

SA-61

Wireless Smoke Detector Installation Manual

September 2012

1. Introduction

The SA-61 is a battery-operated Wireless Smoke Detector.

It is available in two frequencies: 433.92 MHz or 868.35 MHz.

The smoke sensor unit can easily be plugged into or detached from the wireless base unit (AS-60) for cleaning and maintenance purposes.

A mechanical key on the sensor is designed to avoid mismatching or incorrect installation of the sensor and base. The sensor chamber is engineered to sense smoke from a wide range of combustion sources. The chamber is well protected from insects and dust contamination.

A LED indicator on the sensor unit shows the operating status and Alarm mode, while an RF LED is located in the base unit and indicates RF transmissions, such as alarms and tamper.

The SA-61 smoke detector has a low profile, as well as a professional and trendy appearance.

Figure 1: SA-61



2. Technical Specifications

2.1 Electrical Characteristics

Power Supply Voltage	CR123 3 V 1300 mAh
Battery Life	Three years with regular use
Avg. Standby Current	30 μ A
Max. Alarm Current	75 mA
Siren Output	85 dB at 1 m (built-in)
Sensitivity	2.5%/ft nominal (0.5~4%/ft)
Frequency	G (433.92 MHz), H (868.35 MHz)

2.2 Environmental Characteristics

Environment	Indoor
Operating Temperature	0°C to 35.8°C (32°F to 100°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Operating Humidity	0 to 95% RH (non-condensing)

2.3 Physical Characteristics

Weight	120 g (4.23 oz)
Dimensions (L x W x H)	121.9 x 121.9 x 34 mm (4.8 x 4.8 x 1.34 in.)

2.4 Modes of Operation

Normal Mode	The indicated LED flashes once every 344 seconds (to save battery life) to show it is working.
Alarm Mode	The detector goes into Alarm mode if it detects smoke. In Alarm mode, the indicated LED and the RF LED quickly flashes and the Piezoelectric sounder is activated.
Low Battery Mode	When the battery voltage is low, the detector beeps every 43 seconds.

2.5 Signaling and Events

Tamper Event	When the sensor is disconnected from the base or the base unit from the ceiling.
Signaling Type	Red LED on detector, red LED in base unit
Report Types	Alarm, Tamper, Low Battery Alarm Report: <ul style="list-style-type: none">• Every 20 seconds during first 3 min• Every 3 min from 3 min till 30 min• Alarm event is no longer sent after 30 min or immediately upon Alarm Restore (When the ambient environment smoke concentration is lower than the alarm level for a zone)

3. Installation

3.1 Choosing a Mounting Location

A smoke detector should be installed according to NFPA (National Fire Protection Association) Standard 72. For complete coverage in residential units, smoke detectors should be installed in all rooms, halls, storage areas, and basements. At the least, one detector should be placed on each floor and in each sleeping area.

Install smoke detectors as close to the center of the ceiling as possible or at least 10 cm (4 inches) away from any wall or corner.

Do NOT locate smoke detectors at the top of peaked or gabled ceilings; the dead air space in these locations may prevent the unit from detecting smoke. Avoid areas with turbulent air flow such as near doors, fans or windows. Rapid air movement around the detector may prevent smoke from entering the unit and affected the accuracy.

3.2 Smoke Detector Limitations

- Smoke detectors will not sense a fire if the smoke does not reach the sensor.
- Smoke detectors may not be heard. Be sure to locate the smoke detector within hearing distance.
- Smoke from a slow fire rises slowly and may not reach the smoke detector until the fire gets bigger.
- To keep your smoke detectors working properly, be sure to maintain the unit according to manufacturer's recommendations and UL and NFPA standards.

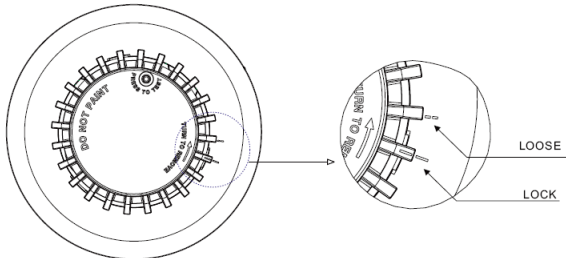
3.3 Disassembly

The unit arrives assembled, so you must disassemble the unit into its three pieces before you can mount it.

To disassemble:

1. Turn the sensor counter-clockwise to the "Loose" position as shown in Figure 2 and gently remove the sensor.

Figure 2: Loose and Lock Positions



2. Gently separate the top part of the base unit from the lower part.

3.4 Mounting the Base Unit

The AS-60 base unit provides different punch out options for different gang box standards for mounting to 3 1/2-inch and 4-inch octagonal, single-gang, and 4-inch square back boxes (Figure 3).

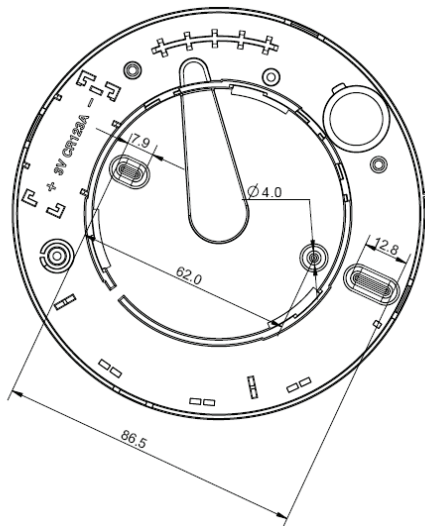


Figure 3: Punch Out Options for Various Gang Box Standards

To mount the base unit:

1. Mark two mounting points in the wall.
2. Drill into the marked points and insert wall plugs/gang box.
3. Screw and fix the base unit.

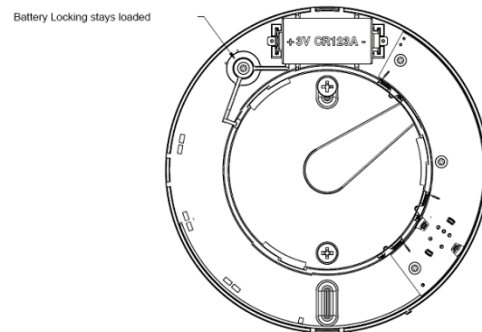
3.5 Inserting the Battery

The battery compartment is designed to meet UL requirement. A lever has been inserted to avoid attaching the sensor unit without the battery being inserted.

To insert the battery:

1. Load the battery into the base compartment as shown in Figure 4.

Figure 4: Battery Installation



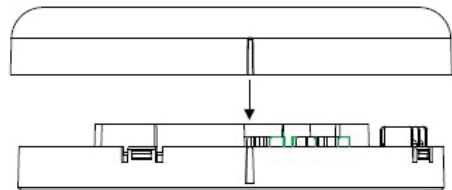
3.6 Assembly

Once you have mounted the base unit and inserted the battery, you are ready to close the unit.

To assemble the unit:

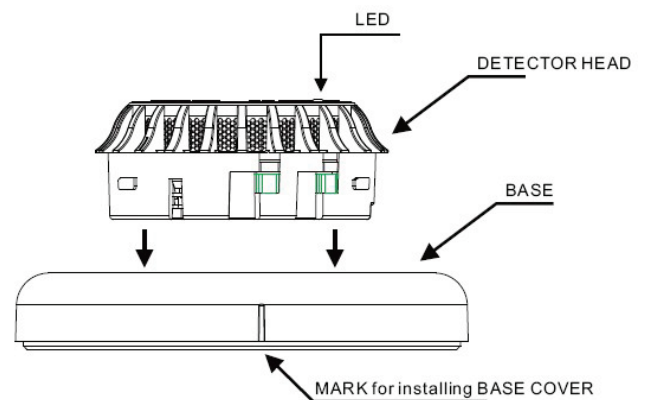
1. Replace the top part of the base unit with its bottom part that has been mounted by lining up the two lines as shown in Figure 5.

Figure 5: Base Cover Insertion



2. Attach the sensor unit onto the base unit as shown in Figure 6 and turn the sensor clockwise to the Lock position (Figure 2).

Figure 6: Sensor Insertion



4. Testing

Once the detector is installed, you should test the unit.

4.1 General Testing

To test the unit:

1. Press and hold the Test button on the sensor. The following occurs:
 - Both LEDs flash quickly
 - The Piezoelectric sounder is activated
 - The smoke detector transmits an alarm to the wireless alarm panel

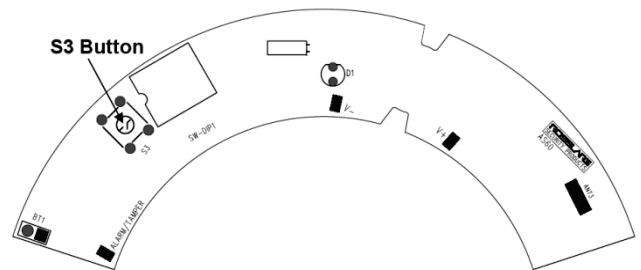
Release the Test button to return to Normal mode.

4.2 RF Testing

To test the RF connection:

1. Remove the sensor.
2. Remove the top cover of the base unit.
3. Press the **S3** button (Figure 7) for more than 5 seconds.

Figure 7: S3 Button



The unit sends 10 RF messages to the system every four seconds and then returns to Normal mode

5. Maintenance

5.1 Cleaning

The unit runs a self-check for cleanliness every 43 seconds. If three consecutive tests fail, the unit beeps three times every 43 seconds.

To clean the unit, pass a vacuum cleaner with a brush attachment gently over the front frilled sections and the sides of the smoke detector.

5.2 Battery Replacement

When the detector's battery is low, the detector beeps once every 43 seconds. If the detector is connected to a wireless security network, it sends a low battery warning message.

The smoke detector continues to operate with a low battery for at least 7 days.

Replace the battery when a low battery is indicated.

6. FCC Statement

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - This device may not cause harmful interference.
 - This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Limited Warranty

ROSSLARE ENTERPRISES LIMITED (ROSSLARE) TWO-YEAR LIMITED WARRANTY is applicable worldwide. This warranty supersedes any other warranty. ROSSLARE'S TWO-YEAR LIMITED WARRANTY is subject to the following conditions:

WARRANTY

Warranty of ROSSLARE'S products extends to the original purchaser (Customer) of the ROSSLARE product and is not transferable.

PRODUCTS COVERED BY THIS WARRANTY AND DURATION

ROSSLARE ENTERPRISES LTD. AND/OR SUBSIDIARIES (ROSSLARE) warrants that the SA-61 Wireless Smoke Detector to be free from defects in materials and assembly in the course of normal use and service. The warranty period commences with the date of shipment to the original purchaser and extends for a period of 2 years (24 months).

WARRANTY REMEDY COVERAGE

In the event of a breach of warranty, ROSSLARE will credit Customer with the price of the Product paid by Customer, provided that the warranty claim is delivered to ROSSLARE by the Customer during the warranty period in accordance with the terms of this warranty. Unless otherwise requested by a ROSSLARE representative, return of the failed product(s) is not immediately required.

If ROSSLARE has not contacted the Customer within a sixty (60) day holding period following the delivery of the warranty claim, Customer will not be required to return the failed product(s). All returned Product(s), as may be requested at ROSSLARE'S sole discretion, shall become the property of ROSSLARE.

To exercise the warranty, the user must contact ROSSLARE Enterprises Ltd. to obtain an RMA number after which, the product must be returned to the Manufacturer freight prepaid and insured.

In the event ROSSLARE chooses to perform a product evaluation within the sixty (60) day holding period and no defect is found, a minimum US\$ 50.00 or equivalent charge will be applied to each Product for labor required in the evaluation.

ROSSLARE will repair or replace, at its discretion, any product that under normal conditions of use and service proves to be defective in material or workmanship. No charge will be applied for labor or parts with respect to defects covered by this warranty, provided that the work is done by ROSSLARE or a ROSSLARE authorized service center.

EXCLUSIONS AND LIMITATIONS

ROSSLARE shall not be responsible or liable for any damage or loss resulting from the operation or performance of any Product or any systems in which a Product is incorporated. This warranty shall not extend to any ancillary equipment not furnished by ROSSLARE, which is attached to or used in conjunction with a Product, nor to any Product that is used with any ancillary equipment, which is not furnished by ROSSLARE.

This warranty does not cover expenses incurred in the transportation, freight cost to the repair center, removal or reinstallation of the product, whether or not proven defective.

Specifically excluded from this warranty are any failures resulting from Customer's improper testing, operation, installation, or damage resulting from use of the Product in other than its normal and customary manner, or any maintenance, modification, alteration, or adjustment or any type of abuse, neglect, accident, misuse, improper operation, normal wear, defects or damage due to lightning or other electrical discharge. This warranty does not cover repair or replacement where normal use has exhausted the life of a part or instrument, or any modification or abuse of, or tampering with, the Product if Product disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim.

ROSSLARE does not warrant the installation, maintenance, or service of the Product. Service life of the product is dependent upon the care it receives and the conditions under which it has to operate.

In no event shall ROSSLARE be liable for incidental or consequential damages.

LIMITED WARRANTY TERMS

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THIS WARRANTY SHALL BECOME NULL AND VOID IN THE EVENT OF A VIOLATION OF THE PROVISIONS OF THIS LIMITED WARRANTY.

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