



# WIRELESS COMBINED OUTDOOR SIREN «TRUBACH-U-RK»

## Installation Guide

### 1 General Information

1.1 Wireless combined outdoor siren «Trubach-U-RK» (hereinafter, the Siren) is designed for informing people about events and emergencies by generating light and acoustic signals.

1.2 The Siren is intended for operation as a component of a system that is operated by a control panel (hereinafter, CP), supporting «Rielta-Contact-R» wireless two-way communication data exchange protocol.

1.3 Wireless signal exchange with the CP is executed via two-way addressable wireless communication within the 433.05 to 434.79 MHz frequency range.

Two frequencies are used for the radio exchange: the main frequency and the reserve one. The Siren switches to the reserve operating frequency automatically in case of radio-frequency interference on the main one.

1.4 Transmitter power does not exceed 10 mW.

1.5 The Siren is powered either by two lithium batteries of CR123A type with a 3 V nominal voltage located inside the case, or from external power supply with a nominal voltage of 9 - 30 V.

If power is supplied from both sources (the batteries and the external power supply), **the Siren is out of service!**

1.6 The Siren generates and transmits the following messages via radio communication channel:

- «Norm»;
- «Tamper» – after case tampering;
- «Main power supply failure» – if the power-supply battery voltage drops below  $(3.5 \pm 0.5)V$  or the external power supply voltage drops lower than  $(8 \pm 1) V$ ;
- «Backup power-supply failure» – if the power-supply voltage drops below  $(3.2 \pm 0.5) V$ .

1.7 The following rates of the control radio exchange may be assigned by the command from CP: 10 s, 15 s, 30 s, 60 s, 2 min, 5 min. Alarm messages are transmitted immediately.

1.8 The Siren switching ON / OFF and modes of its operation adjustment are executed by commands from the CP.

1.9 The Siren provides continuous and pulse alarm modes.

1.10 The User is able to set pulse mode parameters.

1.11 The Siren provides a light signal contrast at illumination level up to 500 lk.

1.12 Operation modes of the Siren are displayed by two LED indicators (see Table 3).

1.13 The Siren being powered by built-in power supply battery ensures safe operation in standby mode for not less than 8 years.

1.14 The Siren is designed to operate continuously around the clock in closed premises of residential and industrial buildings and structures, as well as in open areas under roof.

1.15 The Siren is resistant to the impact of electromagnetic interference.

### 2 Specifications

Table 1

Parameter	Value
Acoustic pressure level at 1 m distance from the Siren, not less	95 dBA
Generated acoustic signals frequency	2 ... 5 kHz
Average consumption current in a standby mode:	
– in the battery mode*, not more	16 $\mu A$
– in the external power supply mode, not more	5 mA
Average consumption current in an acoustic alarm mode (both: in battery or in external power supply modes), not more	280 mA
Average consumption current in a light alarm mode:	
– in the battery mode*, not more	200 mA
– in the external power supply mode, not more	100 mA
IP rating	IP54
Dimensions, not more	220 x 330 x 90 mm
Weight, not more	1 kg
Average service life	8 years
Operating conditions	
Operating temperatures:	
– in the battery mode	minus 20...+55 °C
– in the external power supply mode	minus 40...+55 °C
Permissible moisture at a temperature of + 25 °C	100 %

\* – with a radio exchange interval of at least 60 s, radio interference absence and an ambient temperature of +25 °C

A typical directional pattern (horizontal and vertical) of the sound channel of the Siren is shown in Fig. 1.

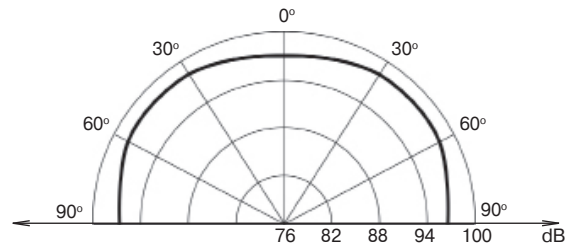


Figure 1 – Directional Pattern

### 3 Scope of Delivery

Each Siren unit package contains the items listed in Table 2.

Table 2

Name	QNT.
Wireless combined outdoor siren «Trubach-U-RK»	1 pc
Lithium power supply battery CR123A	2 pcs*
Screw 3-5x40.016	4 pcs
Wall plug NAT 8x40 SORMAT	4 pcs
Wireless combined outdoor siren «Trubach-U-RK».	1 copy
Installation Guide	
* Installed	

### 4 Protective Measures

Dangerous voltages for human health are absent in the Siren.

### 5 Design

The Siren layout is shown in Figure 2.

The case comprises the following components:

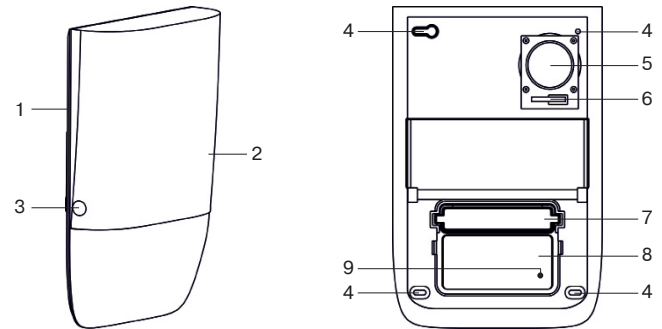
- base (1);
- cover (2) fixed by two screws (3).

The base contains:

- four mounting holes (4) to the wall;
- piezo-transmitter (5);
- tamper contact (6);
- PCB in transparent protective case (8).

The protective case includes:

- battery compartment (7);
- two-colour LED indicator (9).



a) exterior view

b) with cover removed

Figure 2 – «Trubach-U-RK»

Battery compartment (Figure 3) stores:

- «RESET» pin contacts;
- two lithium batteries with isolators and extractors intended for easy batteries extraction, and a leading-in socket for external power supply «-12V+».

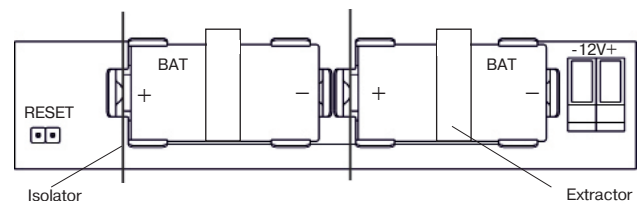


Figure 3 – Battery compartment

## 6 LED Indication

The Siren displays its state by the LED indication as shown in Table 3.  
Table 3

Operation Mode	LED Indication
Binding	Green LED intermittent blinking
Binding is finished	Short-run (2 s) red LED continuous lighting
Identification	Alternate green and red indicators blinking
Communication Quality	See Table 4

## 7 Switching On and Pre-starting Procedures

In general, the operating procedure comprises the following steps:

- binding with the CP (logging in the CP);
- choosing place of installation and communication quality appraising;
- installation.

## 8 Binding with the CP

8.1 Prepare the CP for new device binding («Binding» mode) in accordance with the CP Manual. During binding procedure in radio coverage zone there must be only one CP ready for binding with the new device.

8.2 Remove the plugs from the screws (Fig. 2, pos. 3). Untighten the screws. Holding the base, pry off the case cover from the lens side (Fig. 4) and put it off.

8.3 Remove the isolators or energize the Siren by an external power supply.

8.4 Close «RESET» pin contacts on the printed circuit board (PCB) by a current-conducting item until indication «Binding» is switched on.

8.5 Execute binding procedure. Successful binding is displayed by short-run red LED indicator binding.

**NOTE** – The binding mode is active for 100 s. In order to resume the binding procedure Cls. 8.4, 8.5 should be repeated.

## 9 Choosing Place of Installation

9.1 It is not recommended to install the Siren in the following places:

- on massive metal constructions and closer than 1 m to them;
- closer than 1 m to power cables and metal water and gas pipes;
- near radio interference sources;
- inside metal constructions.

9.2 Install the Siren at a place where communication quality is appraised as «Excellent» or «Good» (see Cl. 10).

## 10 Communication Quality Appraising

10.1 Bring binded Siren to the chosen place of installation.

10.2 Press and then release tamper contacts (Fig. 2, pos. 6).

10.3 Apprise communication quality with the CP by LED indication modes in accordance with Table 4.

Table 4 – LED indication of communication quality control results

LED Indication		Communication Quality Appraisal	Recommendations
Color	Mode		
Green	Three blinks	Excellent	Install the Siren in this place
Green	Two blinks	Good	
Green	One blink	Communication established	Use repeaters of «Ladoga-RK» product line
Red	A series of blinks	No communication	

## 11 Installation

11.1 Choose a place for installation, mark places for the Siren fixation (Figure 5). Use the Siren case as a template for marking.

11.2 Fasten the Siren with the removed cover in the chosen place by means of the screws using four fixation holes.

11.3 Install the cover and fix it by two screws.

11.4 Put plugs on the screws.

## Overall Mounting Dimensions

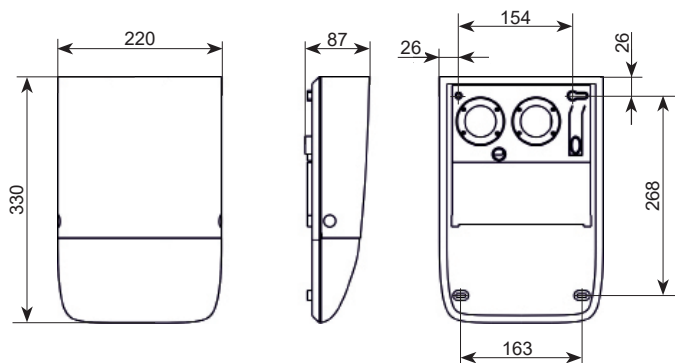


Figure 5

## 12 Storage and Transportation

12.1 The Siren in transport packaging should be stored in heated, ventilated storage premises which should not contain any current-conducting dust, acid and alkali fumes, or corrosive or destroying insulation gases.

12.2 The Siren in its original packing may be shipped by any transport means in closed vehicles that assume transportation over any distances in compliance with the existing shipping rules concerning the respective means of transportation.

12.3 During storage and transportation periods lithium batteries must be removed from the holder or isolators should be inserted.

12.4 After transportation under the conditions different to exploitation conditions, the Siren shall be ready to operate after a maximum of 6 h.

## 13 Recycling

13.1 The Siren recycling is fulfilled taking into account the absence of toxic components in it.

13.2 The batteries recycling is performed according to the rules of disposal of batteries.

## 14 Manufacturer's Guarantees

14.1 The manufacturer guarantees conformity of the «Trubach-U-RK» to the technical requirements during 42 months since the date of manufacture provided that the transportation, storage, installation and operation conditions are observed.

14.2 The guaranteed shelf life of the «Trubach-U-RK» is 36 months since the date of manufacture within the limits of guaranteed shelf life.

14.3 The Siren that is found non-conforming to the technical requirements shall be repaired by the manufacturer, provided the installation and operation rules have been complied with.

14.4 Warranty obligations are not applied to the power supply batteries.

## 15 Packing Certificate

Wireless combined outdoor siren «Trubach-U-RK» has been manufactured in compliance with the active technical documentation, classified as fit for operation and packed by «Development and Production Enterprise RIELTA» LLC.

Packing date \_\_\_\_\_  
month, year