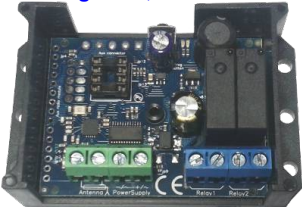


## Creasol UniRec2

### Multi-frequency 2ch receiver

Works with almost any remote control, fixed and rolling code, AM and FM.



## Creasol UniRec2

### Universal receiver with 2 relay outputs, 250V 5A max.

User-selectable frequency:  
433.42, 433.92, 434.15, 434.42, 868.3, 868.5, 868.8 MHz, AM/FM.

Operating frequencies:	433.42-434.42MHz 868.3-868.8MHz
Number of different remote controls:	Up to 60, depending by type of code. Up to 1000 with optional memory.
Sensitivity:	-102dBm
Power supply:	6-36Vdc or 7-27Vac
Max current consumption:	100mA @6Vdc, 23mA @36Vdc
Output ratings:	Max resistive load: 5A. Max voltage: 30Vdc or 250Vac



## Introduction

This is a receiver with 2 output channels that can be configured in one of the supported frequencies so, when it receives a code transmitter by a remote control that was previously programmed into the receiver, it activates the corresponding output. It can be used to replace a non-operational receiver, a rolling code receiver or to add a new frequency to an existing receiver. Also it can be used to control one or two outputs by a remote control, e.g. lights or small motors/pump.

It supports up to 60 different remote controls (the number depends by the type/length of the transmitted code), limit that can be easily overcome by installing an optional/removal memory. Different types of remote controls are supported, so it's possible to use the receiver with a mixed of different remote controls, all operating in the same frequency and with same modulation.

It's also possible to install an additional receiver module, if needed: in this case the integral receiver must be disabled.

**In case the receiver controls a motor, to prevent any malfunction caused by overvoltages when the motor is turned off, appropriate protections should be taken: snubbers, capacitors and varistors connected to the motor.**

## Features

**Multi-frequency receiver:** frequency is user-selectable through parameter 5: frequencies marked with \* are disabled inside UE. It's also possible to select the modulation OOK, FSK with 12.5KHz deviation and FSK with 25KHz deviation.

**Wide range of supported remote controls:** both fixed and rolling code remote controls can be used. Different types can be used with the same receiver, if transmitting in the same frequency.

**Master remote control:** it's possible to program one or more remote controls for a specific channel that, instead of activating the correspondent output, start programming mode for that channel. In this case it's possible to remotely program new remote controls without accessing the receiver.

**Wide supply voltage:** from 7 to 27Vac or from 6 to 36Vdc.

**High power supply efficiency:** uses a switching-mode voltage regulator to reduce power consumption when supplied with high voltage.

**Additional RX power saving:** the receiver circuitry can be configured to be enabled for 60ms every 60ms or 180ms: in this way it's possible to reduce current consumption at the cost of a less response on receiving.

**High voltage and current contact rating:** relay outputs support up to 250Vac and 5A (1kVA), using resistive load.

**Wide output configurations:** hold-to-run, bistable, bistable ON/OFF (one button to activate and another button to deactivate output), timer from 500ms to 60 minutes.

**Optional memory:** it's possible to place an optional non-volatile memory, eeprom type M24C32-W, on the socket, to increase the max number of different remote controls to 1000: in this case, also the configuration is stored into this memory, so it's possible to move the configuration to another receiver or duplicate/store it using a standard eeprom programmer.

**Optional receiver module:** it's possible to disable the integrated multi-frequency receiver on the board and use an external receiver, which pin configuration should be compatible with MIPOT receivers.

## Installation

Device should be placed in a proper environment: in case of high humidity, place inside an IP65 case. Connect external antenna (coaxial cable) as indicated in the silkscreen, or a single wire on the left-side screw connector, with length 8cm for 868MHz, 17cm for 433MHz or 25cm for lower frequencies. Connect, through fuses, the power supply (don't care about polarity) and relay outputs.

## Related products

**Creasol UniLock:** compact receiver designed to easily activate an electric lock by almost any remote control in the market, fixed and rolling code. Multi-frequency, very compact (29x29x10mm) and very easy to be installed.



**Creasol Multi:** multifrequency remote control duplicator, able to operate at 433.92 and 868.3 MHz. Automatically detects frequency and code, no need for external equipment. Each button is independent, so it's possible to copy up to 4 remote controls, even if they transmit in different frequencies.



**Creasol Four:** long-range remote control duplicator, operating at 433.92 MHz



## EC Declaration of Conformity

Creasol, via Brigata Mazzini 83, Farra di Soligo, Italy, ce@creasol.it, hereby declares that the receiver UniRec2-2 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC (R&TTE). Applied standards: EN300220, EN301489, EN60950. Declaration of Conformity can be obtained from <http://www.ce.creasol.it>

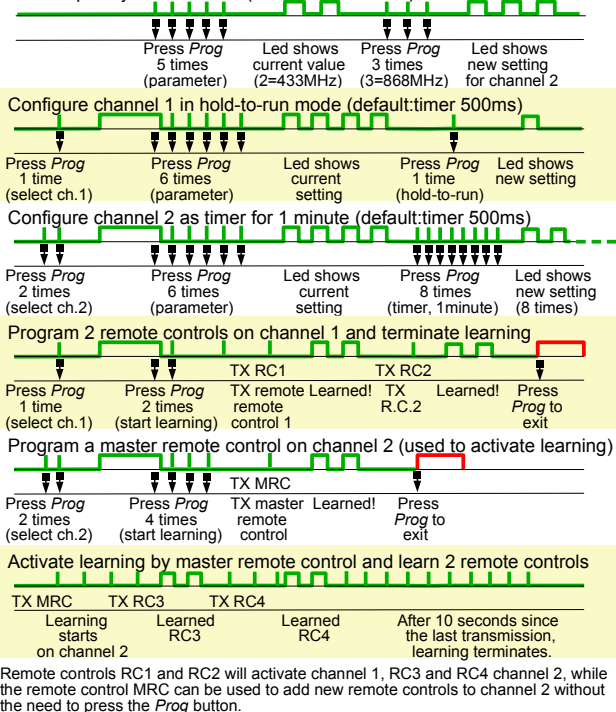
Farra di Soligo, 2014-07-15. Signed by Paolo Subiacco

*Paolo Subiacco*

Parameter	Value (default value underlined>
5=set frequency. *: not enabled inside UE	<u>2=433.92</u> , 3=868.3, 4=315*, 5=288*, 6=300*, 7=303*, 8=306*, 9=310*, 10=318*, 11=330*, 12=390*, 13=403.55*, 14=418*, 15=433.42, 16=434.15, 17=434.42, 18=868.5, 19=868.8MHz
6=output type	1=hold-to-run, 2=bistable, 3=bistable ON/OFF, <u>4=timer 500ms</u> , 5=timer 1s, 6=timer 15s, 7=timer 30s, 8=timer 1m, 9=timer 2m, 10=timer 5m, 11=timer 10m, 12=timer 15m, 13=timer 30m, 14=timer 45m, 15=timer 60m The channel number must be selected before parameter value.
7=output function	<u>1=normally open</u> , 2=normally closed, 3=electric lock before open, 4=only one output active
8=power saving	1=receiver always active, 2=rx duty 33% (power saving ON)
9=modulation	1=OOK (AM), 2=FSK 12KHz, 3=FSK 25KHz, 4=ext. module

## UniRec2 configuration - Examples

Set frequency to 868.3MHz (default:433.92MHz)



## Configuration

This device is supplied pre-configured to receive at 433.92 MHz, AM modulation, and to activate outputs for 500ms.

To modify this configuration, press quickly the button *Prog* a number of times corresponding to the programming channel (if needed), the parameter number and the desired value, as shown in the figure. If programming fails, a long red flash will be emitted.

In *hold-to-run* mode the output is active until the button on remote control is released. In *bistable* mode, the remote control button is used to toggle the output ON-OFF-ON-OFF. In *bistable ON/OFF* mode, one button is used to switch output ON, and another button to switch output OFF. In timer modes, normally it's needed only a button to switch output ON for the programmed time: if the button is pressed again while output is ON, after more than 10s, the output is switched OFF.

For any bistable or timer mode, it's possible to program one or more remote controls that are capable to only switch output OFF: follow the instructions below selecting channel 3 (OFF function corresponding to channel 1) or 4 (OFF function corresponding to channel 2).

## Learning remote controls

Press the *Prog* button 1 or 2 times, corresponding to the selected channel: Led goes solid green. Press *Prog* twice to enable learning mode: Led starts flashing slowly. Press a button on the remote controls that should be learned. Every time a new code is learned, the 10s timeout is reload and Led flashes twice if the code is programmed, 3 times if it was already learned, 6 times if memory is full.

During the learning phase, the receiver sensitivity is reduced to avoid the possibility of learning unwanted remote control transmitting from a distant location. Anyway, be careful about this.

## Removing remote controls

Press the *Prog* button 1 or 2 times, corresponding to the selected channel: Led goes solid green. Press *Prog* 3 times, then press button on remote controls in the same way as learning procedure. Led flashes 4 times for any removed code. To blank the whole memory, press the *Prog* button 10 times, wait for Led flashing, the press *Prog* button 3 times.

## Learning master remote controls

Press the *Prog* button 1 or 2 times, corresponding to the selected channel: Led goes solid green. Press *Prog* 4 times, then press button on remote control: this remote controls will not activate the output, but can be used to enable learning procedure without the need to access the receiver and press *Prog* button. To learn new remote controls in this way, put the *master* remote control in transmission for 2s, then keep in transmission for 2s the new remote controls that should be learned: every time a new remote control is learned, the 10s timer is reload to permit successive learnings.

## Security and safety

Do not use in systems that require a high level of anti-theft security. Installation should be done by a qualified technician, in a well insulated enclosure, protected by dust, high humidity, steam and contact with other circuits and metal parts. All responsibility, for any damage caused by not complying with the instructions in this manual, is declined.

## Warranty

The warranty complies with statutory requirements, and cover only defects, within the product itself, in material and manufacture. Your local stockist should be contacted in connection with any warranty-related matters.