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External Wireless Sounder

Model: WL RWS401



Installation and Programming Instructions

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Introduction

RISCO Group's two-way External Wireless Sounder is designed to extend the signaling capabilities of RISCO Group's wireless systems. The wireless sounder offers an easy and flexible solution for quick installation. The sounder is powered by its own batteries and communicates wirelessly with the security panel. Up to 3 wireless sounders can be assigned to a system.

Operational Functions

Alarm / Tamper Indication

Upon an alarm condition, the sounder will be activated for a period of time defined by the system (**Bell Time Out** parameter).

Low Battery Indication

Upon a low battery condition a trouble indication is sent to the panel. There are 2 types of low battery indications:

- ◆ Radio low battery
- ◆ Speaker low battery

Supervision

Each sounder can be defined to be supervised by the panel. The system generates a local fault signal identifying the sounder whose signal is not received during a predefined time, followed by a report to the Alarm Receiving Center (if defined).

Pre Alarm Indication

When an entry time starts, the system transmits a pre-alarm signal to the sounder. If the system is unset before the entry delay time expires, a cancellation signal is sent to the sounder. If the sounder does not receive a cancellation signal within the entry delay time, the sounder will be activated.

Sounder Self Testing

Once placing all batteries in the battery holders or pressing on the reset switch located on the PCB (with the tamper switch open), the sounder performs a functional self test indicated by a strobe flash squawk sound.

LED display

The wireless sounder has 2 LEDs located on the PCB. These LEDs are enabled when the tamper is open and 10 minutes after the tamper is closed.

Red: Indicates transmission

Yellow: Indicates a low battery

Red and Yellow (3 seconds): Confirms successful learning

Mounting the Sounder

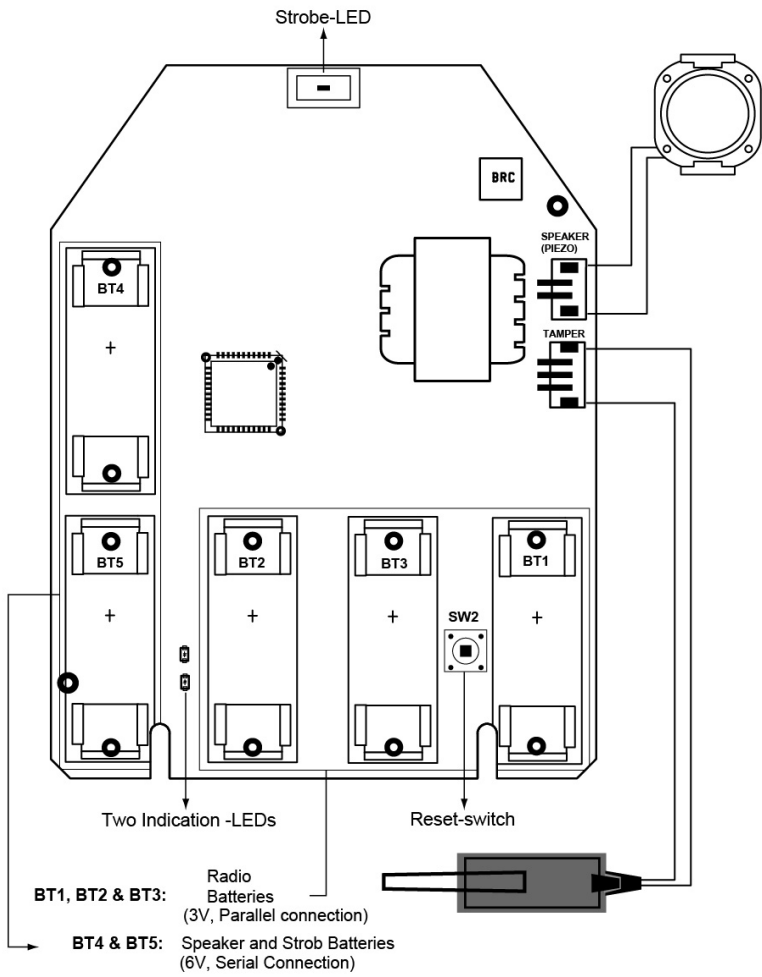
To mount the sounder follow this procedure:

1. Open the front cover by removing the case locking screw located at the bottom of the unit.
2. Hold the mounting pattern template (supplied) against the wall and mark the locations for the mounting holes (4 mounting holes are available). Drill the desired mounting holes and place the screw anchors.
3. Mount the back unit to the wall using the supplied screws, 3.9mm, 32mm length screws (DIN 7981 3.9X32 ZP).
4. Insert a tamper screw into a tamper hole -- see the figure below.
5. Access to the PCB is gained by releasing the inner cover retaining the clip and lifting the cover upward (rotating it on its axis).
6. Insert the supplied batteries in the metal clips according to the polarity. The sounder is ready for communication set up with the system.



Tamper Screw

7. After the sounder is trained, Close the inner cover, re-attach the front cover and lock the Cover Screw Assembly.



External Sounder - PCB Diagram

Programming the sounder

Programming the wireless sounder consists of the following 3 steps:

1. Setting communication between the receiver and the sounder
2. Setting sounder parameters
3. Testing the sounder

Step 1: Sounder/Receiver Communication Set up

The sounder must identify itself to the system's receiver by writing its ID into the system. Perform according to the following steps:

1. Set the receiver to the Write mode.



NOTE:

WisDom: Main engineer menu > 9) Devices > 2) Sounder > 1) Allocation > Select sounder > Choose ODWS1

Agility: Main Engineer menu: 2) Radio Devices > 1) Allocation > 1) RF Allocation

LightSYS (V2.40 and above): Main Engineer menu: 7) Install > 2) WL Device > 2) Allocation > 1) By RF > 4) Sounder

2. Select the sounder's ID.
3. Unpack the supplied batteries.
4. Insert two speaker batteries and three Radio batteries into the batteries holders.
5. After a squawk is heard and the sounder's strobe flashes you have 10 seconds to press on the tamper switch for at least 3 seconds. If the sounder is successfully recognized, the system will sound a confirmation beep and the sounder will initiate a second squawk sound and the 2 LEDs on the sounder will flash for 3 seconds.
6. Repeat the process for other sounders in the system.

Step 2: Setting the Sounder Parameters

Each sounder can be defined with different sets of parameters. The following table describes the list of parameters of the sounder.



NOTE:

For the specific programming location of each parameter refer to the system manuals.

Strobe Control

Defines the Strobe operation mode:

- **Always Off:** The strobe is deactivated
- **Follow Bell (Default):** The strobe is activated when the sounder bell is triggered
- **Follow Alarm:** The strobe is activated when an alarm event occurs in the system

Strobe Blink

Defines the number of times the strobe will flash per minute (Default 40 times per minute). Strobe Blink options:

- | | |
|-----------------------------------|-------------------------|
| [1] 20 times per minute | [4] 50 times per minute |
| [2] 30 times per minute | [5] 60 times per minute |
| [3] 40 times per minute (Default) | |

Strobe Arm Squawk

The time that strobe blinking will continue when set is performed (Default: 05)



NOTE:

If the sounder's squawk strobe is defined as NO (Refer to the Allocation section) this parameter will be ignored.

Adjusting the Volume

Defines the sounder sound volume for the following system modes:

- **Exit / Entry:** The sound produced during Exit/Entry time (Default: 0)
- **Alarm:** The sound produced during alarm (Default: 9)
- **Squawk:** The sound produced during squawk sounds (Default: 9)

The sound volume range is between 0 (silent) to 9 (maximum volume).

Muting Tamper

This feature disables a tamper alarm from the sounder and it is recommended to be used when replacing the sounder's batteries.



NOTES:

1. An ongoing tamper alarm will not be disabled.
2. **WisDom:** This feature is controlled under the Engineer Menu (Quick key [9][2][5]). Tamper alarm will be disabled during the current installation programming period.
3. **Agility:** Grandmaster Code/User Menu > Activities > Advanced > Service Mode (Agility 3 only)
The tamper alarm will be disabled for the time programmed in the Mode Service timer.
4. **LightSYS** (V2.40 and above): Grandmaster Code/User Menu > Activities > Advanced > Service Mode
The tamper alarm will be disabled for the time programmed in the Mode Service timer.

Setting Supervision Time

Specifies how often the system generates a supervision request to the sounder.

If any of the sounders does not respond to the request at least once during the receiver supervision time, the system will regard the accessory as lost.



NOTE:

The receiver supervision time should be higher than the sounder supervision time in order to eliminate false lost event.

Range: 00-255 minutes

Default: 58 minutes



NOTE:

WisDom: Engineer menu: 1) System > 1) Timers > 9) Accessory supervision time

Agility: Engineer menu: 1) System > 1) Timers > TX supervision

LightSYS (V2.40 and above): Engineer menu: 1) System > 1) Timers > 6) Wireless > 3) TX supervision.

Pre Alarm indication

This wireless sounder incorporates a pre-alarm feature that enhances the security of the system by producing a local alarm in case of sabotage.

If defined, the system sends a pre-alarm signal to the sounder at the beginning of the entry delay. If the sounder does not receive a cancellation signal from the system at the end of the entry time, the sounder goes into alarm mode.



NOTE:

WisDom (Ver 4.25): Engineer menu Quick key: 1)System> 2)Parameters> 35)Sunder Pre alarm

Agility: Engineer menu: [1][2] > Advanced > Sunder Pre alarm

LightSYS (V2.40 and above): Engineer menu 1) System > 2) Controls > 7) Device > 5) Sunder Pre alarm

Step 3: Testing the Sounder

Communication Test

The sounder communication test performs a communication test between the sounder receiver and the system.

➤ To perform a communication test:

1. Access the communication test option.



NOTE:

WisDom: Engineer menu > 9) Devices > 2) Sounders > 3) Communication test

Agility: Engineer menu > 2) Testing > 5) Sunder > 1) Communication test

LightSYS (V2.40 and above): Installer Code/User menu: Maintenance > Wireless Test > Wireless Sounders > Comm. Test.

2. The system sends a test signal to the sounders. A number between 00-99 indicates the strength of the communication signal between the system and the sounder.



NOTE:

For successful communication, the strength of the signal should be higher than the sounder receiver noise threshold level.

WisDom: Engineer menu quick key [9][2][4], **Agility**: Engineer menu > 2)Testing >1) Main unit > 1)Calibration).

Agility: Engineer menu: 2) Testing > 1) Main unit > 1) Calibration

LightSYS (V2.40 and above): Engineer menu: 7) Install > 2) WL Device > 1) RX Calibration.

Diagnostics

The Diagnostics menu enables to test parameters reflecting the operation of the sounder:

- ◆ **Speaker batteries voltage**: Tests the selected sounder's speaker batteries voltage
- ◆ **Radio batteries voltage**: Tests the selected sounder's radio's batteries voltage
- ◆ **Sounder version**: Displays information regarding the sounder's version



NOTE:

WisDom: User menu: 4) Maintenance > 7) Sounders > 1) Diagnostics

Agility: Engineer menu > 2) Testing> 5) Sunder>2) Battery test > 3)Version

LightSYS (V2.40 and above) Battery Test: Installer Code/User menu: Maintenance > WL Test > WL Sounders > Battery test

LightSYS V2.40 and above) Sunder Version: Installer Code/User menu: Maintenance. > Diagnostics > Sounders > Select Sunder >Version

The diagnostic features can also be performed from the Upload/Download software, locally or remotely.

- ◆ **Sounder Calibration**: Displays information regarding the noise level around the sounder.

**NOTE:**

WisDom: Engineer menu quick key: [9][2][4]

Agility: Engineer menu: 2) Testing > 5) Sounder > 4) Noise level > 1) View > 2) Calibrate

LightSYS (V2.40 and above): Installer Code/User menu: Maintenance > Diagnostics > Sounders > Select Sounder > Calibration

Replacing Batteries

1. Before opening the sounder it is advised to silence the tamper alarm using the Tamper Mute option.
2. Remove the screw from the bottom of the sounder cover and open both covers upwards and away from the sounder.
3. Remove the old batteries from the metal clips and replace them with the new ones. Pay attention to the polarity.
4. Replace both of the covers on the sounder and close the locking screw.

**NOTES:**

Dispose of old batteries according to your local regulations.

Risk of explosion if battery is replaced by an incorrect type.

Technical Information

Electrical

Power supply	5 x CR123, 3V Lithium batteries 3 batteries for the wireless system 2 batteries for signalling
Battery lifetime	3 years (typical)
Sounder volume	105 dB @ 1 meter (3.3") - adjustable
Strobe lens	Polycarbonate
Flash frequency	60 times per minute (max.)
Dimensions (HxWxD)	273 x 230 x 64 mm (10.7 x 9.0 x 2.5 inch)
Weight (including batteries)	1 Kg (2.2lbs)

Wireless

Wireless technology	Bidirectional narrow band
Frequency	868 MHz, 433 MHz
Range	150m (492') Line of sight
Monitoring	YES
Modulation Type	ASK

Environment

Temperature range	- 25°C to 60°C
IP class	IP 44
Environment class	Class IV

RTTE Compliance Statement

Hereby RISCO Group declares that this wireless sounder is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

RISCO Group Limited Warranty

RISCO Group Ltd. and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 24 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by the Seller, Seller cannot guarantee the performance of the security system which uses this product. Seller's obligation and liability under this warranty is expressly limited to repairing and replacing, at Seller's option, within a reasonable time after the date of delivery, any product not meeting the specifications. Seller makes no other warranty, expressed or implied, and makes no warranty of merchantability or of fitness for any particular purpose.

In no case shall seller be liable for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever.

Seller's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection.

Seller, in no event shall be liable for any direct or indirect damages or any other losses occurred due to any type of tampering, whether intentional or unintentional such as masking, painting or spraying on the lenses, mirrors or any other part of the detector.

Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery or fire without warning, but is not insurance or a guaranty that such will not occur or that there will be no personal injury or property loss as a result.

Consequently seller shall have no liability for any personal injury, property damage or loss based on a claim that the product fails to give warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage arising from under this limited warranty or otherwise, regardless of cause or origin, sellers maximum liability shall not exceed the purchase price of the product, which shall be complete and exclusive remedy against seller.

No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week.

Contacting RISCO Group

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