

Schnurloses Telefon nach DECT Standard

BEDIENUNGSANLEITUNG

INSTRUCTION MANUAL

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- WELCOME! We congratulate you on the purchase of this MBO® product. Your new telephone has all the performance features of the DECT standard with excellent voice transmission quality and aesthetic design. We are sure you will enjoy your buy for a long time to come.
- GENERAL FEATURES Your new telephone is a compact, cordless mobile telephone with many advanced features. The "MBO ALPHA 2400 DECT" (Digital Enhanced Cordless Telephone) has many useful features for use at home, in the office or simply for fun.

CAUTION

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To get the most our of your new telephone, be sure to carefully read this manual and follow the caution and operating instructions. If you follow the manual carefully and fully understand how to use the telephone you will enjoy it for a long time.

These operating instructions are only for information. They are not part of the purchase contract. All data is nominal only.

Subject to change without notice.

Closing date: 10/2001

ABBREVIATIONS	DECT	Digital enhanced cordless telecommunications
	DTMF	Dual tone multi-frequency
	EEPROM	Electronic erasable programmable read-only memory
	EXT RING	External call ringer
	EXT	External (call)
	FP	Fixed part (base set)
	IPEI	International portable equipment identity
	INT	Internal (call)
	INT RING	Internal call ringer
	LCD	Liquid crystal display
	LNR	Last number redial
	MEM	Memory
	MMI	Man-machine interface
	PABX	Private access branch exchange
	PIN	Personal identification number
	PP	Portable part (handset)
	PSTN	Public switched telephone network
	RFPI	Radio fixed part identifier
	VOL	Volume

GLOSSARY OF TERMS

Base set number

The base set number is the local number assigned to the base set for registration of a service. A handset of this base set can have another number assigned to it.

Engaged handset

Somebody is using the handset.

Free handset

A registered handset ready to receive calls.

Handset number

A number by which the base set identifies a handset. The current number of the hand set depends on the current registration.

Key

Is a button on the telephone's keypad.

Registration

The service registration is a prerequisite which must be met before a handset can use the services of the base set. Note that a handset can register with several base sets.

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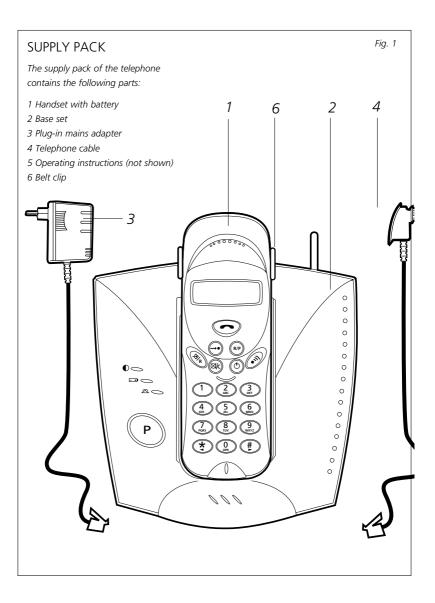
Denotes a symbol with information on the operating state of the device.

Tone

Denotes a tone generated by the receiver or loudspeaker of the handset.

RANGE	The base set maintains radio contact with the handset. Radio contact can be maintained over 300 m distance outdoors and up to 50 m inside a building. The radio reception can be impaired by obstacles in the path of the radio signals. The quality of the voice communication deteriorates rapidly at the fringe of and outside the range of the base set and handset. A beep warns you that you are leaving the reception range. If you hear the beep, move nearer the base set, otherwise the communication will be interrupted after about 10 seconds.
	If the handset makes the radio link with the base set, you hear the reception tone.
	The best radio communication exists if you can see the base set while using the handset.
general Programming Note	The functions of your telephone are programmed via the telephone buttons. If during a programming procedure the telephone detects no activity within 20 seconds, i.e. if no button is pressed within this time, the programming is cleared and you must start the programming again.
SETTINGS / PROGRAMMING	Many functions of your telephone have default settings when you buy it. You can change these defaults (see the chapter on settings, page 25 and following).
HANDSET PIN	The handset PIN protects the settings of the handset. If you want to change the settings you must enter the handset PIN as part of a programming procedure. The default PIN of the handset is "1590". You can chan- ge this number at any time (see pages 36-37).

CONNECTION / START-UP

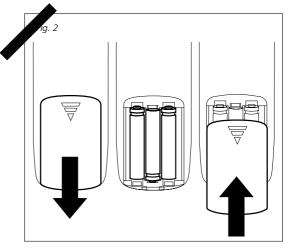


CONNECTION / START-UP

BATTERIES

Before you connect and use your cordless phone, load the three supplied **NiMh** batteries in the handset. If link and stand-by hours are out of specification despite correct charging, you must replace the batteries. Make sure that you buy quality batteries such as are available from a specialized dealer. Poor quality batteries can effect the voice quality of your telephone.

- Open the battery compartment on the rear of your handset by pulling the battery compartment cover.
- Take out the old batteries.
- Load the new batteries making sure to install the poles correctly (see diagram in battery compartment).
- Replace the cover on the battery compartment.



FIRST BATTERY CHARGE / CHARGE PROCESS To charge the batteries, place the handset in the base set. Before using the handset for the first time, charge the batteries for 24 hours. Low battery voltage is indicated by the battery icon
the LCD of the handset.

Loading / Changing The Batteries

CONNECTION / START-UP

	Important note: The battery charge LED on the base set should light when you place the handset in the base set. If the LED does not light either the handset is not placed correctly in the base set or the battery charge is not working.
BATTERY NOTE	The batteries cannot reach their full capacity at the first charge. Physical reasons prevent this. Therefore the time until depletion of the batteries can be shorter than nor- mal; this will balance out after several charges.
	The charge capacity of the batteries deteriorates with age and due to the memory effect* which prevents full char- ge. Generally, the handset should be completely dischar- ged and recharged from time to time. The discharge state of the battery is indicated by the battery charge icon and / or a warning beep.
	To ensure that the batteries are charged correctly, clean the charging contacts once a month with a soft cloth.
	*) Repeated partial charging and discharging shifts the capacity point of the batteries and less capacity is left. Each partial charge or discharge defines a new capacity point and shortens the life of the batteries.
BATTERY DISPOSAL	Spent batteries must not be disposed of with the house- hold garbage. Return spent batteries for recycling to your dealer or a battery collection center. Because of the risk of explosion, batteries must not be thrown in the fire. To avoid fire and explosion, charge the batteries only with the base set.

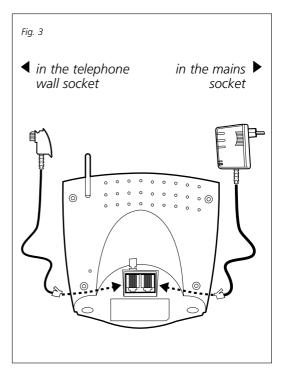
CONNECTING THE TELEPHONE

Note:

If your telephone connections are different, please contact your local telephone exchange

Make certain that the mains voltage is the same as the voltage on the nameplate of your telephone.

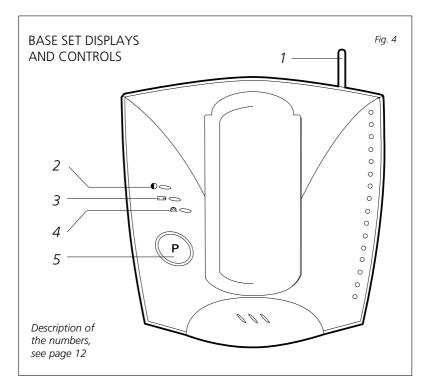
- a) Connect one end of the telephone lead to the base set and the other end to the telephone wall socket.
- **b)** Connect the power cable to the base set and the plug in the mains socket.



BASE SET

SETTING UP THE BASE SET Observe the following points for setting up the base set:

- Place the base set on a level surface (e.g., a table).
- If you want to use several handsets with the base set, ensure that the base set is about the same distance from each handset.
- To avoid interference, maintain a minimum distance of 50 cm between the handset and other electronic equipment (e. g., a fax machine, television set, monitor screen, etc.).
- Place the base set near a mains socket.



BASE SET

1 Antenna

ensures good connection between the handset and the base set.

2 Power on

indicates if the base set is connected to the power source and ready for use.

3 Battery charge

lights when the battery is being charged.

4 Call

indicates that the call key was pressed and the line is busy.

5 Paging key

Press the page key to call (search) a handset from the base set

PAGING KEY

The page function is available when the base set is not used otherwise. Press this key to call the handsets that are connected to the base set.

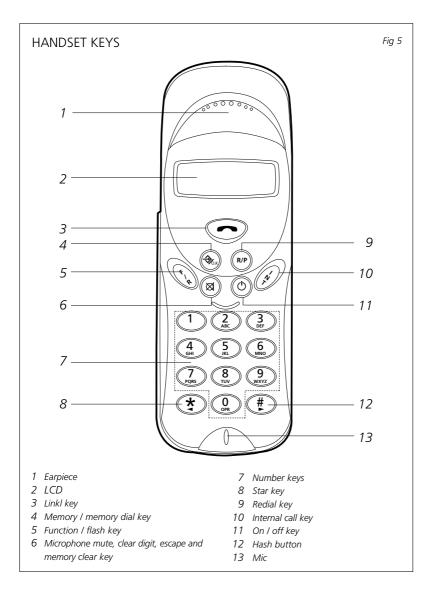
• The page tone on the handset will sound and the base paging message is displayed on the LC panel.

685E --> PRGING

Press the call key [~] on the handset or the page key [P] on the base set to end the page function.

The page function cannot be performed during an external or internal call or while the telephone is ringing, i.e. when a call is coming.

If you want to register a new handset, press the **page key** for more than 15 sec.



HANDSET KEYS

3 Link key

Key to "pick-up" and "hang up" the telephone. Pressing this key in function mode enables stand-by mode.

4 Memory / memory dial key

Memory:

With this key you can store numbers, display stored numbers and conclude settings / programming.

5 Function / flash key:

Function:

Press this key for settings and programming. **Flash:** (earth / flash): Displays the register content during a call.

6 Microphone mute, clear digit, escape and memory clear key

Microphone mute:

Pressing this key and holding it pressed for a while mutes the microphone (e.g., if you want to talk to another person in the room).

Clear digit:

Pressing the key briefly clears erroneous input during call preparation.

Escape:

Pressing the key in function mode takes you to standby mode

Memory clear:

Clears the specified memory and returns to stand-by mode

7 Number pad

To input digits and letters of telephone numbers and names for direct dialing or memory entry.

8 🔺 / asterisk key

Asterisk:

Special function for dual tone multi-frequency dialing.

Temporary tone dialing: If you press this key long during a call, the set changes form pulse to tone dialing.

Navigation function in the menu.

9 Redial / pause key

Redial:

Redials the last number dialed **Pause:** Pause before the next digit is dialed.

10 Internal link / call forward key

Internal:

To make an internal call between handsets. **Call forward:** To forward an external call in call mode.

11 On / off, lock and receiver volume key

On / off:

Pressing this key long switches the hand set on or off. Lock:

Pressing the key briefly locks the handset.

Receiver volume:

Pressing the key briefly in call mode sets the volume to one of 3 steps (low, middle, high).

12 ► / hash button

Hash:

A special character, e.g., to control an answering machine in remote mode (only DTMF mode).

►:

Navigation function in the menu.

LCD DIGITS AND ICONS

DESCRIPTION OF ICONS



The LCD displays the following information:

T Antenna

The "antenna" icon is displayed when the handset is switched on, registered with the base set and is wit hin range of the base set. If the handset is not in range, "RANGE OUT" is displayed.

Cy Call icon (pick-up/hang-up)

This icon is displayed when the call key (pick-up / hang-up) is pressed to make a call and the radio connection exists between the base set and the handset.

EXT External call

"EXT" is used for external calls. An existing external call is displayed on all registered, switched-on hand sets to inform all subscribers that an external call is being made or received.

INT Interner Anruf (Mobilteil)

"INT" is displayed when one handset calls another handset. The INT information is only displayed on the participating handsets.

⊡ Battery

This icon indicates the battery charge. When it is displayed the batteries are nearing depletion and should be charged.

🗝 Locked

When this icon is displayed, the handset is in lock mode. In this mode only incoming calls are allowed. All keys except the **ON key**, are locked.

HANDSET MODES

The functions available on the handset (PP) depend on the active mode. At least one of the following modes is enabled at any time:

Stand-by

The handset is in stand-by mode after installation. In this mode the handset is not used actively. The LCD displays only the antenna icon and the handset number. The handset number is displayed on the right of the LCD. Stand-by mode capacity: max. 250 hours Talk time: max. 10 hours

Not Subscribed (not registered)

The Not Subscribed mode is enabled when the handset has not registered with the base set (FP). NOT SUB is displayed on the LCD.

Lock

The Lock mode is enabled when the handset is locked for outgoing calls and only incoming calls are allowed. The lock icon is displayed on the LCD. To enable the lock mode, press the **On** $[\mathcal{O}]$ key in stand by mode briefly (max. 0.5 sec). To disable the lock mode, press the **On** $[\mathcal{O}]$ key again.

Direct Call

The Direct Call mode is enabled if the settings of the handset are such that when any key is pressed (except the defined key combination) a previously programmed number is dialed out automatically. This mode has no effect on incoming calls.

Dial Preparation

The Dial Preparation mode is enabled when a number is processed and the **link key** [-] is not pressed.

Call Active

The handset changes to Call Active mode if you press the **call key** [—] or [**INT**] to make a call.

Programming

The Programming mode is enabled if you want to change settings. Press the [$\mathbf{F/R}$] key to enable the programming mode.

SWITCHING ON THE HANDSET

- You can switch on and off the handset with the **ON** [^(b)] **key**.
- When you switch on, the handset (PP) tries to find a base set (FP).
- When the base set is found, a beep is heard. The antenna icon and the base set number are displayed on the LCD.

Note: If the handset has not registered, "NOT Sub" is displayed on the LCD. You must register the handset at first (see page 32/33 "Registering a handset").

SERRCHING FP

MULTI 1

NOT SUB

HANDSET OUT OF BASE SET RANGE

This message is displayed when the handset is moving out of the radio range of the base set.

• You hear a warning beep. Take the handset back within the range of the base set.

RRNGE OUT

VIEWING REGISTER ENTRIES During an external call you can transfer the call to another subscriber if that subscriber is served by the same PBX. To make the transfer, press the [**F/R**] **key**. The base set will signal either EARTH or FLASH on the telephone line (see earth / flash time programming). Note that the PBX must support this feature.

TALK MODE (AUTOTALK) When the handset rings, it changes from "Battery Charger Off" mode to "Talk" mode. When the "Talk" mode is disabled the handset changes from "Battery Charger On" mode into "Stand-by" mode.

In "Talk" mode the **call key** [\frown] is not available for 4 sec if the key is pressed by accident.

BATTERY LOW

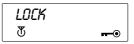
- This message is displayed when the battery is nearing depletion.
- A warning beep is heard and the battery icon sis displayed.

TULTI I T

HANDSET LOCK

This display indicates that all keys of the handset are locked. Only incoming calls are allowed.

- If you want to lock the handset, press the ON key [①] briefly (max. 0.5 sec).
- To clear the lock, press the **ON key** [①] again.



CALL WAITING

If you are making an internal call or calling another subscriber and an external call is coming in, you hear the call waiting tone. Pressing the **call key** [--] twice makes the direct link to the incoming call.

Pressing the **call key** [-] once ends the internal link and the handset starts ringing. Now you can accept the incoming call in the normal way by pressing the **call key** [-].

PAUSE

The pause function inserts a defined delay in the dial process. The pause must not be at the first digit of a number as in this case the **pause key** [**R/P**] is interpreted as redial instruction.

CALL DURATION

During and after a telephone call, the call duration is displayed for continuous 10 sec after dialing the number.

The duration is again displayed for 2 secs after hang-up.



Display format (mm : ss) (min : sec). The call duration was 22 minutes and 28 seconds.

RECEIVING A CALL

- The user can recive an internal or external call by pressing the **call key** [---]. Until the call is received the "INT" or "EXT" icon flashes, depending on where the call originates. After hook-up the icon is displayed permanently. If the call is internal only the called hand-set rings and "INT" flashes on the LCD of that set. The number of the calling handset is displayed on the left of the LCD. If the call is external, all free handsets start ringing and the "EXT" icon flashed on the LCDs of all (free and engaged) handsets.
- To hang up, press the **call key** [].

Making an external call

- Press the call key [].
- The 🌈 icon is displayed on the LCD.
- You hear the dialing tone and "EXT" appears on the LCD.
- Dial the number. The call duration is displayed 10 sec after dialing the last digit.
- To hang up press the **call key** [----] again. The call duration is displayed for 2 sec.

External call with call preparation

- Dial the number.
- Press the call key [].

Note:

While you are preparing the call, you can change the number with the **delete key** $[\boxtimes]$. Press this button briefly to clear the digit dialed last. If you press the button for more than 0.5 sec, the whole number is cleared. If the whole number is cleared, the handset returns to stand-by mode.

MAKING A CALL

	• The number can also be retrieved from the telephone directory, the caller ID memory or the redial memory. The telephone supports numbers up to 25 characters. If you try to enter more than 25 characters, you hear a beep and every digit after the 25th digit is ignored.
REDIAL	• The three numbers dialed last are stored in the redial memory and can be called with the redial key [R/P]. Several presses of the [R/P] key scroll through the numbers in the redial memory.
	• Then press the call key [-]. After this the [R/P] key also enables the pause function.
INTERNAL CALLS AMONG HANDSETS	If you want to make an internal call from another hand- set, proceed as follows:
	• Press the [INT] key on the handset.
	• Dial the number of the handset you want to call.
	• Press the call key [-] on the handset you are calling.
	• To hang up, press the call key [-].

Forwarding A Call Between Handsets

If you want to forward a call from one handset to another handset, proceed as follows:

- Press the [INT] key (e.g. on handset 1).
- Dial the number of the handset you want to call (e.g., 2)
- Press the **call key** [] on handset 2.
- If you want to forward the call from handset 2 to hand set 3, press the call key [~] on handset 1. The engage tone is heard on handset 2. Press the [INT] key on handset 2 and dial "3".

Remark:

Call preparation is not possible for internal calls. Pressing the [${\rm INT}$] ${\rm key}$ deletes the numbers you have dialed.

If you are making a call with an external caller and you want to forward this call to another internal handset, proceed as follows:

- Press the [**INT**] **key** and dial the handset you want to call.
- The internal ringing tone is heard on the handset you have called. Press the **call key** []. The handsets are now linked with each other.
- Next, the first handset must press the **call key** [] to forward the external call.
- If the second handset does not answer, press the [INT] key again and the first handset is again connected to the external caller.

CHANGING THE DIAL MODE DURING AN EXTERNAL CALL

If the telephone is set to pulse dialing, you can temporarily change to tone dialing if you press the **asterisk key** [\clubsuit]. This function is useful, for example, if you want remote access to an answering machine.

The selected dial mode is only active for the duration of that call. When you hang up, the original dial mode is entered again.

Forwarding An External Call To an Internal Handset

MICROPHONE MUTING

If you press the **microphone** $[\boxtimes]$ **key** during a call, you can mute the microphone. When the microphone is mute the other party cannot hear you.

- If while you are calling you press the **micro**-**phone** [⊠] **key** long.
- "MUTEd" is displayed on the LCD.
- If you want to continue the call, press the **microphone** [⊠] **key** long again.

MUTEd		
C y	EXT	

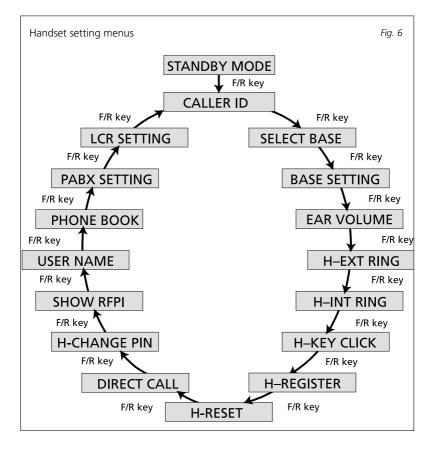


GENERAL

Press the [**F/R**] **key** in stand-by mode. The setting menus are displayed one after another.

Press [\Rightarrow_{k}] **key** to select the menu you want. If in menu mode you do not press a programming key for 20 sec, the program returns to stand-by mode.

Pressing the **call key** [**~**] at any time during setting returns to stand-by mode. In either case all unsaved settings are lost.



CALLER IDENTIFI-CATION (CLIP)

NOTE:

*) You can use the clip function only if it is activated by the provider.

Besides, the PBX (whether analog or ISDN) must also support the clip function.

Questions should be addressed to the supplier of your telecom system. The CLIP*) function displays the calling number on the LCD of your set. The set receives calls in frequency shift keying (FSK – name, telephone number, date and time of a call)** and DTMF. The set can store up to 20 calls for later viewing. The same call is never stored twice. If the memory is full, old calls are automatically deleted to save more recent calls.

**) Only if the provider provides name, date and time signal service. Which function is supported depends on the network configuration in the country in which the set is used.

Selecting a number in the caller list

- Press the [**F/R**] **key** until "CALLER Id" is displayed on the LCD.
- Press the [♣_K] key. The number/name of the last caller is displayed.
- Press [*] or [#] to view all callers in the list in succession.
- Press [~]. The required number/name is dislayed on the LCD and dialed automatically.

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Clearing a number from the caller list

 Press the [🛛] key to delete the number from the LCD.

AELETE MEM 2 K

- Press the [\clubsuit_{k}] key if "dELETE MEM" is displayed on the LCD.
- Press the $[\clubsuit_{\kappa}]$ key to delete the number.

Clearing all numbers from the caller list

- Press the [F/R] key until "CALLER Id" is displayed on the LCD.
- Press the [36. K] key.
- Press the [F/R] key. "dELETE ALL" is displayed on the LCD.
- Press the [♣,] key to delete all numbers from the caller list.

CALLER-Id ଅ



Display name, date and time of a call

You can alternately display the calling number, caller name and date / time of the call on the LCD if you press [\Re_{κ}].

Remark:

Date and time are only displayed if the network transmits the data with the calling number. If the caller's name is entered in the memory (phone book), the name appears on the LCD as programmed (see phone book page 39 and on). The same applies to the name if the network supports name signal.

SELECTING A BASE SET

This function selects from all base sets the base set (FP fixed part) with which the handset (PP – portable part) has registered. Up to four registrations are supported at any one time. Only one base set can be selected. The selection can be made automatically or manually.

Important:

Before you can select a base set for the handset the handset must have registered with the base set (see page 32/33 "Registering a handset").

Remark:

If you select the option "bASE NO : AUTO", the base set search proceeds automatically. If several base sets are available, the handset selects any of them. This function is only supported if the handset has already registered with these base sets.

Selecting a base set

- Stand-by mode
- Press the [F/R] key to display "SELECT bASE" on the LCD.
- Now press the [36. K] key.
- The selected base set is displayed, e.g., "base NO · 1"
- Press the [**F/R**] key. The displays "bASE NO : 1-4, AUTO" appear on the LCD in succession
- When the number of the required base set is displayed, e.g., "bASE NO :

685E ND· 2

685E NO: 1

2", press the $[\Rightarrow_{\kappa}]$ key. This example assumes that the handset has registered with base set 2 and has been assigned number 1 "MULTI 1".

MIIITI I

SELECT HASE

- If the handset wants to register with base set 2 again, select "bASE NO : 2". Then press the [♣_x] key.
- Display: "NEW bASE : 2".
- After a moment "bASE : 2" is displayed automatically.
- Press the [♣,] **key** to register with the new base set.
- The program automatically returns to stand-by mode and "MULTI 2" is displayed on the LCD.

NEW BASE: 2

HARE 2



Remark:

If the handset was not registered with base set 2, "NOT Sub2" is displayed. NOT SUB 2 T

SETTING THE EAR VOLUME

You can set the ear volume in this menu. The available settings are "VOL LOW", "VOL MIDDLE" and "VOL HIGH". You can change the ear volume while you are making a call.

If the [\circ] **key** is pressed in "Talk" mode, the selected volume is adopted automatically after 3 sec and no confirmation is required. This volume setting is active only temporarily.

ℬ

- Stand-by mode
- Press the [**F/R**] **key** to display "EAR VOLUME" on the LCD.
- Now press the [³/_%,]
 key.

MULTI I T ERR VOLUME

- Select the volume, e.g., "VOL MIddLE with the [**FR**] **key**.
- Press the [♣,] **key** to confirm.
- When the volume setting is complete, the "EAR VOLUME" menu is again displayed.

עחו *הוא*או ד

ERR VOLUME

RINGING

The ringer volume and the melody can be set separately for external calls. The ringing tone setting for internal calls is made in the "H-INT RING" menu. The setting for external calls is made in the "H-EXT RING" menu. In either menu at first the melody, then the ringing tone volume is set. 9 melodies and 9 volumes are available.

SETTING THE MELODY AND VOLUME OF THE EXTERNAL RINGING TONE

Setting the melody

- Press the [**FR**] **key** to display "H-EXT RING".
- Then press the $[\clubsuit_{\kappa}]$ key.
- When "MELODY" appears on the LCD, select this menu with [^{*}/_{*}] key.
- The number of the selected melody is displayed,
 e.g. "MELOdY 1" and the

H--EXT RING

MELOdy ሜ

መደርርዓን በ ማ

e.g., "MELOdY 1" and the melody is played.

- Press the [FR] key to scroll through all available melodies (1-9 and OFF).
- Press the $[\mathbf{A}_{\mathbf{k}}]$ key to select the required melody.
- The program returns to the "H-EXT RING" menu.

H--EXT RING ଅ

Setting the volume

- Stand-by mode
- Press the [F/R] key to display "H-EXT RING".
- Then press the $[\clubsuit_{\kappa}]$ key.
- When "MELOdY" appears on the LCD, press the [F/R] key.
- "VOLUME" is displayed on the LCD.
- Select this menu with $[\mathcal{B}_{\kappa}]$ key.
- The selected volume, e.g., "1" is heard and the number "VOLUME 1" is displayed.
- Press the [F/R] key to scroll through all available volumes (1-9). Press the [-%,] key to select the required volume.
- The program returns to the "H-EXT RING" menu.

H--EXT RING

መ መደበጋዓብ

᠕



VOLUME 1 रू

H--EXT RING

SETTING THE MELODY AND VOLUME OF THE INTERNAL RINGING TONE Make the settings with the same procedure as for the external melody and ringing tone in the "H-INT RING" menu.

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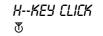
KEY CLICK ON / OFF

You can configure the handset such that each press of a key is confirmed with an audible signal.

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- Stand-by mode
- Press the [**F/R**] **key** to display "H-KEY CLICK" on the LCD.
- Now press the $[\clubsuit_{\kappa}]$ key.
- The current setting is displayed.
- Press the [**F/R**] **key** to select the required setting.
- Press the [♣,] **key** to confirm the setting.
- The program returns to the "H-KEY CLICK" menu.

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REGISTERING A HANDSET

You can make and answer calls with a handset only after it has registered with the base. To register a handset, the base must be in "Register" mode. If you want to register a new handset, press the page button [P] on the base set for more than 15 seconds until a beep comes. This signals that the base has been reset and entered the "Register" mode.

- "NOT SUb" or "SEAR-CHING FP" is displayed on the LCD.
- Press the [F/R] key to display "H-Register".
- Now press the [36.*] key.
- "SEARCH bS 1" is displayed on the LCD.

NOT SUB T

H--REGISTER



- Press the [**F/R**] **key** to select the required base set (1 to 4).
- Select the required base set and press the [♣_K] key.
- If you want to register another handset, while "SEARCH bS1" is displayed on the LCD, press the **paging key** for 15 seconds until you hear a beep. Press the [→_K] **key** while the beep is sounded.
- The handset runs an automatic search and the radio fixed part identification (RFPI) is displayed after a moment. The RFPI is different for each base set. Press the [♣_x] key.
- "PIN" is displayed on the LCD. Enter the PIN.
- Press the [♣,] **key** to confirm the four-digit PIN.
- "MULTI 1" is displayed on the LCD.

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NOTE:

The procedure is the same if you want to register a handset from another supplier. Press the **paging key** on the base set for more than 15 seconds until the beep comes. The menu of your handset may be different from the menu described here, however. For further information, consult the manual of your handset.

Note:

The default PIN of your handset is "1590".

RESETTING THE HANDSET

You can restore all handset defaults with this menu. The menu supports two options:

1: Reset All

Clears phone book entries, direct dialing number, user name, clip memory and PSBX number.

2: Initialize

Boots the default parameters of the handset.

Button click:	On
Ringing volume:	Step 9
External melody:	4
Internal melody:	7
Ear volume:	Middle

To reset the handset, proceed as follows:

- Stand-by mode
- Press the [F/R] key to display "H/-RESET" on the LCD.
- Press the [🗞] **key**.
- "PP PIN" is displayed on the LCD.
- Enter the PIN and press the [♣,] **key**.
- "RESET ALL" is displayed on the LCD. If you press the [→_{6,x}] key, all values are cleared. If you press the [F/R] key, "INITIA-LIZE" is displayed on the LCD. If you now press the [→_{6,x}] key, the default settings are loaded

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PP PIN:

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RESET RU $\mathcal{T}_{\mathcal{T}}$

Note:

The default PIN of your handset is "1590".

and the program returns to stand-by mode.

• "H-RESET" is displayed on the LCD.

Remark:

If you want to clear the handset 1 registration data, press the **ON** [\odot] and [**INT**] **keys** on the handset simultaneously while the handset is off. "F->CLEARSUBS" is displayed on the LCD. If you press the [**F/R**] **key** now, the registration data is deleted and "NOT Sub" is displayed on the LCD.

DIRECT CALL (BABY CALL)

When the direct (baby) call function is enabled, each press of a button dials out a pre-defined number. One direct call number can be pre-defined for each handset. Direct call is only possible for external outgoing calls.

Programming a direct (baby) call number

- Stand-by mode
- Press the [F/R] key to display "dIRECT CALL" on the LCD.
- Press the [36. K] **key**.
- If a direct call number is already programmed, this number is displayed and can be edited.
- Press the [\$\star{x}_x\$] key to activate the "Direct Call" mode with this number. If any button is pressed, the pre-programmed number is dialed out.

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 If no direct call number is pre-programmed, "PHONE NUMbER" is displayed on the LCD. Enter the direct call number and press the [A.] key. This activates the direct call with this number.

PHONE NUMber க

Remark:

If the direct call number is enabled, "dIREKT CALL" is displayed on the LCD.

Disabling a direct (baby) call number

If you want to exit the "Direct Call" mode, press the [\bowtie] **key** twice briefly.

HANDSET PIN

A current PIN can be replaced by a new PIN only if the new PIN is entered correctly two times and the entry is not interrupted. It is possible to restore the default PIN "1590" on the handset.

Changing the handset PIN

- Stand-by mode
- Press the [F/R] key to display "H-CHANGE PIN" on the LCD.
- Now press the $[\Rightarrow_{\kappa}]$ key.
- "PP PIN :" is displayed on the LCD.
- Enter the current PIN and press the [-‰_κ] key.
- When "NEW PIN" is displayed, enter the new PIN of the handset and press

PP PIN:	
\mathfrak{T}	

H--CHANGE PIN

MULTI I

Note:

The default PIN of your handset is "1590".

NEW	PIN:	
\mathbb{T}		

the [🗞] key.

- When "RETYPE:" is displayed on the LCD, enter the new PIN.
- Press the [36.] **key** again.
- "H-CHANGE PIN" is again displayed on the LCD.

RETYPE.



RFPI (RADIO FIXED PART IDENTIFIER) CODE This function displays the radio fixed part identifier (RFPI) code to which the handset is currently connected.

- Stand-by mode
- Press the [**F/R**] **key** to display "SHOW RFPI" on the LCD.
- Press the [🗞] key.
- The radio fixed part identifier (RFPI) of the base set is displayed on the LCD.
- If you press the [♣_{6x}] **key**, the program returns to the "SHOW RFPI" menu.

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SHOW REPL \mathfrak{T}

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SHOW RFPI ଅ

ASSIGNING A USER NAME TO A HANDSET

This function assigns a handset a name not exceeding 10 characters. The user name is displayed on the LCD when the handset is in stand-by mode.

- Press the [F/R] key to display "USER NAME" on the LCD.
- Now press the [♣,] **key**.
- "NAME" is displayed on the LCD.
- Enter a name by the **number key**.



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• Press the [$\hat{\bullet}_{kx}$] **key** to confirm the entry. The handset returns to stand-by mode and the user name is displayed on the LCD.

Example:

Entering the name "KIM"

- Press the [F/R] key and select 'USER NAME'.
- Press the [🗞] **key**. "NAME" is displayed.
- Press the [5] key twice ("K" is displayed).
- Press the [4] key three times ("I" is displayed).
- Press the [6] key once ("M" is displayed).
- Press the [→_{δκ}] key to confirm.

Remark:

If you want to enter several letters in succession and these letters are programmed on the same button, you must press the [#] **key** after every letter before the next letter entry is supported.

Example:

Entering the name "ABC"

- Press the [F/R] key and select 'USER NAME'.
- Press the [$\clubsuit_{0\kappa}$] key. "NAME" is displayed.
- Press the [2] key once ("A" is displayed).
- Press the [🗯] key.
- Press the [2] key twice ("B" is displayed).
- Press the [불] key.
- Press the [2] key three times ("C" is displayed).
- Press the [♣,] **key** to confirm.

TELEPHONE DIRECTORY (PHONE BOOK)

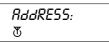
You can store 20 numbers (not exceeding 20 digits each) and names (not exceeding 12 characters each) in the phone book.

Saving a telephone number of the caller ID memory in the phone book

- Select the telephone number which you want to save in the phone book in the caller ID list.
- Press the [♣,] **key**.
- Press the [**F/R**] **key** twice. "INSERT Pb" is displayed on the LCD.
- Press the [♣_{0x}] key.
 "NAME" is displayed on the LCD.
- Enter the name and press the [-♣,] key.
- "AddRESS: XX" is displayed on the LCD.

INSERT	PB
\mathbb{Z}	





• Press the [\Rightarrow_{κ}] **key** to confirm.

Saving a name in the phone book

There are 2 option to save a name in the phone book.

Option 1

- Select the required number and press the [-‰_κ] key.
- •"NAME" is displayed on the LCD.
- Enter the name and press the [♣,] **key**.
- When "AddRESS : XX" is displayed, press the [-³/_{δκ}]
 key again.

NAME ₹

RAARESS. K

Option 2

- Press the [F/R] key to display "PHONE bOOK" on the LCD.
- Press the [🗞] **key**.
- If you press the [⋈] key once, the prompt "dELETE MEM?" is displayed on the LCD.
- If you press the [**F/R**] **key** again, "INSERT Pb" is displayed on the LCD.
- Press the [🗞] **key**.
- If "NUMbER" is displayed, enter the telephone number.
- Press the [♣,] **key**.
- If "NAME" is displayed, enter the name.
- Press the [🗞] **key**.
- If "AddRESS : XX" is displayed, press the [♣_κ] **key** again.

Deleting a number from the phone book

- Press the [F/R] key to display "PHONE bOOK" on the LCD.
- Press the [🗞] **key**.
- Select the telephone number you want to delete and press the [⋈] key.
- Then press the [-♣,] **key**.

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NAME ៥

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Searching for a telephone number with automatic dialing

- Press the [F/R] key to display "PHONE bOOK" on the LCD.
- Press the [*****] **key** and the [**#**] **key** to search for the number.
- Press the [🗞] **key**.
- Press the [] key and the number is dialed out automatically.

Remark:

If you have saved the telephone number "123" by the name of "ABC" in the phone book and you dial 123, "ABC" is displayed on the LCD. When a name is displayed you can also view the number. Press the [\Rightarrow_{x}] **key**.

USING THE HANDSET IN A PABX

Setting a PABX line number

- Press the [F/R] key to display "PAbX SETTING" on the LCD.
- Press the [36, x] **key**. "PAbX SET 1" is displayed on the LCD.



PRBX SET 1

again and enter the PABX line number, e.g., "0".

- Press the [$\Rightarrow_{0\kappa}$] **key** to confirm.
- "PabX SETTING" is again displayed on the LCD.

Remark:

You can set "PabX SET 2" with the same procedure. If no PABX line number is programmed, the message "EMPTY" is displayed on the LCD.

Clearing a PABX line number

- Press the [F/R] key to display "PAbX SETTING" on the LCD.
- Press the [-♣,] **key**. "PabX SET 1" is displayed on the LCD.

PRBX SETTING ଅ

PRBX SET 1 ത

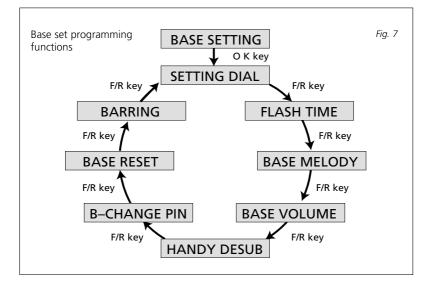
- Press the [$\textcircled{}_{\kappa_{\kappa}}$] key to display the programmed line number on the LCD.
- Press the [⊠] **key** three times in succession. "INPUT NUM" is displayed on the LCD.

INPUT NU៣ ភ

• Press the [\Rightarrow_{x}] key. The number is deleted. "PabX SETTING" is again displayed on the LCD.

You can change the base settings and the configuration of the system in the base setting menu.

- If "bASE SETTING" is displayed on the LCD and you press the [\Rightarrow_{κ}] key, the "SETTING dIAL" menu is displayed after a moment of WAITING.
- If in an active menu mode you do not press a key for programming the base set within 20 sec, the program returns to stand-by mode. Pressing the call key [-] also returns to stand-by mode. In either case all unsaved settings are lost.
- The "bASE SETTING" menu cannot be called in the follo wing cases:
 - If the base set is switched off or is out of range of the handset, in which case "WAITING" is displayed continuously on the handset LCD.
 - If the handset has not registered. The "bASE SETTING" menu is skipped.



SETTING THE DIAL MODE

Two dial modes are supported: pulse dial and tone (DTMF) dial.

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PULSE

DTMF

BASE SETTING

SETTING HIRL

- Stand-by mode
- Press the [**F/R**] **key** to display "bASE SETTING" in the LCD display.
- Now press the [-♣,] **key**.
- When "SETTING dIAL" is displayed, press the [-⅔,] key.
- The menu contains two options: PULSE and DTMF (tone) dial. You can toggle between both with the [F/R] key.
 Select the required dial mode and press the

 [♣_{0x}] key to confirm your selection.
 "SETTING dIAL" is again displayed on the LCD.

The setting procedure is

complete.

SETTING JIRL रू

• Press the [-] key to return to stand-by mode.

PROGRAMMING EARTH / FLASH TIME

You can program the base set to send an earth or flash signal to the telephone network when a register recall instruction is received. The basic setting depends on the country in which the telephone is used. The initial setting after a reset of the base is EARTH.

• Stand-by mode

MULTI I

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- Press the [F/R] key to display "bASE SETTING" in the LCD display.
- Now press the [♣,] **key**.
- Press the [F/R] key to change to "FLASH TIME" and press the [³/_{δκ}] key.
- This menu contains two options, "FLASH" and "EARTH". You can toggle between them with the [F/R] key. Select the required option with the [♣_K] key.
- The flash value (FLASH) is incremented in steps of 20 in the range between 40 and 400 with every press of the [F/R] key. The earth value (EARTH) is incremented in steps of 50 in the range between 50 and 1500 with every press of the [F/R] key. Select the required value and press the [♣(K)] key to confirm. The selected value is recorded and "FLASH TIME"

is displayed on the LCD. This completes the setting.

• Press the [] key to return to stand-by mode.

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FLASH TIME ₹

FLASH ଅ

EARTH ଅ

FLASH TIME ឃ

SETTING THE RINGER MELODY

You can set the ringer melody in this menu. You can choose from 9 melodies (1-9).

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- Stand-by mode
- Press the [**F/R**] **key** to display "bASE SETTING" in the LCD display.
- Press the [🗞] **key**.
- Press the [**F/R**] **key** to display "BASE MELODY" on the LCD.
- Press the [🗞] **key**.
- The number of the selected melody is displayed, e.g., "MELODY1" and the melody played.
- Press the [F/R] key to scroll through all melodies (1-9 and OFF). Each time the ringer melody is played.
- Select the required melody and press the [$\Rightarrow_{6\kappa}$] **key** to confirm.
- "BASE MELODY" is again displayed on the LCD. The setting is complete.
- Press the [-] key to return to stand-by mode.

bASE MELOଟ୍ୟ ଷ

BASE SETTING

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SETTING THE BASE RINGER VOLUME

You can set the base ringer volume in this menu. You can choose from 9 volume levels (1-9).

Volume 0 serves a special function. Selecting volume step 0 mutes the base ringer. Step 9 is the highest volume.

- Stand-by mode
- Press the [**F/R**] **key** to display "bASE SETTING" in the LCD display.
- Press the [🗞] **key**.
- Press the [F/R] key to display "bASE VOLUME" on the LCD.
- Press the [♣,] **key** to select this menu.
- The number of the selected volume is displayed, e.g., "VOLUME 1".
- Press the [F/R] key to scroll through all volume steps (1-9). Each time you hear the volume change.
- Select the required volume and press the
 [♣_x] key to confirm.
- "bASE VOLUME" is again displayed on the LCD. The setting is complete.
- Press the [-] key to return to stand-by mode.

bASE SETTING ര

BASE VOLUME T

VOLUME । उ

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DEREGISTERING A HANDSET

A handset which has registered with the base set can deregister.

The number of the handset is selected for deregistration.

• Stand-by mode

• Press the [**F/R**] **key** to display "bASE SETTING" in the LCD display.

- Press the [♣_K] **key** to select this menu.
- Press the [**F/R**] **key** to display "HANdY dESUB" on the LCD.





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- Press the [\Rightarrow_{κ}] **key** to select this menu.
- The registered handset number is displayed.
- Press the [F/R] key to scroll through all handset numbers (2-5).
- When the number of the handset you want to deregister is displayed, e.g., "HANdY NO: 2", select it with the [♣,] key.
- "HANdY dESUB" is displayed on the LCD.

KRNdy NO:2 ®

HANdy desub ซ

- Press the [Image: A sequence of the sequence of
- Press the [-] key to return to stand-by mode.

Remark: You can deregister all handsets, except the handset which you are using for deregistration and "Multi 1". For example, handset number 3 (Multi3) cannot deregister handsets of number 1 (Multi1) or number 3 (Multi3). For deregistration of these handsets, (see p. 50 "RESETTING THE BASE").

CHANGING THE MASTER PIN (BASE SET)

Note:

Do not forget your personal PIN.

Note:

The default PIN of your handset is "1590". The master PIN is an essential safety feature of the system. It should be changed as soon as possible. The default setting of the master PIN is "1590". An active PIN can only be changed if a new pin is entered correctly twice in succession and the procedure is not interrupted.

- Stand-by mode
- Press the [**F/R**] **key** to display "bASE SETTING" in the LCD display.
- Press the [♣,] **key** to select this menu.
- Press the [**F/R**] **key** to display "b-CHANGE PIN" on the LCD.
- Press the [♣_{6x}] **key**. The message "FP PIN" is displayed on the LCD.
- Enter the current PIN and press the [→_{kx}] key.
 WAIT is displayed for a moment.
- When the message "NEW PIN" is displayed, enter the new base set PIN and press the [♣_x] key.
- When the message "RE-TYPE PIN:" is displayed, enter the new base set PIN again and press the [♣_x] key. "b-CHANGE PIN" is displayed again.
- Press the [-] key to return to the stand-by menu.

EP PIN:

BASE SETTING

b--CHANGE PIN

NEW PIN: T

RETYPE PIN:

ь--*CHANGE PIN* т

MULTI I

RESETTING THE BASE

You can reset the base defaults in this menu. The reset deregisters all handsets registered with the base and the base enters the "Register" mode.

The menu supports two options:

1: Reset All Registration data	No handset registered
2: Initialize Boots the default parame	eters
Ringer volume.	Step 9
Ringer melody	Melody 4
Master PIN	1590
Dial mode	DTMF (tone)
Call bar	All barred numbers are deleted together with their assignments to handsets

To reset the base set, proceed as follows:

- Stand-by mode
- Press the [**F/R**] **key** to display "bASE SETTING" on the LCD.
- Press the [🗞] **key**.
- Press the [**F/R**] **key** to display "bASE RESET" on the LCD.
- Press the [♣,] key. "FP PIN" is displayed on the LCD. Enter the PIN and press the [♣,] key. The message "INITIALIZE" is displayed.
- If you press the [36, *]
 key again, all defaults are reset.

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FP PIN.

INITIRLIZE ៥

Note:

The default PIN of your handset is "1590".

 If you press the [F/R] key, "RESET ALL" is dis played on the LCD. If you press the [♣,] key, all data relating to registered handsets is deleted.

The handset is now again in the "NOT Sub" menu.

RESET RU T

NOT SUB &

BARRING NUMBERS

Note:

set is "1590".

The default PIN of your hand-

You can bar up to five numbers with up to five digits each. You can define up to 5 handsets for each number. Each time you enter this function, you can program one barred number.

Barring a number

- Stand-by mode
- Press the [F/R] key to display "bASE SETTING" on the LCD.
- Press the [🗞] **key**.
- Press the [**F/R**] **key** again to display "bAR-RING" on the LCD.
- Press the [♣₆] key to select this menu.
- The message "FP PIN" is displayed on the LCD.
- Enter the base set PIN and press the [♣_x] key. If a number has already been barred, this is displayed in format "NO1 : 001".

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BASE SETTING

LARRING ₼

FP PIN:

- If no number has been barred, the message "EMPTY" is displayed.
- You can now enter a number which you want to bar. Then press the
 [♣_k] key. The barred number can be changed or deleted with the [⊠] key.

• The message "HANdY" is displayed. Here you can successively enter the number of all handsets for which the barred

number shall be effective

- Then press the [36. K] key.
- The "BARRING" menu is displayed. This completes the barring procedure.
- Press the [♣_κ] **key** to return to the stand-by mode.

NO I: EMPTY

NOI: 0190 T



ЬARRING Т

GENERAL INFORMATION

TROUBLESHOOTING AND REMEDIES

Problem	Cause and remedy
The set does not work	 Inspect the main supply. Isolate the base set and the handset from power for a moment. Charge the batteries. Inspect the telephone connection. Inspect the telephone socket outlet. Out of base set range: Reduce distance between handset and base.
No ringer tone	Inspect the telephone connection.Use the correct telephone socket outlet.
No dialing	 Wrong dial mode setting; change to other dial mode.
Poor communication	 You are too far away from the base set or the radio link between the base and the handset is disturbed.
Rapid tone signal	
- while you are calling	• You are too far away from the base set. Reduce the distance.
- while the link is being established	• You are off-range. Return to the radio range of the base set.
Ambient noise	 Check if it is better to change the set to another position. (Interference from other appliances).
Noise	Battery low or defective. Interference from other appliances.

GENERAL INFORMATION

AMBIENT NOISE

Depending on the position of your telephone, ambient noise cannot always be excluded, not even in the best environment. Electrical appliances, such as televisions, satellite receiver systems, fax machines, economy lamps, computers, etc., produce electromagnetic fields causing interference and noise. Do not use your cordless telephone near electric cables or electrical appliances.

If you hear noise while phoning check the items in the list below.

Hearing aids can sometimes produce disturbing noise.

Possible cause	Remedy
Does the antenna touch an object or a wall?	Change the position of the base set.
Is the handset too far away from the base?	Reduce the distance.
Is there an obstacle, such as a wall, between the handset and the base?	Reduce the distance or change the position.
Is the base/handset near a radio, television, satel- lite receiver, fax machine, power economy lamp, computer?	Remove the set to another place.
Is there contact between the power supply cable or the telephone cable and an electrical appliance?	Cable should not make contact.

GENERAL INFORMATION

SAFETY	• Use only the telephone cable supplied with the set.
INSTRUCTIONS	\bullet Power the base set only from a 230 V AC, 50 Hz mains.
	• If the telephone is hit by an object or water enters the set, inspect the housing, disconnect the power supply and have the set inspected by a specialist before you use it again.
	• If the telephone cannot be fully plugged in the outlet, consult your telephone provider.
	• Make certain to plug the power supply cable and the telephone cable in the correct sockets on the base of the telephone.
	• Ensure good ventilation to avoid heat buildup inside the telephone.
	• Do not place the set on a surface (e.g., table cloth, wool blanket, etc.) or near material (e.g., curtains or other textiles) such that the ventilation openings can be blocked.
HEALTH	The radiation emitted by the set is not harmful to your health.
CLEANING THE TELEPHONE	Clean the telephone outside. Wipe the plastic parts with a moist cloth. Do not wipe the plastic parts with a dry cloth. This causes electrostatic charge which attracts dust and causes contamination of the set.

WHERE TO PLACE THE TELEPHONE?

The telephone is designed for normal use. The base set should not be placed on a heater, in a wet room or near a personal computer, television, radio or microwave oven. Place the base set on a pad so that the plastic feet are not attacked by the top coat of the furniture and ugly marks are left. We will not be liable for damage from any of the these causes. Avoid strong vibration and do not let the base set or handset drop to the floor. This voids any guarantee claim.

TECHNICAL SPECIFICATIONS

Model	:	MBO 2400
Telephone standard	:	DECT
Frequency range	:	1.88 GHz – 1.90 GHz
Modulation	:	QPSK
Output	:	20 mW
Range	:	inside a building: up to 50 m outdoors: up to 300 m
Dial mode	:	pulse or tone, optional
Phone book	:	alphanumeric, up to 20 telephone numbers
CID memory	:	20 call numbers
Stand-by battery life	:	max. 250 hours
Talking battery life	:	max. 10 hours
Power supply	:	Base set: by mains adapter DC 9V/100 mA Handset: 3 x NiMh batteries type AAA (1.2V) 550 mAh, commercial type
Operating temperature	:	+15°C to +35°C
Storage temperature	:	0°C to +55°C
Ambient conditions	:	Do not expose to high RH or constant direct sunshine
Dimensions (HxWxD) base set with handset	:	approx. 135 x 140 x 100 mm
Weight base set with handset	:	approx. 300 g (incl. batteries)

WARRANTY

This product is under warranty for 24 months from the date of purchase. Defects which are obviously due to the material or workmanship will be repaired free of charge during this period. This warranty will not be honoured if the product has been mishandled, e.g., dropped or pushed hard, or tampered with or altered by anyone other than the manufacturer.

If you have a warranty claim, please call the service number on the rear cover page. Please have the following handy:

CE 0682

- 1) a brief description of the difficulties encountered
- 2) proof of purchase.1

GARANTIE

Bei Garantie-Inanspruchnahme wenden Sie sich bitte an die unten stehende Telefonnummer.

WARRANTY

If your product is defective, please call the phone number at the bottom of this page.

Service in Deutschland:

Hotline 0180 / 532 37 49

Service for Germany: Hotline 0180 / 532 37 49