

**INSTALLATION CERTIFICATE**

The undersigned qualified installer attests having personally installed the remote receiver module on the premises indicated below, in accordance with manufacturer instructions.

By :

Sold on :

.....

Device :  Remote Control Receiver  
Module AC120

Address:

.....

Signature: .....

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ISO 9001 Certified Company



**REMOTE CONTROL  
RECEIVER MODULE  
AC120**

**INSTALLATION  
MANUAL**



Made in Italy

AC2576 Rev.02 - 10/13

## PRODUCT OVERVIEW

The AC120 is a multi-function compact receiver which can store up to 120 GEMINI, 2-button or 4-button, remote controls. It can be used for control of alarm systems, remote gate opening, garage door control, etc.

The first 60 remote controls are stored in the microprocessor non-volatile memory (EEPROM). Memory can be extended by fitting a second optional Eeprom (ref. IC0161) to store 60 other remote controls. To insert the second Eeprom simply disconnect the module, fit the Eeprom and restore power. The LED will flash twice to confirm the Eeprom has been recognized.

Eeproms can be fitted indifferently on either socket but the module will not operate if an Eeprom is only fitted on socket 2.

The socket for the first EEPROM is on the right hand side of the circuit board, behind the relay (Fig.1).

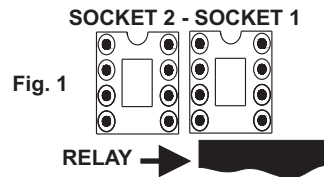


Fig. 1

The incorporated relay has NO/NC contacts which can be programmed to operate in pulse, toggle or pulse with timer mode.

A specific remote control button can be assigned to the relay output.

**NB:** To avoid damaging the optional Eeprom during installation, carefully align notches (see Fig. 2).

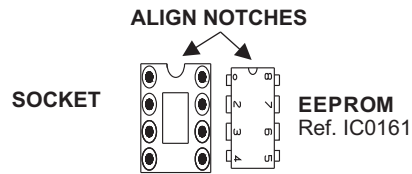


Fig. 2

## DIP-SWITCH SETTINGS

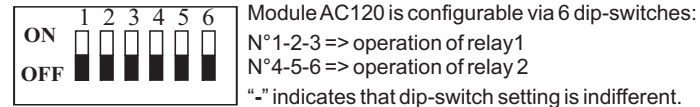


Fig. 3

Module AC120 is configurable via 6 dip-switches:  
 N°1-2-3 => operation of relay1  
 N°4-5-6 => operation of relay 2  
 "-" indicates that dip-switch setting is indifferent.

OPERATING MODES	RELAY 1 OUTPUT			RELAY 2 OUTPUT		
	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6
Pulse	OFF	-	-	OFF	-	-
Toggle state	ON	OFF	-	ON	OFF	-
Timer activation - resettable	ON	ON	-	ON	ON	-
Remote control button N°1-2	-	-	OFF	-	-	OFF
Remote control button N°1-4	-	-	OFF	-	-	ON
Remote control button N°3-2	-	-	ON	-	-	OFF
Remote control button N°3-4	-	-	ON	-	-	ON

## DIP-SWITCH SET UP

The examples below also apply for setting dip-switches of relay output 2.

**DIP 1 OFF, PULSE MODE** => pressing remote control button will trigger the relative relay for approx. 1/2 a second.

**DIP 1 ON, DIP 2 OFF, TOGGLE MODE** => pressing remote control button will change the relative relay state. A subsequent press of the same button will restore relay initial state.

**DIP 1 ON, DIP 2 ON, TIMER** => pressing remote control button will trigger the relative relay for approx. 4 minutes. A subsequent press of the same button will restore relay initial state.

**DIP 3 OFF, RC BUTTON ASSOCIATION** => by setting dip-switch in this position, button 1 is learned (4-button remote control).

**DIP 3 ON, RC BUTTON ASSOCIATION** => by setting dip-switch in this position, button 3 is learned (4-button remote control).

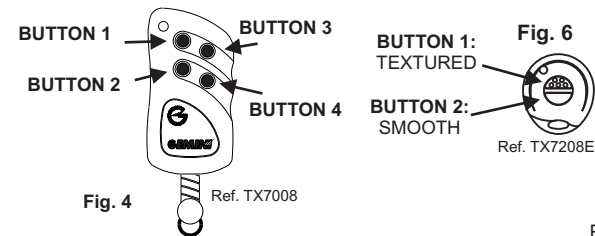


Fig. 4

Ref. TX7208E

## REMOTE CONTROL CONFIGURATION

### MODE 1: New Remote Control:

- Check dip-switches, the new remote control will be learned according to settings.
- Press and release the "LEARN" button on AC120 module (Fig.5) => the LED will blink once.
- Press one of the buttons on the remote control to be learned => the LED will blink again.

### MODE 2: Previously Learned Remote Control:

- Check dip-switches, the new remote control will be learned according to settings.
- Simultaneously press buttons 1-2 or 3-4 of a previously learned remote control and hold for 1 to 2 sec. => the LED will initially flash quickly and then give a long flash and turn OFF.
- Press one of the buttons on the remote to learn => the LED will blink.

**NB:** If the Eeprom memory is full, the LED on the AC120 module will blink on entering learn mode to indicate that no other device can be learned.

## REMOTE CONTROL CANCELLATION

There are 2 cancellation procedures:

**Total cancellation** => clears the entire Eeprom memory: all data will be lost.

**Partial cancellation** => only selected remote controls will be deleted.

### TOTAL CANCELLATION

If the module has 2 Eeproms, both will be cleared. To clear only one, disconnect the module and remove the Eeprom that must not be erased.

If the Eeprom to be cleared is fitted on socket 2, move it to socket 1 and proceed with cancellation:

- Press the "LEARN" button (Fig.5) and keep it pressed until the LED turns OFF (at least 10-15 sec.).

**NB:** Do not release the button before the LED turns OFF otherwise the procedure will be invalidated.

### PARTIAL CANCELLATION

**NB:** When learning remote controls, we recommend you write down the device position in order to select it when it needs to be deleted.

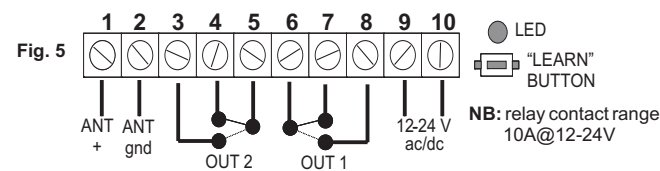
Remote controls are divided into groups. Identify the group and the remote control to be deleted:

- Group 1 => 1 to 10
- Group 2 => 11 to 20
- Group 3 => 21 to 30 => up to group 12 (remote control n. 120).

- Power the module and simultaneously press and hold the "LEARN" button for 2 sec. The LED will blink once if there is 1 Eeprom or twice if there are 2 Eeproms.
  - Release the LEARN button. The LED will give 5 long flashes.
  - Repeatedly press the "LEARN" button (1 to 12 times) to select the required group. The LED will blink the number of times corresponding to the selected group.
- NB:** if the button is pressed once too many, procedure will be repeated from point **b**).
- Press the "LEARN" button (1 to 10 times) to select the remote control to be deleted. The LED will blink the number of times corresponding to the deleted remote control.
  - Press the "LEARN" button. The LED will turn ON.
  - Hold the "LEARN" button until the LED turns OFF. If the button is released before the LED turns OFF, the remote control will not be deleted and the procedure will start again from point **b**).

When the selected remotes have been deleted, disconnect and reconnect the module to restore normal operating mode.

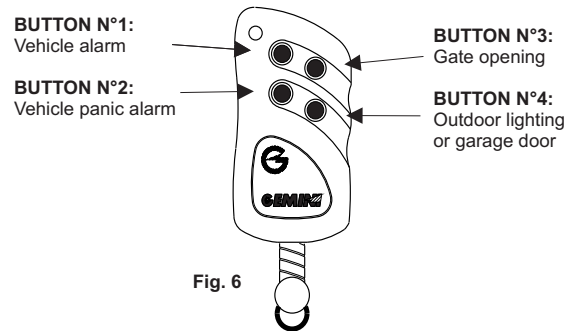
## WIRING DIAGRAM



POS.	INPUT / OUTPUT
1	Antenna positive pole
2	Antenna negative pole (gnd)
3	NA (normally opened) contact - relay channel 2
4	NC (normally closed) contact - relay channel 2
5	Common - relay channel 2
6	Common - relay channel 1
7	NC (normally closed) - relay channel 1
8	NA (normally opened) contact - relay channel 1
9	Module AC120 power supply ( 12-30 Vac/dc )
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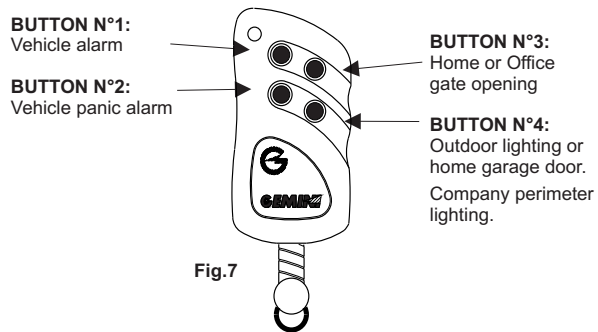
### CONFIGURATION EXAMPLES

The following are just indicative examples to illustrate how module AC120 can be configured.



If remote control buttons are configured as shown in Fig.6, a single remote control can be used to manage vehicle alarm (buttons 1 and 2), open gate (button 3), turn ON outdoor lighting or open garage door (button 4).

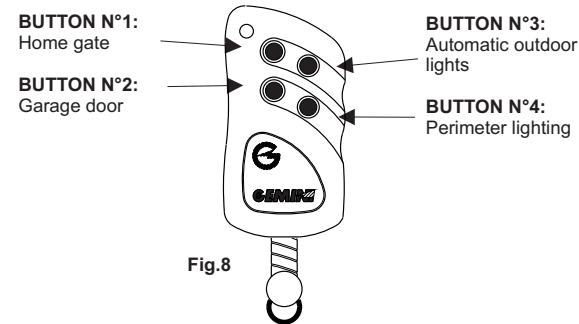
To set up outdoor lighting in automatic or manual mode, see **Dip-Switch Settings** table.



Configuration shown in Fig.7 requires the use of two AC120 modules, one at home and the other at work, with buttons N°1 and N°2 assigned to your vehicle.

Two modules can be associated to the same remote control and therefore be configured differently.

Same thing can be done with 3 modules (home, work and cottage). There is no limit to the number of AC120 modules you can program.



Configuration shown in Fig.8 requires the use of two AC120 modules, both for the same premises.

### TECHNICAL SPECIFICATIONS

Power Supply	12-30 V ac/dc
Current consumption	7,3 mA @ 13,8 Vdc
Transmission frequency	433,92 Mhz
Relay contact range	10A @ 12-24V
Timer	Approx. 4½ min.
Number of output channels	2
Pulse switch relay	0,5 seconds
Storing memory	60 or 120 remote controls