RSM-WS/W(RED)-AS
RSM-WS/W(WHT)-AS
WIRELESS WATERPROOF WALL SOUNDER

GENERAL DESCRIPTION

The wireless waterproof wall sounder is an acoustic output device which is activated by a specific command sent from the control panel, through a translator module and other possibly present expander modules, in case of fire or emergency situations; this device provides a United Kingdom tone set. The communication between the sounder and the translator / expander module(s) is wireless via the 'Sagittarius' bidirectional protocol.
This sounder allows the installer to choose among three different tones and to set the volume by directly and manually acting on the device.

TECHNICAL SPECIFICATIONS

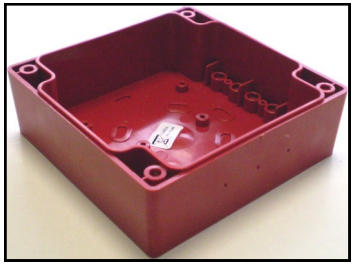
Operating frequency	916 MHz	
Communication range with the translator or the expander *	100 m	In open space
Radiated power	5 dBm (3 mW)	Typical
Modulation type	FSK	
Operating frequency channels	6	
Primary battery **	Type CR123A (3 V & 1.2 Ah)	5 years typical ***
Secondary battery **	Type CR123A (3 V & 1.2 Ah)	2 months typical ***
Operating temperature range	From -10°C to +55°C	
Max tolerated humidity	95% RH	No condensing
Ingress protection rating	IP 66	
Sound output volume (adjustable)	80 dB(A) - 100 dB(A)	
Required programming software	"Wirelex-Fire" revision 5.1.3 and successive	

*** Ideal operating range: may vary consistently according to environmental conditions.**

**** When a low battery condition is indicated, both, main and secondary, batteries must be changed altogether.**

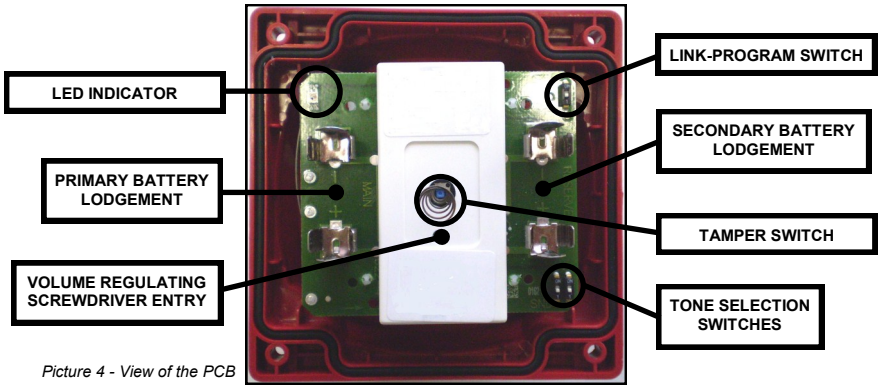
***** These lifespan values refer to the device being programmed with a control signals transmission period of 12 seconds.
If the device is activated for 30 seconds a week for test, the primary battery's lifespan reduces to 4.1 years (with the sounder activated and the volume set at maximum level).**

Picture 1 - General overview



Picture 2 - Wall base

Picture 3 - Sounder device



Picture 4 - View of the PCB

SOUNDER VISUAL LED INDICATOR

This device is equipped with a bi-colour LED (red/green) that provides visual indication for functional conditions and battery levels as indicated in table 1. The indicator is positioned on the device's PCB on the back of the sounder device (picture 4).

Device Status	Green LED	Red LED
Switching into operating mode	Short blinks	-
Switching into programming mode	-	4 short blinks
Normal mode	-	-
Main battery fault (low level)	-	Blinking (0.1 second on / 5 seconds off)
Secondary battery fault (low level)	Blinking (0.1 second on / 5 seconds off)	-
Both batteries fault	Sequential bicolor blinking (0.1 second on / 5 seconds off)	

Table 1

DEVICE'S POWER SUPPLY AND LINKING

The linking operation permits the configuration of this device on the translator module.
The linking operation described below does not change if made directly from the translator module or from the PC configuration program:

1) Verify that the secondary battery is present; if not insert the battery into its housing (picture 4), **with the poles correctly oriented as indicated on the PCB**.

2) Move the "link-program" switch to position ON.

3) Insert the main battery into its housing (picture 4), **with the poles correctly oriented as indicated on the PCB**.

   Ensure that both battery polarities are correct.

   The visual LED indicator switches green once, then four times red (programming mode) and will, successively, turn off. This indicates that the device is ready to be linked to the translator module.

4) Move the switch to position 1 to trigger the communication between the device and the translator.
   The green LED switches on once, then it blinks many times (operating mode), and, finally, after alternating green-red for one second, the indicator turns off: this indicates that the linking procedure has been performed correctly and the device has programmed itself .
   The sounder is linked and all the parameters (address, system code etc.) necessary to work correctly are stored.
   If the LED remains switched on the red light it means that the linking operation failed. In this case remove the main battery, switch over alternatively the ON / 1 switch a few times in order to discharge the internal capacitor and then start again from point 2).

   IMPORTANT NOTE! Programming is considered to be completed successfully only if there is an indication of programming success on the device and on the translator or on the window of the PC configuration program.

COMMUNICATION QUALITY ASSESSMENT

It is possible to assess the wireless communication quality of this device with the system by using an in-built testing feature.
After a successful linking operation, by switching over the "link-program" switch on the ON position, the LED indicator will start blinking according to table 2.
Always remember to reposition the switch to 1 after the assessment operation: device will NOT work operatively while the switch is positioned on the ON position.

Communication quality	Assessment	Device's indication
No communication	Fail	Two red blinks
Communication quality: 0 dB - 10 dB (Mark 2)	Poor	One red blink
Communication quality: 10 dB - 20 dB (Mark 3)	Medium-low	One green blink
Communication quality: 20 dB - 30 dB (Mark 4)	Good	Two green blinks
Communication quality: > 30 dB (Mark 5)	Excellent	Two green blinks

Table 2

DEVICE PLACEMENT

For specific information regarding detector and device's spacing, placement and special applications refer to your specific national standards.

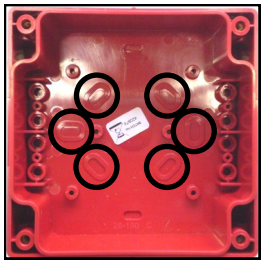
It is strongly advised to mount the device as far as possible from metal objects, metal doors, metal window openings, etc. as well as cable conductors, cables (especially from computers), otherwise the operating distance may greatly drop. The device should not be installed near electronic devices and computer equipment that can interfere with the reception's quality.

1) Select the position of the device before installing it. **Verify, from that position, that the communication between the device and the translator or the expander is correctly established and working (see the COMMUNICATION QUALITY ASSESSMENT paragraph).**

2) Install the wall base in the selected position with the provided screws (picture 5).

3) Set the device's tone and output volume; see the following paragraphs.

4) Test the sounder (see the following paragraphs), then install, screw and seal securely the sounder device onto the fixed wall box (picture 6).



Picture 5 - Wall fixing screw entry points on the wall base

Picture 6 - Screw entry points for fixing the sounder device onto the wall base

OUTPUT TONE SELECTION

Sounder's output must be selected by using the two tone selection switches (picture 4): **orientate the back of the sounder as in picture 4**. Select, by changing over the switches, the desired tone by referring to table 3; the first indicated switch in the sequence is the left one and the successive is the right one ("Switches position" column of the tables).

Switches position*	Pattern	Frequency	Rate	Main application
0 (switches: ON - ON)	Pulsed tone	990 Hz	1 Hz (500 ms on – 500 ms off)	
1 (switches: ON - OFF)	Dual tone	990 Hz and 650 Hz	2 Hz (250 ms - 250 ms)	BS fire tone
2 (switches: OFF - ON)	Continuous tone	990 Hz	Steady	BS fire tone
3 (switches: OFF - OFF)	Pulsed tone	990 Hz	1 Hz (500 ms on – 500 ms off)	

* 'OFF' position corresponds visually on the device to '1'.

Table 3 - Tone selection reference table

VOLUME REGULATION

In order to adjust the sounder's volume insert a screwdriver into its entry hole situated on the back of the sounder device (picture 4); turn the screwdriver clockwise / anticlockwise to adjust the volume.

TAMPER DETECTION FEATURE

This device is provided with a tamper detection switch-spring system (picture 4), and, in case of removal of the sounder from its wall base, it sends a tamper detection message to the control panel. For this reason assure that the sounder device is well inserted onto its wall base and securely closed.

BATTERY FAULTS

If a battery fault condition is detected on this device, a fault message is sent to the control panel via translator / expander.
This kind of fault condition is locally signaled by the device's visual LED indicator (see table 1).

TESTING

In order to test the functionality of the installed sounder, the following test must be performed: activate an alarm condition on the control panel (by a call-point or sensor in the installed system): the control panel will transmit an activation message to the device via translator / expander and activate its output.

After each test the device must be reset by the specific command on the control panel or on the translator (see the RESET paragraph).

If the test fails, check whether the batteries are charged, if mistakes were done previously or even if the system is activated. If the device's functionality is hopeless, send back the device to your distributor for repair or substitution.

All devices must be tested after installation and, successively, on a periodic basis.

RESET

To reset the sounder device from an activated or a fault condition, it is necessary to:

1) solve the cause of the abnormal condition

2) send the reset command from the control panel or from the translator.

Performing sequentially those two operations, the sound output and/or fault condition will deactivate / resolve.

MAINTENANCE

1) Before starting any maintenance work, isolate and disable the system, in order to avoid accidental and unwanted fault / tamper detection conditions.

2) Remove the sounder from its wall base.

3) Perform the planned necessary maintenance operations (e.g. battery substitution).

4) After the device has been serviced, reinstall correctly the sounder block onto its wall base, re-apply power to the system and check correct operation as described under the TESTING paragraph.

WARNINGS AND LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that this device is only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

Smoke sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Sensors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions.

Certified Product
Australian Standard
SAI Global
Lic SMK40119
AS4428.9-2006
ABN 67 153 750 648

Refer to and follow national codes of practice and other internationally recognized fire engineering standards.

Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

WARRANTY

All devices are supplied with the benefit of a limited 3 year warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product.
This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage.

Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified.

Full details on our warranty and product's returns policy can be obtained upon request.