

8 ZONE WALL MOUNTING RADIO RECEIVER WITH REMOTE CONTROL BOX

RÉCEPTEUR RADIO 8 ZONES POUR MONTAGE EN SAILLIE, AVEC BARRE DE COMMANDE REMOTABLE

8 ZONEN FUNKEMPFÄNGER FÜR DIE WANDINSTALLATION, MIT SEPARATER BEDIENLEISTE

RICEVITORE RADIO 8 ZONE PER INSTALLAZIONE A PARETE, CON BARRA DEI COMANDI REMOTA

RECEPTOR RADIO DE 8 ZONAS DE PARED CON BARRA DE MANDOS REMOTA



Model with connection BUS to separate control box, for the control of 8 solenoid valves plus pump or boiler, in wireless temperature control systems.

Modèle avec BUS de connection à la barre de commande séparée, pour commande de 8 électrovannes et commande pompe ou chaudière, dans des installations sans fils pour la régulation de la température.

Modell mit BUS zur Verbindung mit der separaten Bedienleiste, für die Steuerung von 8 Magnetventilen und die Steuerung der Pumpe oder des Kessels in drahtlosen Anlagen für die Temperaturregelung

Modello con BUS di collegamento alla barra dei comandi separata, per il comando di 8 elettrovalvole e il comando della pompa o caldaia, in impianti senza fili per la regolazione della temperatura.

Modelo con BUS de conexión a la barra de mandos separada para controlar 8 electroválvulas y bombas o calderas en instalaciones de termorregulación sin cables.

EN - English

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MODO DE EMPLEO**

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TECHNICAL SPECIFICATIONS

Supply voltage:	18 V~50 Hz (from control box)
Device Absorption:	1 VA max.
Type of appliance:	Electronic
Type of output:	encrypted on two-wire RS485 bus
Wire section at terminals:	min. 0,5 mm ² ÷ max. 1,5 mm ²
Maximum length of bus connection:	100 m (minimum wire section 0,5 mm ²)
Reception frequency band:	«868-868.6 MHz»
Maximum signal capacity in free air:	120 m
Maximum signal capacity in the presence of walls:	30 m (according to the chap. 1.1 and to the chap. 1.4)
Signal reception mode:	antenna internal to the receiver
Type of insulation:	Class II 
Protection degree:	IP 30 / wall-mounted
Pollution:	normal
Operating temperature limits:	-20 °C ÷ + 70 °C
Storage temperature limits:	-25 °C ÷ + 85 °C

PERFORMANCE DATA

- Possibility of **system operation with master chronothermostats** (see chronothermostat instructions - model with Master).
- **Pump (or boiler) control** simultaneous with the control of one of more solenoid valves.
- **Delayed pump** (or boiler) control (120 second delay).
- Coupling transmitters in self-learning mode, facilitated by luminous and audio signals.
- It is possible to erase a transmitter coupling to the zone even in the event of transmitter failure.
- Manually forcing the state of the output to test the system (5 minutes, resettable).
- "RESET" command to erase temporary data in memory and deactivate commands.
- Permanent, modifiable memory, for coupling the transmitter and assigning the Master.
- Luminous signals indicating malfunctions due to the absence of transmission or an almost dead battery.
- Highly reliable communications thanks to the **double transmission of data**.
- Lighted and/or audio signal, on 3 levels, of the TEST signal to verify the presence and capacity of the signal (VMETER).

SEE THE CONTROL BOX'S OWN MANUAL FOR THE RELEVANT TECHNICAL SPECIFICATIONS AND PERFORMANCE DATA.

Dimensions

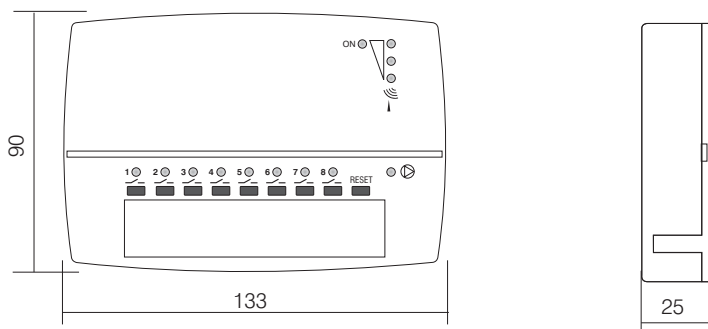


Fig. 1.i

EN 1 - INSTRUCTIONS FOR THE INSTALLER

1.1 - INSTRUCTIONS AND REQUIREMENTS FOR INSTALLING THE RECEIVER

Install the receiver at a height that allows the antenna to stick up above any nearby metal container (boiler, expansion tanks, metal cabinets); avoid positioning the antenna near cables and electrical panels (fig. 2.i).



Cabinets, walls and slabs containing metal can limit the operation of the product.

This system is incompatible with radio products working on the same frequency using a permanent emission mode.



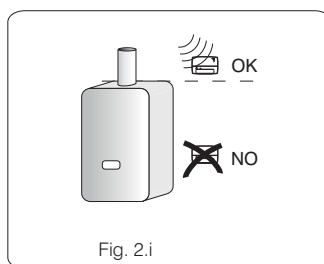
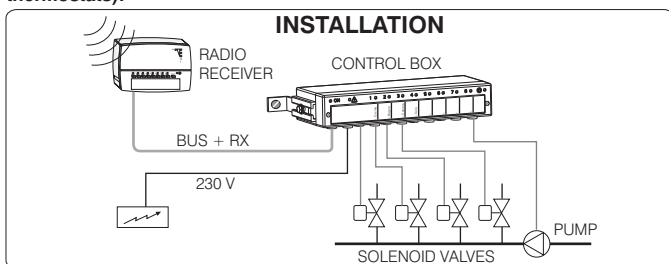
Important: installation and electrical connections of devices and appliances must be implemented by person with electrotechnical expertise only and in conformity with current laws and regulations. The manufacturer declines any liability in connection with the use of products subject to special environmental and/or installation standards. Examples given in the manual are purely indicative.



Read carefully the instructions booklet before installing the device and keep it at hand for future consultation.

The manufacturer reserves the right to make all technical and manufacturing modifications deemed necessary without prior notice.

Instructions relative to the structure of realizable systems and the assignment of areas to individual chronothermostats or thermostats are shown in the technical documentation for the transmitter devices (chronothermostats and/or thermostats).



- **Install the control box as instructed in its own manual.**
- **Install the 8 zone receiver as instructed below.**

1.2 - INSTALLING THE BASE ON THE WALL

Installing the device: **INDEPENDENT - FIXED**

WARNING! DISCONNECT MAINS POWER FROM THE CONTROL BOX BEFORE INSTALLING THE RECEIVER.

For installation, it is necessary to separate the front part, complete with electronic card, from the base.

- First on one side and then on the other, insert a screwdriver in the slots located on the sides of the product, exerting light pressure on the locking catch, then, with a small forward rotation of the screwdriver (as shown in figure 3.i), lift the front.
- Remove the front from the base (the resistance to removal is due to the coupling pin on the terminal strip) (fig. 4.i).

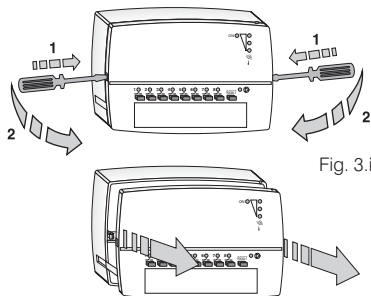


Fig. 3.i

From the base, remove the parts prepared for the passage of the connection wires shown in fig. 5.i.

- Pass the connection wires through the opening you have made.
- Attach the base to the wall (or built-in box), with 2 screws using the pairs of holes **(A-A, B-B, -C-C)** provided (fig. 5.i).
- Make the electrical connections to the terminals located on the base as shown in the next chapter.

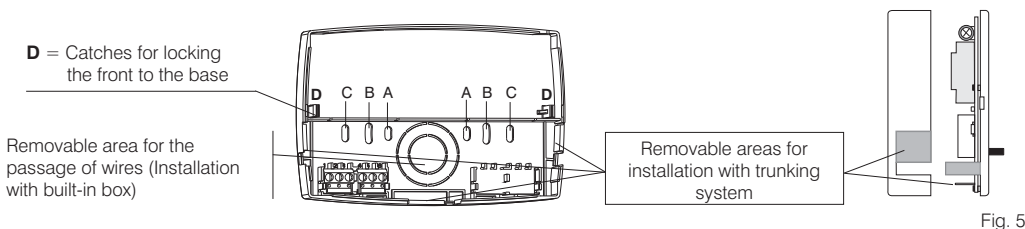
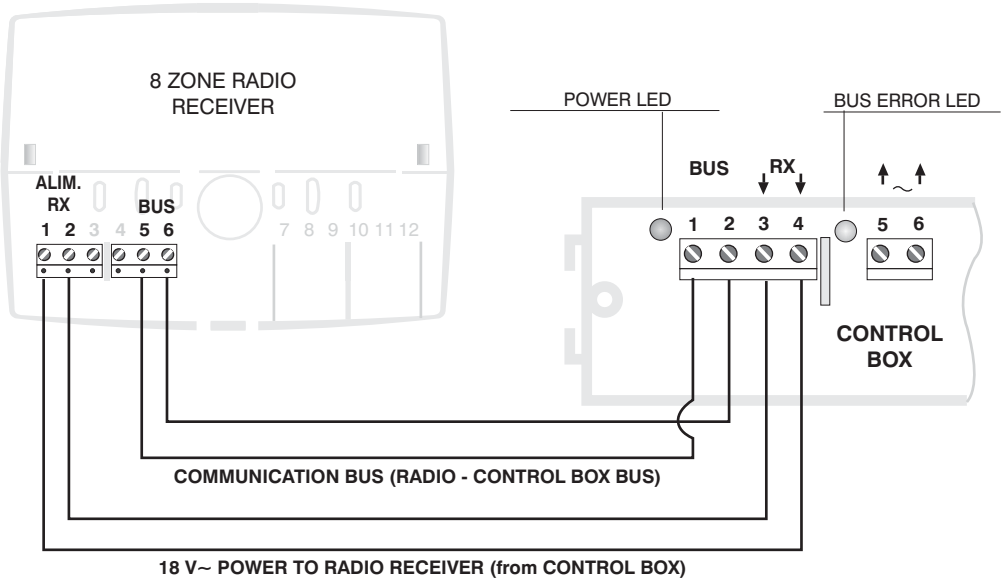


Fig. 5.i

Fig. 6.i



N.B. Refer to the control box's own manual for instructions regarding electrical connections.

IMPORTANT! The pump (or air conditioning unit) is only activated provided at least one of the solenoid valves is open.

You can choose between the following pump control modes:

- Instant.

- Delayed, with 2 minute delay after activation of solenoid valve/s.

Set the switch on the 8 zone receiver's electronic control card to the required control mode: R = Delayed / I = Instant.

Example of operation with instant pump activation.

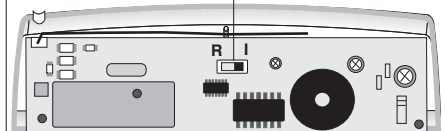
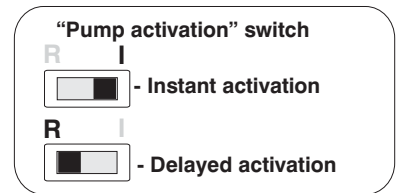
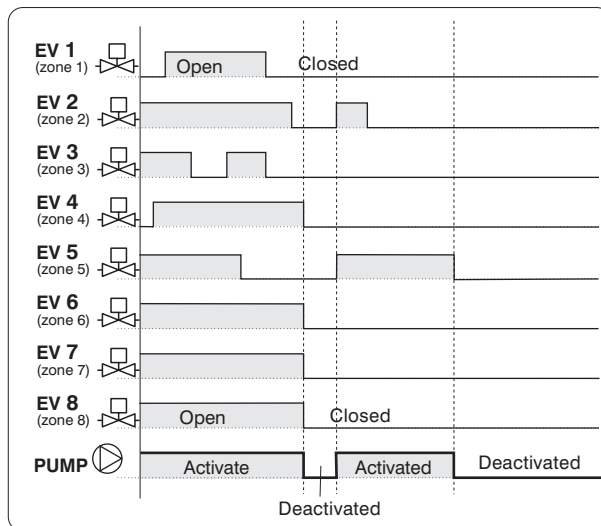


Fig. 8i

Fig. 7i

1.4 - ATTACHING THE FRONT WITH CARD TO THE BASE

- Reinsert the front part with card on the base being careful to correctly insert the pins connecting the card to the terminals.
- Push the front on to the base using both hands as shown in figure 9.i, until the catches click and lock the front to the base.

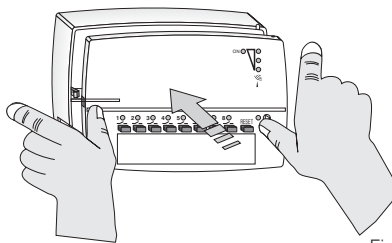


Fig. 9.i

ATTENTION: IN THE EVENT THAT, DUE TO ENVIRONMENTAL CONDITIONS, YOU DETECT AN EXCESSIVELY LOW RADIO SIGNAL, WE RECOMMEND MOVING THE ANTENNA OUTSIDE THE RECEIVER AND POSITION IT VERTICALLY.

With reference to the installation procedure (chapter 1.2):

- Open the receiver
- Move the antenna wire from its seat (upper inside part of the front) and rotate it vertically
- Pass the wire through the small semi-hole provided for the purpose (fig. 10.i)
- Carefully reclose the receiver (fig. 9.i - fig. 10.i)

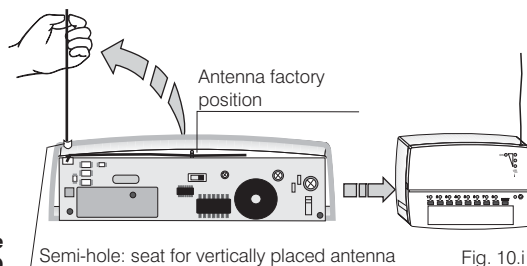


Fig. 10.i

Power the receiver and attempt to operate it and couple the transmitter, as shown in chapter 2 "PUTTING INTO OPERATION AND USE".

2 - PUTTING INTO OPERATION AND USE

2.1 - SIGNAL AND COMMAND LEGEND

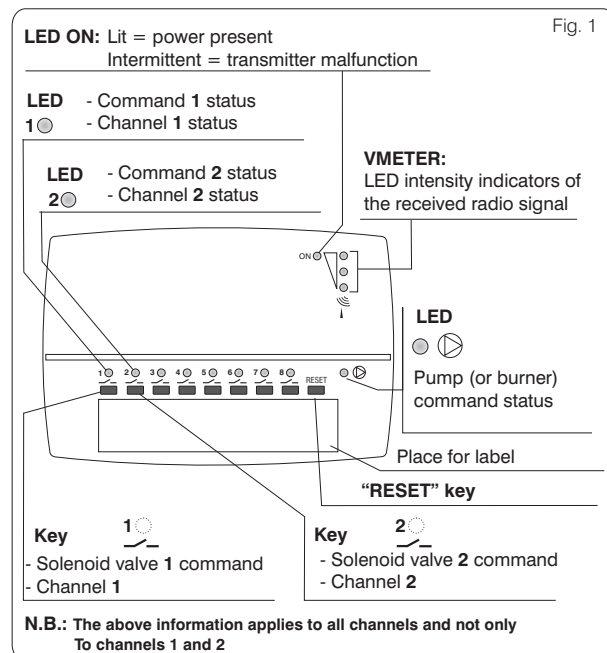


Fig. 1

LED	Appearance of the lighted signals
	off Fixed off
	1 s on off Intermittent (t on = t off) every second
	on off 1 prolonged impulse
	on Fixed on
Audible signal	
	Short sound
	Prolonged sound

Fig. 2

Label with assigning of zones

At the end of the installation, indicate the assigning of zones (ex.: Rooms - Dining-room, Day - Night) on the label supplied and fix it in the proper place.



IMPORTANT! The instructions and examples given in this manual use channels 1 and 2 only as examples. All operations and instructions refer to all channels (1 ÷ 8).

2.2 - NEW DEVICE

When turned on, the receiver has only the **LED ON** lit (fig. 3).

N.B.: there may be a weak lighted signal on the **lower LED** of the **VMETER**, due to the presence of radio interference.

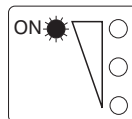


Fig. 3

2.3 - TEMPORARILY FORCING THE STATE OF THE CONTROL OUTPUT (ex.: to test the system)

A) TRANSMITTER NOT YET COUPLED OR NOT ACTIVE

- Hold down the relevant ex. **key 1** until there is a brief audible signal, then let go: the control is activated and the corresponding **LED** is steady on (fig. 4). Also the pump (or burner) command is activated.
- The control will remain activated for 5 minutes, at the end of which, an audible signal will continue for **5 seconds** to alert the operator of its imminent deactivation (fig. 5). If you wish to keep it active, press the ex. **key 1**; again while the audible signal is sounding; otherwise, when the signal ceases, the control will be deactivated.

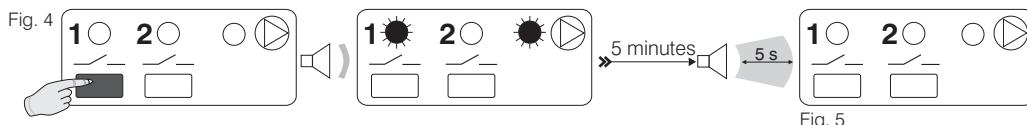


Fig. 4

Fig. 5

Fig. 6

- Briefly press the **"RESET"** key; when released the temporary forced control is cancelled (fig. 6).

N.B.: Before performing this operation, consult paragraph 3.0 **"RESET"**.

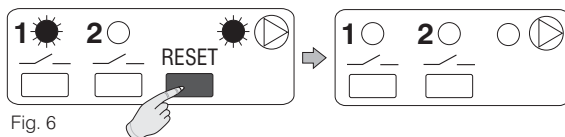


Fig. 6

B) TRANSMITTER COUPLED AND HEAT REGULATION ACTIVE The above-indicated operations can also be performed, using the same methods, during normal heat regulation operation; in this case, the temporary forced control will cause the transmitter to be excluded and the reversal of the command status: if active, it will be deactivated and vice versa. During the forced state, the corresponding **key (1 ÷ 8)**, is not functional.

2.4 - COUPLING TO TRANSMITTERS (Wireless chronothermostat and/or thermostat)

COUPLING TRANSMITTERS WITH CHANNELS ON THE 8 ZONE RECEIVER

- Pairable radio transmitters: Thermostat, chronothermostat or chronothermostat with Master.
- One transmitter can be coupled (as primary device) with one or more channels (e.g. Chronothermostat 1 with channels 1, 2, 3; chronothermostat 2 with channels 4, 5, 6; Thermostat with channel 7, leaving channel 8 not used).
- Only one transmitter can be coupled with each channel as its primary device.

COUPLING ONE OR MORE CHANNELS WITH A TRANSMITTER (examples use channel 1)

ON THE TRANSMITTER TO BE COUPLED activate the **"Test"** mode, as described in the chapter **"Coupling to receiver"** in the transmitter manual.

LEDs 1 ÷ 8 on the RECEIVER show channel status.

Execute coupling according to the indication of the **LED (A, B or C)**, as described below.

A - LED 1 off = channel not coupled

- Hold down **key 1** until a single acoustic signal sounds; then release it: **LED 1** is flashing.

The transmitter is coupled to the receiver (fig. 7).

Repeat the operation for the other channels to pair (fig. 8).

On the TRANSMITTER: deactivate "Test" mode.

B - LED 1 flashing = channel already coupled to the transmitter

- To confirm coupling:** deactivate "Test" mode on the transmitter.
- To cancel coupling:** hold down **Key 1** until a single acoustic signal sounds; then release it: **LED 1** is off (fig. 9).

On the TRANSMITTER: deactivate "Test" mode.

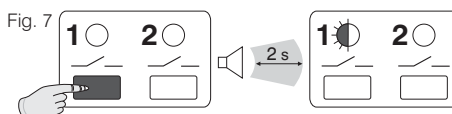


Fig. 7

Fig. 8

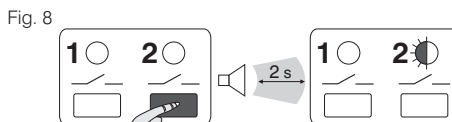
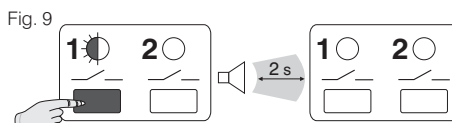


Fig. 9



C - LED 1 always on = channel coupled to another transmitter

- Hold down **key 1** until a single acoustic signal sounds; then release it: **LED 1** is flashing (fig. 10). The new transmitter is coupled to the receiver.

On the TRANSMITTER: deactivate "Test" mode.

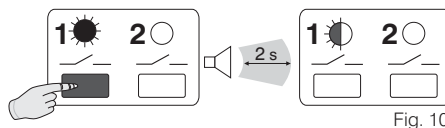


Fig. 10

N.B.: to replace a transmitter coupled to a channel, proceed as described in "C"

Coupling other transmitters to the remaining free channels

Select "Test" mode on the next transmitter to be paired, then repeat all the steps given above.

ATTENTION: the coupling to channels and assigning the master are not cancelled by the **RESET** control or by a power failure.

N.B.: test mode on the transmitter automatically terminates 3 minutes from activation.

2.5 - RECEIVER SETTING FOR OPERATION WITH "MASTER" (if required)

COUPLING ZONES WITH MASTER CHRONOTHERMOSTATS

- Only chronothermostat models with a "Master" function can be used to control the system's "Master" mode.
- Only one "Master" transmitter can be paired with each channel, but the same "Master" transmitter can be paired with more than one channel (paired exclusively or with another transmitter).
- More than one "Master" transmitter can be paired with one 8 zone radio receiver.
- A "Master" transmitter that has not been paired with any channel as a primary device can nevertheless be paired with the receiver channels as a "Master".
- Free channels cannot be paired with "Masters".

COUPLING CHANNELS WITH MASTERS

Select "Master Test" mode on the MASTER CHRONOTHERMOSTAT

- Press the "Master" key until "MST" disappears from the display.
(See "Pairing the Master" in the chronothermostat manual).

ON THE RECEIVER:

The channel LEDs can be in the following states:

LED on = channel already paired with another "Master"

LED flashing = channel already controlled by the active "Master"

LED off = channel free and not paired with the active "Master"

Example: pairing channel 2

- Press and hold the **key 2** button until you hear one beep, then release it. Both **LEDs** flash. **Channel 2** is now ready to be paired with the "Master" chronothermostat (fig. 11).
- Repeat the above operation with all the free channels you want to pair with the "Master".

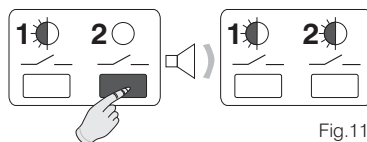


Fig. 11

Exit "Master Test" mode on the MASTER CHRONOTHERMOSTAT.

- Press the "Master" key for 2 seconds, then release it.

IMPORTANT: the above procedure can be used to pair all channels not yet paired with a "Master", to a "Master" chronothermostat that has itself not yet been paired with any receiver channel as primary device.

CANCELLING THE PAIRING OF CHANNELS WITH A "MASTER"

Select "Master Test" mode on the MASTER CHRONOTHERMOSTAT.

ON THE RECEIVER

The channel LEDs flash if the channels are paired with the active "Master".

- Press and hold the **button** for the channel whose pairing with the "Master" is to be cancelled until you hear one beep, then release it. The **LED** for the channel in question goes out and the channel pairing with the "Master" is cancelled.
- Repeat the above operation for all the other channels whose pairings you wish to cancel.

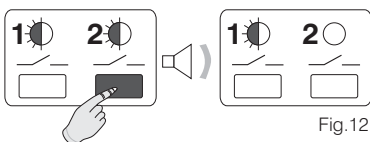


Fig. 12

Exit "Master Test" mode on the MASTER CHRONOTHERMOSTAT.

The transmitters control heat regulation and send commands and control signals to the receiver, which makes them operational. The operational security of the control is assured by the double sending of commands, a short time apart, and by an effective self-diagnostic system.

Signals during normal operation:

- **ON LED:** lit
- **LED 1 ÷ LED 8:** on with control activated, off with control deactivated
- **PUMP LED:** only comes on in conjunction with at least one of the channel 1 ÷ 8 LEDs
- **LED VMETER:** 1, 2 or all the LEDs light up briefly with each radio signal received

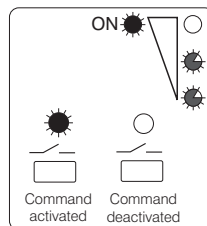


Fig. 13

2.7 - CHECKING THE INTENSITY OF THE RECEIVED SIGNAL - VMETER

ON THE TRANSMITTER

- Activate the **"check the intensity of the radio signal mode"**, as explained in the specific chapter of the transmitter.

ON THE RECEIVER

- The **LED** for the channel in test mode (LED 1 ÷ LED 8) flashes to indicate transmitter pairing status.
- The **3 LEDs** on the **VMETER**, together with the audible signal, indicate the intensity of the radio signal received, as illustrated in the figures to the side.

N.B.: verification mode on the transmitter automatically terminates 3 minutes after activation. If you wish to interrupt the verification, deactivate "Verify" mode **on the transmitter** explained in the instruction manual.

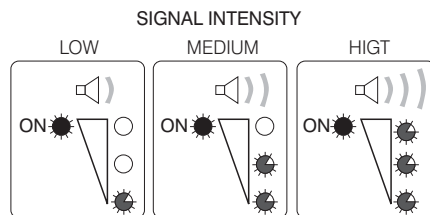


Fig. 14

ATTENTION: even in "normal operation" it is possible to check the intensity of the last radio signal received (the last signal is always stored):

- Press the **key** for the channel you want ex. **1** for about 2 seconds, then let go: the **LEDs** on the **VMETER** will show the intensity of the last signal received for 5 seconds.

2.8 ERROR SIGNALLING

TRANSMITTER ERRORS

The receiver reports two types of transmitter anomalies:

- **Failure to receive a radio signal for more than 30 minutes**
- **Transmitter battery almost dead.**

In both cases, the signal is given by the intermittent, simultaneous lighting of the **ON** e and malfunctioning channel **LEDs** (ex.: fig. 15 - channel 1 fault).

ATTENTION: in the case of the lack of a radio signal, the control of the corresponding solenoid valve is also deactivated.

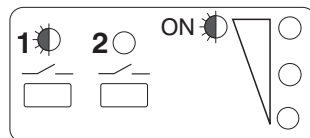


Fig. 15

CONTROL BOX BUS ERRORS

The receiver can signal the following type of bus (or control box) error:

- **No signal received on the bus for over 30 seconds.**

This type of fault is shown by the **ON LED** and the 3 **VMETER LEDs** flashing simultaneously (fig. 16).

IMPORTANT: All the control bar outputs are deactivated and will be reactivated only when the bus recognises its first valid signal.

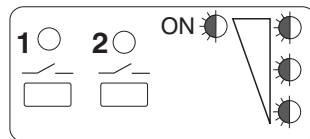


Fig. 16

2.9 - DELETING A TRANSMITTER COUPLING (even in a state of malfunction) FROM THE RECEIVER

It is possible to delete a transmitter coupling even if it is not able to transmit the **Test** signal (ex.: channel 1).

- Press and hold the **key** **1** until the end of the sequence of beeps shown in the figure 17; then let go. The transmitter coupling is erased from the memory of the receiver and **channel 1** is free.

ATTENTION: in the event the key is released before the beginning of the long beep, the operation is automatically cancelled and the command output is set to "Temporary Forced" (see paragraph 2.3). Press **"RESET" Key** to return to normal operation.

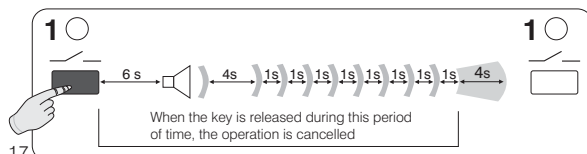


Fig. 17

3.0 - RESET

The **RESET** command on the receiver cancels all the data stored in the device except the coupling to the transmitter and the setting for **"Master"** functioning.

- Briefly press the **"RESET"** key: when it is released, all the **LEDs** will light together with a **beep** and the **ON LED** will be **steady lit** (fig. 18).

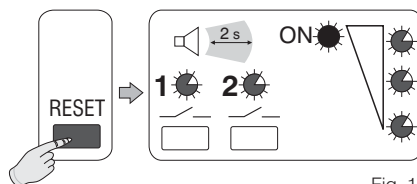


Fig. 18