Astra-TRC Bracelet

Wireless Transmitter

Operation Manual

This Operation Manual describes principles of functioning, proper use, maintenance and service of the wireless transmitting device Astra-TRC Bracelet (hereinafter "bracelet") (Figure 1).
The manufacturer reserves the right to make improvements in the bracelet design without prior notice. The alterations shall be included into a new edition of Operation Manual.

1 Function

1.1 The bracelet is a small-sized radio transmitter provided with an independent battery, and designed to generate and transmit encoded signals upon pressing a button.
1.2 Encoded signals shall be transmitted after the button is pressed. The LED indicator illuminating within 2-3 s. denotes signal transfer.
1.3 The indicator will flash on each 2s within 0,2s for a period of 5 min. confirming to the police that the button was pressed, and that the activation of the button wasn't false.
1.4 The bracelet will stop transmitting signals in 20 seconds after pressing the button, regardless of how long you press the button, even if it is still pressed.
1.5 The bracelet is powered from a 3V battery, type CR2430.
1.6 If light intensity is inferior and the LCD indicator blinks when the button is pressed, it indicates that the battery in the bracelet is low.
1.7 The manufacturer guarantees a minimum communication range 50m between Astra-RVC receiver (hereinafter referred to as receiver) and the bracelet in line of sight in the area with dry ground in the absence of strong radio interference, and objects interfering with and reflecting radio waves. The communication range between the receiver and the bracelet can be cut down to 30m inside concrete buildings and in presence of radio interference.

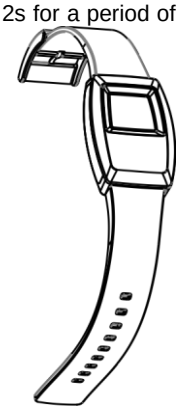


Figure 1

2 Specifications

Operating frequency, MHz ..... . 433,82 - 434,02
Power supply voltage, V, max 3
Output capacity, mWt, max 10
Current consumption:
- in standby mode, μA, max.....5
- in radio transmission mode, mA, max 35
Overall dimensions (without band) .....52,3×36×13
Weight (with battery), kg, max.....0,04
Operating Conditions
Temperature range, °C..... .from 0 up to +50
Relative air humidity,%.....up to 95 at + 35 °C
Without moisture condensation

3 Delivery Set

Radio transmitting device
Astra-TRC bracelet .....1 pcs.
Battery CR2430 (included) .....1 pcs.
Operation Manual.....1 copy.

4 Structure

The bracelet is designed as a wrist watch, and consists of a cover and a base (Figure 2).
The front cover contains a button and a printed circuit board with radio elements.
The printed circuit board contains an indicator controlling operation of the bracelet.

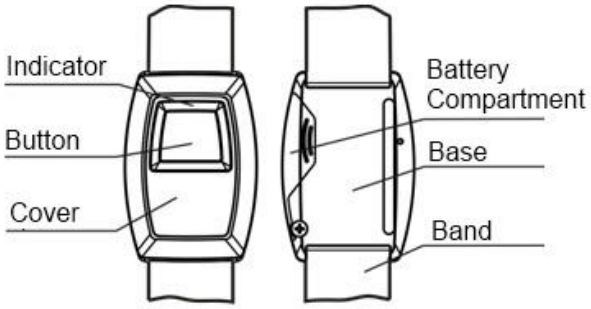


Figure 2

5 Registration of the Bracelet in Receiver Memory

5.1 After transportation in conditions differing from those of operation keep bracelet unpacked under supposed operation conditions for at least 2 hours.
5.2 Bracelets shall be registered in turns in any order. In case of successful registration, receiver will "save" in its nonvolatile memory a unique factory number of the bracelet, and will attribute a serial number in the order of registered bracelets. An illustrated manual describing registration of bracelets is provided in **Appendix A**.
5.3 Clear the receiver memory before registration of the first bracelet.
1) Remove the front cover from the receiver by pushing a base clip from the cover slot.
2) Install jumpers on **F1** and **F2** plugs.
3) Power the receiver up.
4) A green receiver indicator will blink once per 4 seconds.
5) Press and hold the button on the receiver until the green indicator is off. The receiver memory is clear.
6) Power the receiver off.

5.4 Registration of First Two Bracelets

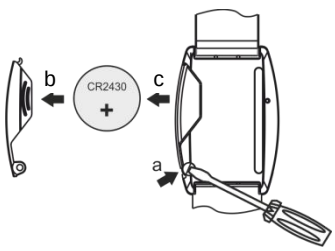
1) Remove the front cover from the receiver by pushing a base clip from the cover slot.
2) Install jumpers on **F1** and **F2** plugs of the receiver**.**
3) Power the receiver up.
A green receiver indicator will blink **once per 4 seconds**, **a red** indicator is **off.**
4) Briefly press the **button** on the receiver. The green indicator will illuminate. The receiver will switch to the registration mode for **30 s.**
5) Press **the button** on the **bracelet** which is to be registered. The **green** indicator on the receiver will be **off**.
6) Press **again** the button on the bracelet which is to be registered.
The **green** indicator on the receiver will be blinking 2 times per 1 second within **4 seconds**. It will indicate successful registration.
The green indicator will blink **2 times** and switch to the standard mode (blinks 1 time per 4 seconds). It will indicate a failed registration.
Possible **causes of failed** registration:
– the bracelet has been earlier registered – if you press the button on the bracelet a red indicator will illuminate on the receiver;
– the registration procedure is wrong – repeat registration steps til 5.4 or 5.5.
7) Power the receiver down.
8) Remove jumpers from **F1** and **F2** plugs**.**
9) Close the receiver cover.

5.5 Registration of the Third and the Following Bracelets

1) Remove the front cover from the receiver by pushing a base clip from the cover slot.
2) Install jumpers on **F1** and **F2** plugs of the receiver**.**
3) Power the receiver up.
A green receiver indicator will blink **once per 4 seconds**, **a red** indicator is **off.**
4) Briefly press the **button** on the receiver. The green indicator will illuminate. The receiver will switch to the registration mode for **30 s.**
5) Press **the button** on one of the **first two** registered bracelets or key fobs. The red receiver indicator will illuminate.
6) Immediately, press **the button** on the **bracelet** which is to be registered. The **green** indicator on the receiver will be **off**.
7) Press **again** the button on the bracelet which is to be registered. The **green** indicator on the receiver will be blinking 2 times per 1 second within **4 seconds**, and the **red** indicator will be off. It will indicate successful registration.
The green indicator on the receiver will blink **2 times** and switch to the standard mode (blink 1 time per 4 seconds). It will indicate a failed registration.
Possible **causes of failed** registration see in p.5.4.
8) Power the receiver off.
9) Remove jumpers from **F1** and **F2** plugs of the receiver**.**
10) Close the receiver cover.

6 Battery Replacement

1) Unscrew the holding screw in the base of the bracelet.
2) Remove the cover of the battery compartment.
3) Remove old battery.
4) Install a new battery in maximum 10s.
5) Replace the cover of the battery compartment.
6) Tighten the holding screw in the base.



7 Recycling

The bracelet does not pose threat to life and health of people, as well as to the environment. After the expiry of its service life period, the bracelet shall be disposed of without special precautions in respect to the environment.
The waste batteries must be returned to the trading organization, service center, and manufacturer or to a recycling organization.

8 Manufacturer Warranties

8.1 The manufacturer warrants that the bracelet will meet requirements of technical specifications if a user follows all shipping, storage, mounting and operating guidelines.
8.2 The warranted shelf life is 1 year 6 month from manufacturing date.
8.3 The warranted service life is 1 year from the commissioning date, but not more than 1 year 6 months from manufacturing date (the warranty doesn't cover the battery).
8.4 The manufacturer must repair or replace the bracelet within the warranty period.
8.5 The warranty does not become effective in the following cases:
– failure to comply with this Operation Manual;
– mechanic damage of the bracelet;
– if the bracelet is improperly repaired by anyone other than the manufacturer.
8.6 The warranty applies only to the bracelet. All other equipment of other manufacturers used with the bracelet is subject to other manufacturer's warranties.
In no case shall the manufacturer be liable for any death, physical injury or property damage, or any other accidental or intentional loss based on claim that the bracelet failed to perform its functions.

Warranty service and technical support:
TEKO-TD

Prospect Pobedy str. 19
420138 Kazan, Russia
Phone: +7 (843) 261-55-75
Fax: +7 (843) 261-58-08
E-mail: info@teko.biz
support@teko.biz
Web: www.teko.biz

Made in Russia

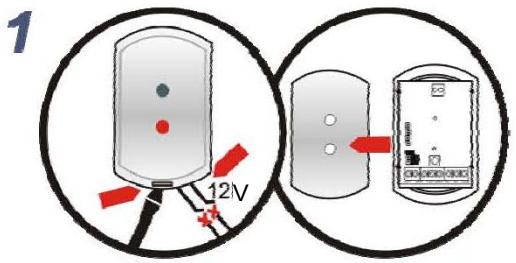
Appendix A
(reference)

REGISTRATION OF THE BRACELET IN RECEIVER MEMORY

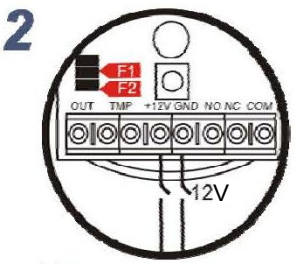
Attention! Clear the receiver memory before registration of the first bracelet.

Perform steps 1, 2, 3. Press and hold S1 button on the receiver until the green indicator is off. Proceeding to registration – Step 4 and further.

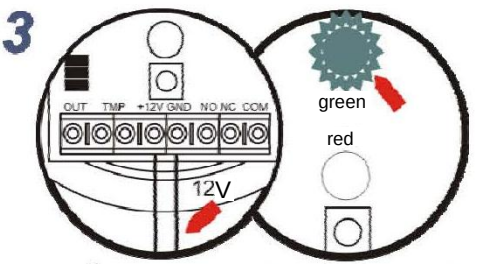
Registration of first two bracelets



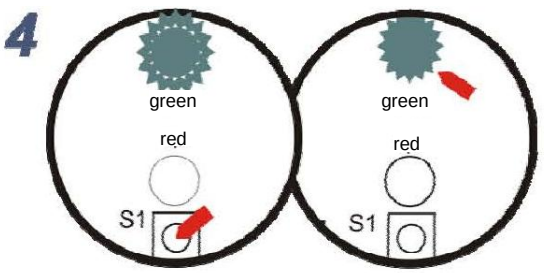
Remove the front cover of the receiver when it is powered down



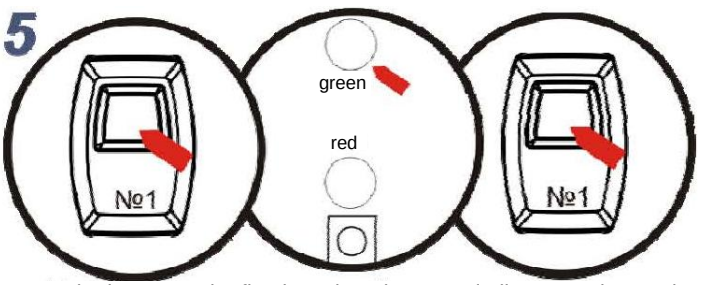
Install jumpers F1, F2



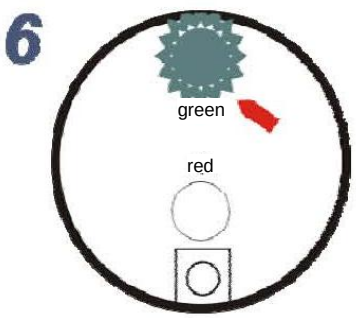
Power the receiver up. The green indicator will blink 1 time per 4 seconds



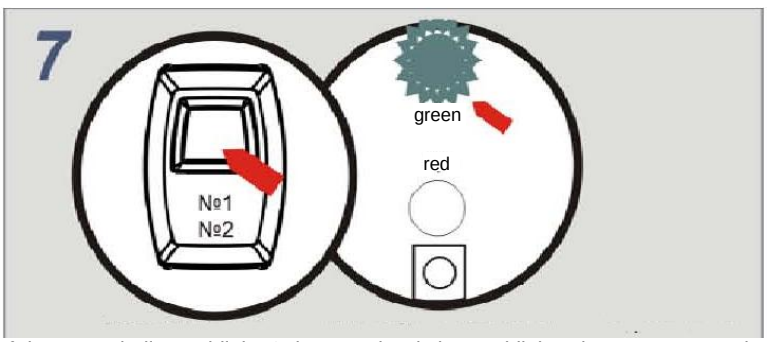
Press S1 button. The green indicator will switch to constant illumination for 30 s.



Press the button on the first bracelet. The green indicator on the receiver will be off. Immediately, press the button again



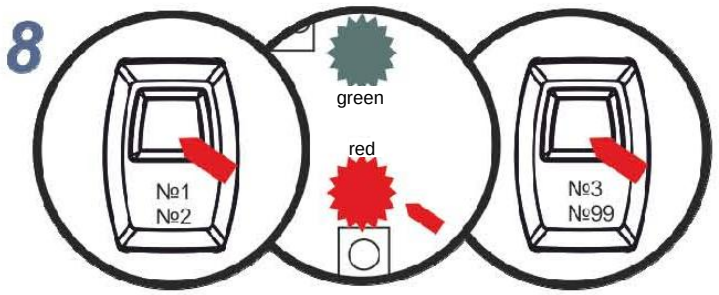
The green indicator on the receiver will blink frequently within 4 seconds. Registration of the first bracelet is finished. The receiver returns to the status described in Step 3.



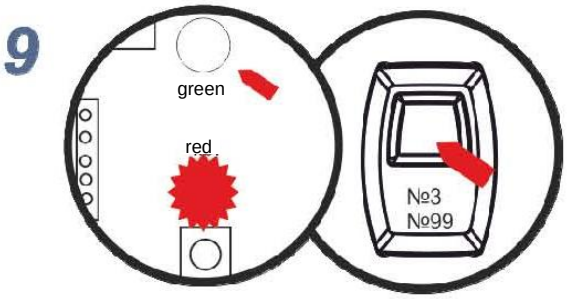
If the green indicator blinks 2 times and switches to blink 1 time per 4 seconds, when the button is pressed again (finishing operation 5), it will indicate a failed registration. Repeat Steps 4,5,6

Registration of the second bracelet- Steps 4-6

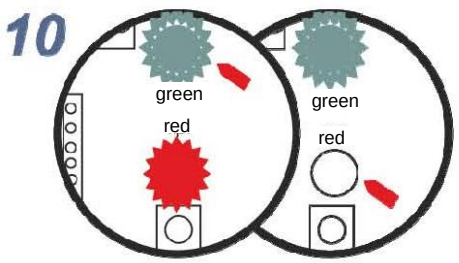
Perform Steps 4,8,9,10 in order to register next bracelets from 3rd to 25th (from 3rd to 99th)



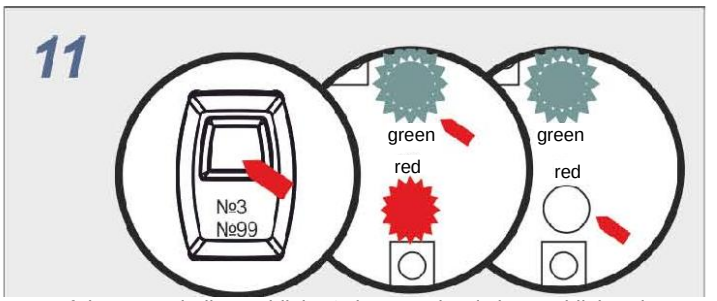
Press the button on one of the first two bracelets. The red indicator will illuminate on the receiver. Immediately, press the button on the registered bracelet.



The green indicator will be off on the receiver. Immediately, press the button on the registered bracelet again.

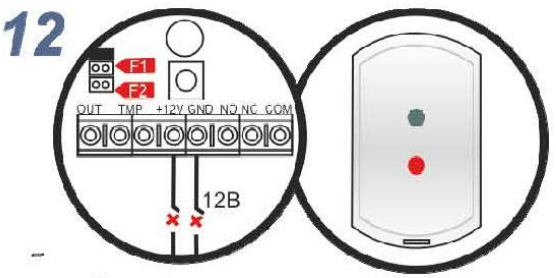


The green indicator on the receiver will be blinking frequently. The red indicator will be off in 4 seconds. The registration is complete. The receiver returns to the status described in Step3.



If the green indicator blinks 2 times and switches to blink 1 time per 4 seconds, when the button is pressed again, it will indicate a failed registration. Repeat Steps 4,8,9,10 or check the number of bracelets to be registered to the receiver design variant.

Perform Step 12 after the registration of all the required number of bracelets is complete.



Power the device down. Remove jumpers from F1, F2 plugs.
Close the front cover of the receiver.