# **INSTALLATION & MAINTENANCE**







## **RSM RADIO SMOKE DETECTOR**

- · Photoelectric smoke detection technology
- · Test button to test sounder and transmitter
- · Delayed transmit function for testing
- Sends Alarm, Restoral, Supervision & Low Batt signals
- High volume sounder on-board
- · Compatible with all Ness receivers
- One 9V battery powers the smoke detector and radio transmitter
- Compact slimline housing



**REV 2.1** 

### INTRODUCTION

The RSM radio smoke detector is designed for use as an optional radio accessory with Ness alarm systems.

The photoelectric smoke detector and on-board Ness radio transmitter are powered by a single 9V Alkaline battery (supplied).

Alarm signals are delayed by 10 seconds before being sent to allow the on-board sounder to be tested without triggering the alarm system.

The RSM has a twist-off base which simplifies installation and battery replacement.

#### INSTALLATION

To remove the detector from the base push the lock tab with a screwdriver and twist the detector anti-clockwise.

Mount the base with at least two screws in an appropriate position on the ceiling (or wall).

Insert the battery into the battery compartment making sure that the red safety bar is folded down under the battery. The safety bar ensures that the smoke detector cannot be connected to its base without the battery fitted.

Line up the slot on the detector with the alignment arrow on the base and twist the detector clockwise to lock it in.

Test the smoke detector.

## WHERE NOT TO INSTALL

Do not install smoke detectors in areas where combustion particles are present. Install at least 6m away from sources of combustion such as heaters, stoves, furnaces, water heaters. Avoid poorly ventilated areas.

In kitchens or in air streams near kitchens. Air currents can draw smoke into the sensing chamber of smoke detectors mounted nearby.

In damp, humid or steamy areas such as bathrooms and saunas. Install at least 3m away from dishwashers, showers, saunas etc.

Where temperatures are below  $4^{\circ}$ C or above  $38^{\circ}$ C.

In dusty or greasy areas. If installed in a laundry the smoke detector must be cleaned regularly to prevent lint and dust from blocking the sensing chamber.

In insect infested areas. Insects can block the opening to the sensing chambers or cause unwanted alarms.

Near air vents, ceiling fans or strong draughts. Strong draughts can draw smoke away from the smoke detector preventing it from detecting when needed.

Less than 30cm away from fluorescent lights to prevent electrical interference which can adversely affect the smoke detector.

In "dead air" regions in the corners of rooms or the peak of pitched ceilings. See Diagram1 & 2.

In rooms where cigarette smoke is present.

## **IMPORTANT NOTICE**

The Ness RSM radio smoke detector is intended for use as an optional and supplementary smoke detection system in addition to existing smoke alarms as required by relevant building codes.

If there is any doubt as to the suitability of this device for a particular application it is recommended that you seek advice from the appropriate authorities or professional fire protection services.

#### WHERE TO INSTALL

Ideally one smoke detector per bedroom or at least one in a passageway outside the main bedroom/s. At least one per floor in multi-storey buildings.

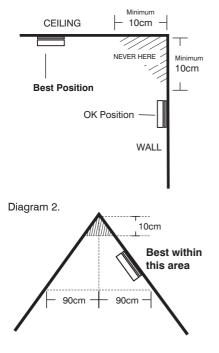
Install more than one detector if the length of a passageway exceeds 9m.

In stairwells or adjacent to stairways and over each electric appliance.

Smoke detectors should be installed in the middle of the ceiling. If this is not possible, install at least 10cm away from a wall to avoid the non-circulating "dead air" region in corners of rooms. If wall mounting and in potentially hot environments such as caravans or portable homes the detector should be mounted 10–30cm away from the ceiling.

On a pitched ceiling follow the 10–90cm rule as per diagram 2. Do not install directly in the peak.





### TESTING

To test the sounder press and hold the Test button for at least 2 seconds. If you hold the Test button for over 10 seconds it will also send an alarm signal to the receiver.

## LED INDICATOR

The LED indicator is located behind the Test button. It will flash once every 30 seconds to indicate normal operation and flashes continuously during an alarm.

## **RADIO TRANSMITTER**

ALARM SIGNALS. The smoke detector sends an alarm signal when it alarms and a restoral signal when the alarm resets (usually when the detection chamber is clear of smoke).

A supervision signal is sent every hour. The supervision message can be used by compatible control panels to verify the correct operation of the radio smoke detector. (Compatible with Ness D8x & D16x).

A low battery signal is sent when the battery is low and should be replaced. The battery status is sent every hour along with the supervision message. The transmitter's low battery warning is separate from the smoke detectors internal low battery sensing.

**DELAYED TRANSMISSION.** Alarm signals are delayed by 10 seconds after detection of smoke or when the Test button is pressed. This delay is disabled for 2 minutes after power-up to allow for faster testing.

#### PROGRAMMING TO A RECEIVER.

The transmitter sends a radio learn message on power up, (when you connect the battery). For programming to a Ness control panel or standalone receiver refer to the manuals for those products.

Before connecting the battery, press and hold the test button for at least 5 seconds to fully discharge the detector. This will guarantee that a learn message will be sent on power up so that you can program your receiver.

#### **REGULAR MAINTENANCE**

Clean the smoke detector at least once a month. Gently vacuum away any dust using a vacuum cleaner with a soft brush attachment. Open the cover and disconnect the battery, gently vacuum the inside of the cover and the sensor chamber then reconnect the battery. Close the cover and vacuum the outside of the detector.

Test the detector after cleaning.

Never use water, detergents or solvents to clean your smoke detector as they may damage the unit.

Test the smoke detector at least once a week.

Replace the battery when necessary with a 9V Alkaline battery.

## SPECIFICATIONS

SMOKE SENSOR TECHNOLOGY	Photoelectric.
VISUAL DISPLAY	Red alarm LED.
AUDIBLE OUTPUT	Piezo sounder.
LED INDICATOR	Normal condition: 1 flash every 30 seconds. Alarm condition: Continuous flash.
LOW BATTERY WARNING	Smoke sensor will chirp once every 30 seconds until the battery is replaced. The radio transmitter will send a low battery signal once per hour.
ALARM PERIOD	Until sensing chamber is clear of smoke.
OPERATING VOLTAGE	9V Alkaline battery
CURRENT DRAW	Standby <15µA, Alarm <12mA
RADIO TRANSMITTER TYPE	SAWR stabilised
RADIO FREQUENCY	304MHz, 868MHz, 434MHz depending on model and region.
RADIO COMPATIBILITY	All Ness radio receivers. All Ness control panels with radio options fitted.
DIMENSIONS	133mm diameter x 40mm
MODELS	106-040 304MHz Standard Ness model. 106-041 868MHz / 106-042 434MHz Export models. 106-044 304MHz OEM model.



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RSM RADIO SMOKE DETECTOR INSTALLATION NOTES REV 2.1 Document Part Number 890-358

For Ness RSM Radio Smoke Detector Models 106-040, 106-041, 106-042, 106-044

Ness Corporation manufacturing processes are accredited to ISO9001 quality standards and all possible care and diligence has been applied during manufacture to ensure the reliable operation of this product. However there are various external factors that may impede or restrict the operation of this product in accordance with the product's specification.

These factors include, but are not limited to:

1. Erratic or reduced radio range. Ness radio products are sophisticated low power devices, however the presence of in-band radio signals, high power transmissions or interference caused by electrical appliances such as wireless routers, cordless phones, computers, TVs and other electronic devices may reduce the range performance. While such occurrences are unusual, they are possible. In this case it may be necessary to either increase the physical separation between the Ness receiver and other devices or if possible change the radio frequency or channel of the other devices.

2. Unauthorised tampering, physical damage, electrical interruptions such as mains failure, electrical spikes or lightning.

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