DECT

6.0

Congratulations on your selection of this quality product by **XACT Communication**. With proper care and adherence to the set-up and user instructions in this Owner's Manual, this unit will provide you with years of trouble-free service. **XACT** is committed to providing quality products that fit your needs. We would like to have any comments or suggestions you might have on this product. You may mail your comments to:

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New York, NY 10016
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IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.

2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

3. Do not use the telephone to report a gas leak in the vicinity of the leak.

4. Use only the power supplies that come with this unit (Type no. MB102-065030 and LF093 00D-41). Use only McNair brand Ni-MH type rechargable batteries of type no. MH-AAA550mAh. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

5. Plug the adaptor to the socket-outlet that is near the equipment and shall be easily accessible.

6. CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

SAVE THESE INSTRUCTIONS

FCC Interference Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna (that is, the antenna for radio or television that is "receiving" the interference.
- Reorient or relocate and increase the separation between the telecommunications equipment and receiving antenna.
- Connect the telecommunications equipment into an outlet on a circuit different from that to which the receiving antenna is connected.

FCC RF Radiation Exposure Statement

The installation of the base unit should allow at least 20 centimeter between the base and persons in compliance with FCC RF exposure guidelines. For body worn operation, the portable part (handset) has been tested and meets FCC RF exposure guidelines.

This device must not be co-located or operating in conjunction with any other antenna or transmitter. The changes or modifications not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

1.1 Handset description

1.1.1 Handset keypad

Some keys have more than one usage depending on the MMI state (standby, in call, menu mode). The table hereafter gives all the possible actions for each key. In the following chapters, the reference for one key will be indicated with the main action of the key. Sometimes the second (or third) meaning will be indicated as follows: KEY_USE1/KEY_USE2.

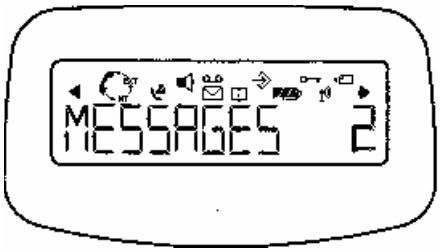
Key name	Standby mode	Incoming call	Talk mode		Menu mode	
			from incoming call	Outgoing call		Phonebook mode
KEY_MENU/OK ***MENU***	Enter menu				confirm	confirm
KEY_LNR ***Redial/Pause***	Enter Redial list		Pause	Redial (first key in call) Pause (after first key)		Pause
KEY_UP/CLIP ▲	Enter CLIP list	Ringer volume up	Receiver Volume Up	Receiver Volume Up	choose	choose
KEY_DOWN/CLIP ▼	Enter CLIP list	Ringer volume down	Receiver Volume Down	Receiver Volume Down	choose	choose
KEY_MEM/EXIT	Enter Phonebook		Enter Phonebook	Enter Phonebook	Exit	Exit
KEY_CLEAR ***X***			Toggle Mute	Toggle Mute	Clear	Clear
KEY_HOOK	Go in TALK mode	Go in TALK mode	Standby mode	Standby mode		
KEY_INT ***Int***	Intercom		Transfer the call	Transfer the call		
KEY_R/POWER ***R***	Power off (hold)		Flash	Flash		
KEY_0 ***0***	Pre-dial 0		Dial 0	Dial 0		0
KEY_1 ***1***	Pre-dial 1 (DDK1:Long)		Dial 1	Dial 1		1
KEY_2 ***2***	Pre-dial 2 (DDK2:Long)		Dial 2	Dial 2		2
KEY_3 ***3***	Pre-dial 3		Dial 3	Dial 3		3
KEY_4 ***4***	Pre-dial 4		Dial 4	Dial 4		4
KEY_5 ***5***	Pre-dial 5		Dial 5	Dial 5		5

KEY_6 ***6***	Pre-dial 6		Dial 6	Dial 6		6
KEY_7 ***7***	Pre-dial 7		Dial 7	Dial 7		7
KEY_8 ***8***	Pre-dial 8		Dial 8	Dial 8		8
KEY_9 ***9***	Pre-dial 9		Dial 9	Dial 9		9
KEY_STAR/LOCK *****	Pre-dial * Toggle key lock (Hold)		Dial * Go into DTMF mode from pulse	Dial * Go into DTMF mode from pulse		*
KEY_HASH **#**	Pre-dial #		Dial # Go into Conference call	Dial # Go into Conference call		#

Short press is less than 1 second
Long press is more than 1.5 second
Hold is press and hold more than 3 seconds

1.1.2 LCD display

The LCD display is composed of 12 characters in capital letter form (12 * 14 segments alphanumeric chars) and 16 icons.



The definition of the icons is as follows:

Icon	NAME	Definition
	HOOK_IND	Off hook indicator
EXT	*EXT*	External call engaged
INT	*INT*	Internal call engaged
	NEW_CLIP_IND	Caller identification available /new numbers in call listing
	CLIP_ANSWERED	indicate answered call
	CLIP_UNANSWERED	indicate unanswered call
	PHONEBOOK_IND	Phonebook indicator
	MENU_IND	Menu indicator
	BATTERY	3 levels battery indicator 1 segment: weak, 2 segments: medium, 3 segments: full The segments scroll during battery recharging and stop scrolling when battery is full
	LOCK_IND	Handset keypad locked
	ANTENNA	Signal strength indicator. The icon is steady when handset is locked to its base The icon flashes when the handset is unlocked or not subscribed to any base
◄	*LEFT_ARROW*	Indicates that displayed number is longer than the screen (12 digits)
►	*RIGHT_ARROW*	Indicates that displayed number is longer than the screen (12 digits)
	Alarm set	Indicates when set the alarm ON

(Alarm set icon will be defined later)

1.1.3 Standby display

In standby mode, the display shows the current time and the handset number (space and 1 digit), preceded by HS (After Talk OFF, the display shows the handset name and the communication duration alternately for 5 seconds)

EX 1(_15 – 53__ HS_ 2)
EX 2(DECT9 HANDSET)

(The “-“ between hour and minute shall be flashing every second)

1.1.4 LED

- Talk LED

Action	LED state

Standby mode	OFF
Subscription mode	Flash
In call	Flash
Incoming call	Flash synchronized with PSTN ring pattern.

- Key backlight LED

Action	LED state
Standby mode	OFF
During incoming call	Flash (0.25 s ON/OFF)
External call	ON
External call on hold	Flash (0.5 s ON/OFF)

- LCD backlight LED

Action	LED state
Standby mode (No key press)	OFF
Press any key	ON for 8 seconds after press last key
During key lock	OFF
Incoming call	ON

1.2 Base description

1.2.1 Page Key

Key action	MMI action
Short press (<5 s)	Send a page to handsets
Long Press (>=5s)	Enters subscription mode (in use LED will flash)

1.2.2 LED

- Power/In use LED

Action	LED state
Standby mode	ON
Subscription mode	Flash
In call	Flash
Incoming call	Flash synchronized with PSTN ring pattern.

1.2.3 Tones

The three base melodies are shown in the following table

Nr	Name
1	*Ring 1*
2	*Ring 2*
3	*Ring 3*
4	*Ring 4*
5	*Ring 5*
6	*TONE_CONFIRM*

2 Main User interface

2.1 Power up

Plug the power supply into the base. The in use LED will power on and *TONE_CONFIRM*.

Insert batteries in the handset. If battery level is enough (see Start up with low batteries chapter), the handset will start.
The display will show “BASE 1” and antenna flashing, until it locks onto its subscribed base. If the handset finds its base in the first 10 seconds, no beeps are played (see Range indication chapter). Then the display shows the standby display.

2.2 Standby mode

In standby mode, the display shows the current time and the handset number, preceded by HS.

The *ANTENNA* icon is steady. The *BATTERY* icon indicates the charge level.

Handset:

Events	Handset mode
Press **KEY_HOOK**	Enter TALK mode
Press **KEY_INT**	Enter intercom mode
Press **KEY_MENU**	Enter MENU mode
Press **KEY_MEM**	Enter phonebook mode
Press **KEY_STAR/LOCK** (hold 3 second)	Enter KEY LOCK mode
Press **KEY_LNR/PAUSE**	Enter redial list mode
Press **KEY_UP/CLIP or KEY_DOWN/CLIP**	Enter CLIP mode
Press **KEY_R/POWER** (hold 3 second)	Enter power down mode
Press **1,2,3……0,*,#**	Pre-dialling
Incoming call signal	Incoming call mode
Another handset TALK	Busy mode
Battery is low	Battery low icon
Battery is too low	Power down mode
On charging	Charging mode
Long press for **1 or 2**	Access direct pre-programmed number

Base:

Events	Base mode
Press **PAGE KEY**	Enter PAGE mode
Incoming call signal	Incoming call mode

2.3 TALK mode

Refer to External outgoing call

2.4 Intercom mode

Refer to intercom

2.5 Incoming call mode

Refer to incoming call

2.6 MENU mode

Refer to MENU settings

2.7 Phonebook mode

Refer to phonebook

2.8 Redial list mode

Refer to redial features

2.9 CLIP mode

Refer to Caller ID (CLIP) feature

2.10 Charging mode

Refer to Charging conditions

2.11 Busy mode

When one Handset is TALK, another handset's "EXT" icon, and *TONE_BUSY* in earpiece if press **KEY_HOOK**

2.12 Power down

Make a long press on **KEY_R/POWER**, and the handset power down.
Press and hold **KEY_R/POWER** for 5 seconds to wake it up.
When the handset wakes up, the clock time data shall be transferred from base.

3 Call User interface

3.1 Incoming call

Display

The display shows "CALL" and *EXT* icon blinks (0.5 s ON/OFF), if caller ID information is available (see 3.5), caller name or number is displayed.
Both the Talk indication LED and key backlight shall be flashed during ringing. (0.25 s ON/OFF)
And LCD backlight shall be turned on.

Handset and base ringer melody and level as MENU setting.

Note 2: It is possible to change ring volume during the incoming alert by using **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys.
The ring volume will be displayed as "VOLUME n" (1<=n<=5) or "VOL OFF" during 8 s unless **KEY_HOOK** is pressed.

Incoming alert phase:

The incoming call phase begins with the first ring (ALERT_ON) signal of the handset and stops:

- If the user take the call (see operation)
- If the call is not answered and the caller release its call or another parallel phone answers. EXT icon and LEDs will stop flashing after FTXX_LINE_EXPIRY.

The Base ring alert is synchronized with the PSTN ring ON/OFF pattern.

3.1.1 To answer the call:

- Press **KEY_HOOK**.
- Simply lift the handset from the cradle.

HOOK_IND icon will be displayed.

Note 1: After it goes to talk mode automatically, **KEY_HOOK** will be disabled about 3 seconds to prevent unwanted hang up.
Note 2: Once handset TALK on, another handset's display "EXT" icon and can not TALK & *TONE_BUSY* in earpiece if press **KEY_HOOK**

3.2 External outgoing call

Normal dialling :

- Press **KEY_HOOK**
- Enter the called number

Pre-dialling:

Pre-dialling allows you to enter and modify a number before dialling.

- Dial your called number. Up to 32 digits (included pause, *,#)are allowed. If the number exceeds 12 digits, the last 12 digits are displayed and *LEFT_ARROW* is ON, Press **KEY_CLEAR** key to delete last digit.
- Press **KEY_HOOK**, the digits are dialled, digit(s)

3.2.1 Dialling PAUSE

Press **KEY_LNR** (after first key) to make a pause, which is displayed as a "P".
The time is adjustable by FP EEPROM settings

3.2.2 Flash key

During a call, press shortly **KEY_R** to perform a Flash break and displayed as a "R".
The flash time is adjustable by FP EEPROM settings

3.2.3 DTMF dialling

DTMF tone duration (pause before, tone length, pause after, high & low group level) is adjustable by FP EEPROM settings

3.2.4 Pulse dialling

Pulse timing (make, break, pause after) is adjustable by FP EEPROM settings
Pulse dialling mode can be disabled by EEPROM settings.
(If disabled by setting, the dialling setting menu shall not be on the handset setting menu)

3.2.5 Temporary DTMF dialling

During a call or pre-dialling, when the selected dial mode is pulse and you want to dial DTMF codes,
During talk, long press **KEY_STAR/LOCK** to switch into DTMF dialling, only during this call.
During pre-dialling or number storage, long press **KEY_STAR/LOCK** is used to program the digits after the KEY_STAR going temporarily to DTMF dialling. This will be displayed as a "d".

3.2.6 Dial tone detection

During an external outgoing call, the dial tone detection is activated. When detected the digits which have been dialled on the handset (pre-dialled or post dialled) are sent to the line.
If the dial tone is not detected, a time out expires and the digits are sent.
The time out is adjustable by FP EEPROM settings
No dial tone detection time out : selected by EEPROM data
with dial tone detection time out : selected by EEPROM data

3.2.7 Call timer display

After going off hook, the display is blank during 15 s unless you press a key. The communication duration is displayed after 15s after the last pressed key

If you press a key (0 - 9) during the conversation, the communication duration is not reset to zero and reappears after 15 seconds. At the end of each call, the duration of communication and the handset name are displayed alternately for 5 seconds.

3.2.8 Mute

It is possible to mute the microphone during a conversation.
Press **KEY_CLEAR/KEY_MUTE** during the conversation, the microphone is then deactivated, the external correspondent is put on hold; you can talk freely without being heard by the calling party.
"MUTE" is displayed.
No digit key or **KEY_INT** can be used during mute.
And Phonebook can be reviewed but can't be dialled out during mute.
Press **KEY_CLEAR/KEY_MUTE** again to return to normal mode.

3.2.9 Changing Earpiece Volume during Call

It is possible to change earpiece volume during a call using **KEY_UP/CLIP** and **KEY_DOWN/CLIP.** The earpiece volume will be displayed as "EARVOL n" (1<=n<=5) during 8 s unless a key digit (**KEY_0** to **9** + **KEY_HASH** + **KEY_STAR**) is pressed.

3.3 Direct access memory

The product has two locations of direct access memory dial number. The number is pre-programmed to the EEPROM and user cannot change it. The maximum digits for each location are 16 digits and there is no name for this direct access dial number.

3.3.1 How to access the direct memory dial number during idle

User press and hold the **KEY_1** or **KEY_2** for more than 1.5 second (Long press), then the unit display pre-programmed number on the LCD and dial it out**.** **KEY_1** for location number 1 and **KEY_2** for location number 2.

3.3.2 During OFF HOOK

When the unit is on OFF HOOK mode, it is only allowed to access direct access memory number when the first key in is long press for **KEY_1** or **KEY_2**.

3.4 Redial feature

3.4.1 Redial list

Up to **10** last redial numbers (32 digits) are stored in the redial list (in PP EEPROM).

The last calls appear with their name if they are stored in the phonebook.

To retrieve the entries:
Press **KEY_LNR** If the list is already empty, then "empty" is displayed

- Scroll through the calls with the up **KEY_UP/CLIP** and down **KEY_DOWN/CLIP** arrows. The phonebook name is displayed if it exists. Otherwise it displays the first 12 digits of the number.
- Press **KEY_OK** to toggle between name and number,
- Press **KEY_MEM/EXIT** return to standby mode

To dial out number just simple press **KEY_HOOK**.

3.4.2 Dial out redial after OFF HOOK

To recall the last redial entry, just take the line by **KEY_HOOK** and press **KEY_LNR** to dial.

3.4.3 Delete a redial buffer :

- Press **KEY_CLEAR** and “DELETE ?” appears.
- Press KEY_OK to make redial number deleted, or press **KEY_MEM/EXIT** to cancel the delete operation.

To return to the previous menu, press **KEY_MEM/EXIT**

3.4.4 Delete all redial buffer :

- Long press **KEY_CLEAR** and “DELETE ALL?” appears.
- You can either press **KEY_OK** again and all redial are deleted, or press **KEY_MEM/EXIT** to cancel the delete all operation.

To return to the previous menu, press **KEY_MEM/EXIT**

3.4.5 Store a Redial list into PHONEBOOK

- Press **KEY_OK** during display the redial number which you wish to store to the phonebook. The display show “ADD ?”.
- After appearing the “ADD ?” And press **KEY_OK** to confirm. The display show “NAME ?”.
- Enter the name.
- Press **KEY_OK** after modified name.
- Press **KEY_OK** after modified number.
- Select the melody of your choice (1 to 5) and validate
- Press **KEY_OK** to confirm.

3.5 Internal call transfer

When you wish to transfer an external call to another extension:

- During a call, press **KEY_INT**
- Select the number of the internal correspondent that you wish to call; the external caller is put on hold.
- When the internal correspondent picks up, press **KEY_HOOK** to hang up and transfer the call.

If the internal correspondent does not pick-up, press **KEY_INT** again to reconnect to the external caller on line.

3.6 Conference call between two handset and external caller

When you wish to talk an external call and other handset:

- During a call, press **KEY_INT**
- Select the number of the internal correspondent that you wish to call; the external caller is put on hold.
- When the internal correspondent picks up, you can talk with internal correspondent first with external call on hold.
- Press **KEY_#** to go to Conference call.
- When one of handset press **KEY_HOOK** or press **KEY_INT**. Then the conference call is finished, but other handset still talk with external caller.

If the internal correspondent does not pick-up, press **KEY_INT** again to reconnect to the external caller on line.

3.7 Caller ID (CLIP) features

3.7.1 General features

The phone supports CLIP DTMF and FSK type I and II. See 8.1 for more details.

3.7.2 Caller ID display

Note: Caller identification is only available if you have subscribed to this service with your network operator.

During the incoming alert:
The CLIP information is displayed if they are provided.
Order of display:

- Phonebook name and calling number alternately if the number matches with the CLIP calling number
- CLIP calling name and calling number alternately if the network is transmitted. However, if the number is match with one of phonebook memorized number, it shall use phonebook memorized name.
- CLIP calling number
- Number matching method is as follows.
    - If the one of number which CLIP or phonebook is less than 5 digits, it will not compare. (If the one of phonebook number is 1234, this number will not use for number matching)
    - If the CLID received 10 digits and phonebook number is 8 digits, CLID last 8 digits will use for the matching with that phonebook number. And if the CLID is 8 digits and phonebook number is 10 digits, Phonebook number last 8 digits will use for the matching with that CLID number.

The following special network messages are managed and displayed at the place of calling number:

Message	CLIP type	Meanings
WITHHELD	FSK type I & II	The caller hides its identity
UNAVAILABLE	FSK type I & II	Network failure, the calling number can't be transmitted

Special caller texts display format:

Display	CLIP TYPE	Caller texts from network
WITHHELD	FSK type I & II	PRIVATE
UNAVAILABLE	FSK type I & II	UNAVAILABLE
INT NATIONAL	FSK type I & II	INTERNATIONAL
OPERATOR	FSK type I & II	OPERATOR
PAYPHONE	FSK type I & II	PAYPHONE
RINGBACK	FSK type I & II	RINGBACK

The icon will stay during all incoming alert phase or if you answer the call.

The call timer display will come again after 15 seconds if no key pressed.

During standby mode:
The icon will flash if unanswered CLIP(s) in call list, icon will be off after all unanswered call is read.

3.7.3 Recall CLIP list

Unanswered and answered calls are stored in the CLIP list of each handset independently (in EEPROM).

Note: any new CLIP call will be stored in EEPROM .

Size storage

Each entry will store:

- The call number (20 digits)
- The caller name (12 digits) if the network send it
- The date and hour of the call

Storage sequence

The CLIP information that has been received during incoming alert phase (calling number, name date/hour) is stored then displayed.

If the new call entries, The icon will flash (480ms ON/OFF) and will off after all new call is read.

Note: The new message indication is reset at power up, so the icon is always off after a reset.

MMI operation

To retrieve the entries:

1. Press **KEY_ UP/CLIP or KEY_ DOWN/CLIP** to enter the call list. The icon will stay ON for Unanswered Calls and the icon will stay ON for Answered Calls. If the list is already empty, then "EMPTY" is displayed
2. Scroll through the calls using the up **KEY_UP/CLIP** and down **KEY_DOWN/CLIP** arrows.
3. You will find the different fields of the entry:

   If the call is unanswered and unviewed. The and icon will stay ON. The will be turned off after it is viewed.
   If a matched number found in phonebook memory , the corresponding name will be shown otherwise if the caller name is available, the caller name will be displayed. If both are not available, the caller number is displayed first.
   Press **KEY_OK**, the first 12 digits of caller number is displayed , press **KEY_OK** again to check the remaining digits (if more than 12 digits)
4. Press **KEY_OK** The date and hour is displayed if any
5. When the CLIP found no matched number in Phone Book and Calling Number is present, when press **KEY_OK** again , CLIP data can be stored into phone book (see 3.5.6)

To select another call list, simply press **KEY_UP/CLIP** or **KEY_DOWN/CLIP** . Error tone will be sounded if reach the top or bottom of the list.
To return to the previous menu, press **KEY_MEM/EXIT**.
To dial out number just simple press **KEY_HOOK**

3.7.4 Delete one CLIP list

- Press **KEY_CLEAR** and "DELETE ?" appears.
- There you can either press **KEY_OK** and CLIP deleted, or presses **KEY_MEM/EXIT** to cancel the delete operation.

3.7.5 Delete all CLIP list

- Long press **KEY_CLEAR** and "DELETE ALL?" appears.
- There you can either press **KEY_OK** and all CLID are deleted, or press **KEY_MEM/EXIT** to cancel the delete all operation.

To return to the previous menu, press **KEY_MEM/EXIT**

3.7.6 Store a CLIP list into PHONEBOOK

- After appearing the "ADD ?" and press **KEY_OK** to confirm (after 3.6.3 step 5)
- Press **KEY_UP/CLIP** or **KEY_DOWN/CLIP** to move the cursor for edit or delete name. If the CLIP data does not have name, LCD shall display "NAME ?". And then enter the name.
- Press **KEY_OK** after modified or enter the name.
- Press **KEY_OK** after modified number.
- Select the melody of your choice (1 to 5) and validate
- Press **KEY_OK** to confirm.

3.7.7 Dial out CLIP list

To recall the number from CLIP list , pressing **KEY_HOOK** will dial out the number .

3.8 Phonebook

The phonebook contains up to **50** names of 12 characters max. and numbers of 20 digits. Phonebook is stored in PP EEPROM. One handset phonebook is independent from other locked handsets.

3.8.1 Dial a number of the phonebook list

To call a correspondent whose name you have saved in the phonebook:

- Press **KEY_MEM/EXIT** to enter the phonebook. The will be ON.
- Press the first letter of the name; the first name that starts with this letter in the alphabet appears. For instance to find names beginning by A, press once on **KEY_2,** to find names beginning by B, press twice on **KEY_2,** to find names beginning by C, press three times on **KEY_2**
- Go through the list of names with the **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys the list scrolls up/down in an alphabetical order.
- Press **KEY_MENU/OK** to display the number and user can press the **KEY_MENU/OK** again to display remaining digits if the recalled phone book number is more than 12.
- Press **KEY_MEM/EXIT** returns to standby mode
  OR
- Press **KEY_HOOK** to dial the number of the correspondent whose name is displayed.

3.8.2 Dial a number of the phonebook list during Talk.

- Press **KEY_MEM/EXIT** to enter the phonebook. The will be ON.
- Press the first letter of the name; the first name that starts with this letter in the alphabet appears. For instance to find names beginning by A, press once on **KEY_2,** to find names beginning by B, press twice on **KEY_2,** to find names beginning by C, press three times on **KEY_2**
- Go through the list of names with the **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys the list scrolls up/down in an alphabetical order.
- Press **KEY_MENU/OK** to display the number and user can press the **KEY_MENU/OK** again to start dialling or display remaining digits if the recalled phone book number is more than 12.
- Press **KEY_MENU/OK** again to start dialling and return to normal Talk mode.
- Press **KEY_MEM/EXIT** without dialling, then returns to normal Talk mode

3.9 Intercom

3.9.1 Internal call

- Press **KEY_INT**
- Enter the number of the internal handset (1 to 5)

The and “INT” icons displayed, the number of the internal handset display “INT” with caller handset number and rings (INT MEL).

Remark: the caller handset go to standby mode if the number of the internal handset is not available or caller handset

3.9.2 End of intercom call

Incoming call applied then go to ring in mode.
The number of the internal handset press **KEY_HOOK** go to INTERCOM mode

3.9.3 Intercom mode

The and “INT” icons displayed on both handsets.

3.9.4 End of intercom

Any handset (intercom) press **KEY_HOOK,** go to standby mode
Incoming call applied then go to ring in mode.

3.10 Page button

Press Page button on the base.
The handsets will ring *RING_1* at volume of Handset internal ring level setting and display INT with “□□□□”during 30s unless page key is pressed again on the base or a key is pressed on any locked handset. (When the handset set to key lock, user can be stop the paging by pressing any key)

3.11 Battery and charge management

3.11.1 Battery indicator

5 levels indicators icon for mean battery voltage:

> = EEP_BAT_FULL_LEVEL

> = EEP_BAT_HALF3_LEVEL

> = EEP_BAT_HALF2_LEVEL,

Blinking > = EEP_BAT_ALARM_LEVEL

3.11.2 Low battery conditions

If the following conditions are applied:
During a call,

- If mean battery level is less than EEP_BAT_HALF1_LEVEL,

- If battery warning tone option is ON

then a *TONE_LOW_BATT* will be emitted every minute.

In any state (standby or call), If mean battery level is less than EEP_BAT_ALARM_LEVEL, handset will enter in power down mode.

3.11.3 Charge conditions

If the following conditions are applied:

- In standby mode,
- If battery warning tone option is ON
- The handset is put on its charger (debounce time: 200 ms)

then a *TONE_CONFIRM* will be played.

Charging icon:

Scroll for display handset is charging, fast scroll when quick charging mode,

3.11.4 Quick charge

If the battery voltage below EEP_BAT_HALF2_LEVEL, the charging mode is always quick charge mode first until the following condition detect.

- If detect negative ΔV then stop quick charge
- If reach to time limit which defined by EEPROM setting

3.11.5 Start-up with low batteries

If battery level at start-up is lower than EEP_BAT_HALF2_LEVEL, the handset will stay in sleep mode (no LCD, no RF, no MMI working). You need to put the handset into charge until battery level reaches EEP_HALF2_LEVEL.

3.12 Range indication

3.12.1 Out of range tone

If the following conditions are applied:

- The handset has been out of range since EEP_RANGE_OUT_DELAY s
- If range warning tone option is ON

then a *TONE_WARNING* will be played.

EEP_RANGE_OUT_DELAY : selected by EEPROM data

3.12.2 In range tone

If a *TONE_WARNING* has been played, a *TONE_IN_RANGE* is played when the handset goes into range the next time.
Note: at start-up, the handset plays the *TONE_IN_RANGE* only if it goes into range after more than 10 s.

3.12.3 Range limit tone during a call

During a call, in range limit conditions, the handset will play a *TONE_WARNING* in the Buzzer
The tone is repeated until range conditions are good
If the handset goes out of range, the call is released (on both handset and base).

3.13 Alarm activation

When the unit is set to alarm ON and the clock reach to the alarm setting time, the handset shall generate the alarm sound and display “ALARM ON” on LCD. Once the clock is reach to alarm setting time, the alarm setting shall be OFF.

3.13.1 During idle

The sound level shall follow the handset internal ring level. However, if the setting is “OFF” the alarm sound level shall be “LEVEL 1”. During generating the alarm sound, press any key to stop the alarm without any operation even the handset is “**Key Lock**” mode. For example, press **“KEY_HOOK”** to stop the alarm, however, the handset should not go to talk mode.
If do not press any key for more than one minute, the alarm shall stop automatically.

3.13.2 During Talk

The sound level shall be same as Battery Low warning tone. During generating the alarm sound, press any key to stop the alarm without any operation.

3.13.3 During ringing or paging

The alarm sound shall not active during paging or ringing.

4 MENU Settings

Menu structure

A wide range of phone settings are accessible through a user friendly menu.

- To enter the menu, press **KEY_MENU/OK**
- Scroll through the selections using the **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys, the selections scroll in a loop (you return to the first after the last). To validate a selection, press **KEY_MENU/OK**
- To return to the previous menu, press **KEY_MEM/EXIT.**
- To escape a menu and return to standby mode, press and hold **KEY_MEM/EXIT**
- After 15 s without pressing any key, the handset returns in standby mode

PHONEBOOK	ADD ENTRY	NAME ?	NUMBER ?	MELODY 1 … 5
	MODIFY ENTRY	MELODY 1 ... 5	-	
	DELETE ENTRY	CONFIRM ?		
SETUP	BASE VOLUME	VOLUME OFF		
		VOLUME 1 ... 5		
	BASE MELODY	MELODY 1 … 5		
	DEL HANDSET	PIN ?	HANDSET ?	
	PIN CODE	PIN ?	NEW PIN	
			RETYPE	
	DIAL MODE	TONE (dtmf) DIAL		
		PULSE DIAL		
	RECALL	RECALL1		
		RECALL2		
	DEFAULT	PIN ?	CONFIRM ?	
HANDSET	BEEP	KEYTONE	ON	
			OFF	
		LOW BATTERY	ON	
			OFF	
		OUT RANGE	ON	
			OFF	
	INT RING VOL	VOLUME OFF		
		VOLUME 1 … 5		
	EXT RING VOL	VOLUME OFF		
		VOLUME 1 … 5		
	INT MELODY	MELODY 1 … 5		
	EXT MELODY	MELODY 1 … 5		
	CLOCK SET			
	ALARM SET	ON		
		OFF		

	AUTO ANSWER	OFF		
		ON		
	NAME			
	LANGUAGE	ENGLISH		
		NEDERLANDS		
		FRANCAIS		
		DEUTSCH		
		ITALIANO		
		ESPANOL		
		ΕΛΛΗΝΙΚΑ		
		РУССКИЙ		
		DANSK		
		SVENSKA		
		NORGE		
		POLSKI		
		ČESKY		
		SLOVENCINA		
		PORTUGUES		
		MAGYAR		
	KEY LOCK ?			
REGISTER	SELECT BASE	*+BASE 1 2 3 4	NEW BASE X	
		AUTO		
	REG BASE	+BASE 1 2 3 4	SEARCHING X	PIN ?

Notes : * Only registered base number will be shown.
Notes : + Registered Base Number will blinking

4.1 PHONEBOOK

- Select "PHONEBOOK"

4.1.1 Add a name

- Select "ADD ENTRY"

- Enter the new name and validate.
- Enter the new telephone number and validate
- It is possible to enter the following data for number entering.
  - **KET_1** to **KEY_0**
  - **KEY_STAR and KEY_#**
  - **KEY_LNR** (Pause)
  - **KEY_R** (Recall, Flash)
- Select the melody of your choice (1 to 5) and validate
- Press **KEY_OK** to confirm.

With your telephone you can write text as well as figures. This is useful for entering a name into the address book, giving a name to a handset, …
To select a letter, press the corresponding key as many times as is necessary. For example to select an 1, press 2 once, to select a B, press 2 twice and so on. To select A and then B consecutively, select a 1, wait until the cursor moves on to the next character, then select a B.
To select an empty space, press 1.
To select a dash, press 1 twice

The keypad characters are as follows:

First press	Second press	Third press	Fourth press	Fifth press
Space	-	1		
A	B	C	2	
D	E	F	3	
G	H	I	4	
J	K	L	5	
M	N	O	6	
P	Q	R	S	7
T	U	V	8	
W	X	Y	Z	9

4.1.2 Delete a name

- Select "DELETE ENTRY"
- Move through the list of names using the **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys the list scrolls down in alphabetical order.
- Press **KEY_OK** when you find the name you wish to delete
- "CONFIRM ?" appears, press **KEY_OK** to confirm.

4.1.3 Modify a name or number

- Select "MODIFY ENTRY"
- Move through the list of names with the **KEY_UP/CLIP** and **KEY_DOWN/CLIP** keys. The list scrolls down in alphabetical order.
- Press **KEY_OK** when you find the name to modify
- Press **KEY_UP/CLIP** or **KEY_DOWN/CLIP** to move the cursor for edit or delete name.
- Press **KEY_OK** after modified name.
- Press **KEY_CLEAR** to delete number.
- Press **KEY_OK** after modified number.
- Select the melody of your choice (1 to 5) and validate
- Press **KEY_OK** to confirm.

4.2 SETUP

- Select "SETUP"
- In idle, all the handsets which registered to the same base can enter the “SETUP” menu in the same time, and the last setting will be validated.

4.2.1 BASE VOL

This menu enables you to adjust base ring volume

- Select "BASE VOLUME" and validate
- Select the desired volume (VOLUME OFF or VOLUME 1 to 5) and validate

4.2.2 BASE MEL

This menu enables you to select base ring melody

- Select "BASE MELODY" and validate
- Select the melody of your choice (1 to 5) and validate

4.2.3 DEL HS

You can cancel a handset's association with a base to allow another handset to be associated

- Select "DEL HANDSET" and validate
- Enter the PIN code and validate
- Select the handset to be cancelled and validate

4.2.4 PIN CODE

The base PIN code is used in subscription operation or to modify some critical parameters in the base.

To change the PIN code:

- Select "PIN CODE" and validate
- Enter the old 4 figure confidential code and validate
- Enter the new 4 figure confidential code and validate
- Enter the new confidential code a second time and validate

4.2.5 Dial mode selection (This mode will not appear when set the Pulse dialling disable by EEPROM

Two types of dialling are available:

1. DTMF tone dialling
2. Pulse dialling

To change the dialling mode:

- Select "DIALMODE" and validate
- Select "TONE" or "PULSE" of dial mode and validate

FTXX_DIAL_MODI : selected by EEPROM data

Note: the Dial mode selection menu can be hidden to lock the base into pulse or DTMF dialling by the CONFIG_ENA_MENU_DIALMODE flag (see various factory settings).

4.2.6 Recall duration selection

- Select "RECALL"
- Choose RECALL 1 to select short flash time
- Choose RECALL 2 to select long flash time

RECALL 1 & 2 timing : selected by EEPROM data

Note: not recall select function in if RECALL 1 & RECALL 2 is same timing.

4.2.7 Default settings

This menu enables you to reset both handset and base with default settings.

By SET UP menu,

- Select "DEFAULT"
- Enter the base PIN code and validate
- "CONFIRM ?" appears, press **KEY_OK** to confirm

By quick default,

- Press and hold * key when insert the battery for 5 seconds, “DEFAULT” appears, then “CONFIRM?”, press **KEY_OK** to confirm

Then the handset and base will apply default parameter settings and make a software RESET.

Default parameter	**Value**
Handset name	TBD
Low battery indicator	ON
Out of range indicator	ON
Key click	ON
Auto answer	ON
INT melody	1
INT volume	3
EXT melody	1
EXT volume	3
ear volume	3
Language	English
Phonebook	Empty
CLID list	Empty
Redial list	Empty
PIN CODE	0000
PAUSE	3 s
dial mode	DTMF(Tone)
Key lock	OFF
CLOCK	00 :00
ALARM	OFF

Default values in handset and base are defined by EEPROM settings [1]. So they can be adjusted for each country.

4.3 HANDSET

- Select "HANDSET"

4.3.1 BEEP

Beep features
The handsets may or may not emit beeps while the keys are pressed , the batteries are low and when the handset is out of range of the base.

4.3.1.1 KEYTONE

- Select "KEYTONE" and validate
- Select “ON” or “OFF” and validate

4.3.1.2 LOW BATTERY

- Select "LOW BATTERY" and validate
- Select “ON” or “OFF” and validate

4.3.1.3 OUTRANGE

- Select "OUT RANGE" and validate
- Select “ON” or “OFF” and validate

4.3.2 INT RING VOL

This menu enables you to adjust handset ring volume (intern melody)

- Select "INT RING VOL" and validate
- Select the desired volume (VOLUME OFF or VOLUME 1 to 5) and validate

4.3.3 EXT RING VOL

This menu enables you to adjust handset ring volume (extern melody)

- Select "EXT RING VOL" and validate
- Select the desired volume (VOLUME OFF or VOLUME 1 to 5) and validate

4.3.4 INT MELODY

This menu enables you to choose a different melody for internal call

- Select "INT MELODY" and validate
- Select the melody of your choice (1 to 5) and validate

4.3.5 EXT MELODY

This menu enables you to choose a different melody for external call

- Select "EXT MELODY" and validate
- Select the melody of your choice (1 to 5) and validate

4.3.6 CLOCK SET

Clock setting is 24-hour format.

- When enter Clock setting mode, LCD display current time with flashing hour indication.
- Enter the current time by 24-hour format and validate. And same time, the update data send to base to keep for all the handset to have same clock.
- If the CLIP data has time data, the clock shall be updated by CLIP time data.
- The time data shall be kept at base unit and when the handset turned on, the time data shall be transferred from base to handset.

4.3.7 ALARM SET

This menu makes the handset to have alarm clock feature.

- Select ON or OFF and validate
- If select ON, then the menu go to alarm time setting mode
- Time setting is same as Clock setting

4.3.8 AUTO ANSWER

When there is an incoming call and the handset is on the base, the phone automatically takes the line.

- Select "AUTO ANSWER" and validate
- Select "ON" to activate "OFF" to deactivate and validate

4.3.9 NAME

This function allows you to personalise each handset.

- Select "NAME" and validate
- Enter the name and validate (max 10 chars)

4.3.10 KEY LOCK

This function allows you to lock the key

- Select "KEY LOCK?" and validate
- Press **KEY_MENU/OK** to lock key, icon displayed and go to standby mode.

Note :Press **KEY_HOOK** key can be OFF HOOK during incoming call and KEY LOCK is on.

4.3.10.1 Quick KEY LOCK

Simply press and hold **KEY_STAR/LOCK** 3 second

4.3.10.2 To unlock key:

- Press any key “PRESS ⁎” is displayed, within 5s time out
- Press **KEY_STAR/LOCK** to unlock key

4.4 REGISTER

- Select "REGISTER" and validate
- Select “SELECT BASE” or “REG BASE” by KEY_UP or KEY_DOWN
- Press KEY_OK to confirm

4.4.1 SELECT BASE

- Select "SELECT BASE" and validate
- “BASE 1 2 3 4” is displayed (only the registered base number will be shown and current base number will be blinking)
- Press 1 - 4 to confirm the selection or KEY_UP/KEY_DOWN + KEY_F to select auto searching.
- Valid tone is sounded if valid base is found
- “NOT REGISTER” is shown and error tone sounded the selection is invalid

4.4.2 REG BASE

- Select "REG BASE" and validate
- “BASE 1 2 3 4” is displayed (only the registered base number will be blinking)
- Press 1 - 4 to confirm the selection
- It is now searching the base in subscription mode and “SEARCHING…” is displayed
- Valid tone is sounded and “PIN ?” is shown if valid base found
- Enter subscription PIN code and verified by base
- Valid tone sounded if subscription is successful and back to standby mode.

On the base:

- Put the base into subscription mode, by pressing and holding **PAGE_KEY**
- The base will then emit a beep, the Line LED will flash. It is now ready to be associated with a new handset, during the 90 seconds after pressing the button only.

If the handset has located the base, a valid tone is played.
If the handset does not locate the base, it will return to the previous configuration after 1 minute. Try again by changing the base number and check that you are not in a environment where there is interference

When a handset is associated with a base, it is given a handset number by the base. It is this number which is displayed on the handset after the name and must be used for internal calls.

5 Prefix dialling

There are two data for prefix dialing. One is Detect string and other is Replace string. If user enter the number and first sevelrale string match with the pre-programmed string data, then the string will be replaced by pre-programmed Replace string data. This function can be enabled or desabled by EEPROM setting.

5.1 Detect string

The pre-programed detect string is 5 digits inside the EEPROM. The data is 1 to 0 and F (F is for blank) If the Detect string need to be 003 then the data shall be F,F,0,0,3

5.2 Replace string

The pre-programed replace string is maxmum 10 digits inside the EEPROM. The data is 1 to 0

5.3 Detecting and replacment

The prefix dialing is only working when the dialing is prepared dialing which mean enter the dial number during idle mode and then OFF HOOK. The prduct will check the first few digis (maximum 5 digits depended on Detect string data) and if match with detect string, then replace the detected string to the replace string. If the detect string is all F, there will be no matching and add the replace string to the dialed number except the dialed number starting from not 1 to 0.

EX 1
Detect string : FFF00
Replace string : 1234567
Dialing number : 00567456
The product will dial ---- 1234567-567456

EX 2
Detect string : FFFFF
Replace string : 1234567
Dialing number : 00567456
The product will dial ---- 1234567-00567456

EX 3
Detect string : FFFFF
Replace string : 1234567
Dialing number : 13567456
The product will dial ---- 1234567-13567456

EX 4
Detect string : FFFFF
Replace string : 1234567
Dialing number : #13567456
The product will dial ---- #13567456

EX 5
Detect string : FFFF0
Replace string : 1234567
Dialing number : 00567456
The product will dial ---- 1234567-0567456

EX 6
Detect string : FFFF0
Replace string : 1234567
Dialing number : 0567456
The product will dial ---- 1234567-567456

EX 7
Detect string : FFF00
Replace string : 1234567
Dialing number : 0567456
The product will dial ---- 0567456

6 Quick default settings

If you have lost your PIN code, the following procedure allows you to restore default settings on handset and base.
Press **KEY_STAR** on handset when power up (insert and remove batteries). The display shows “DEFAULT”. Press **KEY_OK**. When the handset locks onto its base, both will restart.

7 Subscribe a new handset

Refer to MENU mode’s REGISTER page

The base can support a maximum of 2 handsets. If you already have 2 handsets, and you wish to change one of them, you must firstly delete a handset, then associate the new handset.

8 Test modes

8.1 Handset test modes

Refer to document of TEST MODE

8.2 Base unit test modes

Refer to document of TEST MODE

9 Specifications

9.1 CLIP Standards

The phone supports the following CLIP features defined by the identified standard:

Feature	Country	Standard
FSK type I FSK type II	All applicable	ETS 300 659-1 ETS 300 659-2

Note : No impedance matching is required

9.2 DECT Specifications

The phone complies with the following standards

Part	Standard
DECT Radio	EN301 406
DECT GAP	TBR 22
Analog Telephone Network	TBR 21 and TBR 38
EMC	EN301 489-1 and EN301 489-6
Safety	EN 60950