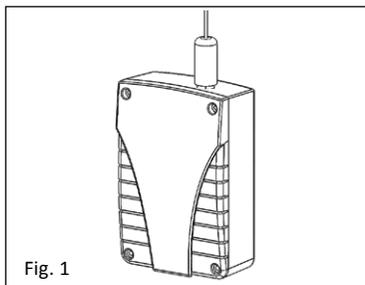## INSTALLATION MANUAL

Fig. 1

1 - Introduction

The Transmitter Solutions HIVE500 PLUS 433 receiver (Fig. 1) is a single conversion superheterodyne receiver with integrated rolling-code decoding. The demodulation is AM/ASK.

A special algorithm allows to keep synchronyzed transmitter and receiver. The receiver having dry contacts relays output, can be connected to any type of device (gate, garage door, rolling shutters, awnings, anti-burglar appliances, lighting, etc.).

The transmitter memorization can be carried out either with 2 push-buttons of the receiver or remotely using only the keys of the transmitter. The setup of the remaining parameters of the receiver can be done only with the 2 push buttons of the receiver. All the setting steps are displayed by a backlit LCD display.

The internal data can be saved/restored to/from an external memory.
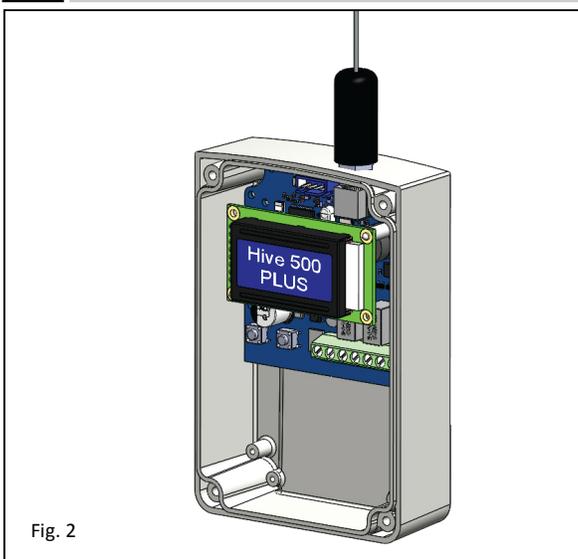
1 | Technical specifications

Fig. 2

Receiver type:	Supereheterodyne.
Demodulation:	AM/ASK.
Operating frequency:	433.92 Mhz.
Sensitivity (for good signal):	-115 dBm.
Input load:	50 Ohm.
Power supply :	12 o 24 V ac/dc.
Current consumption (@12Vdc)	from 25 mA to 90 mA (max)
N° of relays:	2 (1 NO and 1NO / NC).
Max power on relay output:	24VA max 60V .
Memory capacity:	500 transmitters
Security protocol	Keeloq® Hopping code
N° of code combinations	2exp64
Operating temperature:	from -20 to + 70 °C.
Dimensions (Fig. 2):	120 x 80 x 40 mm
Weight:	65 gr.
Relay operating mode	Pulse, step, timed
Delay	from 1 sec. to 24h: 59 min.

2 | Mounting

connect the antenna

Drill the placing surface with ø6 tool and insert the 2 plugs

22 mm

Then fix the support with the screws provided

Option A) make a hole (ø11 mm) on the bottom of the box and pass the cables throught

Option B) Use of Pg7 cable gland

Fig. 3

3 Layout & Wiring

Fig. 4

- Connector for backup memory
- Antenna
- Backlit LCD Display
- Buzzer
- Hive 500 PLUS
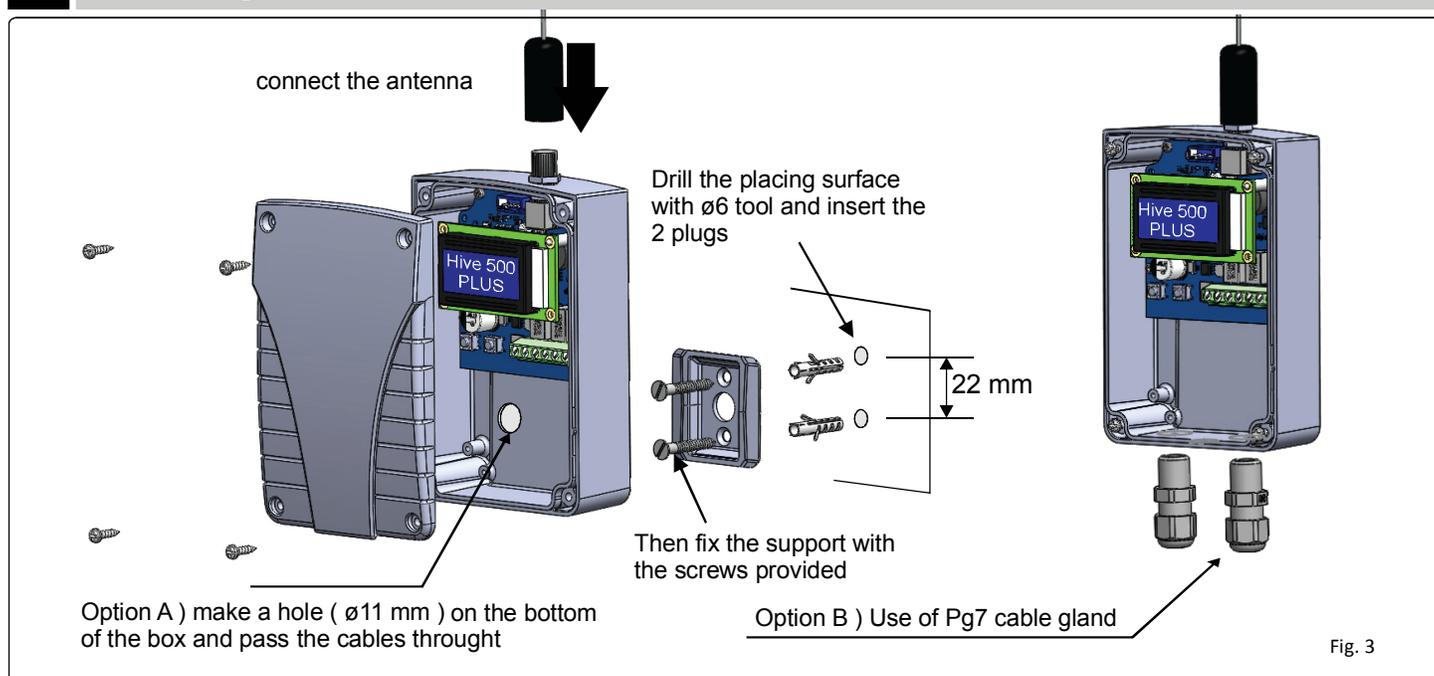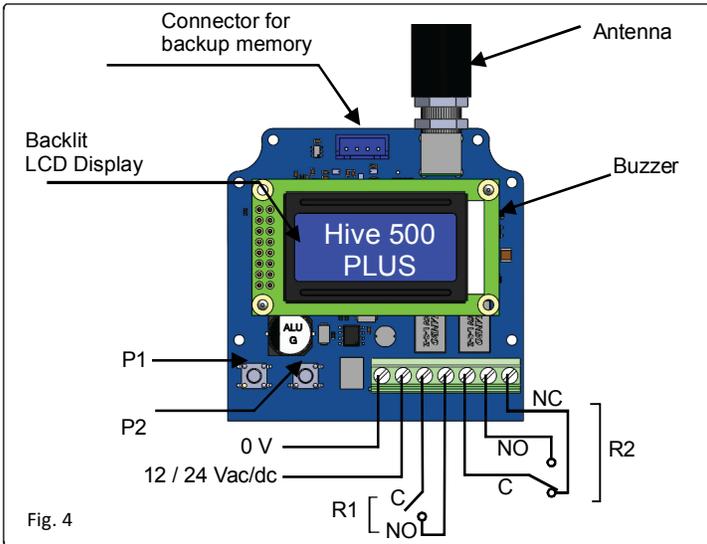- P1
- P2
- 0 V
- 12 / 24 Vac/dc
- R1 [C / NO]
- R2 [NC / NO / C]

4 Compatible transmitters

TRAFLA433TSPW4K
STINGRAY 433TSPW1V, 433TSPW2V
TRATSMASPROS2TR2641E4.TS
TRARAY433TSPW4V
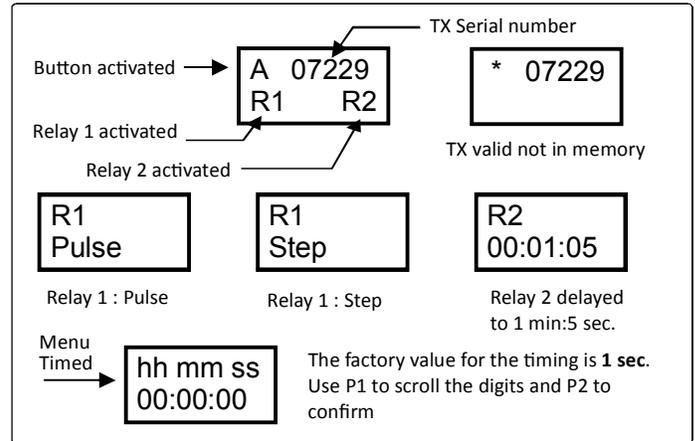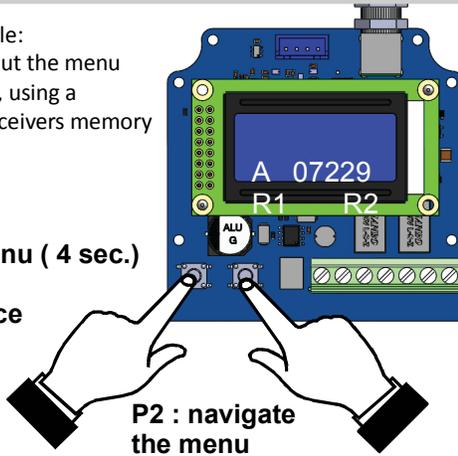433TSPW1K-C, 433TSPW1KB-C, 433TSPW2K-C
SEDK2641A4M.TS

5 Warnings

The receiver allocation is very important for the best operation of the system. Place the receiver far from interference sources such as big magnetic fields or radio emissions. The installation and the positioning of the antenna is very important as well. Before installing the antenna it's advisable to make some tests on the site.
The distance between 2 receiver must be at least 1,5m

The appliance full comply with the requirements of the following European Directives : 2006/95/CE, 2004/108/CE, 99/05/CE and the Standard EN 60335-1.
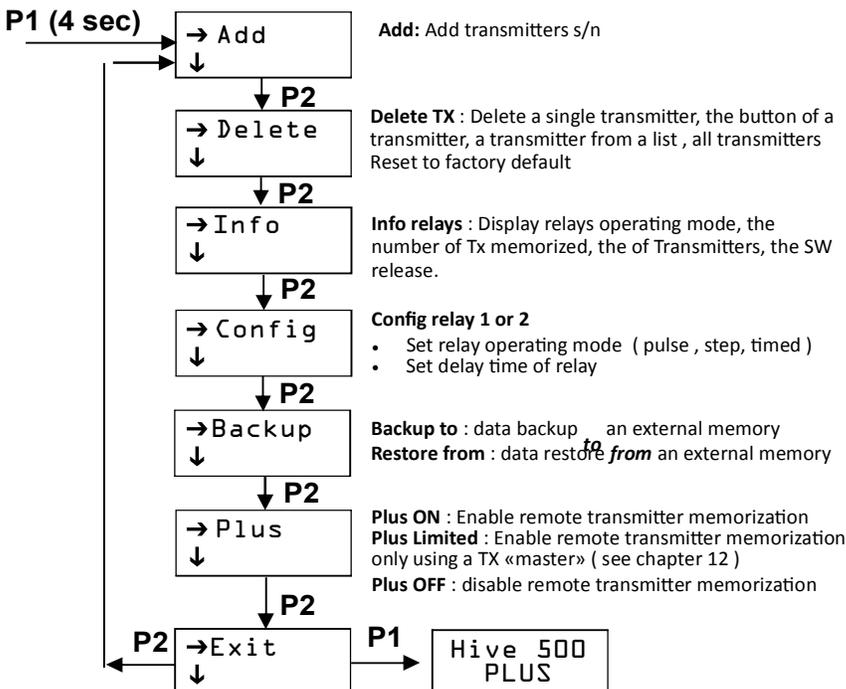
6 Display legend

There are 2 methods available:
1) Using P1 and P2 throughout the menu
2) Remote from the receiver, using a transmitter already in the receivers memory (Mode PLUS).
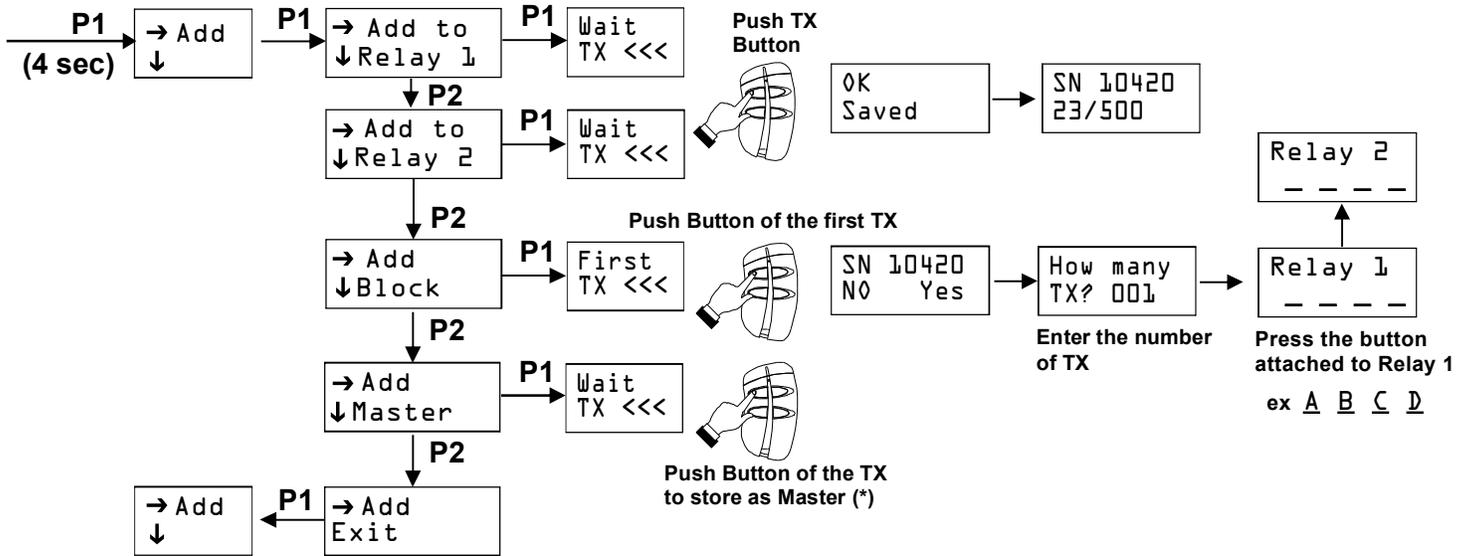

P1 : enter the menu (4 sec.)
or
confirm the choice

P2 : navigate the menu

- Button activated → `A 07229`
- TX Serial number
- Relay 1 activated → `R1`
- Relay 2 activated → `R2`
- `* 07229` TX valid not in memory
- `R1 Pulse` Relay 1 : Pulse
- `R1 Step` Relay 1 : Step
- `R2 00:01:05` Relay 2 delayed to 1 min:5 sec.
- Menu Timed → `hh mm ss 00:00:00` — The factory value for the timing is **1 sec**. Use P1 to scroll the digits and P2 to confirm

7 Programming / Navigation menu

P1 (4 sec)

→ `Add` ↓

Add: Add transmitters s/n

↓ **P2**

→ `Delete` ↓

Delete TX : Delete a single transmitter, the button of a transmitter, a transmitter from a list , all transmitters
Reset to factory default

↓ **P2**

→ `Info` ↓

Info relays : Display relays operating mode, the number of Tx memorized, the of Transmitters, the SW release.

↓ **P2**

→ `Config` ↓

Config relay 1 or 2
- Set relay operating mode (pulse , step, timed)
- Set delay time of relay

↓ **P2**

→ `Backup` ↓

Backup to : data backup *to* an external memory
Restore from : data restore *from* an external memory

↓ **P2**

→ `Plus` ↓

Plus ON : Enable remote transmitter memorization
Plus Limited : Enable remote transmitter memorization only using a TX «master» (see chapter 12)
Plus OFF : disable remote transmitter memorization

↓ **P2**

P2 ← →`Exit` ↓ **P1** → `Hive 500 PLUS`

8 | Menu Add

P1 (4 sec) → **→ Add ↓**

P1 → **→ Add to ↓Relay 1**

P1 → **Wait TX <<<** → **Push TX Button**

P2 ↓

→ Add to ↓Relay 2

P1 → **Wait TX <<<**

OK Saved → **SN 10420 23/500**

P2 ↓

→ Add ↓Block

P1 → **First TX <<<** → **Push Button of the first TX**

SN 10420 NO Yes → **How many TX? 001** → **Relay 1 _ _ _ _** → **Relay 2 _ _ _ _**

Enter the number of TX

Press the button attached to Relay 1

ex <u>A</u> <u>B</u> <u>C</u> <u>D</u>

P2 ↓

→ Add ↓Master

P1 → **Wait TX <<<** → **Push Button of the TX to store as Master (*)**

P2 ↓

→ Add Exit ← **P1** ← **→ Add ↓**

(*) NOTE : MASTER TRANSMITTER MUST BE 2 OR MORE BUTTONS TO PROGRAM BOTH RELAYS

The first TX added acts as Master: that means that it can be used to add more tx using the PLUS option. The submenu Add Master allows to assign the Master property to any other TX already in memory even not memorized on the first position. Once a TX has been assigned as Master, its property cannot be removed unless to delete it from the memory using the Delete menu. The transmitters «Master» are identified with the «#» in the list.

9 | Menu Delete

P1 (4 sec)

→ Add ↓

P2 ↓

→ Delete ↓

P1 →

P2 ↓
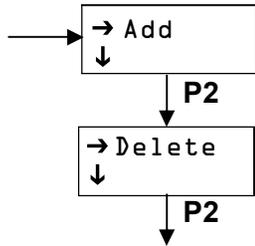
- **Delete TX** : Delete a transmitter. It's necessary to have the transmitter available because the system requires the RF transmission;
- **Delete Button** : Delete the single button of a transmitter;
- **Delete by List** : Delete a transmitter from a list. In this case it's enough to know the SN of the transmitter to delete to complete the erasure;
- **Delete All TX** : Delete all transmitters;
- **Delete setting** : Reset to factory default: delete all the transmitters and reset the operating mode of the relays to PULSE.
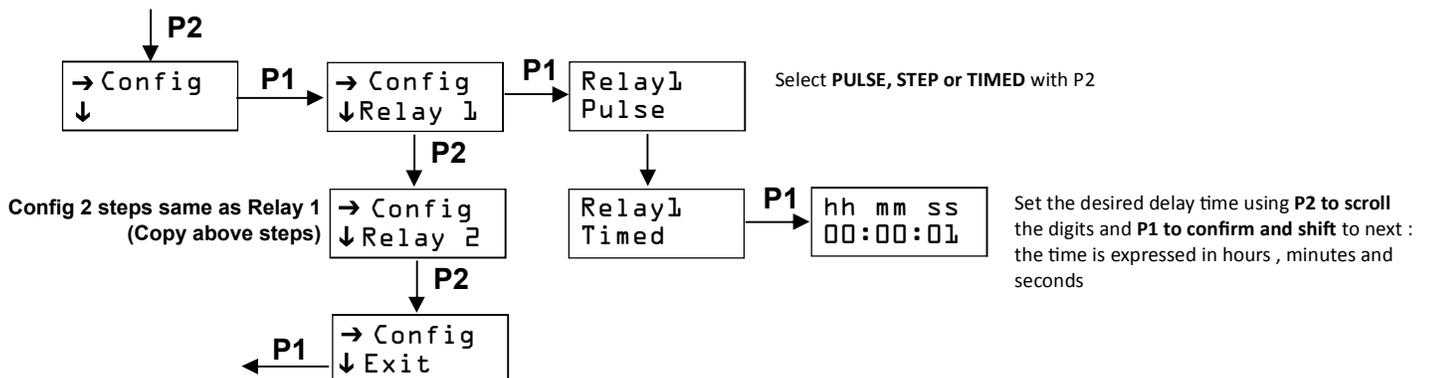
10 | Menu Info
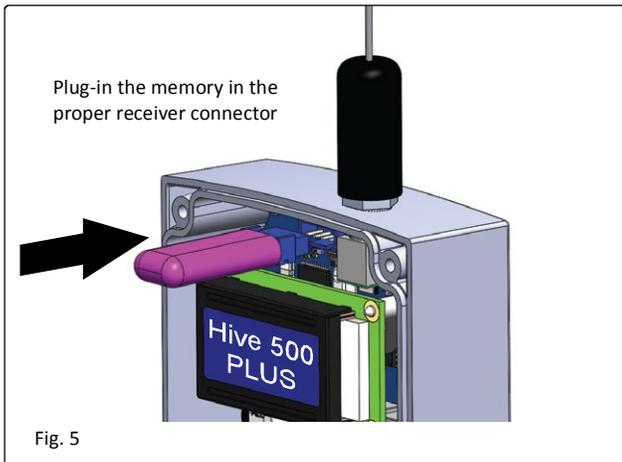
P2 ↓

→ Info ↓

P1 →

P2 ↓
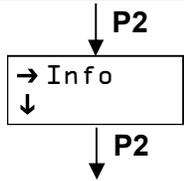
- **Info relays** : Display relays operating mode
- **Info N. Users** : Display number of Tx memorized
- **Info List** : List of Transmitters / Relays used.
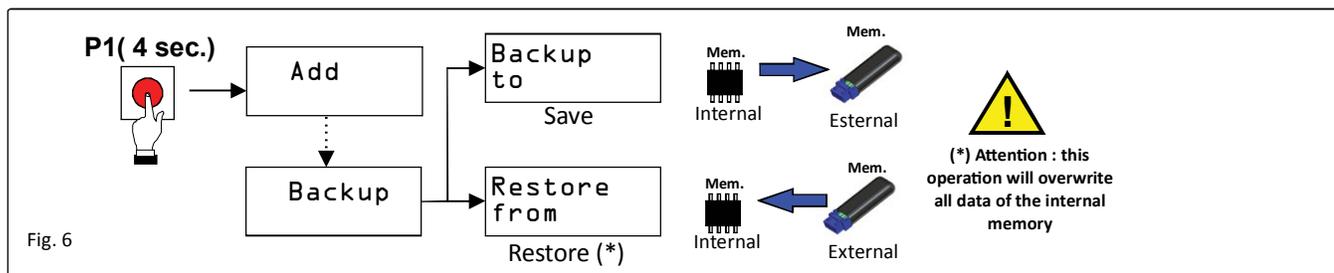- **Info Version** : SW release.

11 | Menu Config

Allows to set the operating mode of the relays R1 and R2, as Pulse, Step or Timed. In case of Timed it's possible to set the delay time from 1 sec. to 24h: 59 min.

P2 ↓

→ Config ↓

P1 → **→ Config ↓Relay 1**

P1 → **Relay1 Pulse**

Select **PULSE, STEP or TIMED** with P2

P2 ↓

Config 2 steps same as Relay 1 (Copy above steps) → **→ Config ↓Relay 2**

Relay1 Timed

P1 → **hh mm ss 00:00:01**

Set the desired delay time using **P2 to scroll** the digits and **P1 to confirm and shift** to next : the time is expressed in hours , minutes and seconds

P2 ↓

→ Config ↓Exit ← **P1**

12 BACKUP / RESTORE

Plug-in the memory in the proper receiver connector

Hive 500 PLUS

Fig. 5

Allows to create a backup of the memory data base and save it onto an external memory (fig. 6)

P1(4 sec.)

Add → Backup to — Save

Backup → Restore from — Restore (*)

Mem. Internal → Mem. Esternal

Mem. Internal ← Mem. External

(*) Attention : this operation will overwrite all data of the internal memory

Fig. 6

13 Memorization PLUS

The memorization PLUS allows to add a new transmitter remotely, without using the push-buttons P1 & P2. It's enough to use a transmitter «Master».
A transmitter «Master» can be :
1) the first transmitter added
2) any transmitter memorized and changed as «master» using the **Add Master** submenu
The PLUS feature can be : **ON, Limited or OFF**
- **Plus ON** : remote transmitter memorization enabled;
- **Plus Limited** : remote transmitter memorization enabled only using a TX «master» (see fig. 7-8);
- **Plus OFF** : remote transmitter memorization disabled;

Memo TX on relay 1

A+B — Beep — MOD. PLUS — OLD
A (4 sec.) — OLD
Beeeeeeeeeeeeeeeeeeeeeeeeeeeeeep — Relay 1
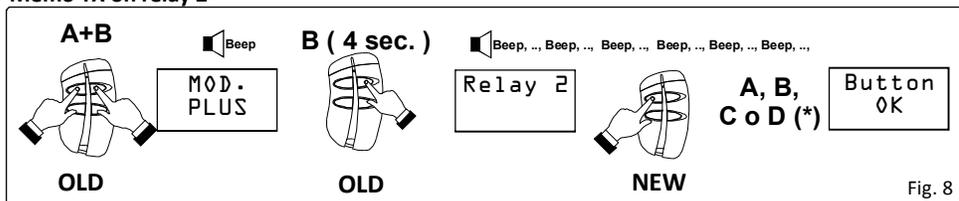A, B, CoD (*) — NEW
Button OK

Fig. 7
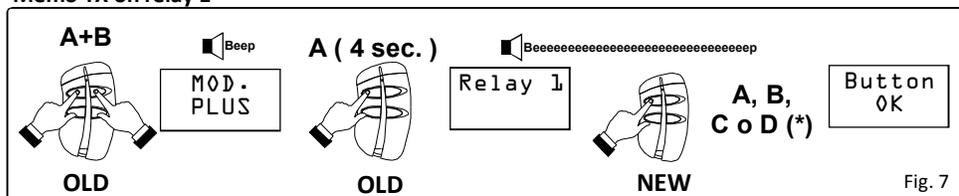
(*) : Push the button of the new transmitter before the end of the beep.

NOTE : The memorization PLUS is active only if there is, at least, one transmitter in memory.
If the memory is empty the memorization of a new transmitter can be done both using P1-P2 and remotely.
Once memorized the first, any next transmitter can be stored remotely if the option PLUS is "ON" or "Limited" or always using P1 and P2.

Memo TX on relay 2

A+B — Beep — MOD. PLUS — OLD
B (4 sec.) — OLD
Beep, .., Beep, .., Beep, .., Beep, .., Beep, .., Beep, .., — Relay 2
A, B, CoD (*) — NEW
Button OK

Fig. 8

Transmitter SOLUTIONS®

3788 West 2270 South, Suite E
Salt Lake City, UT 84120
(866) 975-0101 • (866) 975-0404 fax
www.transmittersolutions.com