Aastra 312w
User Guide

AASTRA

Welcome to Aastra

Thank you for choosing an Aastra product. Our product stands for the highest quality demands, teamed with first-class design.

This instruction manual will guide you in the use of your Aastra 312w, and in doing so will answer all of your important questions. If you should require any additional technical support, or if you would like information about other Aastra products please contact the person responsible for your system or your retailer first.

You can also use our website

www.aastra.com

to find any further information.

We hope that you will enjoy using your Aastra 312w.

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Using the phone

Safety instructions

Correct use/declaration of conformity

The Aastra 312w is a handset for calling via SIP in a WLAN.
The CE mark on the product confirms its conformity to the technical guidelines for user safety and electromagnetic compatibility, valid at the time of issuing the corresponding declaration of conformity according to European directive 99/5/EC.

The declaration of conformity can be viewed online at http://www.aastra.com.

Like every cordless phone, this handset uses radio signals which do not always guarantee a connection establishment in all circumstances. Therefore as a rule you should never rely solely on cordless phones for essential communication (e.g. medical emergencies).

Electricity supply/power failure/battery

This product requires an AC supply for the use of the charging point. The electricity can only be disconnected from the charging point when the mains adapter is taken out of the socket.

If there is a power failure, all saved information (program and user data) is retained without changes.

Important advice on the battery can be found in the section “Precautions when handling the battery”.

Safety

The charging point can only be installed and used in a closed building.
Place the charging point on a non-slip mat.

Do not install the charging point and the handset near:
- Water, moisture or damp areas (e.g. bathroom)
- Sources of heat, direct sunlight or unventilated areas
- Devices, which produce strong magnetic fields, electronic devices, fluorescent lamps, computers, radio devices, televisions or fax/phone devices
- Areas where the device could be covered, or where its ventilation could be obstructed, or where water could run into it
- Dusty areas, and areas which are subject to vibrations, jolting or extreme temperature fluctuations.

The following advice must be observed without fail when installing, connecting and operating the phone:

- Position the connecting cable where it will not cause accidents.
- Only connect the connecting cable to the intended sockets.
- Only connect authorized accessories.
- Only use the mains adapter plug supplied (ID no.: 23-001066-00).
- Research has shown that in certain cases portable phones, which are switched on, can influence medical devices. Therefore when using portable phones within medical facilities, comply with the regulations of the institution concerned.
- Never
  - open the charging point or the handset (except for the battery cover) yourself.
  - touch the plug contacts with sharp or metallic objects.
  - carry the charging point by the connecting cable.
- Only clean your telephone with a slightly damp cloth.
- Do not use your phone in areas where there is the danger of explosion.

Install and keep the handset and accessories out of the reach of children.

Advice for hearing aid users

Before using the handset, hearing aid users should be aware that the radio signal will engage with the hearing aid and could cause an unpleasant buzzing noise at sufficient volumes.

Overview and basic information

General

With the Aastra 312w calls are made over the Internet (VoIP - Voice over Internet Protocol). Access is gained via access points (APs) of a WLAN (Wireless Local Area Network). The handset itself uses the SIP standard (Session Initiation Protocol), so that the connections must be made via an SIP server or an SIP compatible phone system, which also supports this protocol.

The following requirements are valid for the WLAN APs:

- Radio network standard IEEE 802.11g (strongly recommended) or IEEE 802.11b
- Encryption WPA2 (recommended), WPA1 and WEP and unencrypted operation are supported.
- For WPA, an authentication by PSK (pre-shared key) is supported.
- The APs must support and have activated WME (Wireless Media Extensions), also known as WMM (Wi-Fi Multimedia) (otherwise the battery life during conversations will be considerably shorter and the speech quality will be reduced).

Familiarize yourself with the configuration of your phone. You will get to know lots of new functions, which will make communication and organization easier for you.

Please note: The handset is not suitable for use in private or public WLAN access points (hotspots).

Details regarding standby and talk times

The battery energy consumption strongly depends on the characteristic of the access points (APs) used. Please make sure that the AP supports the WMM (Wi-Fi multimedia) feature (also known as WME or 802.11e) as well as ADSD (Asynchronous Power Save Delivery). Moreover, you should be able to set the Delivery Traffic Indicator MAP (DTIM). The talk time of the handset is optimised by WMM, and the standby time by DTIM. A DTIM setting of 5 is recommended. In nets with very high broadcast loads, it may also be reasonable to select smaller values which will, however, reduce the standby time.
Networks with high broadcast loads (e.g. in the region of 5 packages per second or more) generally cause worse standby times as each of these packages must be received and analysed by all WLAN devices. The reasons for this load are mostly ARP enquiries that are sent to the WLAN without having been filtered. In large nets, a separation on a higher network layer is thus recommendable, e.g. by IP routing. Thus, you can also increase the data throughput and the battery life-span of other WLAN devices.

If these features are not supported, the battery life-span can be more than halved. Settings for the power saving mode of the handset can be found at the entries for the WLAN profiles.
Moreover, a bad radio connection (great distance to the AP) reduces the standby and talk time of the handset. High speaker or ring tone volumes, a key and display illumination that is switched on

frequently as well as an activated vibration alarm are also decisive characteristics shortening the standby and talk times. Another factor reducing the talk time is a low RTP package length that is received by the other party.

Reach

WLAN handsets have a lower reach than firmly installed WLAN connections in a PC that are exclusively designed for data traffic. This is due to the fact that in the data traffic, more package losses can be tolerated than in voice operation. Thus note that a safe voice operation starts at a field strength of approximately – 70 dBm to the AP. You can check the field strength to the APs in the site survey display (see there). Causes for low reaches may be reinforced concrete walls, microwave devices, obstacles, floor heatings, etc.

PIN protection

As in certain menus, wrong entries may cause failures of your telephone system, different system settings are protected by means of a PIN. In the delivery state, the PIN is set to “22222”. Change the PIN if necessary.

MEM card

The Aastra 312w is equipped with a memory card (MEM card). The local settings of the device (among others a local telephone book with 100 entries) and the device identification (MAC address) are saved on the MEM card. It is therefore possible to have this data available on another device when devices are exchanged (by putting the MEM card into the new device), enabling you to call immediately (without having to register again).
The MEM card is inserted into the battery compartment underneath the battery. For safety, an extra battery compartment locking device is installed.

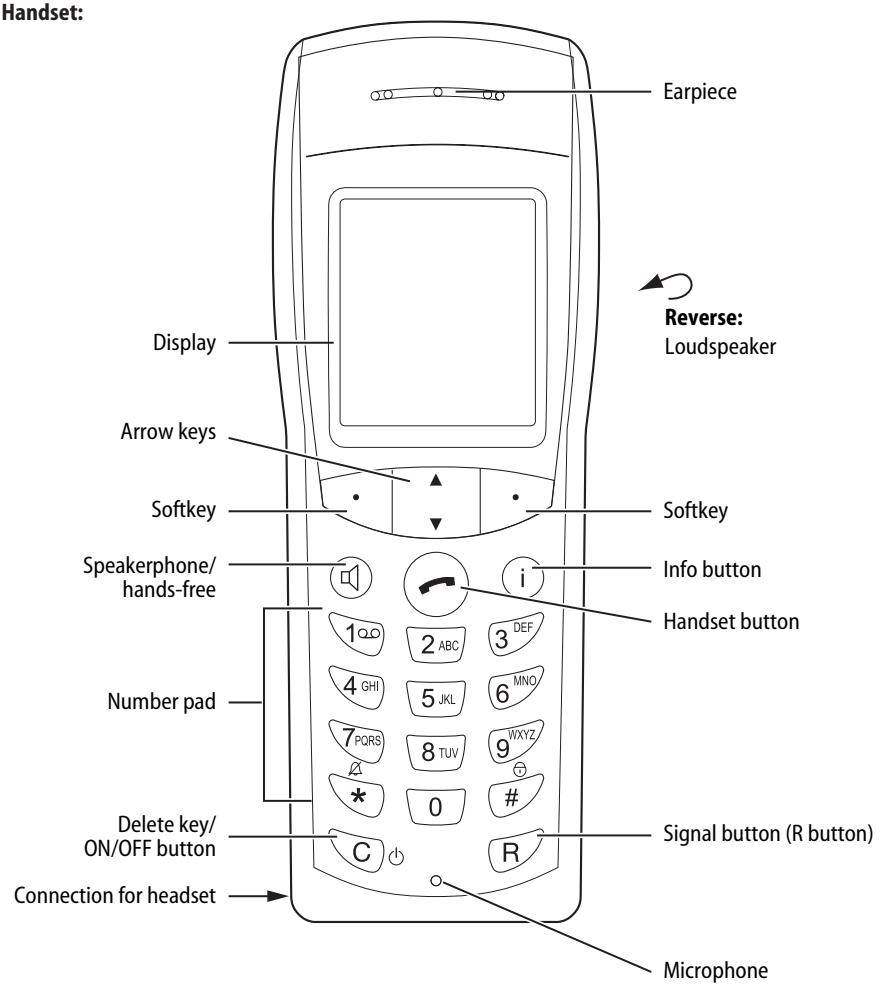
In some models, the MEM card is already installed. If the MEM card is supplied separately, you must insert it into the battery compartment underneath the battery. Please read the section below (Installation) to find out how to equip the Aastra 312w with the MEM card.

Headset connection

The handset has a 2.5 mm catch socket for the connection of a headset. Only the headset offered as an accessory from Aastra can be used in order to maintain the electric values.

Diagram

Handset:



Buttons on the handset

Softkeys – the function of an individual button is depicted in the display depending on status. If there are only two possibilities, they are divided between the left and right softkeys. If there are more possibilities, the softkey **Options** will then appear.

From the idle state, this button opens the telephone book.
Within a menu or a list, you can scroll up or down using the arrow keys.

Signal button/R button: Query button.

Speakerphone/hands-free button. Switches the inbuilt loudspeaker on (button lights up) and off.

Info button:
Pressing the button quickly when in the idle state opens the caller list.
The button flashes if new calls have been received in your absence.

The C button is used to correct entries. Pressing and holding the button in the idle state turns the handset on/off.

Handset button: Equivalent to “answer” and/or “hang up” on a standard phone.

Number buttons are used for direct entry of call numbers and names.

The pound button is used for entering the pound sign.
Pressing and holding the button in idle state: Switches on the key lock.

The asterisk button is used for entering the asterisk sign.
Pressing and holding the button in idle state: Switches the ringer (buzzer) on/off.

All buttons are illuminated.

Installation

Unpacking and installing the phone

Unpacking

The packaging contains:
- Aastra 312w handset
- Charging point
- Mains adapter plug (100 - 240V/50 – 60 Hz) with connecting cable (3 m)
- One battery (stuck into the battery cover)
- MEM card (installed or separate depending on the model)
- Belt clip
- Instruction manual (abridged version)

Installing the charging point

Your phone is produced for normal use conditions. Furniture today is coated with a highly-visible variety of varnishes and plastics and treated with different varnish servicing products. It cannot be ruled out that some of these products will contain components, which corrode and soften the plastic feet of the charging point. Device feet, which have been altered in this way by foreign products, could leave unpleasant marks on the surface of the furniture.

For obvious reasons, the manufacturer cannot be held responsible for this type of damage. Therefore please use a non-slip mat for your charging point, particularly when it is installed on new furniture, or furniture which has been freshly treated with varnish servicing products.

Note

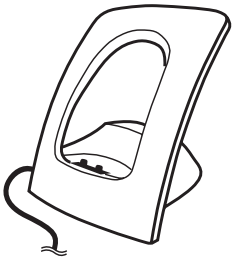
- Please observe the following:
  The AC connection should be within the reach of the cable supplied.
- Please also ensure that the charging point is not installed in the opening area of doors or windows. This could lead to damage.

Putting the charging point into operation

In order to be able to put your phone into operation, you need to plug in the mains cable for the charging point.

Safety instruction
Only use the intended mains adapter plug with type designation ID no. Europe 23-001066-00, U.S./Canada 4516883 for the charging point.

Plug the mains cable plug into the socket on the charging station, and then plug the mains adapter plug into a mains socket.



Wall power supply

Note

If the mains adapter plus has not been plugged in, or if there has been a power failure, your charging point will not work.
A handset, which is in the charging point without any electricity supply, remains switched on and the battery will run down during standby time.

Putting handset into operation

Precautions when handling the battery

It is imperative that you read the safety precautions before you use the battery for the first time. Ensure that these safety precautions and all other operating instructions remain available for future reference.

This device contains a Li-Ion battery pack. Not complying with any of the following regulations when using the battery will lead to the danger of overheating, fire and explosion.

- The battery is firmly attached to the battery compartment cover. Never try to remove the battery from the cover.
- Never use another charging station for your handset.
- Never try to use the battery to supply power for any device other than this handset.
- Never use or leave the battery near an open flame.
- Never put the battery into a microwave, throw it into a fire or subject it to intense heat in any other form.
- Never carry or store the battery with electrically conductive articles (necklaces, leads etc.)
- Never try to dismantle the battery, or modify it in any way, and never subject it to strong blows.
- Never submerge the battery in fresh or salt water.
- Never use or store the battery in direct sunlight, in a vehicle parked in the blazing sun or in any other location where there are high temperatures.
- If you ever notice discharge of liquid, an unusual smell, heat development, coloring, deformation or any other abnormal condition while you are using, charging or storing the battery, remove the battery from the handset immediately and keep it away from open flames.
- The battery fluid could damage your sight. If you accidentally get battery fluid in your eyes, wash them out immediately with clean tap water and then seek medical attention.
- If the battery is used by children, make sure that a responsible adult tells the children about the precautions and the correct handling instructions, and ensure that the children handle the battery correctly.
- If battery fluid accidentally gets on your clothes or skin, wash the affected area immediately with clean tap water. Extended contact with the battery fluid can cause skin irritation.

Precautions during use

- The battery is only designed for use with this handset.
- Only use the charging point supplied to charge the battery.
- New batteries are not charged up. Therefore you must charge the battery before using it for the first time.
- The use of the battery in a cold environment can shorten the expected battery life of a fully loaded battery. Charge the battery in a place where the temperature is in the region of 10°C to 35°C. Charging in a place outside of this temperature area can lead to charging time being longer than normal, or could even lead to failure of the charging process.
- A very limited battery life after full charging indicates that the operational life of the battery has expired. Replace the battery (complete with the battery compartment cover) with a new one.
- Never wipe the battery with thinners, petroleum ether, alcohol or other liquid products, or with chemically treated wipes. This can lead to deformation of the battery, and to operational failure.

Initial operation

Charge the battery for approx. 4 to 6 hours before using your handset for the first time. The protective measure serves to extend the operational life of the battery.
Maximum battery power will first be reached after three to five cycles of charging and running down.
Regularly place the handset on the charging point to achieve optimum battery charging.

Your handset will only be ready for use after the battery has been charged for the first time. Only then can calls be received and/or made from this handset.

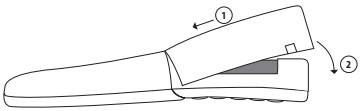
Charging and use times

Charging time: (empty battery) 4 - 6 hours to full capacity.
Talk time: Up to 5 hours (when fully charged).
Standby time: Up to 50 hours (when fully charged).

Inserting the battery

The battery is firmly attached to the battery compartment cover of the handset. To start operation, insert the battery as shown in the following sketch.

Inserting the battery
After inserting the MEM card (see next page), if not already inserted: Set the cover at a slight angle (1) and click it down (2) until it is firmly locked into place.



Removing the battery
To release the battery cover, take a suitable pointed object (e.g. biro) and press it into the hole at the base of the handset (1). At the same time, lift the cover upwards as shown in the sketch (2).

Note

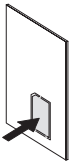
Switch the handset off before you remove the battery, otherwise data could be lost.

Inserting the MEM card

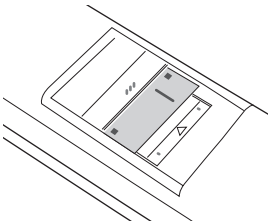
If the MEM card is supplied separately, you will need to insert this into the battery compartment.

Safety instruction
The MEM card must be handled with great care. The contacts must be free from dust, moisture, grease etc. Do not store the MEM card in warm areas (e.g. with direct exposure to sunlight). Do not bend the MEM card, this could destroy the contacts.

- First press the MEM card out of the larger frame using your finger.



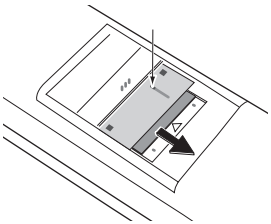
- Push the MEM card under the metal clip (gray in the diagram) with the contact surfaces on the bottom and the slanted edge to the back. Ensure that the MEM card is inserted far enough. If in the correct position it will lie flat in the cavity and will be secured against slipping by the two raised sections in the casing.
  Never touch the shiny gold contact. Static discharge can lead to device defects.



Removing the MEM card

You must only remove the MEM card if you want to give the handset to someone else, or if you need the MEM card for a new handset.

- After detaching the battery cover:
  Insert a pointed object (e.g. an unbent paper clip) into the back end of the slot in the metal clip and push the MEM card under this cover. Ensure that you do not touch the contacts, either underneath the metal clip or on the MEM card.



Battery: Battery status

The battery status is shown on the display. They mean:

Battery status 81 - 100 %

Battery status 61 - 80 %

Battery status 41 - 60 %

Battery status 21 - 40 %

Battery status below 20%

(Frame flashes) Battery almost empty, warning signal is sounded.

- When the handset is in the charging point, the flashing and/or illuminated segments show the charging process and/or the battery status (as long as the display illumination is switched on).
- If the handset is placed in the charging point with a fully discharged battery, no display will be shown until a specific battery status has been reached. This process can take a few minutes and is not a fault.
- Even if the handset is switched off, the battery will slowly run down.

Battery warning

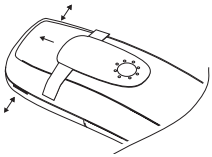
When the battery capacity has almost been used up, the battery symbol in the display will flash and you will hear 3 short “beeps” every minute as an acoustic warning (can be switched off in the menu “Audio” > “Signal tones”). If you are in the middle of a conversation, there will be up to 5 minutes talk time left before the handset switches off.

Logging on the handset

Some preparations and programming are necessary to be able to integrate your handset into an existing wireless network (WLAN) and to register it on an access point (AP). You will find a detailed description of the corresponding steps in the chapter “WLAN: Registering a handset” starting on page 47.
You can save five so-called “profiles” on your handset. These profiles contain the accounts of five different WLAN configurations. When changing from one WLAN to another you are therefore able to make calls within a very short period of time by selecting the corresponding profile.
For further information on the profiles see menu “System > Network > Profiles” on page 51.

Attaching/removing the belt clip

Push the adapter clip over the reverse side of the handset until the clip locks into place in the side openings. To remove the belt clip, pull the clips apart slightly.



Display screen, softkeys and buttons

The display

Symbols in the upper display row:

Quality of the radio connection (four columns – secure radio connection; only one column – insecure radio connection).

Microphone switched off.

Battery status (see page 13).

You have programmed and activated a local alarm time (see page 46).

The “Do not disturb” function is activated (see page 42)

Call diversion activated.

The ring tone is switched off.

The PIN protection for administrator entries is deactivated.

There is no connection from the handset to an access point (AP).

New entry in the call list.

Symbols in the lower display row (related to the buttons):

Softkey for redialing

Softkey for the telephone book

Menu Softkey for the main menu

Softkey to cancel the keypad lock

Softkey (control buttons) to scroll up or down in lists

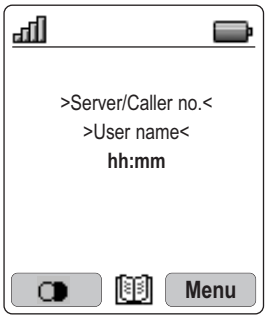
Softkey (control buttons) to move the entry cursor

Softkey (control buttons) to set the ringer volume and handset volume (during calls and/or during connection)

Text

Information on the current connection status or menu lists and texts will be displayed for you in windows. In the idle state you will see the network name with internal call number, your programmed user name, the current time and also e.g. a programmed alarm and activated features. The time will first be shown when it is transferred from the server.

Selection lists (e.g. the telephone book) and the menu for the features can be scrolled up or down using the arrow keys. An entry that can be selected is shown in bold.



Softkey row

The texts and symbols in this row are related to the buttons below them. The content of the row changes depending on the operating status.

Illumination

The display automatically illuminates when you receive calls or when you press a button, and turns the illumination off again automatically after a short period if no further buttons are pressed. You can set the corresponding time period in the menu “Display > Illumination > Display”.

Softkeys and buttons

Both of the buttons underneath the display and the arrow keys are known as softkeys. The functions assigned to the buttons are shown in the bottom display row. The button function changes automatically according to the particular operational status of the handset.

Softkey: Arrow keys

Symbols will be displayed above the arrow keys, which represent their functions at that particular time:

Pressing the arrow key up and/or down opens the telephone book.

When entering call numbers or text you can make changes by moving the cursor. The arrow keys move the cursor one space along when pressed once quickly. If you keep the key pressed down, the cursor will continue to move until the key is released.

When a selection list is displayed (e.g. telephone book or menu) move the cursor bar to the desired entry with the arrow keys.

Handset/loudspeaker/headset:
Adjust the volume to the desired level with the arrow keys. The settings will be shown numerically and graphically.

Softkey: OK

You can confirm the selected function with **OK** . If there is a possibility to switch a function, the switching process will be carried out using this button. In the display, active settings (ON) will be designated by a "✓" at the level of the corresponding term in the display frame; for inactive settings (OFF), a "—" will appear, or the position will be empty.

Softkey: Back

With **Back** you can leave the section of the menu that is currently displayed. The display then shows the selection in the previous menu, or the current idle state or connection display.

Softkey: Redialing

Enables selections to be made from the redialing list.

Handset button

According to the current status of the phone (e.g. idle state, in conversation or in editor mode) the handset button has the following functions:

... **In idle state:**
The dialing tone is established.

... **When there is an incoming call:**
The call is accepted.

... **During a conversation:**
The conversation is ended and/or the connection is broken down.

... **If you are browsing a list, e.g. of caller numbers or the redialing list etc, or numbers have been entered:**
The call number is dialed.

Loudspeaker button

Activates speakerphone/hands-free function.
When the speakerphone/hands-free function is switched on, this button is illuminated.

Info button (i)

This button can be used to access the caller list. If there are new entries in the caller list, the info button flashes.

C button

The C button has a number of functions. The function is dependent on the current status of the phone (e.g. in idle state, during a conversation or in editor mode etc.) and the **length of time** for which the button is pressed. The following functions can be implemented:

... **If the device is switched off:**
Short press or pressing and holding the button: The device is switched on.

... **In idle state:**
Pressing and holding the button: Handset is powering off.

... **When entering text or call numbers:**
Short key press: Deletes the character to the left of the cursor.
Pressing and holding the button: Deletes the entire entry.

... **During the display of lists (e.g. call list):**
Short key press: Deletes the entry.

Signal button (R)

Short key press during a connection: A query is initiated.
Short key press to toggle between two active lines.

button

Pressing and holding the button in idle state: Switches the key lock on.
The key lock is switched off again by pressing the softkey and the button within five seconds.

* button

Pressing and holding the button in idle state: Switches the buzzer/ringer on or off.
Pressing the button quickly whilst entering text (e.g. names for telephone book entries): Switches from upper to lower case letters, or vice versa.

Number buttons

The number buttons can be used for the direct entry of call numbers and names, and alpha numerics (vanity numbers).
When entering text, you can use the arrow keys to move the entry position to the beginning or end of the entry. The C button deletes individual numbers/characters. The procedure can be aborted using **Back** .
Further information can be found in the section “The editor” on page 23.

Softkey: Menu

Short key press in idle state: The handset menu is opened.

Automatic fade out

Menus/settings are automatically switched off in the following conditions:

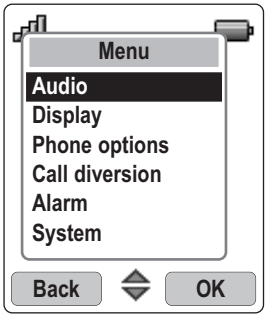
- No entries for 1 minute with open menus.
- No entries for 3 minutes with open “entry windows” (e.g. profile settings) – without storing the entries that have already been made.
- If a call is received when in the idle or connection state. When the device returns to the idle state, the menu window which faded out will be shown again, so that you can continue with any entries that were interrupted.
- If you carry out entries in the connection state which require a new connection-dependent menu to be called up (e.g. the signal button Ⓡ is pressed to make queries, see “Calling”).
- When using a softkey, which calls up menus other than the one already on display.

Entries that have already been saved in the menu remain saved once the menu has been left.

Navigating the menu

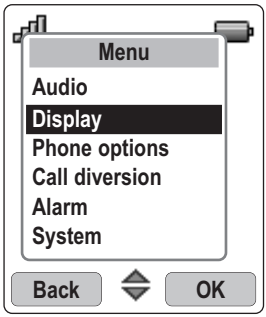
Example: The main menu

If you press the Menu softkey, the main menu will be displayed.



The following menu items are available for selection:

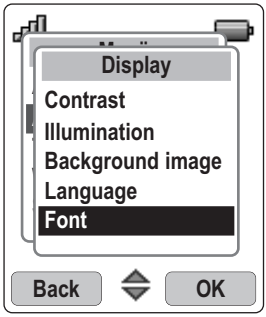
- Audio
- Display
- Phone options
- Call diversion
- Alarm
- System



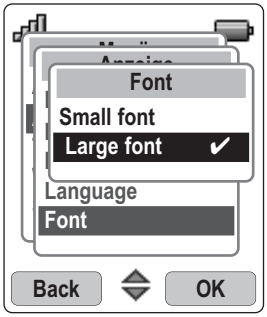
Highlight an entry using the arrow keys. Press OK to call up a submenu. Please see the chapter “Phone settings” for a more detailed description.

The process is exactly the same for selecting a submenu item (Audio, Display etc.), see also “Overall menu” on page 71.
Please note: Menu items that cannot be selected are shown in grey.

Then confirm your selection using OK .



From the submenu items contrast, illumination, background image, language and font, select e.g. **font** with the arrow keys and then press OK .



Then select e.g. **font** with the arrow keys and press OK. After doing this, your new setting will be adopted.

Switching function

Some functions only offer two settings – ON or OFF. An active function (ON) can be identified by the ✓ such as e.g. Do not disturb ✓.

If the function is switched off, the symbol — appears e.g. Do not disturb –. Always carry out the switching process to set this function using the OK softkey.

Setting possibilities using the number buttons or the arrow keys

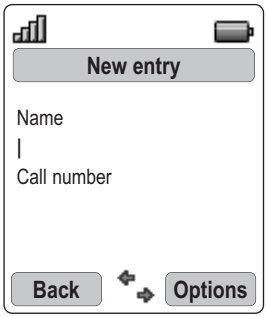
For example, in the menu "Audio > Ringer settings > Ringer volume" you can set the desired volume (e.g. level 4) using either the number keypad or the arrow keys. After pressing OK your new setting will be adopted.

Example: Telephone book/editor

The example explains the possibilities for creating a new entry in the telephone book, further options for the telephone book can be found starting on page 37.

Open the telephone book using the arrow keys .

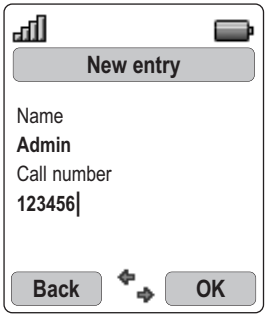
Press **Options** and confirm **New** using **OK**. You will then reach the entry location.



Enter the name. To obtain the desired letter from a button, press the button the appropriate number of times in quick succession or press and hold the button to display the character set in an insertion. The entry position automatically moves on if you do not make any entries for a short period of time, or if you enter a different character. You can correct entries by moving the cursor to behind a character using the arrow keys. The character to the left of the cursor can be deleted using the C button. At this point you can now insert new characters.

The asterisk button can be used to switch between different styles of writing: lower case, words starting in upper case, upper case or numbers. The mode set will be shown by a symbol in the upper line.

Once you have entered the name, move on to entering the call number using the arrow keys.



Enter e.g. “123456”.

Corrections can be made using the same procedure as for the name entry.

Press **OK** at the end of the entry to save it.

The editor

Enter names/call numbers

Using the editor you have the opportunity to make new entries in lists of call numbers and names (e.g. telephone book), or to make changes.
The maximum length is 32 characters for number entries (call numbers) and 16 characters for word entries (names).

The following example shows the character set of the buttons when the display language is set to "German". When the display language is set to a different language, different/more sets of characters will be offered.

Button	Upper case	Lower case
1	. , ? ! 1 @ ' " - ( ) / : _ ; |	? ! 1 - + * / = & ( ) % ¿ ¡
2	A B C 2 Ä À	a b c 2 ä à
3	D E F 3 É	d e f 3 é
4	G H I 4	g h i 4
5	J K L 5	j k l 5
6	M N O 6 Ö	m n o 6 ö
7	P Q R S 7 ß	p q r s 7 ß
8	T U V 8 Ü	t u v 8 ü
9	W X Y Z 9	w x y z 9
0	Space 0 € £ $ ¥ ¤	Space 0 € £ $ ¥ ¤
✳	Switching writing style	Switching writing style
#	# * + & % = < > [ ] { } \ ~ ^ ¿ ¡ §	# * + & % = < > [ ] { } \ ~ ^ ¿ ¡ §

Basic functions

Switching the handset on/off

Once the battery has been charged for the first time, your handset will be switched on automatically and is ready for use. You can switch off your handset to maintain the battery life for longer.

Switching off the handset

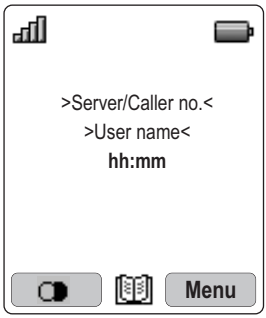
Press and hold the C button.

Note

If your handset is switched off, it cannot respond to an incoming call or activate a programmed alarm. Incoming calls will not be entered into the call list.

Switching on the handset

Press the C button



After a few seconds, the display will look like this (e.g.):

The name of the SIP server will be shown as the network name. You can change the name of the handset in the menu “Phone options > User name”.

As a rule, the current date and time settings will be supplied from the server on registering. If necessary, you will have to set the correct time zone (menu “Phone options >...”).

Note

If, on the other hand, Please register! appears on the display, the handset must be registered. Please contact your system administrator.

Key lock

Switch the key lock on before carrying the handset in your pocket. This will prevent a call number being dialed accidentally.

If you receive a call, the key lock will be switched off for the duration of the call. You can accept the call using the handset button.

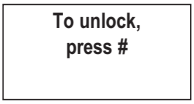
Turning the key lock on

Press and hold the pound button in the idle state.

The symbol will appear over the left softkey.

Turning the key lock off

Press the softkey .



Press the pound key within five seconds to deactivate the lock.

Switching the hands-free function on/off

Pressing the loudspeaker button in the idle state (the handset is then ready to dial) or during a connection turns the loudspeaker on or off.

Setting the handset volume during a conversation

You are having a conversation (using the handset, loudspeaker or headset).
The volume adjustment is entered via the arrow keys ⁚ and then set optionally via the arrow keys ⁚ or by the keys 1-7. The current setting is displayed graphically.

The altered setting is only temporarily valid for the existing connection. If the temporary setting is confirmed using OK, it is valid as the new basic setting (see page 39) for further connections.

Switching the ringer off

If you do not want to be disturbed (e.g. during a meeting), you can switch off the ringer (only the ringer via the loudspeaker). To do this, press the * button until you hear a noise and appears on the display.

To turn the ring tone back on, press and hold the * button again.

Alternatively, you can also use the menu "Audio > Ringer settings > Ringer device" to deactivate the entry "Buzzer", then the symbol will also appear in the display.

Setting the ringer during a call

If you are called, you can use the arrow keys to temporarily change the ringer volume for this call. If the temporary setting is confirmed using OK, it is valid as the new basic setting (see page 39) for further connections.

Handset not attainable

When the "Do not disturb" function is activated (see page 42), your handset is no longer attainable. However, calls are still noted in your call list (as long as the call number is transferred).
You will not be disturbed but you can see calls, giving you the opportunity to return important calls if necessary.

Illumination

The illumination is activated each time a button is pressed and remains switched on for the set time (can be set in the menu "Display > Illumination > Keypad").

Change the display contrast

In order to adjust the display to on-site illumination/brightness, you can change the contrast. The setting can be made in the menu “Display > Contrast”.

Handset secrecy button

If you do not want the person you are on the phone with to hear what you are saying e.g. to another person in the room, you can momentarily activate the secrecy button.

You are in the middle of a conversation

Press **Mute**. The symbol appears in the display.

The person you are talking to on the phone cannot hear what you are saying anymore.
When you want to talk to the person again, press the left softkey once more. The person you are on the phone with can hear what you are saying again.

Calling

Dialing the call number

All calls described in this section that are initiated by pressing the handset button can also be carried out in the hands-free mode using the loudspeaker button .

Dialing call number with predial

When using predial, you have the opportunity to correct your entries before dialing.

Enter the call number in the idle state. Correct mistakes using the arrow keys (cursor) and the C button to delete and replace with new entries if necessary.

Press the handset button to dial.

Dialing call number with direct dialing

Press the handset button.

Enter the call number and end it with **Dial**; the number will be dialed immediately.

Note

Please enter the call number quickly, because four seconds after the last number is entered dialing will be started even if **Dial** has not been pressed. If numbers have not been entered completely, the wrong number will be dialed.

To end the conversation:

Press the handset button.

... or

Press **Options** .

Select **Disconnect** .

Press **OK** .

Calling from the redialing list

The 10 most recently dialed call numbers (max. 32 characters) are saved in the redialing list. Each new number that is dialed overwrites the oldest entry in the list.
You can see the call numbers in the redialing list and call up the corresponding details (e.g. call time).

In the idle state, press .

Select the desired call number.

Press the handset button to dial immediately.

... or

Press **Options** .

Select **Dial** .

Press **OK** to dial the call number.

In the option menu, the following commands still have the following functions: . .

Info	. . . view details regarding the call.
To phone book	. . . transfer the telephone number into the telephone book.
Delete	. . . delete the entry.
Delete all	. . . delete the complete list.

Note

You can also call up the redialing list when you have already pressed the handset button and can hear the dialing tone. If this is the case, the selected entry will be dialed by pressing the handset button .
Entries in the redialing list can be deleted using the C button.

Calling from the telephone book

The telephone book can save a maximum of 100 entries, which are automatically placed in alphabetical order.

In the idle state, press the arrow key .

Select the desired name

or

Enter one or several of the letters which start the name in order to start a targeted search (if necessary press the number buttons several times in quick succession).

Press the handset button to dial immediately.

... or

Press **Options** .

Select **Dial** .

Press **OK** to dial the call number.

Note

You can also call up the telephone book when you have already pressed the handset button and can hear the dialing tone. If this is the case, the selected entry will be transferred to the predial by pressing the handset button .

Calling from the caller list

When you press the info button ⓘ a list of calls that have not been accepted will be displayed. You can see the call numbers in the caller list and call up the corresponding details (e.g. call time).

ⓘ Press the info button in the idle state.

Select the desired call number.

Press the handset button to dial immediately.

... or

Press **Options** .

Select **Dial** .

Press **OK** to dial the call number.

In the option menu, the following commands still have the following functions: . .

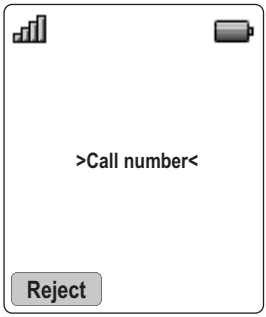
Info	. . . view details regarding the call.
To phone book	. . . transfer the telephone number into the telephone book.
Delete	. . . delete the entry.
Delete all	. . . delete the complete list.

Note

You can also call up the caller list when you have already pressed the handset button and can hear the dialing tone. If this is the case, the selected entry will be dialed by pressing the handset button . Entries in the caller list can be deleted using the C button.

Accepting calls

Calls are signaled acoustically and optically (flashing i key) by the handset and shown on the illuminated display. The call number or the caller's name will be shown. If the call number is saved in the telephone book, the caller's name will be displayed as entered in the telephone book.



During the call you can…

… Reject the call using the **Reject** softkey (if so, caller hears busy tone).

Press the handset button to accept the call.

Putting a conversation on hold

You are in the middle of a conversation.

Press the signal button. The conversation is put on hold.

or

Press **Options** .

Press **OK** . The conversation is put on hold.

Getting back to a held conversation

Press the signal button. You will be reconnected with the person on the other end of the phone.

or

Press **Options** .

Press **OK** . You will be reconnected with the person on the other end of the phone.

Accept call waiting

If you receive another call during a connection, you will hear a call waiting signal. You accept the call as follows.

Press the signal button. The active call is put on hold.

or

Press **Options** .

Press **OK** . The active call is put on hold.

or

Press the handset button **twice**. The waiting call is accepted, the first connection is separated.

Calling another contact during a conversation

Making a query call

You are in the middle of a conversation.

Press the signal button – the first conversation is put on hold.

Enter the call number with the number buttons and finish it with **Dial** (or wait 4 sec).

or

Select a call number from the caller list, redialing list or telephone book as described starting on page 30.

To end the query, and to return to the held connection:

Press **Options** .

Select **Disconnect** .

Press **OK** . You will be reconnected with the person you were originally speaking to.

Note

When entering the call number, if you do not press any buttons for 4 seconds, the number you have entered up until that point will be dialed. Subsequent dialing is not possible.
If you disconnect the query conversation with the handset button , the held conversation appears again using a call-back function, as long as the participant has not already hung up.

During the query: Toggle

If the connection is achieved, you can use the signal button Ⓡ to talk to either of the other people in the conversations as you choose (toggle).

Ⓡ The conversation that is currently on hold will be activated, and the other conversation put on hold.

Transferring a call

Consulted transfer

You are conducting a query conversation and are currently "toggling" between calls (see above):

Press the handset button – the conversation will be transferred.

Blind transfer

You are in an active call and want to transfer the call without query.

Ⓡ Press the signal button – the call is put on hold.

Dial the call number manually or select a call number from the caller list, redialing list or telephone book as described starting on page 30.

Press **Dial**, the number is dialed.

Once the phone is being called press the handset button. The call is transferred.

or

Press **Options**.

Select **Transfer** and confirm with **OK**.

Dial the call number manually or select a call number from the caller list, redialing list or telephone book as described starting on page 30.

Press **Dial**, the call is transferred.

The telephone book

New entry

The telephone book can save 100 entries: Call numbers of up to 32 numbers, names of up to 16 characters.

In the idle state, press the arrow key .

Press **Options** .

Select **New** and confirm with **OK** .

Enter the name and use the arrow key ▼ to proceed to enter the call number (possibility for correction see page 23).

Enter the call number and press **OK** . The entry will be saved.

Note

Always enter the call number with the location network prefix, as otherwise no name can be displayed when calls are received.

Editing an entry

In the idle state press the arrow key and scroll to the entry

or

Enter the start of the name in order to start a targeted search (if necessary press the number buttons several times in quick succession).

Press **Options** .

Select one of the following menu items and confirm with **OK** .

Edit	You can make changes to the names and the call numbers.
Delete	Deletes the entry concerned **immediately**.
Delete all	Deletes the entire contents of the telephone book **immediately**.

Note

You will find information about entering characters (editor) from page 23 onwards.

Phone settings

Menu: Audio

Press **Menu** .

Select **Audio** and confirm with **OK** .

Select one of the following menu items and confirm with **OK** .

Ringer settings Select one of the following menu items and confirm with **OK** .

Melody Select a melody using the arrow keys and confirm it using **OK** .

Ringer volume Select the desired ringer volume with the arrow keys and confirm with **OK** .

Ringer device Select the appropriate entry with the arrow keys and switch on ✓ or off – using **OK** .

- **Buzzer** ✓ Ringer via the loudspeaker
- **Vibrator** ✓ Call with vibration alert
- **Headset** ✓ Call signal in the headset

Leave the menu using **Back** .

Signal tones Select the appropriate entry with the arrow keys and switch on ✓ or off – using **OK** .

- **Key click** ✓ Acoustic acknowledgement of pressing a key.
- **Confirm tones** ✓ Acoustic acknowledgement of successful programming.
- **Battery alarm** ✓ Warning signal for low battery capacity
- **Range alarm** ✓ Warning signal for fluctuation radio signal at the range limit.

Leave the menu using **Back** .

Volume Select one of the following menu items and confirm with **OK** .

… **Earpiece** Select the desired volume with the arrow keys and confirm with **OK** .

… **Loudspeaker** Select the desired volume with the arrow keys and confirm with **OK** .

Note

If the handset is in energy saving mode (the display is off), the first time a button is pressed it will not be acknowledged by a “key click”.

Menu: Display

Press **Menu** .

Select **Display** and confirm using **OK** .

Select one of the following menu items and confirm with **OK** .

Contrast

Select the desired contrast with the arrow keys and confirm with **OK**.

Illumination

You can set the time for which the illumination should stay on. Please consider that long illumination times result in increased energy consumption, which will be at the cost of the standby time of the handset. You can determine the length of display illumination while the device is in the charging point using the setting “Charging light”.

- **Display** — Settings range 10 sec to 240 sec in set steps
- **Keypad** — Settings range “Off” to 240 sec in set steps
- **Charging light** — Settings range 1 sec to 240 sec in set steps, “On” and “Off”.

Background

Using the arrow keys you can choose one of six motifs as a background image that will be shown as a screen saver.
Select the desired background image or “No image” and confirm with **OK** .

Font

You can choose between two text sizes for the presentation of menu contents. Select the desired text size with the arrow keys and confirm with **OK** . Use **Back** to end the settings.

- **Small font** ✓
- **Large font**

Menu: Phone options

Press **Menu** .

Select **Phone options** and confirm using **OK** .

Select one of the following menu items.

Do not disturb – You can switch this function on ✓ or off – using **OK** . If it is switched on, the symbol appears in the display.
Incoming calls are not signaled and the caller will hear the busy tone. However, the calls are listed in the caller list.

Call wait. off – Using **OK** , this feature can be switched on ✓ or off – . If the feature is switched on, another call will not be signalled during an existing connection. The caller hears the busy tone.

Auto answer – You can switch this function on ✓ or off – using **OK** . If it is switched on, an incoming call will be accepted as soon as the handset is taken out of the charging point. The conversation is automatically ended when the handset is placed back into the charging point.
If a headset is connected, the call is automatically accepted after three seconds.

Auto key lock – You can switch this function on ✓ or off – using **OK** . If it is switched on, the key lock is automatically switched on 60 sec after the last button is pressed.

Silent charging – You can switch this function on ✓ or off – using **OK** . If it is switched on, no calls are signaled when the handset is in the charging point. During this time “Silent charging” appears in the display. The caller hears the busy tone. The calls are listed in the caller list.

User name Press **OK** and enter a name, which will be displayed on the handset display when in idle state. You will find advice on making the entry on page 23. As in certain systems, the user name can also be transferred to foreign telephones, the setting is locked via the administrator PIN (“22222” in the delivery state).

Country options Select one of the following menu items and confirm using **OK** .

••• **Language** You can choose between different languages for the menu in the display:

- English
- Deutsch
- Français
- Italiano
- Español
- Dansk
- Nederlands
- Svenska

- Suomi - Norsk
- Polski

Select the desired language with the arrow keys and confirm with OK.

... Country

Press OK, select one of the entries offered and confirm with OK. Selecting a country means that the tones such as e.g. the dialing tone or the busy tone will be played back in the way appropriate for the specific country.
The following choices are available:

- per DHCP - Germany
- Switzerland - France
- USA - Canada

If "per DHCP" is selected, the information will be determined by the DHCP server (as long as this setting is also selected in the network profile, see page 51). If no information is provided by the DHCP server, the preset "Germany" will be used.

... Time zone

This menu item allows the correct time zone to be set (the NTP server always transmits GMT = 0/London). Press OK. Firstly select a continent using OK.
In the following list, the time difference in hours as well as a city or a region is specified.
In the list the time difference is given in hours, as well as a town or region as an example. The selection of the correct time zone also influences the correct time to switch between winter and summer time.
For example, for Germany, Austria and Switzerland "1 Berlin" should be set.
Confirm your selection using OK.
When "per DHCP" is marked, if it is selected the settings from the DHCP server will be used. If the corresponding option is not available in the DHCP, the preset will be used (time zone 0/London).

... **Time format**

Press **OK** and select the date and time format used in your country using the ▼ key.
The following settings are possible:
- day, month, year (dd.mm.yy)
- month/day/year (mm/dd/yy)
- year - month - day (yy-mm-dd)
- 24 hour time format
- 12 hour time format, am/pm.

Menu: Call diversion*

You can divert your calls to another telephone number (call rerouting). Rerouting can be effected immediately, if your telephone is busy or after a certain time (max. 15 seconds).

Press **Menu** .

Select **Call diversion** and confirm using **OK** .

Select one of the following menu items and confirm using **OK** .

Unconditional –	Using **OK** the respective property can be switched on ✓ or off – .
Busy –	Using **OK** the respective property can be switched on ✓ or off – .
By time –	Press **OK** and set the time using the arrow keys.
Call number	Specify the telephone number of the rerouting destination.

Note

The rerouting types “Busy” and “By time” can be activated simultaneously. An active call diversion is shown in the display by means of the symbol .

* This feature is not available in some PBX systems.

Menu: Alarm

You can program an alarm time, at which the handset will give off a one-off wake-up call.
The wake-up call lasts for 60 seconds and can be stopped by pressing **OK**.
If the wake-up call is switched on, the symbol appears in the display.

Press **Menu**.

Select **Alarm** and confirm using **OK**.

Select one of the following menu items and confirm with **OK**.

Activ e – Switch the alarm function on ✓ or off – using **OK**.
Use **Back** to transfer the settings.

Set Enter an alarm time with the number buttons and confirm with **OK**.

Note

If the handset is switched off at the programmed alarm time, the wake-up call will be given as soon as possible once it is switched on again.
The wake-up call will only be made once; in order to have another wake-up call the function must be switched to “Active” again in the menu.

WLAN: Registering a handset

Setting up a WLAN profile

You can store the data needed for up to five different WLAN networks in your handset. Each set of data is saved in a **profile**. When changing to another network you only need to activate the corresponding network to be able to connect.

There are two ways to set up a profile: You can either carry out the selection using “Site survey”, or you can enter the configuration manually. Selection via “Site survey” is preferable when you are in the transmission range of the network that is to be established. Using this system will mean that some of the necessary entries are already adopted automatically.

Selection via Site survey

This process uses the data from the currently selected access points (AP) and a guideline for a new network profile. The handset attempts to enter the corresponding values. Check and correct these entries, e.g. the region (Regulatory Domain) or the WEP/WPA code, as these cannot be transmitted automatically.
You will find advice on the entries in the parameter overview in “Manual configuration” (see page 48). Please also make yourself familiar with the data with which you have set up the WLAN.

- Press **Menu** .
- Select **System** and confirm using **OK** .
- Select **Network** and confirm using **OK** .
- Select **Tools** and confirm using **OK** .
- Select **Site survey** and confirm using **OK** .
- Select an AP of the network that is to be established. The SSID of the network is shown in the lower part of the display, this can be used to identify the network. You can find the meanings of the displays in the site survey window on page 57. If necessary, use the filter function (see note on page 57).
- Press **Options** .
- Select **New Profile** and confirm with **OK** . Enter the administrator PIN (“22222” by default). The entry mask for the network profile is opened. This will already be partially filled in. Check and, if necessary, supplement the entries. You will find advice on making the entry on page 51.
- Press **OK** to save the new profile.

Manual configuration

Press **Menu** .

Select **System** and confirm using **OK** .

Select **Network** and confirm using **OK** .

Select **Profiles** and confirm using **OK** .

If there is still no profile saved:
Press **New** .

If profiles are already saved:
Press **Options** , select **New** and confirm with **OK** . Enter the administrator PIN ("22222" by default).

The empty entry masks for a network profile will be opened.

Parameter overview

Information regarding the menu control
In the setting windows of the profiles and access data, you can, by **shortly** pressing the arrow keys, move the cursor in the entry line by one position. By **keeping** the arrow keys **pressed**, you can go to the next entry line.

You can make the following entries in the profile. Please also familiarize yourself with the data with which you have set up the WLAN. When making entries always switch between the entry/selection lines using the arrow keys and finish the profile definition with **OK** .

Profile name: Enter a name (any name) for this new profile (for advice on entering names see page 23, you can make corrections using the C button).

Region: Choose the appropriate region from those offered in the list using the left softkey ▼ . Press the arrow key in order to access other entries.

SSID (Network name): Enter the SSID.

Security: Choose the desired encryption from the list of possibilities (WEP, WPA1-PSK, WPA2-PSK or No security) using the left softkey ▼ . Press the arrow key in order to access other entries.

WEP key or **WPA key** : If you have selected WEP, WPA1-PSK or WPA2-PSK, you must enter the corresponding rubric in the key. When the entry is made, the key is shown in plain text. After you have quit the entry mask and called it up again only "*****" will be displayed. In order to correct a key,

you must enter it again. In the AP, always set the first WEP key as default value and also use it in the device settings.

Power save mode : Using this setting, you can influence which WLAN power saving mode will be used during the voice connections. In most cases the Auto selection should find the suitable setting. Not every AP supports all power saving modes. In some configurations, the Aastra 312w will not be able to automatically detect the best power saving mode to be used in a reliable way. In these cases it may be useful to manually set another mode. Using the left softkey ▼ select . . .

Auto: In this setting, the device tries to use U-APSD if the AP signals that it will support this. If the AP does not support U-APSD, the Aastra 312w will use asynchronous PS-Poll. Whether U-APSD is supported or not can be determined in the site survey mode. If serious interruptions in the voice connection occur quite frequently, you should use another power saving mode or no such mode at all.

U-APSD: Unscheduled Automatic Power Save Delivery is defined in the 802.11e standard. This mode combines the longest battery life-span with highest sound quality. If this mode is selected in the WLAN profile, however not supported by the AP, the Aastra 312w will not use a power saving mode.

Async. PS-Poll: This mode uses the PS-Poll packages defined in 802.11 in order to request voice packages from the AP. In contrast to the standard, the PS-Poll packages are not only used after the Beacons but asynchronously to them. In this way, one almost reaches the battery life-span of U-APSD with identical sound quality. Not all APs support this mode. If serious interruptions in the voice connection occur quite frequently, you should use another power saving mode or no such mode at all.

802.11 PS-Poll: This mechanism has been defined in the original 802.11 standard. It involves the material disadvantage that a large part of the packages is delayed by the duration of the Beacon interval. This impairs the sound quality. Yet, this mode may be useful if the AP does not support any other power saving mode, but you, nevertheless, require long talk times.

None (power saving mode)
No power saving mode is used. The battery life-span for voice connections is thus at least halved. This mode can be used if the AP is not compatible with any other power saving mode. In contrast to the other settings, this setting also deactivates the search for access points in the background as this search also depends on a power saving mode. Thus, the handover behaviour is deteriorated.

IP address from: Choose the desired option from those offered in the list using the left softkey ▼. Press the arrow key in order to access other entries. If you select the setting “static” instead of “per DHCP”, you will have to carry out the entries for the IP address, net mask, gateway and DNS server. Enter the necessary points for the separation of the blocks with the pound button.

NTP server: The NTP server can even be set manually when the IP address allocation "per DHCP" is selected. The NTP server address set manually takes precedence over an NTP server address received from the DHCP server.

DSCP/ToS: Here, the value of the Type of Service Byte (RFC 791) can be determined in the IP header. The value is entered in decimal format. This value is set in all outgoing SIP and voice packages. Alternatively, you can enter a Differentiated Services Code Point (DSCP, RFC 2474). DiffServ uses the first 6 bits of the Type of Service Byte.
Since DSCP and ToS use the same byte in the IP header, it only turns out by the utilisation in the network components whether the value will be interpreted as DSCP or ToS.

After the configuration

A newly established profile will automatically be selected as the active profile. If the network is in reception range, the field strength bars will be shown after a few seconds. If "per DHCP" is selected for the address allocation in the menu "System > Network > Profiles", the field strength bars/"DHCP" will flash alternately.

If the binocular symbol can still be seen, the settings must be checked:
- Is the SSID right? Does the regulatory domain match the channel that the AP is transmitting on?
- Are the safety settings and the key right?

If the "binocular" and field strength bars are changing every few seconds, the network is being lost again and again:
- Is the destination field strength sufficient?
- Are the safety settings and the key right?

If the field strength bars/"DHCP" are flashing alternately:
- Is a DHCP server active?
- Is "System > Accounts > per DHCP" activated in the menu but the DHCP server is not transferring any accounts?

  Solution: Supply the DHCP server with accounts or configure the accounts manually.

Changing the profiles

Press **Menu** .

Select **System** and confirm using **OK** .

Select one of the following menu items and confirm with **OK** .

Network Select one of the following menu items and confirm with **OK** .

Profiles Select one of the displayed profiles and press **Options** .

… **Select** The profile that is currently active is marked with a ✓ .
Select one of the profiles from the list and confirm using **OK** . The handset will attempt to register itself in the corresponding WLAN.

… **Edit** Select one of the profiles from the list and confirm using **OK** . Enter the administrator PIN (“22222” by default). You can edit the entries for this profile (for details see “New”).

… **Delete** Select one of the profiles from the list and confirm using **OK** . Enter the administrator PIN (“22222” by default). The profile will be deleted immediately.

Advice on the DHCP server

It is possible to configure the handset so that in addition to the IP configuration, the telephony accounts (see chapter “Setting up a SIP server”, page 52) are also transmitted per DHCP. If a DHCP server only transfers an IP configuration without accounts, the handset will ignore the offer from the DHCP and wait for one with accounts.
If this is the case, “DHCP” will flash permanently in the top left of the display. Then either the DHCP server must be configured so that it transfers access data (see chapter “Supported DHCP options”, page 65), or an access must be configured manually in the handset.

Setting up a SIP server

You can store the accounts of up to five different WLAN networks in your handset. The data required for this is all stored as accounts in a list from which a server can be selected. The data for the SIP account is defined by the system administrator.

Press **Menu** .

Select **System** and confirm using **OK** .

Select **Accounts** and confirm using **OK** .

<Active profile>

or

per DHCP

Press **Options** , select **New** and confirm with **OK** . Enter the administrator PIN ("22222" by default).
The empty entry mask for the account is opened to an SIP server.

If a network connection exists, the name of the gateway and the user ID (= call number) should appear in the display within a few seconds of leaving the menu. If this is not the case, please see "System > Accounts > Info" (see page 59).
"Info" will not be able to be called up if absolutely no access has been set up, and nothing has been received via DHCP.

Parameter overview

Information regarding the menu control
In the setting windows of the profiles and access data, you can, by **shortly** pressing the arrow keys, move the cursor in the entry line by one position. By **keeping** the arrow keys **pressed**, you can go to the next entry line.

When making entries, you can determine the following accounts. Always switch between the entry/selection lines using the arrow keys and finish the installation with **OK** .

System name: Name of the System

SIP server: The server that is to be used as an SIP proxy can be a hostname or an IP address. If a special port number is required, it can be entered after a colon.

Example:	sip.aastra.com sip.aastra.com:8200 172.30.203.12:8200

When making the entry, use the asterisk button to switch between different styles of writing: Letters, numbers or IP addresses. In the "IP address" mode you can enter a dot using the pound button.

Registrar: If the registrar is not the same as the SIP proxy, its address can be entered here. If this field is empty, the SIP proxy will also be used as the registrar. Therefore in normal configuration, this field can be left empty (for entry format see SIP server example).

Outbound proxy: An outbound proxy can be configured here. This can be necessary, e.g. if the handset cannot solve the DNS names itself as a result of its configuration. The outbound proxy will be entered as an IP address, or if necessary as an IP address:port. In most cases, this field can be left empty.

Example:	172.30.203.12 172.30.203.12:6200

User ID: This is the SIP user ID. This is normally the call number of this device. However, it is also possible to have a user ID that is not just made up of numbers.

Authentication name: Is used for authentications. May remain blank if the system does not require an authentication or if the authentication name is the same as the user ID.

SIP password: This is used for authentications. Can be left empty if the system does not require any authentication. This password is used independently of the inquired realm, as it is not necessary to enter a realm.

Pref. codec: The voice codec, which should preferably be used. It influences the sound quality and also the bandwidth used on the network. If there is no particular reason to make a change, it is recommended to use the preset G.711.

DTMF method: It is possible to set for a SIP profile, how DTMF (MFV) will be transmitted.
Using the left softkey ▼ select . . .

RFC 2833 (default setting): Transmits DTMF in the RTP stream according to RFC 2833 after the package type negotiated via SIP/SDP. If the package type is not negotiated, "Inband" will be used automatically.

SIP-INFO: DTMF will be transmitted via SIP Info messages (no standard, however widely accepted). This setting should be used if RFC 2833 is not supported.

RFC + INFO: Both transmission types are activated. Please note: Possibly, the other party recognises numbers twice.

In-band: Like the sound, the DTMF tunes are also transmitted as RTP packages. Recognition is usually only possible with Codec G711. This setting should only be selected if the other party does not support any other mechanism.

In-band + INFO: Both transmission types are activated. Please note: Possibly, the other party recognises numbers twice.

Changing accounts

Press **Menu** .

Select **System** and confirm using **OK** .

Select one of the following menu items and confirm with **OK** .

Accounts Select one of the following menu items and confirm with **OK** .

<Profile name> Select one of the displayed profiles and press **Options** .

… **Select** The accounts of the selected entry are used.

… **Edit** You can change the accounts of the selected entry.

… **Delete** The selected entry will be deleted immediately.

or

per DHCP Select one of the menu items and confirm with **OK** .

… **Select** If this function is selected, only DHCP offers that contain accounts will be accepted.

Tools for troubleshooting/info

Ping

A ping (small data packet) is used to measure the reliability of a network connection and the reaction time of a server. In using this, an ICMP echo request is sent from the handset to a remote host. As soon as the host answers, the handset calculates the time elapsed in milliseconds. It will also be determined if data packages have been lost.

Whilst ping is running, the energy saving mode in the handset will be deactivated. This will facilitate shorter package round-trip times. In this time a ping can also be carried out on the device from a remote processor. If the device is in the idle state, external ICMP echo requests will first be answered after several 100 ms.

Example display:

Above: **16 ttl=64 t=14 ms**

xx = (here 16) sequence number, increases with each ICMP echo request sent out

ttl = Remaining time to live, starts at 64, is decreased by one with every router traversed

t = Time from when a request is sent until the response is received

At the bottom:

tx: Number of requests sent

rx: Number of responses received

loss: Percentage where no response is received

avg: Average measured round-trip time

Press **Menu**.

Select **System** and confirm using **OK**.

Select **Network** and confirm using **OK**.

Select **Tools** and confirm using **OK**.

Select **Ping** and confirm using **OK**.

Enter the IP address and confirm with **OK**.

Press **OK** or **Back** to end the process.

Traceroute

The traceroute sends ICMP echo requests with increasing TTL (time to live) to one processor. This can be used to determine the presence of routers which are traversed on the way to the target address. The round-trip time between sending a request and the receipt of a response at each of these routers is also measured. Three requests are sent to each node (hop) in the network.

Example display:

```
traceroute to
 172.17.1.1 ...        <= Destination
1:  172.30.0.2         <= Hop 1
 150 43 50 ms          <= 3 x Roundtrip Delay
2:  172.30.206.1       <= Hop 2
 30 50 63 ms           <= 3 x Roundtrip Delay
- done -               <= done
```

Press **Menu**.

Select **System** and confirm using **OK**.

Select **Network** and confirm using **OK**.

Select **Tools** and confirm using **OK**.

Select **Traceroute** and confirm using **OK**.

Enter the IP address and confirm with **OK**.

Press **OK** or **Back** to leave the display.

Site survey

The access points (APs) and their field strengths, which can currently be received, are displayed in a window (upper area). These may be APs which the handset can connect to, but may also be ones which belong to foreign systems. If a network profile has been established, APs with a matching SSID appear in black, whilst foreign APs are displayed in red. If a connection to an AP exists, this will also be marked with an asterisk "*".
Select one of the listed APs using the arrow key. In the lower part of the display detailed information is shown about the selected AP:

Example display:

First row:	SSID	<SSID of the AP>
Second row:	C	<Channel of the AP> as well as possible encryption mechanisms supported by the AP: WEP, TKIP, AES
Third row:		possible authentication mechanisms supported by the AP: 802.1X, PSK and possible QoS mechanisms supported by the AP: WME

Press **Menu** .
Select **System** and confirm using **OK** .
Select **Network** and confirm using **OK** .
Select **Tools** and confirm using **OK** .
Select **Site survey** and confirm using **OK** .

Note

If you press **Options** , you can switch a filter on using **OK** . If the filter is active, only the APs that have SSIDs matching the active profile are displayed in the list.
Using the submenu "New profile", you can transfer data from the site survey to produce a new profile (see page 47).

Roaming info

If this option is active, the handset will bring up an alert window each time a connection to an AP is established, lost or changed. The message contains the BSSID of the AP. It will disappear automatically after a few seconds. The message appears when the option is active irrespective of the operational status of the device, e.g. even during a conversation. This function can be used to detect errors and weaknesses in an existing installation.

Press **Menu**.

Select **System** and confirm using **OK**.

Select **Network** and confirm using **OK**.

Select **Tools** and confirm using **OK**.

Select **Roaming info –**. You can switch this function on **✓** or off **–** using **OK**.

Info (on the network connection)

You receive information about the status and properties of the network connection:

IP address: Own IP address, or "-" if none is available. The latter can be the case if DHCP is activated and no address has yet been assigned.

Gateway: IP address of the default gateway, "-" if none has been configured and/or has not been assigned by DHCP.

MAC: Own MAC address.

SSID: If there is a connection to the WLAN, the corresponding SSID is displayed here.

BSSID: MAC address of the AP that the device is currently associated with. "-" if there is no association, i.e. no connection to the WLAN.

RSSI history: In the diagram the progression of the destination field strength of the currently active AP over the last few minutes is displayed. The perpendicular axis shows the field strength in dBm, the horizontal axis shows the time. On the right-hand side the current field strength is displayed, older field strengths are further to the left.
The green area of the diagram marks field strengths, which are suitable for telephony. Those in the red area will be subject to restrictions (interference, interruptions).
Using the **+/-** softkey, the scale of the time axis can be changed between approx. 30 minutes and approx. 5 minutes.

On the line in the diagram, AP connection loss (disassociation) is represented by red symbols. Green symbols designate a connection (association) to the AP, or a change of APs.

Press **Menu**.

Select **System** and confirm using **OK**.

Select **Network** and confirm using **OK**.

Select **Info** and confirm using **OK**.

Info (on the SIP server)

The status of registration to the SIP server is displayed. If the handset is registered, the time until the expiry of this registration is displayed. Shortly before the expiry a new registration will be carried out automatically. If no registration was possible, the most recent SIP error code will be displayed.

Example:	Error: Not registered Last registration error: Status 404

The following codes are used for frequently occurring errors:

Status No answer: There is no SIP signalization error; rather it is highly likely that there is a problem with the network. This can be the case when e.g. the SIP server was not attainable or has not responded.

Status code 404 Not Found: The user ID is unfamiliar to the registrar.

Status code 401 Unauthorized: There was an error in authentication. An incorrect SIP password could be the cause.

Press **Menu**.

Select **System** and confirm using **OK**.

Select **Accounts** and confirm using **OK**.

Select **Info** and confirm using **Options**.

Move the window with the right softkey to display the complete text.

Syslog

This gives you a representation of the internal messages and error entries of the system.
These can also help service technicians when trying to locate errors.

Press **Menu** .

Select **System** and confirm using **OK** .

Select **Network** and confirm using **OK** .

Select **Syslog** and confirm using **OK** .

Move the window with the right softkey to display the complete text.

Software update/licenses/PIN

Version

Under Version you can see the version numbers of the software (SW) and the hardware (HW) of the device.

Press **Menu** .
Select **System** and confirm using **OK** .
Select **Software** and confirm using **OK** .
Select **Version** and confirm using **OK** .

Update

Using this function, the handset software can update itself. In order to do this, the handset must be connected to a WLAN from which the server is attainable. If possible, use the ftp process as this allows quicker data transfer. If the update is aborted, or error messages are displayed the current software remains unchanged. Attempt the process again. After the software update the handset will be restarted in order to activate the new software. You can continue making calls during the update process.

Press **Menu** .
Select **System** and confirm using **OK** .
Select **Software** and confirm using **OK** .
Select **Update** and confirm using **OK** .
Select one of the following menu items and confirm it using **OK** .

Check now

Press **OK** . It is checked whether another device software is available on the server. If available, this software is immediately loaded into the device.

Settings

Press **OK** . Enter the administrator PIN (“22222” by default). Enter the data of the server from which the update is to be completed into the entry fields. Start the update using **OK** .

The following entries are required:

Protocol: ftp, tftp, http (Select using ▼).
Preset on delivery: ftp

Server: IP address or name of the server from which the software should be loaded.
Preset on delivery: ftp.aastra-detewe.de

Filename: Pathway and name of the file.
Preset on delivery: WLAN/312w.dnld

Note

The updated is cancelled if the software to be loaded complies with the already existing one.

Licenses

Here you will find the open source software licenses (see also page 64).

Press **Menu**.
Select **System** and confirm using **OK**.
Select **Software** and confirm using **OK**.
Select **Licenses** and confirm using **OK**.

Changing the administrator PIN

Different system settings as well as the user name are protected by means of a PIN. The PIN is set to "22222" by default. Change the PIN (4 to 8 digits) in order to prevent that unauthorised changes can be made to your settings.

Press **Menu**.
Select **System** and confirm using **OK**.
Select **PIN** and confirm using **OK**.
Enter the administrator PIN ("22222" by default).
Enter the new administrator PIN.
Repeat the new PIN.

Reset

Deleting the MEM card

You may delete any data on the MEM card and restore the default settings. When doing so, you also delete the profiles and the access data. The local telephone book can be deleted separately.

- Switch off the handset (keep the C key pressed).
- Simultaneously press the C key and number 5 and keep them pressed.
- Only release the keys if you see a confirmation in the display.

Note

After the deletion, “English” is switched on as display language.

Deleting the local telephone book

- Switch off the handset (keep the C key pressed).
- Simultaneously press the C key and number 8 and keep them pressed.
- Only release the keys if you see a confirmation in the display.

Appendix

Free software

The product contains, among other things, embedded Open Source Software, developed by Third Parties. The license terms and conditions associated with this software require that Aastra-DeTeWe give copyright and license information to you. A list of the Open Source Software contained in the product and the Open Source Software Licenses are available below. The license terms and conditions and the list of relevant software parts can be found in the device menu System > Software > Licenses (see page 62).

If it is provided in the license terms and conditions, the source code can be found on the separate data media (e.g. CD-Rom), if any, or at the following internet site ftp://ftp.aastra-detewe.de/ WLAN/

Warranty

Aastra-DeTeWe provides no warranty for the Open Source Software contained in the product, if such software is used in any manner other than the software execution intended by Aastra-DeTeWe. The licenses listed below define the warranty, if any, from the authors or licensors of the Open Source Software. Aastra-DeTeWe specifically disclaims any warranties for defects caused by altering any Open Source Software or the product's configuration. You have no warranty claims against Aastra-DeTeWe in the event that the Open Source Software infringes the intellectual property rights of a third party. Technical support, if any, will only be provided for unmodified software.

Supported DHCP options

DHCP options supported by the Aastra 312w

Designation	Name	Length	Meaning	Reference	Comment
1	Subnet mask	4	Subnet mask value	[RFC2132]	Optional
2	Time offset	4	Time offset in seconds from UTC	[RFC2132]	Optional
3	Router	N	N/4 Router addresses	[RFC2132]	Optional, only first entry used
6	Domain server	N	N/4 DNS server addresses	[RFC2132]	Optional
15	Domain name	N	The DNS domain name of the client	[RFC2132]	Optional
42	NTP servers	N	NTP Server addresses	[RFC2132]	Optional, only first entry used
43	Vendor specific	N	Vendor specific information	[RFC2132]	Necessary if accounts are configured per DHCP, otherwise optional

Used producer-dependent options (vendor specific information)

Designation	Name	Length	Type	Meaning	Comment
17	Country	2	u16	Country, see table below	Optional
20	System name	N	text	Name of account	Optional
21	SIP proxy	N	text	SIP proxy address|name[:port]	Necessary if accounts are configured per DHCP, otherwise ignored
22	SIP registrar	N	text	Registrar address|name[:port]	Optional
23	SIP outbound Proxy	N	text	Outbound proxy address[:port]	Optional
24	SIP user ID	N	text	SIP user ID	Necessary if accounts are configured per DHCP, otherwise ignored
25	SIP password	N	text	SIP Password	Optional

Designation	Name	Length	Type	Meaning	Comment
26	SIP Auth. Name	N	text	SIP Authentication Name	Necessary if the access data has been configured using DHCP and this value does not correspond to the user ID.

Supported country codes

Value	Country
1	GERMANY
3	SWITZERLAND
5	FRANCE
100	USA
102	CANADA

Questions and answers

Net traffic in idle state

Why are the values from my PC provided by "Ping" so poor?

If the device is in idle state, the network capacity is reduced as far as possible. If in this state, "Ping" packages (ICMP Echo Requests) are sent to the Aastra 312w from the outside, the answers often take more than one hundred milliseconds. The device will automatically adjust the network activity depending on the state. If, for example, the "Ping" tool is used from the telephone, it aborts the WLAN idle state. Then, Pings from the outside will be answered immediately.

Operation behind a firewall or a DSL router

Why do I have problems behind my DSL router?

The Aastra 312w has been designed for the use in local company networks. Currently, no mechanisms for bypassing NAT routers and firewalls are installed (e.g. STUN). The functionality behind such devices can thus not be guaranteed.

What is the difference between user name, user ID and authentication name?

The user name in the telephone options is used as display name for SIP. This is the one that is shown as name at the party receiving the call (if applicable).

The user ID from the SIP profile often corresponds to the telephone number. In a SIP URI, this is the part in front of the '@'. If no separate authentication name is set-up, the user ID is still used for the authentication if the server requests this.

It is possible to set an authentication name (auth. name) if it is different from the user ID. There are, for example, installations, in which the user ID corresponds to the telephone number, while the authentication name is an abbreviation of the real name, e.g. "JPublic".

Servicing and maintenance

Your phone is a product that meets the highest requirements for both design and construction. It should therefore be handled with care. The following suggestions are intended to help you to enjoy using this product for a long time.

Observe all safety instructions on page 1. These instructions are equally valid for the handset, the charging point and all accessories.
To clean the phone, first remove the mains plug from the charging point. Wipe the devices with an anti-static cloth or a slightly dampened, soft leather cloth, and then finally wipe with a dry cloth.

Note: Never spray the phone with cleaning products or solvents.

Clean the charging contacts of the handset and the charging point with a lint-free cloth.

Environmental characteristics and disposal

This product was produced in an environmentally friendly way and is suitable for recycling according to legal requirements and the 2002 manufacturer's guidelines.
With regard to low energy consumption, long life utility and ease of use, fewer materials and components were developed, and those that were developed are environmentally sound.
You can contribute to ensuring your device has a long operational life but observing the safety instructions, the information on the operational life of the battery, and the service and maintenance instructions.

Advice for disposal

To avoid any negative effects for the environment and public health which could arise from the disposal of electrical and electronic devices, which contain dangerous substances, the directives of the European Parliament and the Council

- Directive 2002/96/EC "Electrical and Electronic Equipment" and
- Directive 2002/95/EC "Restriction of use of certain hazardous substances in electrical and electronic equipment"

are legally regulated in all countries of the EU.

The legislation is primarily aimed at avoiding waste of electrical and electronic devices, but is also aimed at reusing, recycling and other forms of utilization of these types of waste in order to reduce the amount of waste thrown away and to lower the amount of harmful substances from electrical and electronic devices in the waste.

The product that you have purchased has been developed according to state of the art technology with regard to the environment and recycling, and therefore complies with the requirements of the European directives.

The product is labeled with the symbol displayed here. This symbol means that when the owner of the product wants to dispose of it, they are obliged to do so in a waste collection that is separate from the unsorted municipal waste collection. In order to do this, suitable facilities have been established for the return of old electrical and electronic devices. Old devices can be brought to these public return points free of charge. Please find out the location of the return points from the information provided by the authorities responsible from waste disposal in the towns and municipalities.

Warning!
Old electrical devices do not belong in household waste.
Please hand them in to the recognized return points free of charge.

Declaration of conformity

CE Marking

This device fulfils the requirements of the EU directive:
1999/5/EC Directive on Radio Equipment and Telecommunications Terminal Equipment and the reciprocal recognition of their conformity.
Conformity with the abovementioned directive is confirmed by the CE mark on the device.

The declaration of conformity can be viewed online at the following address:

http://www.aastra.com

Technical data

Standard: 802.11b/g

Number of channels: ..... 14, possibly restricted by the regulatory domain

Frequencies: ..... 2.412 GHz – 2.484 GHz,
possibly restricted by the regulatory domain

Transmitting power: ..... 100mW maximum

Security: ..... WEP, WPA1-PSK, WPA2-PSK

Quality of Service: ..... WME

Voice encryption: G.711, G.729

Charging point electricity supply: ..... 100-240 V / 50-60 Hz / 90mA
(Mains adapter plug ID No. 23-001066-00)

Handset battery life: ..... on standby/during conversations
up to 50 hours/approx. 5 hours

Battery: ..... Li-Ion Polymer-Pack, NiMH, 3,7 V, 1000 mAh

Empty battery charging time: ..... 4 to 6 hours

Permitted surrounding temperatures
for operation of the handset: ..... 5° C to 40° C.

Permitted surrounding conditions
for operation of the charging point: ..... 5° C to 40° C ; 20 % to 70 % relative humidity

Permitted storage temperature: ..... -10°C to +60°C

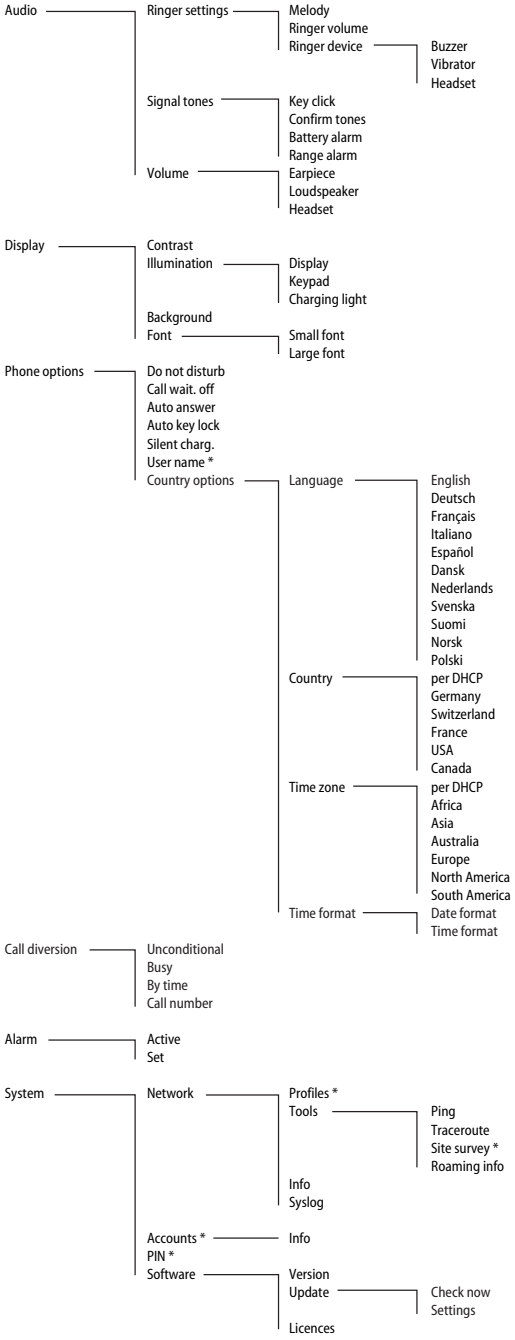
Charging point measurements: ..... Width/height/depth = 78 x 105 x 64 mm

Handset measurements: ..... Length/width/height = 146 x 53 x 28 mm

Handset weight: ..... 106 g (without battery), 144 g (with battery)

Length of the mains adapter cable: ..... 3 m

Menu tree



* different system settings are protected by means of the administrator PIN

FCC Notices (U.S. Only)

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.
Modifications not expressly approved by this company could void the user's authority to operate the equipment.
NOTE: 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.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Health and Safety Information

Exposure to Radio Frequency (RF) Signals:
The wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on the safety standards previously set by both U.S. and international standards bodies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.
This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
This EUT has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE Std. C95.1-1992 and had been tested in accordance with the measurement procedures specified in FCC/OET Bulletin 65 Supplement C (2001) and IEEE 1528-2003.

Industry Canada (Canada only)

Operation of this device is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Privacy of communications may not be ensured when using this telephone.
Exposure to Radio Frequency (RF) Signals:
The wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limit for exposure to radio frequency (RF) energy set by the Ministry of Health (Canada), Safety Code 6. These limits are part of comprehensive guidelines and established permitted levels of RF energy for the general population. These guidelines are based on the safety standards previously set by international standard bodies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.
This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general public exposure limits specific in ANSI/IEEE C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE 1528-2003.

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