

# ***Installation Manual***

## **Multuser receiver ERONE 433/500**

**Type. SEL2641R433-K5**

**Type. SEL2641F433-K5**

*We appreciate your choice of a product Erone.  
This product is addressed to manage the access in  
automatic door control systems*

*This appliance Erone has been carefully manufactured and checked  
Erone has designed this system to assure the best reliability and satisfaction  
in the time*

*We recommend to read carefully this manual before to proceed to the installation*

## Important recommendations

- Never interfere with the product when connected to a power source;
- Avoid direct contact with water;
- Regularly check the state of the product;
- Respect the current norms;
- Wear protected glasses to avoid injury during the drilling phase;
- Change the factory code;

## General remarks

### • Radio

The materials and the technology used have made it possible to create a system functioning on the 433,05 - 434,790 MHz frequency band, used by LPD equipments and therefore subject to european radio and electromagnetic compatibility regulations (CE).

### • Rolling Code

In order to guarantee your safety and the total inviolability of the communication between transmitter and receiver, the code sent out by the transmitter changes every time the equipment is used and is recognised by the receiver only, thanks to an unfalsifiable code-setting calculation. The system thus conceived avoids all risk of being recording or of the code being copied (268 million combinations).

## Composition of the receiver

See fig. 1 of the enclosed "Installation phases"

Item	Description	Q.ty
1	Receiver	1
2	Antenna wire	1
3	Assembly screws	4
4	Plugs	4

## Characteristics

### • Receiver

Local oscillator freq.	6,6128 MHz
Power supply	12/24 Vac/dc
Modulation	AM/ASK - FM/FSK
Number of memorizable users	507
Number of relays	2
Type of output contact	1 NO, 1 NO/NC
Commutable power	24 VA
Maximum relay voltage	60 V
Absorbition	95 mA (relay excited)
Housing protection	IP 40
Operating temperature	from -10°C to +55°C
Dimensions (Fig 1)	180x140x68mm
Weight	330gr

### • Transmitter

Frequency	433,92 MHz
Power supply	12 Vdc
Modulation	AM/ASK
Number of functions	2 or 4
Coding type	Rolling Code
Number of combinations	
E.r.p.	50 - 100 $\mu$ W
Absorbition	18 mA
Range in open space with receiver with antenna	100-200 meters
Housing protection	IP 44
Operating temperature	-10°C to +55°C
Dimensions	82x48x16 mm
Weight	32gr
Battery type	Alkaline - 23A

## Compatibility

The receiver can operate correctly with the corresponding transmitters according to following table:

Receiver	Transmitter
SEL2641R433-K5 ( AM/ASK)	S2TR2641E2 - E4 - E2M ( Series 024A) SETR2641AM2 ( Series mini AM)
SEL2641F433-K5 ( FM/FSK)	S2TR2641F2 - F4 - F2M ( Series 024F) SETR2641FM2 ( Series mini FM)

## Description

### Receiver

( See fig. 1 of the enclosed "Installation phases").  
It authorizes between 1 and 500 users (two buttons of a transmitter correspond to a zone of use).  
Possibility of memorizing 7 master transmitters.  
2 relays available in series (1 NA contact, 1 NA or NC contact) LCD back-lit visualization with two lines of 16 characters for clear messages.

### Master Transmitter (See. Figure 2 ).

Silver Transmitter with 2 yellow buttons  
Function of the buttons.

#### Press both buttons simultaneously:

to enter the programming mode.

#### The left-hand button (channel A) is used :

- for normal functioning;
- to reply NO to a question from the receiver in the programming phase;
- to move through the numbers 0 to 9 on the receiver during the programming phase.

#### The right-hand button (channel B) is used:

- for normal functioning;
- to reply YES to a question from the receiver during the programming phase;
- to confirm the choice or a number on the receiver during the programming phase.

### User Transmitter ( See. Figure 2.)

Grey Transmitter with yellow push-buttons( basic version).  
Available in 2-channel AB or 4-channel ABCD versions  
Allows the transmitter to function normally

### ERONE Advice

*The place in which the receiver is installed is very important in order for the system to function well. The following conditions must be respected:*

- install the receiver far from all sources of disturbance like computer systems, alarm systems, large magnetic fields, radio emissions;
- the distance between two receivers must be at least 1.50 metres.

## Installation

- Position the receiver on a plane, open it and remove the pre-forated parts (fig. 4) situated at the back of the receiver with the aid of a screwdriver.
- Make a hole in the pre-forated parts ( 5) (fig. 6).
- Put the plugs in the holes (fig. 7) or adapt the holes to the nature of the support.
- Fix the receiver using the screws supplied (fig. 8).
- Make holes in the guiding slits (only in those used),
- Proceed to the electric connection (fig. 10), and thread the wires through the guiding slits (fig. 9).

### ERONE advice

*When assembling the equipment outdoors, we advise you to protect the receiver in a container with an IP54 level of protection.*

## Electrical connection

### ERONE advice

*A telephone wire (0,6 mm<sup>2</sup>) is sufficient for the input of the receiver and the relay cabling.*

#### Receiver power supply:

- connecting clip 3: 0V
- connecting clip 4: 12/24 Vac/dc

#### Connect the output contacts:

- connecting clip 5: common relay 1
- connecting clip 6: NO contact relay 1 (contact normally open)
- connecting clip 7: common relay 2
- connecting clip 8: NO contact relay 2 (contact normally open)
- connecting clip 9: NC contact relay 2 (contact normally closed)

#### Connect the antenna

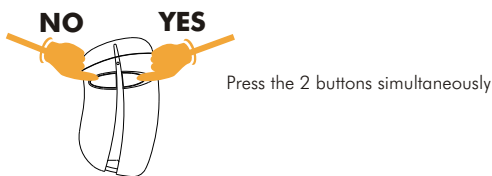
- connecting clip 1: antenna conductor or antenna wire supplied with the receiver
- connecting clip 2: braided wire of the antenna cable

### ERONE advice

*The installation and positioning of the antenna are fundamental for good reception. Carry out tests before fixing the antenna definitively. Place the antenna as high as possible and far from all types of metal structures which could shield the receiving part of the antenna.*

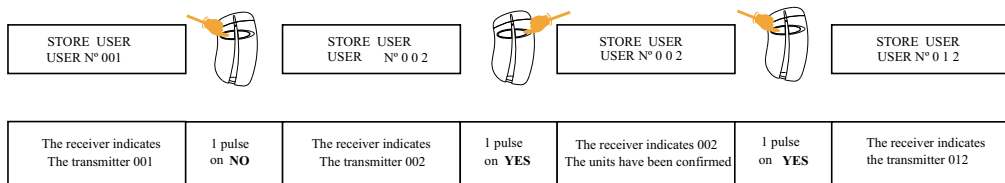
## Function and use of the Master

- **Enter the programming mode and return to the beginning of the current**



Example for the number change

- **Reply YES to a question**

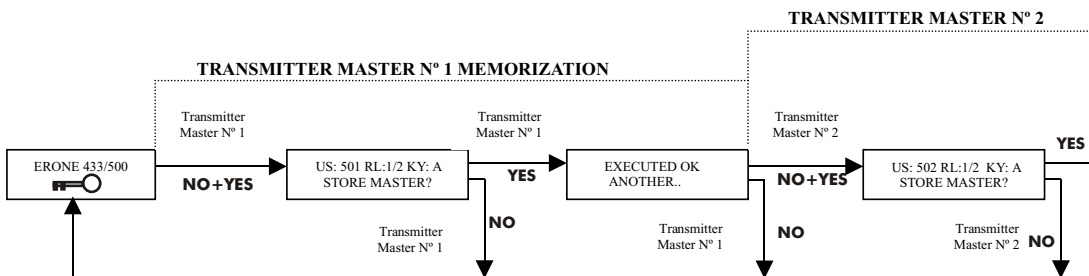


## Master transmitter memorization

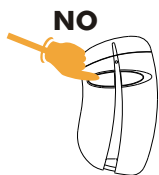
This menu is accessible with the Master transmitter not memorized and the default access code (11111). The master transmitters are used to introduce the parameters of the receiver and have to be memorized as indicated above. It is possible to memorize up to 7 master transmitters on the same receiver.

### ERONE advice

Memorize at least 2 master transmitters. If the first transmitter is lost, the second will allow access to the parameters.



## ● Reply NO to a question



Press the left-hand button

## ● Change a number or a letter

Some phases of parametre variation require the visualization of numbers or letters. In these phases the left-hand button of the master transmitter is used to change the numbers from 0 to 9, and the right-hand button is used to confirm the choice of numbers. See the following example: positioning to User zone N. 412.



STORE USER  
USER N° 0 1 2



STORE USER  
USER N° 4 1 2



Exit from the menu

1 pulse on YES	The receiver indicates 0 1 2 The tens have been confirmed	4 pulses on NO	The receiver indicates the transmitter 4 1 2	1 pulse on YES	The hundreds have been confirmed
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## ERONE advice

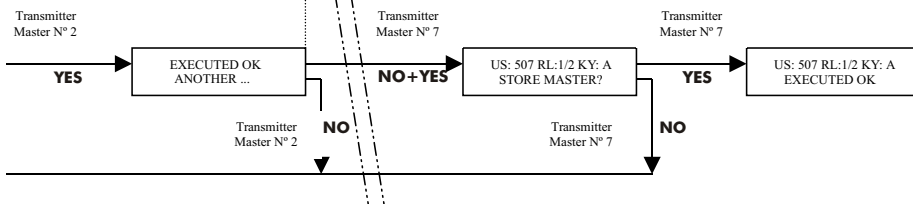
After memorizing the transmitters, we advise you to proceed to number them with an indelible pen.  
Example: transmitter memorized on field No. 504.



1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

## MEMORIZATION

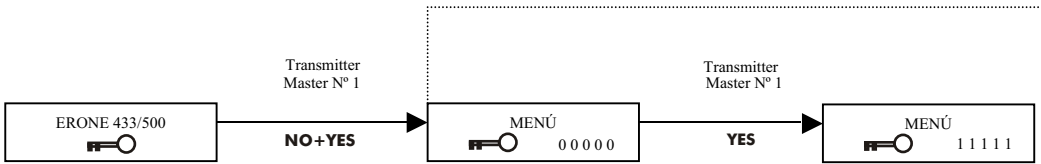
### TRANSMITTER MASTER N° 7 MEMORIZATION



## Entry into the main menu

\*.Personalize the access code (see "Change a number or a letter" p. 5).

### ACCESS CODE SETTING



Starting message	Press on both keys of a Master transmitter (simultaneously )	Dial the default key or the personal key using the Master transmitter	Activate the key <b>YES</b> of the <b>Master</b> transmitter	The default or personal key has been set
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The default access code is 11111.

It is a good idea to personalize this code by choosing one of the 65536 possible combinations, to prevent unauthorized personnel from access and from being able to interfere with the parameters of the system.



## Memorization of the User transmitters

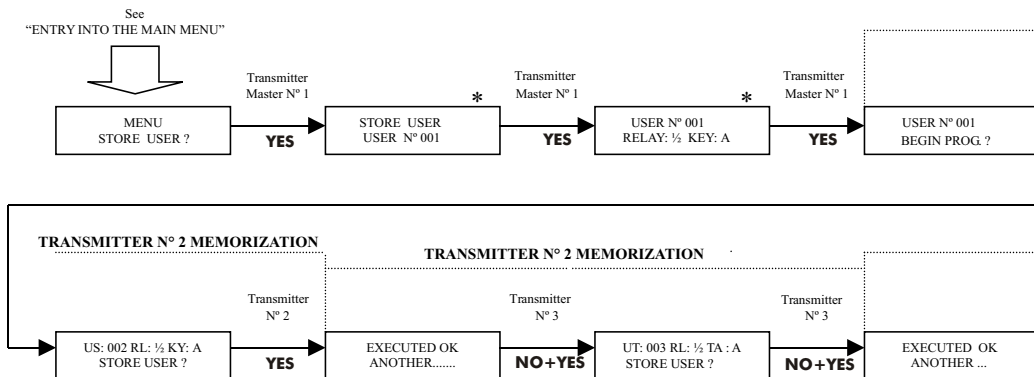
The receiver will memorize the first transmitter in the following way:

- USER n. 001: the transmitter will be memorized in position 001;
- RELAY 1/2: the transmitter will control relays 1 and 2 of the receiver;
- KEY A: button A of the transmitter will control relay 1 of the receiver and button B relay 2.

Each of these parameters can be modified. See "Change a number or a letter" (p. 5) and "Modify relay or key parameters" (p. 8).

### ERONE Advice

Before memorizing the transmitters, we advise you to number them, marking each one with an indelible pen. For example: transmitter to memorize on Position n. 348.



## Choice of "RELAY" or "CHANNEL" parameters

For every transmitter the receiver offers:

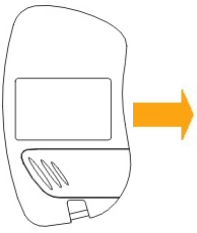
- a position to memorize;
- the relay or relays which will be activated by the

transmitter;

- the channel or channels used by the transmitter.

The table below show the correspondences between what appears on the display and the setting of the transmitter buttons on the receiver relays.

	Channel A		Channel B		Channel	Channel
	TX 2 keys	TX 4 keys	TX 2 keys	TX 4 keys	TX 4 keys	TX 4 keys
<b>Relay</b>	A on relay 1	A on relay 1	B on relay	B on relay 1	C on relay 1	D on relay 1
<b>Relay 1</b>	A on relay	A on relay	B on relay	B on relay	C on relay	D on relay
<b>Relay 2</b>	A on relay	A on relay	B on relay	B on relay	C on relay	D on relay



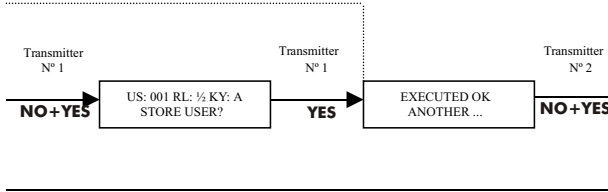
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9



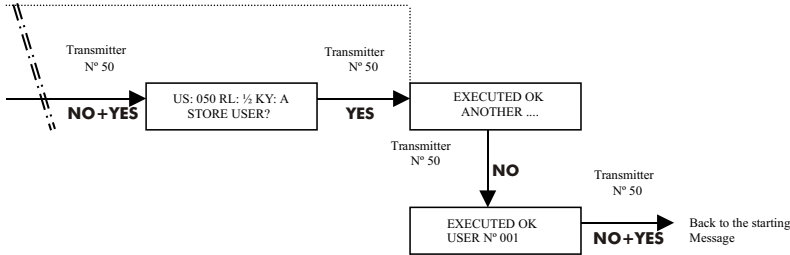
## ERONE Advice

The receiver is programmed in the factory with a default access code of 11111. To facilitate the memorization of the transmitters, it is advisable to modify the access code by entering the code "00000". After having memorized the transmitters, it is a good idea to change the access code to deny access to unauthorized personnel.

### TRANSMITTER N° 1 MEMORIZATION

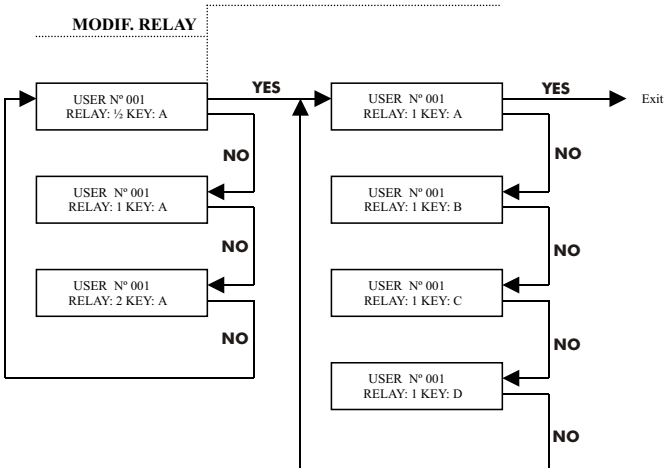


### TRANSMITTER N° 50 MEMORIZATION



## MODIF. CHANNEL

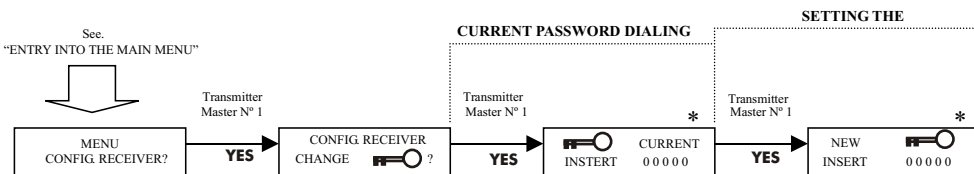
### MODIF. RELAY



## Modifying the access code

The default access code is "111111". It is highly advisable to personalize it by setting one of the 65535 possible combinations in order to deny access to the parameters to unauthorized personnel.

**WARNING: If access code is lost, it will not be possible to proceed to the variation of the parameters.**

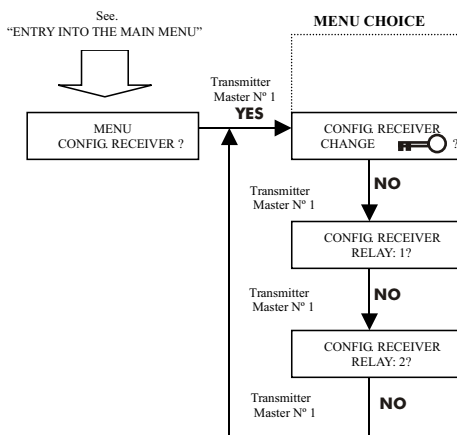


## Choice of the type of relay contact

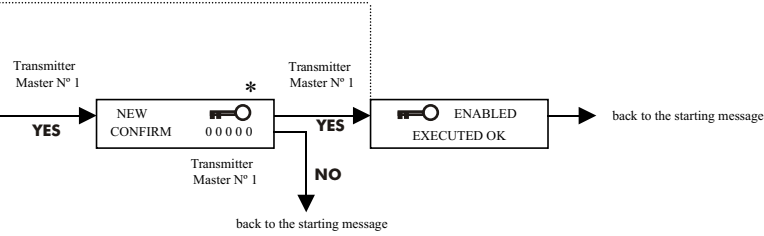
On each relay 4 types of contact are available:

- Impulsive :pressing a button on the transmitter activates the relay impulsively.
- Bistable :Pressing the button on the transmitter for the first time closes the relay contact; pressing it again the contact is opened.
- Timed 6 sec :Pressing the button on the transmitter closes the contact for 6 seconds
- Impulsive pedal :Pressing the button on the transmitter closes relay contact impulsively. The range of the transmitter is reduced (advisable for pedal access).

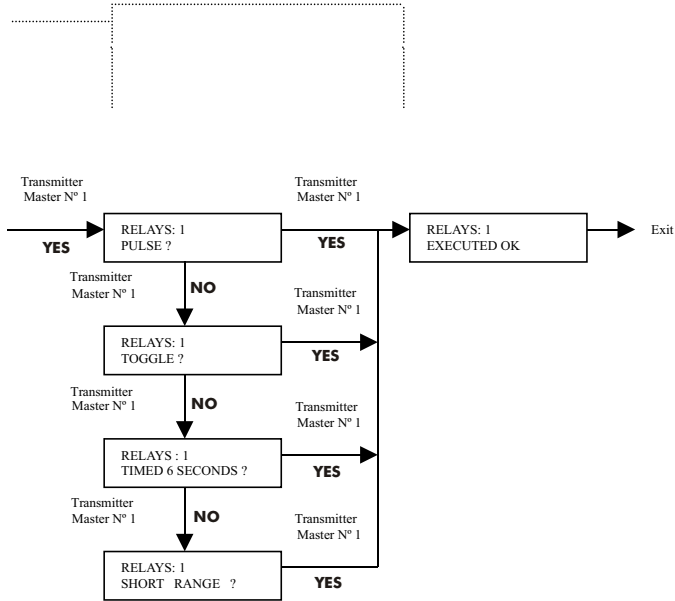
Modifying the type of contact of relay 2 is done by following the same procedure.



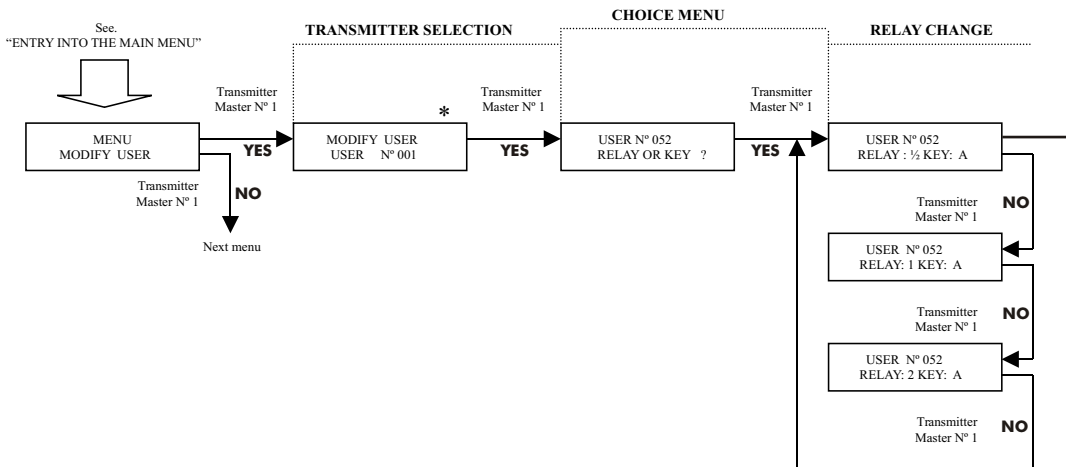
### NEW PASSWORD



### CONTACT TYPE SELECTION



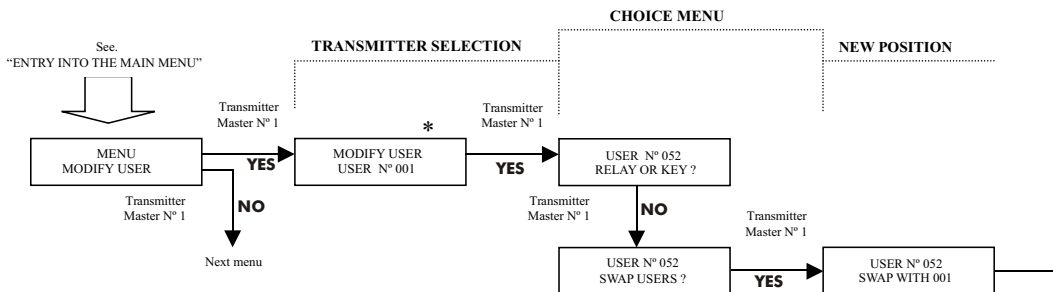
## Modify the "Relay" or "Key" parameters



Determine the memory position of the transmitter to modify (see "Change a number or a letter", p. 5)

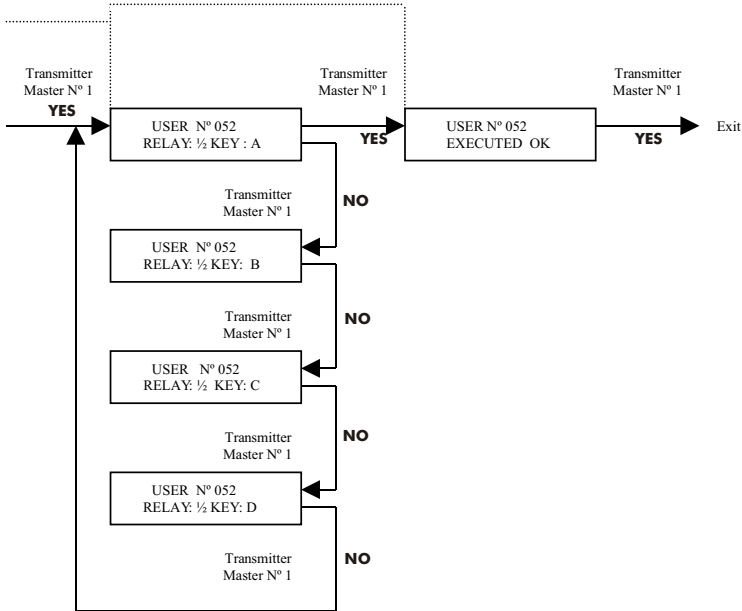
## Modify the memory position of a transmitter

A transmitter can be moved to a free position.  
It is also possible to exchange the position of 2 transmitters.

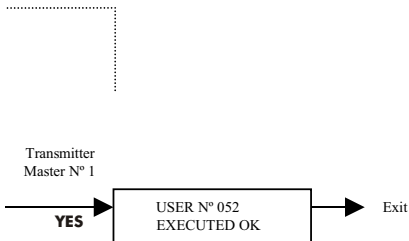


Determine the memory position of the transmitter to modify (see "Change a number or a letter", p. 5)

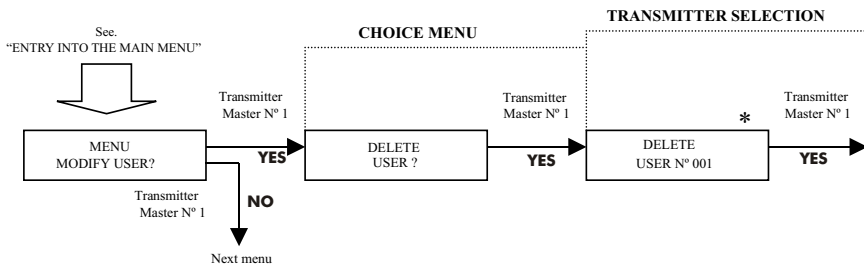
### KEY CONFIGURATION



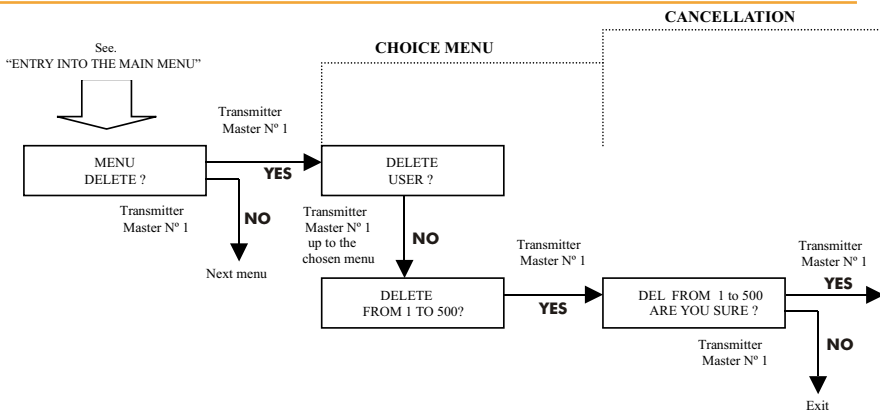
### OF MEMORIZATION



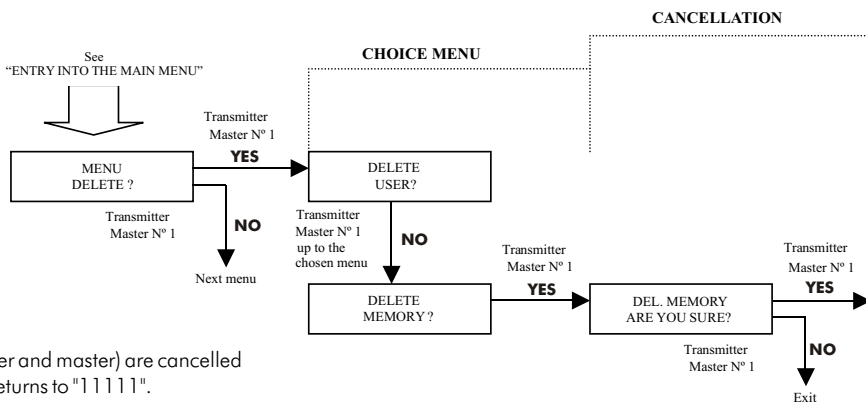
## Canceling a user transmitter



## Canceling all the user transmitters

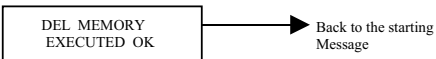
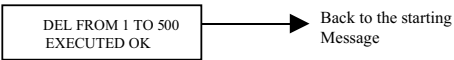
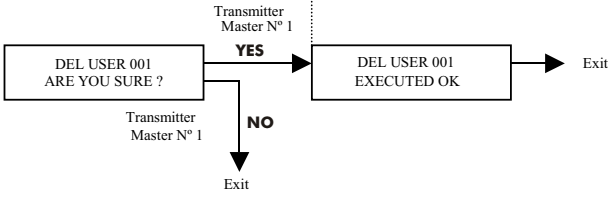


## Complete reinitializing of the receiver



All the transmitters (user and master) are cancelled and the access code returns to "11111".

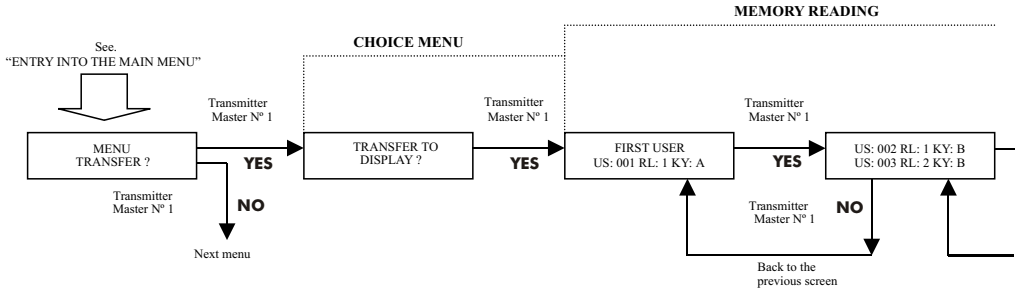
**CANCELLATION**



## Visualization of the memory on LCD

We can visualize the contents of the memory on the display and read the following parameters for every transmitter:

- memory position;
- relay/s used;
- key used by the transmitter.



## Print events

We can print a list of the transmitters memorized and for each of them the following parameters:

- Memory position;
- relay used;
- key used by the transmitter.

It is possible to use this list to carry out installation.

## Printer setting

It is only possible to print from a printer with a serial port.

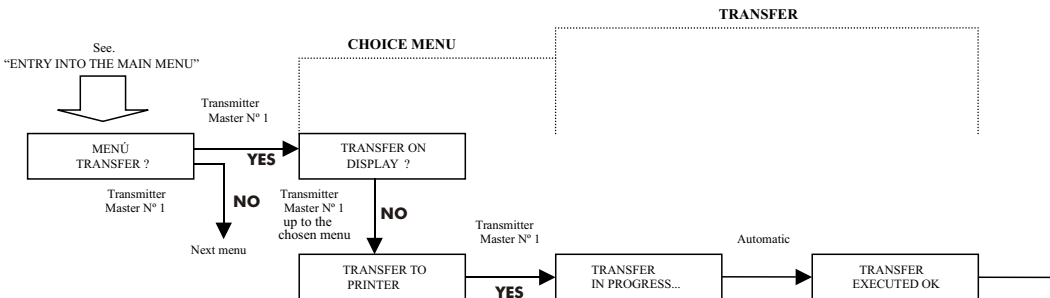
Baud-rate: 2400 Baud  
 Number of bit: 8  
 Parity: None  
 Stop bits: 1  
 Handshaking: X ON / X OFF

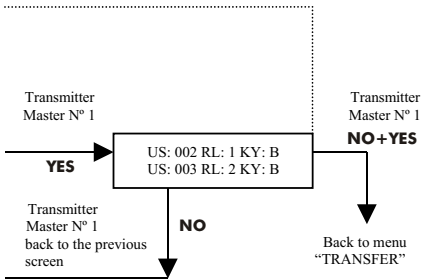
## Connection

Connect the receiver and the printer with the appropriate cable (supplied in the operating kit) using the serial port of the printer (see fig. 11).

## ERONE advice

*During the transfer phase, connect the cables before switching on the power supply.*





Example of print-out

\*\*\* ERONE 433/500 \*\*\* PASSWORD: 54321

INSTALLATION ADDRESS

*To be completed by hand*

USER N°	RELAY	KEYS	USER NAME
0001	1/2	A/B	<i>To be completed by hand</i>
0002	1	B	
0003	1/2	A/B	
0005	1	A	
0501	1/2	A/B	
0502	1/2	A/B	
0503	1/2	A/B	
0504	1/2	A/B	
0505	1/2	A/B	
0506	1/2	A/B	
0507	1/2	A/B	

\*\*\* End of list \*\*\*

→ Back to the starting Message

## Copy the memory of a receiver into another receiver or into a backup memory

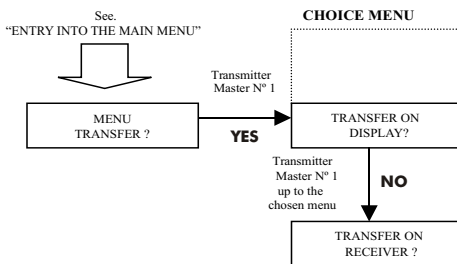
In order to be able to control the transmitters without moving your own base, it is necessary to copy the memory of the receiver into another receiver or a backup memory card.

### •Transfer to another receiver

Connect the 2 receivers with the appropriate cable (supplied in the operating kit - fig. 12). The main receiver must be connected to a power supply and it will provide voltage for the second one too

### •Transfer to a backup memory

Insert the backup memory into the receiver (see fig. 13) the right way round.



### ERONE Advice

When transferring, connect the cable before switching on the power.

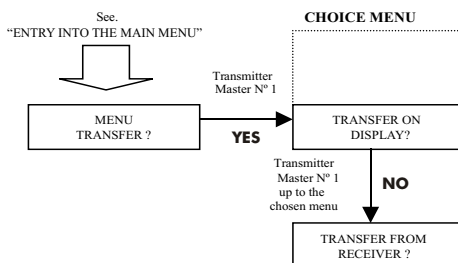
## Restore the data from another receiver or a backup memory

### •Transfer from another receiver

Connect the 2 receivers with the appropriate cable (supplied in the operating kit - fig. 12). The main receiver must be connected to a power supply and it will provide voltage for the second one too.

### •Transfer from a backup memory

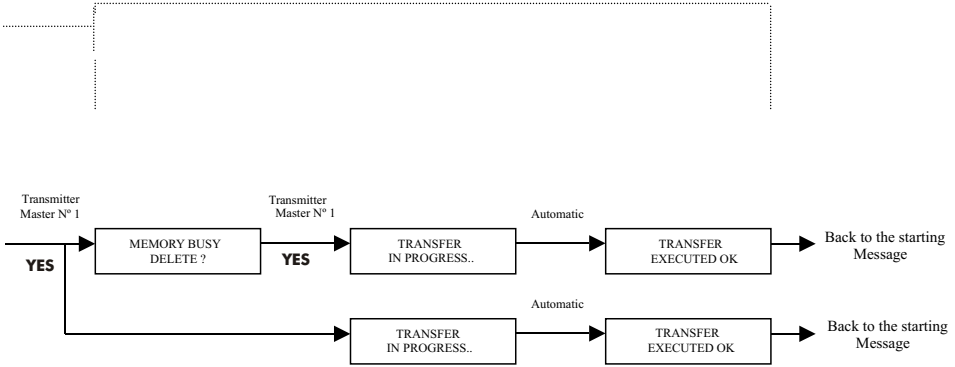
Insert the backup memory card into the receiver (see fig. 13) the right way round




### ERONE Advice

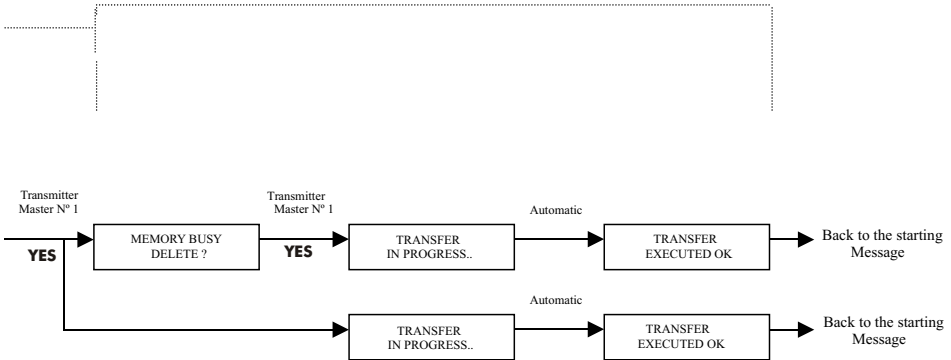
When transferring, connect the cable before switching on the power


**TRANSFER**



 Any data contained on the receiver or the backup memory will be totally erased after transfer.

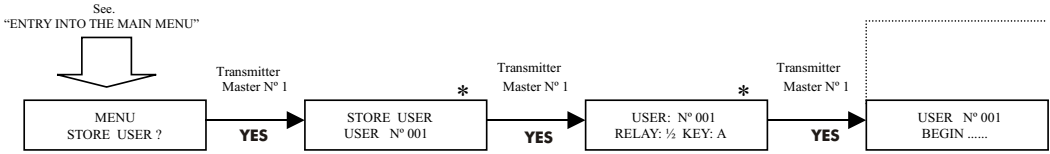
**TRANSFER**



 Any data contained on the receiver or the backup memory will be totally erased after transfer.

## Memorize one or more transmitters on site

Choose the memory position of the transmitter (see "Change a number or a letter" p. 5).



## Memorize one or more transmitters without moving on site

### 1a) With the backup file of the site and a transmitter

- 1 - Connect the backup file of the site to the receiver, being careful to insert it the right way round (see fig. 13)
- 2 - Transfer the contents of the backup file to the receiver (see "Load the memory from another receiver or from a backup file").
- 3 - Remove the backup file.
- 4 - Memorize the receiver or receivers to be added (see "Memorize one or more supplementary receivers" p. 20)
- 5 - Transfer the data by loading it onto the transmitter or transmitters following the diagram below using the Rx-Tx cable (fig. 14).

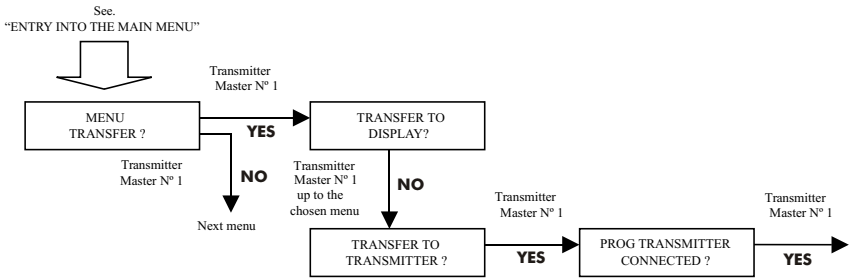
6 - Insert the site backup file.

7 - Transfer the memory of the receiver to the backup memory (see "Copy the memory of a receiver or a backup file").

8 - Remove the backup file.

Once transfer has taken place, the transmitter is ready to be memorized on site.

**WARNING: After transfer, only the first 16 activations of the buttons of the transmitter will allow the memorization of the receiver installed on site.**



### ERONE Advice

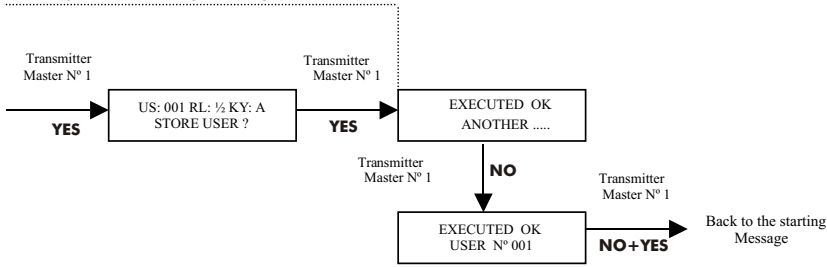
After having extracted the memory it is possible to test the transmitter on the receiver used for programming by following the instructions below:

- eliminate the transmitter by following the "Elimination of a user transmitter" menu;
- press the 2 buttons (A and B of fig. 15) of the transmitter simultaneously, release them and then press B again. Once this has been released the transmitter is memorized. It is also possible to verify that transfer has taken place (remember that a maximum of only 16 impulses are allowed).

Insert the correct way round (see fig. 14). Maintain enough pressure until the message "(EXECUTED)" appears, to avoid establishing wrong connections between the transmitter and the cable of the socket, which could cause a deterioration of the transmitter.

Do not touch the battery with the pins of the socket.

## TRANSMITTER MEMORIZATION



### 1b) With a receiver with no backup card

If there is no backup card, it is essential to know the access password of the site and the free areas of memory of the receiver.

- Substitute the access password with the password of the receiver installed on site.
- Memorize the transmitter or transmitters to be added (see "Memorize one or more supplementary transmitters" p. 20).
- Transfer the data onto the transmitter or transmitters by following the diagram set out below, using the Rx-Tx cable (fig. 14).

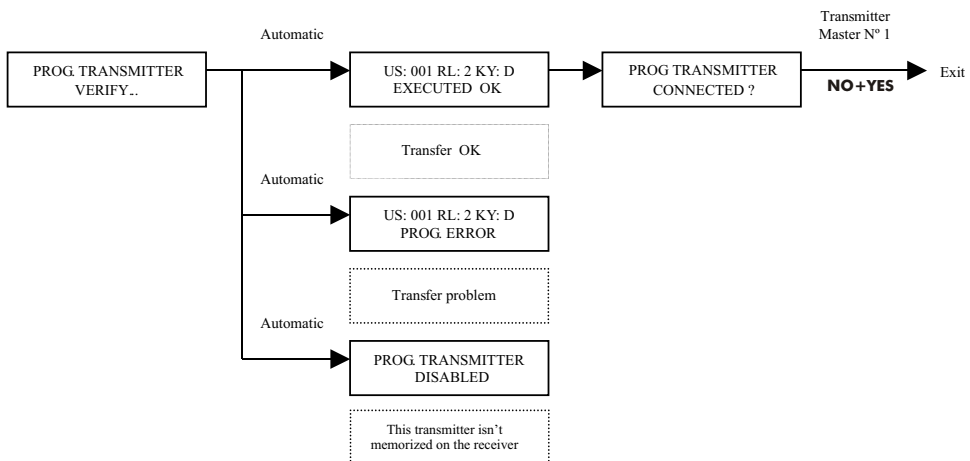
Once transfer has taken place, the transmitter is ready to be memorized on site.

**WARNING: After transfer, only the first 16 activations of the buttons of the transmitter will allow the memorization of the receiver installed on site.**

### 2 Memorization of the transmitter on site

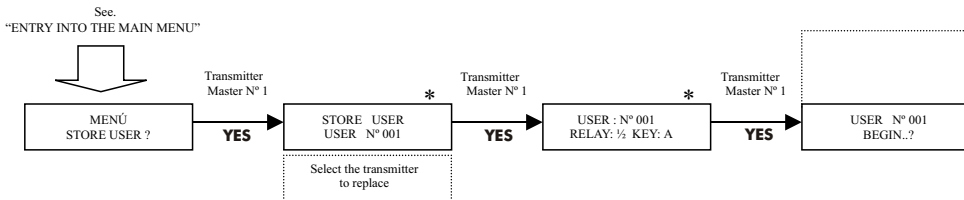
The transmitter has been preset but it will only be memorized in the receiver installed on site once the following operation has been carried out:

- on site press the two buttons A and B of the transmitter simultaneously (fig. 15), release them and then press button B. After releasing it the transmitter will have been memorized.



## Replace one or more user transmitter on site

It is possible to memorize a transmitter in a memory position which is already occupied. In this case the transmitter which occupied this position will be cancelled from the memory of the receiver.



## Replace one or more transmitters without going on site

### 1a ) with the backup card of the site and a receiver

- 1 - Insert the site backup card into the receiver the correct way round (see fig. 13).
- 2 - Transfer the contents of the card to the receiver (see "Load the memory of another receiver or a backup card, p. 18).
- 3 - Remove the backup card.
- 4 - Proceed to memorize the transmitter or transmitters to add (see "Memorize one or more supplementary transmitters", p. 20).
- 5 - Transfer the data to the receiver or receivers by following the diagram below using the Rx-Tx cable (fig.

14).

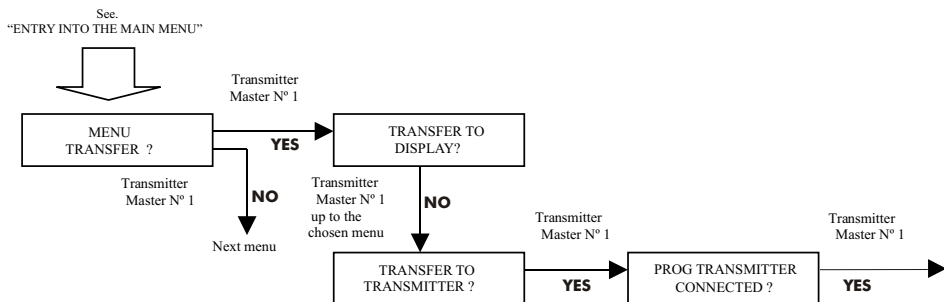
6 - Insert the backup card.

7 - Transfer the memory of the receiver to the backup card (see "Copy the memory of the receiver to another receiver or a backup card").

8 - Remove the backup card.

Once the transfer is complete, the transmitter is ready to be memorized on site.

**WARNING: After transfer, only the first 16 activations of the buttons of the transmitter will allow the memorization of the receiver installed on site.**



### ERONE Advice

After having extracted the backup memory it is possible to test the transmitter on the receiver used for programming by following the instructions below:

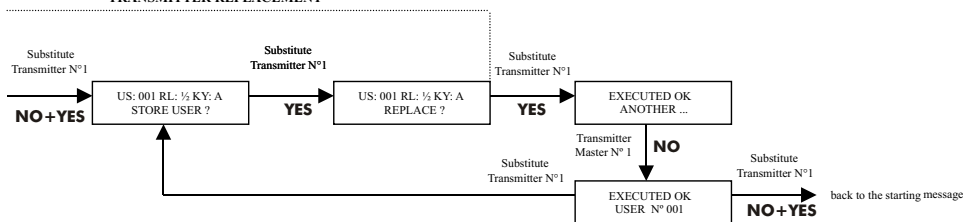
- eliminate the transmitter by following the "Elimination of a user transmitter" menu.

- press the 2 buttons (A and B of fig. 15) of the transmitter simultaneously, release them and then press B again.

Once this has been released the transmitter is memorized.

It is also possible to verify that transfer has taken place (remember that a maximum of only 16 impulses are allowed).

### TRANSMITTER REPLACEMENT



## 1b) With a receiver with no backup memory

If there is no site backup memory, it is necessary to know the access code of the site and the memory positions available for the transmitters.

- Substitute the access code with that of the receiver installed on site.
- Proceed to the memorization of the transmitter or transmitters to be added (see "Memorize one or more supplementary transmitters" p. 20).
- Transfer the data to the transmitter or transmitters by following the diagram below using the Rx-Tx cable (fig. 14).

Once transfer is complete, the transmitter is ready to be

memorized on site.

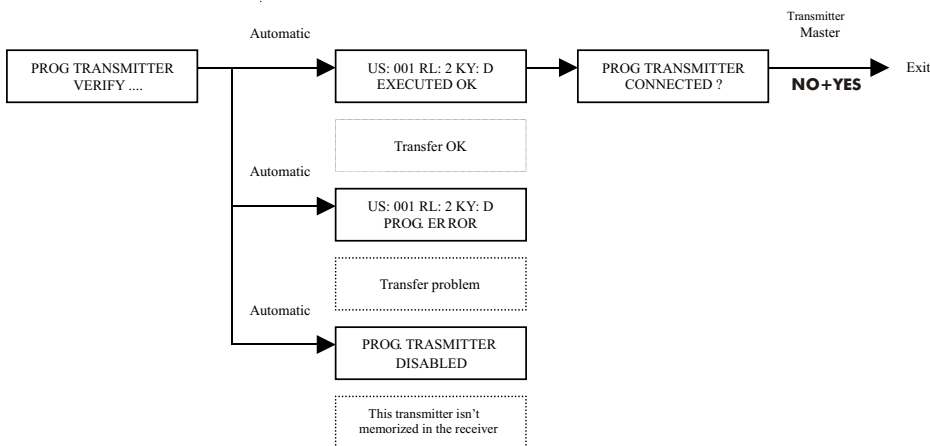
**WARNING: After transfer, only the first 16 activations of the buttons of the transmitter will allow the memorization of the receiver installed on site.**

## 2 Memorization of the transmitter on site.

The transmitter has been preset but it will only be memorized in the receiver installed on site after the following operation:

- on site, press simultaneously the two buttons A and B of the transmitter (fig. 15), release them and then press button B. After releasing it the transmitter will be

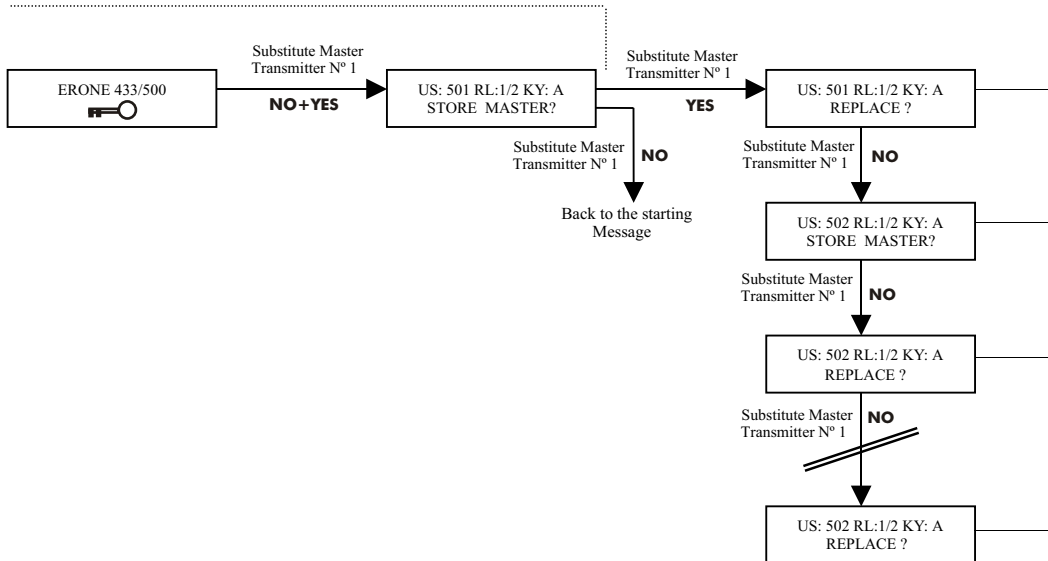
### TRANSFER

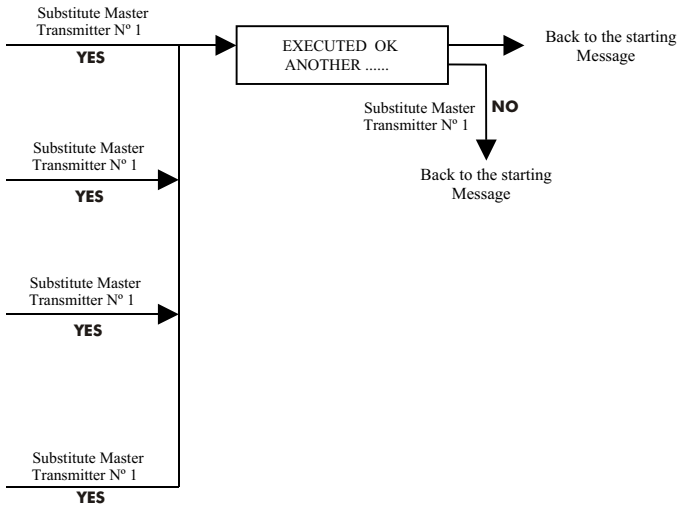


## ( Substitute one or more master transmitters

To substitute one or more master transmitters it is necessary to set the default access code back to "11111" (see "Modify the access code to the parameters", p. 10).

### REPLACEMENT OF A MASTER TRANSMITTER





## Particular messages

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Introduction of the wrong access code.

ERROR



Attempt to memorize a transmitter which has already been memorized.

US: 002 RL: 1 KY:A  
THE CODE EXISTS!

Attempt to memorize a transmitter in a memory position which is already occupied.

US: 002 RL: 1 KY:A  
REPLACE ?

Attempt to move a transmitter which has not been memorized or the cancelling of a transmitter which has not been memorized.

EMPTY MEMORY  
USER N° 001

Cancelling of a master transmitter.

DISABLED  
USER N° 501

Failed transfer either due to lack of connection or because the backup memory has been inserted the wrong way round.

TRANSFER TO  
NOT CONNECTED

## Receiver auto-test system

The Erone 433/500 receiver contains an auto-test system which makes it possible to identify incorrect usages or readings.

Example of the message on the display:

SYSTEM  
ERROR

CODE	DESCRIPTION	ACTION
1	Impossible to write on the memory	Memory empty. Return the receiver to the factory
2	Reading or writing error on the display	Copy the contents of the receiver to the backup and memory and return the receiver to the factory.
4	Faulty transfer of the data to a transmitter via connecting cable	Repeat the programming of the transmitter. If the message is persistent, check the memory position on the receiver, memorize again, and then start transfer again.
8 16	Used for checking during production Used for checking during production	
32	Writing on the last memory position Es. 500 o 507.	Memory full Last memory position: use a previous position or replace a position already used.
64	Radio signal received too weak	Check the charge on the batteries of the transmitter or bring the transmitter near the receiver
128	Transmitter counter not synchronized	Transmit a second time If the message persists, eliminate the memory position of the transmitter and then memorize again. If, after the transfer of a transmitter, the number of impulses allowed (16) has been exceeded, the counter will no longer be synchronized and the transmitter cannot be memorized in the receiver.

**ERONE** is a trademark by ELPRO INNOTEK S.p.A.

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## **GUARANTEE**

**Warranty period : 24 months from the production date placed inside. In this period if the appliance has any malfunction due to defective component, it will be repaired or replaced by the manufacturer. The warranty doesn't cover the plastic box The assistance will be performed at the manufacturer site**