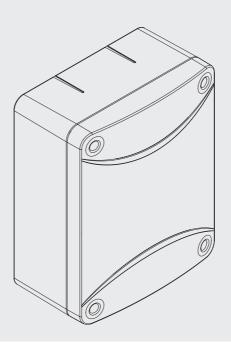
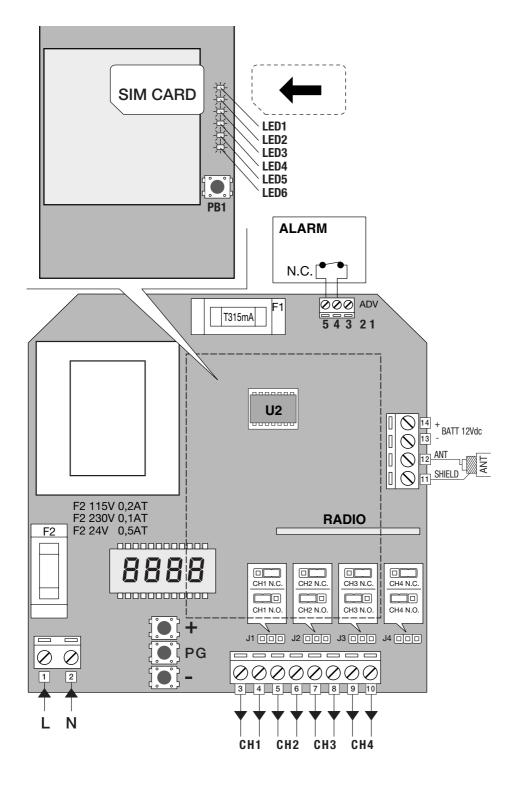
CALL











CALL

GSM four channel receiver

Quick start

The basic steps to install and program a new SIM in the CALL system are described hereunder.

For further information on the various functions, refer to the other sections of this manual.

- 1) Insert the SIM* in a mobile phone, remove the PIN code and the telephone answering function, if activated.
- 2) Remove the SIM from the mobile phone and insert it in the CALL.
- 3) RESET the SIM, as indicated in the "SIM RESET" section.
- 4) Change the access password as indicated in the "Access PASSWORD" section, thus selecting the system operating mode (Safety Access or Open Access).
- 5) If the selected mode is Safety Access, store the telephone numbers to be enabled and the related customizations into memory.
- 6) If the selected mode is Open Access, the system is ready for use.
- * Check that the SIM that is to be used for the CALL system is activated, take note of the telephone number of the SIM itself.

The vocal calls and the SMS controls can be sent also from fixed telephones.

WARNINGS

The customized password (modpsw) and, in general, when commands are typed in, it is important not to leave any spaces unintentionally.

The system, in fact, considers spaces as actual digits so that password "1234567" differs from "1234567" as the first password features a blank at end of string.

For the same reason, when entering the various phone numbers for enable, disable purposes, etc., it is important not to leave blank spaces between the various numbers, for ex.:

addnum 123456 3391234567,3391234568,33912345679

is correct at the phone numbers are separated by a comma only.

while

addnum 123456 3391234567, 3391234568, 33912345679 is incorrect and only the first number will be stored in memory

CALL

CALL is composed of a four-channel receiver, controlled by a GSM module, which can be activated by mobile phones, in addition to radio transmitters, through which it is possible to:

- Activate a receiver channel through normal vocal call (this call is free of charge as the device cuts off the call after a few rings, without answering);
- Activate either of the 4 channels by sending a text message (SMS).

The GSM module can be programmed in two different ways:

The "Safety Access" mode (default setting) allows for the programming of all available functions. The most important are:

- Enabling/disabling of the telephone numbers in the SIM memory of the Call (up to 200 telephone numbers can be stored in memory):
- Setting the modification of each memorised number;
- Activation/deactivation of the radio receivers (rolling code);
- Change of the safety password;
- Asking the device to know:
 - 1) the status of outputs
 - 2) how many and which numbers of mobile phone are stored in memory and with which presettings
 - 3) the number of activated transmitters
 - 4) whether a specific transmitter it enabled
 - 5) the number of SMS messages that were sent to the GSM module of Call
- Release/lock of the receiver radio menu in order to prevent the storage in memory of new transmitter codes through the receiver functions. Memorisation is now enabled only through mobile phones.

The "Open Access" mode does not provide for the storage in memory of the telephone numbers in the CALL memory. Any telephone may therefore activate the channels through a call or an activation SMS message, thus exceeding the preset 200 number limit of the standard mode.

HOW TO CONNECT, SWITCH ON AND INITIALIZE THE SYSTEM:

Introduce a SIM card in the special seat in the device. There are no limits to the network operator. However, the SIM that is intended for this use must be without PIN code. The SIM card must be in a mobile phone for which, when switched on, the PIN request function is disabled.

The device can be connected to the 230V power mains (the device can be also connected to a 12V buffer battery).

After an initialization cycle, the device switches to the regular operation mode (see section "LED diagnostics").

SIM RESET:

A RESET must be performed if a SIM has never been previously used in a CALL receiver.

This operation involves the following: erase message memory, erase address book, reset SMS counters, new presetting of default password.

To reset the SIM card proceed as follows:

- Cut off power supply
- Press the module key (PB1)
- Power the device keeping the key pressed
- The module switches on
- After approximately 10 seconds, the red LED switches on with fixed light (the key can be released)
- The red LED stays on for 2 about minutes. When it switches off, the operation is completed and the message and address-book memory have been erased. The SMS counters have been reset and the default password, which is 123456, has been restored.
- At this point, the module enters the normal operating mode.

LED DIAGNOSTICS

The 6 LED of the GSM module allow for the monitoring of the status of the CALL system:

LED 1 (red):

1 flash every 2 seconds: SIM correctly recorded in the GSM network 2 flashes every second: SIM in the recording mode in the GSM network

LED 2 (yellow):

It flashes rapidly in the transmission phase

LED 3 (yellow):

It flashes rapidly in the receiving phase

LED 4 (green):

Continuous flashing: SIM in the initialization phase

From 1 to 5 flashes, followed by an interval: GSM reception level (1: minimum level - 5: maximum level)

LED 5 (red):

It switches on when an entering command is being processed.

If the credit of the SIM is finished, LED 5 will switch on with fixed light.

LED 6 (green):

Switched on with fixed light: correct operation of the software

Flashing: error in the software

During normal operation the LED status is as follows:

LED 1: flashing every 2 seconds

LED 2 and LED 3: continuous flashing

LED 4: from 1 to 5 flashes to show reception level

LED 5: switched off (it switches on if an SMS is received)

LED 6: switched on with fixed light

ACCESS PASSWORD

All programming controls provide for an access password.

For safety reasons, the first operation to be carried out is to change password.

Send an SMS message with this text:

modpsw 123456 112233

where:

modpsw command string

123456 default password (or password currently in use which you wish to change)

112233 new password (max 10 numeric characters). When a new password is set,

the old one will no longer be valid.

REPLY:

"PASSWORD UPDATED"

The default password can be restored by resetting the SIM.

The type of password typed in also selects the operating mode (Safety Access or Open Access).

If the first figure of the password is different from "0" (zero), the system sets in Safety Access mode.

If the first figure of the password is "0" (zero), the system sets in Open Access mode.

"SAFETY ACCESS" OPERATING MODE

This mode allows to activate the channels only by telephone numbers memorised through one of the procedures described in the "PROGRAMMING" section. It is then possible to:

- ACTIVATE A CHANNELTHROUGH VOCAL CALL: call the CALL device with a telephone the number of which had been previously memorised. After 2 rings, the call is cut off automatically and channel 1 is activated (the channel to be activated by this type of call can be changed through command "modnum").
- ACTIVATE A CHANNEL THROUGH SMS: through a mobile phone, the number of which had been previously memorised. Send an SMS to the CALL device with the text message "ch1". As soon as the device receives the text message, channel 1 will be activated (or send ch2, ch3, ch4 according to the channel to be activated). As described hereunder, the text of the message intended to activate the channels, can be modified.

Note: if you wish to receive an acknowledgement text message by the CALL device, the message must be "?ch1". The reply will be "COMANDO ESEGUITO CORRETTAMENTE" ("COMMAND OK")

"OPEN ACCESS" OPERATING MODE

This mode allows to activate the channels from any telephone with no need to store the related number in the CALL memory:

- ACTIVATION OF A CHANNEL THROUGH VOCAL CALL: call the CALL device from any telephone. After 2 rings the call will be cut off automatically and channel 1 will be activated.
- ACTIVATION THROUGH SMS: from any telephone, send an SMS to the CALL device with the text message "ch1". As soon as the device receives the text message, channel 1 will be activated (or send ch2, ch3, ch4 according to the channel to be activated). As described hereunder, the text of the message intended to activate the channels, can be modified.

Note: if you wish to receive an acknowledgement text message by the CALL device, the message must be "?ch1". The reply will be "COMANDO ESEGUITO CORRETTAMENTE" ("COMMAND OK")

PROGRAMMING

Programming is performed by sending the control signals through a SMS from a mobile phone to the number of SIM present in the CALL device.

The various programming control signals are described hereunder.

ADD USER TO THE LIST OF ENABLED TELEPHONE NUMBERS:

Mobile telephone numbers (or fixed telephone numbers) can be added to the memory of the device in two wavs:

1) Type in a SMS command:

addnum 12345 3391234567,n°2,n°3,n°4...

where:

addnum command string 123456 access password

telephone number to be added to the list 3391234567

n°2,n°3,n°4 if more than one number is to be added in one single message, it is

sufficient to separate them with ","

NB.

N.B.: Omit any 0 (zero) at the beginning of the number sequence to be memorised.

For example, if the number to be entered is 03391234567, type the number 3391234567 in the command.

- When a number is memorised via SMS, it acquires the default permissions and settings. Therefore, the vocal call will activate channel 1, while with the text messages it is possible to activate all 4 channels. These settings can be modified with the "modnum" command.
- To allow for a correct operation of the vocal call, the telephone calling shall not have the "hide number" function activated.
- If an acknowledgement reply of the vocal call is to be received from the device, the control signal shall be:

?addnum 123456 3391234567:n°2:n°3:n°4 The reply will be: "USER ADDED"

2) Manual typing in:

- remove the SIM from the CALL device and insert it in a mobile phone
- store the telephone numbers to be enabled in the SIM address book proceeding as follows:
 in the user name field type the telephone number to be memorised
 in the telephone number field, digit 0 or, if settings of channels are to be customized, the presetting 5-

in the telephone number field, digit 0 or, if settings of channels are to be customized, the presetting 5digit string described in section "How to modify the permitted access of one or more numbers".

HOW TO MODIFY THE PERMITTED ACCESS OF ONE OR MORE NUMBERS:

This command permits to modify the permitted access and presetting of one or more mobile phone numbers, or it permits or denies the possibility to activate some channels, change the combination call/channel to be activated, call in the event of alarm.

modnum 123456 00000 3391234567,n°2,n°3,n°4...

where:

modnum command string 123456 access password

output
ou

* the string regarding channel presetting and permitted accesses to channels is composed of 5 digits:

Digit 1: activation with phone call:

"0" = denied access (the phone call activates no channel)

"1" = the phone call activates channel 1
"2" = the phone call activates channel 2

"3" = the phone call activates channel 3
"4" = the phone call activates channel 4

Digit 2: activation of channel 1 by SMS:

"0" = denied access (channel 1 cannot be activated through SMS)

"1" = channel 1 can be activated (through the sending of SMS1)

Digit 3: activation of channel 2 by SMS:

"0" = the phone call activates channel (channel 2 cannot be activated through SMS)

"1" = channel 2 can be activated ((through the sending of SMS2)

Digit 4: activation of channel 3 by SMS:

"0" = denied access (channel 3 cannot be activated through SMS) "1" = channel 3 can be activated (through the sending of SMS3)

Digit 5: activation of channel 4 by SMS:

"0" = denied access (channel 4 cannot be activated through SMS)

"1" = channel 4 can be activated (through the sending of SMS4)

If a number, which was not previously memorised, is entered in among the numbers typed in the odnum command, this number will be added to the list with presetting and permitted access indicated in the command.

If a reply should be sent by the device, the command shall be:

?modnum 123456 000000 3391234567,n°2,n°3,n°4

The reply will be: "CONFIGURATION UPDATE OK"

REMOVE USER FROM LIST OF ENABLED PHONES:

This command permits to remove one or more numbers from memory.

delnum 123456 3391234567

where:

delnum command string 123456 access password

3391234567 telephone number to be removed from list

If a reply should be sent by the device, the command shall be:

?delnum 123456 3391234567

The reply will be: "USER DELETED"

REQUEST OF GENERAL STATUS OF THE MODULE:

This command signal permits to receive some information on the device:

the number of messages sent, the number of transmitter codes preset in memory, the software and firmware version of the GSM module, the network operator to which the device is connected, the number of mobile phones stored in memory.

status 123456

where: status 123456

status command string

access password (this is the default password if it has not modified yet or if

the module has been just initialized)

REPLY:

Sms sent: 0; Tx rec: 0; Sw:1.0.0; Fw:1.0.0.; Op:vodafone; phs:n/200

where:

Sms sent: 0 number of SMS sent from the last time counters have been reset

Tx rec: 0 number of transmitters stored in the receiver

Sw:1.0.0 software version of the GSM board

Fw:1.0.0. firmware of the GSM module

Op:vodafone network operator

phs:n/200 phonebook status: number of phone numbers stored in memory / maximum

phone numbers storable in memory

STATUS REQUEST OF PRESETTING AND PERMITTED ACCESSES OF A NUMBER:

This command allows to know presetting (presetting of alarm and channel to be activated by phone call) and permitted accesses (channels which can be activated by SMS) regarding one specific number stored in memory.

numstatus 123456 3391234567

where:

numstatus command string 123456 access password

3391234567 telephone number to be added to the list

REPLY:

ALARM: ON/OFF, CALL: 1/2/3/4, ch1: ON/OFF, ch2: ON/OFF, ch3: ON/OFF, ch4: ON/OFF

where:

ALLARM: ON/OFF notice of activated/deactivated alarm

CALL: 1/2/3/4 number showing the channel which can be activated by phone call

ch1:ON/OFF activation status of channel 1 by SMS
ch2:ON/OFF activation status of channel 2 by SMS
ch3:ON/OFF activation status of channel 3 by SMS
ch4:ON/OFF activation status of channel 4 by SMS

READ LIST OF ENABLED PHONES:

This command permits to know the number of memorised phone numbers.

readbook 123456

where:

readbook command string 123456 access password

REPLY:

n°1;n°2;n°3;

RESET OF SENT SMS COUNTER:

This command permits to reset the counter of SMS sent by the CALL device. This counter can be useful to count the messages sent since the last recharge made in order to estimate the remaining credit.

smsreset 123456

where:

smsreset command string 123456 access password

If a reply should be sent by the device, the command shall be:

?smsreset 123456

The reply will be: "COMMAND OK"

OUTPUT COMMAND MESSAGE:

This command permits to modify the text of channel activation SMS, so as to be able to combine a specific output to an ID word of the device to be activated or deactivated.

(example: if the gate is connected to channel 1, the SMS linked to channel 1 can be modified with the wording "GATE")

setcmdmsq 123456 1 GATE

where:

setcmdmsg command string 123456 access password 1 SMS to be modified (1-4)

GATE channel activation string (20 digits max)

N.B.: the text of the 4 SMS is the default text: Ch1, Ch2, Ch3 and Ch4 (words corresponding to SMS1, SMS2, SMS3, SMS4, respectively)

If a reply should be sent by the device, the command shall be:

?setcmdmsg 123456 1 GATE

The reply will be: "COMMAND MESSAGE SET"

ADD TRANSMITTER CODE IN THE RECEIVER CONNECTED TO MODULE:

This command permits to add a transmitter code to the receiver memory without necessarily gain access to the control unit (the serial number of the transmitter to be entered must be known). Through this command only 2-channel transmitters can be entered. To enter 4-channel transmitters proceed through the radio Menu of the receiver (see instructions of RR.4).

addtx 123456 02D762D

where:

addtx command string 123456 access password

02D762D string of 7 hexadecimal digits (0 – F) representing the SN of the TX to be

added to the receiver memory

N.B.: the following is added by default to the TX added: key1>channel, key 2>channel 2.

The serial number of remote controls is indicated outside the remote controls in series, or it can be read through the ADVANTAGE system.

If a reply should be sent by the device, the command shall be:

?addtx 123456 02D762D
The reply will be: "COMMAND OK"

o

HOW TO DISABLE THE TX PRESENT IN THE RECEIVER CONNECTED TO THE MODULO:

This command permits to disable a transmitter. This will remain stored in the receiver memory but it will not activate any channel (to restore it, use command "addtx")

distx 123456 02D762D

where:

distx command string 123456 access password

02D762D string of 7 hexadecimal digits (0 – F) representing the SN of the TX to be

disabled from the receiver memory

N.B.: To reset a disabled transmitter, enter it again with command "addtx"

If a reply should be sent by the device, the command shall be:

?distx 123456 02D762D
The reply will be: "COMMAND OK"

REQUEST OF TRANSMITTER STATUS IN RECEIVER CONNECTED TO THE MODULE:

This command permits to know whether a specific transmitter is enabled or not

testtx 123456 02D762D

where:

testtx command string 123456 access password

02D762D string of 7 hexadecimal digits (0 - F) representing the SN of the TX to

request the status

The reply will be one of the following

"TRANSMITTER ENABLED"

"TRANSMITTER DISABLED"

"TRANSMITTER NOT PRESENT"

ACTIVATION OF THE TRANSMITTER ENTER BLOCKTHROUGH RECEIVER:

This command permits to block the access to the radio menu functions of the receiver making it possible to enter the new transmitters only through mobile phone (command "addtx").

setrxpsw 123456

where:

setrxpsw command string 123456 access password

RFPI Y:

"COMMAND OK"

DEACTIVATION OF TRANSMITTER ENTER BLOC THROUGH RECEIVER:

This command permits to reactivate the access to the radio menu functions of the receiver making it possible to store in memory new transmitters through both the use of a mobile phone and the normal functions of the receiver.

resetrxpsw 123456

where:

resetrxpsw command string 123456 access password

RISPOSTA:

"COMMAND OK"

STATUS REQUEST OF RECEIVER OUTPUTS:

This command permits to know the status of outputs, in other words whether they are activated or not (preset outputs in impulsive mode will always how their OFF status).

recstatus 123456

where:

recstatus command string 123456 access password

REPLY:

As a reply a string containing SMS activating messages regarding channels and showing their ON/OFF status is sent

Note: To preset the channel operating modes (monostable/bistable/timed) see instructions of the RR 4 receiver.

POSSIBLE ERROR REPLIES:

The system sends the following error messages, through SMS.

"COMMAND MESSAGE NOT SET"

Check the syntax of the command string

"NO PASSWORD FOUND"

Check the syntax of the password configuration command

"COMMAND EXECUTION ERROR"

The command was not executed

"SYNTAX COMMAND ERROR"

The command is correct, but the parameter syntax is incorrect

"PASSWORD FRROR"

Check password

"ERROR UNKNOWN"

General error

"ERROR, MEMORY FULL"

Receiving memory is full. No other remote control number can be memorised

"COMMAND UNKNOWN"

The control signal is not recognized

"PHONE NUMBER NOT PRESENT"

The telephone number to be cancelled is not stored in memory

"ERROR INTERNATIONAL DIALING CODE"

Check the syntax of the memorised numbe

"UNAVAILABLE TELEPHONE NUMBER"

The command was sent by a number which is memorised, but not enabled

ALARM FUNCTION

An alarm device (Normally Closed contact) can be branched between pin 4 and 5 of the ADV terminal board of the receiver. If the alarm triggers (the contact opens), the gsm module will send an alarm signal to the cell phone numbersenabled for this function.

The warning signal consists in a phone call to the first number stored in memory and enabled for this function (the order is determined by the memorisation order of the numbers in the SIM memory). The one who receives the telephone call can disconnect the call and the alarm will stop. Otherwise, after 30 seconds, the call will be disconnected and the second number enabled will be called, and so on.

Note: to stop the alarm by disconnecting the telephone call, the cell phone must have the telephone answering function disabled.

To enable the telephone number for the receipt of the alarm signal, send the following command "adda-larmnum" as described hereunder:

addalarmnum 123456 **+NN**3391234567**,+NN**3391234568**,+NN**3391234569 etc

addalarmnum command string 123456 access password

+NN3391234567 telephone number with international code*, if more than one number must

be typed in with one single message, it is suficient to separate the numbers

with ","

the number +NN3391234567 (and following) will be called if an alarm occurs

*In this case, the international code must be entered so that the alarm call can reach the user even if he is in a foreign country, different from the country in which the CALL device is installed.

Any number can be reached by an alarm signal.

If the number is already stored in memory, it must be in any case re-entered with the addalarmnum function.

To erase the telephone number from the list of enabled numbers for alarm, use the delnum function.

In this way, the number will be erased. The corresponding number, added with the addnum function, will be erased as well.

When the red LED of the gsm module triggers, it switches on with fixed light and it will switch off when someone disconnects the call or when all listed numbers have been called

RADIO RECEIVER MODULE

In this second part, the four channel radio receiver functions are described such as wire connections, output configuration, memorising of transmitters, etc..

SPECIFICATIONS

- Four output, independent and freely configurable channels
- Rolling code radio receiver 433.92MHz frequency
- Programming through built-in LCD display
- Standard memory for 512 transmitters. It can be replaced with MEM2048 module for 2048 transmitters
- Versions with 230VAC, 115VAC or 24VAC/CC power supply are available.
- Input for 12VDC emergency battery, with automatic charge.

INPUT/OUTPUT FUNCTIONS					
Input, No.	Function	Description			
1-2	Power supply	Input, 230Vac 50Hz (1-Phase/2-Neutral) in the 230V version Input, 115Vac 60Hz (1-Phase/2-Neutral) in the 115V version Input, 24 Vac/dc (1+ /2 -) in the 24V version			
3-4	Channel 1	Output, channel 1. 230 Vac max 5A. Normally Open (N.O.) Contact, switchable in Normally Closed (N.C.) through jumper 1.			
5-6	Channel 2	Output, channel 2. 230 Vac max 5A. N.O. Contact, switchable in N.C. through jumper 2.			
7-8	Channel 3	Output, channel 3. 230 Vac max 5A. N.O. Contact switchable in N.C. through jumper 3.			
9-10	Channel 4	Output, channel 4. 230 Vac max 5A. N.O. Contact, switchable in N.C. through jumper 4.			
11-12	Antenna	Antenna connection of the built-in radio module (11-screen/12-signal).			
13-14	Battery	Input for emergency battery, 12Vdc (13:- / 14:+). It allows the operation of the receiver in case of power failure of the mains, During the mains operation the battery is recharged. Recharge time, about 15 hours for a battery 12V/1.2Ah.			

Note:

The U2 memory can contain 512 rolling-code, 433.92MHz, transmitters maximum. If necessary, it can be replaced with item MEM2048 which can contain up to 2048 different codes.

PROGRAMMING

The programming of the various functions of the control unit is carried out by using the LCD display in the receiver and presetting the desired values in the programming menus described hereunder.

- 1 Press the <PG> key, the display shows the first Parameters Menu "PAR".
- 2 By using the keys <+> or <->, select the desired Menu (PAR>>LOG>>RADIO>>...).
- 3 Press the <PG> key, the display shows the first function available on the Menu.
- 4 By using the keys <+> or <->, select the function to be modified.
- 5 Press the <PG> key, the currently preset value for the selected function is displayed.
- 6 By using the <+> or <-> keys, select the value to be assigned to the function.
- 7 Press the <PG> key. "PRG" is displayed which means the programming has been successful.

Note:

You can return to the upper menu without making changes if you press the <+> and <-> keys simultaneously in a Function Menu.

If you press the <+> and <-> keys simultaneously when the display is switched off, the card software version is shown. Press PG to select the desired value. OK is shown to confirm a successful programming. If either the <+> key or the <-> key are kept pressed, the increase/reduction of numeric values is accelerated in the Time Menu.

After 60 sec wait, the receiver exits the programming mode and the display switches off. Each single function, which is available in the control unit, is described in the following tables

PARAMETERS				
MENU	FUNCTION			
Nch I	The operating mode of channel 1 is preset. The descriptions of the single submenus are shown hereunder:			
	INP	Monostable. The relay activates for 1 sec when the corresponding key is pressed; then the relay returns to its original status.		
	FC	Bistable. When the associated key in the transmitter is pressed, the relay activates. It remains in its new status until the key is pressed again.		
	F IUE	Timed. The relay activation time can be preset within a range of 1 to 600 seconds (10 min). Select the desired activation time between 1 and 600 seconds, then press OK to store the val ue into memory.		
Nch2	Same operating modes preset for MCH1.			
Nch3	Same operating modes preset for MCH1.			
Псьч	Same operating modes preset for MCH1.			

RADIO				
MENU		FUNCTION		
Rdd	Menu to type in the transmitter codes in memory. The submenus are described hereunder:			
	ch i	The key is associated to channel 1. Press, within 5 sec, the transmitter key which is to be associated to channel 1.		
	ch2	The key is associated to channel 2. Press, within 5 sec, the transmitter key which is to be associated to channel 2.		
	ch3	The key is associated to channel 3. Press, within 5 sec, the transmitter key which is to be associated to channel 3.		
	ch4	The key is associated to channel 4. Press, within 5 sec, the transmitter key which is to be associated to channel 4.		
dEL	Menu to erase previously typed in transmitter codes from memory. The single submenus are described hereunder:			
	codE	The receiver is in a waiting mode, waiting for a memorized transmitter key to be pressed. The transmitter is erased from the receiver memory.		
	Indh	Remove a transmitter code for which the position in memory is know, see function FIND>>Code.		
rE5	The receiver memory is completely erased. All transmitter codes and relevant associations and channel parameters are cancelled. A confirmation of the operation is being asked.			
F Ind	Search Menu for transmitter codes stored in memory. The single submenus are described hereunder:			
	codE	The receiver is waiting for a code. Press any key on the transmitter; if this is stored its position in memory is displayed.		
	n EH	The number of transmitter codes stored in the receiver memory is displayed.		

