ZSP Rival 432
A radio receiver operating manual

I. Terms in use

- Monostable output mode – turn on for programmed time after pushing the button
- Bistable output mode – turn mode to opposite (turn on or turn off) after pushing button
- Momentary output mode – turn on as long as the button is being pushed

II. General informations

Rival 432 receiver is one of remote control and access control devices that build ZSP System. Basic application of ZSP System is to work with controllers of gate, rollers, also lightning, alarm system (direct connection to alarm line or switchboard) and direct contol of devices such as entryphone, intercome, etc. as well.
Thanks to new, full programed functions, Rival 432 receiver come up to clients expectations. New **simplify programming interface** and possibility of programming **more remote controls** increase product values.

III. Technical data

- dynamically variable code Keeloq gives high class safety
- superherterodine receiver, work frequency: 433.92 Mhz
- reciver's memory containing 35 ZSP series remotes (NEO, TIP)
- two separated NO relay outputs, working in mono-, bistable or momentary mode, max load for each output 1A/24V AC or DC
- turn on time in monostable mode: from 0,5 sec and from 1 sec to 127 sec, bistable mode remembers last state before power down
- simple remote registering without need of using receivers buttons
- possibility to lock easy remote registering function
- discretion with ascribing remote buttons to receivers outputs
- terminal block to switch aerial's concentric cable
- splash – proof case IP-53
- receiver suppy from 12 V to 24 V AC/DC
- max current constription:1005mA (with two channels on and 24 V supply)
- dimension: enclosure [mm] heigh 118, width 55, depth 27,5
- working temperatures from -20° C to +55° C

IV. Receiver installation

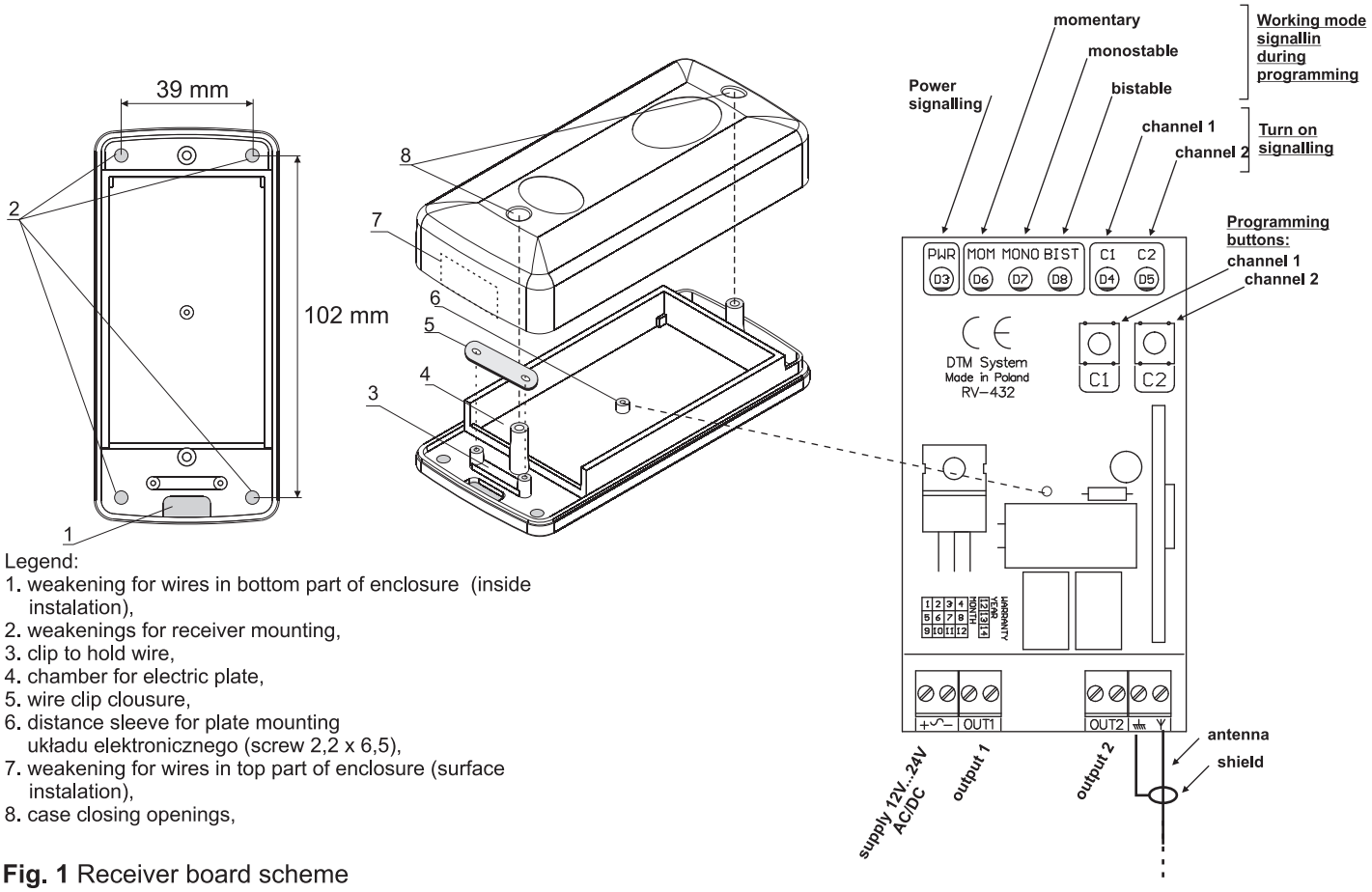
1. Device description and installation

Rival 432 receiver contains of main board, the splash – proof case and aerial . Main board (fig.1) has microprocessor control system of LED diodes and buttons, executive set on two relays, connectors of supply,connectors of outside antenna and controled devices.

Strub aerial of 170 mm length is switched to aerial block in new receiver. To enhance radio range use outdoor aerial. Outdoor aerial's concentric cable need to be switched to Y marked terminal block and ground marked terminal block.

Hints for making the radio range optimal:

- neighbourhood of the energetic devices and metal elements will short the range
- radio interferance from other sources will short the range
- avoid wet and concrete walls for mounting the receiver
- remember to remove old used batteries from remotes
- mount the receiver's as high as possible
- use the good quality coaxial cable for making the outdoor aerial



Legend:
1. weakening for wires in bottom part of enclosure (inside instalation),
2. weakenings for receiver mounting,
3. clip to hold wire,
4. chamber for electric plate,
5. wire clip clousure,
6. distance sleeve for plate mounting układu elektronicznego (screw 2,2 x 6,5),
7. weakening for wires in top part of enclosure (surface instalation),
8. case closing openings,

Fig. 1 Receiver board scheme

2. Exemplary electric scheme

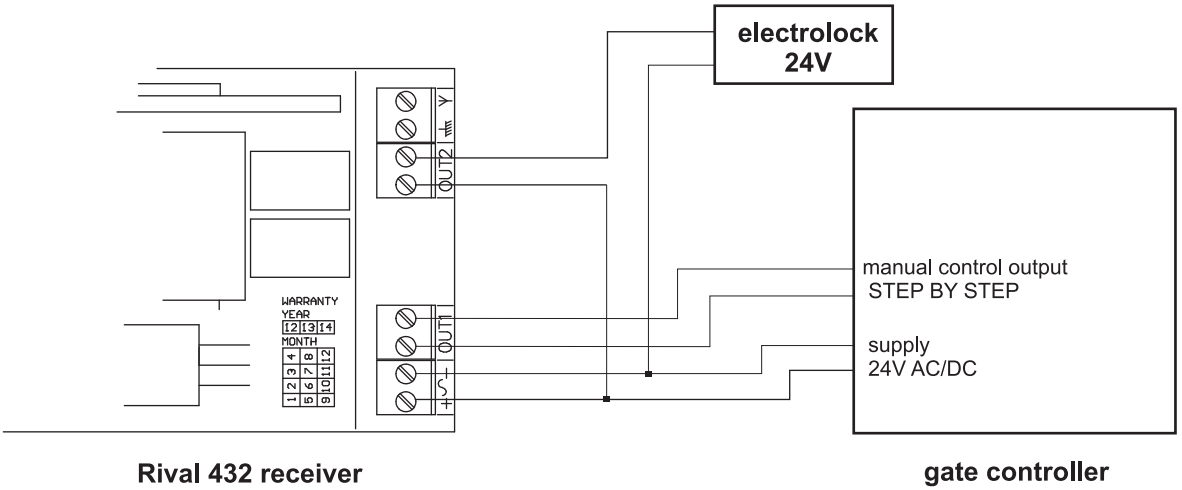


Fig. 2 Exemplary electric scheme of Rival 432 receiver, gate controller and electrolock electric connection.

V. Programming

Rival 432 receiver programming has influence on working mode. Before programming fimilarize with fig.1 which shows receivers board, localization of programming buttons, relay outputs C1 and C2, LED diodes. Lightining LED diodes shows chosen channel and working mode. Next to LED diodes are short descriptions of signalized function. Receiver's outputs are controled by remote control's programmed buttons

1) Registering remote control to receivers memory

Registering remote control to receivers memory is adding particular button with simulataneously assing recivers output.

It is possible to assing few of buttons to the same channel or to assing remote control button to both of channels. To remove programmed button, it is necessary to delete remote control from receiver's memory, and assing buttons in right confriguration (point 3).

Button registering

While pushing output button **(C1/C2)** push choosen remote control's button. LED diode will light.

Remarks! If pushing output button **C1/C2** stops before pushing transmitter's button receiver will turn on output programming mode. To exit push shortly other channel button.

2) Easy remote control registering

It is possible to register new remote control without using receiver's buttons. New remote control must be in radio range of receiver and previously registered remote control presence is necessary. Easy remote control registering is unavailable if output is on momentary mode.

a) push and hold for 15 sec. any button of previously registered remote
b) within 3 sec. after releasing the previous button push and hold for 15 sec. any button of new remote control
c) new remote control is registered with same as previous remote configuration.

Remarks! Failure in registering may be caused by radio interferences, low batteries or lock of easy remote registering function.

3) Simple remote control removing

To remove single remote control from receiver's memory push and hold simulataneously output buttons (C1 and C2). All of LED diodes (except for green LED diode) will light. During lighting push any remote control's button that you want to remove. Diodes will wane, remote will be removed from receiver's memory.

Remarks! If you hold the receiver's C1 and C2 buttons for too long, receiver's memory will format.

4) Output (C1/C2) mode change to *bistable* or *momentary*.

For monostable mode check point 5.

Output's factory settings:

C1 output working mode – monostable (0,5s)
C2 output working mode – monostable (0,5s)

To change mode of C1 or C2 output push and release chosen output button. Red LED diode will light **(C1/C2)**. Yellow LED diode shows actual output mode. Push output button several times to set working mode. Yellow LED diode with **MOM** sing for momentary mode, **BIST** sing – bistable mode, **MONO** sing – monostable mode (check point 5.) To approve chosen mode push and hold output button (C1/C2). Red LED diode will light and wane. Working mode is registered.

5) Output (C1/C2) mode change to *monostable*

To change output mode to monostable push and release button **(C1/C2)**, red LED diode will light and yellow LED diode which shows actual output mode will light. Push output button to set working mode on monostable, signalized by yellow LED diode with **MONO** sing. To approve push and hold edited output button (C1/C2). LED diode with MONO sing will fade, than start to blink. Hold output button for wanted turn on time in seconds. Number of blinking set turn on time in seconds (or minutes if after releasing in short time button is being pushed for second again.)

Remarks!
To set turn on time 0,5s release **C1/C2** button before yellow diode with **MONO** sing light.

6) Lock / unlock easy remote control registering function

To secure device from unwanted remote registering (aspecial protected customers areas) it is recomended to lock easy remote registering function.
To lock hold and release button **(C1/C2)**, red LED diode will light **(C1/C2)**, yellow LED diode which shows actual working mode will light. Push and hold next button. After 4 seconds **C2** diode will light (means that easy remote control registering function is active). Still hold the button. After another 4 seconds of holding **C1** button diode will light (means that easy remote control registering function is locked). After releasing button, card will memorize settings and lock easy remote control registering function.
Same procedure to unlock, just release button when **C2** diode light. By default – factory settings, easy remote control function is unlock.

7) Receiver's memory formating

To format receiver's memory push and hold simultaneously C1 and C2 buttons. All LED diodes (except green diode) will blink. Release buttons when LED diodes stop blink (after about 15 seconds). Receiver's memory has been formated.

Remarks! Format is irreversible. All remotes will be removed from receiver's memory and return to factory settings (C1 and C2 output in monostable mode turn on time 0,5s)

VI. Remote TIP and NEO parameters

- four (two) buttons that can control any channel or the group channels
- signal transmission is based on Microchips® KeeLoq® dynamically variable code,
- remote frequency 433,92 Mhz
- up to 150m radio range NEO, 50m TIP
- battery: L1028 23A 12V,
- ERP TIP: 1 mW, NEO: 3 mW;
- working temperature from 0°C to +55°C.
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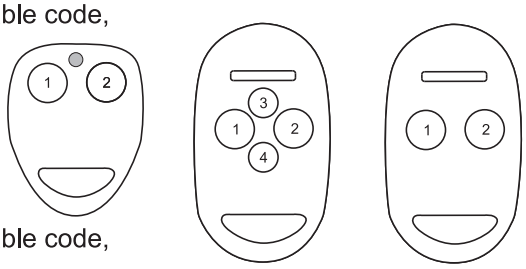

fig. 3. TIP and NEO remotes with buttons numbering.

VII. Warranty

DTM System provides operational and ready to use devices. The producer gives 24 months warranty from the selling date to the end customer. This time is counted according to the producer warranty labels or serial numbers placed on every product. Producer obliges himself to repair the device for free if during the warranty period there are problems which come because of his fault. Broken device should be supplied on customer's expense to the place of purchase and enclose clear and brief description of the breakage. The cost of mount/dismount is covered by the user. The warranty does not cover: batteries in the remote controls, faults caused by improper usage, user self repairs and adaptations, lightning strikes, voltages or short circuits in the electrical grid. Appropriate legal acts regulate details of the warranty.

CE

DTM System hereby declares that the radio receiver complies with Directive 2014/53 / EU. The full text of the EU Declaration of Conformity is available at the Internet address.

www.dtm.pl

The intention of the WEEE Directive (Directive 2002/96/EC on waste electrical and electronic equipment) is to reduce the amount of hazardous substances in waste. The underlying purpose is to promote the avoidance, recovery and risk-free disposal of waste.

DTM System spółka z ograniczoną odpowiedzialnością
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