TOP-A0307/RGB

Control unit with 3 outputs for RGB LEDs with constant current 350-700 mA Power supply 12-36 VDC. RX 433 MHz, 3 wired inputs, input for extender.

TOP-A0509/RGB

Control unit with 3 outputs for RGB LEDs with constant current 500-900 mA Power supply 12-36 VDC. RX 433 MHz, 3 wired inputs, input for extender.





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1 - PRODUCT FEATURES

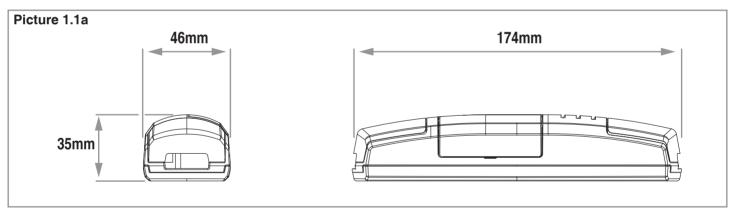
1.1 TECHNICAL DATA

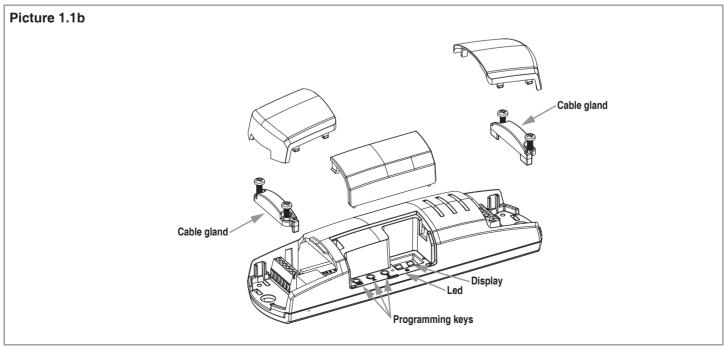
Power supply	12-24-36 Vdc
Output	3 channels
Type of load	RGB LED with constant current
N° of programmable transmitters	30
Radio frequency	433.920mhz ISM
Protection rating	IP20
Operating temperature	-20 +55 °C
Dimensions	174x46x35 mm

TYPE OF CONNECTABLE LOAD

After you choose the output current (depends on the load). It's possible to increase the available power (and the number of the connectable led) by using an high voltage power supply (max 36V)

Power supply	12V	24V	36V
N° of Leds connectable for each output	3	6	9
(It is considered a Led with standard			
voltage drop of 3,5V)			
Maximun power for each output	350mA= 3,6W	350mA= 7,3W	350mA= 11W
The maximum power is the result of the tension of led	500mA= 5,2W	500mA= 10,5W	500mA= 15,7W
(suppose 3,5V), multiplied for the set current, multiplied for	700mA= 7,2W	700mA= 14,7W	700mA= 22W
the number of the Leds connected	900mA= 9,4W	900mA= 18,9W	900mA= 28,3W



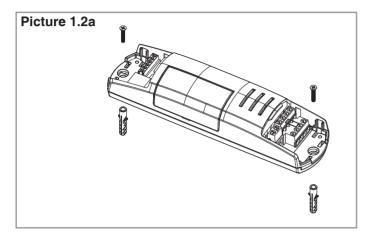


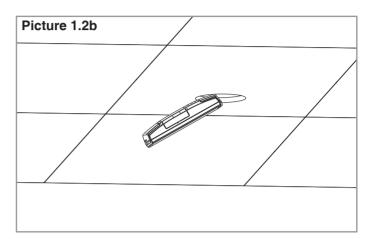
1.2 DESCRIPTION

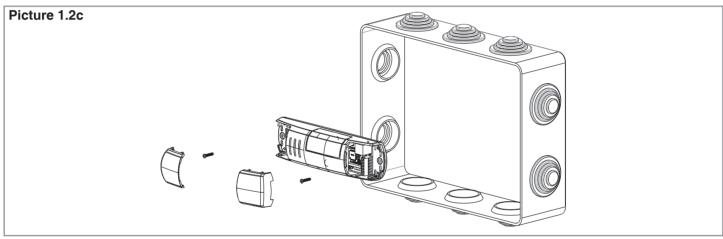
This device is the electronic control unit with Dimmer function for wireless and wired control of RGB LEDs with constant current. 12-36 VDC power supply and output can be selected via Jumper 350-500-700-900 mA. The option to connect up to 4 further extenders allows synchronised control of high powers. Wired inputs with button. Wide-ranging and accurate dimmer function; fade on and off that can be set to between 0 and 10 seconds.

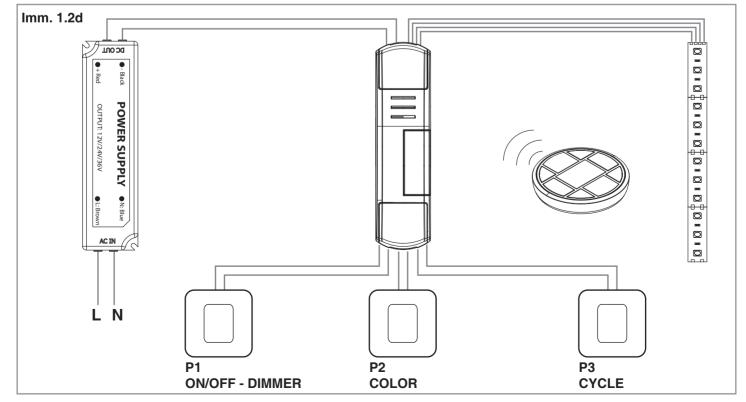
The ISM (industrial, scientific and medical) radio frequency band guarantees a long range, even through walls and ceilings.

Programming via the display is quick and intuitive while its compact size means it can be easily installed in false ceilings (picture 1.2b) and interconnection boxes (picture 1.2c).



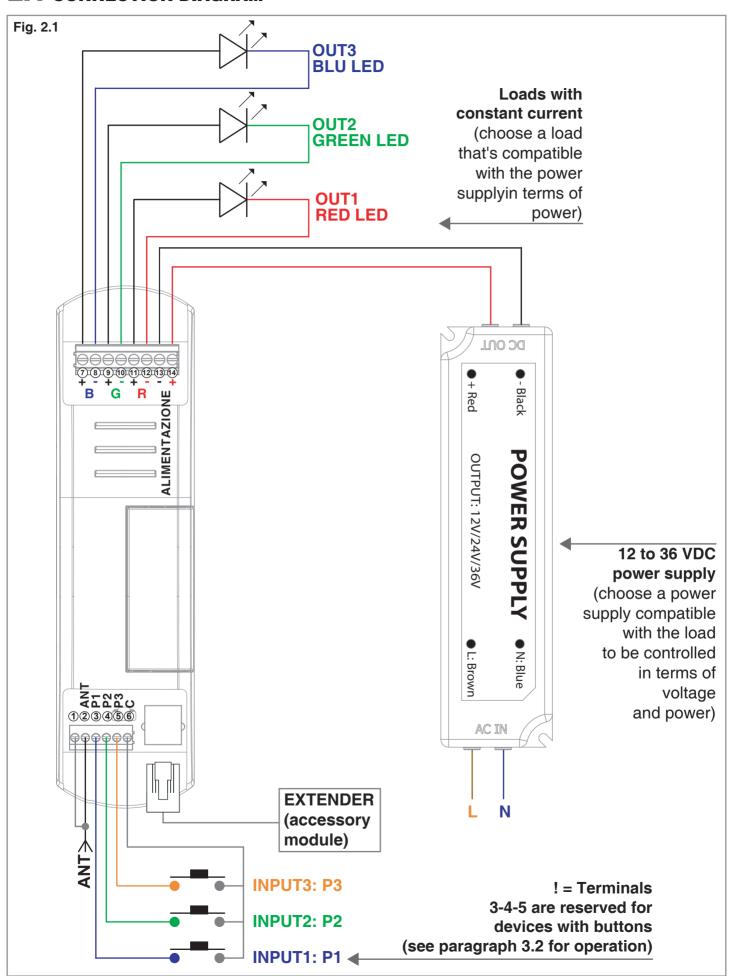






2 ELECTRICAL CONNECTIONS

2.1 CONNECTION DIAGRAM



NOTE: multiple buttons or loads can be connected by using parallel cabling.

2.2 DESCRIPTION OF CONNECTIONS

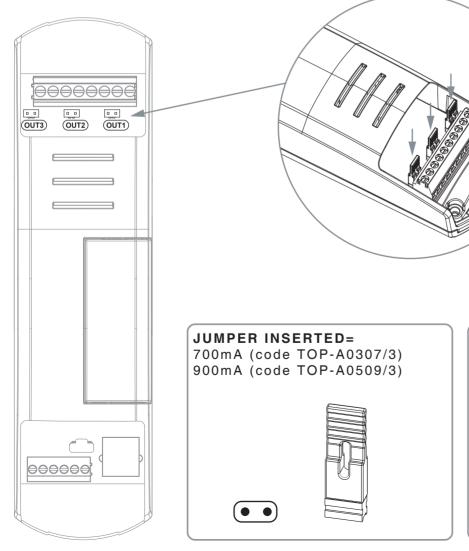
- Not all loads and buttons need to be connected for the control unit to operate correctly.
- Use wires with a suitable cross-section for the load connected.
- Multiple buttons can be connected by using parallel cabling.

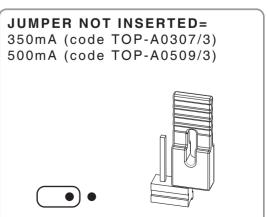
WARNING: If a load with higher consumption than that allowed (see control unit information plate data) is connected, the control unit will go into safety mode, switching off the load for one minute.

TERMINAL	DESCRIPTION
1	Aerial sleeve
2	Aerial signal
3	Button P1 input
4	Button P2 input
5	Button P3 input
6	Common for buttons
7	Output 3, BLU LED +V
8	Output 3, BLU LED -
9	Output 2, GREEN LED +V
10	Output 2, GREEN LED -
11	Output 1, RED LED, +V
12	Output 1, RED LED, -
13	Power supply -
14	Power supply + (12-24-36Vdc)

2.3 SET THE OUTPUT CURRENT

With the jumper is possible to set the current provided to the Leds. The selection is different for each out





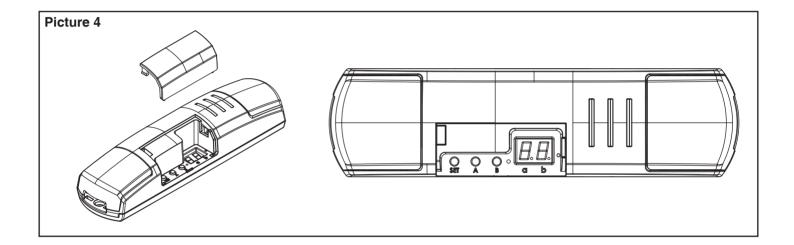
4 CONTROL UNIT SETTINGS

In the programming zone (see picture 4) you can access the programming menu using the keys and the display. Short presses on the "SET" key let you scroll through the different programmable functions visible on the display ("P1", "P2",,,). Prolonged pressure on the "SET" key (approx. 3 seconds) takes you to the menu for the function selected.

The different types of programming available are:

- "P0": not used
- "P1": programming of radio
- "P2": deletion of radio
- "P3": activation/deactivation of memory of last value at switch-on
- "P4": selection of fade on
- "P5": selection of fade at switch-off
- "P6": load state when the control unit is switched on
- "P7": timed on
- "FS": factory setting, reset control unit

After 60 seconds' inactivity (no keys pressed), the control unit goes into stand-by with the displays switched off.



4.0 MENU "PO": NOT USED

Default: value 2

In this product menu P0 is not used. Not change the default value (2).

4.1 MENU "P1": RADIO PROGRAMMING

This procedure lets you programme compatible multifunctional or generic transmitters.

WHICH REMOTE CONTROL DO YOU WANT TO ASSOCIATE WITH THE CONTROL UNIT?



MULTIFUNCTIONAL TRANSMITTERS - MODELS AND CODES



HB70-1L



CODE: HB80-30D. HB80-2L HB80-4L. HB80-4RGBW.

HB80-30RGBW

CODE: HB90-6LT HB90-6DM HB90-8P

CODE: TOUCH-1L TOUCH-1 TOUCH-1DIM TOUCH-4L TOUCH-1C TOUCH-1RGBW TOUCH-1CFU TOUCH-3C

With multifunctional transmitters the transmitter control modes depend on the model used. Refer to the transmitter manual, to the paragraph entitled "commands sent by the transmitter", bearing in mind that it is an "RGBW" device.

GENERIC TRANSMITTERS - MODELS AND CODES



CODE: HB70-5G



CODE: HB80-6G



CODE: MCU-TX4



With generic transmitters, the transmitter's control modes depend on the function associated with the key during the association procedure.

The available function for the key are:

TABLE 4.1 - KEY FUNCTIONS OF THE GENERIC TRANSMITTER

NUMBER TO BE SET IN "STEP 3b" OF THE PROCEDURE	KEY FUNCTION
2	Short press: ON/OFF Prolonged press: Dimmer intensity UP / DOWN
3	ON
4	OFF
5	Dimmer intensity UP
6	Dimmer intensity DOWN
7	Short press: with light on it changes colour Prolonged press: with light off dimmer colour / with light on save colour (see paragraph 5.1)
8	Dimmer intensity UP shade of colour
9	Dimmer intensity DOWN shade of colour
10	Play / stop "colour cycle" (see paragraph 5.4)
11	Change effect of "colour cycle" (see paragraph 5.4)
12	Change duration of "colour cycle" (see paragraph 5.4)
13	Deactivate "save colour" (see paragraph 5.1) "Soft Off 1h":
14	"Soft Off 1 hr": gradual fading in one hour (see paragraph 5.2)

PROCEDURE

STEP 1

Short presses on the "SET" key let you scroll through the menu until "P1" programming appears on the display.



STEP 2

A prolonged press on the "SET" key (approx. 3 seconds) takes you into programming.

The LED on the receiver comes on



WHICH TRANSMITTER DO YOU **WANT TO PROGRAMME?**

MULTIFUNCTION TRANSMITTER

(see models and codes on previous page)

GENERIC TRANSMITTER

(see models and codes on previous page)

STEP 3a

Short presses on key "B" let you set value "1" on the display



STEP 3b

Short presses on key "B" let you choose the function you want to programme shown on the displays.

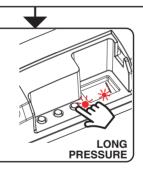
See table 4.1 on the previous page.



STEP 4

Give a long press on key "B" (approx. 3 seconds).

The LED on the display comes on



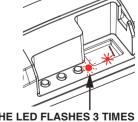
STEP 5

Make a transmission with the transmitter to be saved (see transmitter manual, the paragraph entitled "transmitter programming").

The LED on the receiver flashes 3 times to signal that it has been received.







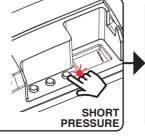
THE LED FLASHES 3 TIMES

STEP 6

The control unit listens for 50 seconds in case you want to add other transmitters.

To immediately exit the procedure give a short pressure on key "b".

The LED on the display turns off



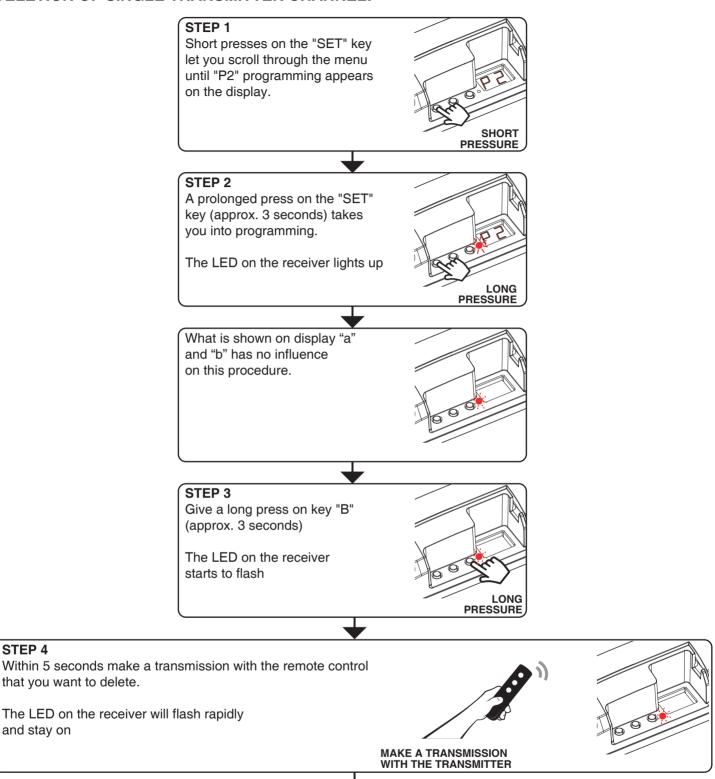
The control unit goes back to the menu displaying the radio programming. If you want to save other transmitters, go back to point 3 of this procedure.

If you want to go back to the menu displaying the different types of programming, give a prolonged press to the "SET" key (approx. 3 seconds).

4.2 MENU "P2": DELETION OF RADIO

These procedures let you delete transmitters that have already been programmed from the receiver's memory.

DELETION OF SINGLE TRANSMITTER CHANNEL:



STEP 5

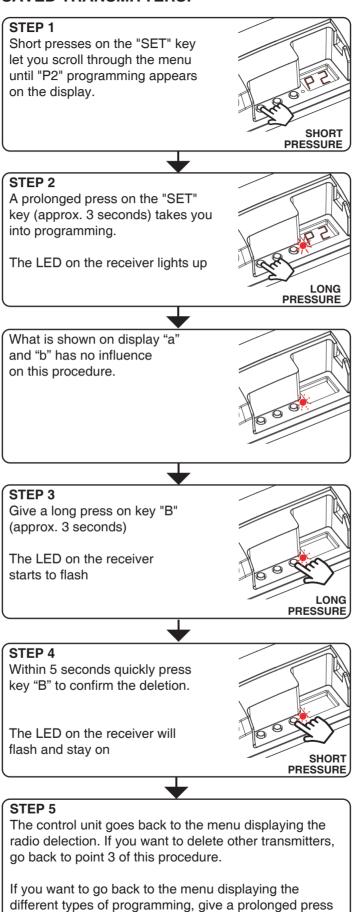
The control unit goes back to the menu displaying the radio delection. If you want to delete other transmitters, go back to point 3 of this procedure.

If you want to go back to the menu displaying the different types of programming, give a prolonged press to the "SET" key (approx. 3 seconds).

STEP 4

and stay on

DELETION OF ALL THE SAVED TRANSMITTERS:



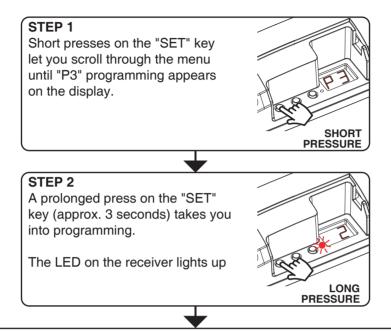
to the "SET" key (approx. 3 seconds).

4.3 MENU "P3": "SAVE" FUNCTION: (BRIGHTNESS LEVEL AND COLOUR AT SWITCH-ON)

Default: switches on with white light at maximum brightness

With this procedure you can set the intensity value at which the load switches on.

PROCEDURE:

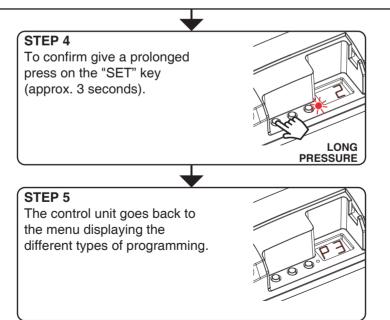


STEP 3

Make short presses on key "B" to choose the setting you want to set based on table alongside

DISPLAY	SAVE FUNCTION:	
	INTENSITY AT SWITCH-ON	
1	"SAVE" function on. The load will switch on at the last brightness value and colour set before it was switched off	
2	Switch-on of load at maximum intensity with white light	
3	Switch-on at value saved (see paragraph 5.1)	





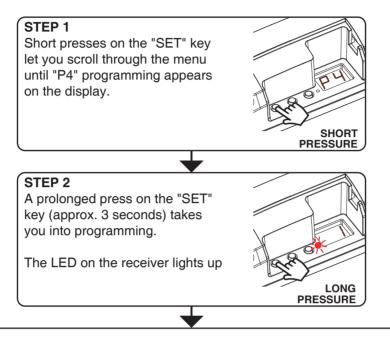
WARNING: The setting of display "b"=3 is possible only if a store colour command was previously sent by transmitter or via wire, see paragraph 5.1.

4.4 MENU "P4": FADE SETTING: GRADUAL SWITCH-ON

Default: switch-on in approx. 0.5

This procedure means you can set the duration of the switch-on time.

PROCEDURE:



STEP 3 Make short presses o

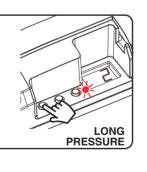
Make short presses on key "B" to choose the setting you want to set based on table alongside

DISPLAY	FADE: FADE ON TIME
_	immediate ON
01	ON ~ 0,5s
02	ON ~ 2s
03	ON ~ 4s
04	ON ~ 10s



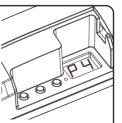


To confirm give a prolonged press on the "SET" key (approx. 3 seconds).



PASSO 5

The control unit goes back to the menu displaying the different types of programming.

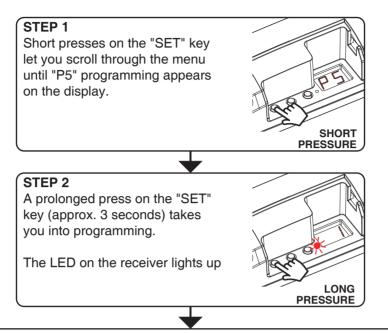


4.5 MENU "P5": FADE SETTING: GRADUAL SWITCH-OFF

Default: switch-off in approx. 0.5 seconds

This procedure means you can set the duration of the switch-off time.

PROCEDURE:



STEP 3

Make short presses on key "B" to choose the setting you want to set based on table alongside

DISPLAY	FADE: FADE OFF TIME
_	immediate OFF
01	OFF ~ 0,5s
02	OFF ~ 2s
03	OFF ~ 4s
04	OFF ~ 10s



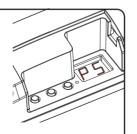
PASSO 4

To confirm give a prolonged press on the "SET" key (approx. 3 seconds).



PASSO 5

The control unit goes back to the menu displaying the different types of programming.

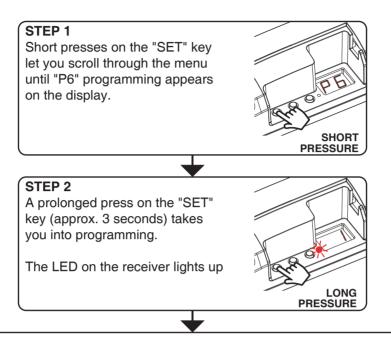


4.6 MENU "P6": LOAD STATE WHEN THE CONTROL UNIT IS SWITCHED ON

Default: Light Off

This process is used to set the state of Leds when the control unit is switched on (for example when the power supply is provided by a general switch or timer).

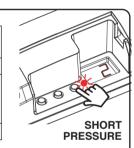
PROCEDURE:

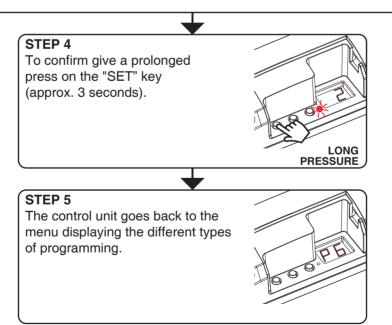


STEP 3

Short presses on key "B" let you choose the function you want to programme shown on the displays based on what is shown in the table alongside

DISPLAY	BRIGHTNESS
	AT SWITCH-ON
1	Default (light off)
2	The light switches on in the same status
	as the load is currently in:
	Set the desired status of light
3	Colour cycle



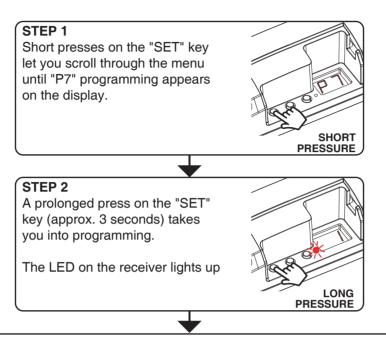


4.7 MENU "P7": TIMED ON

Default: No timing

This process is used to set the time for which the Leds stays on before an automatic switch off.

PROCEDURE:

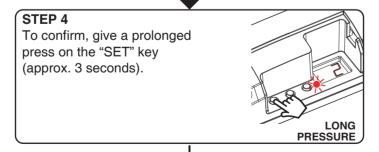


STEP 3

Short presses on key "B" let you choose the timing that you want to programme shown on the displays based on what is shown in table alongside

DISPLAY	TIMED ON
1	No Timing
2	1 minute
3	5 minutes
4	15 minutes
5	40 minutes
6	1 hour
7	2 hours
8	3 hours
9 `	8 hours





STEP 5

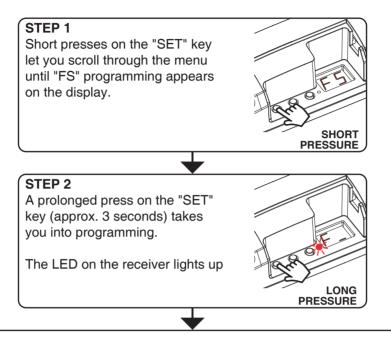
The control unit goes back to the menu displaying the different types of programming.



4.8 MENU "FS": FACTORY SETTING, RESET DELLA CENTRALE

This procedure let you take the control unit back to factory settings.

PROCEDURE:



STEP 3

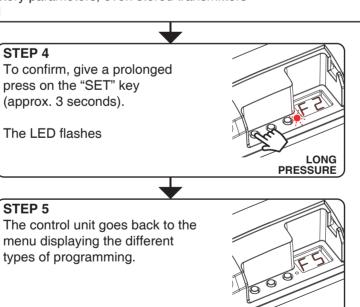
Con pressioni brevi del tasto "B" posso modificare l'impostazione visualizzata sul display "b":

display = F1 reset factory parameters, but no deletion of already

programmed transmitters

display = F2 full reset of factory parameters, even stored transmitters

will be deleted



SHORT

PRESSURE

5 FURTHER DETAILS

The following paragraphs describe the ways the lights connected are commanded and controlled.

5.1 "SAVE COLOR" FUNCTION

The "save color" function enables a colour and intensity for the connected load to be saved, which can then be used every time it is switched on.

This function can be used after adjusting the colour and intensity as desired (via radio or wire);

- VIA WIRE: with a prolonged press on the button connected to input "P2" (see paragraph 3.2 for the use of buttons via wire).
- VIA RADIO WITH GENERIC TRANSMITTER: with a prolonged press on a generic transmitter (see table 4.1b) programmed with the "change color/save color" function (see table 4.1c).
- VIA RADIO WITH MULTIFUNCTIONAL TRANSMITTER: with a compatible multifunctional transmitter (see table 5.1a). The way the command is sent depends on the transmitter model used, see the transmitter manual.

Tab. 5.1a

COMPATIBLE MULTIFUNCTIONAL TRANSMITTERS

HB80-30RGBW, HB80-4LRGBW, HB90-6LT

After sending a "save color" command, the load will always switch on with the colour and intensity saved. To change the switch-on value:

- another "save color" value must be sent (if you want the default value, just send the command with the load switched on with a white light and maximum intensity).
- a generic transmitter must be used (see table 4.1b), programmed with

the "deactivate save color" function (see table 4.1c).

The control unit will set the switch-on value that was originally programmed (see paragraph 4.3).

- carry out the procedure described in paragraph 4.3 and set display "b" to the desired setting.

5.2 "SOFT OFF 1 HR" FUNCTION: FADE OFF

The "Soft off 1 hr" function is a gradual fading off in one hour starting from the colour and intensity set at the time the command was sent.

This function can be activated after adjusting the colour and intensity as desired (via radio or wire);

- VIA RADIO WITH GENERIC TRANSMITTER: with a generic transmitter (see table 4.1b) programmed with the "soft off 1 hr" function (see table 4.1c).

This gradual switch-off can be interrupted at any time by the sending of another command via radio or via wire.

5.3 "ADJUST WHITE LIGHT TEMPERATURE" FUNCTION

This function enables an effect on white light to be produced which makes the light warmer (by moving the shade towards red) or colder (by moving the shade towards blue).

This function can be used after adjusting the colour and intensity as desired (via radio or wire);

- VIA RADIO WITH MULTIFUNCTIONAL TRANSMITTER: with a compatible multifunctional transmitter (see table 5.3a). The way the command is sent depends on the transmitter model used, see the transmitter manual.

Tab. 5.3a

COMPATIBLE MULTIFUNCTIONAL TRANSMITTERS

HB80-30RGBW, HB80-4LRGBW, HB90-6LT

5.4 BEHAVIOUR OF THE "COLOR CYCLE"

The "color cycle" is an automatic and gradual changing of the colours to create an effect.

The cycle can be played/stopped by sending commands:

- VIA WIRE: with a short press on the button connected to input "P3" (see paragraph 3.2) with the light on.
- VIA RADIO WITH GENERIC TRANSMITTER: with a generic transmitter (see table 4.1b) programmed with the "play/stop color cycle" function (see table 4.1c).
- VIA RADIO WITH MULTIFUNCTIONAL TRANSMITTER: with a compatible multifunctional transmitter (see table 5.4a).

The way the command is sent depends on the transmitter model used, see the transmitter manual.

With each press on one of these commands the load will:

flash once= play "color cycle"

flash twice= stop "color cycle"

CHANGE "COLOR CYCLE" DURATION

This function is used to adjust the duration of the colour cycle. At the end of the cycle with the time set it will start again from the beginning.

The duration of the cycle can be changed by sending commands:

- VIA WIRE: with a prolonged press (about 3 seconds) on the button connected to input "P3" (see paragraph 3.2) with the light on.
- VIA RADIO WITH GENERIC TRANSMITTER: with a generic transmitter (see table 4.1b) programmed with the "change color cycle duration" function (see table 4.1c).

With each press on one of these commands the load will:

flash once= short 90 second "color cycle" Default value

flash twice= long 15 minute "color cycle"

- VIA RADIO WITH MULTIFUNCTIONAL TRANSMITTER: with a compatible multifunctional transmitter (see table 5.4b). The way the command is sent depends on the transmitter model used, see the transmitter manual.

With multifunctional transmitters other cycle duration values can be set.

After sending a "change color cycle duration" command, the cycle will always be executed with the duration set. To change the duration of the cycle again, reset it as desired.

CHANGE "COLOR CYCLE" EFFECT

This function is used to change the shades of colour that are displayed during the cycle.

The shades that can be set are:

Effect1 (default value): the colour cycle displays all the shades

Effect2: colour cycle with green and blue tones

Effect3: colour cycle with blue and violet tones

Effect4: colour cycle with blue, violet and pink tones

Effect5: colour cycle with red and orange tones

Effect6: colour cycle with orange and yellow tones

The effect of the cycle can be changed by sending commands:

- VIA RADIO WITH GENERIC TRANSMITTER: with a generic transmitter (see table 4.1b) programmed with the "change color cycle effect" function (see table 4.1c).
- VIA RADIO WITH MULTIFUNCTIONAL TRANSMITTER: with a compatible multifunctional transmitter (see table 5.4c). The way the command is sent depends on the transmitter model used, see the transmitter manual.

After sending a "change color cycle effect" command, the cycle will always be executed with the effect set. To change the effect of the cycle again, reset it as desired.

Т	a	b.	5.	.4a

COMPATIBLE MULTIFUNCTIONAL
TRANSMITTERS
HB80-30RGBW, HB80-4LRGBW,
HB90-6LT

Tab. 5.4b

COMPATIBLE MULTIFUNCTIONAL
TRANSMITTERS
HB80-30RGBW, HB80-4LRGBW,
HB90-6LT

Tab. 5.4c

COMPATIBLE MULTIFUNCTIONAL
TRANSMITTERS
HB80-30RGBW, HB80-4LRGBW,
HB90-6LT
HB80-30RGBW, HB80-4LRGBW,

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