INSTALLATION MANUAL

SOUNDER MODELS

RONDO L – RONDO LS

GENERAL DESCRIPTION

Sounder mod. **RONDO L** is a low-consumption sounder with high-brightness LED flashing unit – anti-opening and anti-removal tamper – sound and timing programming – alarm counting – microprocessor self-test of: battery, speaker and drivers with dedicated anomaly negative output – programming of sounder trigger polarity – permanent or momentary optical indication of alarm system ON/FF (arming/disarming) – electronic board protected against polarity inversion and tropicalized through a special resin tropicalization process against bad weather conditions and moisture. External cover and sounder base are in ABS while the internal cover is made of zinc-plated steel.

The tamper devices detecting removal, sounder opening, foam and shock are to be connected in series. In case of tamper attempt, they open the contact between the two TAMPER terminals thus triggering off the alarm.

Sounder mod. **RONDO LS:** technical features as RONDO L **with double micro switch anti-foam circuit provided of anti-shock technology** against hard hits.

TECHNICAL FEATURES

Voltage	Nominal battery recharge	13.0 ± 13.8 Vdc
	Minimum command	4.1 Vdc
	Minimum supplying	10 Vdc
	Max supplying	15 Vdc
Current	Max consumption from control panel (for battery recharge and sound)	500mA ± 100 mA
	Battery consumption in alarm	1.3 A +100/-300 mA
	Flashing unit consumption	90mA ± 10 mA
	Consumption in stand-by	15mA
	Consumption from control inputs	+0.5 mA @Vc=12V; -0.3 mA @Vc=0V
	Open collector	-10mA Max
Fundamental frequency		See CHART 6
Sound pressure		See DIAGRAM 1
Life of LED flashing light		1,000,000 flashes
Timings		3 minutes, settable at 8 min
Battery	Housing capacity	12V 1.2Ah or 12V 2.2 Ah max
	Duration in stand-by	120 hours using 12V 2.2 Ah model
Control panel command		2 or 3 wires
Tamper switch		N.C. 0.2 A max; cover opening and sounder removal from wall
Mechanic		
Cover		Painted ABS
Base		ABS
Internal cover		Zinc-plated steel
Flash cover		Polycarbonate
Temperature conditions		from –25° to +55° C
Environmental class		Class IV
IP protection		IP 44
Relative humidity condition		from 20% to 100% of RH
Size		330x210x110 (H x L x W)
Weight		1,850 gr
Standards compliance	Certification body (IMQ-SISTEMI DI SICUREZZA)	EN50131-4:2009
Security		Grade 3

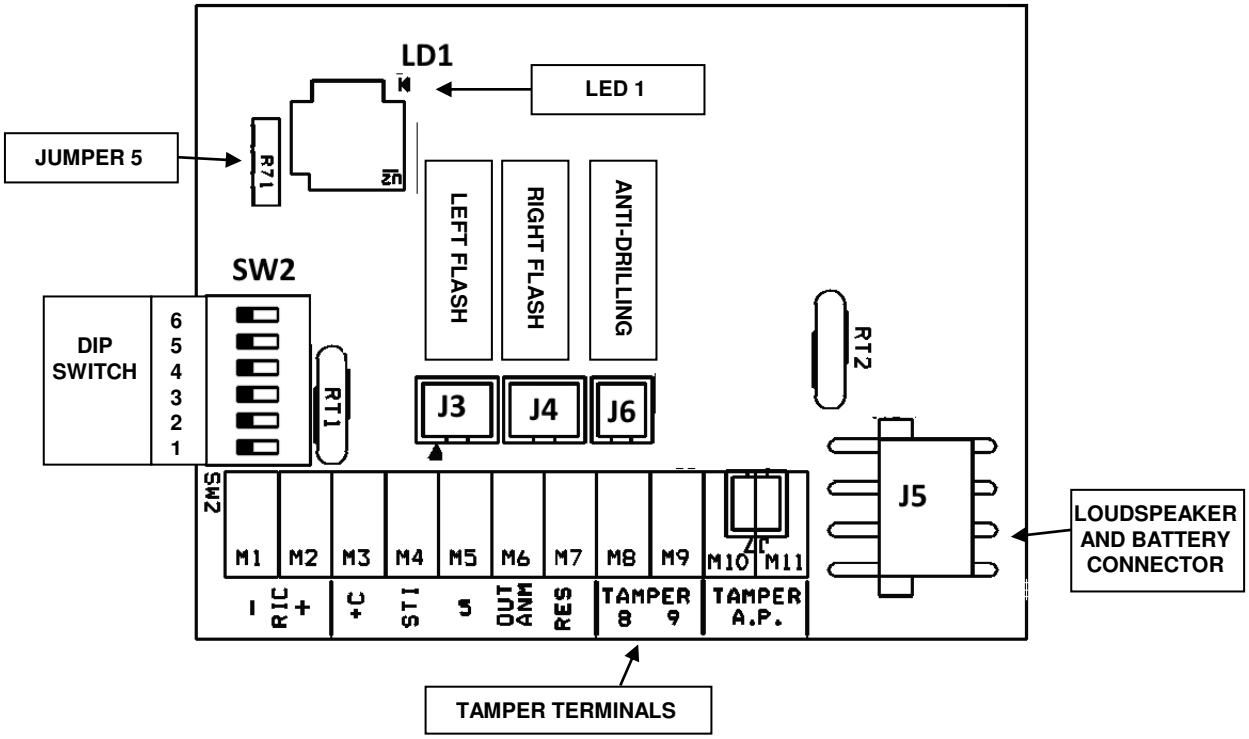
MOUNTING:

1. Use the 6mm plugs to fix the siren on the wall; always check if the tamper works properly;
2. Insert the connection cables through the holes located on the lower part of the sounder base;
3. If necessary, modify the default settings by acting on the dipswitches as shown in the charts below;
4. Connect battery and power supplying to the alarm control panel;
5. Close both internal and external covers using the screws provided.

Battery must have UL94-HB flammability rate.
Power supplying must be of SELV type.

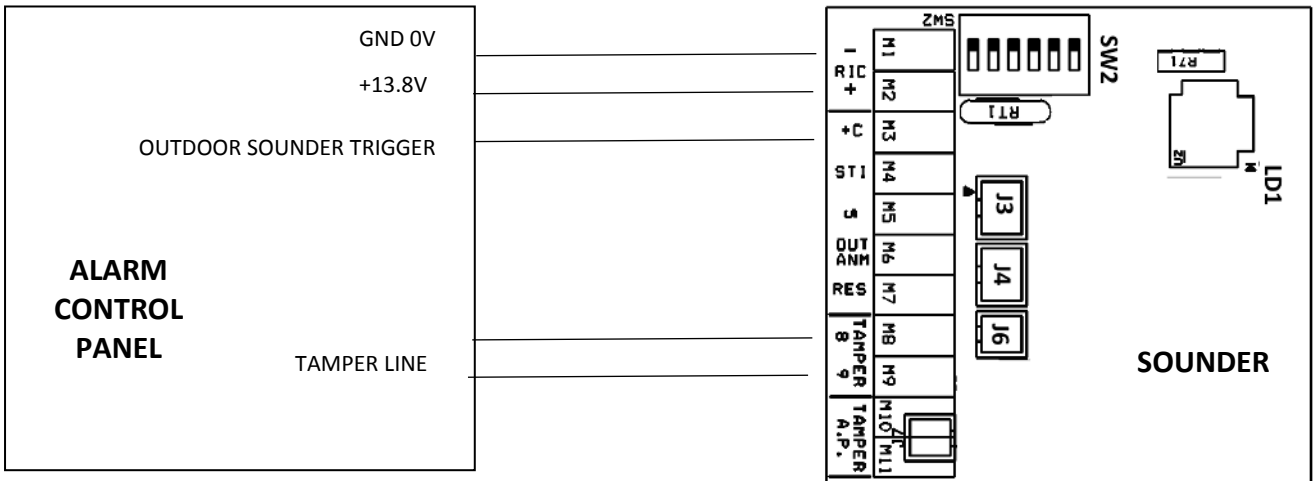
<u>Attention</u>: in order to avoid moisture formation inside the sounder, it is important to prevent air from flowing in the cable tray. To obtain such a result, once the sounder is connected, seal the hole using some silicon or any other filler type. This operation avoids the formation of moisture inside the sounder; condensation mostly appears in winter and it is usually caused by warm and humid air coming out of the wall where the sounder is installed and passing through the holes located on the sounder base. Condensation and moisture can affect the sounder which might not work properly.

<u>CONNECTION SCHEMES</u>



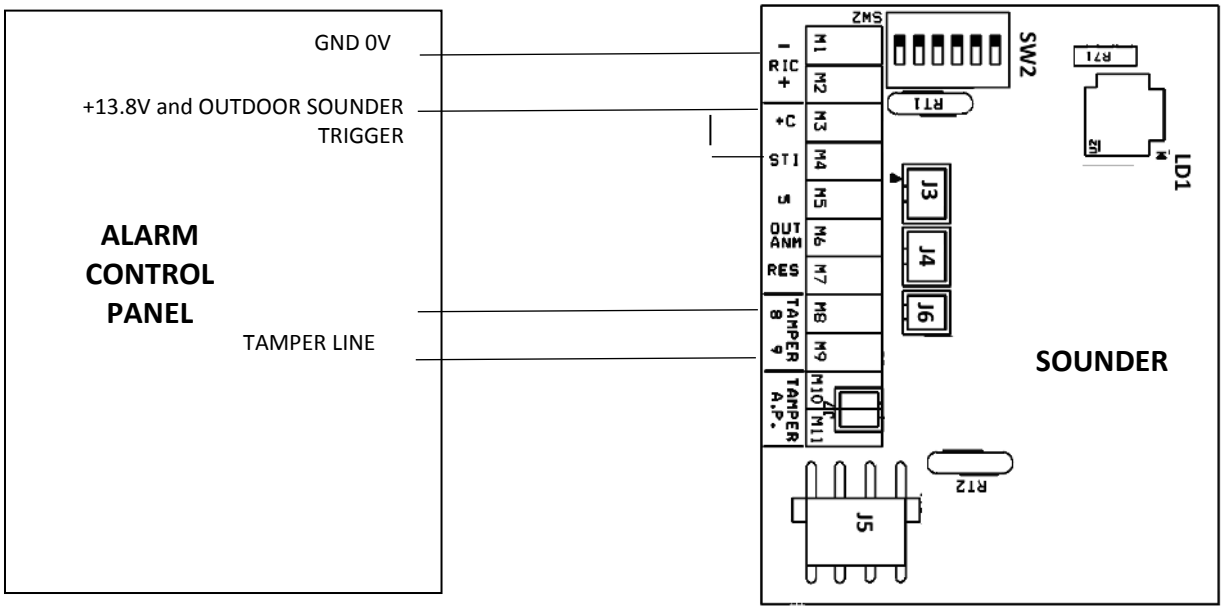
1. **<u>THREE-WIRE CONNECTION</u>**

   Connect 13.8 Volt supplying coming from control panel to the dedicated terminals:
   -RIC negative; +RIC positive; +C positive-missing trigger.
   <u>Note: by default, DIPSWITCH N°2 is set in OFF position, POSITIVE-MISSING TRIGGER</u>



2. TWO-WIRE CONNECTION

Connect 13.8 Volt supplying coming from control panel to the dedicated terminals:
-RIC negative; +RIC positive. (+C trigger must be jumped to +RIC)
Note: by default, DIPSWITCH N°2 is set in OFF position, POSITIVE-MISSING TRIGGER



3. OPTICAL INDICATION OF SYSTEM STATUS (MOMENTARY OR PERMANENT ON-OFF)

- If a positive is given to terminal STI (System status) all LEDs of the flashing light make 3 flashes (ON);
- If the positive is removed, all LEDs light on steady for 5 seconds (OFF) and the complete sounder test is launched (remote test).

By default, DIPSWITCH N°4 is set in OFF position (MOMENTARY ON-OFF)
DIPSWITCH N°4 in ON position (MOMENTARY ON-OFF) and 1 LED keeping on flashing as long as positive tension = 12V is given to terminal STI.

ATTENTION: BY BRINGING DIP 5 IN ON POSITION, THE ALARM SYSTEM INDICATION COMMAND TURNS NEGATIVE

4. SOUNDER TIMING

By default, timing is 3 minutes (DIPSWITCH N°1 in OFF position) and it can be modified into 8 minutes.

5. TERMINAL OUT ANM AND FAULTS LED

The microcontroller managing the sounder is able to check if recharge, battery, loudspeaker and drivers are working properly. In case of faults, the open collector output OUT ANM opens while the LED located on the sounder board shows the type of fault by making a certain number of flashes followed by a short pause (please see chart here below for FAULTS LED signalisation).
The microcontroller automatically performs every 4 hours the battery current test. Moreover, other tests are performed on regular basis. Usually, if the sounder is **properly** supplied, the faults output (terminal 6) **remains at 0V** (max consumption 50mA). In case any of the tests performed **fails**, the faults output **disconnects from the ground and becomes free**. Moreover, the microprocessor is always under self-test and in case of failure or malfunctioning, it gives a **free output** with sound interruption.
At the first sounder supplying (13.8V or battery), anomalies automatically reset once the cause disappears; this makes the installation easier. After the first activation of the sounder, anomalies reset only through a command to STI or +C terminal.
To launch the remote test, take terminal n°4 (STI) to 12V for 10 seconds and then let it free. This action launches the test that lasts 60 seconds. During the test, the sounder verifies if it is working properly and provides signalization of any faults through the faults output (OUT ANM) and the faults LED as shown in CHART 1: FAULTS below. **To reset the fault, first eliminate the fault cause, then wait 10 seconds and take terminal n°4 (STI) to 12V for at least 10 seconds. By setting terminal +C free for a short time, all faults are reset, with the exception of those concerning the battery that are reset**

after 4 hours from battery restore (replacement). The sounder performs all tests again and therefore updates battery faults too.
In case a fault occurs, the LEDs of the flashing light flash faster.

CHART 1: FAULTS

Fault type	Led LD1	Output OUT ANM
Speaker interruption (test performed every 10s)	1 FLASH	OPEN
No recharge current (recharge V < 12V) (test performed every 10s)	2 FLASHES	OPEN
Battery not connected (test performed every 12 hours)	3 FLASHES	OPEN
Low battery (battery V < 10.5V) (test performed every 10s)	4 FLASHES	OPEN
Damaged battery – internal resistor over 3.5 Ohm (test performed every 12 hours)	5 FLASHES	OPEN
Speaker drivers failure	6 FLASHES	OPEN
No anomaly	OFF	0V

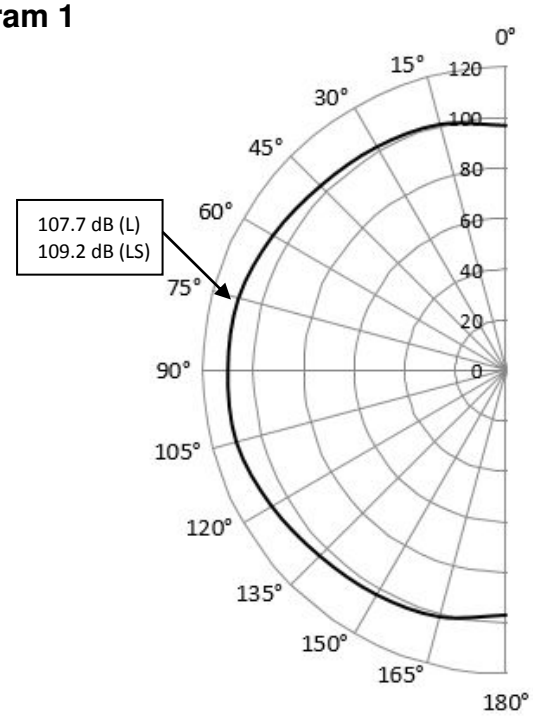
6. CONNECTION OF MICRO SWITCH ANTI-OPENING AND ANTI-REMOVAL TAMPER

Connect the tamper line coming from control panel in series to the two wires of micro switch located on the sounder using the dedicated terminals TAMPER 8 and 9.

7. CONNECTION OF ANTI-FOAM (LS model)

Connect the two wires of the antifoam device in series to the micro switch and the tamper line coming from control panel.

Diagram 1



RONDO' **LS** DIP3 in ON position	
Angle	dB (A) @1m
15°	102.8
45°	102.0
75°	109.2
105°	108.6
135°	103.2
165°	101.4

RONDO' **L** DIP3 in ON position	
Angle	dB (A) @1m
15°	103.8
45°	100.7
75°	107.7
105°	108.4
135°	103.2
165°	103.0

CONNECTION and SETTINGS

Chart 2: dipswitches and jumpers	
DIP 1	Alarm timing
DIP 2	Polarity of alarm input +C
DIP 3	Tone selection
DIP 4	Alarm system STI (ON/OFF) notice setting
DIP 5	STI polarity (alarm system ON/OFF)
DIP 6	Alarm trigger mode +C
JUMPER 5	Max daily alarms

Chart 3: wiring	
Terminals	**Connections**
-RIC (1)	Negative supplying 0V GND
+RIC (2)	Positive supplying +13.8V
+C (3)	Sounder control chart 5
STI (4)	ON/OFF indication of alarm system status
5	Do not connect
OUT ANM (6)	Fault output. Open collector, 0V = no anomaly
RES (7)	Do not connect
TAMPER (8)	Self-protection N.C.
TAMPER (9)	Self-protection N.C.

Chart 2: alarm timing	
DIP	**Alarm duration**
OFF	3 minutes
ON	8 minutes

Chart 4: polarity of alarm input +C	
DIP 2	**Terminal +C**
OFF (default)	Positive-missing trigger
ON	Negative-missing trigger

Chart 5: tone selection		
DIP 3	**Tone**	**Frequency limits (Hz)**
OFF	Increasing-continuous-decreasing	1,200 ÷ 1,750
ON (default)	Increasing-decreasing (NFC 48-265) – **CERTIFIED**	1,400 ÷ 1,600

Chart 6: Alarm system STI (ON/OFF) signalization setting		
DIP 4	**Terminal 4**	**Flash status (ON/OFF)**
OFF (default)	+12V	All LEDs flash 3 times
	Not connected or 0V	All LEDs remain steady on for 5 seconds then switch off
ON	+12V	All LEDs flash 3 times and one LED keep on flashing
	Not connected or 0V	All LEDs remain steady on for 5 seconds then switch off

Chart 7: Alarm system mode	
DIP 5	**Terminal STI**
OFF (default)	Positive giving trigger
ON	Negative giving trigger

Chart 8: Alarm trigger mode +C		
DIP 6	**Terminal +C**	**Note**
OFF (default)	Missing trigger	Alarm occurs by disconnecting the 12V or 0 V (see DIP 2)
ON	Giving trigger	Alarm occurs by connecting the 12V or 0 V (see DIP 2)

Chart 9: Max daily alarms	
JUMPER 5	**Number of alarms during 24 hrs after the first alarm**
CONNECTED (default)	Infinite alarms
CUT	Restriction to 4 daily alarms (24 hours) of sound activation (STI resets the counter to zero)

INSTALLATION SUGGESTIONS

In case the sounder does not work properly, check if the on-board LED flashes. If it flashes, check FAULTS CHART here above.

WARRANTY

All Venitem products are granted against factory or material defects. In order to improve design and quality of the products, Venitem reserves the right to modify the products without prior notice. All faulty or defective products must be returned to the supplier

MADE IN ITALY

DISPOSAL:
This product must be disposed of using the appropriate bins for electrical and electronic products. This product must not be placed in bins for collection of other waste types.

NOTE

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