HOCHIKI RSM-WSB(RED)-AS

AUDIOVISUAL WIRELESS WALL SOUNDER

GENERAL DESCRIPTION

The audiovisual wireless wall sounder is an output device that combines together acoustic and visual signaling features performed in case of fire or emergency situations.
This device is activated by a specific command from the control panel sent through a wire-to-wireless translator module and one or more possible wireless area expansion modules (known, also, as expander devices).
The communication between the sounder-beacon and the translator / expander modules is wireless via the “Sagittarius” bidirectional protocol.
This device allows the installer to choose among five different tones and to regulate its output volume setting; incorporated beacon’s flash rate and light intensity are fixed.

TECHNICAL SPECIFICATIONS

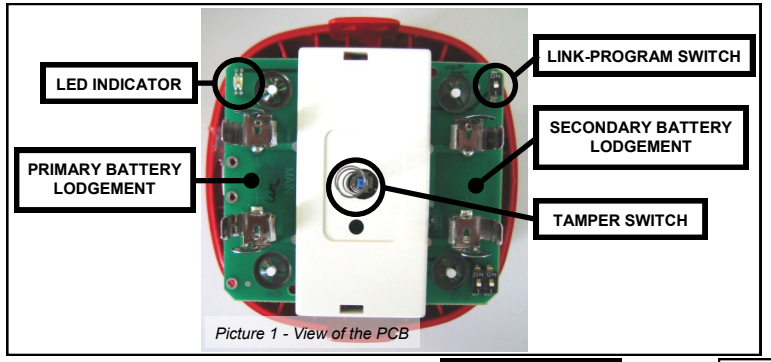
Operating frequency	916 MHz
Communication range with translator or expander *	100 m (in open space)
Max radiated power	5 dBm (3 mW)
Radio signal’s modulation type	FSK
Operating frequency channels	6
Main and secondary battery type	CR123A (3 V & 1.2 Ah)
Estimated battery life **	**>3 years**; remains operational for up to **60 days** from first appearance of the low battery warning ***
Alarm current	100 mA
Operating temperature	-10 °C - +55 °C
Max tolerated humidity (no condensing)	95% RH
Ingress protection rating	IP 21C ****
Sound output volume (selectable)	between 76 dBa and 95 dBa at max volume depending upon angle and tone selection
Beacon flash rate	1 Hz
Beacon flash light intensity	> 1 Cd
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.**

***** This lifespan value refers to the device being set with a message transmission period of 12 seconds; tests are not considered in this estimation.**

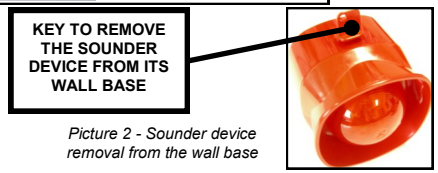
****** Type A for indoor use only.**



Picture 1 - View of the PCB

SOUNDER DEVICE REMOVAL FROM THE WALL BASE

In order to remove the sounder device from the wall base, the opening key must be inserted into the two holes present on the base; hold only the base firmly with one hand and insert and push the key into its holes with the other, until the device unblocks. During this operation be careful not to break the two pins of the key and not to drop the device on the floor.



Picture 2 - Sounder device removal from the wall base

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 (picture 1).

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Device Status	Green LED	Red LED
Power up	1 second green, then 0.5 second red for 4 times	
Programming and linking to the system	Blinking until linking and programming is completed	
Program - link failure	-	Continuously on
Normal mode	-	-
Main battery fault (low level)	-	Blinking (0.1 second on and 5 seconds off)
Secondary battery fault (low level)	Blinking (0.1 second on and 5 seconds off)	-
Both batteries fault	Sequential bicolor blinking (0.1 second on and 5 seconds off)	

Table 1

DEVICE’S POWER SUPPLY AND LINKING

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

1) Move the “link-program” switch to position ON (picture 1).

2) Insert the secondary battery into its housing (picture 1), **with the poles correctly oriented as indicated on the PCB**.

3) Insert the primary battery into its housing (picture 1), **with the poles correctly oriented as indicated on the PCB**.
The visual LED indicator switches on accordingly (see “Power up” in table 1).
Ensure that both battery polarities are correct!!!

4) When the translator (by itself or piloted by the Wirelex) is searching for a new device for linking, move the “link-program” switch to position 1 in order to initiate communication with the translator module; the visual LED indicator switches on accordingly (see “Programming and linking to the system” in table 1).

IMPORTANT NOTE!
Programming is considered to be completed successfully only if there is an indication of programming success on the translator or on the window of the Wirelex program.
If the linking and programming operation fails, check if mistakes were made with the translator or the Wirelex, remove the batteries, switch over alternatively the ON / 1 switch a few times in order to discharge the internal capacitor and then start again from point 1) re-performing the linking procedure.

COMMUNICATION QUALITY ASSESSMENT

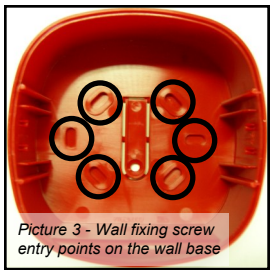
It is possible to assess the wireless communication quality of this device with the system by using an in-built testing feature.
After a successful linking operation, by switching over the “link-program” switch on the ON position, the LED indicator will start blinking according to table 2.
Always remember 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).**


Picture 3 - Wall fixing screw entry points on the wall base

2) Install the wall base in the selected position with the provided screws (picture 3).

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

4) Test the sounder-beacon (see the following paragraphs), then install securely the sounder-beacon device onto the fixed wall box.

OUTPUT TONE SELECTION

In order to select the sounder-beacon sound output, switch over, with the aid of the tip of a pen or screwdriver, the first three switches (beginning from the left side) positioned under the PCB (see picture 4).

Select the desired tone by referring to table 3 and changing over the switches as thereby specified: the first indicated digit in the sequence symbolizes the switching status of the leftmost one and the successive ones are those that follow in physical sequence ("Switches position" column of the table); value "0" means that the considered switch must be set outwards the device; value "1" means that the considered switch must be set inwards the device.

Switches position	Pattern	Frequency	Rate	Main application
011	Slow whoop tone	500 Hz to 1200 Hz	3 s sweep, 0.5 s silence	Dutch fire tone
000	Sweep (DIN) tone	1200 Hz to 500 Hz	1 Hz	DIN tone
101	Dual tone	990 Hz and 650 Hz	2 Hz (250 ms - 250 ms)	BS fire tone
111	Continuous tone	990 Hz	Steady	BS fire tone
001	Pulsed tone	990 Hz	1 Hz (500 ms on – 500 ms off)	

Table 3 - Tone selection reference table

VOLUME REGULATION

In order to adjust the sounder-beacon output volume, switch over, with the aid of the tip of a pen or screwdriver, the first switch (beginning from the right) positioned under the PCB (see picture 4).

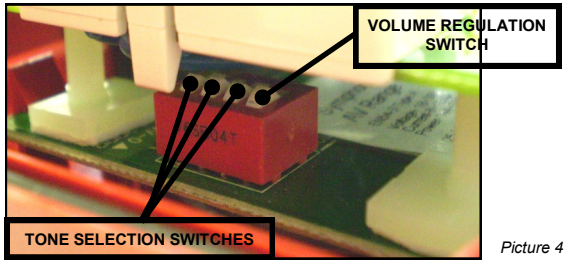
The switch, if set inwards the device, gives the highest volume, while, if set outwards, gives the lowest volume (see the TECHNICAL SPECIFICATIONS).

TAMPER DETECTION FEATURE

This device is provided with a tamper detection switch-spring system (picture 1), and, in case of removal of the sounder-beacon device from its wall base, it sends a tamper detection message to the control panel. For this reason assure that the sounder-beacon 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).



Picture 4 - Tone and volume setting switches

TESTING

In order to test the functionality of the installed sounder beacon, 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-beacon 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 strobe and sound output and/or fault condition will deactivate / resolve.

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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-beacon 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-beacon 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.