

RD-ZA328A-39-001

Revision: F

Thank you for purchasing the carbon monoxide (CO) alarm. This device uses advanced electrochemical sensor, and with an LCD digital display for CO concentration.

⚠ATTENTION!

Please take a few minutes to thoroughly read the user manual before operating or servicing it, and familiarize yourself and your family with its operation. And save for future reference.

Table of Contents

1. Product important information.....	01
2. What to do if the alarm sounds.....	01
3. Installation instructions.....	02
4. Product overview	02
5. Understanding your CO alarm	03
6. Battery installation/replacement.....	04
7. What you need to know about CO	04
8. Troubleshooting guide.....	05
9. General maintenance	05
10. Product specifications	05
11. Manufacturer/Customer service information.....	05
12. Warranty information	05
13. Warranty card	06

1. Product Important Information

⚠CAUTION!

- This CO alarm was designed to detect carbon monoxide from any source of combustion in a residential environment. It is not designed for use in a recreational vehicle (RV) or boat.
- This CO alarm was designed for indoor use only. Do not expose it to rain or moisture. Do not knock or drop the detector. Do not open or tamper with the alarm, as this could cause a malfunction.
- This CO alarm is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect smoke, fire or any other gas.
- This CO alarm will not protect against the risk of carbon monoxide poisoning when the battery has drained.
- Installation of the CO alarm should not be used as a substitute for proper installation, use and maintenance of fuel-burning appliances, including appropriate ventilation and exhaust systems.
- This CO alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas might be present in other areas.
- This CO alarm should be installed by a competent person. It 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 it is tampered with.
- Individuals with medical problems may consider using warning devices that 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.
- 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.
- 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.

- The TEST/SILENCE button accurately tests the device's 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.
- If you're sure it isn't a real alarm warning, open windows or fan the air around the device to silence it.
- Observe and follow all local and national electrical and building codes for installation.
- This device can only sound its alarm when it detects a dangerous level of CO in the air. They do not sense smoke, heat, flame, or other gases. It is designed to give an audible warning that CO is dangerous.
- This device has limitations. It is not foolproof and is 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 the unit every 10 years.

2. What to Do if the 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.

If the alarm sounds:

- Operate the TEST/SILENCE button;
- Call your emergency services [the fire department or 911];

Telephone Number:

- Immediately move to fresh air - outdoors or by an open door/window. Do a head count to check that all people are accounted for. Do not reenter the premises or 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.

- After following steps 1–3, if your alarm reactivates within a 24-hour period, repeat steps 1–3 and call a qualified appliance technician to investigate for sources of CO from fuel-burning equipment and appliances and inspect for proper operation of this equipment.

Telephone Number:

If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer's instructions, or contact the manufacturer 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.

3. Installation Instructions

3.1 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.
- Alarm users should add the phone numbers of their emergency service providers and qualified technicians on the two self-adhesive labels provided by the source alarm manufacturer. Users should place one label next to the alarm and another near the 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 house, install it near bedrooms, not in the basement or furnace room.

3.2 Installation step

The device can be installed in two ways.

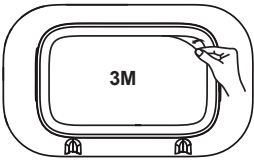
Installation steps in the first way:

- Put the battery into the battery box.
- Install the bracket on the alarm.
- Paste 3M tape on the bracket.
- Fix the alarm in the correct position.
- Use the TEST/SILENCE button to test the device. Ensure that the sound of the device is in alarm mode.

Note: Not certified by ETL test.

⚠WARNING!

DO NOT install the device in direct sunlight or a high-temperature environment.



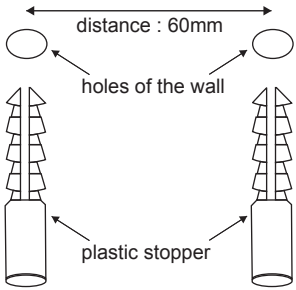
NOTE: 3M TAPE IS AN OPTION, PLEASE PURCHASE SEPARATELY!

Installation steps for the second way:

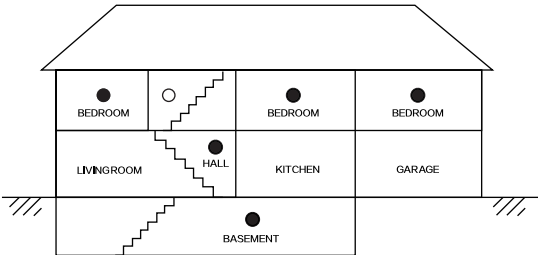
- Drill two ϕ 5.0 mm holes on the wall, the distance between the centers of the two holes is 60mm, and then insert the two provided plastic plugs into the holes.
- Hold the bracket by hand and align the two plastic plugs to fix them first.
- Insert and tighten the two provided screws.
- Put the battery into the battery box.
- Install the alarm on the bracket.
- Use the TEST/SILENCE button to test the device. Ensure that the sound of the device is in alarm mode.

⚠CAUTION!

As you install the device, it may sound for several minutes, then stop and enter normal operation mode. If it always sounds like this, please call our agent.



3.3 Recommended installation locations



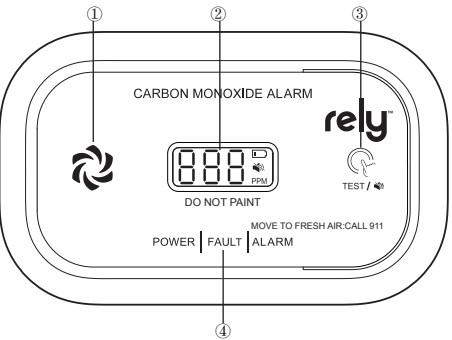
○ REQUIRED TO MEET NFPA RECOMMENDATIONS

● SUGGESTED AREAS FOR INSTALLING ADDITIONAL CO ALARMS

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

- Place it out of the reach of children. Under no circumstances should children be allowed to handle the CO alarm.
- Install it in a bedroom or hallway located close to the sleeping area. Take special care to verify that the alarm can be heard in sleeping areas.
- It is recommended that a CO alarm be installed on each level of a multilevel house.
- Do not install within 5 ft. of heating or cooking appliances. (Recommends 15 ft. to prevent nuisance alarms).
- Placing it at eye level allows for optimum monitoring of the red and green indicator lights.
- Ensure that all vents in the unit are unobstructed.
- Do not install in dead air spaces, such as the peaks of vaulted ceilings or gabled roofs.
- Do not install in turbulent air from ceiling fans.
- Do not place it near fresh air vents or close to doors and windows that open to the outside.
- Keep the CO alarm away from excessively dusty, dirty, or greasy areas. Dust, grease and household chemicals can affect the sensor.
- Keep out of damp and humid areas, such as the bathroom. Avoid spraying aerosols near the CO alarm.
- Do not install in areas where the temperature is below 40 °F (4.4 °C) or hotter than 100 °F (37.8 °C).
- Do not place it behind curtains or furniture. CO must be able to reach the sensor for the unit to accurately detect CO.
- Do not place them near metal objects.

4. Product Overview



① Sounder

② LCD Display

③ TEST/SILENCE button

④ Indicator

GREEN=POWER

YELLOW=FAULT

RED=ALARM

4.1 POWER indicator

The POWER indicator (green LED) is used to indicate the power status of the device. The POWER indicator will flash once every 40 seconds.

4.2 FAULT indicator

The FAULT indicator (yellow LED) is used to indicate the fault status of the device.

4.3 ALARM indicator

The ALARM indicator (red LED) is used to indicate the alarm status of the CO alarm.

4.4 TEST/SILENCE button

The TEST/SILENCE button is used to test the device. Press and hold to enable TEST function.

4.5 Alarm sounder

The alarm sounder is used to send out CO alarm warnings and fault warning information.

4.6 LCD screen

Indicates CO concentration and device status.

5. Understanding Your CO Alarm



5.1 Start up

When first powered on, the ALARM indicator (red), FAULT indicator (yellow) and POWER indicator (green) will flash once in turn, and then the buzzer will sound once, and the LCD will display for 4 seconds. This is the power-on prompt.



Then the LCD screen will display the countdown of 56 seconds, and the POWER indicator (green) will flash once every second. This is the preheated state, 60 seconds later, the POWER indicator (green) flashing every 40 seconds indicates the unit is functioning properly.

NOTE: The purpose of the LCD full segment code display during the power-on prompt is to check whether the LCD screen is good or not.

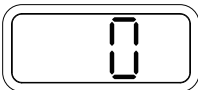
NOTE: When the LCD is fully displayed," "does not mean that the battery is low, the " "does not mean that the sound is muted, and "888 PPM" does not mean that there is a dangerous carbon monoxide concentration around.

5.2 Normal operation

The POWER indicator (green) flashes once every 40 seconds. The LCDs display the current CO concentration.

CO concentration display range: 30–999 PPM.

If the CO concentration is under 30 PPM, the LCD will display "0."



5.3 CO alarm warning

When the device detects a dangerous level of CO, it 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.

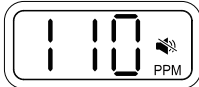
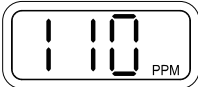
The LCD keeps showing real-time CO concentration. This signal will repeat until the dissipation of CO.

Alarm sensitivity setting:

Conforms to UL 2034

30 PPM:	Without alarm in 30 days
70 PPM:	Alarm between 60 to 240 minutes
150 PPM:	Alarm between 10 to 50 minutes
400 PPM:	Alarm between 4 to 15 minutes

NOTE: Refer to "What to do if the alarm sounds" when you hear the sounds of the CO alarm warning.



5.4 CO alarm warning silence


During the device's CO alarm mode, pressing the TEST/SILENCE button will pause the alarm sound of the device about 5 minutes. The alarm indicator (red) will keep flashing as it does in CO alarm mode, it indicates the device is running into the CO alarm silence mode.

NOTE: The audible alarm signal will reactivate about 5 minutes from the time the TEST/SILENCE button is operated if the concentration of CO surrounding the alarm remains at 50 PPM or greater.

⚠WARNING!

- Before enabling the feature of CO alarm warning silence, you should confirm that the alarm is due to dangerous levels of carbon monoxide, and the dwelling should be ventilated.
- Never remove the batteries from your CO alarm to silence the horn. Use the silence feature. Removing the batteries removes your protection! See "What to do if the alarm Sounds" for details on responding to an alarm.

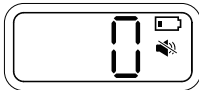
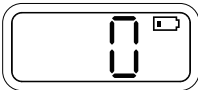
5.5 Low battery warning

If the device chirps once every 40 seconds, the fault indicator (yellow) will flash at the same time. It indicates the battery is low. The LCD displays "".



NOTE: When the low battery warning occurs, the device is capable of producing a CO alarm signal for at least 12 hours and 7 days of low battery 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 carbon monoxide poisoning when the battery has drained.



5.6 Low battery warning silence

When the device is under the low battery warning, pressing the TEST/SILENCE button, it will enter the low battery warning silence status for about 10 hours, meanwhile it will appear " " and " " on LCD, and FAULT indicator (yellow) still keep flashing.

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


5.7 Fault warning

If the device chirps twice every 40 seconds with FAULT indicator (yellow) will be flash. It indicates the device is in malfunction condition. The LCD displays "Err ", that means your CO alarm have no detecting function and no respond CO.

NOTE: When Fault warning occurs, replace the device immediately. Please contact us to more service.



5.8 Fault warning silence

When the device is in a fault state, press the TEST/SILENCE button, it will enter the fault warning mute state for about 10 hours while displaying " " on the LCD, and the fault indicator (yellow) remains flashing.

NOTE: The silence feature of the fault warning is a temporary action to cancel the warning sound effect, you need to replace the device as soon as possible.

5.9 End-of-life warning

If the device chirps three times every 40 seconds, the failure indicator (yellow) flashes three times. And the LCD displays' End '. It indicates the end of the life of the CO alarm. You need to immediately replace the device.



5.10 End-of-life reset

When the device enters the end-of-life warning state in the first 30 days, press the button to reset the end-of-life. At this point, if the device is still available, it will enter the normal standby state for 24 hours, after 24 hours, the device will return to the end-of-life warning state. After 30 days of the first end-of-life warning state, the device can no longer be reset and needs to be replaced in a timely manner.

NOTE:The replacement date that appears on the CO alarm is the date beyond which the CO alarm might no longer detect carbon monoxide accurately and should be immediately replaced.

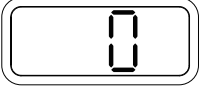
5.11 Test the device

When the device is in normal operation status, you can test it by pressing the TEST/SILENCE button. When you press and hold the TEST/SILENCE button, you should hear an alarm sound pattern (<85 dB) and a corresponding ALARM indicator (red) flash. After the eighth sound, the device will issue a normal alarm volume (>85 dB). The test process will stop when you release the button, but the alarm will ring for at least two cycles. The LCD displays showed the current CO concentration during testing.

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

NOTE: If the device is in a failure or end-of-life state, it cannot be tested.

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

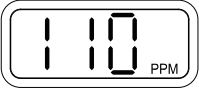


5.12 Weekly test

Recommend test the alarm weekly by pressing the TEST/SILENCE button to ensure the normal operation of the equipment.

5.13 Alarm memory

7-day alarm memory function
When the unit detects CO and alarms, the LCD will display "AL" after the unit has exited the alarm and the CO concentration is below 30 PPM, while the alarm indicator (red) flashes once every 40 seconds.
After pressing the TEST/SILENCE button, the device will clear the alarm memory warning and respond to the corresponding function of the button. Short press the button to display the maximum CO concentration recorded on the LCD for 4 seconds, press and hold the button to enter the test alarm state.
Or 7 days later, the device will automatically clear the alarm memory prompt.
NOTE: Press and hold the TEST/SILENCE button during the display period to clear the maximum concentration value memorized and enter the test alarm state.



6. Battery Installation/Replacement

Once it chirps with the corresponding fault indicator (yellow LED) flashing once every 40 seconds, it indicates that the battery is low; you must replace it with the battery specified. Please see “10. Product specifications”.

6.1 Battery replacement

To install or replace the battery in the device, please perform the following steps:
1. Remove the device from the wall.
2. Remove the old battery and replace it with a new one.
3. Put the battery in the battery compartment.
4. Install the alarm back on the bracket.
5. Use the TEST/SILENCE button to test the alarm. If the test alarm is normal, it means that the device can work normally.

⚠WARNING!

CONSTANT EXPOSURE TO HIGH OR LOW TEMPERATURES OR HIGH HUMIDITY MAY REDUCE BATTERY LIFE.
Use only the battery specified. Please replace two identical-type batteries in the meantime. The use of a different battery may have a detrimental effect on the device.

⚠CAUTION!

A good safety measure is to replace the battery at least once a year. Test the alarm for correct operation using the TEST/SILENCE button whenever the battery has been replaced!

6.2 Battery disposal

⚠WARNING!

Fire, explosion, and severe burn hazards. Do not recharge, crush, disassemble, or heat above 100 °C, incinerate or expose contents to water.
1. Not to dispose of the 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.

7. What You Need to Know About CO

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

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

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:

- MILD EXPOSURE: Slight headache, nausea, vomiting, and fatigue (often described as "flu-like" symptoms).
- MEDIUM EXPOSURE: severe throbbing headache, drowsiness, confusion, fast heart rate.
- EXTREME EXPOSURE: unconsciousness, convulsions, cardiorespiratory 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.
The device may not prevent the chronic effects of carbon monoxide exposure, and the device will not fully safeguard individuals at special risk.

8. Troubleshooting Guide

Problem	Method of disposal
The CO alarm does not sound when TEST/SILENCEbutton is pressed.	1. Ensure CO alarm is powered off. Replace new battery and confirm that it has normal function after replacement. 2. The CO alarm is under "Fault warning" mode. Please ensure the CO alarm is under "Normal operation" mode then test the CO alarm. 3. Clean the CO alarm. Please refer to "9. General maintenance". 4. If there are still failures during warranty, you can return it to your retailer. 5. If the CO alarm is out of warranty, please replace with another new CO alarm.
The CO alarm 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 CO alarm chirps twice with FAULT indicator (yellow) flashing twice every 40 seconds.	MALFUNCTION SIGNAL Clean this CO alarm. Please refer to "9. General maintenance". 1. If the CO alarm is under warranty, please return it to your retailer for replacement. 2. If the CO alarm is out of warranty, please replace with another new CO alarm.
The CO alarm chirps three times with FAULT indicator (yellow) flashes three times every 40 seconds.	END-OF-LIFE SIGNAL Please replace the alarm.
The CO alarm sounds unwanted alarms when residents are cooking, taking showers, etc.	Open the window.

9. General Maintenance

- To keep your CO alarm in good working order, please follow these simple steps:
- Verify the device's alarm sound and indicator operation by pressing the TEST/SILENCE button once a week.
 - Remove the device from the wall and clean the alarm cover and vents with a soft brush attachment once a month to remove dust and dirt.
 - Never use detergents or other solvents to clean the device.
 - Avoid spraying air fresheners, hair spray, or other aerosols near the device.
 - 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.
 - As soon as possible, place the device back in its proper location to assure continuous protection from carbon monoxide poisoning.
 - 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, isobutane, isopropanol, ethylene, benzene, toluene, ethyl acetate, and hydrogen sulfide, sulfur dioxide, alcohol-based products, paints, thinners, solvents, adhesives, and hair sprays, aftershave, perfumes, and some cleaning agents.
- Your device will not be operational and will not monitor for CO levels without a battery. 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.

10. Product Specifications

Model: 6000
Product standards: UL 2034 - CO Alarms [UL 2034, 4th Ed]
CSA 6.19 - CO Alarms for Canada [2017]
Power supply: 3V (2*AA alkaline battery)
Recommend battery type: Energizer E91, Gold Peak GN15A
Sensor type: Electrochemical
Product service life: 10 years after manufacture
Sensitivity setting: Conforms to UL 2034 standard.
30 PPM: Without alarm in 30 days
70 PPM: Alarm between 60 to 240 minutes
150 PPM: Alarm between 10 to 50 minutes
400 PPM: Alarm between 4 to 15 minutes
Operation ambient condition: 40°F (4.4°C)~100°F (37.8°C), 25-95%RH non-condensing
Alarm sound: >85 dB (A) at 10 feet (3.05 m)
Low battery warning silence: about 10 hours
Installation location: Wall
Detection range: Max. 40 m² within a room.
Size: 120*73*34 mm
Weight: 100 ± 5g (net)
Accuracy of digital display: 30-999 PPM +/-30% when measured in conditions of 80°F (+/-10°F), atmospheric pressure +/-10% and 40% +/- 3% relative humidity. Display readings may vary slightly depending on changes in the ambient condition (temperature, humidity) and the condition of the sensor.

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

⚠WARNING!

It is impossible to determine the source of CO using sight or smell. Always consider a CO alarm event as dangerous.

11. Manufacturer/ Customer Service Information

Rely Innovations

ADDRESS: 555 Matthews Drive, Canton, MS 39046
INTERNET: www.relysafety.com

12. Warranty Information

THREE YEAR LIMITED WARRANTY

Our products are subject to strict quality controls. However, if this device should unexpectedly not function perfectly, please get in touch with us at the customer service address provided in the Manufacturer and Customer Service Info section.

THE WARRANTY PERIOD IS 36 MONTHS AND BEGINS ON THE DAY OF PURCHASE

Please retain your receipt as proof of purchase. Warranty claims can only be made for possible defects caused by material and production faults. During the warranty period, if service is required, do not return the product to your retailer. For Warranty Service, defective devices can be sent to the customer service address provided (postage paid). A new or repaired device will be returned to you. After the warranty period has expired, you still have the option of sending the defective device for repair to the customer service address. 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. In the event of a warranty claim, please return the receipt and completed warranty card with fault description along with the defective device.

The warranty does NOT cover the batteries supplied.

13. Warranty Card

Last Name: _____
First Name: _____
Phone: _____
Address: _____

Country: _____
Zip Code: _____
Fault description: _____

Date of purchase: _____

Signature: _____