Introduction

This device, supplied by a CR2032 3V cell, is capable to duplicate existing remote controls, even if transmit in different frequencies, and can be connected to max 2 external buttons and/or 1 external voltage to be monitored. When one or two buttons are pressed, or when the monitored external voltage falls down (power failure), the device start transmitting for an amount of time that is configurable for each channel.

Totally there are 4 channels:
- channel 1: switch/button 1 has been pressed
- channel 2: switch/button 2 has been pressed
- channel 3: both switches/buttons have been pressed
- channel 4: power failure has been detected

Configuration

The transmission frequency and every parameter is user-selectable through the button **Prog**. Each channel is factory-configured to transmit at 433.92 MHz, OOK, a random 24bit code repeated 8 times, with 100µW transmission power. Input voltage monitoring is disabled.

To modify this configuration, press quickly the button **Prog** a number of times corresponding with the number of channel: LED will be steady-on. Press again the button **Prog** a number of times corresponding to the parameter that should be modified (see Tab.1): LED will flash to notify the current value of that parameter. Then, press again the button **Prog** for the number of times corresponding to the desired value: LED will flash a number of times corresponding to the new value. If programming fails, a long flash will be emitted.

It's possible to configure, for each channel, the working frequency, the number of times the code/telegram is repeated, the space between transmitted telegrams, etc. To receive these transmissions, it's necessary that the receiver supports this feature.

Learning a remote control

Press **Prog** button a number of times corresponding to the channel number, then press **Prog** twice to enable learning mode; press the button on the remote control that should be copied: LED flashes twice if a fixed code has been copied, or 4 times if it was a rolling code: in the latter case, be aware that it may not work if the receiver checks the rolling part of the code.

Instead of duplicating an existing remote control, it's possible to initialize a new random code, 12 or 24bit, pressing **Prog** a number of times corresponding the channel then pressing again **Prog** for 10 times and finally 1 (12bit) or 2 (24bit) times.

Security, safety and disposal

The device always transmit a fixed code, so it's not suitable for systems that requires an high level of anti-theft security. Keep the battery well out of reach of children and animals; call a doctor immediately if the battery is swallowed.

(Wireless and RF) battery, plastic (blisters and enclosure), battery and electronic board should be disposed of properly.

Warranty

The warranty complies with statutory requirements, and cover only defects, within the product itself, in material and manufacture. Battery is not covered by the terms of the warranty.

![Fig. 1: Application diagram](http://www.creasol.it)

**Applications:**
- Multiple switches (1 or 2 in transmitters)
- Power failure monitor (e.g. notify the domotic controller when external power supply goes down)
- Can be connected to intercom switches to transmit up to 3 codes to open/close gate, barrier, main door, ... supplied by a 3V battery. Very compact: 41x24x9mm.

**Powered by a CR2032 3V cell.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value (default value underlined)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-set the frequency</td>
<td>2, 433.92, 3, 868.3, 4, 868.3, 5, 868.3, 6, 310, 7, 310, 8, 310, 9, 310, 10, 55.418 MHz</td>
</tr>
<tr>
<td>6-number of codes to be transmitted</td>
<td>1=transmission disabled, 2=hold-to-run (max 20s), 3=4 codes, 4=4 codes, 5=8 codes, 6=16 codes, 7=32 codes, 8=64 codes, 9=128 codes</td>
</tr>
<tr>
<td>7-extraneous</td>
<td>blank, 1 random short blank, 2 random long blank, 3 random medium blank, 4 random long blank (used to avoid collisions)</td>
</tr>
<tr>
<td>8-power level</td>
<td>10W, 20W, 100W, 310W, 318W, 330W, 390W</td>
</tr>
<tr>
<td>10-init. code</td>
<td>1= DLW, 2= 1mW, 3= 1mW, 4= 10mW</td>
</tr>
</tbody>
</table>

**Fig. 2: SenderBatt configuration - Examples**

<table>
<thead>
<tr>
<th>Press Prog 2 times (ch. number)</th>
<th>Press Prog 5 times (parameter)</th>
<th>Led shows current value (2x433.92MHz)</th>
<th>Press Prog 3 times (3x868MHz)</th>
<th>Led shows new setting for channel 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable power failure monitoring (ch. 4, default disabled)</td>
<td>Press Prog 4 times (select ch.4)</td>
<td>Led shows new setting (on/off)</td>
<td>Press Prog 5 times (parameter)</td>
<td>Led shows new setting (bit 4, bit 5)</td>
</tr>
</tbody>
</table>

**Tab.1**

**Creasol UniRec**: use any electronic board with a low voltage input by almost any remote control, fixed and rolling code. It has a low voltage (up to 40V) opto-isolated contact which provide up to 15mA of current. It accepts very compact (28x24x10mm) transmitters.

**Creasol Multi**: multifrequency Creasol Four: long-distance remote control duplicator, able to range operates in the range 280-868 MHz. Automatically select the best frequency and code, no need for duplicator, external equipment.

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