Combo Smoke/CO Alarm Instruction Manual

Intertek
5019856

Model No.: GS886F
RD-886F-39-001 Rev F

Thank you for purchasing this Combination Smoke/CO alarm GS886F. This model is powered by 120VAC with 2 AA battery back-up. It is a multi - station alarm which can be hardwired or wireless interconnect. It also contains a voice message system and SMART HUSH 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 devise.
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

Smoke alarm pattern is three long beeps with voice "Fire!", and three long beeps repeating.
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

Carbon monoxide (CO) alarm pattern is four quick beeps with voice "Warning! Carbon Monoxide, evacuate" 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. IF THE ALARM 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

⚠ **WARNING!** -THIS PRODUCT IS INTENDED FOR USE IN ORDINARY INDOOR RESIDENTIAL AREAS. IT IS NOT DESIGNED TO MEASURE COMPLIANCE WITH COMMERCIAL AND INDUSTRIAL STANDARDS.

⚠ **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.
⚠ **WARNING!** -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 should be installed by a competent person.
⚠ **CAUTION!** - THIS DEVICE WILL ONLY INDICATE THE PRESENCE OF CARBON MONOXIDE GAS AT THE SENSOR. CARBON MONOXIDE GAS MIGHT BE PERSENT IN OTHER AREAS.
⚠ **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.
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 connecting AC power. If more than one smoke alarm is installed all units shall be interconnected or paired. Interconnection can be achieved either by wiring the I/O terminals of the alarms together or pairing using the wireless module inside the alarm.

4.1 Battery installation

1) Install the new battery:
Open the battery cover and install the new battery. (See Diagram 1-2)

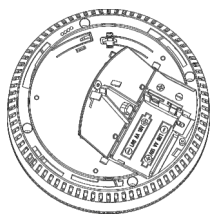


Diagram 1

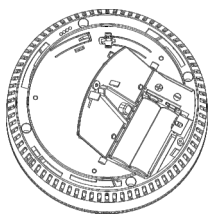


Diagram 2

2) After you installed the battery:
Close the battery cover and use a phillips screwdriver to secure the battery cover with the screws attached to the battery cover, then test smoke alarm using TEST/ SILENCE button. (See Diagram 3)

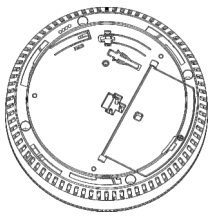


Diagram 3

3) Test the alarm: Press the test button for more than 1s and the alarm enters test mode. Make sure that the alarm works normally, then proceed to the next step of installation.

4.2 Wireless Pairing

1) Press the TEST button on any smoke alarm 3 times within 2 seconds to enter "Pairing Mode". The unit will remain in pairing mode for 5 minutes. This unit now becomes the MASTER alarm. Only create one MASTER per installation.
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 unit will chirp once with voice "Pairing success", and the SLAVE unit will chirp once with voice "Pairing success" and Green LED light on for 3 seconds. If the wireless module fails, the yellow LED will light up 3s.If networking fails, voice "Pairing failed" and the yellow LED flashes fast for 3s.
NOTE: To exit pairing, press TEST button on MASTER unit 3 times within 2 seconds, green LED will turn off. Suggest to pair the alarm with battery power only before install on roof and connect to mains power.
NOTE: if there is no problem in the distance between the installed rooms and each other, try to avoid wired interconnection wiring, so as to reduce the problems caused by wired interconnection.

4.3 Wiring Requirements

1) This alarm should be installed on a UL Listed or recognized junction box. All connections should be made by a qualified electrician and all wiring used shall be in accordance with articles 210 and 300.3(B) of the U.S. National Electrical Code ANSI/NFPA 70, NFPA 72 and/or any other codes having jurisdiction in your area. The multiple station interconnect wiring to the alarms must be run in the same raceway or cable as the AC power wiring. In addition, the resistance of the interconnect wiring shall be a maximum of 10 ohms.
2) The maximum wire run distance between the first and last unit in an interconnected system is 1000 feet.
3) The appropriate power source is 120 Volt AC Single Phase supplied from a non-switchable circuit.
4) 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.

⚠ **WARNING!** - The alarm cannot be operated from power derived from a square wave, modified square wave or modified sine wave, inverter. These types 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.
To reduce the likelihood of nuisance tripping of the device's alarm circuit, the accommodation spaces should be well ventilated when household cleaning supplies or similar contaminants are used.

4.4 wiring instructions for AC quick Connector Harness

CAUTION: Turn off the main power to the circuit before wiring the alarm.

1) For alarms that are used as single station, DO NOT CONNECT THE ORANGE WIRE TO ANYTHING. Leave the orange wire insulating cap in place to make certain that the orange wire cannot contact any metal parts or the electrical box.
2) All interconnected alarms must be supplied from a single power circuit.
3) The wire colors are: Live = Black; Neutral = White, Interconnect = Orange. Do not connect Interconnect wires to a Live or Neutral. Improper connection will result in damage to the alarm, failure to operate, or a shock hazard. Check the connections carefully before turn on the main power to the circuit. Interconnect Wiring Diagram See Diagram 4.
4) Maximum number of alarm is 18 units and 12 smoke alarm and 6 non-smoke alarm allow.
5) Make certain alarms are wired to a continuous (non-switched) power line.

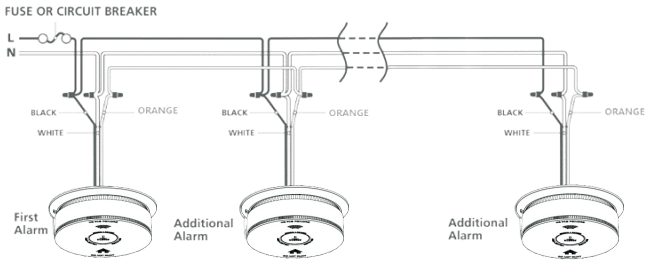
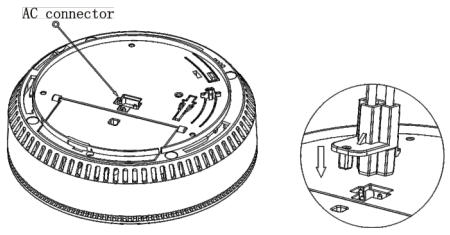


Diagram 4

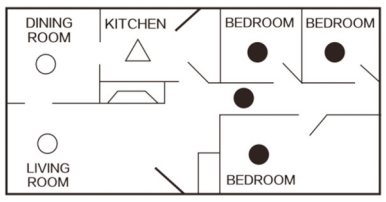
NOTE: Use standard UL Listed household wire (as required by local codes) available at all electrical supply stores and most hardware stores.
5) After selecting the proper location for your alarm, and wiring the AC QUICK CONNECTOR harness as described previously, attach the mounting bracket to the electrical box.
6) Pull the AC QUICK CONNECTOR through the center hole in the mounting bracket and secure the bracket.
7) Plug the AC QUICK CONNECTOR into the back of the unit, making sure that the locks on the connector snap into place. Then push the excess wire back into the electrical box through the hole in the center of the mounting bracket.
8) Install the alarm fully on the mounting bracket by rotating the alarm in a clockwise direction.
9) Turn on the AC power. The green LED will turn on when the alarm is operating from AC power.



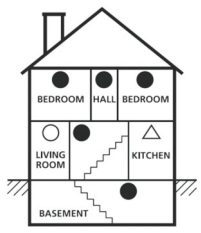
⚠ **WARNING!** - To prevent injury, this device must be securely attached to the ceiling/wall in accordance with the installation instructions.

4.5 Recommended location for alarms

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



Singe floor plan



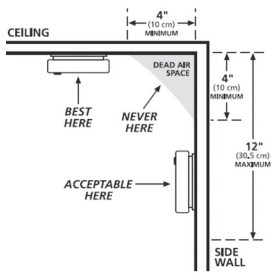
Multiple floor plan

● Smoke or smoke/CO alarms for required protection
○ Smoke or smoke/CO alarms for additional protection
□ Smoke alarm with silence control for additional protection

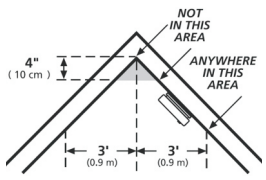
1) In all sleeping rooms and guest rooms.
2) Outside of each separate dwelling unit sleeping area, within 21 ft (6.4 m) of any door to a sleeping room, the distance measured along a path of travel.
3) On every level of a dwelling unit, including basements.
4) On every level of a residential board and 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 center 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 meters) 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 (10cm) and maximum of 12 inch (30.5cm) 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 3feet (0.9m) of the highest point (measured horizontally).

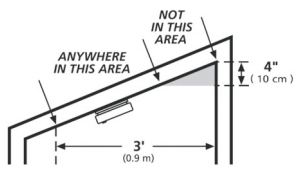
4.6 Locations to avoid

To 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 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 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 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℃or rise above 40℃, 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" (10cm) 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.



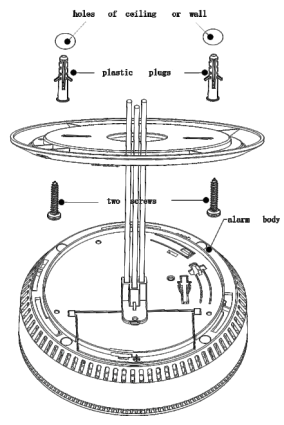


4.7 Installation instructions

⚠ **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.
If you install only one device in your home, install the device near bedrooms, not in the basement or furnace room.
1). Drilling two ф5.0mm holes in the ceiling or wall, the distance between two holes center is 75mm(2.95inch), 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.

2 x ф5.0mm **Ceiling or Wall**

Alarm body



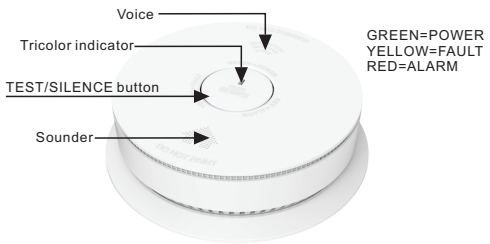
4.8 Un-installation instructions

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/SILENCE 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 SILENCE function.

5.Sounder/Speaker

The sounder/speaker is used to send out smoke alarm, CO alarm warning and abnormal warning information.

5.2 Operation and testing

1) Operation

The alarm is operating once it is power on and testing is complete. When the product alarms, the unit sounds a loud alarm with voice messages. See Sections 1 and 2 for alarm signal descriptions.

2) Testing

Test your alarm weekly by pressing more than 1 sec and releasing the TEST/SLIENCE button. A quick beep will confirm the button has been pushed followed by the test sequence. See Other Alarm Visual and Audible Indicators table. The alarm and voice will sound if the electronic circuitry, horn, speaker, and battery are working. If the alarm or voice does not sound, or gives erratic or low volume sound, the unit must be replaced.

⚠ **WARNING!-** Due to the loudness of the alarm, always stand about 2.5 feet away from the unit or use ear protection when testing.

⚠ **WARNING!**- Do not use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a structure fire.

3) Chirping

When End of Life or Low Battery chirping begins, you can temporarily silence these chirps by pressing the TEST/SILENCE button. See Troubleshooting Guide.

⚠**WARNING!**- replace unit as soon as possible when in end of unit life mode.

5.3 Other Alarm Visual And Audible Indicators

Operate mode	Visual (flash)	Audible (beep/voice)	Description mode
Power on	Preheat 60 seconds, with POWER indicator (Green LED) flash every 2 seconds		
Normal (standby)	AC power: Green LED on continuously DC power: Green LED flash every 40 sec		
Test	RED LED flash in time with alarm pattern.	Voice "Testing Alarms, This may take a few seconds, Testing Smoke", 3 long beeps, Voice "Fire!", 3 long beeps, Voice "Testing Carbon monoxide", 4 quick beeps, Voice "Warning, Carbon Monoxide,evacuate", 4 quick beeps, Voice "Highest carbon monoxide level was xx PPM, The testing is complete and you are protected"	Press Test/Silence button once a week to verify proper alarm operation
Smoke Alarm	RED LED flash in time with alarm pattern.	3 long beeps, Voice "Fire!", 3 long beeps, repeat.(After 4 cycles, voice "Please leave the building and call 911 immediately", Then continue the pattern above)	
CO Alarm	RED LED flash in time with alarm pattern.	4 quick beeps,Voice"Warning, Carbon Monoxide,evacuate", 4 quick beeps, repeat. (After 6 cycles, voice "Highest carbon monoxide level was XX PPM. Please move to fresh air and call 911 immediately", Then continue the pattern above)	
Smoke Alarm Hush Mode	RED LED flash every 8 sec	After button press, voice "Hush Mode Activated, It takes about eight minutes". Smoke alarm pattern stops. (If there is too much smoke to allow Hush: voice "Too much smoke, cannot be hushed" Smoke alarm pattern continues.)	This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm.
CO Alarm Hush Mode	RED LED flash every 8 sec	After button press, voice "Hush Mode Activated, It takes about five minutes".CO alarm pattern stops.	This feature can help users confirm whether there is a CO leak
Local Smoke Alarm memory mode	RED LED flash every 40 sec	After button press, voice "There was a fire alarm before,The total number of historical alarms is xx". You can exit by pressing the button 3 times in succession.	This feature will help the user determine which alarm went off. This status can maintain 72 hours.
Local CO Alarm memory mode	RED LED flash every 40 sec	After button press, voice "There was carbon monoxide leak, Highest carbon monoxide past records was xx,The total number of historical alarms is XX". You can exit by pressing the button 3 times in succession.	This feature will help the user determine which alarm went off. This status can maintain 72 hours.
Wireless Alarm mode	None	3 long beeps, loop repeat.	Wired and wireless alarm status is the same
Wireless Alarm memory mode	RED LED flash every 1 sec	None	This status lasts for 3 minutes before exit. This function indicates that an interconnected alarm has occurred.

5.4. Troubleshooting Guide

Trouble Condition	Visual (flash)	Audible (beep/voice)	Description mode/Action
Low battery warning	Yellow LED flash every 40 sec	Chirp and voice "Low Battery" every 40 sec. (After 1 hour, voice occurs only once every 15mins).	Press Test/Silence button once to silence for 10h.
Smoke Sensor Fault warning	Yellow LED flash every 40 sec	Chirp every 40s,voice "Smoke sensor error" every 40s. (After 1 hour. voice occurs only once every 15mins)	Review Cleaning Your Alarm section. Remove and dispose your unit, and replace as soon as possible
CO Sensor Fault warning	Yellow LED flash every 40 sec	Chirp every 40S,voice "CO sensor error" every 40S. (After 1 hour, voice occurs only once every 15mins)	Review Alarm section. Press Test/Silence button once to attempt to reset unit. If error continues, remove, dispose unit, and replace as soon as possible
End of Life	Yellow LED flash twice every 40 sec	Double chirp every 40s. voice "Replace alarm" every 40s. (After 1 hour, voice occurs only once every 15mins).	Press Test/ Silence button once to silence for 10 hours. Remove and dispose your unit, and replace as soon as possible.

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 indictors 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, hair spray, 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 2 replaceable 1.5V(AA)battery located in a battery compartment. Under normal conditions, a fresh battery should last at least one year.

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

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

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.

NOTE: If the battery carrier tamper resist feature has been activated it will need to be deactivated in order to change the battery. Refer to section **"Replace Battery"** for instructions.

Replace battery with one of the following approved brands:

ENERGIZER, Alkaline battery, 1.5V, E91,

Gold peak, Alkaline battery, 1.5V, GN15A,

These batteries can be purchased at your local retailer.

⚠**WARNING!**- WARNING!-Use only the batteries specified. Use of different batteries may have a detrimental effect on the alarm.

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℃, 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.

8.4 Replace Battery

1) Replace the battery:

Use a phillips screwdriver to unscrew the battery cover to open the battery cover and replace with new battery. (See Diagram 1-2)

2) After you replaced the battery:

Close the battery cover and use a phillips screwdriver to secure the battery cover, then test smoke alarm using TEST/ SILENCE button. (See Diagram 3)

CAUTION: Test the alarm for correct operation using the test facility whenever the battery is replaced.

9. Product Specifications

Model: GS886F

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: 120VAC (60Hz,30mA max，2 AA battery backup)

Radio frequency: 915MHz

Wireless Distance: Minimum 30m Open Air

Wireless/Hardware Interconnection: Up to 24 Alarms

Sensor of Smoke: Multi-Criteria Optical

Smoke Alarm Sensitivity: 2.08%/ft +/-25% OBS

Smoke alarm silence: about 8 minutes

CO silence: about 5 minutes

Sensor of CO: electrochemical

Voice message system

CO alarm sensitivity Setting (Conforms to UI2034):

70PPM Between 60 to 240 minutes

150PPM Between 10 to 50 minutes

400PPM Between 4 to 15 minutes

Product life: 10 years after manufacture

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

Humidity Operating range: 10-95% RH non-condensing

Audible Alarm: ≥85dB at 10ft@ 3.0 to 3.5 KHz pulsing alarm, with voice messages "Fire!" and/or "Warning! Carbon Monoxide, evacuate."

Storage/Transport Ambient Condition: -20~+50°C, 10~95% RH non-condensing

Low Battery warning silence: about 10 hours

Installation Location: ceiling or wall

Detection range: Max. 40 m^2 within a room.

Size: about Φ155*41.8mm

Weight: 320±10g

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

SILENCE: If 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.

NOTE: Dense 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

RESET: Pushing 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. Allways 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 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 stay 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:

SITERWELL ELECTRONICS CO., LIMITED

ADDRESS: No.666 Qingfeng Road, Jiangbei District, Ningbo, Zhejiang Province, China

TEL: 0086-574-87729581

FAX: 0086-574-87729581

E-MAIL: sales@china-siter.com

12.2 Customer service:

SITERWELL ELECTRONICS CO., LIMITED

ADDRESS: No.666 Qingfeng Road, Jiangbei District, Ningbo, Zhejiang Province, China

TEL: 0086-574-87729581

FAX: 0086-574-87729581

E-MAIL: sales@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

THREE YEARS LIMITED WARRANTY

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: _____

Overview visual and acoustic signals