User Guide

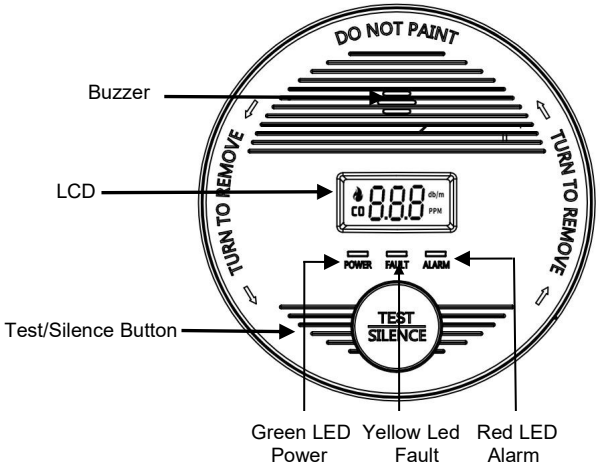
Interconnecting Carbon Monoxide and smoke Alarm

Models included in this User Guide:

Model	Wireless	AA Batteries (Replaceable)	10 Yr Sealed Battery (Non-replaceable)
SC-9111	**No**	No	**Yes**
SC-9111R	YES	No	**Yes**
SC-9113	No	**Yes**	No
SC-9113R	**Yes**	**Yes**	No

Contents

1. Product Function



2. What is Carbon Monoxide?

Carbon monoxide (CO) is a colorless, odorless, and tasteless poison gas that can be fatal when inhaled. CO inhibits the blood's capacity to carry oxygen.

Potential Sources of CO

- **Wood-burning stoves**
- **Gas boilers and fires**
- **Gas Hobs**
- **Oil and coal burning appliances**
- **Portable gas heaters**
- **Blocked flues and chimneys**
- **Fumes from integral garages**
- **Barbecues**
- **High concentrations of**

This CO alarm is not a substitute for the correct maintnance of your appliances.

Carbon monoxide can be produced from poorly burning appliances or from blocked flues and chimneys.

If your alarm has sounded and you have ventilated the room the CO may have dispersed before help arrives. It is crucial that the source of CO is determined and appropriate maintenance carried out.

Carbon monoxide is a cumulative poison. Long term exposure to low levels may cause symptoms. This alarm is time-weighted – the higher the level of CO, the sooner it will alarm.

NOTE: The apparatus may respond to brief exhaust gas emissions, for example during the initial start-up of an appliance. Also, hydrogen acts as an interferent and can arise from some battery charging activities and the curing of concrete or cement under certain circumstances. Volatile Organic Compounds (VOCs), e.g. alcohols, which may eventually activate the alarm, can be generated from use of damp-proofing materials or other coatings containing alkylalkoxysilanes.

3. Safety information-Possible Sources of CO

Inside your home, appliances used for heating and cooking are the most likely sources of CO. Vehicles and other combustion engines running in an attached garage and using a charcoal/gas grill or hibachi in an enclosed area are all possible sources of CO. Generators running in enclosed areas, such as garages or living spaces, will create CO. CO can be produced when burning any fossil fuel: gasoline, diesel, propane, natural gas, oil and wood. It can be produced by any fuel-burning appliance that is malfunctioning, improperly installed, or not ventilated correctly, such as: Furnaces/boilers, gas ranges/ stoves, gas clothes dryers, water heaters, portable fuel burning space heaters, fireplaces,
wood-burning stoves and certain swimming pool heaters. Blocked chimneys or flues, back drafting and changes in air pressure, corroded or disconnected vent pipes, or a loose or cracked furnace heat exchanger can also release CO into your building.

3. Safety information-Alarm levels as defined by UL 2034.

The table below shows the response times at which your CO alarm will sound;

Parts per Million (PPM) of CO	Time until Alarm
70	60 – 240 minutes
150	10 – 50 minutes
400	4 – 15 minutes

CO Advice and Information

The table below shows the effects of different levels of CO poisoning on the body;

Parts per Million (PPM)	Effects on Adults
100	Slight headache, nausea, fatigue (flu-like symptoms)
200	Dizziness and headache within 2 – 3 hours
400	Nausea, frontal headache, drowsiness, confusion and rapid heart rate. Risk to life after over 3 hours of exposure
800	Severe headaches, convulsions, vital organ failures. Death possible within 2 – 3 hours

3. Safety Information

NOTE: If you recognise any of the above symptoms consult your Doctor immediately.

NOTE: Young children, elderly and pets are more susceptible to the dangers of CO.

NOTE: Your alarm is designed to detect CO gas. It is not designed to detect smoke, fire or other gas such as natural gas.

NOTE: This product is intended for use in ordinary family homes.

NOTE: Individuals with certain specific medical conditions may need an alarm that operates below 30ppm. If this applies consult your Doctor.

IMPORTANT: Ensure that all family members are familiar with the symptoms of CO poisoning and how your alarm works.

4.Installation Instructions – Recommended Locations For Smoke And Carbon Monoxide Alarms

- Locate smoke alarms in all sleeping areas. Try to monitor the exit path as the bedrooms are usually farthest from the exit. If more than one sleeping area exists, locate additional alarms in each sleeping area.
- Locate additional alarms in stairways, because stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every bedroom.
- Locate an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers).
- Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent an alarm not located in that room from waking the sleeper.
- Smoke, heat, and combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- For all alarm locations, be sure to choose a flat, solid surface for mounting, with no holes or gaps under the mounting bracket.
- For mobile home installation, select locations carefully to avoid thermal barriers that may form at the ceiling. For more details, see MOBILE HOME INSTALLATION section.
- When mounting the alarm on the wall, use an inside wall with the top edge of the alarm at a maximum of 12" (30.5 cm) below the ceiling.
- Put smoke alarms at both ends of a bedroom hallway or large room if the hallway or room is more than 30ft (9.1 m) long.
- Install Smoke Alarms on sloped, peaked or cathedral ceilings at or within 3ft (0.9m) of the highest point (measured horizontally).
- Industry experts recommend a CO alarm be installed on each level of the home -- ideally on any level with fuel burning appliances and outside of sleeping areas.

This equipment should be installed in accordance with the National Fire Protection Association's 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

Mobile Home Installation

Modern mobile homes have been designed and built to be energy efficient. Install smoke alarms as recommended above. In older mobile homes that are not well insulated compared to present standards, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier which can prevent the smoke from reaching an alarm mounted on the ceiling. In such units, install the smoke alarm on an inside wall with the top edge of the alarm a maximum of 12” (30.5 cm) below the ceiling.

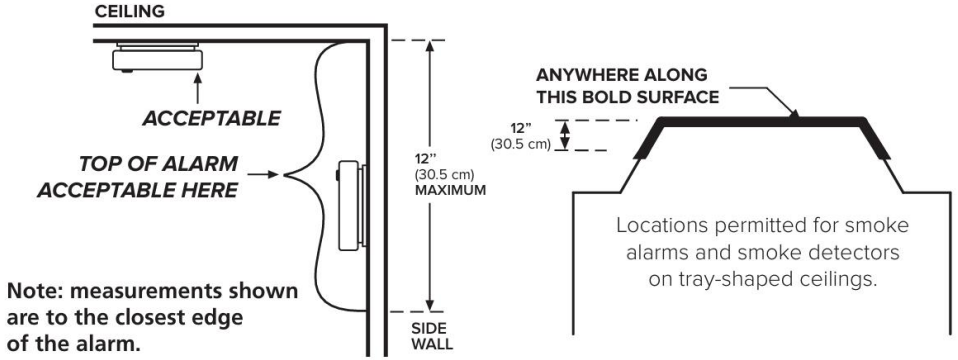


Figure 6-A

NFPA 72 states: "Smoke alarms in rooms with ceiling slopes greater than 1 ft in 8 ft (0.3m in 2.4 m) horizontally shall be located on the high side of the room." NFPA 72 states: "A row of detectors shall be spaced and located within 3 ft (0.9m) of the peak of the ceiling measured horizontally."

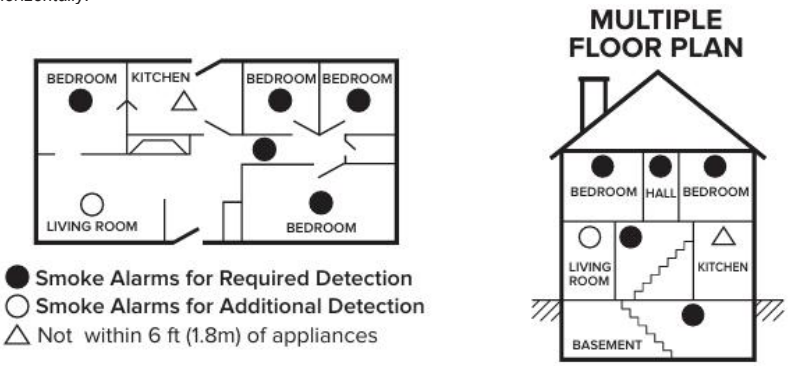


Figure 6-B

If you are not sure about the insulation in your mobile home, or if you notice that the outer walls and ceiling are either hot or cold compared to the room air temperature, install the alarm on an inside wall. NFPA 72 (National Fire Protection Association) requires smoke alarms be installed in each sleeping area. ⚠ **WARNING: TEST YOUR ALARM OPERATION AFTER MOBILE HOME HAS BEEN IN STORAGEOR UNOCCUPIED, AND AT LEAST ONCE A WEEK DURING USE.**

4.Installation Instructions-Locations To Avoid

(See Figures 6-A, 6-B for recommended locations)

- In the garage. Products of combustion are present when you start your automobile.
- Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature and should not be installed within 6 ft (1.8m) of cooking appliances.
- Do not install within 6 ft (1.8m) of heating appliances.
- Less than 4" (10cm) from the peak of an "A" frame type ceiling.
- In an area where the temperature may fall below 40°F (4.4°C) or rise above 100°F (37.8°C), such as garages and unfinished attics.
- In dusty areas. Dust particles may cause nuisance alarms or a failure to alarm.
- In very humid areas (above 95% RH, non-condensing) as moisture or steam can cause nuisance alarms.
- In insect-infested areas.
- Smoke alarms should not be installed within 3 ft (0.9m) of the door to a bathroom containing a tub or shower, forced air supply ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high air flow areas.
- Near lights. Electronic "noise" generated by the lights may cause nuisance alarms.
- Do not install near vents, flues, or chimneys.
- Do not install near fans, doors, windows or areas directly exposed to the weather.
- Do not install DC (battery only) alarms on top of AC electrical junction boxes.
- Avoid installing where the unit will be exposed to direct sunlight.

NOTE: Smoke alarms are not to be used with detector guards unless the combination (alarm and detector guard) has been evaluated and found suitable for that purpose.

Locations to Avoid

- Avoid locating next to draughts, such as doors, windows, extractor fans, air vents or other similar ventilation openings.
- Avoid locating close to obstructions (e.g. behind curtains, shelves or furniture).
- Avoid dusty, dirty or greasy areas, such as garages or workshops

- Avoid humid (bathrooms), cold (< -10 °C) or hot (> 40 °C) or damp areas and keep away from sinks.

4.Installation Instructions –Supply and Interconnect

Refer to Separate Easy Installation Instructions

NOTE: THIS HEAT ALARM MUST BE INSTALLED BY QUALIFIED (LICENSED) ELECTRICIANS ONLY.

THIS ALARM MUST BE POWERED BY A CONSTANT 240V AC, 50Hz SUPPLY THAT IS NOT CONTROLLED BY ANY FORM OF SWITCH.

THIS ALARM INTERCONNECTS WITH UP TO 24 OTHER DEVICES (OF WHICH 18 CAN BE INITIATING) INCLUDING SMOKE, CO AND HEAT ALARMS. (See page 12)

THIS ALARM IS NOT DESIGNED TO BE INTERCONNECTED WITH OTHER MANUFACTURER'S PRODUCTS, UNLESS OTHERWISE SPECIFIED.

⚠ **WARNING:** This alarm cannot be operated from power derived from a square wave or modified square wave inverter. These type of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that will damage the alarm.

4. Using Your Alarm – what the signals mean

Operational Mode	Visual Indications	Audible Indications	Action/Note
Normal (standby)	Green LED blinks approx every 50 sec.		
Test (Test/Silence button press when no alarm condition is present)	Red LED blinks in time with alarm pattern. The LCD screen displays the Smoke and CO concentration. Red LED blinks 30 sec. To trigger integrated alarm signal	• Smoke：3 long beeps, pause, 3 long beeps • CO：4short beeps, pause, 4 short beeps	Perform Test/Silence button press once a week to verify proper alarm operation.
Smoke or CO Alarm	Red LED blinks in time with alarm pattern.	• Smoke：3 long beeps, pause, 3 long beeps • CO：4short beeps, pause, 4 short beeps	NOTE: Alarm memory is only retained for 24 hrs.
Smoke Alarm Hush™ Mode	Red LED blinks every 8 sec .	After Test/Hush button push: Smoke alarm pattern stops. If there is too much smoke to allow Hush™, smoke alarm pattern continues.	This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm. Push Test/Hush button during Hush™ to clear Hush™ and perform a test.
CO Alarm Reset (combination smoke/CO models only)	None.	After Test/Hush button push: CO alarm pattern stops.	Unit is confirming if CO is present or if it experienced a nuisance situation. Re-alarm means danger. Move to fresh air and call 911.
Networking Setup	Master Device：Yellow LED Steady on Sub-Device：Red LED blinks 3 times.	Sub-device：3 short beeps	Press the button 3 times briefly

5. Using Your Alarm - Interconnected systems

Interconnected systems of RF line Models -SC-9111R,SC-9113R		
step	**Operation**	**Smoke/Heat Alarm**
Set the Master Device	Press the button 3 times briefly on any device;	Yellow LED Steady On
Add Sub-Devices	Press the button 3 times briefly on another device.	3 short beeps with Red LED flashing
Exit Networking	Press the button on master device;	Yellow Led Off

6. What to do if Your Alarm Sounds!

Carbon Monoxide Alarm Procedure

⚠ **WARNING! Activation of the alarm indicates the presence of Carbon Monoxide (CO) which can kill you.**

Follow these steps if alarm sounds (4 loud audible pulses followed by a pause for 5 seconds):

1. Keep calm and open all doors and windows. Turn off all fuel-burning appliances if possible. Note: it is possible that outdoor conditions could influence domestic CO alarms (bad traffic pollution in cold weather, for example). In these circumstances, the level of indoor CO might actually increase when doors and windows are opened.
2. If the alarm continues to sound, even after being reset (where appropriate), then evacuate the premises, alerting other occupants to the risk. Leave doors and windows open. Do not re-enter the premises.
3. Get medical help for anyone suffering the effects of CO poisoning, and advise that CO inhalation is suspected.
4. Call Emergency Services: 000:

Never restart the source of the CO problem until it has been corrected. Never ignore the sound of the alarm! If the alarm is sounding, pressing the test/reset button will terminate the alarm.
If the CO condition that caused the alert in the first place continues, the alarm will reactivate.
If the unit alarms again within six minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

7. Maintenance of Your Alarm

This is a Mains Alarm. Isolate before removing for decorating. If in doubt contact a qualified electrician.

⚠ **Warning: Do not tamper with the apparatus, as there is a risk of electric shock or malfunction.**

To keep your alarm in good working order:

- **Test every week**
- **Vacuum regularly to remove dust**
- **Keep away from solvents or detergents**
- **Avoid spraying air-freshener, hair-spray near the alarm**
- **Do not paint the alarm. If decorating or using adhesives close to the alarm, remove it temporarily**

The following substances can affect the sensor and cause false alarms:

Methane, Propane, Iso-butane, Iso-propanol, Ethylene, Benzene, Toluene, Ethyl acetate, Hydrogen Sulphide, Hydrogen, Sulphur Dioxide, alcohol based products, paints, thinners, solvents, adhesives, hair-sprays, aftershaves or perfumes and some cleaning agents.

NOTE: there could be other compounds occurring within a particular household which could cause similar effects.

8.Troubleshooting

	LEDs		Sounder	Unit Status	Action
Error condition -1	Red	Flashing every 30 secs	Chirp/30 secs	Unit has failed	Replace
Error condition -2	Red	ON	Constant lound sound	Unit micro-processor has failed	Replace
End of Life	Red	Flashing	Chirp twice every 30 sec-onds	The unit has reached the end of its life	Replace
Low battery	Red	Flashing every 50 secs	Chirp/50 secs	Battery is low	Replace the battery (For AA batteries model) Replace(For 10-Y seald model)

9.Product Specifications

Power Supply	DC 3V	**Humidity Range**	5%-95% relative humidity (RH)
Average Working Current	<25 uA	**Dimensions / Weight**	110mm D x 32mm H /0.141kgs
Sensor Type	Photoelectric, Electrochemical	**Life of Alarm**	10 years sensor life
Function	Smoke Detection CO Detection Test& Silence Function Local Alarm	**Wireless Response time**	<10 s
Time Delay Range	10 MIN: for HUSH 10 HR: for Silence of Fault 72 HR: for Memory Function	**Material**	ABS
Interconnect	Up to 40 Smoke and CO alarms.	**Operating Distance**	50M Indoor Use Line of Sight 100M in Free Field
Radio Frequency	433.92 MHZ	**Audible Alarm**	85+ dB at 3m @ 3.2±0.5 KHz pulsing alarm
Local Signal	Sound: Alarm Sound: Signal Visual: 1 LED(Green) for Regular Status Visual: 1 LED(Red) for Alarm Visual: 1 LED(Yellow) for Fault Visual: 1 LCD for Display Concentration of Smoke and CO		

10.Warnings and Important Notices

WARNING: THIS CARBON MONOXIDE ALARM IS NOT A SUBSTITUTE FOR INSTALLING AND MAINTAINING AN APPROPRIATE NUMBER OF SMOKE ALARMS IN YOUR HOME. THIS ALARM WILL NOT SENSE SMOKE, FIRE, OR ANY POISONOUS GAS OTHER THAN CARBON MONOXIDE. FOR THIS REASON YOU MUST INSTALL SMOKE ALARMS TO PROVIDE EARLY WARNING OF FIRE AND TO PROTECT YOU AND YOUR FAMILY FROM FIRE AND ITS RELATED HAZARDS.

WARNING: THIS PRODUCT IS INTENDED FOR USE IN ORDINARY INDOOR RESIDENTIAL AREAS. IT IS NOT DESIGNED TO MEASURE COMPLIANCE WITH COMMERCIAL AND INDUSTRIAL STANDARDS. THIS ALARM IS NOT SUITABLE FOR INSTALLATION IN HAZARDOUS LOCATIONS . INDIVIDUALS WITH MEDICAL PROBLEMS MAY CONSIDER USING WARNING DEVICES WHICH PROVIDE AUDIBLE AND VISUAL SIGNALS FOR CARBON MONOXIDE CONCENTRATIONS UNDER 30 PPM.

IMPORTANT: THIS CARBON MONOXIDE ALARM IS DESIGNED TO DETECT CARBON MONOXIDE FROM ANY SOURCE OF COMBUSTION INCLUDING IMPROPER OR MALFUNCTIONING APPLIANCES. THE INSTALLATION OF THIS DEVICE SHOULD NOT BE USED AS A SUBSTITUTE FOR PROPER INSTALLATION, USE AND MAINTENANCE OF FUEL BURNING APPLIANCES INCLUDING APPROPRIATE VENTILATION AND EXHAUST SYSTEMS.

WARNING: THIS UNIT IS NOT A SMOKE ALARM. IT WILL NOT SENSE SMOKE . FOR EARLY WARNING OF FIRE YOU MUST INSTALL SMOKE ALARMS.

IMPORTANT: IF ANY FAULT SIGNALS OCCUR, CONTACT THE MANUFACTURER OR SUPPLIER AND DO NOT CONTINUE USING THE ALARM.

WARNING: THE DEVICE CANNOT WARN AGAINST THE CHRONIC EFFECTS OF EXPOSURE TO CARBON MONOXIDE OR PROTECT INDIVIDUALS WHO ARE AT SPECIFIC RISK.

CAUTION: THIS ALARM WILL ONLY INDICATE THE PRESENCE OF CARBON MONOXIDE AT THE SENSOR. CARBON MONOXIDE MAY BE PRESENT IN OTHER AREAS.

FCC

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.

⚠ **WARNING!** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

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 equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.

11.Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with Local Authority or retailer for recycling advice.

13.Service And Warranty

Ten-Year Limited Warranty

We warrants that the enclosed alarm (but not the AA replaceable batteries on AA battery models) will be free from defects in material and workmanship or design under normal use and service for a period of ten years from the date of purchase.

This warranty shall not apply to the alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate power. Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchant ability and fitness for a particular purpose, are limited in duration to the above warranty period. In no event shall the Manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise.

The National Fire Protection Association (NFPA) and the manufacturer recommend replacing this alarm after ten years.

Product Support: lixiangservice@outlook.com

Model: _____

Date Code (on back): _____

Date of Purchase: _____

Where Purchased: _____

Date to Replace: _____