



IS0171-AA
07.2003

CT10-M

GSM telephone communicator

CT11-M

GSM/PSTN
telephone communicator

User
manual

ELKRON

Table of contents

1.0	Description of LEDs and buttons	3
1.1	Description of the LEDs	3
1.2	Description of the buttons	3
2.0	Language selection.....	4
2.1	Language selection	4
2.2	Viewing system status	4
3.0	User programming	5
3.1	User programming list	6
3.2	Telephone number programming list	7
3.3	Output switching menu	8
3.4	Answering service menu (for remote controls)	9
3.5	Engineer code enabling menu	9
3.6	User code changing menu	10
3.7	SIM card expiration menu.....	11
3.8	Test call menu	12
3.9	SMS message editor menu.....	13
3.10	Voice message programming menu	15
4.0	Cycle call stopping	15
5.0	Answering machine e remote control	16
	Alphanumeric coding table	19

DIRECTIVE R&TTE 99/05/EC COMPLIANCE

Informative note

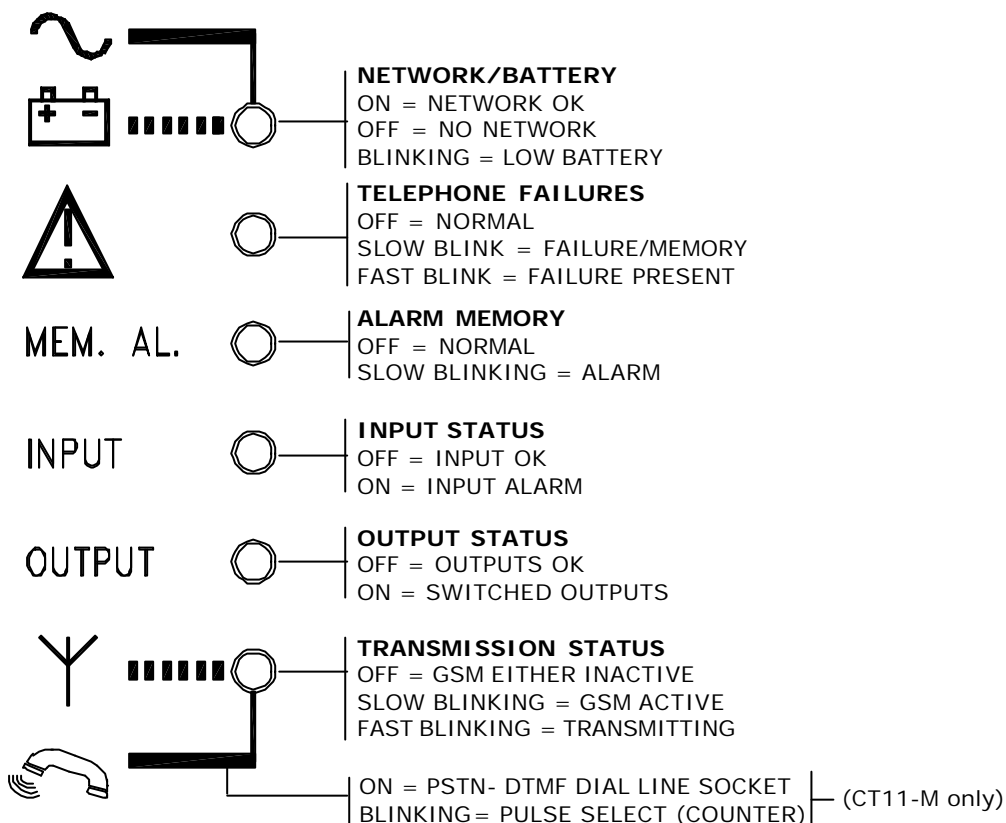
Ministerial type-approval for transceivers and telecommunication terminals was abolished on 8 April 2000.

The CT11-M terminal is designed and certified for PSTN (Public Switched Telephone Network) use employing DTMF (Dual Tone MultiFrequency) signalling. The terminal complies with the Pan-European Connection Directive R&TTE 99/05/CE – ETSI TBR21 for use as a standalone terminal in an analogue PSTN.

Refer to the technical instructions accompanying the product for possible specific hardware and software programming.

1.0 Description of LEDs and keys

1.1 DESCRIPTION OF THE LEDs



1.2 DESCRIPTION OF THE KEYS

Number pad keys for entering access code, telephone numbers and selecting programming parameter values



Arrow keys used to scroll the programming menu and select the functions to be programmed



Key for accessing the SYSTEM STATUS MENU (in combination with number keys) and for deleting telephone numbers



EXIT key used to quit the programming menus














OK key used to confirm parameter modifications during programming and to start listening to and recoding messages



–2.0 Language selection - viewing system status–




2.1 LANGUAGE SELECTION



















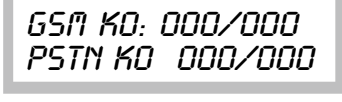

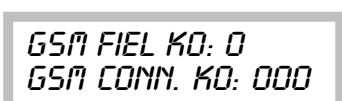









- The interface language can be selected in any condition without needing to enter a code. Simply press “C” followed by 9. The languages will be displayed cyclically each time the button is pressed. Either press E^{EXIT} to quit or wait for the one minute time-out.

BUTTONS TO PRESS	DISPLAY	LANGUAGE
 + 		SELECT LANGUAGE
+ 		FRENCH
+ 		ENGLISH
+ 		GERMAN
+ 		SPANISH
+ 		PORTUGUESE

2.2 VIEWING SYSTEM STATUS

- The “SYSTEM STATUS” menu can be accessed in any condition without entering a code. Simply press “C” followed by a number key (from 1 to 8). Either press E^{EXIT} to quit the menu or wait for the time-out (one minute).

BUTTONS TO PRESS	DISPLAY	EVENT TYPE
		INPUTS NOT QUITTED (e.g. Input 1)
		ALARM MEMORY (e.g. Input alarm 2)
		CLEAR ALARM MEMORY AND NETWORK/BATTERY FAILURE WARNING LEDS

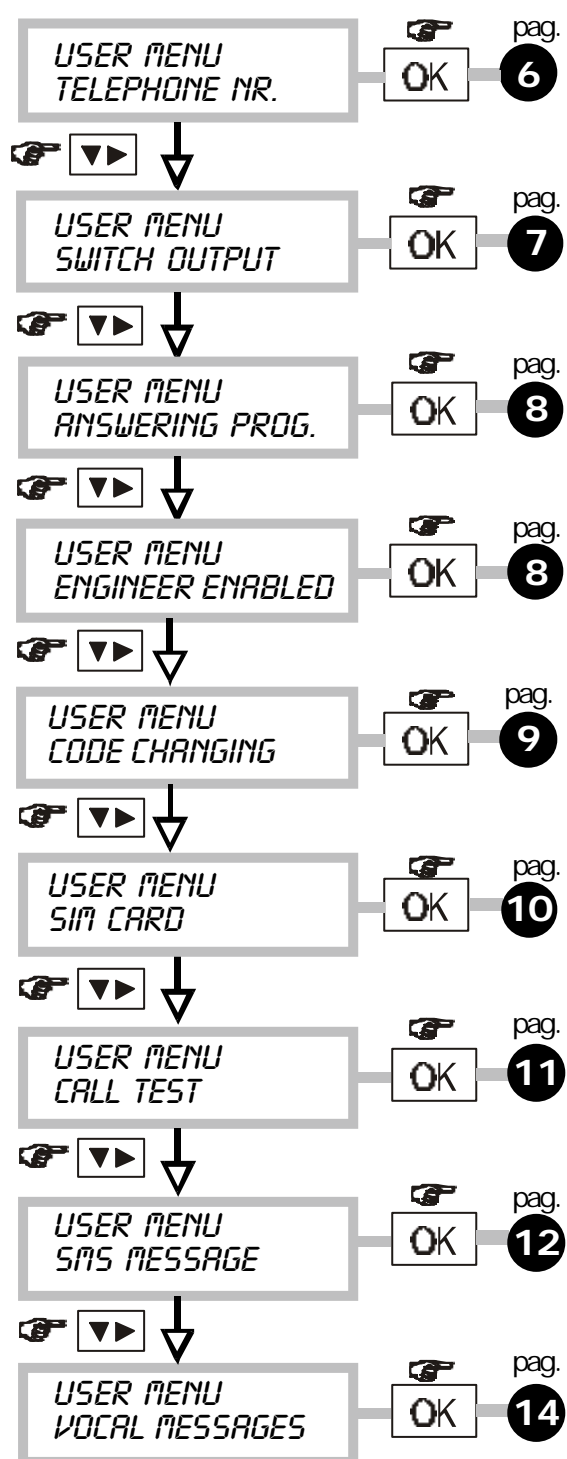
BUTTONS TO PRESS	DISPLAY	EVENT TYPE
 + 		SWITCHED OUTPUTS (e.g. Output 4 switched)
 + 		GSM FIELD COVERAGE AND NETWORK REGISTRATION @ = home ^ = roaming X = not registered The message "Searching network..." will appear if the device is not registered.
 + 		
 + 		GSM DATE AND TIME
 + 	 AT EACH PRESSED OF THE KEY 7 APPEAR THE FOLLOWING VISUALIZATION	IF ANOMALY PRESENT WARNING (CT11-M only)
+ 		CYCLES WITH ANOMALIES/TOTAL CYCLES
+ 		CALLS WITH ANOMALIES/GSM CALLS MADE CALLS WITH ANOMALIES/PSTN CALLS MADE
+ 		NUMBER OF "NO FIELD COVERAGE" FAILURES N. OF DISCONNECTION FAILURES BETWEEN GSM MODULE AND CT10-M/CT11-M OR MISSING SIM CARD
+ 		NUMBER OF "NO PSTN LINE" FAILURES (CT11-M)
+ 		COUNTER RESET COMMAND (ACTIVE ONLY WHEN FAILURE AND ANOMALY CONDITIONS HAVE BEEN RESTORED) AND TELEPHONE FAILURE INDICATOR LED
 + 		SOFTWARE RELEASE (BOARD)
+ 		GSM MODULE CONTROL FIRMWARE

3.0 USER PROGRAMMING

NOTE: An alarm event occurring during programming will be signalled by means of the LEDs on the panel. The respective outputs will switch. No calls will be made because the system is being supervised at the time.

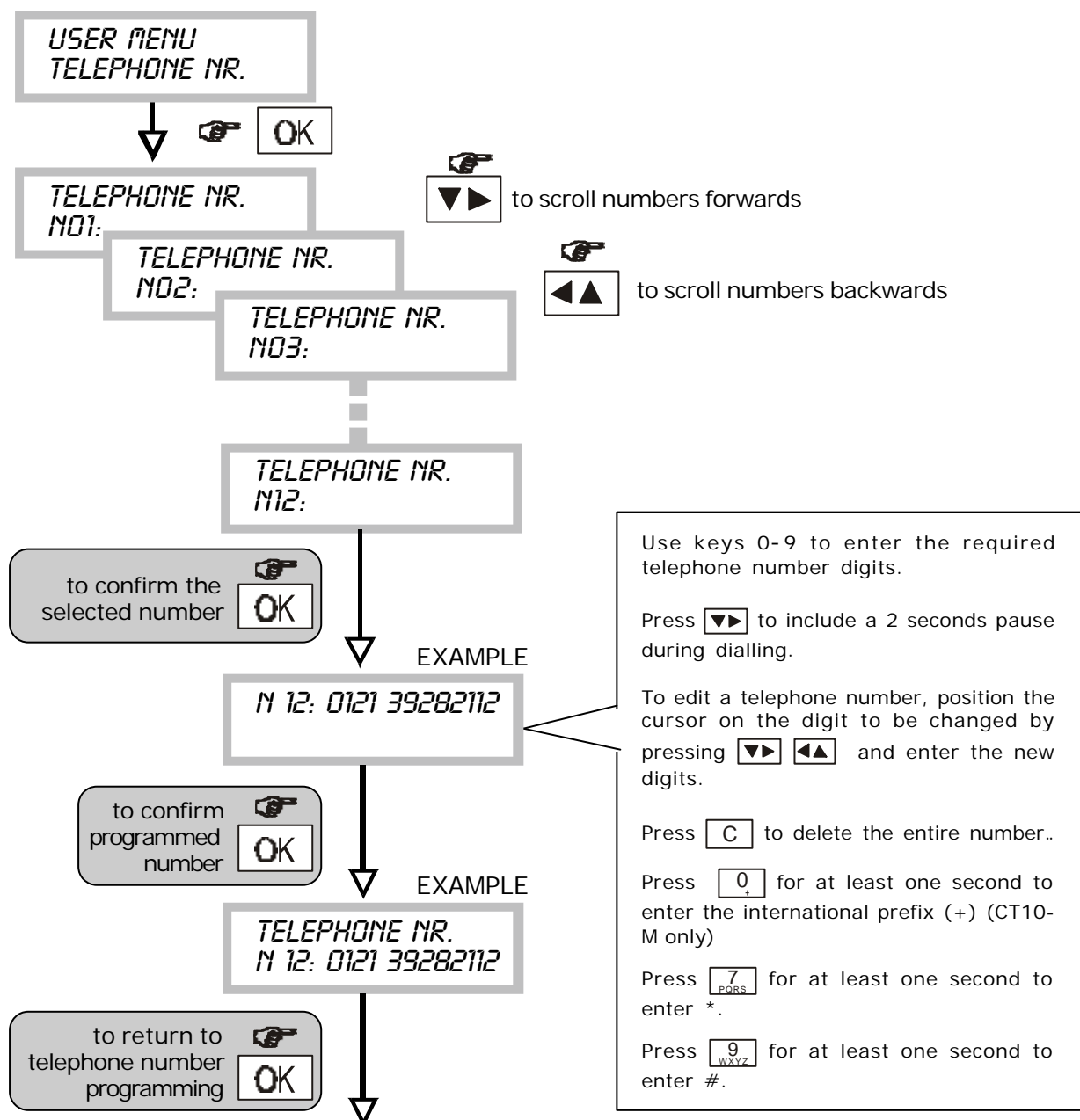
3.1 USER PROGRAMMING LIST

Enter the 6-digit user code x-x-x-x-x-x (default 111111)



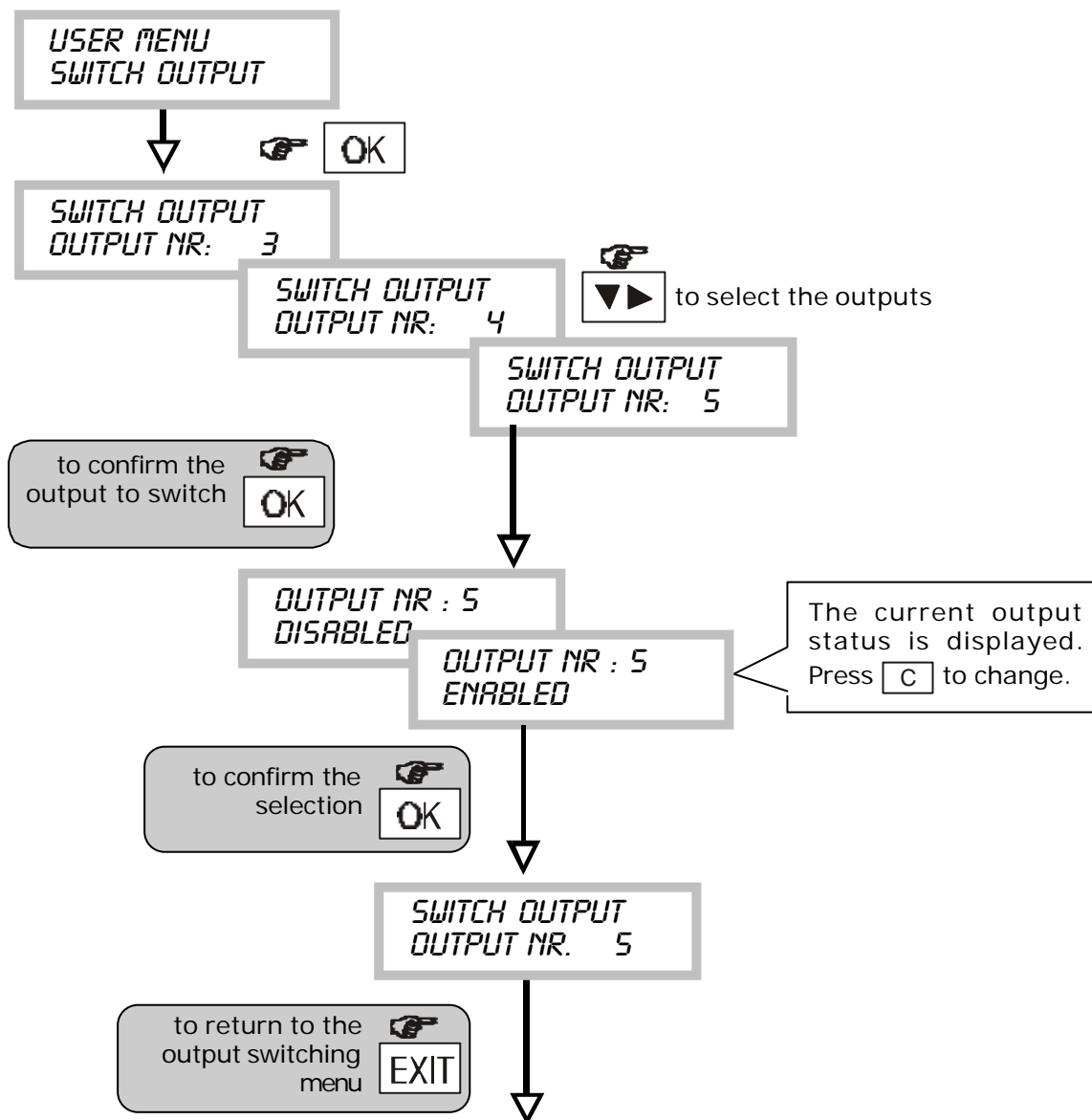
3.2 TELEPHONE NUMBER PROGRAMMING MENU

This menu is used to programme/edit the telephone numbers which will be dialled automatically by the communicator following an alarm. Up to twelve numbers can be programmed, maximum 28 digits each.



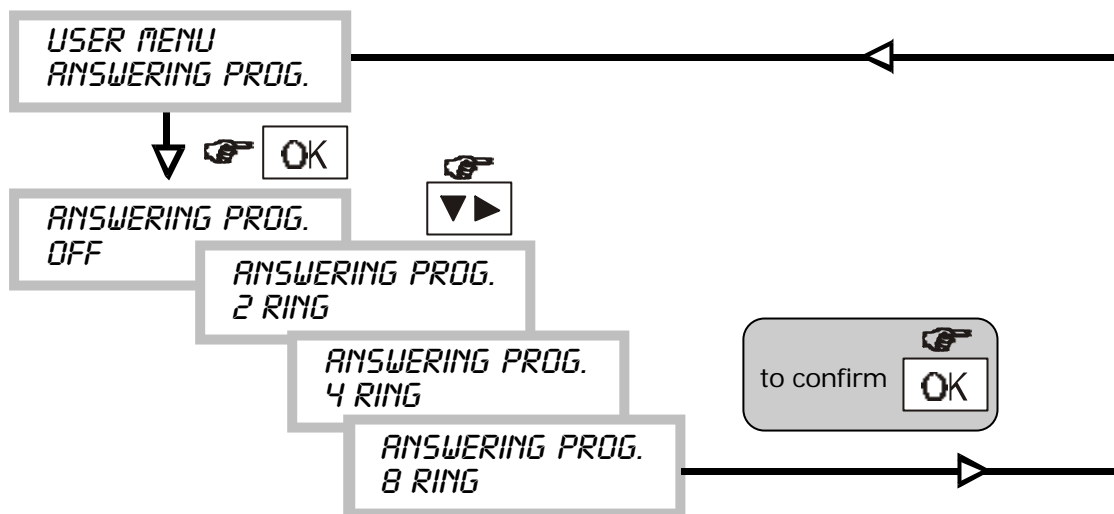
3.3 OUTPUT SWITCHING MENU

- This menu is used to change a remotely controllable output (ON/OFF). An output switched on or off remotely can be returned to its original condition.



3.4 ANSWERING PROGRAMMING MENU (for remote controls)

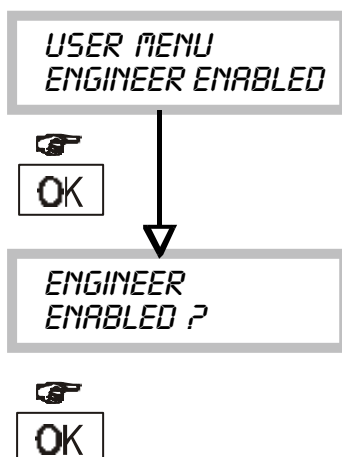
- This procedure can be used to activate the answering service function permitting a connection between the caller and the communicator to operate remote controls.



The answering service function will be activated also if the "skip outgoing message" is automatically activated. The number of rings on CM10-M are only indicative

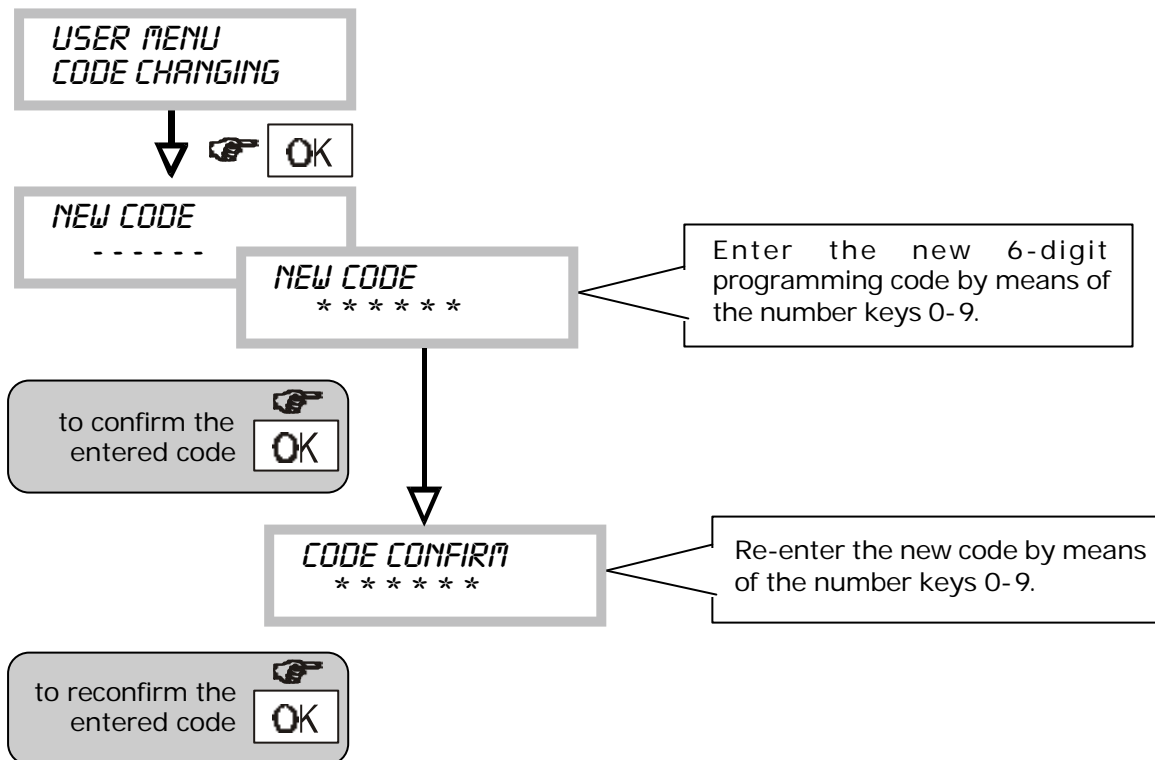
3.5 ENGINEER ENABLING

- By means of this procedure it is possible to enable the engineer code. Access to the engineer menu will be disabled once the user code is entered.



3.6 USER CODE CHANGING MENU

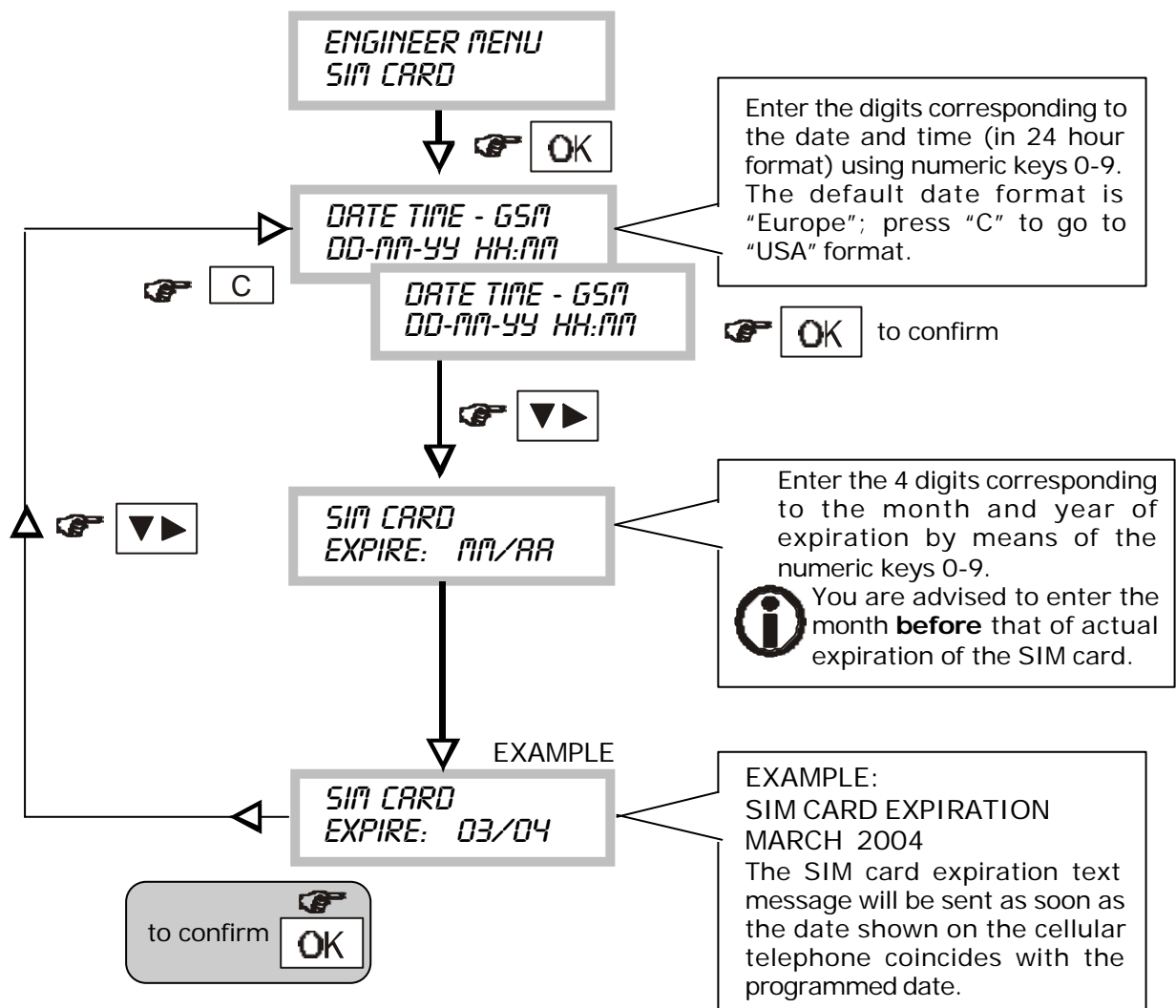
- This procedure can be used to customise the USER access code (default 111111)



3.7 SIM CARD EXPIRATION MENU

- If a pre-paid SIM card is used instead of a telephone subscription, the card will expire either when the credit is used up (for the calls made) or automatically after a certain time from the last request for credit (typically after 12 months). Refer to the conditions of your telephone operator.
- This function can be used to program a date when the CT10-M will send an automatic call to advise the user that the SIM card expiration date is approaching.
- A specific text message will be sent (number 4) to the telephones associated with failure events (see "Failure/telephone number association" menu).

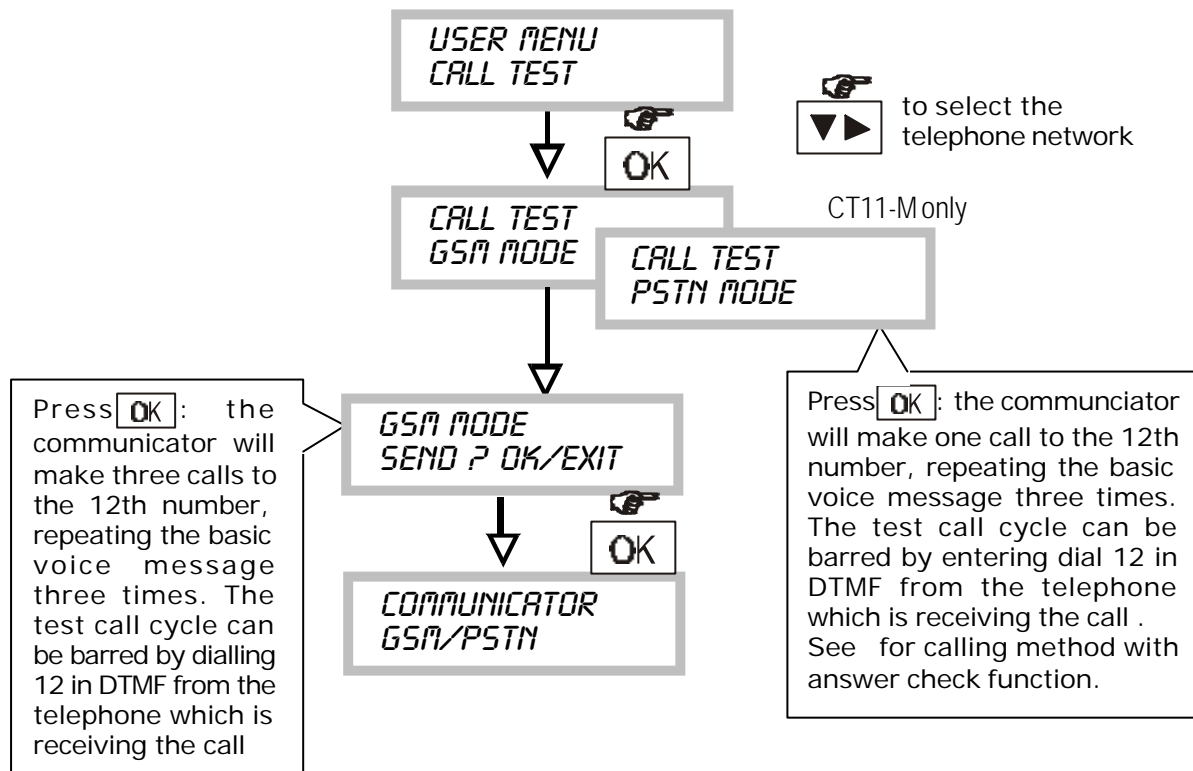
The current date and time must be entered before programming the SIM card expiration.



NOTE: All date and time fields must be entered to store the setting. Note that 12h time format (with "AM" and "PM") is used if "USA" setting is selected (in SYSTEM STATE menu).

3.8 CALL TEST MENU

- A voice test call can be made after installation or for a functional test of the communicator. The basic message will be sent to the 12th programmed number.



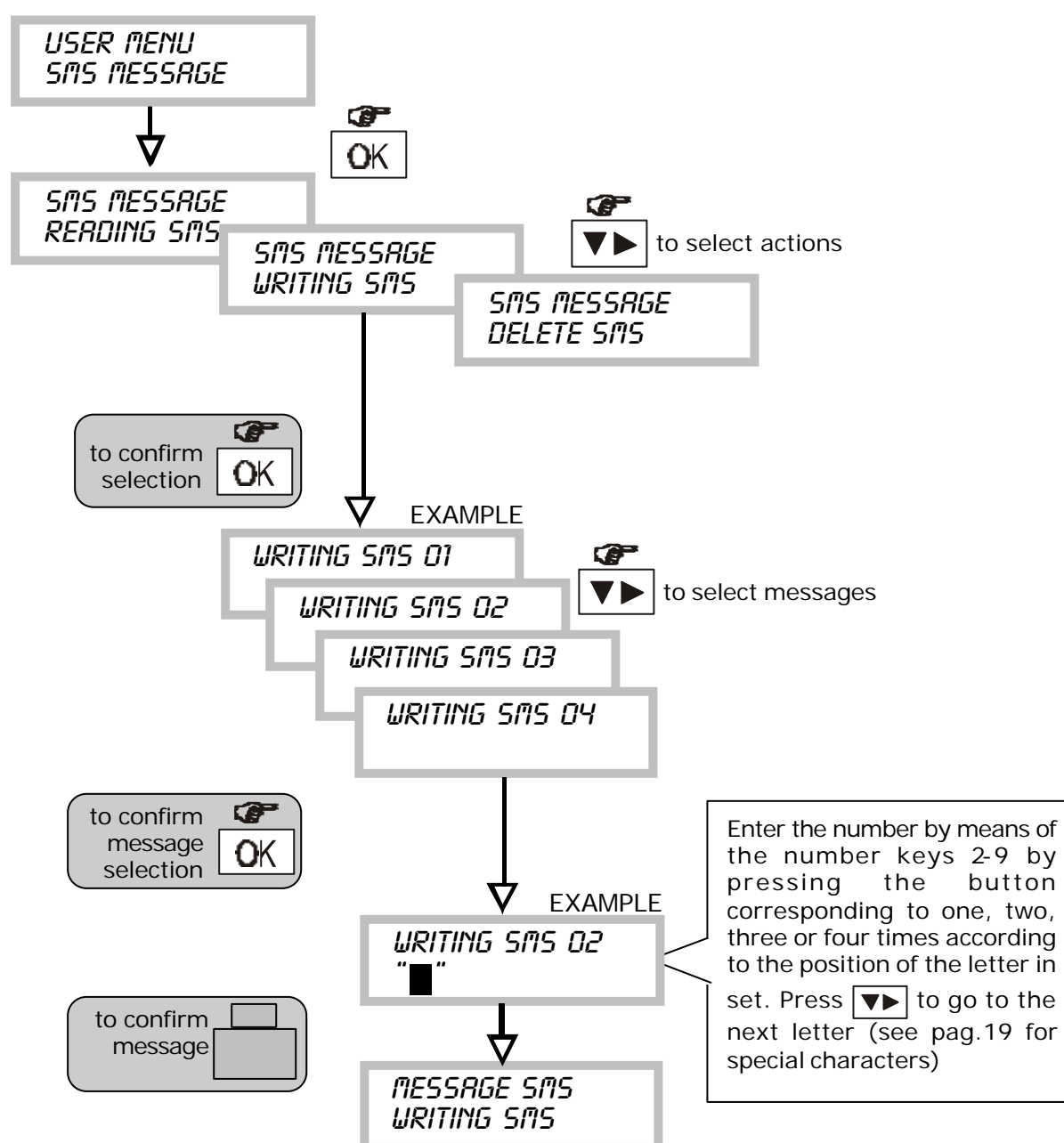
The test call will not be made if the 12th telephone number is not programmed.

3.9 SMS MESSAGE EDITOR MENU

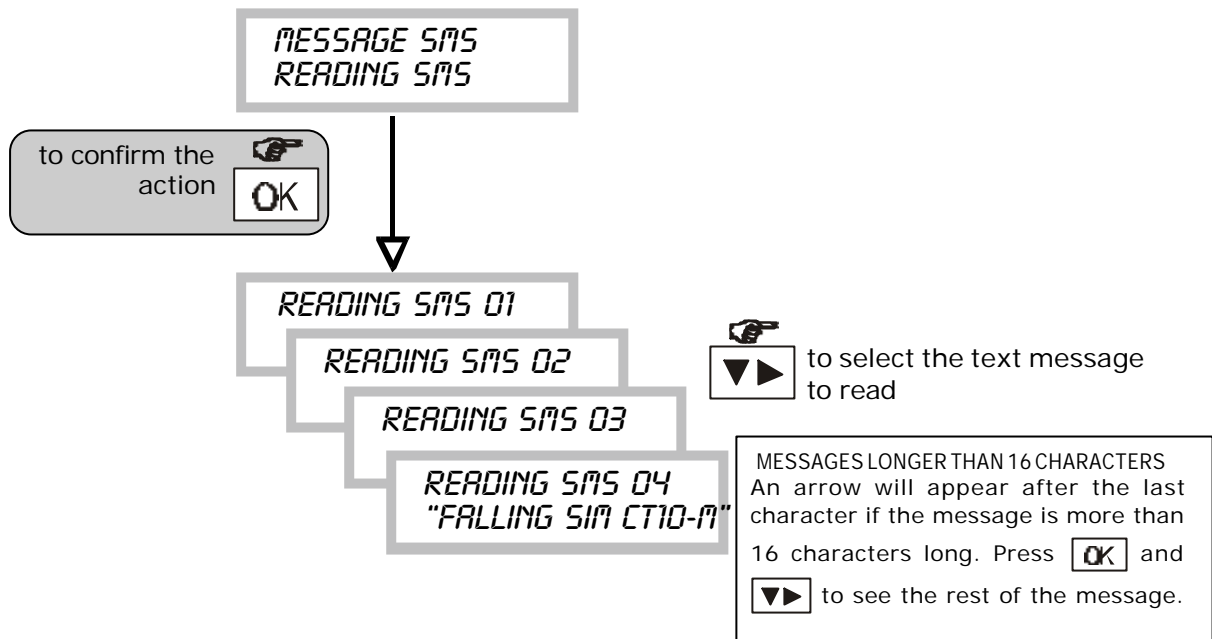
- This function can be used to edit the text messages that the communicator will send following ALARM/FAILURE/SIM CARD EXPIRATION events.
- There are four messages. The association between the text message number and the event is shown in the following table.

Message	Associated event	Example
TEXT 01	INPUT 1 ALARM	"WARNING BURGLAR ALARM"
TEXT 02	INPUT 2 ALARM	"WARNING ROBBERY IN PROGRESS"
TEXT 03	TECHNICAL FAILURE	"WARNING NO FIELD COVERAGE"
TEXT 04	SIM CARD EXPIRATION	"WARNING CT10-M SIM CARD EXPIRATION"

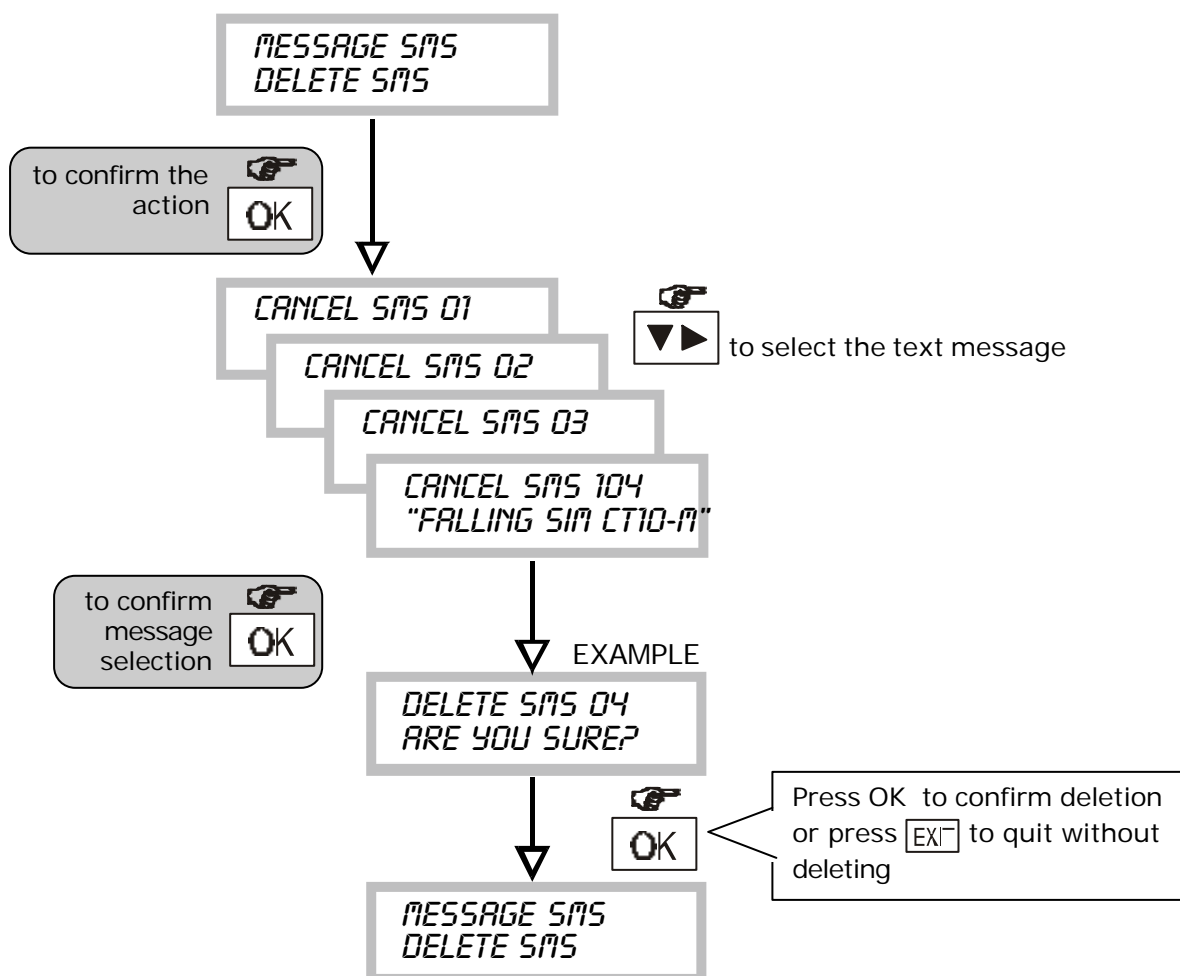
- The message text for each ALARM/FAILURE/SIM CARD EXPIRATION event can be freely edited (maximum 40 characters per message).



- Reading a text message



- Deleting a text message

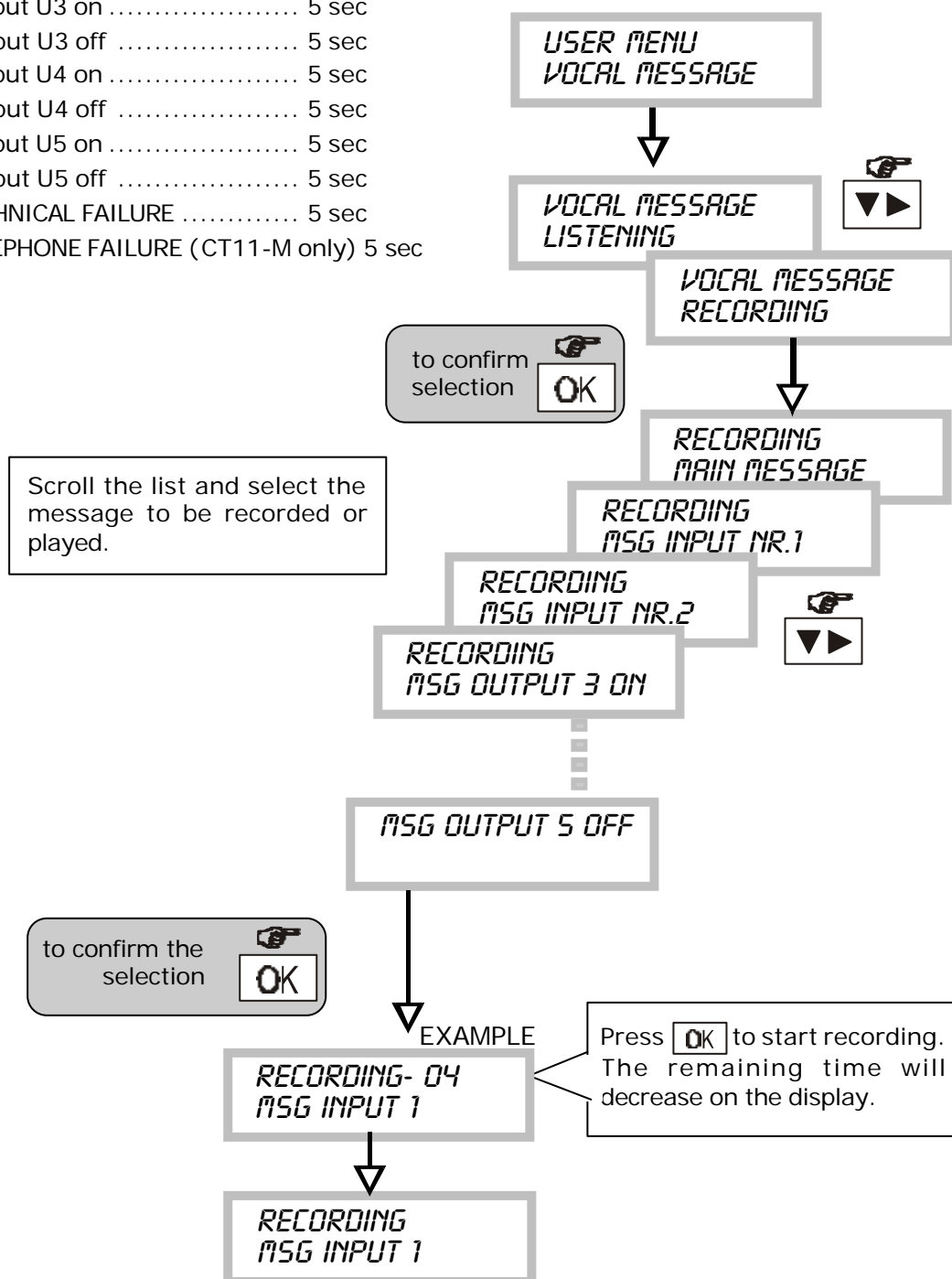


3.10 VOCAL MESSAGE PROGRAMMING MENU

- This function is used to record and play the voice messages which can be sent by the communicator by means of the headphones provided .
- The available messages are associated to alarm events, remotely controlled output status switching, a technical failure events and a telephone failure events.

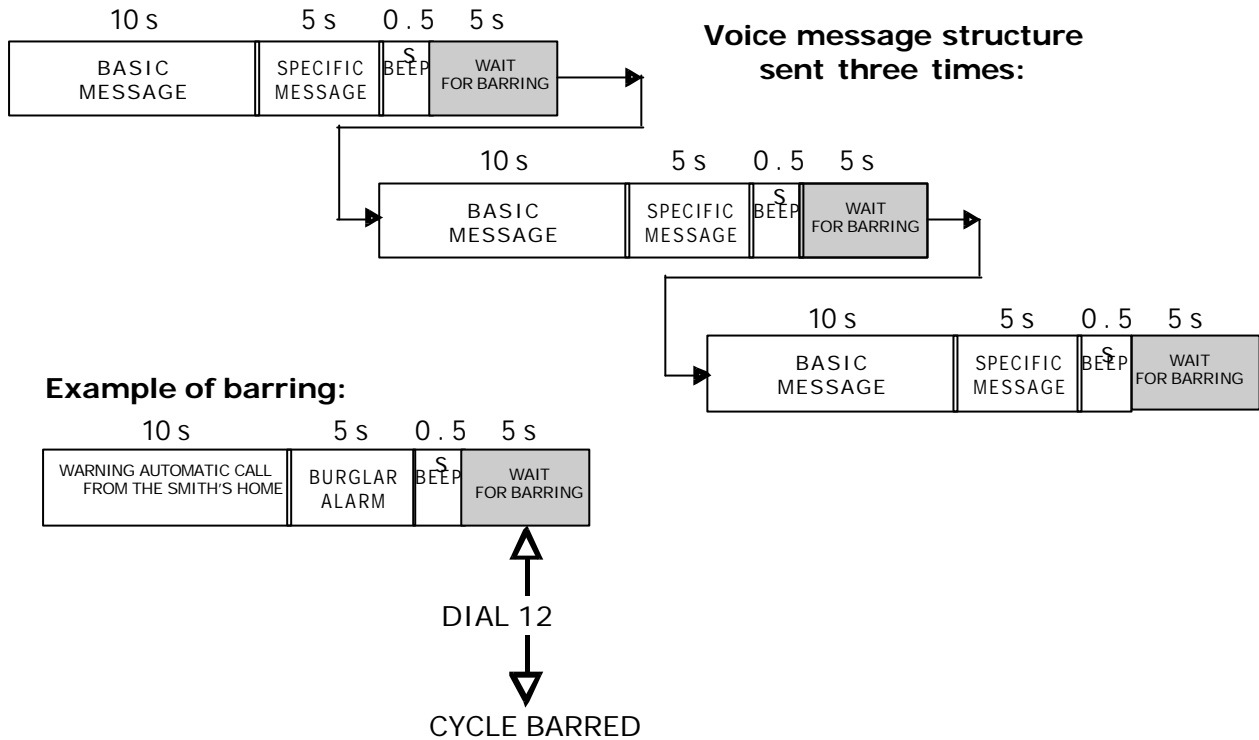
Type of message Duration

Basic message	10 sec
Input 1 alarm	5 sec
Input 2 alarm	5 sec
Output U3 on	5 sec
Output U3 off	5 sec
Output U4 on	5 sec
Output U4 off	5 sec
Output U5 on	5 sec
Output U5 off	5 sec
TECHNICAL FAILURE	5 sec
TELEPHONE FAILURE (CT11-M only)	5 sec



4.0 Stopping the call cycle

- The call cycle can be stopped by dialling **12 in DTMF** (called "Barring code") on the telephone receiving the voice call.
- Voice messages can be barred as shown below.



- The call in progress and the remaining call cycle (voice and text messages) will be completed if the "Barring code" is entered.
- If the input that caused the alarm is subjected to TC, the call cycle in progress is barred when the TC switched to ON.
- The call cycle can also be barred locally by means of the keypad by entering a valid code (user code or ENGINEER code, where enabled).


5. 0Answering service and remote control function

- Various devices can be switched on and off remotely (e.g. air conditioner, lights, irrigation system, etc.) by sending DTMF commands to any telephone and switching the communicator outputs which are programmed as **remotely controllable** (U3, U4, U5). If enabled, the communicator will answer incoming calls at any time, except for when it is making alarm calls. To remotely control a device, call the CT10-M/CT11-M GSM number or PSTN number (CT11-M only) and wait for an answer. GSM calls will be answered after at least six rings (heard by the caller). PSTN calls will be answered after a programmable number of rings (2-4-8, see paragraph 8.4).
- Answers are notified by a tone allowing the caller to dial the USER CODE (in DTMF) within 30 seconds. A confirmation tone will be heard after each digit. A sequence of three confirmation tones will be heard at the end of the code if the code is correct. Otherwise a long error tone will be heard. Three attempts to enter the correct code can be made before the call is ended.
- The remote control can be used to switch the required outputs (see sequence in the following figure) after the code has been accepted. This operation requires a three-digit code:
 - 5: defines the type of "output switching" command.
 - 3 or 4 or 5: defines the output number to be switched
 - 1 or 0 is used to activate or deactivate the required output.The communicator will give priority to an alarm triggered during the remote control procedure. No on/off commands will be accepted and a WRONG CODE BEEP will be output. Hang up.
- Each remotely controllable output can be programmed as maintained or timed.
 - Status changes follow the command if the output is maintained.
 - The on command (1) will activate the output and the timer while the off command (0) will anticipate the time-out (if this has not already occurred) if the output is timed.
- The user has one minute from code recognition to complete the remote control operations. If no codes are sent by this time-out, the communicator will end the call in progress and clear the line.
- The communicator will send a short confirmation tone after receiving each remote control. A longer tone will be heard in the case of the following errors:
 - programmed output other than "remotely programmable"
 - wrong code
- If the code is accepted, the communicator will send the voice message recorded by the user to confirm implementation of the control.
- **At this point, the user will need to enter the "5" code again to switch other outputs (or the same output) at the end of the voice message**

NOTE: You are advised to deactivate the "ANSWERING SERVICE" function provided by the GSM operator.

- SKIP ANSWERING MACHINE MESSAGE (CT11-M only)
Connect to the communicator as follows if an answering machine is fitted on the PSTN line used by the CT11-M:
 - call the PSTN telephone number
 - wait for a single ring tone
 - hang up quickly
 - call the number again

Remote control Function

COMMANDS TO THE COMMUNICATOR		SIGNALS FROM THE COMMUNICATOR		MEANING OF THE SIGNALS	
1	Call GSM/PSTN number	Answer tone		CONNECTION OK	
2	 Send six-digit user code (default code 111111)	n	BEEP0.5s	RECEIVED CODE DIGIT	
		n	BEEP0.5s	RECEIVED CODE DIGIT	
		n	BEEP0.5s	RECEIVED CODE DIGIT	
		n	BEEP0.5s	RECEIVED CODE DIGIT	
		n	BEEP0.5s	RECEIVED CODE DIGIT	
		n	BEEP0.5s	RECEIVED CODE DIGIT	
		3 BEEPS 0.5s OR BEEEEEP		CORRECT CODE WRONG CODE (repeat procedure from point 2)	
3	Send code 5 5	BEEP 0.5s		RECEIVED	
4	Send code corresponding to output to be switched * 3 OR 4 OR 5	BEEP 0.5s		RECEIVED	
5	Send code : 1 = on or 0 = off 0 OR 1	3 BEEPS 0.5s + ASSOCIATED VOICE MESSAGE		COMMAND DONE	

* More than one output can be switched (or the same output more than once) during the same call. Simply repeat the following operations sequence: **3 4 5** for each output to be switched.

ALPHANUMERIC CODING TABLE

KEY	NUMBER OF TIME TO PRESS KEY							
	1	2	3	4	5	6	7	8
0 +	+	-	&	@	/	%	Ø	
1	WHITESPACE	?	!	"	.	()	1
2 ABC	A	B	C	2				
3 DEF	D	E	F	3				
4 GHI	G	H	I	4				
5 JKL	J	K	L	5				
6 MNO	M	N	O	6				
7 PQRS	P	Q	R	S	7	*		
8 TUV	T	U	V	8				
9 WXYZ	W	X	Y	Z	9	#		

ELKRON SPA
Via Carducci, 3 - 10092 BEINASCO (TO)
TEL. 011.3986711 - FAX 011.3499434
EMAIL: info@elkron.it -
EMAIL Assistenza Tecnica: stac@elkron.it

