

Combo Smoke & CO Alarm Instruction Manual



Model No.: GS888-2RFDR
RD-(888-2RFDR)-39-001 Rev A



Thank you for purchasing this Combination Smoke & CO alarm GS888-2RFDR. This model is powered by three 1.5V AA battery. It is a multi-station alarm which can be wireless interconnect. It also contains a LCD graphical display and SMARTHUSH Control to temporarily silence nuisance alarms.

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 72 (National Fire Protection Association, Battery march Park, Quincy, MA 02269).

- a) Typical installation drawing layouts for the unit(s) indicating recommended locations and wiring methods which shall be in accordance with the applicable requirements outlined in the following:
- 1) C22.1-12, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations; and
 - 2) CAN/ULC-S553, Standard for Installation of Smoke Alarms.

The National Fire Protection Association (NFPA) and the manufacturer recommend replacing this alarm ten years from the date code on back of alarm. This instruction manual contains important information on starting operation and using the device.

Please take a few minutes to thoroughly read the instruction manual and familiarize yourself and your family with its operation. And save it for future reference.

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1. What to do if the smoke alarm sounds

The smoke alarm pattern is three long beeps, a 1.5 second pause, and three long beeps repeating. The ALARM indicator (red) will flash once a second.

The smoke alarm takes precedence when both smoke and carbon monoxide are present.

1.1 What to do in case of fire.

1. Do not be panic, stay calm.
 2. Leave the building as quickly as possible. Touch doors to feel if they were hot before opening them. Use an alternate exit if necessary. Crawl along the floor, and do not stop to collect anything.
 3. Meet at a pre-arranged meeting place outside the building.
 4. Call the fire department or 911 from outside the building.
 5. Do not go back inside a burning building. Wait for the fire department to arrive.
- NOTE: These guidelines will assist you in the event of a fire, however, to reduce the chance that fires will start, practice fire safety rules and prevent hazardous situations.

1.2 Practice fire safety.

If the smoke alarm sounds, and you have not pushed the test button, it is warning of a dangerous situation, your immediate response is necessary. To prepare for such occurrences, develop family escape plans, discuss them with all household members, and practice them regularly.

1. Expose everyone to the sound of a smoke alarm device and explain what the sound means.
2. Determine two exits from each room and an escape route to the outside from each exit.
3. Teach all household members to touch the door and use an alternate exit when the door is hot, instruct them not to open the door if the door is hot.
4. Teach household members to crawl along the floor to stay below dangerous smoke, fumes and gases.
5. Determine a safe meeting place for all members outside the building.

2. What to do if the CO alarm sounds

THE CARBON MONOXIDE (CO) ALARM PATTERN IS FOUR QUICK BEEPS, REPEATING EVERY 5 SECONDS. THE ALARM INDICATOR (RED) WILL FLASH THE SAME PATTERN.

WARNING! –ACTUATION OF YOUR CO ALARM INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN KILL YOU.

WARNING! –ACTION OF THIS DEVICE INDICATES THE PRESENCE OF DANGEROUS LEVELS OF CO! CO CAN BE FATAL!

If alarm signal sounds:

- 1) Operate TEST/SILENCE button;
- 2) CALL YOUR EMERGENCY SERVICES (fire department or 911); EMERGENCY PHONE#:
- 3) IMMEDIATELY MOVE TO FRESH AIR – OUTDOORS OR BY AN OPEN DOOR/WINDOW. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE PREMISES NOR MOVE AWAY FROM THE OPEN DOOR/WINDOW UNTIL THE EMERGENCY SERVICES RESPONDERS HAVE ARRIVED, THE PREMISES HAVE BEEN AIRED OUT, AND YOUR ALARM REMAINS IN ITS NORMAL CONDITION.
- 4) After following steps 1 – 3, if your alarm reactivates within a 24 hour period, repeat steps 1 – 3 and call a qualified appliance technician (Telephone Number) 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 manufacturers' 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: See Section RECOGNIZING NUISANCE ALARMS, for nuisance alarm situations.

3. Product important information

CAUTION! –This Combo Smoke & CO alarm was designed to detect both smoke and carbon monoxide from any source of combustion in a residential environment. It is not designed for use in recreational vehicle (RV) or boat.

CAUTION! –This Combo Smoke & CO alarm was designed for indoor use only. Do not expose to rain or moisture. Do not knock or drop the alarm. Do not open or tamper with the alarm as this could cause malfunction.

CAUTION! –This Combo Smoke & CO alarm is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect any other gas.

CAUTION! –This Combo Smoke & CO alarm will not protect against the risk of smoke or carbon monoxide poisoning when the battery has drained.

CAUTION! –Installation of the alarm should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

CAUTION! – This device will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas might be present in other areas.

CAUTION! – This device should be installed by a competent person.

CAUTION! – This Combo Smoke & CO alarm is not intended to alert hearing impaired individuals.

WARNING! – Do NOT try to repair the device, it has the risk of electric shock or malfunction if the device is tampered with.

WARNING! – Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm. This alarm has not been investigated for carbon monoxide detection below 70 PPM. There are situations where a smoke alarm may not be effective to protect against fire as stated in the NFPA Standard 72. For Instance: a) Fires where the victim is intimate with a flaming initiated fire; for example, when a person's clothes catch fire while cooking; b) Fires where the smoke is prevented from reaching the smoke alarm due to a closed door or other obstruction; c) Incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located smoke alarms.

WARNING! – Smoke alarms are not to be used with smoke alarm guards unless the combination has been evaluated and found suitable for that purpose.

WARNING! – This device 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.

WARNING! – This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards.

- 1) The TEST/SILENCE button accurately tests the device functions. Do not use any other test method. Test the device weekly to ensure proper operation. Do not install in non-residential buildings. And the device is not a substitute for a complete alarm system.
- 2) If you're sure it isn't a real alarm, open windows or fan the air around the device to silence it.
- 3) Observe and follow all local and national electrical and building codes for installation.
- 4) This Combo Smoke & CO alarm is designed to be used inside a single family only. In multifamily buildings, each individual living unit should have its own smoke alarm devices. Do not install in non-residential buildings. The device is not a substitute for a complete alarm system.
- 5) Install a Combo Smoke/CO alarm in every room and on every level of the home. Smoke may not reach the smoke alarm for many reasons. For example, if a fire starts in a remote part of the home, on another level, in a chimney, wall, roof, or on the other side of a closed door, smoke may not reach the device in time to alert household members. This Combo Smoke/CO alarm will not promptly detect a fire or CO danger except in the area or room in which it is installed.
- 6) This Combo Smoke/CO alarm may not alert every household member every time. The alarm horn is loud in order to alert individuals to a potential danger. However, there may be some circumstances where a household member may not hear the alarm (i.e. outdoor or indoor noise, sound sleepers, drug or alcohol usage, the hard of hearing, etc.). If you suspect that this device may not alert a household member, should install and maintain other specialty smoke alarm or/and CO alarm devices. Household member must hear the alarm's warning sound and quickly respond to it to reduce the risk of damage, injury, or death that may result from fire. If a household member is hard of hearing, install other special smoke alarm or/and CO alarm with lights or vibrating devices to alert occupants.
- 7) This Combo Smoke/CO alarm can only sound their alarms when they detect smoke or detect combustion particles or dangerous level of CO in the air. They do not sense heat, flame, or other gas. The device is designed to give audible warning of a developing fire. However, many fires are fast - burning, explosive, or intentional, and others are caused by carelessness or safety hazards. In this circs, Smoke may not remake the unit alarm QUICKLY ENOUGH to ensure safe escape.
- 8) This Combo Smoke/CO alarm have limitations. The device is not foolproof and is not warranted to protect lives or property from fire. Smoke alarm or/and CO alarm are not a substitute for insurance. Homeowners and renters should insure their lives and property. In addition, it is possible for the device to fail at any time. For this reason, you must test the device weekly and replace every 10 years.

4. Installation instructions

NOTE: Install the battery and test that the alarm works normally, before operation or servicing. If more than one smoke alarm is installed all units shall be interconnected or paired. Interconnection can be achieved pairing using the wireless module inside the alarm.

4.1 Wireless Pairing

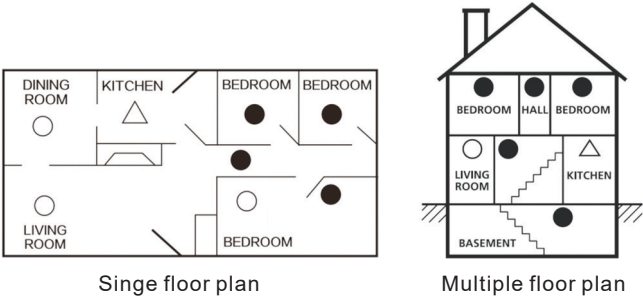
- 1) Press TEST button on any smoke alarm 3 times within 2 seconds to enter "Pairing mode" and LCD flashes "rF" quickly. The device will become a MASTER alarm which LCD will always display "rF" if the networking is not completed within 10 seconds. Only one MASTER alarm can be created per connection. The unit will remain in pairing mode for 1 minute.
 - 2) On any other slave smoke alarm, press the test button 3 times within 2 seconds to enter pairing mode. If the network connection is successful, the master and slave device green LEDs will light up for 2 seconds and then go out and the buzzer will beep once. Each successful connection will keep the MASTER alarm in pairing mode for count down 1 minute again.
- NOTE:** To exit pairing, press TEST button on MASTER unit 1 time, LCD will turn off.



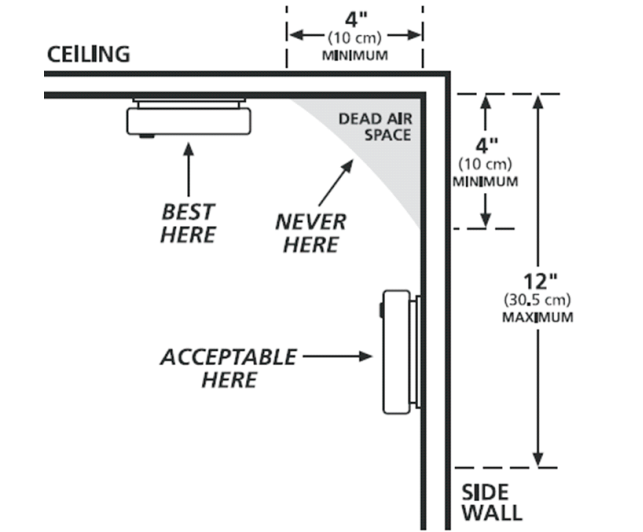
WARNING! - To prevent injury, this device must be securely attached to the ceiling/wall in accordance with the installation instructions.

4.2 Recommended location for alarms

The following suggestions are intended to help you with the placement and installation of your Combo Smoke/CO alarm.



- Smoke or smoke/CO alarms for required protection
 - Smoke or smoke/CO alarms for additional protection
 - Smoke alarm with silence control for additional protection
- 1) In all sleeping rooms and guest rooms.
 - 2) Outside of each separate dwelling unit sleeping area, within 21 feet (6.4 m) of any door to a sleeping room, the distance measured along a path of travel.
 - 3) On every level of a dwelling unit, including basements.
 - 4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics.
 - 5) In the living area(s) of a guest suite.
 - 6) In the living area(s) of a residential board and care occupancy.
 - 7) Smoke, heat, and combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the centre of the room places it closest to all points in the room Ceiling mounting is preferred in ordinary residential construction.
 - 8) The device should be at least 6 feet (1.8 m) above the floor level.
 - 9) When mounting a device on the ceiling, locate it at a minimum of 4 inch (10 cm) from the side wall.
 - 10) When mounting the device on the wall, use an inside wall with top edge the alarm at a minimum of 4 inch (10 cm) and maximum of 12 inch (30.5 cm) below the ceiling.
 - 11) Put the device at both ends of a bedroom hallway or large room if the hallway or room is more than 30 feet (9.1 m) long.
 - 12) Install the device on sloped, peaked or cathedral ceilings at or within 3 feet (0.9 m) of the highest point (measured horizontally).



4.3 Locations to avoid

For ensure the Combo Smoke & CO Alarm work properly and provide detection performance, do not install the device in the following places:

- 1) Near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, hot water heaters). Install at least 10 feet (3 m) away from these areas. Use specialized smoke alarm device with unwanted alarm control for this areas.
- 2) In areas with high humidity, like bathrooms or areas near dishwashers or washing machines or directly above a sink. Install at least 10 feet (3 m) away from these areas.
- 3) Avoid spraying aerosols near the device.

4) Next to a door or window, an extractor fan, air returns or heating and cooling supply vents. Install at least 3 feet (0.9 m) away from these areas. The air could blow smoke away from the device, interrupting its alarm.

5) In rooms where temperatures may fall below 0°C or rise above 40°C, or in humidity higher than 93%. These conditions will reduce battery life or cause a fault alarm.

6) In extremely dusty, dirty, or insect – infested areas influence particles interfere with the device operation.

7) In the garage. Products of combustion are present when you start your automobile.

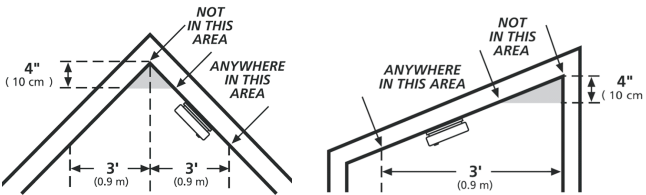
8) In an enclosed space (for example in a cupboard or behind a curtain).

9) Where it can be obstructed (for example by furniture).

10) Less than 4 inch (10 cm) from the peak of an "A" frame type ceiling.

11) Near fluorescent lights. Electronic "noise" may cause nuisance alarms.

12) Place out of the reach of children. Under no circumstance should children be allowed to handle the device.



4.4 Installation instructions

CAUTION! -This device should be installed by a competent person.

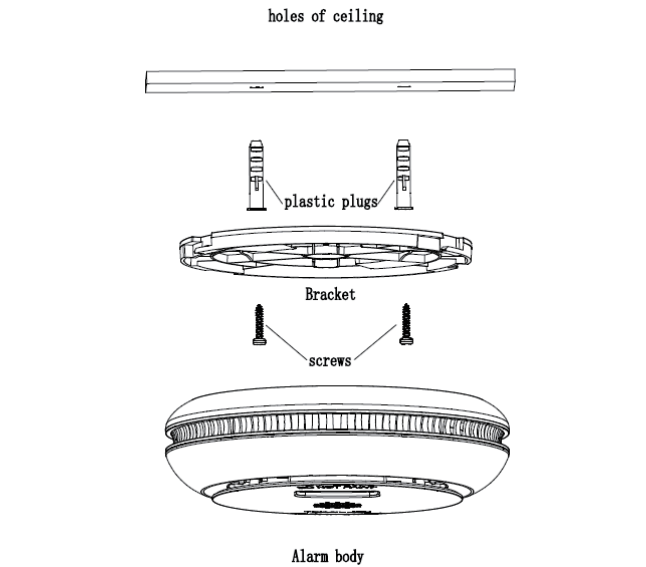
WARNING! – This device should be located in an open and unobstructed area and shall not be located behind furniture, drapes, or any other object where it might not be seen or heard. The alarm shall be heard from all sleeping areas.

WARNING! – Alarm users should add the phone numbers of their emergency service providers and qualified technicians on the two self-adhesive labels provided by the alarm manufacturer. Users should place one label next to the alarm and another near the source of fresh air they plan to gather. When the alarm indicates the presence of carbon monoxide, the user can escape as planned.

When choosing your installation locations, make sure you can hear the alarm from all sleeping areas. If you install only one device in your home, install the device near bedrooms, not in the basement or furnace room.

- 1). Drilling two Ø5.0mm holes in the ceiling or wall, the distance between two holes centre is 2.76 inch (70 mm), then inserting two plastic plugs provided into the holes.
- 2). Attach the bracket to the plastic plugs and fix tightly the screws into the plastic plugs. Do NOT over-tighten screws.
- 3). Install and rotate the alarm body on the bracket.
- 4). Test the device by using the TEST/SILENCE button. Ensure the device sound is alarm pattern.

As you install the device, it may sound for several minutes. It stop and enter in normal operation mode. If it always sounds, please call our service center.



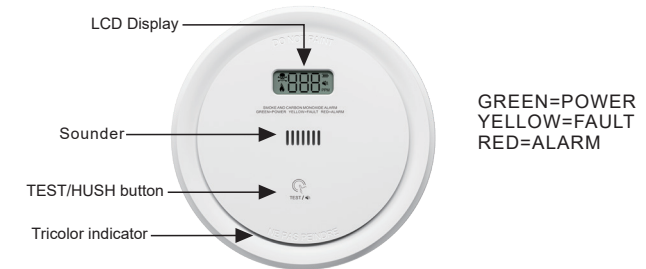
4.4 Un-installation instructions

Rotate clockwise for installation
Rotate counter clockwise for un-installation



5. Understanding your Combo Smoke & CO alarm

5.1 Product overview



1. **POWER indicator (green)**
The green indicator is used to indicate power status of the device. The green indicator will flash every 40 seconds.
2. **FAULT indicator (yellow)**
The yellow indicator is used to indicate malfunctions or low battery warning status of the device.
3. **ALARM indicator (red)**
The red indicator is used to indicate alarm status of the smoke alarm or CO alarm.
4. **TEST/HUSH button**
The TEST/SILENCE button is used to test the device and to silence the unit during a Smoke alarm/carbon monoxide alarm. Press to keep it longer than 1s to enable TEST function, or press to enable HUSH function.
5. **Sounder**
The sounder is used to send out smoke alarm, CO alarm warning and abnormal warning information.

5.2 Operation and testing

1. Start-up

The device start-up after connecting the battery, with the green indicators will light up briefly and LCD screen full segment code display then countdown 60 seconds. After power on, 60 seconds before the POWER indicator (green) flash every 2 seconds. This is pre-heated state, 60 seconds later the POWER indicator (green) flashing every 40 seconds indicates the device is functioning properly.



2. Normal operation

The POWER indicator (green) flashing every 40 seconds. The LCD doesn't display.

3. Fault warning

If the device chirps twice every 40 seconds, with FAULT indicator (yellow) will be flashing. It indicates the device is in a malfunctioning condition. If the word "Er" and flame symbol on the LCD screen is on, it means that your device does not have the function to detect smoke and is not responding to smoke. If the word "Err" and toxic symbol on the LCD screen is on, it means that your device does not have the function to detect CO and is not responding to CO.



⚠ CAUTION! –When Fault warning occurs, replace the device immediately. Please contact us to more service.

4. Fault warning silence

When the device is under the fault warning, pressing the TEST/HUSH button, it will come into a fault warning silence status for about 10 hours. FAULT indicator (yellow) continue to flash, and the LCD displays flame/toxic symbol and the word “Err” and mute symbol. The mute symbol blinks.



5. Low battery voltage warning

If the device chips once every 40 seconds and FAULT indicator (yellow) will be flashing, with LCD displays the word “Lb”, and low battery symbol blinks. It indicates the battery is low.



NOTE: When the low battery voltage warning occurs the device is capable of producing a smoke alarm signal for at least 4 minutes, or CO alarm signal for at least 12 hours, and 7 days of low battery voltage warning signal operation.

NOTE: You need to replace the battery as soon as possible when the device enters this status.

NOTE: The device will not protect against the risk of smoke and carbon monoxide poisoning when the battery has drained.

6. Low battery voltage warning silence

When the device is under the low battery warning, pressing the TEST/HUSH button, it will come into a low battery voltage warning silence status for about 10 hours. FAULT indicator (yellow) continue to flash, and the LCD displays low battery symbol and the word “Lb” and mute symbol. The mute symbol and low battery symbol blinks.

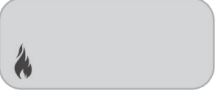


NOTE: The silence feature of low battery voltage warning is temporary action to cancel warning sound effect, you need to replace the batteries as soon as possible.

NOTE: 7 days after Low Battery begins, the notifications cannot be silenced.

7. Smoke alarm

When the device detects a dangerous level of smoke, the device will emit a smoke alarm pattern. The smoke alarm signal pattern is 3 long beeps followed by 1.5 seconds of silence. This cycle repeats as long as a dangerous smoke condition exists. The ALARM indicator(red) will flash once a second. The LCD displays flame symbol.This signal will repeated until dissipation of smoke or the alarm signal is manually silenced.

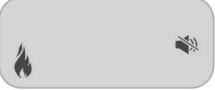


⚠ CAUTION! –Refer to “1. What to do if the smoke alarm sounds” when you hear the sounds of the smoke alarm warning.

⚠ DANGER! –If the smoke alarm sounds, and it is not being tested, it means the unit is sensing smoke, THE SOUND OF THE ALARM REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.

8. Smoke alarm silence

During the device under smoke alarm mode, push the TEST/HUSH button, it will pause the device alarm sound for about 8 minutes. The ALARM indicator (red) will keep flashing in smoke alarm mode, the LCD displays flame symbol, and mute symbol blinks. It indicates the device is running into the smoke alarm silence mode. The Combo Smoke & CO alarm will automatically reset after approx. 8 minutes, if after this period, particles of combustion are still present, the alarm will sound again.The smoke alarm silence (smoke alarm silence mode) can be repeatedly used until the air has been cleared of the condition causing the alarm.



⚠ DANGER! –Before using the smoke alarm silence (silence), identify the source of the smoke and be certain a safe condition exists.

9. CO alarm

When the device detects a dangerous level of CO, the device will emit a loud alarm pattern. The alarm signal pattern is 4 short beeps followed by 5 seconds of silence. This cycle repeats as long as a dangerous CO condition exists. The ALARM indicator (red) will flash the same pattern. The LCD keeps showing toxic symbol and real-time CO concentration. This signal will repeat until dissipation of CO.

CO alarm sensitivity setting (conforms to ul2034):

70ppm between 60 to 240 minutes
150ppm between 10 to 50 minutes
400ppm between 4 to 15 minutes



NOTE: The smoke alarm takes precedence when both smoke and carbon monoxide are present.

⚠ CAUTION! –Refer to “2. What to do if the CO alarm sounds” when you hear the sounds of the CO alarm warning.

⚠ DANGER! –If the CO alarm sounds, and it is not being tested, it means the unit is sensing a dangerous level of CO, THE SOUND OF THE ALARM REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.

10. CO alarm silence

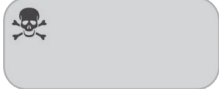
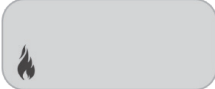
During the device under CO alarm mode, pressing the TEST/HUSH button, it will be paused alarm sound of the device about 5 minutes. The ALARM indicator (red) will keep flash as CO alarm mode, the LCD displays toxic symbol and real-time CO concentration, and mute symbol blinks. It indicates the device is running into the CO alarm silence mode.



⚠ DANGER! –Before enable feature of CO alarm warning silence, you should be confirmed that the alarm is due to dangerous levels of carbon monoxide and the dwelling should be ventilated.

11. Test the device

To test the device, pressing TEST/HUSH button, you should hear alarm sound patterns and with a corresponding ALARM indicator (red) flashes. In smoke alarm mode, LCD displays flame symbol; In CO alarm mode, LCD displays toxic symbol. The alarm sound patterns will stop until a test alarm cycle finished after releasing TEST/HUSH button.The test alarm sound pattern includes: 3 long beeps and 1.5 seconds pause for 2 repeat, 4 long beeps and 5 seconds pause for 2 repeat, repeat this pattern until releasing TEST/HUSH button.



NOTE: After the TEST/HUSH button is enabled, the alarm sounds and the red alarm light flashes. This does not indicate that CO is present.

NOTE: Test the unit weekly! If at any time your unit does not perform as described, replace it immediately.

NOTE: If your devices are wirelessly interconnected, when one of them tests for an alarm, the other interconnected devices will send an interconnected alarm signal. The sound mode of interconnection alarm is the same as smoke alarm, the red indicator does not flash and the LCD screen shows “L-A”.

⚠ WARNING! –Do NOT use an open flame to test your alarm, it could damage the alarm or ignite combustible materials and start a structural fire.

⚠ WARNING! –Due to the loudness (85 decibels) of the alarm, Always stand an arms-length away from the unit when testing.

12. End-of-life warning

If the product continues to work for 10 years, the device will chirp 3 times every 40 seconds, with a FAULT indicator (yellow) flash, while displaying “EOL” on the LCD. It indicates this Combo alarm is in end-of-life. That means your device has no detecting feature and no response to smoke and CO.



NOTE: You need to replace the device as soon as possible when the device enters this status.

13. Local smoke or CO alarm memory

72 hours alarm memory function. When the device detects Smoke & CO and alarms, when the device return to standby mode, ALARM indicator (red) flash per 40 seconds. The LCD doesn't display.After quickly press TEST/HUSH button for 3 times, or after 72 hours, will reset the historical memory function and enter normal operation status.

14. Wireless interconnected alarm

When a smoke or CO alarm occurs in one of the devices in the network, the other devices in the same network will send out interconnected alarms. The sound mode of interconnection alarm is the same as smoke alarm, the red indicator does not flash and the LCD screen shows “L-A”.



15. Wireless alarm memory

When a smoke or CO alarm occurs in one of the devices in the network and then return to standby mode, the other devices in the same network will enter “wireless alarm memory” mode which red indicator flashes once every 2 seconds for about 4 minutes. The master device will enter “local alarm memory”.

5.3. Troubleshooting

⚠ CAUTION! –Do not attempt to repair the device. It will affect your warranty.

If the device is not operating properly, and is still under warranty, return it to the place of purchase. Pack it in a well-padded carton, and ship to the place of purchase. If the alarm is no longer under warranty, have a licensed electrician replace it immediately with a comparable alarm.

Troubleshooting guide:

Problem	Method of disposal
The device does not sound when TEST/HUSH is pressed.	1.Ensure device is powered off.Replace new battery and confirm that it has normal function after replacement. 2. The device is under "Smoke alarm silence" or "Low battery voltage warning silence" or "Fault warning" mode.Please ensure the device is under "Normal operation" mode then test the device. 3. Clean the device. Please refer to "6. General maintenance". 4. If there are still failures during warranty, you can return it to your retailer. 5. If the unit is out of warranty, please replace with another new device.
The device chirps once with FAULT indicator (yellow) flashing once every 40 seconds.	LOW BATTERY VOLTAGE SIGNAL The battery is under low battery status, please replace the battery.
The device chirps twice with FAULT indicator (yellow) flashing twice every 40 seconds.	MALFUNCTION SIGNAL Clean this device. Please refer to "6. General maintenance ". 1. If the device is under warranty, please return it to your retailer for replacement. 2. If the device is out of warranty, please replace with another new device.
The device sounds unwanted alarms when residents are cooking, taking showers, etc.	1. Press TEST/HUSH button to pause alarm. 2. Clean the smoke around the device.

6. General maintenance

To keep your Combo Smoke/CO alarm in good working order, please follow these simple steps:

- 1.Verify the unit's alarm sound and indicators operation by enable the TEST/SILENCE button once a week.
- 2.Remove the unit from the ceiling and clean the alarm cover and vents with a soft brush attachment once a month to remove dust and dirt.
- 3.Never use detergents or other solvents to clean the unit.
- 4.Avoid spraying air fresheners, hairspray, or other aerosols near the device.
- 5.Do not paint the device. Paint will seal the vents and interfere with the sensor's ability to detect CO. Never attempt to disassemble the unit or clean inside. This action will void your warranty.
- 6.As soon as possible, place the Combo Smoke/CO alarm back in its proper location to assure continuous protection from fire and carbon monoxide poisoning.
- 7.When household cleaning supplies or similar contaminants are used, the area should be ventilated.

⚠ WARNING! -The following substances can affect the sensor and may cause false actions: methane, propane, isobutene, isopropanol, ethylene, benzene, toluene, ethyl acetate, hydrogen sulfide, sulfur dioxides, alcohol based products, paints, thinner, solvents, adhesives, hair sprays, after shaves, perfumes and some cleaning agents.

⚠ WARNING! -Your Combo Smoke/CO alarm will not be operational and will not monitor for smoke and CO levels without battery.

⚠ WARNING! -This apparatus is designed to protect individuals from the acute effects of carbon monoxide exposure. It may not however, prevent the chronic effects of carbon monoxide exposure and will not fully safeguard individuals at special risk or with specific medical conditions. If in doubt consult a medical practitioner.

7. Carbon monoxide (CO) overview

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.

7.1 Possible Sources of CO

- 1) Excessive spillage or reverse venting of fuel burning appliances caused by: i) Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles), ii) Negative pressure differential resulting from the use of exhaust fans, iii) Simultaneous operation of several fuel burning appliances competing for limited internal air. iv) Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters, v) Obstructions in or unconventional vent pipe designs which amplify the above situations.
- 2) Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.).
- 3) Temperature inversions which can trap exhaust gasses near the ground.
- 4) Car idling in an open or closed attached garage, or near a home.

7.2 Symptoms of CO Poisoning

Initial carbon monoxide poisoning symptoms are similar to the flu with no fever and can include dizziness, severe headaches, nausea, vomiting and disorientation. Everyone is susceptible but experts agree that unborn babies, pregnant women, senior citizens and people with heart or respiratory problems are especially vulnerable. If symptoms of carbon monoxide poisoning are experienced seek medical attention immediately. CO poisoning can be determined by a carboxyhemoglobin test.

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

- 1.**MILD EXPOSURE:** Slight headache, nausea, vomiting, fatigue (often described as “Flu-like” symptoms).
- 2.**MEDIUM EXPOSURE:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
3. **EXTREME EXPOSURE:**Unconsciousness, convulsions, cardio respiratory failure and death.The above levels of exposure relate to healthy adults. Levels differ for those at high risk. Many cases of reported carbon monoxide poisoning indicate that while victims are aware they are not feeling well, they become so disoriented they are unable to save themselves by either exiting the building, or calling for assistance. Also, young children and household pets may be the first affected.

⚠ WARNING!–Exposure to high levels of carbon monoxide can be fatal or cause permanent damage and disabilities.

⚠ WARNING!–The device may not prevent the chronic effects of carbon monoxide exposure and that the device will not fully safeguard individuals at special risk.

8. Battery information

8.1 Battery type

This alarm is powered by 3 replaceable 1.5V (AA) battery located in a battery compartment. Under normal conditions, a fresh battery should last at least one year.

NOTE: Constant exposure to high or low humidity or temperatures may reduce battery life.

NOTE: Battery installation or replacement is necessary for the life of the device.

8.2 Battery deactivation

This alarm is equipped with a low battery monitor circuit. If the battery capacity is near the point where it can no longer provide adequate power for all alarm functions, the low battery condition will occur. See Troubleshooting Guide. The battery must be replaced within 7 days of the first occurrence of the "Low Battery Warning" to provide continuous alarm protection. To install or replace the battery in unit, please perform the following steps:

- 8.2.1 Take down the unit from bracket heads of the wall.
- 8.2.2 Open battery compartment.
- 8.2.3 Remove the old battery, and replaced by new battery.
- 8.2.4 Put the battery into the battery box.
- 8.2.5 Reinstall the alarm on the wall or ceiling.
- 8.2.6 Test alarm using the TEST/HUSH button, if the testing alarm is ok, means the product can work normally.

⚠ WARNING!–Use only the battery specified. Use of different battery may have a detrimental effect on the alarm.

⚠ CAUTION!–Please replace new 3pcs same type batteries in the meantime.

⚠ CAUTION!–Test the alarm for correct operation using the TEST/HUSH button, whenever the battery is replaced!

NOTE: Do not use lithium batteries in this unit, a good safety measure is to replace the battery at least once a year.

8.3 Battery disposal

- ⚠ WARNING!–Fire, explosion and severe burn hazard. Do not recharge, crush disassemble, heat above 100 °C, incinerate or expose contents to water.**
1. Not to dispose of battery (or the device) as unsorted municipal waste but collect it separately.
 2. Dispose of in accordance with all applicable federal, state and local regulations.

9. Product specifications

Model: GS888-2RFDR

Product standards:

UL 217 – Smoke Alarms [UL 217 8th Ed]
UL 2034 – CO Alarms [UL 2034, 4th Ed]
ULC S531 – Smoke alarms for Canada [3rd Ed (Feb 2014)]
CSA 6.19 – CO Alarms for Canada [2016]
Power supply: 4.5V (3*AA alkaline batteries)
Recommend battery type: Energizer E91, Gold Peak GN15A
Radio frequency: 915MHz
Wireless distance: Minimum 30m open air
Wireless interconnection: Up to 12 alarms

Sensor of smoke: Multi-Criteria Optical
Sensor of CO: Electrochemical
Smoke alarm sensitivity: 1.44%/ft +/-33% OBS
Smoke alarm silence: About 8 minutes
CO alarm sensitivity setting (conforms to ul2034):

70ppm between 60 to 240 minutes
150ppm between 10 to 50 minutes
400ppm between 4 to 15 minutes

CO alarm silence:About 5 minutes

Product life: 10 years after manufacture

Operation ambient condition: 40°F (4.4°C)–100°F (37.8°C), 30–93%RH non-condensing

Storage/Transport ambient condition: 14°F (-10°C)–113°F (45°C), 20–95% RH non-condensing

Alarm sound:≥85dB at 10ft @3.0 to 3.5kHz

Low battery warning silence: About 10 hours

Installation Location: Ceiling or wall

Detection range: Max. 40 m² within a room

Size: About Φ155*51mm

NOTE: This Combo Smoke & CO alarm is designed to detect carbon monoxide gas from any source of combustion. It is not designed to detect any other gas.

10. Recognizing Nuisance Alarms

Smoke Nuisance

SILENCEIf you know why the alarm is sounding, and you can verify that it is not a life threatening situation, you can push the button silence the alarm for 8-10 minutes. If the smoke is not too dense, that unit will silence. After the SILENCE period, the smoke alarm will automatically reset and sound the alarm if particles of combustion are still present. You can use SILENCE repeatedly until the air has been cleared of the condition causing the alarm.

NOTEDense smoke will override SILENCE and sound a continuous alarm. If no fire is present, check to see if one of the reasons listed in "Locations to avoid" may have caused the alarm. If a fire is discovered, get out and call the fire department or 911.

This alarm is designed to minimize nuisance alarms. Cigarette smoke will not normally cause the unit to alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if it is located too close to a cooking appliance. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help prevent nuisance alarms from occurring by removing these combustible products from the kitchen.

Carbon Monoxide (CO) Nuisance

RESETPushing the button during CO alarm allows the unit to reset calculations and double check for the presence of CO. If the unit re-alarms within 6 minutes, it is sensing high levels of CO which can quickly become a dangerous situation. Move to fresh air and call 911.

⚠ WARNING! –It is impossible to determine the source of a co alarm using sight or smell. Always consider a co alarm event as dangerous

11. Good safety habits - develop and practice a plan of escape

Prepare and practice a home escape plan twice a year, including drills at night. Know of two ways out of every room (door & window) and identify a meeting place outside the home where everyone will gather once they have exited the residence. When two people have reached the meeting place, one should leave to call the fire department's telephone number (_____) while the second person stays to account for additional family members. **Establish a rule that once you're out, you never re-enter under any circumstance!**

- Make a floor plan indicating all doors and windows and least two escape routes from each room.
- Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire and where to meet after they leave the house.
- Ensure that small children hear the alarm and wake when it sounds. They must wake up on order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.
- Familiarize everyone with the sound of the smoke/CO alarm and train them to leave you home when they hear it.
- Current studies have shown smoke/CO alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting other to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.
- Install and maintain fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency.

12. Manufacturer and customer service information

12.1 Manufacturer:

NINGBO EVERSAFE ELECTRONICS CO.,LTD

ADDRESS: NO. 1 Jiangjia, Dali Village, Shenzhen Town, Ninghai County, Ningbo City, Zhejiang Province 315614 P.R. China

E-MAIL: vivian@china-siter.com

12.2 Customer service:

NINGBO EVERSAFE ELECTRONICS CO.,LTD

ADDRESS: NO. 1 Jiangjia, Dali Village, Shenzhen Town, Ninghai County, Ningbo City, Zhejiang Province 315614 P.R. China

E-MAIL: vivian@china-siter.com

13. FCC & IC warning

This device complies with part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). 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 of the device.

FCC warning:

Any Changes or modifications not expressly approved by the party responsible for compliance 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 equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IC warning:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

14. Warranty Information

Dear customer,

Our products are subject to strict quality controls. However, if this device should unexpectedly not function perfectly, please contact the customer services address given on warranty service information. This is the only way for you to be able to return your device of have it picked up free.

The warranty period is 36 months and begins on the day of purchase.

Please always keep your till receipt as proof of purchase. Warranty claims can only be made for possible defects caused by material and production faults.

During the warranty period, defective devices can be sent to the service address given overleaf for you (post paid). You will then receive a new or repaired device back free. After the warranty period has expired you still have the possibility of sending the defective device for repair to the address given overleaf. Repairs carried out after the warranty period must be paid for.

In the event of misuse or improper treatment, use of force or intervention not carried out by our authorized service branches, the warranty is no longer valid. This warranty does not restrict your legal rights.

NOTE: In the event of a warranty claim, please return the till receipt and completed warranty card with fault description together with the defective device.

NOTE: The warranty does cover the batteries supplied.

15. Warranty Card

Last Name: _____

First Name: _____

Phone: _____

Address: _____

City: _____

Country: _____

Zip Code: _____

Fault description: _____

Date of purchase: _____

Signature: _____