

# Instruction Manual

## Smoke Alarm

Modelnumber:GS559B Ref: ST559B

Thank you for your support

- Please read the instruction manual carefully before operating
- Please keep the instruction manual for future reference



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**SITERWELL ELECTRONICS CO.,LIMITED**

## Product Introduction

The unit is a photoelectric 3V DC smoke and heat alarm. It is operated by 3v AA Alkaline battery. With the photoelectric technology, it is more sensitive in detecting slow smoldering fires which generate light smoke.little heat and may smolder for hours before bursting into flames. This smoke alarm does not contain any radioactive material.

The smoke alarm is an intelligent security equipment that can be controlled by the Z-Wave network which has particular frequency. Different countries or areas, the radio frequency of the Z-Wave is different. This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. In the Z-Wave network communications, the smoke alarm can communicate with other devices associated. When the smoke is detected, the sensor will send messages to the main controller, and then the alarm sound. Through the Z-Wave network, the devices associated can response after smoke is detected, For instance ,Start fire extinguishing equipment and trigger an alarm,Through the Z-Wave network controller, You will be notified in case of fire.

## Technical Parameters

- Power : DC2\*1.5V Alkaline AA battery (Gold Peak Group: GP15A LR6 or Energizer: E91 or Raymax: LR6)
- Operation current : <13uA (Standby current), <90mA (Alarm current)
- Alarm volume : >85dB(A) at 3 meters.
- Smoke sensitivity : 0.114-0.167dB/m
- Silence time: approx10 minutes
- Heat sensitivity: 54-70°C
- Local smoke alarm sound pattern: BI 0.5s - pause 0.5s – BI 0.5s – pause 0.5s – BI 0.5s – pause 1.5s, BI 0.5s - pause 0.5s – BI 0.5s – pause 0.5s – BI 0.5s – pause 4.5s, with the red LED flash, repeat this alarm pattern.
- Local heat alarm sound pattern: BI 0.2s - pause 0.1s, with the red LED flash, repeat this alarm pattern for about 8.5seconds,then pause 4.5 seconds. repeat this alarm pattern.
- Comply With: EN14604:2005/AC:2008
- Radio Protocol: Z-Wave
- Radio Frequency: 868.4MHz EU; 908.4MHz US
- Wireless distance: >50 m in buildings
- Security: S2\_UNAUTHENTICATED

## Product Configuration

### Product List:

- Smoke Alarm 1pc
- Bracket 1pc
- Screw 2pcs
- Screw stopper 2pcs
- Instruction 1pc

### Wireless function description:

#### Add(Including) alarm to Z-Wave Network

- 1: Make sure the battery is installed well before operating the product.
- 2: Make sure the alarm is on its final install location, then set the controller into the Add(Inclusion) mode.
- 3: Quickly, triple click the test button, The LED will light up.
- 4: Issued beep, LED off, the alarm being Add (included) to the network successfully.

#### Remove(Excluding) alarm for Z-Wave Network

- 1: Make sure the battery is installed well before operating the product.
- 2: Set the Z-Wave Network controller into Remove(exclusion) mode.
- 3: Quickly, triple click the test button, The LED will light up and alarm enter Remove(Excluding) Mode.
- 4: Wait for the main controller to Remove(exclusion) the alarm.

Note: If the alarm is Remove(excluded), then the sensor will be itself restored to factory default settings.

#### Restore the alarm to factory default settings

Reset will delete all information on the Z-Wave network controller, and restore the alarm to factory default settings.

- 1: Press and hold the test button, Installing the battery, red LED light, until the LED is off, release the button, LED light up again, press the button again, When hearing a beep, restore factory settings successfully.

Note: If this sensor is reset, the information of Z-Wave network in the sensor will be deleted. The sensor will be itself restored to factory default settings. Please use this procedure only when the network primary controller is missing or otherwise inoperable.

### Associations

This has the effect that when the sensor detects the smoke, all devices associated with the sensor will receive the relevant reports and can be controlled by the sensor, e.g. Fire extinguishing equipment, alarm device etc.

This device supports five linkage groups:

Linkage group 1 is Lifeline.

Linkage group 2 is assigned to the devices status - sending BASIC SET control frame to the associated devices having detected the smoke alarm.

Linkage group 3 reports the detection's status to the associated device. smoke alarm

Linkage group 4 is assigned to the devices status - sending BASIC SET control frame to the associated devices having detected the heat alarm.

Linkage group 5 reports the detection's status to the associated device.

The alarm will send a "BASIC SET(0xFF)" message to associated group2,4 when pressing test button. to check the function; The alarm will also send a "BASIC SET(0x00)" message to associated group2,4 when quitting the test button. The alarm will also send a "BASIC SET(0xFF)" message to associated group2, when the alarm detects the smoke; and the alarm will also send a "BASIC SET(0x00)" message to associated group2, when the smoke is cleared. The alarm will send a "BASIC SET(0xFF)" message to associated group4, when the heat function is overheat alarm; and the alarm will also send a "BASIC SET(0x00)" message to associated group4, when the overheat alarm is cleared.

The maximum number of devices that can be added to the Linkage group 1 is 1.

The maximum number of devices that can be added to the Linkage group 2,3,4,5 is 4.

### **Command Classes:**

This sensor supports Command Classes as below:

COMMAND\_CLASS\_ZWAVEPLUS\_INFO(V2)  
COMMAND\_CLASS\_ASSOCIATION(V2)  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION(V3)  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO(V3)  
COMMAND\_CLASS\_VERSION(V2)  
COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC(V2)  
COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY(V1)  
COMMAND\_CLASS\_POWERLEVEL(V1)  
COMMAND\_CLASS\_BATTERY(V1)  
COMMAND\_CLASS\_NOTIFICATION(V8)  
COMMAND\_CLASS\_WAKE\_UP(V2)

S2 supported Command Classes:

COMMAND\_CLASS\_VERSION COMMAND\_CLASS\_ASSOCIATION  
COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION  
COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC  
COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY  
COMMAND\_CLASS\_POWERLEVEL COMMAND\_CLASS\_BATTERY  
COMMAND\_CLASS\_NOTIFICATION COMMAND\_CLASS\_WAKE\_UP  
COMMAND\_CLASS\_SUPERVISION

Supported Notification Type: Smoke Alarm

Smoke AlarmSupportedEvent:

1:Smoke detected,Unknown Location(0x02)  
2:SmokeAlarm Test(0x03)

3:Replacement Required,Unspecified reason(0x04)

4:Alarm Silenced(0x06)

Supported Notification Type: Heat Alarm

Heat Alarm Supported Event: 1:Overheat detected,Unknown Location(0x02)

2:Heat Alarm Test(0x07)

3:Replacement Required,End-of-life(0x08)

4:Alarm Silenced(0x09)

## **Important Safety Information:**

1. The test button accurately tests smoke alarm functions. Do not use any other test method. Test smoke alarm weekly to ensure proper operation.
2. If you're sure it isn't a really alarm, open windows or fan the air around smoke alarm to test and silence it.
3. User to install this product needs to comply with all local and national electrical installation and building codes.
4. This smoke alarm is designed to be used inside a single family home only. In multifamily buildings, each individual living unit should have its own smoke alarms. Do not install in non-residential buildings as this smoke alarm is not a substitute for a complete alarm system.
5. Install a smoke 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 smoke alarm in time to alert household members. A smoke alarm will not promptly detect a fire except in the area or room in which it is installed.
6. Smoke 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 smoke alarm may not alert a household member, install and maintain specialty smoke alarms. Household member must hear the alarm's warning sound and quickly respond to it to reduce the risk of injury, or death that may result from fire, if a household member is hard of hearing, install special smoke alarms with lights or vibrating devices to alert occupants.
7. Smoke alarms can only sound their alarms when they detect smoke or detect combustion particles in the air. They do not sense heat, flame, or gas. This smoke alarm 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 such circumstances, Smoke may not reach the alarm **QUICKLY ENOUGH** to ensure safe escape. Therefore the installation of smoke alarms is not a substitute for practicing fire safety in the home.
8. Smoke alarms have limitations. This smoke alarm is not foolproof and is not warranted to protect lives or property from fire. Smoke alarms are not a substitute for insurance. Homeowners and renters should have adequate insure to protect their lives and property. In addition, it is possible for the smoke alarm to fail at any time. For this reason, you must test the

smoke alarm weekly and replace them every 10 years.

### **Do Not Install Smoke Alarms in the Following Places:**

- 1: Near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, hot water heaters). 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. Install all least 10 feet away from these areas.
- 3: Near 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 detector, interrupting its alarm.
- 4: 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.
- 5: In extremely dusty, dirty, or insect – infested areas influence particles interfere with smoke alarm device operation.

### **Battery Usage Tips**

#### **Battery Specification:**

Rating voltage: DC 1.5V

Package: AA alkaline battery

Recommend battery:

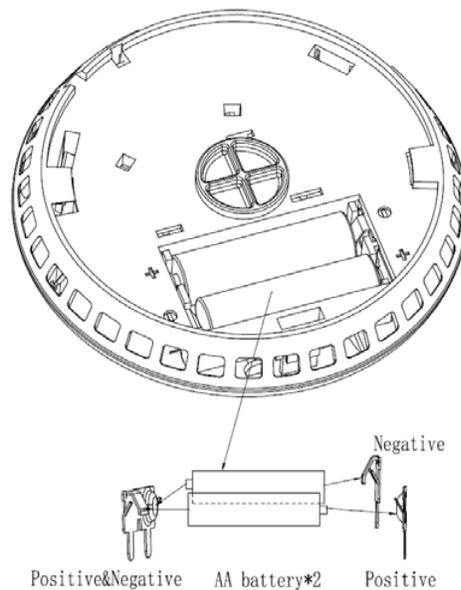
Raymax: LR6

Energizer: E91

Gold Peak Group: GP15A LR6

#### **Replace Battery**(see the diagram 1):

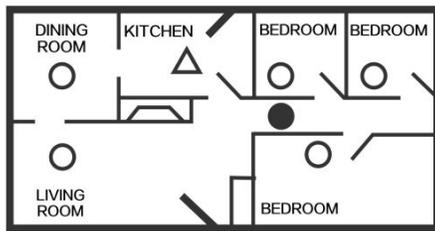
- 1: Turn the alarm body counterclockwise and take out the alarm body from the bracket.
- 2: Take out the old battery from the battery box.
- 3: Fix the two new batteries to the battery box. Please note the battery polarity.
- 4: Fix the battery into battery box, fit alarm body on bracket and turn the alarm body clockwise.
- 5: Test smoke alarm using test button. The sound pattern is 3 short beeps-1.5 seconds pause, 3 short beeps-4.5 seconds pause, repeat it. If there's no sound output, it means that the smoke alarm is faulty or the installing operation is wrong, and you should gain the correctly method of disposal through reading "TROUBLE SHOOTING".



**Diagram1**

**RECOMMENDED LOCATIONS FOR ALARMS:**

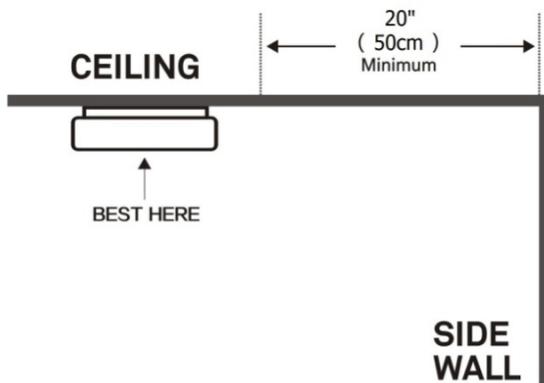
- Locate the first alarm in the immediate area of the bedrooms. Try to monitor the exit path as the bedrooms are usually farthest from the exit. If more than one sleeping area exists, locate additional alarms in each sleeping area.
- Locate additional alarms to monitor any stairway as stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every bedroom.
- Locate an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers).
- Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent an alarm not located in that room from waking the sleeper.
- Smoke, heat, and combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- Not recommend to use for MOBILE HOME.
- For single floor plan and multiple floor plan, please refer to diagram 2 and diagram 3.
- If alarm couldn't be installed in the middle of the ceiling for some reasons, the distance which the alarm away from the wall corner should be beyond 50cm. (see the diagram 4).
- If the length of the room or the hall is beyond 30 foot, you need install several alarms in the hall.
- When the ceiling is slanting, the alarm needs to be installed 500mm away from the highest ceiling point in the room (see the diagram5).



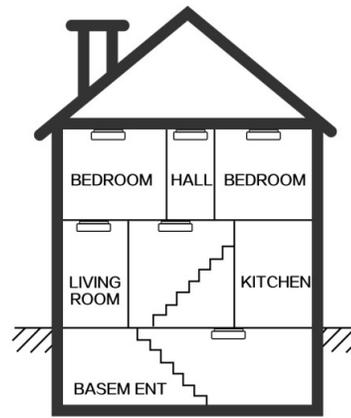
- Smoke Alarms for Minimum Protection
- Smoke Alarms for Additional Protection
- △ Ionisation Type Smoke Alarm with Alarm Silencer or Photoelectric Type

SINGLE FLOOR PLAN

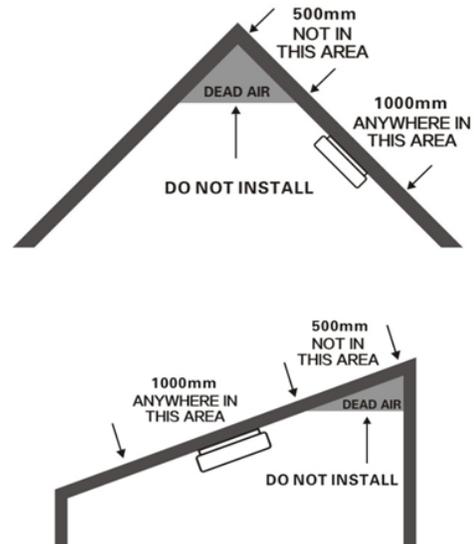
**Diagram 2**



**Diagram 3**



**Diagram 4**



**Diagram 5**

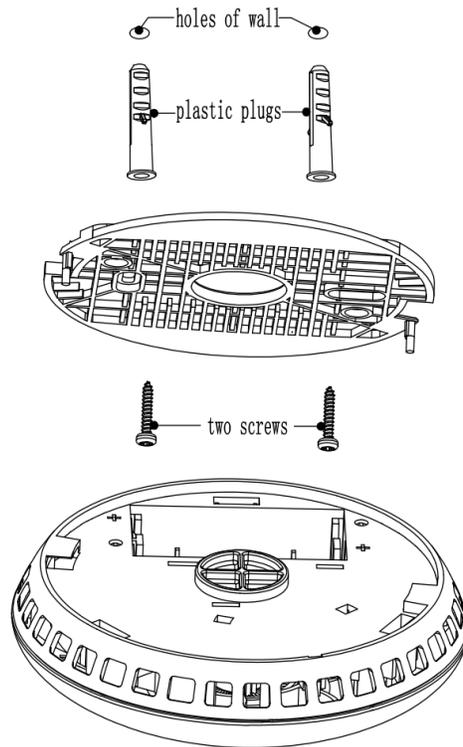
## Installation Steps

- Fix the two AA batteries to each battery box of the smoke alarm.
- According to the **“Wireless function description”** Section to operate the smoke alarm. Ensure the wireless function is ok.
- Then press the bracket on the installation position, mark installation hole of bracket with pencil.
- Bore two installation hole on the sign with electric drill. Make diameter of holes is 5mm, Strike the two plastic plugs into holes with hammer.
- Attach the bracket to the plastic plugs and fix tightly the screws (3\*25mm) into the plastic plugs. (refer to Diagram 6).
- Fit the alarm on the bracket and turn the alarm body clockwise, until matching well on the bracket.
- Test smoke alarm using test button. The alarm will sound 3 short beeps – 1.5 seconds pause, then repeat it until release the button.
- if no sound, it indicates a defective alarm, you can refer to “Trouble shooting” for solution or return to your retailer during warranty.

- If you have any questions on installation, you can contact your retailer.
- During testing, may the other smoke detector will alarm. Once release the button, others will stop alarming in 1 minute. In such a way, you can check the wireless function.

**WARNING:**

To prevent injury, this unit must be securely attached to the ceiling in accordance with the installation instructions.



**Diagram 6**

**Tips**

**Testing:**

Test the unit weekly to ensure proper operation by pressing the test button. about 3 seconds later, this will sound the alarm if the electronic circuitry, horn, and battery are working properly. If no alarm sounds, the battery may be depleted or another problem, refer to “Trouble shooting” section for a solution.

**DO NOT** use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a structure fire.

**CAUTION:** Press the test button, the alarm generates a 2 cycle of soft alarm sound (After about 8 seconds), then the alarm sound will return to normal volume (>85dB), always stand an arms-length away from the unit when testing. Test the alarm weekly to ensure proper operation. Erratic or low sound coming from your alarm may indicate a defective alarm. Refer to “Trouble shooting” section for a solution.

**NOTE: WEEKLY TESTING IS REQUIRED**

**LED indicators**

This smoke alarm is equipped with red LED indicators.

**Standby Condition:** The red LED will flash every 50 seconds to indicate that the smoke alarm is operating properly.

**Alarm Condition:** When the alarm senses products of combustion and goes into alarm, the red LED will flash rapidly (one flash per second). The rapid flashing LED and pulsating alarm will continue until the air is cleared or the test button is released.

**Silence Condition:** The red LED will flash every 16 seconds as long as the alarm is in Hush mode.

**Low battery trouble indication:** An intermittent “chirp” accompanied by a red LED flash every 50 seconds indicates a low battery, you may press the test button to silence the trouble indication for 10 hours, but it will reset automatically after 10 hours. During this condition the unit will continue to operate normally and detect smoke and sound an alarm. This action only temporarily silences the chirp.

**NOTE:** As the battery in this unit is not replaceable, a low battery signal is an indication of end of life. Therefore the alarm **MUST** be replaced as soon as possible!

**Fault indication:** This chirp will occur between the flashes of the red LED indicator light.

**NOTE:** When the unit chirps once every 50 seconds, pressing the test button temporarily silences this warning tone for 10 hours. Refer to “Trouble shooting” section for solutions, if the fault signal reactivates, **you MUST replace**

**the unit with a new alarm at once** or contact your retailer during warranty.

**SMOKE SENSING CHAMBER OPERATION:** This alarm will “chirp” if any of the components in the smoke sensing chamber fail. This chirp will occur between the flashes of the red LED indicator light. (If the chirp occurs at the same time as the red LED flash, indicating a low battery information).

## **Alarm silence (silence mode):**

When the alarm sounds check for a fire first, After verifying that it is not a fire the alarm can be silenced by pushing the test button This will silence the alarm for approx 10 minutes. The red LED will flash once every 16 seconds indicating the smoke alarm is in the silence mode. Smoke alarms are designed to minimize nuisance alarms, but combustion particles from cooking may set off the alarm if the alarm is located close to the cooking area. To minimize the occurrence of false alarms, smoke alarms must be installed a minimum of 10 feet(3 meters) from the nearest cooking appliance. If you accidentally let some smoke into the alarm cause alarm, you can open the doors and windows. Turn on the fan blew it. The alarm will silence (test button) is extremely useful in a kitchen area or other areas prone to nuisance alarms. The silence feature is to be used only when a known alarm condition, such as smoke from cooking activates the alarm. The smoke alarm is desensitized by push the alarm silence (silence mode) on the smoke alarm cover, the alarm will silence to indicate that the alarm is in a temporarily desensitized condition. The smoke alarm will automatically reset after approximately 10 minutes, if after this period, particles of combustion are still present, the alarm will sound again. The alarm silencer (silence mode) can be repeatedly until

the air has been cleared of the condition causing the alarm.

**CAUTION:** Before using the alarm silence (silence), identify the source of the smoke and be certain a safe condition exists.

**DANGER:** If the 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.**

**Low Battery status:**

An intermittent "chirp" accompanied by a flashing red LED indicates once every 50 seconds indicating that the battery has reached a low voltage. And this is a non-replaceable battery alarm, so you need to replace a new smoke alarm within 7 days, In order to avoid noise to disturb your sleeping in the night time, pressing the test button temporarily silence this warning tone for 10 hours, after 10 hours it will again prompt you to replace the battery.

**WHAT TO DO WHEN THE ALARM SOUNDS:**

1. Alert small children in the home to quickly follow the family escape plan.
2. Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
3. In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
4. Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.
5. Once outside, go to your selected meeting place and make sure everyone is there.
6. Call the fire department from your neighbor's home -not from yours!
7. Don't return to your home until the fire officials say that it is all right to do so. There are situations where a smoke alarm may not be effective to protect against fire.
8. For instance:
  - a) Smoking in bed
  - b) Leaving children home alone
  - c) Cleaning with flammable liquids, such as gasoline

**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.

**Trouble shooting:**

DO NOT disconnect battery to quiet an unwanted alarm. This will remove your protection. Fan the air or open a window to remove smoke or dust.

<b>Problem</b>	<b>Cause and Remedy</b>
Smoke alarm does not sound when tested.	1. Activate alarm before installation. 2. Clean smoke alarm. Please refer to the "maintenance and cleaning" section. 3. If problems persist and the unit is still under warranty, you can return to your retailer. 4. If the unit is out of warranty, please replace another new alarm.
Smoke alarm beeps with the red LED flash about	The battery is depleted, please replace battery.

once 50 seconds.	
Smoke alarm chirp occurs every 50 seconds (alarm goes into fault mode) .	Clean smoke alarm. Please refer to the “maintenance and cleaning” section. Replace smoke alarm if the problem persists
Smoke alarm sounds unwanted alarms intermittently or when residents are cooking, taking showers, etc.	<ol style="list-style-type: none"> <li>1. Press test button to silence alarm.</li> <li>2. Clean smoke alarm. Please refer to the “maintenance and cleaning” section.</li> <li>3. Move smoke alarm to new location and press test button.</li> </ol>
The alarm sounds different from it is used to. It starts and stops.	<ol style="list-style-type: none"> <li>1. Clean smoke alarm. Please refer to the “maintenance and cleaning” section.</li> <li>2. if the problem persists during warranty, you can return to your retailer.</li> <li>3. if the unit is out of warranty please replace another new alarm.</li> </ol>

### **Maintenance and Cleaning:**

In addition to weekly testing, the alarm requires periodic cleaning to remove dust, dirt, and debris. Clean the alarm at least once a year to remove dust, dirt, or debris. Use a vacuum cleaner with a soft brush, vacuum all sides and covers of smoke alarm. This alarm has a low battery monitor which will cause the alarm to “chirp” approx every 50 seconds and the red LED flash once at the same time for a minimum of 7 days when the battery gets low. If there is a defective battery or other failures, you can refer to “Trouble shooting” for solution, if there are still failures during warranty, you can return to your retailer.

**WARNING: The battery is sealed and is not replaceable.** Please replace with new alarm if the low battery chirp occurs.

**IMPORTANT:** Do not attempt to remove the cover to clean inside. This will void the warranty.

### **Repair:**

Caution: Do not attempt to repair the alarm. It will affect your warranty.

If the alarm is not operating properly, and is still under warranty, return it to the original place you buy. Pack it in a well-padded carton, and ship to the original place you buy.

If the alarm is no longer under warranty, have a licensed electrician replace it immediately with a comparable alarm.

### **DEVELOP AND PRACTICE A PLAN OF ESCAPE:**

- 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.
- Make a floor plan indicating all doors and windows and at least two (2) 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.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home

when they hear it.

- Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in 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.
- Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others 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.

## **Guarantee**

- Company warrants to the original consumer. Purchase each new smoke alarm to be free from defects in material and workmanship under normal use and service for a period of 3 years from the date of purchase. This warranty does not cover damage resulting from accident, misuse or abuse or lack of reasonable care of the product. In no case shall company be liable for any incidental or consequential damages for breach of this or any other warranty express or implied, whatsoever. The bad product can be mailed to the following address with a detail explanation of problem.
- If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Return it for servicing to Manufacturer:

## **Manufacturer information:**

**SITERWELL ELECTRONICS CO.,LIMITED**

**ADDRESS: NO.76 HAICHUAN ROAD CHUANGYE ZONE B, JIANGBEI,  
NINGBO, CHINA**

**TEL:0086-574-87729581**

**FAX:0086-574-87729581,E-MAIL:Sales@china-siter.com**