

## Smoke Alarm User's Manual

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### IONIZATION SMOKE ALARM

#### MODEL: VST-IS598I

 Class II Apparatus

**Ionization smoke alarms are generally more effective at detecting flaming fires which consumer combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a wastebasket or a grease fire in the kitchen.**

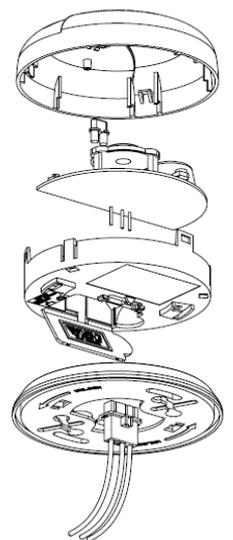
#### FEATURES

- AC/DC Operated Ionization Type Smoke Alarm
- Ionization Sensor for fast flaming
- High and stable sensitivity
- Quick fix mounting bracket and simple AC connector for easy installation
- Fitting and battery tamper-resist feature
- Inter-connectable up to 40 units
- Alarm and AC power supply indicator
- Extra loud alarm sound over 85 dB
- Low-battery warning indicator
- Self-test button
- Auto-reset when smoke clears



#### SPECIFICATION

- Model Number: VST-IS598I
- Detection Type: Ionization Chamber
- Power Source: 220-240V AC 50Hz and 9V DC Battery back-up
- Standby Current (9V battery): 15uA max
- Alarm Current (9V battery) : 30mA max
- Alarm Sound Level: 85 decibels at 3 meters
- Operation Temperature: 4°C to 38°C
- Ambient Humidity: 10%-90%
- Interconnect Quantities: up to 40 units
- Sensitivity to Smoke: 0.61 ~ 1.92 %/FT.OBS.
- Compact size: 110mm diameter



**Note:** This smoke alarm can only be interconnected with other VST alarms specified.

## **IMPORTANT SAFETY INFORMATION**

1. This smoke alarm requires constant 220-240V AC 50Hz mains power supply to operate properly. Backup 9V DC battery will offer additional protection in the event of power failure. This smoke alarm WILL NOT work if AC power is not connected or has failed or been interrupted for any reason. AND if the backup battery is removed, drained or improperly connected, the alarm will not work during a power failure. DO NOT use any other kind of battery except as specified.
2. The push-to-test button accurately tests all smoke alarm functions. Do not use any other test method. Test smoke alarm weekly to ensure proper operation.
3. DO NOT cut off AC power supply or remove or disconnect backup battery to quiet unwanted alarms. This will remove your protection. Open windows or fan the air around smoke alarm to silence it
4. Observe and follow all local and national electrical and building codes for installation.
5. This smoke alarm is designed to be used inside a single room only. In multi-room buildings, each individual living unit should have its own smoke alarms. Do not install in non-residential buildings. And this smoke alarm is not a substitute for a complete alarm system.
6. 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.
7. Smoke alarms may not alert every household member every time. The alarm sound is loud in order to alert individuals to a potential danger. However, there may be limiting 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 damage, 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.
8. Smoke alarms can only sound their alarms when they detect smoke. Smoke alarms 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. Others are caused by carelessness or safety hazards. Smoke may not reach the smoke alarm QUICKLY ENOUGH to ensure safe escape.
9. 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 are responsible for insuring 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 every 10 years.

**Note:** For best protection, we recommend that you install a smoke alarm in every room.

## **RECOMMENDED LOCATIONS FOR SMOKE ALARMS**

### **Installing Smoke Alarms in Single-Family Residences**

Minimum coverage is one unit on every floor, in every sleeping area, or in every bedroom. For additional coverage, Vs-top Electronics Co.,Ltd recommends you install units in all rooms, halls, storage areas, and finished attics, where temperatures normally remain between 5°C and 45°C.

### **More specifically, install Smoke Alarms:**

On every level of your home, including finished attics.

Inside every bedroom, especially if people sleep with doors closed.

In the hall near every sleeping area. If your home has multiple sleeping areas, install a unit in each. If a hall

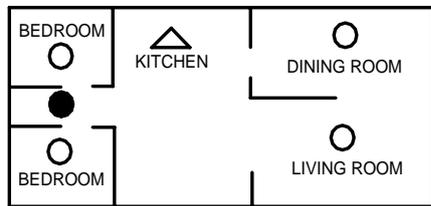
is over 12 meters (40feet) long, install an alarm at each end.

At the top of the first-to-second floor stairway.

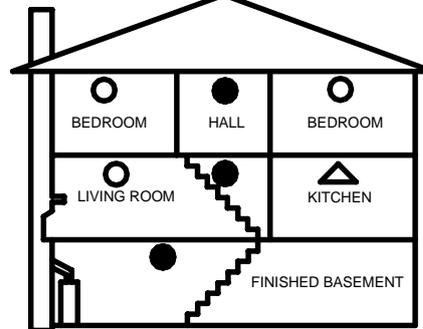
**IMPORTANT!**

Specific requirements for Smoke Alarm installation vary from state to state. Check with your local Fire Brigade for current requirements in your area.

See “Recommended Locations For Smoke Alarm” Diagram following.



SINGLE-STORY RESIDENCE, APARTMENT, MOBILE HOME



MULTI-STORY RESIDENCE

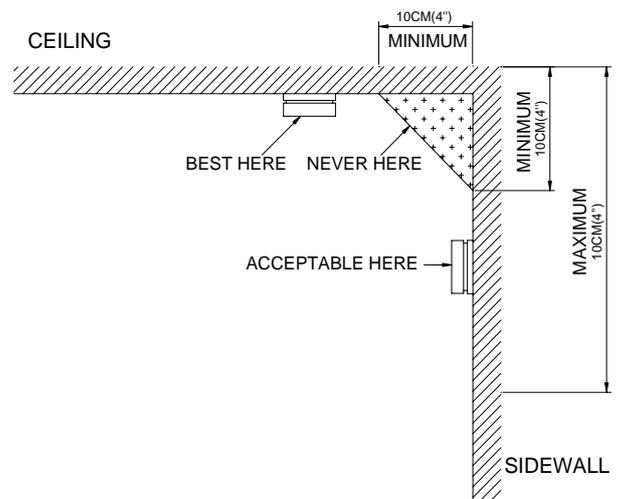
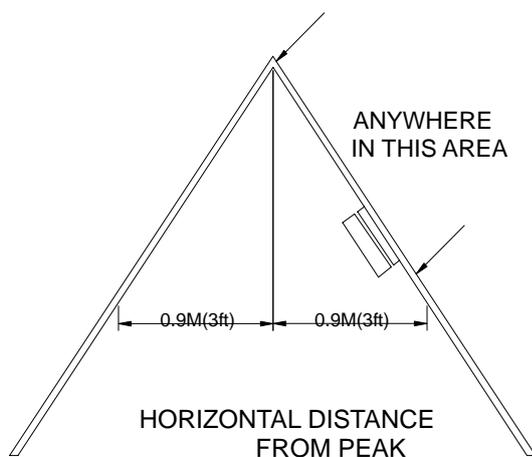
**KEY:**

- Minimum required smoke alarm locations
- Recommended additional smoke alarm locations
- △ Smoke alarms with silence features recommended for additional protection

**IMPORTANT SMOKE ALARM PLACEMENT AND EXCEPTION INFORMATION**

1. Install a smoke alarm as close to the center of the ceiling as possible. If this is not practical, mount no closer than 4 inches from a wall or corner. Also, if local codes allow, install smoke alarms on walls, between 4 and 12 inches from ceiling/wall intersections.
2. Install a minimum of two smoke alarms in every home, no matter how small the home.
3. Install a smoke alarm in each room that is divided by a partial wall (either coming down from the ceiling at least 8 inches, or coming up from the floor).
4. Install a smoke alarm in lived-in attics or attics which house electrical equipment like furnaces, air conditioners, or heaters.

**DO NOT INSTALL SMOKE ALARMS**



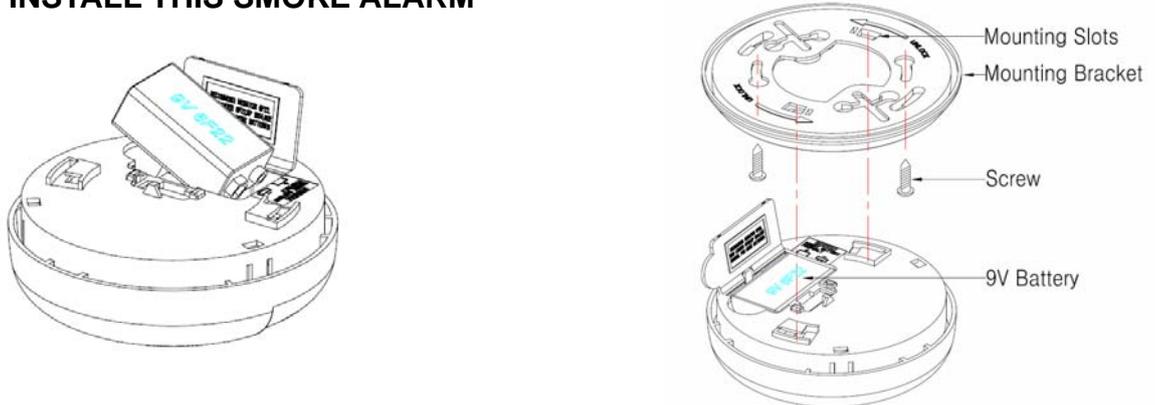
1. Near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, hot water heaters). Use specialized smoke alarm with unwanted alarm control for this areas.
2. In areas with high humidity, like bathrooms or areas near dishwashers or washing machines. Install at

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 4°C or rise above 38°C.
5. In extremely dusty, dirty, or insect-infested areas where loose particles interfere with smoke alarm operation.

**WARNING:** Incorrect orientation will result in a decrease in operational effectiveness.

## HOW TO INSTALL THIS SMOKE ALARM



### **⚠ DANGER: ELECTRICAL SHOCK HAZARD.**

Turn off power at the main fuse box or circuit breaker by removing the fuse or switching the circuit breaker to the OFF position.

**⚠ WARNING:** This smoke alarm is mains powered and requires wiring by a qualified electrician in accordance with the current IEE Regulations for Electrical Installations (BS7671).

The circuit used to power the smoke alarm must be a dedicated permanent supply that cannot be switched off accidentally by the normal user. Before installing ensure the electrical supply is isolated.

1. From back of smoke alarm, remove the mounting plate by turning it counterclockwise.  
(To later engage tamper-resist feature, twist out and set aside one of the pins molded into plate. Both pins are exactly the same.)
2. Gently pull household wires through center hole of plate.
3. Secure plate to ceiling or wall with mounting screws.
4. With a small wire connector, connect white wire from connector plug to white household wire.
5. Connect blue wire from connector plug to blue household wire.
6. If interconnection is desired, connect yellow wire from connector to interconnect wire between smoke alarms. See section interconnecting smoke alarms.

**NOTE:** If this will be used as a single-station smoke alarm, cover yellow wire with electrical tape and tuck it into junction box.

7. Lift open battery pocket door.
8. Connect new 9-volt battery to battery connector inside battery pocket. Be sure battery is securely connected. Smoke alarm may beep briefly when battery is installed.
9. Close battery pocket door, snapping it into place.
10. Attach connector plug to pins on back of smoke alarm. Plug will only fit one way and will snap into place.
11. Gently tug connector to be sure it is attached securely.



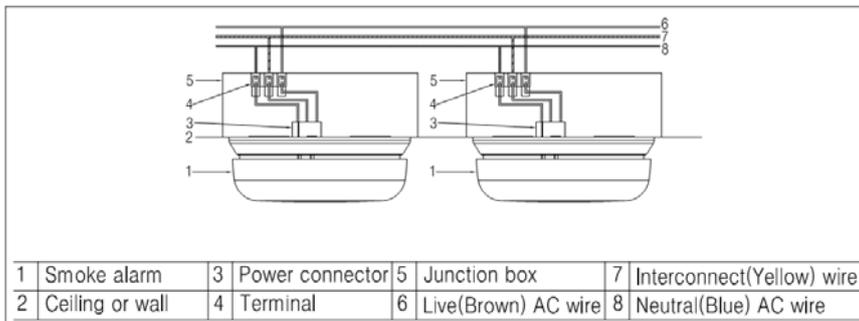
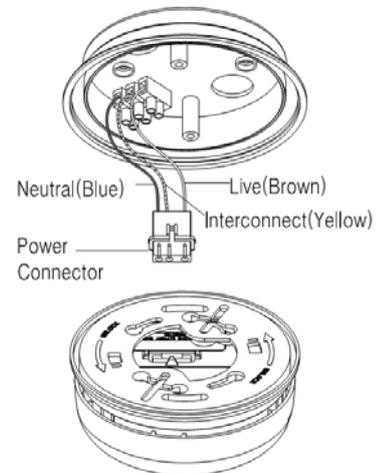
- Position smoke alarm to mounting plate and turn clockwise to lock into place. To engage tamper-resist feature, insert pin into notch on edge of smoke alarm after alarm is properly positioned in base.

**NOTE:** Smoke alarm will not mount to plate if battery is not installed.

- Turn on power at main fuse box or circuit breaker.
- Push test button to test smoke alarm. See **TESTING THE SMOKE ALARM.**

## INTERCONNECTING SMOKE ALARMS

For interconnecting line, only use #14-#18 AWG minimum solid or stranded wire. When being interconnected, maximum wire length between any two is 1500 feet for #18 AWG or 4000 feet for #14 AWG (20 OHMS loop resistance). This smoke alarm can be interconnected with as many as 40 other DC or AC ORIENTALERT smoke alarms and/or heat alarms. Do not connect to any other type or model smoke alarms except the ones we specify. And this smoke alarm is powered by 220-240V AC 50Hz and with 9V DC Battery back-up.



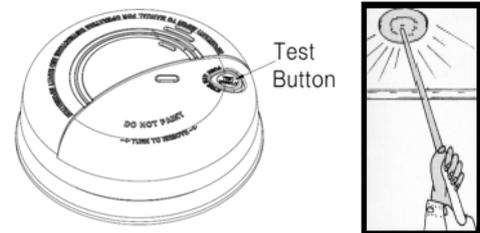
## OPERATING YOUR SMOKE ALARM

Once the smoke alarm has been installed a small GREEN indicator light (LED) should be visible through the alarm grill indicating that AC supply is healthy. A RED indicator light (LED) should also flash approximately once a minute to indicate the battery is healthy and the unit is operating properly.

If smoke is detected, the unit will emit a loud pulsating alarm and a RED indicator light (LED) will be flashing quickly until the air is clear.

## TESTING THE SMOKE ALARM

- Test each smoke alarm to be sure it is installed correctly and operating properly.
- The Test button accurately tests functions. Do not use an open flame to test this smoke alarm. You may ignite and damage the smoke alarm or your home.
- Test smoke alarms weekly and upon returning from vacation or when no one has been in the household for several days.
- Stand at arm's length from the smoke alarm when testing.



## TEST ALL SMOKE ALARMS WEEKLY BY DOING THE FOLLOWING:

- Firmly push the TEST button, and the smoke alarm will sound a loud beep.  
The alarm will stop sounding after releasing the TEST button.
- If smoke alarm does not sound, please retest the smoke alarm.

**⚠ DANGER:** If the alarm sounds, and smoke alarm is not being tested, the smoke alarm is sensing smoke. THE SOUND OF THE ALARM REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.

## MAINTENANCE AND CLEANING

In addition to weekly testing, this smoke alarm requires yearly battery replacement and periodic cleaning to remove dust, dirt, and debris.

### BATTERY REPLACEMENT

Always turn off the AC supply to the smoke alarm before replacing the battery. Replace battery at least once a year or immediately when the low battery signal sounds once a minute, even though the smoke alarm is receiving AC power. Batteries should be replaced regularly as necessary.

**⚠ WARNING:** Do not use any other type of battery, except as specified in this manual.  
Do not use rechargeable batteries.

**⚠ CAUTION:** Explosion will happen if battery is incorrectly replaced.

You'd better use good battery to make the alarm work long.

The battery should only be replaced by a qualified electrician or similarly qualified person.

1. Turn off AC power supply to the smoke alarm.
2. Turn smoke alarm counterclockwise to detach it from the mounting plate.
3. Gently pull down smoke alarm.
4. Remove battery from the compartment.
5. Insert a new 9-volt battery to connector. NOTE POLARITY OF CONNECTIONS. Ensure the metal tab is fully depressed when the battery has been fitted.
6. Using the Push-to-Test button, test the smoke alarm to verify 9V DC battery back-up.  
See **“TESTING THE SMOKE ALARM”**
7. Reattach the smoke alarm to the mounting plate by turning smoke alarm clockwise until it snaps into place.
8. Turn on power supply and test smoke alarm using push-to-test button.  
See **“TESTING THE SMOKE ALARM”**

### CHOOSING A REPLACEMENT BATTERY:

The unit requires one standard 9V battery. The following batteries are acceptable as replacements:

Megaton #6F22; New Leader #6F22; Gold Peak #1604; Eveready #522, #1222;

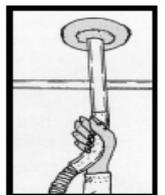
Golden Power G6F22; Golden Power GL6F22A

### CLEANING

Clean the smoke alarm at least once a month to remove dust, dirt, or debris. Using the soft brush or wand attachment to a vacuum cleaner, vacuum all sides and cover of smoke alarm. Be sure all the vents are free of debris.

If necessary, use a damp cloth to clean smoke alarm cover.

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



### PRACTICE FIRE SAFETY

If the smoke alarm sounds its alarm horn, 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 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 if 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.

## WHAT TO DO IN CASE OF FIRE

1. Do not panic; stay calm.
2. Leave the building as quickly as possible. Touch doors to feel if they are 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 from outside the building.
5. Do not go back inside a burning building. Wait for the fire department to arrive.

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.

## TROUBLESHOOTING

 **WARNING:** 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.

PROBLEM	SOLUTION
Smoke alarm does not sound when tested. NOTE: Push test button for at least five seconds while testing!	1 Remove smoke alarm from mounting plate and check that battery is properly attached to connector. 2 Clean smoke alarm.
Smoke alarm beeps about once a minute.	Replace battery. See battery replacement in the maintenance and cleaning section.
Smoke alarm sound unwanted alarms intermittently or when residents are cooking, taking showers, etc.	1 Clean smoke alarm. See cleaning in the maintenance and cleaning section 2 Move smoke alarm to a new location. See SMOKE ALARM PLACEMENT
The alarm sounds different than I'm used to. It starts and stops.	The alarm is operating correctly. This alarm features the internationally recognized horn signal for evacuation. The alarm sound pattern is 3 short beeps followed by a 2 second pause and then repeats.

**WARNING:** Radioactive material Am241, <29.6KBq (0.8uCi). Do not tamper with sealed source. When this alarm is no longer required, it should be returned to supplier or Department of Health for disposal. Do not dispose of it in any other way.

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