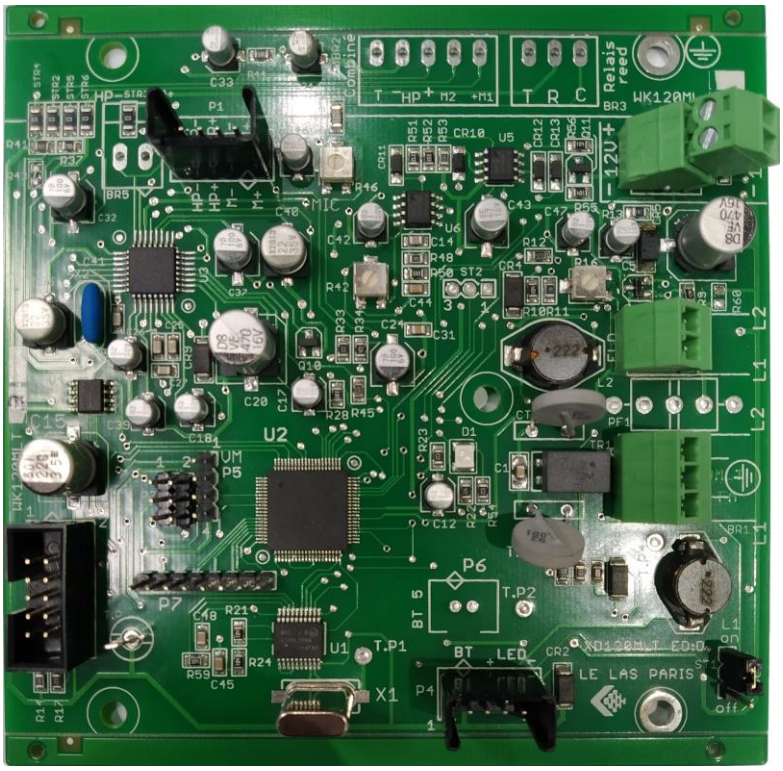
USER GUIDE AND PROGRAMMING MANUAL
« HANDS FREE » TELEPHONE CARD

WK120MLT



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SUMMARY

Equipment for industrial sites

PHONE CARD FOR HANDS-FREE TELEPHONE

WK120MLT

WARNING

BEFORE COMMISSIONING, READ THIS MANUAL CAREFULLY TO ENSURE THAT THE MANUAL SUPPLIED TO ENSURE THAT THE FACTORY CORRESPONDS TO THE INTENDED USE.

NOTE

THE GUARANTEES IS VALID ONLY WHERE PRODUCTS ARE INSTALLED AND OPERATED STRICTLY IN ACCORDANCE WITH THE INSTRUCTIONS DESCRIBED IN THIS MANUAL.

NO GUARANTEE CAN BE INVOKED IF DETERIORATION RESULTS FROM AN EXTERNAL SOURCE OR FROM LACK OF ADHERENCE TO INSTRUCTIONS FOR USE.

IN THE DESIRE FOR CONSTANT IMPROVEMENT, THE INFORMATION CONTAINED IN THIS DOCUMENT AND THE CHARACTERISTICS OF THE EQUIPMENT MAY BE SUBJECT TO MODIFICATION WITHOUT PRIOR NOTICE

EUROPEAN STANDARDS

UNITS BEARING THE CODE "CE" CONFORM TO EMC DIRECTIVE EMC (2014/30/EU) AND THE DIRECTIVE RELATING TO LOW VOLTAGE (2014/35/EU) FORMULATED BY THE EUROPEAN COMMUNITY.

AGREMENT ART N° 98656P DU 8 JUILLET 1998

1. GENERAL CHARACTERISTICS

FEATURES

- Multi-frequency dialing (DTMF).
- Automatic on-hook facility.
- Instant off-hook or after a programmable number of rings.
- Memorised numbers can be programmed remotely by DTMF telephone.
- Several numbers can be linked in the event of a busy signal or no answer after a programmable time.
- Settings can be changed remotely using a conventional DTMF telephone, for example:

  - Ringing type
  - Ringing volume
  - Loudspeaker Volume
  - Automatic answer etc…

IMPORTANT

**THIS CARD IS FITTED WITH A MICROPROCESSOR.
CONNECTION TO THE TELEPHONE LINE AND TO THE MAIN.
THE SET IS INITIALISED AND AN AUDIBLE SIGNAL IS
AN AUDIBLE SIGNAL IS EMITTED.**

**THEY HAVE NUMEROUS PROGRAMMABLE FUNCTIONS
AND ARE FACTORY-CONFIGURED FOR EVERYDAY USE.**

Stations fitted with the hands-free card operate without any modification on public networks such as France Télécom. For correct operation on a private branch exchange (PBX), it is necessary to ensure that the following characteristics coincide with those of your PBX.

If this is not the case, make the necessary corrections using the programming tools.

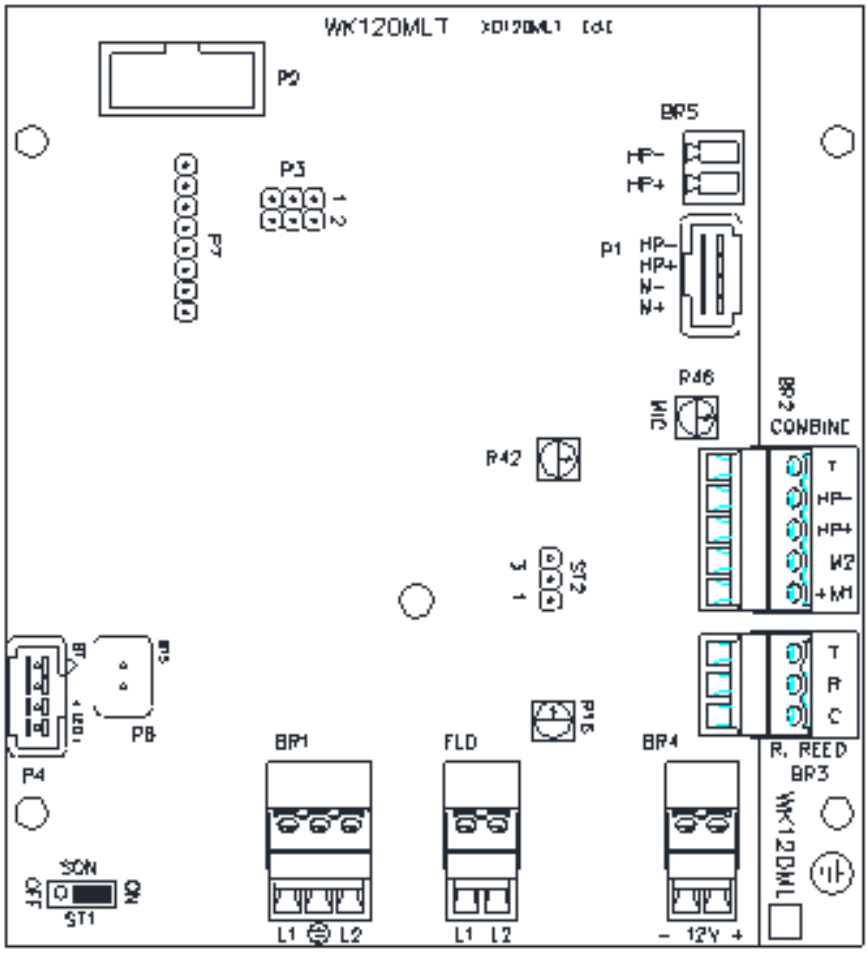
In the event of incompatibility, software can be run on request. Contact the manufacturer for more information.

1.1 TECHNICAL CHARACTERISTICS

• Call voltage received from the PABX Ringing time: 1.5s ± 0.5s Pause time: 3s ± 2 s	> 35 V_{eff} 25Hz or 50Hz Umax = 80V_{eff} Imax = 0,05 A_{eff} ; Pmax = 1 W
• Current in the set (off-hook position)	45mA (25mA minimum) Imax = 0,08 A_{DC} ; Pmax = 1,2 W
• Terminal voltage (on-hook position)	48V (24V minimum) Umax = 60 V_{DC}
• Numbering system	DTMF
• Invitation to dial tone Frequency: from 270 to 540Hz	Continuous tone detection time min 2 sec.
• Busy tone Frequency: 300 to 500 Hz Beep sequence and pause over 10 seconds. Bip: 100 to 600 ms Pause: 100 to 600 ms (= at the bip)	Detection time 4-10 sec
• Back Remote call tone Frequency: 350 to 500Hz Beep sequence and pause until remote off-hook Bip: 0.2sec. to 1.6 sec. Beep + pause cycle less than 6 seconds.	
• Cadenced conversation release tone Frequency: 300 to 500 Hz Beep sequence and pause over 10 seconds. Bip: 100 to 600 ms Pause: 100 to 600 ms (= at the bip)	Detection time 4-10 sec
• Continuous conversation release tone Frequency: 300 to 500 Hz or 760 to 840 Hz Beep duration greater than 10 seconds.	Detection time 6-10 sec

2. TELEPHONE CARD PRESENTATION

The telephone card consists of two detachable parts, which can be cabled or not, according to the model of telephone that you possess (with keyboard, with button, with or without handset etc...)



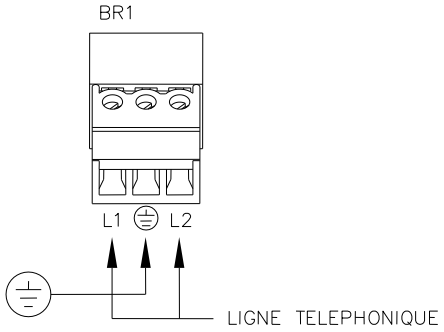
NOTE : DO NOT MOVE THE JUMPERS MARKS ST3.

This motherboard is totally compatible with the previous versions.

3. CONNECTION OF THE TELEPHONE SET

3.1 CONNECTING OF THE TELEPHONE LINE

The connectors let single or multi wires in a max section of 1.5mm ². Link the telephone line on the connector that can be plugged in mark "BR1".

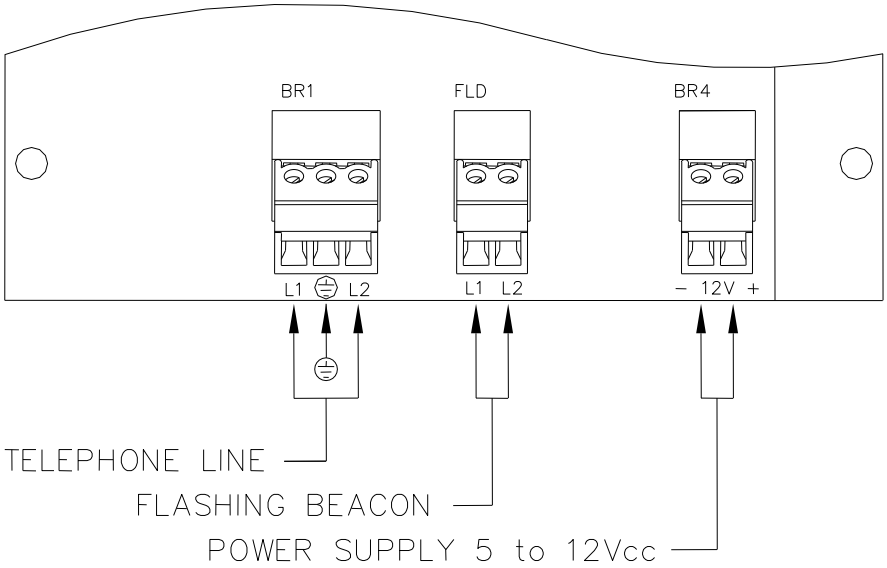


3.2 EARTH GROUNDED OF THE TELEPHONE SET

The electric earth grounded is executed either externally with the earth screw (situated on the lower face of the box) marked by the abbreviation ⊥ , or inside, on the connector ⊥ situated on the connector "BR1" of the motherboard.

3.3 3.3 CONNECTING OPTIONS - FLASH CARD / EXTERNAL POWER SUPPLY

Flash light card* should be plugged on connector marked "FLD". Note: in some versions, this can be disconnected from the telephone card.



4. USE OF 1-BUTTON TELEPHONES

OPERATION: Pressing the call button connects to an extension number programmed beforehand (see programming section). If the number is programmed in the PABX (calling BC), there is no number to program in the extension, the operation remains identical to the case described below.

HOW TO MAKE A CALL

1

PRESS THE CALL BUTTON

The red indicator is lighting and blink

When the called party answers, the red indicator becomes fixed lighted and you can start your communication. Please, speak in front of the telephone from a distance of Approximately 20cm (8in).

At the end of conversation, to free the line :

2

PRESS THE CALL BUTTON 2 SEC.
OR ALLOW THE TELEPHONE TO HANG UP AUTOMATICALLY

The red indicator turn off

HOW TO ANSWER A CALL

1

PRESS THE CALL BUTTON
OR LET THE TELEPHONE ANSWER AUTOMATICALLY

The red indicator turn on

Once you have take the line, talk in front of the telephone at a distance of approximately 20 cm. When the call is over, release the line:

2

PRESS THE CALL BUTTON
OR LET THE TELEPHONE ANSWER AUTOMATICALLY

the red indicator turn off

5. OPTIONS

5.1 RELAY BOARD WK028CRG

This optional card, linked by a ribbon cable to the "P2" connector on the telephone card, enables remote control of relays from a remote device through the telephone line.

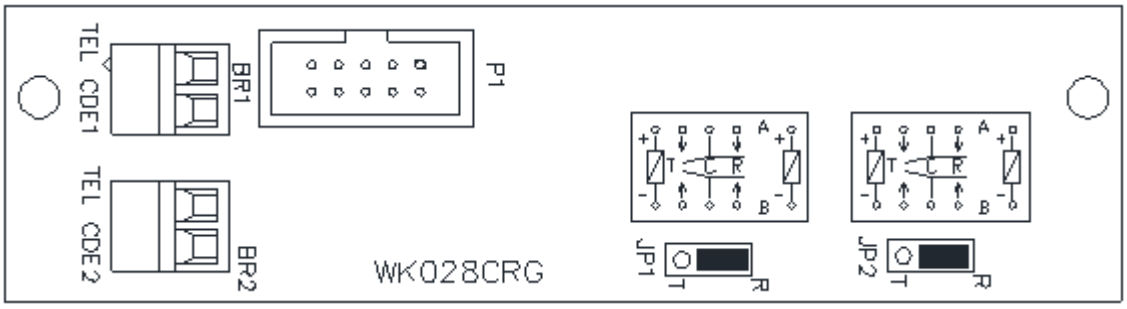
The factory-set remote control codes are 1 and 2. These codes must ALWAYS be surrounded by two *. Therefore, pressing the * 1 * keys on a remote station keypad will activate the first relay, and *2* will activate the second.
Using the keypad of a station equipped with a strike card has no effect on the local strike card.

In factory configuration, the duration of the remote controls is set to two seconds. The DTMF code * cancels the operation in progress. The remote control codes (number between 1 and 9999) and their durations (value between 00 and 94 seconds) can be modified (see chapter on programming the remote control duration).

NOTE

IF THE ACTIVATION TIME IS 00 THE TIMING IS NOT ACTIVATED.
TO DE-ACTIVATE THE RELAY SIMPLY PRESS *****
IN ALL CASES THE RELAY WILL BE DE-ACTIVATED ON HANGING UP.

- Relay contact capacity : 60 Volts, 1 Amp
- ST1, ST2 setting jumpers :
  - T : relay closed when activated
  - R : relay open when activated



WK028CRG : 2 relays board

5.2 OPTION MP3 PLAYER

This option allows you to play a calming message from the moment you pick up the line until the called party answers the call. In multi-number mode, the MP3 Player will play continuously until one of the called parties answers the call.
The messages played are stored on a micro SD card on the top of the module and can be changed. Note that it is possible to record only two messages. To do this, press :

- Remove the micro SD card and connect it to your PC.
- Inside the card, delete the existing files and add your own.

Note: Files added must be in .mp3 format and must be called 0001.mp3 and 0002.mp3.

Finally, you can choose to broadcast one of the two messages using the *42xx* parameter:

Programming Code ***MessCourant*: *42xx***		**Current MP3 Player message**
Prog. usine	xx = 01	Message 1 from the MP3 Player
From	xx = 00	no message
to	xx = 02	Message 2 from the MP3 Player

Acknowledgement of receipt of post: *

6.PROGRAMMING

Keys sequence to be made on the keypad of a remote telephone, DTMF type, in connection with the extension to be programmed. Caution: during programming, the presence of a busy signal may cause the extension to hang up automatically.

CAUTION

1- When you enter in programming mode, do not enter the access code a second time if you have not heard the validation "beep", because you risk to modify the parameter corresponding to the first two digits of the code.

To check that you are well entered in programming mode, enter the code * 6000 *. If you hear the extension identifier (one beep or several beeps depending on the identifier), this means that you are in programming mode, and you can now program your options.
If you do not hear a beep, enter the access code to enter programming mode.

2- Programming is not guaranteed for extensions connected to digital telephone lines.

WARNING : BEFORE PROGRAMMING, ENTER THE ACCESS CODE

*****	**1**	**2**	**3**	**4**	*****

PROGRAMMING A SINGLE CALL NUMBER (M1)

Enter the following combination:

*	5	0	0	1	*	#	1	1	#	<N>	*

< N > call number from 1 to 15 digits.

When programming a memory, the #11# combination represents a continuous tone search at a frequency of 440 Hz ± 100 Hz (standard) before dialling. If your PBX does not comply with the standard, you can replace the tone search with a 2 second pause. In this case, replace [#11#] with [#10#] in the sequence.

PROGRAMMING CALL NUMBERS (M0 TO M9)

Enter the following combination for each button:

*	5	0	0	<M>	*	#	1	1	#	<N>	*

Memory assigned for 1 button phones is memory M1.
To program a number into memory, use the following combination: *5001* #11#<N>*

SETTING OF THE RECEPTION VOLUME

Enter the following combination:

*	1	4	0	<V>	*

< V > Volume from 1 to 15 (factory setting = 5)

SETTING OF THE RINGER VOLUME

Enter the following combination:

*	1	6	0	<V>	*

< V > Volume from 1 to 4 (factory setting = 3)

PROGRAMMING A SEQUENCE OF NUMBERS

To program several memories :

*	5	0	0	<M>	*	#	1	1	#	<N>	*

M = 1, 2, ..., 8 max
N = 1 to 15 digit phone number

The sequence always starts with the base memory assigned to the button (M1)
and stops at the first empty memory.

To program an empty memory (or delete a number), press :

*	5	0	0	<M>	*	*

You must program the waiting times between memories
T1 between M1-M2 and
T2 between M2-M3, M3-M4 etc... if this is the case.
These times represent the waiting time if there is no answer before moving on to the next number.

For T1 type :

*	2	0	T	T	*

TT represents the time-out value in seconds.
For a single programmed number TT = 00
In the case of a sequence of 2 or more numbers, there are two possibilities:

a) hear what is happening on the line by programming no Current Message (*4200*)
b) hide what is happening on the line (no answer, busy etc...) until the called party goes off-hook, by a Current Message (*4201* or *4202*) and a flashing LED.
When the called party's voice is detected, the Current Message is switched off and the call is established. The LED lights up permanently, telling you that you are now on the line with your caller.

For T2 type :

*	2	1	T	T	*

SETTING OF THE NUMBER OF RINGS BEFORE AUTOMATIC OFF HOOK

In the factory, the telephone is programmed to go off-hook automatically after 3 rings.
To change this number, press :

*	1	1	<N>	<N>	*

NN = 00 to 99
NN = 03 in Factory (automatic pick-up after 3 rings or by pressing the button)
If N = 00 automatic off-hook (reserved for remote maintenance station).
If N = 99 without automatic pick-up (response only by pressing the button).

PROGRAMMING THE DURATION OF THE FIRST REMOTE CONTROL

The factory setting for the duration of the first remote control is 02 seconds.
To change this value, press :

*	2	5	<D>	<D>	*

DD = from 00 to 95
If DD = 00, the duration is indefinite, and the relay is deactivated only by pressing the * key or by the line break.

For the other values from 01 to 95, the duration is expressed in seconds, and the relay is deactivated when this duration runs out or by pressing the * key.
If DD = 99, the relay is activated when the line is seized and only deactivated when the line is paused. (Other programming options are described on page 20).

PROGRAMMING THE CODE FOR REMOTE CONTROLS

At the factory, the code for the first remote control is set to 1, and 2 for the second.

NOTE

A REMOTE CONTROL CODE CAN HAVE A VALUE FROM 1 TO 9998 WITH THE EXCEPTION OF 0599, 0600 AND 0989, 0990 WHICH ARE MANUFACTURER CODES
IF IT IS A 4-DIGIT CODE, IT MUST NEVER HAVE THE SAME VALUE AS THE PROGRAMMING ACCESS CODE

As the remote control code is a 4-digit code, programming it requires 2 actions.
Programming the thousands and hundreds, identified as M, C
Programming the tens and units, identified as D, U

For M and C, type

*	2	6	<M>	<C>	*

MC = from 00 to 99
If M = 0, it is a 3-digit code
If MC = 00, it's a 2-digit code

For D and U, type

*	2	7	<D>	<U>	*

DU = from 01 to 99
If MCD = 000, it is a 1-digit code

6. ADVANCED PROGRAMMING

The telephone set can be configured locally or remotely, according to the user's needs, using programming codes. Remote control codes can also be used to initiate specific actions. Generally, all these codes are 4-digit numbers framed by 2 stars (*), with the exception of call number memories. These functions can be accessed using an **"access code"** which can be personalized by the user.
The telephone responds to all valid codes with an acknowledgement corresponding to the code issued (see description below).

ATTENTION:
All programming codes are included with the telephone, but some can only be used if the telephone has the corresponding hardware or software options. For example: self-test, door release remote control, day/night ringing, multi-numbering etc...
All remote controls codes are included in the telephone set, but some are only useful if they are used by a remote maintenance station, while others are for the manufacturer's use.

The telephone set is delivered with a "factory" configuration.

Programming code list

When programming, codes must always be followed by 2 digits representing the size and always framed by 2 stars (*).
e.g.: program 3 rings before going off-hook, *1103*.

- Programming code **Status**: ***10xx*** **Hardware configuration**

Factory settings:	xx = 00	1-button or keypad station
	xx = 01	2-button station
	xx = 04	With handset: automatic dialing when hang off

Acknowledgement of receipt of post: *

- Programming code **Ringer**: ***11xx*** **Number of rings before going off-hook**

Factory settings:	Hands-free: xx = 03	3 Ringtones before going off-hook
	Handset: xx = 99	99 The extension does not pick up
From	xx = 00	No ring before off-hook
To	xx = 98	98 Ringtones before off-hook
	xx = 99	The phone doesn't pick up

Acknowledgement of receipt of post: *
Note: with 00 ringing, the handset loudspeaker is deactivated.

- Programming code **TOnLine: *12xx*** **Talk time before auto hang-up**

Factory settings : Hands-free :	xx = 04	4 minutes to auto hang-up
Handset :	xx = 00	The telephone does not hang up automatically
	xx = 00	The telephone does not hang up automatically
and from	xx = 01	1 minute to auto hang-up
to	xx = 99	99 minutes to auto hang-up

Acknowledgement of receipt of post: *

- Programming code **TSilence : *13xx*** **Duration of Silence allowed before auto hang-up**

Factory settings : Hands-free :	xx = 30	30 seconds before auto hang-up
Handset :	xx = 00	The telephone does not hang up automatically
	xx = 00	The telephone does not hang up automatically
and from	xx = 10	10 seconds before auto hang-up
to	xx = 99	99 seconds before auto hang-up

Acknowledgement of receipt of post: *

Note: tones with stable frequencies, cadenced or not, are not taken to be silence.

- Programming code ***VolHP*: *14xx*** **Loudspeaker volume**

Factory settings : Hands-free :	xx = 01	Low volume (but enough!)
Handset :	xx = 05	Medium volume
From	xx = 00	Minimum volume
to	xx = 15	Maximum volume

Acknowledgement of receipt of post: *

Note: changes in volume on a short line are only perceptible from 00 to 06; they are perceptible beyond that on a long line.

- Programming code ***EvolSonn*: *15xx*** **Evolving ringtone**

Factory settings :	xx = 00	Evolving ringtone deactivated
	xx = 01	Evolving ringtone activated

Acknowledgement of receipt of post: *

- Programming code ***VolSon*: *16xx*** **Ring Volume**

Factory settings	xx = 03	Maximum volume
From	xx = 01	Minimum volume
to	xx = 04	Maximum volume

Acknowledgement of receipt of post: *

- Programming code ***PBout*: *17xx*** **Pressed button time (without releasing) before taking line.**

Factory settings	xx = 00	Immediate line connection
From	xx = 01	Action delayed by 0.1 seconds
to	xx = 98	Action delayed by 9.8 seconds
	xx = 99	No line connection

Acknowledgement of receipt of post: *

- Programming code ***MCAccessMenu*: *18xx*** **Thousands and hundreds of entry codes in the telephone menu.**

Factory settings	xx = 00	
From	xx = 00	minimum value
to	xx = 99	maximum value

Acknowledgement of receipt of post: *

- Programming code ***DUAccessMenu*: *19xx*** **Ten and unit of the entry code in the telephone menu.**

Factory settings	xx = 00	
From	xx = 00	minimum value
to	xx = 99	maximum value

Acknowledgement of receipt of post: *

- Programming code ***T1*: *20xx*** **MULTI-NUMBERING OPTION**
  Time in seconds to switch from M1 to M2 to chain automatic dialling

Factory settings	xx = 00	No sequence of numbers
From	xx = 01	1 second on M1 before moving on to M2
to	xx = 98	98 seconds on M1 before switching to M2
and	xx = 99	No sequence of numbers

Acknowledgement of receipt of post: *

- Programming code ***T2*: *21xx*** **MULTI-NUMBERING OPTION**
  Time in seconds to go from M2 to M3, M3 to M4, up to M8 to chain automatic dialling.

Factory settings	xx = 00	No sequence of numbers
From	xx = 01	1 second on Mx before moving on to the next one
to	xx = 98	98 seconds on Mx before moving on to the next one
and	xx = 99	No sequence of numbers

Acknowledgement of receipt of post: *

Note: during the sequence of numbers subordinate to T2, it is the parity of T1 that determines the voice on the loudspeaker.

- Programming code ***AutoTest*: *22xx*** **TELESURVEILLANCE OPTION**

Factory settings	xx = 00	No self-test
	xx = 01	Self-testing with TAMAT

Acknowledgement of receipt of post: *

- Programming code ***TypePushToTalk*: *23xx*** **TYPE OF OPERATION PUSH TO TALK**

Factory settings	xx = 00	No Push to Talk
	xx = 01	Managing your own Push to Talk
	xx = 02	Commanded Push to Talk

Acknowledgement of receipt of post: *

- Programming code ***Flashing*: *24xx*** **Flashing duration in 1/100th of a second**

Factory settings	xx = 27	270 mS de Flashing
	xx = 00	No flashing, M1 memory
and from	xx = 01	10mS Flashing
to	xx = 99	990 mS Flashing

Acknowledgement of receipt of post: *

- Programming code ***Gâche*: *25xx*** **FIRST RELAY OPTION**
  Remote control relay closing time after receiving code.

Factory settings	xx = 02	2 seconds to close
	xx = 00	No opening
and from	xx = 01	1 second closure
to	xx = 95	95 seconds closure
and	xx = 96	Relay closed during ringing
	xx = 98	Relay closed during ringing and online
	xx = 99	Relay closed online

Acknowledgement of receipt of post: *

Note: the relay card is automatically recognized by the set; without it, this code has no effect. In all cases, hanging up places the relay in idle state.

- Programming code ***MCGache*: *26xx*** **FIRST RELAY CONTROL OPTION**
  Thousand and one hundred control codes.

Factory settings	xx = 00	No thousands or hundreds
From	xx = 00	0 mille, 0 cent
to	xx = 99	9 mille, 9 cents

Acknowledgement of receipt of post: *

Note: the relay card is automatically recognized by the terminal. If the relay card is not present, this code has no effect.

- Programming code ***DUgache*: *27xx*** **FIRST RELAY CONTROL OPTION**
  Decade and unit control code.

Factory settings	xx = 01	No tens, 1 value minimum
From	xx = 01	No tens, 1 value minimum
to	xx = 99	maximum value

Acknowledgement of receipt of post: *

Note: the relay card is automatically recognized by the control unit; without it, this code has no effect. The door release remote control code is 1 to 4 digits long and can have a value from 1 to 9999. Non-significant digits must be set to 0 (zero).
The remote-control code is therefore programmed twice (26xx and 27xx).

ATTENTION :

If you choose a 4-digit remote control code, it must be different from the "access code" (see below).

- Programming code ***MCAcces*: *30xx*** **Thousands and hundreds of user access codes**

Factory settings	xx = 12	12
From	xx = 10	minimum value
to	xx = 99	maximum value

Acknowledgement of receipt of post: *

Note: thousands must never have a value of 0 (zero).

- Programming code ***DUAcces*: *31xx*** **User access code decade and unit**

Factory settings	xx = 34	34
of	xx = 00	minimum value
to	xx = 99	maximum value

Acknowledgement of receipt of post: *

Note: the user access code must contain 4 digits and can have a value between 1000 and 9999. It is therefore programmed in 2 times (30xx and 31xx).
CAUTION:
The user access code must be different from the door release remote control code (see above), otherwise the latter will no longer be recognised.
The user access code must never begin with 0 (zero) and must not be lost, otherwise access to programming becomes impossible.

- Programming code ***CutLine*: *32xx*** **Button pressing time (without releasing) to hang up**

Factory settings	xx = 20	Delayed action of 2 seconds
	xx = 00	Immediate hang up
From	xx = 01	Delayed action of 0.1 seconds
to	xx = 98	Delayed action of 9.8 seconds
and	xx = 99	No hang up by button

Acknowledgement of receipt of post: *

- Programming code ***FreqSon*: *33xx*** **Base frequency Ringer (Depending on speaker type)**

Factory settings:	Hands-free : xx = 00	standard loudspeaker
	Handset : xx = 02	PIEZO
From	xx = 00	Frequency n° 0: 800 Hz chopped
	xx = 01	Frequency n° 1: 800 Hz and 1067 Hz alternating
	xx = 02	Frequency no° 2: 1067 Hz chopped
	xx = 03	Fréquence n° 3 : 1067 Hz and 1333Hz alternating
	xx = 04	Frequency n° 4: 1333 Hz hashed
to	xx = 05	Frequency n° 5: 1333 Hz and 800 Hz alternating
	xx > 05	No ring

Acknowledgement of receipt of post: *

Note: the factory-set base frequency, depending on the type of speaker, is the one that gives the best ringing performance.

- Programming code ***TonMin*: *34xx*** **Minimum on-hook tone frequency**

Factory settings	xx = 30	300 Hz
From	xx = 00	0 Hz
To	xx = 99	990 Hz

Acknowledgement of receipt of post: *

- Programming code ***TonMax*: *35xx*** **Maximum on-hook tone frequency**

Factory settings	xx = 50	500 Hz
From	xx = 00	0 Hz
to	xx = 99	990 Hz

Acknowledgement of receipt of post: *

- Programming code ***MinBip*: *36xx*** **Minimum on-hook beep duration**

Factory settings	xx = 08	80 ms
From	xx = 08	80 mS
To	xx = 99	990 ms

Acknowledgement of receipt of post: *

- Programming code ***MaxBip*: *37xx*** **Maximum on-hook beep duration**

Factory settings	xx = 60	600 ms
From	xx = 08	80 mS
To	xx = 99	990 ms

Acknowledgement of receipt of post: *

- Programming code ***SecondGâche*: *40xx*** **SECOND REMOTE CONTROL OPTION RELAY**
  Time taken for the remote-control relay to close after receiving the code.

Factory settings	xx = 02	2 seconds to close
	xx = 00	No opening
and from	xx = 01	1 second close
to	xx = 95	95 seconds closing time
and	xx = 96	Relay closed during ringing
	xx = 98	Relay closed during ringing and online
	xx = 99	Relay closed online

Acknowledgement of receipt of post: *
Note: the relay card is automatically recognised by the set; without it, this code has no effect. In all cases, hanging up the handset places the relay in idle state.

- programming code ***MessCourant*: *42xx*** **Current MP3 Player message**

Factory settings	xx = 00	no message
From	xx = 00	no message
To	xx = 02	Message 2 from the MP3 Player

Acknowledgement of receipt of post: *

- programming code ***MCSecondGache*: *43xx*** **SECOND RELAY CONTROL OPTION Thousands and hundreds control codes.**

Factory settings	xx = 00	No thousands or hundreds
From	xx = 00	0 mille, 0 cent
To	xx = 99	9 mille, 9 cents

Acknowledgement of receipt of post: *

Note: the relay card is automatically recognised by the terminal. If the relay card is not present, this code has no effect.

- programming code ***DUSecondgache*: *44xx*** **SECOND RELAY CONTROL OPTION Decade and unit control code.**

Factory settings	xx = 01	No tens, 1 value minimum
From	xx = 01	No tens, 1 value minimum
To	xx = 99	Maximum value

Acknowledgement of receipt of post: *

Note: the relay card is automatically recognised by the control unit; without it, this code has no effect. The door release remote control code is 1 to 4 digits long and can have a value from 1 to 9999. Non-significant digits must be set to 0 (zero). The remote control code is therefore programmed twice (43xx and 44xx).

- Programming code ***SoftClip*: *45xx*** **Config 2522 : Registre 06 SoftClip Setting and Noise monitor**

Factory settings :	Hands-free :	xx = 01	Noise Monitor : OFF SoftClip RX: OFF SoftClip TX : ON
	Handset :	xx = 03	Noise Monitor : OFF SoftClip RX: ON SoftClip TX : ON

Noise Monitor	**SoftClip RX**	**SoftClip TX**

From	xx = 00	OFF	OFF	OFF
	xx = 01	OFF	OFF	ON
	xx = 02	OFF	ON	OFF
	xx = 03	OFF	ON	ON
	xx = 04	ON	OFF	OFF
	xx = 05	ON	OFF	ON
	xx = 06	ON	ON	OFF
To	xx = 07	ON	ON	ON

Acknowledgement of receipt of post: *

Note: definitions
- Noise Monitor: If ON, constant noise present on the microphone is cancelled on transmit.
- SoftClip RX: If ON, the receive signal compressor is activated.
- SoftClip TX: If ON, the transmit signal compressor is activated.

- Programming code ***H.S.C*: *46xx*** **Config 2522 : Registre 09**
  HandsFree Switching Characteristic

Factory settings : xx = 00 BGN offset : 120mv
Speed of voice switching: max

BGN offset		**speed of voice switching**	
From	xx = 00	120mv	max
	xx = 01	120mv	moy +
	xx = 02	120mv	moy -
	xx = 03	120mv	min
	xx = 04	180mv	max
	xx = 05	180mv	moy +
	xx = 06	180mv	moy -
	xx = 07	180mv	min
	xx = 08	240mv	max
	xx = 09	240mv	moy +
	xx = 10	240mv	moy -
	xx = 11	240mv	min
	xx = 12	300mv	max
	xx = 13	300mv	moy +
	xx = 14	300mv	moy -
To	xx = 15	300mv	min

Acknowledgement of receipt of post: *

Note: definitions
- BGN offset: microphone sensitivity threshold.
- Speed of voice switching: speed of switching to transmit if the threshold is reached.

- Programming code ***transmit Gain*: *47xx*** **Config 2522 : Registre 10**
  Emission gains

  Factory settings : xx = 01 gain = 40 dB

  Hands-free

  From xx = 00 39 dB
  To xx = 15 54 dB

  Acknowledgement of receipt of post: *

- Programming code ***VolCombi*: *48xx*** **Handset volume**

  Factory settings : xx = 05 Medium volume

  From xx = 00 minimum volume
  To xx = 15 maximum volume

  Acknowledgement of receipt of post: *

- Programming code ***TxGainCombi*: *49xx*** **Handset emission gain**

  Factory settings: xx = 05 gain = 35 dB

  From xx = 00 30 dB
  To xx = 15 45 dB

  Acknowledgement of receipt of post: *

- Programming code ***BlocagePin* : *73xx*** **Block access to the terminal using a pin code**

  Factory settings : xx = 00 No pin lock

  From xx = 01 Blocking the extension directory
  To xx = 02 Blocking the settings menu

Programming of call number memories

The telephone has 10 16-digits memories, numbered from M0 to M9. In a telephone with button(s), from 1 to 8, only memories M1 to M8 are accessible, in case of number chaining (option), the time on M1 is T1, the time on M2 to M8 is T2.

In a keypad telephone, the 10 memories can be accessed directly by pressing keys 0 to 9 on the keypad. The M0 and M9 memories are subject to usage restrictions, especially when the set is associated with a remote monitoring station (option). M0 contains the geographical identifier and M9 the call number of the station.
If the remote monitoring option is not active and the chaining option is enabled, M0 and M9 can be used as call memories:

- M8 isn't followed by M9
- The time on M0 is T2
- The time on M9 is 20 seconds and cannot be changed.

With the number chaining option, several call lists can be created, for example:
- Program M1, M2, M3
- Nothing in M4
- Program M5, M6, M7

Pressing M1 will sequence M1, M2, M3. Pressing M5 will sequence M5, M6, M7.
Other combinations are possible

- Programming code ***Mémoires*: *50xx***

	xx = 00 to 09	Depending on the memory selected
followed by	#11#	Tone search
or	#10#	Wait 2 seconds before dialing
followed by	1 to 15 digits	Corresponding number(s)
ended with	*	Sequence terminator
Acknowledgement of receipt from extension: *xx*		Checksum of registered numbers
Factory setting		All blank memories
To delete a memory: *50xx*		

	xx = 00 à 09	Depending on the memory selected.
Ended with	*	Sequence terminator
Acknowledgement of receipt: *00* Memory		checksum empty

REMOTE CONTROL CODES

To be used, most of these codes require the presence of a monitoring station or equipment able to display the DTMF codes circulating on the telephone line.

There are several code families identified by different prefixes:
- Reading numbers in memory : prefix 60
- Reading configuration settings : prefix 90
- Reading extension status : prefix 90
- erase remote controls : prefix 98
- Special remote controls : prefix 99

- **Memory** read code: ***60xx***

	xx = 00 to 09	Depending on the memory selected

Extension acknowledgement: *<N>* 1 to 16 characters or * if memory empty
Note: with the exception of M0, if it used as a geographical identifier, all programmed memories must begin with a tone search or a pause. These parameters are respectively recorded in the form of the DTMF code "B" for #11# and "A" for #10# but not transmitted on-line.

- **Configuration** read code: ***90xx***

	xx = 10 to 19	
or	xx = 20 to 27	
or	xx = 30 to 37	
or	xx = 40 to 49	Depending on desired reading
Extension acknowledgement: *xx*		Programmed value

- Status reading code: ***90xx***

	xx = 51	Cumulative time in minutes of communication
or	**xx = 52**	Number of outgoing calls from the extension
or	**xx = 53**	Number of incoming calls from the extension
Extension acknowledgement: *xx*		Counter value at the time of the call

Note: the acknowledgement is expressed in hexadecimal.

xx = 60	Global checksum of all numbers programmed in memory (M0 to M9).

Acknowledgement of receipt from extension: *xx*, 00 if all memories are empty

Note: the acknowledgement is expressed in hexadecimal. The numbers stored in memory are DTMF code values from 0 to F increased by 10 in hexadecimal, i.e. the number 0148766262 preceded by a tone search is stored as follows:

1B 10 11 14 18 17 16 16 12 16 12 it has the checksum: E5

xx = 61 Global checksum for all configuration parameters

Acknowledgement of receipt of item: *xx*
Note: the acknowledgement is expressed in hexadecimal.

xx = 62 Program version

Station acknowledgement: *xx*
Note: the acknowledgement allows the station to adapt to the software installed.

xx = 63 Programme CheckSum
Extension acknowledgement: *xxxx* Indicates CheckSum (from v1.1d)

- **Delete** remote control code: ***98xx***

xx = 00 Resetting whole device to factory configuration
After about 1.3 seconds

Acknowledgement of receipt of post: *

xx = 02 Clearing memories M0 to M9

Acknowledgement of receipt of post: *

xx = 04 Reset configurations to factory

Acknowledgement of receipt of post: *

- **Special** remote control code: ***99xx***

xx = 00 Hang up the extension automatically

Acknowledgement of receipt: None

INFORMATIONS

Remember:

All access to programming or remote controls is subject to a 4-digit user access code. On delivery, this code is: 1234.

- When the extension receives a 4-digit code (framed by 2 *), it compares it with the personalised access code:
  - If it is different, no response.
  - If it is identical, the terminal acknowledges receipt with its Geographical Identifier and opens a programming session.

- The G.I. is the content of the M0 memory, if it is empty returns *, or 1 to 16 DTMF code(s) of the user's choice.

- When a programming session is opened and a valid 4-digit code is entered, the terminal returns the corresponding acknowledgement. If this code is not recognised, the A.R. is # #.

- During programming, if you have any doubts when entering a code, press the * key several times and repeat the operation.

- In memory programming, only numeric keys 0 to 9 can be stored directly, the dial tone search (DTMF B code) is performed by #11#, a pause (DTMF A code) by #10#. The pause lasts 2 seconds. It is possible to place or link several pauses in a sequence of digits.
  In the same way, the other DTMF codes C,D,*,# can be recorded: #12# for C, #13# for D, #14# for *, #15# for #. This allows direct access to the France Télécom National Call Transfer service, for example, by programming memories.

- By default the program manages:
  - A 2-line, 16-character LCD display extension (see specific documentation).
  - A 098BRL relay extension (RATP type).
  These cards can be connected or disconnected, while the station is powered on but the line is connected.

- The remote control card extension must, to be recognized, be connected before the station is connected to the telephone line. Otherwise, the corresponding program would not be executed and the operation of the station may be affected (voice weakened). Pressing the * key while the relay is active (timed or not) interrupts the sequence.

- Recognition of cadenced busy tone is done by:
  - Frequency Analysis: 300≤F≥600 (Hz)
  - Analysis of Duration of beeps/silence: 090≤D≥600 (mS)
  - Reproducibility: for at least 4 seconds without interruption.

- Continuous busy tone recognition is done:

  - By Frequency analysis: 300≤F≥500 or 760≤F≥840 in Hz
  - By analysis of the beep duration: D≥6 in secondes
  - If the line is seized by the PL key on the keyboard or by a memory key with a stored number, after dialing
  - If the line is seized using a memory key without a stored number, after pressing the key

- Recognition of continuous dial tone is done by :

  - Frequency analysis: 270≤F≥540 (Hz)

- Analysis of beep duration: D ≥2 (s)

- During dialing from a memory, the microphone is neutralized (anti-piaf). It is reactivated after the correspondant picks up:
  - By voice recognition
  - By the absence of call return tone

- The “Flashing” key has 2 functions:
  - If the flash duration is different from 00, pressing the key executes a flash
  - If the flashing duration = 00, pressing the key determines the sending of memory M1

- Operation of a hands-free/combination station with keypad:
  - Off hook ⇒ line/handset jack
  - Press the PL ⇒ hands-free button
  - Press the PL ⇒ combined key
  - Handset pause l⇒line pause

  Or :
  - Off hook ⇒ line/handset jack
  - Press the PL ⇒ hands-free button
  - Handset pause ⇒ hands-free
  - Press the PL key ⇒ line pause

  Or :
  - Press the PL key ⇒ line/hands-free
  - Off hook ⇒ handset
  - Handset pause ⇒ hands-free
  - Press the PL key ⇒ line pause

  If the handset is not hang up while the extension automatically pauses the line, presence of a busy tone or conversation time exceeded, and if the handset is not replaced (vandalism, handset torn off) the station remains functional hands-free.

- In the case of a 1-number button extension and if you want the call to last indefinitely T1 is set to 00. Remember that ringback tones are not recognized as noise. Consequently, the Tsilence timer (30 seconds by default) will be dominant on T0 and the station hangs up after 30 seconds. It suits

NOTES

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