

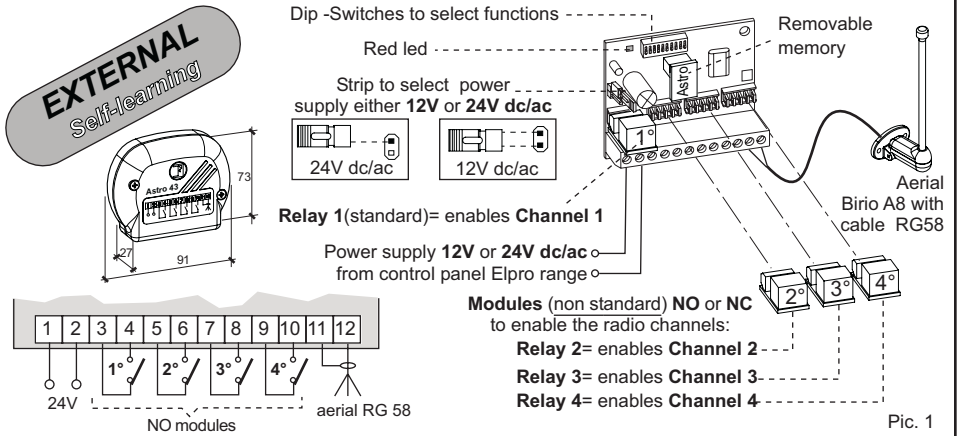
Astro 43 M.Q.B. - EXTERNAL code 4327

RADIO RECEIVER 433.92MHz: self-learning, for external application to operate with a 433.92MHz radio signal

Please note: do not expose the receiver to electro-magnetic or heat sources

Technical specifications:

Working frequency	433.92MHz ± 75KHz
Intermediate frequency value	500 KHz
Stray emission max.power	2 nW
Aerial impedance value	50 Ohm
Sensitivity	1.5 µV
DC and AC power supply	12÷24V dc and ac
Absorption	20 mA ac
Working temperature	-10°C ÷ +55°C
Safety delay time	150msec
Relay contact rating	0.5A - 125V ac
IP standards	IP53
Distance range	120 metres
External radio channels	4
Number of transmitters in the memory	800

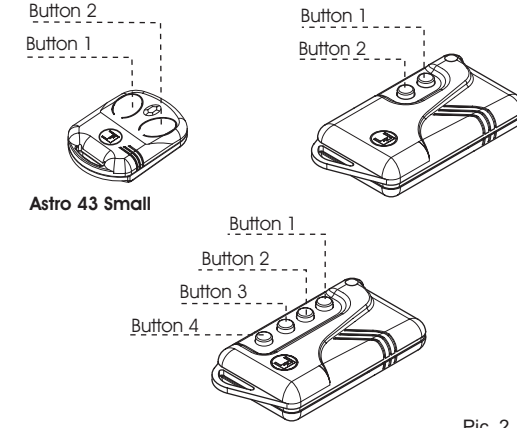


Pic. 1

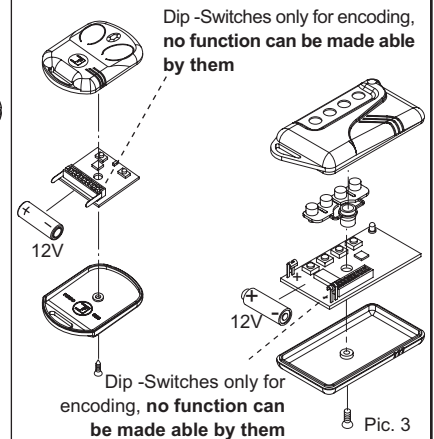
DIP-SWITCHES ONLY IN THE RADIO RECEIVER ASTRO 43 EXTERNAL

- Dip 1 = ON Operates **Relay 1 (Channel 1)**
- Dip 2 = ON Operates **Relay 2 (Channel 2)**
- Dip 3 = ON Operates **Relay 3 (Channel 3)**
- Dip 4 = ON Operates **Relay 4 (Channel 4)**
- Dip 5 = ON enables **memorization of the radio channels**
- Dip 6 = ON enables **delete one transmitter only**
- Dip 7 = ON enables the function **Bistable**
- Dip 8 = ON enables the function **Timer T1** (1sec ÷ 15min)
- Dip 9 = ON enables the function **Timer T2** (1sec ÷ 15min)
- Dip 10 = ON enables the function **delete all memory**

IMPORTANT: to have an output available with the radio receiver terminals, all the Dip-Switches in it must be set on to OFF



Pic. 2



Pic. 3

FUNCTIONS OF THE RADIO RECEIVER ASTRO 43 EXTERNAL: the Dip-Switches in the transmitters are only to encode the user's code, no function can be made able by them

Memorizing one radio channel: Dip-Switch 5 = ON (procedure to memorize the single transmitter buttons in the receiver):

- Transmitter: open the casing and set the user's code by means of the internal Dip-Switches (Pic.3), record it down to prevent forgetting it, and re-assemble the unit.
- Set to **ON** one of the **Dip-Switches 1, 2, 3 or 4** in the receiver corresponding to the channel to memorize: the channel is activated by fitting the relay module, either NO or NC in the receiver connector (Pic.1)
- Press and hold a transmitter button (Pic.2), the receiver learns the signal and the red led flashes to confirm memorizing: each pulse with the transmitter emits a signal that closes the relay NO contact (or opens it, if the relay is NC) in the receiver output, corresponding to the memorized channel.
- **Important:** once this operation is finished set all the Dip-switches on to OFF. The receiver led flashes 5 times to confirm.

N.W. In order to match all the radio channels with the respective transmitter buttons by a single operation (button 1 with channel 1, button 2 with channel 2, and so on.) set the **Dip-Switches 1, 2, 3, 4 and 5 = ON**, carry on the memorizing operation as before, by pressing and holding any one button of the transmitter until the led flashes 1 time. Once the operation is finished set all the Dip-switches on to OFF. The receiver led flashes 5 times to confirm.

Deleting one transmitter: Dip-Switch 6 = ON (the memory does not receive any signal from that transmitter any longer, but the transmitter code remains in the memory)

- Press any one button of the transmitter to be deleted (previously memorized) (Pic.2): the led flashes 1 time to confirm that the signal is received
- Set on to **OFF** the **Dip-Switch 6**: only at this stage, the radio receiver deletes the transmitter from the memory, and the led flashes 6 times to confirm the operation as accomplished
- **Important:** once the operation is finished, set all the Dip-Switches on to OFF, in order to delete more transmitters, repeat the entire operation

Bistable Output: Dip-Switch 7 = ON, (first, it is necessary to memorize at least one transmitter button): the first pulse from the transmitter enables the relay, whereas the second pulse from the same transmitter button disables it (step-by-step function).

- Set to **ON** one of the **Dip-Switches 1, 2, 3 or 4** corresponding to the radio channel required to be used as bistable mode and to the transmitter button as previously memorized
- Press the transmitter button required to operate on bistable mode (Pic.2)
- **Important:** once the operation is finished set all the Dip-Switches to OFF, the led in the receiver flashes 7 times to confirm the accomplished operation

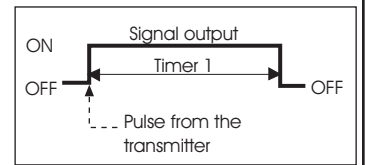
Timer 1: Dip-Switch 8 = ON, (first, it is necessary to memorize the transmitter button by means of which the function is carried out):

on pulsing the transmitter button, the output of the selected channel is activated for a time as pre-set, on expiring of which, it is automatically deactivated

- Set to **ON** one of the **Dip-Switches 1, 2, 3 or 4** corresponding to the radio channel required to be used as mode timer 1
- Press the button 1 of the transmitter (Pic.2) as many times as the minutes required to be memorized (max 15 minutes)
- Press the button 2 of the transmitter (Pic.2) as many times as the seconds required to be memorized

NW: After each pressing of the buttons, wait for the led to go off as a confirmation that the time has been memorized. Once the operation is finished, set all the Dip-Switches to OFF, the led in the receiver flashes as many times as follows: long flashes as the minutes, short flashes as the seconds. After a short pause, the receiver led flashes 8 times to confirm.

On operating phase, a pulse to the receiver from the transmitter button on mode Timer 1 (superior to 3 seconds), disables the output and stops the operation.



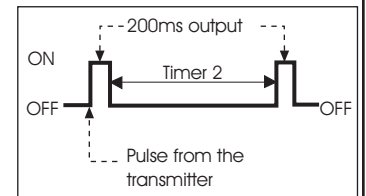
Timer 2: Dip-Switch 9 = ON, (first, select and memorize the transmitter button by means of which this function is carried out):

a pulse from the transmitter activates the selected channel output for 200ms, after the time as pre-set, a second pulse is released for another 200ms

- Set to **ON** one of the **Dip-Switches 1, 2, 3 or 4** corresponding to the radio channel to be used as mode timer 2
- Press the button 1 of the transmitter (Pic.2) as many times as the minutes required to be memorized (max 15 minutes)
- Press the button 2 of the transmitter (Pic.2) as many times as the seconds required to be memorized

NW: After each pressing of the buttons, wait for the led to go off as a confirmation that the time has been memorized. Once the operation is finished, set all the Dip-Switches to OFF, the led in the receiver flashes as many times as follows: long flashes as the minutes, short flashes as the seconds. After a short pause, the receiver led flashes 9 times to confirm.

On operating phase, a pulse to the receiver from the transmitter button on mode Timer 2 (superior to 3 seconds), gives out the 2nd pulse and stops the operation.



Deleting the total memory: Dip-Switch 10 = ON, the memory of the receiver is deleted in total

- Press any one button of the transmitter, provided it is already in the memory (Pic.2), for at least 5 seconds. The red led of the receiver stays on until the operation is finished.
- **Important:** Once the operation is finished, set all the Dip-Switches to OFF, the led in the receiver flashes 10 times to confirm the operation is accomplished

Set the outputs back to Standard mode: Dip-Switch 7 = ON - Dip-Switch 8 = ON - Dip-Switch 9 = ON, the single channels are kept in the memory (but all previous settings such as Bistable, Timer T1 and Timer T2 modes are cancelled)

- Set to **ON** the **Dip-Switch** corresponding to the channel to be set back to Standard Mode.
- Press any one button of the transmitter, provided it is already in the memory (Pic.2), for at least 5 seconds. The red led in the receiver flashes once to confirm.
- **Important:** Once the operation is finished, set all the Dip-Switches to OFF, the led in the receiver flashes 3 times to confirm the operation is accomplished