see Figure 6b).



Figure 6a



Figure 6b



Figure 7

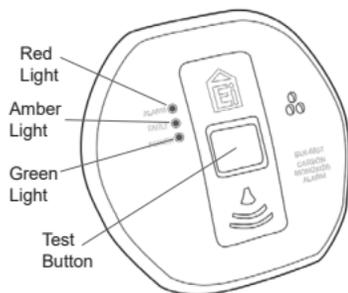


Figure 5

If necessary it is possible to further secure or tamperproof the Detector by using a No.2 or No.4 3/32" to 7/64" (2 to 3mm) diameter - not supplied self tapping screw 1/4" to 5/16" (6 to 8mm) long to firmly lock the Detector and its mounting plate together (see Figure 7).

## 5. Testing / Monitoring & Maintenance

### Testing

Frequent testing of the system is a requirement to ensure its continued and safe operation. To test the Detector press the hold the test button. NOTE: Always notify your Alarm Monitoring Center prior to performing any testing.

The Green LED will flash and the horn will ramp up to full sound to indicate the Detector is operating correctly.

Guidelines and best practices for testing are as follows

1. Immediately after the system is installed or upgraded
2. Once weekly thereafter
3. After prolonged absence from the dwelling (e.g. after extended vacation)
4. After any significant home repairs or remodeling work

### Silencing (Hush)

When the Detector sounds, after sensing CO, pressing the test/hush button will immediately silence the Detector (the red LED will continue to flash). If CO is still present the red LED and sounder will activate again after about 4 minutes. The Detector can only be silenced once during a CO incident. At levels > 250ppm CO the Detector cannot be silenced.

## Monitoring

The ELK-6051 CO Detector will self check (monitor) itself and give a status update every 50 seconds if there are any problems.

The status of the Detector can also be checked on demand by using the test button. The table below shows the status response to both the self check and on demand testing.

If the Detectors are indicating a fault, pressing the test button will silence the beeps for a 24 hour period. This is for your convenience and can only be done once.

<b>Monitoring Summary</b>					
<b>Status Result</b>	<b>Red LED (Alarm)</b>	<b>Amber LED (Fault)</b>	<b>Green LED (Power)</b>	<b>Sounder</b>	<b>Action</b>
<b>Standby</b>	<b>No visual or audible indication if unit is OK</b>				
<b>Unit OK (Test Button)</b>	<b>Off</b>	<b>Off</b>	<b>On</b>	<b>Ramps up to full sound</b>	
<b>Low Battery</b>	<b>Off</b>	<b>1 Flash</b>	<b>Off</b>	<b>1 Beep</b>	<b>Replace batteries</b>
<b>Sensor Fault</b>	<b>Off</b>	<b>2 Flashes</b>	<b>Off</b>	<b>2 Beeps</b>	<b>Replace Unit</b>
<b>End of Life (EOL)</b>	<b>Off</b>	<b>3 Flashes</b>	<b>Off</b>	<b>3 Beeps</b>	<b>Replace Unit</b>

## Maintenance

Clean the outside housing 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 Detector. Do not place air fresheners near the unit.

Use the narrow nozzle of a vacuum cleaner to remove fluff and other contamination from the cover slots and gas entry holes.

**Caution: Do not paint the CO Detector.**

Remove the CO Detector when decorating. Do not allow water or dust to contaminate the Detector.

**Warning:** Do not open or tamper with the CO Detector. There are no user serviceable parts inside and this can damage the Detector.

### Battery Replacement

If the Detector indicates a yellow flash with a single beep, remove the Detector from the mounting plate, remove the battery cover (see figure 8) and replace the batteries. Use **only** Duracell Alkaline MN2400BK AAA size batteries (from a local retailer).

Insert the new batteries with the orientation shown on the base. Replace the battery cover and carefully line up the Detector on the base. Gently press home & twist on (this action automatically switches on the batteries). The red, amber & green LEDs will immediately flash in sequence to show the batteries are connected properly. After 15 seconds press the Test button to ensure that the Detector works.



Figure 8

If the Detector still indicates a yellow flash with a single beep the batteries may be depleted. Replace with fresh batteries. **If the red, amber & green LEDs do not flash in sequence the batteries may be installed incorrectly (reverse polarity). Remove the Detector from the mounting bracket, remove the battery cover and check if the batteries are installed correctly. If the batteries were connected incorrectly after correcting the polarity of the batteries for the first hour the Detector may indicate CO present by a flashing red LED. Please note that during this period the Detector will still activate as required during an actual CO event.**

### **AudioLINK**

AudioLINK is an added feature available in the ELK-6051. This feature allows an authorized person to download information from the Detector through by way of a mobile App. For more information on using this feature, please refer to the relevant section on [www.elkproducts.com](http://www.elkproducts.com).

**Warning!** - Constant exposures to high or low temperatures or high humidity may reduce battery life. Use only batteries specified in marking. Use of a different battery may have a detrimental effect on Detector operation.

For environmentally sound disposal, remove the Detector from its mounting plate, open the battery door and remove the batteries. Dispose in accordance with best practice and guidance on WEEE disposal and recycling.

## Functional Gas Test

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

Solo C6 brand canned CO testing agent may be used to verify the Detector's ability to sense CO. To gas test the Detector, for 3 seconds spray the canned CO within 1/4" of the gas entry holes (see Figure 9). Within seconds, the red LED will begin to flash (as per Table B) to confirm the Detector has detected CO. To enter the accelerated functional gas test mode, press the Test button momentarily (approx. 1 second) while the Detector is indicating CO presence. The Detector will sound 2 x 4 temporal tone patterns to indicate an alarm condition.

To return the unit to standby, simply leave the Detector in clean air for a few minutes until the red LED is no longer flashing.



Figure 9

## 6. What to do when the alarm sounds



**Warning!** "Actuation of your CO Detector indicates the presence of carbon monoxide (CO) which can KILL YOU. If an alarm signal sounds:

1. Operate reset/ Silence button (only operational at concentrations < 250 ppm)
2. Call your local Fire Department or 911
3. Immediately move to fresh air – outdoors or by an open door/ window. Do a head count to ensure that all persons are accounted for. DO NOT re-enter the premises until the first responders have arrived, the premises have been aired out and your Detector returns to its normal condition.

4. After following steps 1-3, if your Detector reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufactures' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

**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 Detector 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.

## 7. How to Protect your Family

Follow these guidelines to reduce the risk of Carbon Monoxide poisoning.

1. Know and look out for warning signs that Carbon Monoxide may be present. These include:
  - The CO Detector warning of abnormal levels.
  - Staining, soot marks or discoloration on or around appliances.
  - A pilot light frequently going out.
  - A strange smell when an appliance is operating.
  - A 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 serviced before further use. If feeling ill, get medical help.
- 2. Choose all appliances and vehicles which burn fossil fuels such as coal, oil, natural gas, propane, kerosene, wood, gasoline, 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 remain unobstructed (particularly after any construction or remodeling work).
- 4. The appliances must also “breathe out” 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 stove, cooktop or barbecue for home heating.
- 8. Children should be warned of the dangers of CO poisoning and instructed never to touch, or interfere with CO Detectors. Do not allow small children to press the test/hush button as they could be subjected to excessive noise when the Detector 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 Detectors 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.

## 8. Technical Specification

**Power:** Two Alkaline AAA type batteries (replaceable)

**CO Sensitivity:** Meets UL2075

**Electromagnetic Compatibility:** Complies with UL2075 / FCC Part 15

**Test/Hush Button:** Checks electronics, sounder, sensor and batteries

**Operating Temperature:** 40° to 100°F (4.4°C to 37.8°C)

**Humidity Range:** 15% to 95% R.H. (non-condensing)

**Audible Alarm:** 85dB(A) at 10ft (3m) minimum

**Wireless Freq:** 902 Mhz – 928 Mhz frequency hopping

**Alarm Memory:** Indicates if unit was previously in Alarm

**Dimensions:** 4.72” x 4.13” x 1.57” (120mm x 105mm x 40mm)

**Weight (grams):** 6.53 ounces (185g)

## **9. Getting the CO Detector Serviced**

If your CO Detector fails to work after you have carefully read all instructions, verified the unit has been installed correctly, and ensured it has good batteries connected, return it for repair or replacement. This should be where it was purchased, or alternatively return in proper packaging to “Customer Assistance and Information” at the nearest address given on the CO Detector or in this leaflet. (Remove the Detector from the mounting plate before shipping). State the nature of the fault, where the CO Detector was purchased, and the date of purchase.

## **10. Limited Warranty Guarantee**

Elk Products guarantees Carbon Monoxide Detectors Models Elk-6051 (excluding batteries) for 2 years from date of purchase against any defects that are due to faulty materials or workmanship. This guarantee only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorized dismantling, or contamination howsoever caused. This guarantee excludes incidental and consequential damage. Further the warranty does not cover Acts of God, such as fire, flood, hurricanes and tornadoes. If this Detector should become defective within the guarantee period, it must be returned to Elk Products, with proof of purchase, carefully packaged, with the problem clearly stated. We shall at our discretion repair or replace the faulty unit.

Elk Products shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty. Any implied warranty of merchantability or fitness for purposes is limited to the duration of the above warranty period. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Some states or jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, or limitations on how long an implied warranty last so the above limitation may not apply to you.

Do not interfere with the Detector or attempt to tamper with it. This will invalidate the guarantee, but more importantly may expose the user to shock or fire hazards. This guarantee is in addition to your statutory rights as a consumer.

## **11. Limitations of CO Detectors**

1. The CO Detector will not work without good batteries or if the batteries are placed in reverse polarity. If the batteries have been drained the Detector will not give protection. Button test the Detector weekly and on return from vacations or long absences.
2. Carbon Monoxide must enter the unit for it to be detected. There may be Carbon Monoxide in other areas of the house (e.g. downstairs, a closed room etc) but not in the vicinity of the CO Detector. Doors, air drafts and obstructions can prevent CO reaching the Detector. For these reasons we recommend CO Detectors are installed 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 Detector 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. The Detector may not wake up somebody who is impaired by alcohol or medications. The Detector sound may be masked by other sounds such as T.V., stereo, traffic noise etc. Installing CO Detectors on either side of closed doors will improve their chance of being heard. This CO Detector is not designed for people with impaired hearing.

4. CO Detectors don't last indefinitely. CO Detectors are sophisticated electronic devices with many parts. Although CO Detectors and their component parts have undergone stringent testing, and are designed to be very reliable, it is possible that parts can fail. Therefore, you should test your CO Detectors weekly. CO Detectors must be replaced after 10 years of operation.
5. CO Detectors are not a substitute for life insurance. House-holders are responsible for their own insurance. CO Detector warn of increasing CO levels, but we do not guarantee that this will protect everyone from CO poisoning.
6. CO Detectors are not suitable as early warning Smoke Detectors. Some fires produce Carbon Monoxide, but the response characteristics of these CO Detectors are such that they would not give sufficient warning of fire. Smoke Detectors must be fitted to give early warning of fire.
7. CO Detectors do not detect the presence of natural gas (methane), propane, butane or other combustible gases. Install combustible Gas Detectors to detect such gases.  
**Note:** Carbon Monoxide Detectors, with electrochemical sensors have a cross sensitivity to hydrogen. This means that they can alarm due to sensing hydrogen being produced by batteries which are incorrectly charged such as on boats or with battery back-up systems such as those used with alternative energy systems. The unit will alarm with 500 ppm H<sub>2</sub> after between 10 and 40 minutes exposure.

This CO Detector is intended for residential use. It is not intended for the use in industrial applications where Occupational Safety and Health Administration (OSHA) requirements for carbon monoxide detectors must be met.

This carbon monoxide detecting device is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect smoke, fire, or any other gases.

WARNING: THIS CO DETECTOR 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.

## 12. Troubleshooting

### **DETECTOR DOES NOT WORK WITH THE TEST BUTTON:**

1. Wait 15 seconds after connecting the power before button testing.
2. Hold button down firmly for at least 5 seconds.
3. Check the Detector is secured correctly on the mounting plate.
4. Check if batteries are inserted in the correct polarity.
5. Replace batteries.

### **DETECTOR SOUNDS FOR NO APPARENT REASON:**

Follow the detailed instructions in Section 6 Entitled "What to do when the alarm sounds" (page 20).

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 an 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 Uninterruptable Power Supplies (UPS)).
5. Ensure there is not excessive smoke or fumes from tobacco smoking devices, especially those that use coal or charcoal to heat the tobacco.
6. If the Detector is installed with an RF Module, ensure that there are no problems with the other RF interconnected devices. Each separate RF device must have its own unique transmitter ID number.
7. Press the test/hush button to silence the Detector.

If the unit continues to sound it is possibly defective and should be replaced (see section 9 “Getting the CO Detector Serviced”).

<b>ELK-6051 Indicator Summary</b>				
<b>Normal Operation</b>	<b>Red LED</b>	<b>Amber LED</b>	<b>Green LED</b>	<b>Sounder</b>
Power Up	1 flash	1 flash	1 flash	Off
Standby	Off	Off	Off	Off
Button Test (Weekly)	Off	Off	Flashing (every sec)	Temporal full sound
Unit Sensing CO gas itself	Flashing (as per table B)	Off	Off	Temporal full sound
Sensing CO through RF Interconnect	Off	Off	Off	Temporal full sound
<b>Fault Mode</b>				
Low Battery Condition	Off	1 flash (every 50 secs)	Off	1 beep with flash
Sensor Fault Condition	Off	2 flashes (every 50 secs)	Off	2 beeps with flash
End of Life Condition	Off	3 flashes (every 50 secs)	Off	3 beeps with flash

## ELK-6051 Service Diagnostics

Diagnostics Modes	Action	Red LED	Yellow LED	Sounder	Action
<b>Fault Checks</b>					
Low Battery	Press & hold button	Off	1 flash	1 beep with flash	Replace Batteries
Fault Sensor	Press & hold button	Off	2 flashes	2 beeps with flashes	Replace Detector
End of Life (EOL)	Press & hold button	Off	3 flashes	3 beeps with flashes	Replace Detector
<b>Detector Memory</b>	<b>Action</b>	<b>Red LED</b>	<b>Yellow LED</b>	<b>Sounder</b>	
24 hours after event		Flashes as per Table C	Off	Off	
Long term memory	Press & hold button	Flashes as per Table C	Off	Temporal full sound	
Memory Erase	Keep button pressed after long term test	Flashes as per Table C	Wait for Green light then release button	Temporal full sound	

## **FCC AND IC COMPLIANCE STATEMENT:**

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.

**NOTE: ELK PRODUCTS IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATION NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.**

Note: 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 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.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

ELK-6051 Wireless CO Detector

FCC ID: TMAELK-6051  
IC: 4353A-6051

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body. This device must not be collocated or operating in conjunction with any other antenna or transmitter.

*Cet équipement est conforme aux limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec tout autre antenne ou transmetteur.*

#### **UL COMPLIANCE STATEMENT:**

This Carbon Monoxide Detector has been tested and approved to UL2075 standards.



## Contact Us

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