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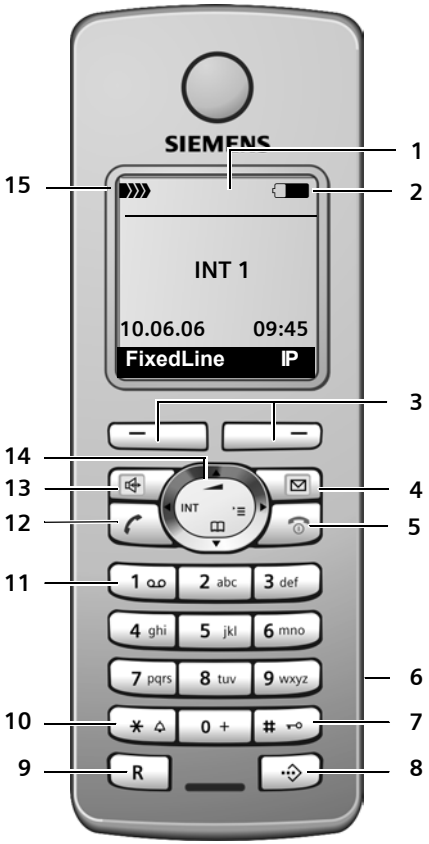
Siemens Home and Office Communication Devices GmbH & Co. KG
Schlavenhorst 66
D-46395 Bocholt

www.siemens.com/gigaset

Gigaset
S450 IP

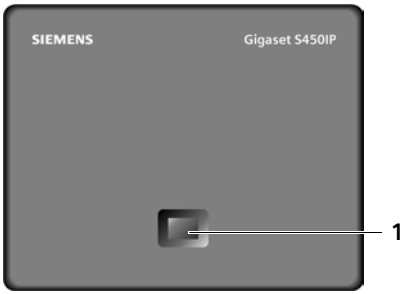
The handset at a glance



Handset keys

1 **Display** in idle status (example)
2 **Battery charge status**
(1/3 charged to fully charged)
flashes: battery nearly empty
flashes: battery charging
3 **Display keys** (page 25)
4 **Message key**
Opens calls and message lists
Flashes: new message or new call
5 **End call key, On/Off key**
End call, cancel function, go back one menu level (press briefly), back to idle status (press and hold), activate/deactivate handset (press and hold in idle status)
6 **Connection socket for headset** (page 16)
7 **Hash key**
Keypad lock on/off (press and hold, page 24)
Toggle between upper/lower case letters and digits for text entry (page 112)
8 **Call-by-call list key** (not for VoIP)
Open call-by-call list
9 **Recall key** (not for VoIP)
Enter flash (press briefly)
Insert a pause (press and hold)
10 **Star key**
Ringer tones on/off (press and hold in idle status)
Open special characters table
11 **Key 1** (press and hold)
Calling the network mailbox
12 **Talk key**
Accept call, open last number redial list (press briefly in idle status), select connection type and start dialling (press briefly/ press and hold after entering the number, page 21)
13 **Handsfree key**
Change between speaker/handsfree mode
Lights up: handsfree talking activated
Flashes: incoming call
14 **Control key** (page 25)
15 **Signal strength**
(low to high)
flashes: no reception

Base station at a glance



Base station key

1 **Paging key**
Lights up: LAN connection active (phone is connected to router)
Flashes:
Data transfer to LAN connection
Press **briefly**: start paging (page 73)
Press and **hold**:
Set base station to registration mode (page 72)

Contents

Safety precautions

Warning:
Read the safety precautions and the user guide before use.
Explain their contents and the potential hazards associated with using the telephone to your children.

Only use the mains adapter supplied, as indicated on the underside of the base station.

Use only **recommended rechargeable batteries (page 109)** of the same type!
This means that you must not use any other battery type or non-rechargeable batteries as this could result in significant health risks and personal injury.

Insert rechargeable batteries with the correct polarity, and use them in accordance with this user guide (polarity symbols can be seen in or on the handset's battery compartment, page 7).

The operation of medical appliances may be affected. Be aware of the technical conditions in your particular environment, e.g. a doctor's surgery.

Do not hold the rear of the handset to your ear when it is ringing or when the handsfree function is activated. Otherwise you risk serious and permanent damage to your hearing. The handset may cause an unpleasant humming noise in hearing aids.

Do not install the base station in bathrooms or shower rooms. The handset and base station are not splashproof (page 102).

Do not use your phone in environments where there is a risk of an explosion (e.g. paint shops.

If you give your Gigaset to someone else, make sure you also give them the user guide.

All electrical and electronic equipment must be disposed of separately from general household waste using the sites designated by local authorities.
If a product displays this symbol of a crossed-out rubbish bin, the product is subject to European Directive 2002/96/EC.
The appropriate disposal and separate collection of used equipment serve to prevent potential harm to the environment and to health. They are a precondition for the re-use and recycling of used electrical and electronic equipment.
For further information on disposing of your used equipment, please contact your local authority, your refuse collection service or the dealer you purchased the product from.

Emergency numbers cannot be dialled if the keypad lock is activated!

Please note:
Not all of the functions described in this manual are available in all countries.

Gigaset S450 IP – more than just a telephone

Your phone lets you make calls both via the fixed network and (cost effectively) via the Internet (VoIP) **without using a PC**.

And your phone can do much more besides:

- **Press a button** each time you make a call to indicate whether you want to call via the fixed network or the Internet (page 21).
- Register up to **six** handsets on your base station. You can use your base station to make two simultaneous calls using VoIP, or one call using the fixed network and one using VoIP.
- **Multiline:** Set up a separate VoIP account for each member of your family with their own VoIP phone number (up to six accounts with different VoIP providers). If you include your fixed network number, your phone can be reached on up to **seven different phone numbers**. These can be assigned to the individual handsets. If a member of your family is called on their number, only their handset will ring.
- Use Gigaset.net for VoIP calls. Connect your phone to the power supply and the Internet, and enjoy free phone calls on Gigaset.net – no need to make any other settings (page 27).
- Configure the phone connection for VoIP without a PC. Your phone's connection assistant downloads general data about your VoIP provider from the Internet and guides you through entering your personal data (VoIP/SIP account). This makes it easy for you to start using VoIP (page 12).
- If necessary, establish any further required VoIP settings on a PC. The phone features a Web interface (**Web configurator**) that can be accessed via your PC's Web browser (page 78).
- Assign your own password (**system PIN**) to protect your device and the Web configurator from unauthorised access (page 64).
- Send and receive SMS messages via the fixed network (page 40).
- Use **instant messaging** on your handset. Go online and see which of your messenger contacts (buddies) are online as well. Chat with your buddies, send and receive text messages, or give them a call (page 52).
- Let your phone tell you, **without requiring a PC**, about new **e-mail** messages in your mailbox (page 49).
- Save up to 150 numbers and names in your handset (page 34).
- Transfer your Outlook contacts from the PC onto your handset. Or back your handset directory up on your PC.
- You can programme the keys of your phone with important phone numbers. The phone number is then dialled by simply pressing the respective key (page 35).
- Keep your hands free when making a call. Use the handsfree function on your handset (page 23) or use the convenient headset to make calls (page 16, accessories, not included in the scope of delivery).
- Make sure your phone is always up-to-date. Keep yourself informed about **firmware updates** on the Internet and load them onto your phone (page 66).
- Use your handset as an alarm clock (page 63).

Your Gigaset S450 IP has a protected operating system that offers **increased security against viruses** from the Internet.

Have fun using your new telephone!

VoIP – making calls via the Internet

With VoIP (**V**oice **o**ver **I**nternet **P**rotocol), your calls are not made via a fixed connection as in the telephone network, but rather they are transmitted via the Internet in the form of data packets.

You can take advantage of all the benefits of VoIP with your phone:

- You can make cost-effective calls at high voice quality with subscribers on the Internet, the fixed network or the mobile phone network.
- Your VoIP provider will give you personal numbers, with which you can be reached from the Internet, the fixed network and any mobile phone network.

To be able to use VoIP, you need the following:

- A broadband Internet connection (e.g. DSL) with flat rate (recommended) or volume-based price
- Internet access, i.e. you need a router that will connect your phone to the Internet. You will find a list of recommended routers on the Gigaset S450 IP product page at:
  http://www.siemens.com/gigaset
- Access to the services of a VoIP provider. Open up to six accounts with **different** VoIP providers.

First steps

Pack contents

The pack contains:

- one Gigaset S450 IP base station
- one Gigaset S45 handset
- one mains adapter for the base station
- one charging cradle incl. mains adapter
- one phone cord
- one Ethernet cable (LAN cable)
- two batteries
- one battery cover
- one belt clip
- one quick guide

Setting up the handset for use

The display is protected by a plastic film. **Please remove the protective film!**

Inserting the batteries

Warning:
Use only the rechargeable batteries recommended by Siemens Home and Office Communication Devices GmbH & Co.KG on page 109! This means on no account should you use conventional (non-rechargeable) batteries or other battery types, otherwise serious damage to health and property cannot be ruled out, e.g. the outer casing of the batteries could be destroyed or the batteries could explode. The phone could also malfunction or be damaged as a result of using batteries that are not of the recommended type.

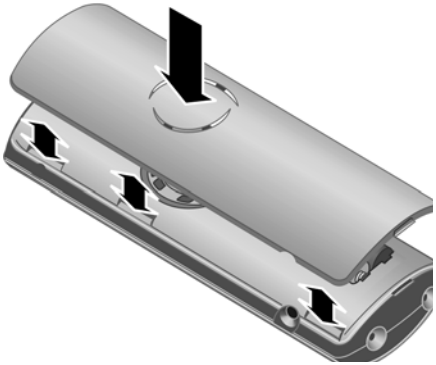
▶ Insert the batteries the right way round (see figure).

The polarity is indicated in/on the battery compartment.

The handset switches on automatically. You will hear a confirmation tone.

Closing the battery cover

- First, align the notches on the side of the battery cover with the protrusions on the inside of the housing.
- Then press the cover until it clicks into place.



Opening the battery cover

- If fitted, remove the belt clip.
- Place your finger in the headset socket cavity and pull the battery cover upwards.

Connecting the charging cradle

Connecting the charging cradle and mounting it on the wall (if required) is described at the end of this user guide.

- To charge the batteries, leave the handset in the charging cradle.

Please note:

– Only place the handset in the charging cradle that is intended for it.
– If the handset has switched itself off because the batteries are flat and if it is then placed in the charging cradle, it will switch itself on automatically.

For questions and problems see page 102.

Initial charging and discharging of batteries

Battery charging is indicated in the top right of the display by a flashing battery icon , or . During handset operation, the battery icon indicates the charge status of the batteries (page 1).

The correct charge status can only be displayed when the batteries are first fully charged **and** discharged through use.

- To do this, leave the handset in the charging cradle without interruption until the battery icon stops flashing in the display (around 13 hours).
- Once the batteries are fully charged, remove the handset from the charging cradle and do not put it back again until the batteries are fully discharged.

Please note:
After the first battery charge **and** discharge, you may place your handset in the charging cradle after every call.

Please note:

- Always repeat the charging and discharging procedure if you remove the batteries from the handset and reinsert them.
- The batteries may warm up during charging. This is not dangerous.
- After a while the charge capacity of the batteries will decrease for technical reasons.

Please note:
You will find explanations for the symbols and typographical conventions used in this user guide in the appendix, page 110.

Setting the date and time

If the date and time on the phone have not yet been set, the **Time** display key will appear. You can use the ➔ **Settings** ➔ **Date/Time** menu at a later point to enter the date and time.

- Press **Time** or open the menu.
- Change multiple line input:

Date:
Enter day, month and year in 6-digit format.

Time:
Enter hours and minutes as 4 digits (e.g. 0 + 7 pqrs 1 ωρ 5 jkl for 7:15 a.m.

Save Press the display key.

The date and time are shown in the handset's idle display (page 1).

Registering the handset to the base station

Your handset is registered to the base station by default.

Instructions on how to register further handsets to the base station are given on page 72.

Installing the base station

The base station is designed for use in closed, dry rooms with a temperature range of +5°C to +45°C.

- Place or hang the base station in a central position in your flat or house.

Please note:

- Never expose the telephone to heat sources, direct sunlight or other electrical appliances.
- Protect your Gigaset from moisture, dust, corrosive liquids and vapours.

Connecting the base station

In order to be able to make calls with your phone via the fixed network and via VoIP, you must connect the base station to the fixed network and the Internet, see Figure 1.

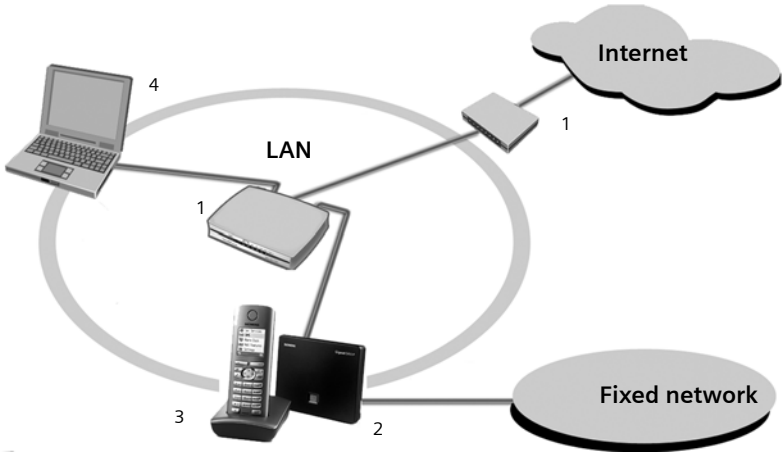


Figure 1 Connecting the phone to the fixed network and the Internet

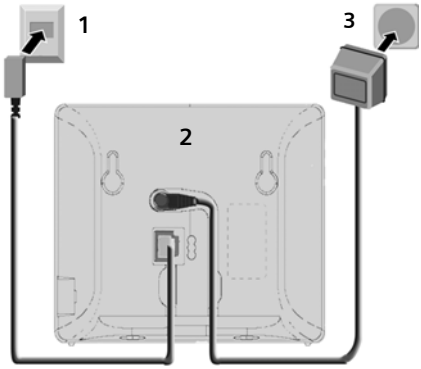
1 Internet connection:
Router and modem (in picture) or router with integrated modem
2 Gigaset S450 IP base station
3 Gigaset S45 handset
4 PC in LAN

Follow the steps in the order given below:

1. Connect the base station to the fixed network phone port
2. Connect the base station with the mains power supply
3. Connect the base station with the router

Connecting the base station with the fixed network and the mains power supply

▶ Please connect the phone jack **first** and **then** the mains adapter, as shown below.

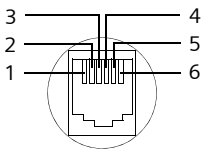


1 Phone jack with phone cord
2 Underside of the base station
3 Mains adapter 230 V

Please note:

- Keep the mains adapter **plugged in at all times** for operation, as the phone does not work without mains connection.
- If you buy a replacement phone cord from a retailer, ensure that the phone jack is connected correctly.

Correct phone jack assignment

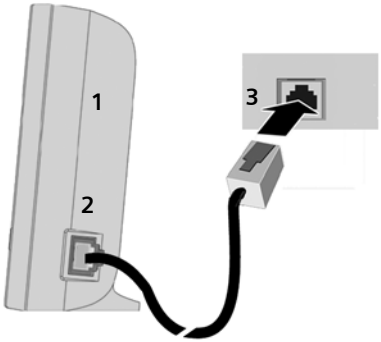


1 unused
2 unused
3 a
4 b
5 unused
6 unused

You can now use your phone to make calls via the fixed network and can be reached on your fixed network number.

Connecting the base station with the router

For Internet access you need a router connected to the Internet via a modem (this may be integrated in the router).



1 Side view of the base station
2 Network plug (LAN) with network cable
3 Network plug on the router

As soon as the cable connecting the phone and router is plugged in, the paging key lights up on the front of the base station (page 1).

You can now establish VoIP connections within Gigaset.net (page 27).

Making settings for VoIP telephony

Before you can use the Internet (VoIP) to phone any other users on the Internet, the fixed network or the mobile phone network, you need the services of a VoIP provider who supports the VoIP SIP standard.

Precondition: you have registered (e.g. via your PC) with a suitable VoIP provider and set up at least one VoIP account.

The following phone settings are necessary in order for you to use VoIP. You will receive all information from your VoIP provider.

- Your user name with the VoIP provider, if this is required by the VoIP provider
- Your registration name
- Your password with the VoIP provider
- VoIP provider general settings

The connection assistant will help you with the settings.

Starting the connection assistant

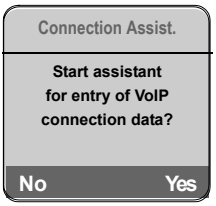
Precondition: The base station is connected to the mains power supply and a router. Your router is connected to the Internet (page 11).

Tip: If VoIP is activated as the default connection for your phone (default setting page 65), the phone will attempt to make a direct connection to your VoIP provider's server after the connection assistant is closed. If incorrect/incomplete information means that the connection cannot be established, messages will be displayed (page 14).

Please note:
Your phone is preconfigured for dynamic assignment of the IP address. In order for your router to 'recognise' the phone, dynamic IP address assignment must also be activated on the router, i.e. the router's DHCP server is activated. Turn to page 68 to find out how to assign your phone a static IP address if necessary.

As soon as the handset battery is sufficiently charged, the message key ✉ on the handset will flash (around 20 minutes after you have put the handset in the charging cradle). Press the message key ✉ to start the connection assistant.

You will see the following display:



Yes — Press the display key to start the connection assistant.

Enter the system PIN (default is '0000').

If you press No, the procedure that follows is described below.

Please note:
The connection assistant will also start automatically if you try to establish a connection via the Internet, before you have made the necessary settings.
You can also call up the connection assistant at any time via the menu (page 67).

Downloading VoIP provider data

The phone establishes a connection with the Siemens server on the Internet. Profiles with general access data for various VoIP providers can be downloaded here.

After a brief period you will see the following display:

Select country (press the control key up/down) and press OK. The VoIP providers available for your VoIP profile will be displayed.

Select your VoIP provider and press OK.

The necessary general access data for your VoIP provider will be downloaded and saved on the phone.

If the data for your VoIP provider is not available for download, press the display key twice. You can then carry out the following steps with the connection assistant.
You must then make the settings needed for the VoIP provider using the Web configurator (page 84). Your VoIP provider will supply you with this data.

Entering user data for your first VoIP account

Enter the VoIP user data for the first VoIP account. Your VoIP provider will supply you with this data.

You can use the Web configurator at a later stage to enter five further VoIP accounts (VoIP phone numbers) that you have set up with the same VoIP provider (page 83). Your phone (together with your fixed network number) can then be reached on up to seven different phone numbers. You can assign the phone numbers to the individual handsets that are registered with the base station as sending and receiving numbers (page 93).

Username:

Enter the user name and press Save if this is required by your provider.

Authent. Name:

Enter the registration name and press Save.

Authent. Password:

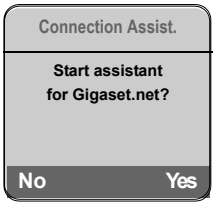
Enter password and press Save.

Please note:
Please note when making these entries that the VoIP user data is case sensitive. When you enter text, the first letter is capitalised by default. If necessary, press and hold the # key to switch between upper and lower case and numbers.

Entering your name in the Gigaset.net directory

With Gigaset.net you can call other Gigaset.net users directly over the Internet free of charge, without setting up an account with a VoIP provider and without making any further settings. You can find Gigaset.net subscribers by carrying out a name search in the Gigaset.net(page 27) directory.

The following appears in the handset's display:



Yes Press the display key.

Enter your Gigaset.net name:
Enter the name that you would like to be listed under in the Gigaset.net directory and press OK. The name may contain up to 25 characters.

A connection to the Gigaset.net server is established.

If there is already an entry under this name, you receive a message to this effect and you will be asked to enter a name again.

If an entry in the Gigaset.net directory is successful, the message "**Your user name is successfully added to Gigaset.net!**" is displayed briefly.

If the attempt to create the entry fails (e.g. because the phone is not connected to the Internet), a message to this effect is displayed briefly (see page 14). You can then create the entry later via the Gigaset.net directory (see page 29).

Completing the VoIP settings

If you have made all the required entries, the message "**Connection data complete**" will appear on the display. The handset returns to idle status.

If all the settings are correct and if the phone can establish a connection to the VoIP server, then the internal name of the handset will be displayed (example):

You can now use your phone to make calls via the fixed network and the Internet. Callers can reach you on your fixed network number and your VoIP number.

Please note:
To ensure that you can always be reached via the Internet, the router must be permanently connected to the Internet.

No connection to the Internet/VoIP server

If one of the following messages is displayed instead of the internal name after the connection assistant is closed, errors have occurred:

- **Server not accessible!**
- **Provider registration failed!**

Below you will find possible causes and measures you can take.

Server not accessible!

The phone has no connection to the Internet.

- Check the cable connection between the base station and the router (the LED on the base station must light up) and the connection between the router and the Internet connection.
- Check whether the phone is connected to the LAN.

– It may not have been possible to dynamically assign an IP address to the phone

or

– You have assigned a static IP address to the phone that has either already been assigned to another LAN subscriber or does not belong to the router's address block.

▶ Find the IP address using the handset menu:
➔ **Settings** ➔ **Base** ➔ **Local Network** (see page 68)

▶ Start the Web configurator with the IP address.

▶ If no connection can be established, change the settings on the router (activate DHCP server) or the phone's IP address.

Provider registration failed!

◆ Your personal data for registering with the VoIP provider may have been entered incompletely or incorrectly.

▶ Check your entries for **Username**, **Authent. Name** and **Authent. Password**. In particular, check your use of upper and lower case.
To do this, open the following menu on your handset:
➔ **Settings** ➔ **Telephony** ➔ **VoIP** ➔ **Provider Registr.** (see page 68)

◆ The server address for the VoIP server has not yet been entered, or has been entered incorrectly.

▶ Start the Web configurator.

▶ Open **Settings** ➔ **Telephony** ➔ **Connections** Web page.

▶ Edit the server address where necessary

Please note:
If port forwarding is activated on your router for the ports that have been registered as the SIP port (Standard 5060) and the RTP port (Standard 5004), it makes sense to deactivate DHCP and assign the phone a static IP address (otherwise you may not be able to hear the other party during VoIP calls):
– Via the handset menu:
➔ **Settings** ➔ **Base** ➔ **Local Network**
Or
– Via the Web configurator:
▶ Open **Settings** ➔ **IP Configuration** Web page.
▶ Select **IP address type**.
Please note that the IP address and subnet mask depend on the router's address block. You must also enter the standard gateway and DNS server. The IP address for the router is generally entered here.

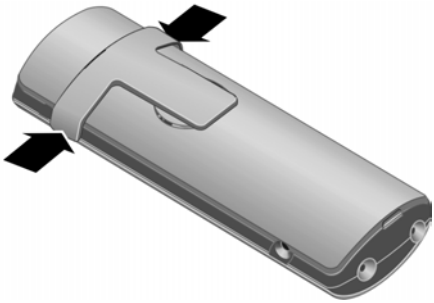
Belt clip and headset

By using a belt clip and headset (optional) you can easily make your handset a constant companion both inside the building and in its immediate vicinity.

Attaching the belt clip

There are notches for attaching the belt clip on the side of the handset at the same height as the display.

- Press the belt clip onto the back of the handset so that the protrusions on the belt clip engage with the notches.



Connection socket for headset

You can use headsets with jack connectors. The following models have been tested and are therefore recommended: HAMA Plantronics M40, MX100 and MX150.

The transmission quality of other models cannot be guaranteed.

Menu trees

Phone menu

Open the main menu on your phone by right-clicking on the control key when the handset is in idle status: ⊙.

There are two ways to select a function:

Using number combinations ('shortcut')

- Enter the number combination that is in front of the function in the menu tree.
  Example: ⊙ 5 jkl 4 ghi 1 ∞ for 'Set handset language'.

Scrolling through the menus

- Scroll to the function with the control key ⊙ (press up or down) and press OK.

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		1-1-3	Outgoing (0)			page 41
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				1-1-1-2	Incoming (0)	page 42
				1-1-1-3	Outgoing (0)	page 41
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				1-1-2-3 to 1-1-4-3	Outgoing (0)	page 41
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Making calls with VoIP and the fixed network

Making an external call

External calls are calls made via the public telephone network (fixed network) or via the Internet (VoIP). You determine what type of connection you want to use when you dial.

Please note:
- You can use your base station to make two simultaneous external calls (on two handsets): two calls using VoIP or one call each using VoIP and fixed network.
- You can define which of your VoIP phone numbers (VoIP account) are used for outgoing external VoIP calls via the handset (**Number Assignment**, page 93).
- If you use VoIP to make a call to the fixed network, you may also have to dial the area code for local calls (depending on the VoIP provider).
  You can also enter the dialling code in the configuration so you do not always need to enter it for local calls (**Dialing Plans**, page 94). It will then be inserted automatically for local calls.

Use the talk key to select the type of connection and make the call

Enter number/IP address and **briefly press**/**press and hold** the talk key.

A default connection is established on your phone (fixed network or VoIP, page 65).

- **Briefly** press the talk key if you want to make a call via this default connection.
- Press and **hold** the talk key if you want to make the call via the other connection type.

Please note:
If you use a different GAP-compatible handset to the Gigaset S45, all calls will be made via the default connection, even if you press and hold the talk key. If you want to use the non-default connection to make a call, enter a star (*) at the end of the number.

Selecting the connection type using display keys and making a call

Precondition: The display keys on your handset are assigned to FixedLine and/or IP (default setting for the Gigaset S45).

FixedLine / IP
Press the display key to select the connection type.

Enter the number or select from the directory.

/ Press the talk or handsfree key.

The number will be called via the selected connection type, regardless of whether the talk key was pressed briefly or pressed and held.

Entering an IP address

You can also dial an IP address instead of a phone number using VoIP.

- Press the star key to separate the sections of the IP address (e.g. 149*246*122*28).
- If necessary press the key to attach the SIP port number of the person you are calling to the IP address (e.g. 149*246*122*28#5060).

Please note:
- Dialling with the directory (page 34) or last number redial list (page 37) saves repeated keying of phone numbers.
- You can assign a number from the directory to a key for quick dialling (page 35).
- You can edit or add to any phone number selected via speed dial or from the directory and use it for the current call.

Cancelling the dialling operation

You can cancel the dialling operation with the end call key.

Ending a call

Press the end call key.

Answering a call

The handset indicates an incoming call in three ways: by ringing, by a display on the screen and by the flashing handsfree key.

Please note:
Only calls to receiving numbers that are assigned to your handset will be signalled (page 93).
If a phone number is not assigned to any handset as a receiving number, the calls will be signalled on all handsets.

You can accept the call by:

- Pressing the talk key.
- Pressing the display key **Accept**.
- Pressing the handsfree key.

If the handset is in the charging cradle and the **Auto Answer** function is activated (page 61), the handset will take a call automatically when you lift it out of the cradle.

If the ringer tone is intrusive, press the **Silence** display key. You can accept the call so long as it is displayed on the screen.

Calling Line Identification

When you receive a call from the Internet, the caller's number and/or the name they have specified is displayed on the screen.

When you receive a call from the fixed network, the caller's number is displayed on the screen if the following conditions are met:

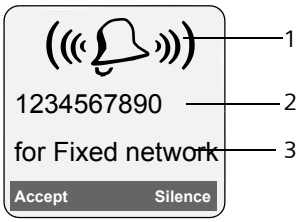
- Your fixed network provider supports CLIP, CLI:
  - CLI (Calling Line Identification): number of the caller is transmitted
  - CLIP (Calling Line Identification Presentation): the caller's number is displayed.
- You have arranged CLIP with your network provider.
- The caller has arranged CLI with the network provider.

If the phone number is identified and the caller's number is saved in your directory, the name will be displayed from the directory.

Call display

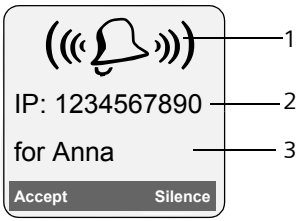
You can use the display to decide whether the call is for your fixed network number or your VoIP number.

Calls to your fixed network number



1 Ringer tone icon
2 Number or name of caller
3 Display of the receiving number: the name is displayed that you have assigned to your fixed network number (page 89).

Calls to your VoIP number



1 Ringer tone icon
2 Number or name of caller
3 Receiving number: indicates which of your VoIP phone numbers the caller has dialled. You assign the names when you enter the VoIP phone numbers into the phone (page 85). For calls from Gigaset.net, **for Gigaset.net** is displayed.

Display when Calling Line Identification is withheld

For calls from the fixed network, the caller can withhold calling line identification or not request it. In this case the number is not displayed. The following is displayed in place of the number:

- **External**, if no number is transmitted.
- **Withheld**, if the caller has withheld Calling Line Identification.
- **Unavailable**, if the caller has not arranged Calling Line Identification.

Handsfree talking

In handsfree mode, instead of holding the handset to your ear you can put it down, e.g. on the table in front of you, to allow others to participate in the call.

Activating/deactivating handsfree mode

Activating while dialling

Enter number and press briefly/press and hold the handsfree key to select the connection type (page 21).

▶ You should inform your caller before you use the handsfree function so that they know someone else is listening.

Switching between earpiece and handsfree mode

▶ Press the handsfree key to activate or deactivate handsfree talking during a call.

If you wish to place the handset in the charging cradle during a call:

▶ Press and hold the handsfree key while placing the handset in the charging cradle. If the handsfree key does not light up, press the key again.

For how to adjust the loudspeaker volume, see page 61.

Muting the handset

You can deactivate the microphone in your handset during an external call. Your caller will hear hold music, if activated (page 65).

Muting the handset

Press the control key on the left to mute the handset.

Cancelling muting

Press the display key or the end call key to cancel the muting.

Dialling the emergency number

The default setting for your phone is that all numbers that are saved as emergency numbers are automatically dialled using the fixed network. The selected connection type (Internet or fixed network) is irrelevant for dialling.

You can deactivate this function using the phone's Web configurator (see dialling rules, page 95), e.g. if you use the phone without a fixed network. However, you should ask beforehand, whether your VoIP provider supports emergency numbers.

Emergency numbers have been preset in your phone. You can use the Web configurator to display these, enter more emergency numbers or edit them (page 95).

Please note:

– If you have used the Web configurator to deactivate the **Emergency calls always via fixed line** function and have entered an automatic area code for VoIP calls (page 94), the area code will also be prefixed to the emergency numbers when they are dialled via VoIP.
– Emergency numbers cannot be dialled if the key lock is activated. Before dialling, press **and hold** the hash key [# ⊸], to release the key lock.

Setting emergency numbers

You can save up to four emergency numbers on your phone. The default setting for your phone is that these emergency numbers are always dialled via the fixed network – irrespective of which connection type you select. The fixed network always supports general emergency numbers (e.g. establishing connection to the **local** police emergency number).

You can deactivate the setting for the emergency numbers to always be dialled via the fixed network.

You can enter or change emergency numbers on the **Dialing Plans** Web page in the Web configurator.

- Open the following Web page: **Settings** → **Telephony** → **Dialing Plans**.
- Enter your emergency numbers in the fields in the **Emergency Numbers** area. Change previously entered emergency numbers.
- Click on **Set** to save the settings.

Operating the handset

Activating/deactivating the handset

[end call] Press and **hold** the end call key.

You will hear the confirmation tone.

Activating/deactivating the keypad lock

[# ⊸] Press and **hold** the hash key.

You will hear the confirmation tone. The ⊸ icon appears in the display when the keypad lock is activated.

The keypad lock deactivates automatically when you receive a call and activates again after the call.

Please note:
The handset displays an advisory message if you press a key by accident while the keypad lock is on. To deactivate the keypad lock, press and **hold** the hash key [# ⊸].

Control key

In this user guide, the side of the control key that you must press in the given operating situation is shown in black (top, bottom). Example: ▲ for 'press up on the control key'.

The control key has a number of different functions:

When the handset is in idle status

▲ Press and release to open the handset directory.
Press and hold to open the list of available online directories (e.g. Gigaset.net directory).

▶ Open main menu.

▶ Open list of handsets.

▲ Adjust the ringer volume of the handset (page 61).

In lists and menus

▲ / ▼ Scroll up/down line by line.

▶ Open submenu or confirm selection.

◀ Go back one menu level or cancel.

In an input field

You can use the control key to move the cursor **up** ▲, **down** ▼, **right** ▶ or **left** ◀.

During an external call

▲ Press and release to open the handset directory.
Press and hold to open the list of available online directories (e.g. Gigaset.net directory).

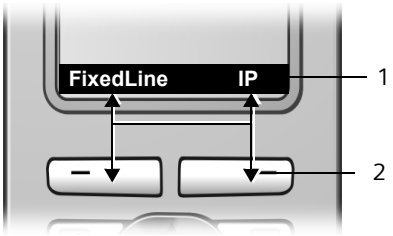
▲ Initiate an internal consultation call.

▲ Adjust loudspeaker volume for earpiece and handsfree mode.

Display keys

The current display functions are shown in the bottom display line in reversed highlights. The function of the display keys changes depending on the particular operating situation.

Example:



1 Current display key functions are shown in the bottom display line.
2 Display keys

The most important display symbols are:

Menu Open the main menu.

Options Open a context-dependent menu.

C Delete key: deletes one character at a time from right to left.

Go back one menu level or cancel operation.

Copy number into directory.

Open the last number redial list.

Reverting to idle status

You can revert to idle status from anywhere in the menu as follows:

▶ Press and **hold** the end call key.

Or:

▶ Do not press any key: after 2 minutes the display will **automatically** revert to idle status.

Changes that you have not confirmed or saved by pressing OK, Yes, Save, Send or Save Entry OK will be lost.

You can find an example of the display in idle status on page 1.

Menu guidance

Your telephone's functions are accessed using a menu that has a number of levels.

Main menu (first menu level)

▶ To open the main menu, press with the handset in idle status.

The main menu functions are shown in the display as a list with icon and name.

Accessing a function

▶ Scroll to the function with the control key and press OK.

Or:

▶ Enter the number that is in front of the function in the menu tree (page 17).

The corresponding submenu (the next menu level) is opened.

Submenus

The functions in the submenus are displayed as lists.

To access a function:

▶ Scroll to the function with the control key and press OK.

Or:

▶ Enter the number combination that is in front of the function in the menu tree (page 17).

Briefly press the end call key once to return to the previous menu level / cancel the operation.

Correcting incorrect entries

You can correct incorrect characters in the text by navigating to the incorrect entry using the control key. You can then:

◆ Press C to delete the character to the left of the cursor.

◆ Insert new character to the left of the cursor.

◆ When entering the time and date etc., edit the flashing character.

You will find examples of symbols used, menu entries and multiple line input in the appendix to this user guide, page 110.

VoIP telephony via Gigaset.net

You can use **Gigaset.net** to make free phone calls via the Internet **directly** to other Gigaset.net users, without having to set up an account with a VoIP provider or make any further settings! You simply have to connect your phone to the power supply and the Internet connection and, if necessary, enter yourself in the Gigaset.net online directory under a name of your choice (page 14/page 29).

Gigaset net is a VoIP service provided by Siemens Home and Office Communication Devices GmbH und Co KG, which is available to all users with a Gigaset VoIP device.

You can call other subscribers to Gigaset.net **free of charge**, i.e. there are no telephone charges other than the costs for your Internet connection. Connections to/from other networks are not possible.

Every Gigaset VoIP device is assigned a Gigaset.net phone number by default (page 107).

All registered subscribers are included in the Gigaset.net directory, which you are able to access.

Exclusion of liability
Gigaset.net is a voluntary service provided by Siemens Home and Office Communication GmbH & Co KG with no liability or guarantee for the availability of the network. This service can be terminated at any time with a notice period of three months.

Please note:
If you do not use your Gigaset.net connection for six weeks, it is automatically deactivated. You cannot be reached for calls from the Gigaset.net.
The connection is reactivated:
- as soon as you start a search in the Gigaset.net directory or
- make a call via the Gigaset.net (dial a number with #9 at the end) or
- activate the connection via the Web configurator (page 89).

Searching for subscribers in the Gigaset.net directory

Your handset is in idle status. A VoIP connection is free.

Press and **hold**.

If necessary select **Gigaset.net** from the list of available online directories and press **OK**.

Please note:
- Calls to the Gigaset.net directory are always **free of charge**.
- You can also open the Gigaset.net directory by dialling **1188#9** (phone number of the Gigaset.net directory) and pressing the talk key. Alternatively, create a new directory entry with this number.

Or (when the handset is in idle status):

1 8 tuv 8 tuv # 9 wxyz
Enter the number (1188#9).

/ Press the talk or handsfree key.

The connection to the Gigaset.net directory is always made using VoIP.

If no connection can be made to the Gigaset.net directory, an error message will be sent and the handset will go into idle status.

If the connection can be made, you will be prompted to enter a name/partial name that you want to search for: **Please enter search name**.

▶ Enter the name or partial name and press OK.

A hit list will be displayed of all the names that begin with the specified character string (abbreviated if necessary).

If no matching entry is found, you will be asked again to enter a name.

You can scroll through the hit list with ⊙.

Once the connection has been established, you will be asked to enter a name that you want to search for.

Nickname:
Enter the name or part of a name (max. 25 characters).

Options — Press the display key.

Start search
Select and press OK.

If the search has been successful, a hit list will be displayed of all the names that begin with the specified character string.

You can scroll through the hit list with ⊙.

If it has **not** been found a **matching** entry, a corresponding message is displayed. You have the following options:

▶ Press the display key New to start a new search.

Or

▶ Press the display key Change to change the search criteria. The previously entered name is copied and can be edited.

If there are **too many matching** entries in the Gigaset.net directory, the message **Too many entries found!** is displayed instead of a hit list.

▶ Press the display key Detail to start a refined search. The previously entered name is copied and can be edited/ expanded.

Calling subscribers

⊙ 📞 — Select the subscriber from the hit list and press the talk key.

Viewing the subscriber's number

⊙ — Select the subscriber from the hit list.

View — Press the display key.

The Gigaset.net number and name of the subscriber will be shown in full, if necessary using more than one line.

Please note:
- Connections to Gigaset.net are always established via VoIP, irrespective of which default connection is set on your phone. Pressing and holding 📞 or pressing it briefly and a "*" at the end of the number have no effect.
- You can open the Gigaset.net directory and establish connections, even if you have not entered yourself in the Gigaset.net directory.

Using other functions

Precondition: the hit list is displayed.

⊙ (select entry) ➔ Options

The following functions can be selected with ⊙:

Add to directory
Copy the number to the handset directory. The number and name (where appropriate abbreviated, max. 16 characters) are copied to the directory.

▶ Edit and save entry where appropriate (page 34).

New search
Start a search with a new name (page 28).

Own details
See "Entering, editing and deleting own entry" on page 29.

Note:
If you dial a Gigaset.net number from the local directory, the connection is automatically established via VoIP.

Entering, editing and deleting own entry

You have the following options:

- Edit the name of your entry in the Gigaset.net directory
- Delete your entry from the directory
- If you did not enter a name when using the phone for the first time (page 14), specify a name and enter yourself in the directory.

Viewing own entry

You are connected to the Gigaset.net directory:

▶ Select Options ➔ Own details and press OK.

Your Gigaset.net number and, where applicable, your currently entered name are displayed.

Entering/editing a name

Edit — Press the display key.

Edit name or enter new name (max. 25 characters) and press OK.
You can delete the name with C.

If there is not yet an entry with this name in the Gigaset.net directory, the name is saved. A message to this effect is displayed. The handset switches to idle status.

If there is already an entry with this name or if the entered name contains impermissible characters, you will be requested to enter a different name.

Note:
If you delete the name, your entry will be deleted from the directory. You are no longer 'visible' to other Gigaset.net subscribers. However, you can still be reached via your Gigaset.net number. For information on how to display the number, see page 107.

Calling a Gigaset.net subscriber

You can call a Gigaset.net subscriber directly via the Gigaset.net directory (see above) or via their Gigaset.net number:

Enter the Gigaset.net number (including the #9) or select from the handset directory.

Press the talk key.

The connection will always be established via VoIP. Every number ending with #9 is dialled via Gigaset.net.

Network services – fixed network

The following network services can only be used for making calls via the fixed network.

Network services are functions that your network provider makes available to you. You have to request these services from your network provider.

▶ **If you require assistance, please contact your network provider.**

Settings for all calls

If you have completed one of the following procedures, a code is sent.

▶ After confirmation from the telephone network, press the end call key.

You can set the following features:

General call forwarding

→ Sel. Services → Fixed Line → Call Divert

▶ Change multiple line input:

When:
Select **All Calls** / **No Answer** / **When Busy**.

Call No.:
Press the display key Edit. Enter the number to which the call is to be diverted, and press Save. You can enter a fixed network (fixed line), VoIP or mobile number.

Status:
Activating/deactivating call forwarding.

▶ Press the display key Send.

▶ Press the end call key after the announcement from the telephone network.

Activating/deactivating call waiting

If call waiting is activated, a caller on the fixed network will hear the ringing tone if you are already conducting a phone conversation using your fixed network connection. This call is announced acoustically and visually on your handset screen.

Calls on the VoIP connection are not shown as call waiting. They are signalled on other registered handsets. If no other handset is available, the caller will hear the busy tone.

Accepting/rejecting call waiting, see page 31.

→ Sel. Services → Fixed Line → Call Waiting

Status: Activate/deactivate.

▶ Press the display key Send.

▶ Press the end call key after the announcement from the telephone network.

Please note:
The setting does not affect the procedure for call waiting on the VoIP connection. For how to activate/deactivate call waiting for the VoIP connection, see page 30.

Functions during a call

Initiate ringback

You hear the busy tone.

Options ➔ Ringback

Press the end call key.

Consultation

During a call:

Ext.Call Press the display key.

Enter a number or copy it from the directory and press OK.

The number will be dialled via the fixed network connection.

Please note:
After a few seconds, the number selected for a consultation call is saved in the last number redial list.

You have the following options:

- Toggling:
  - ▸ Use to toggle between the participants.
  - – End call with active participant: Options End Active Call.
- Conference call:
  - – Call both subscribers: press the display key Conf..
  - – End the conference call (toggling): press display key EndConf.
  - – End call with both participants: Press the end call key.

Accepting a waiting call

Precondition: Call waiting is activated (page 30).

Accept Press the display key.

Or: if the caller's number is not transferred:

Options ➔ Accept waiting call

You have the option of toggling or holding a conference call.

Please note:
- – Without CLIP a waiting call is only announced with a beep.
- – If the first call was an internal call, the internal connection is ended.
- – An internal call waiting is shown on the display. You can neither accept the internal call nor reject it.

Rejecting a waiting call

Options ➔ Reject waiting call

Functions after a call

Cancelling ringback

➔ Sel. Services ➔ Ringback Off

If you have cancelled the ringback, a code is sent.

▸ After confirmation from the telephone network, press the end call key.

Network services – VoIP

You can use the following network services to make calls via the VoIP connection.

Settings for all calls

General call forwarding

➜ Sel. Services ➜ VoIP ➜ Call Divert

A list of your phone's configured and activated VoIP phone numbers will be displayed. VoIP phone numbers for which call diversion is activated are identified with ☑.

- Select the VoIP phone number for which you want to activate or deactivate call diversion, and press OK.
- Change multiple line input:

When:
All Calls / No Answer / When Busy.

Call No.:
Press the display key Edit. Enter the number to which the call is to be diverted, and press Save. You can enter a fixed network, VoIP or mobile number.

Status:
Activating/deactivating call forwarding.

- Press the display key Save.

Please note that call diversion may incur additional costs. Ask your VoIP provider.

Activate/deactivate call waiting

If call waiting is activated, a caller on one of your VoIP connections will hear the ringing tone if you are already on a call using this VoIP connection. This call is announced acoustically and visually on your handset screen.

Calls on the fixed network connection are not signalled as call waiting. They are signalled on other registeredhandsets, to which the fixed network number has been allocated as a receiving number. If no other handset is available, the caller will hear the busy tone.

Accepting/rejecting call waiting, see page 33.

➜ Sel. Services ➜ VoIP ➜ Call Waiting

Status: Activate/deactivate.

- Press the display key Save.

Please note:
The setting applies to all VoIP phone numbers. It does not affect the procedure for call waiting on the fixed network connection. For how to activate/deactivate call waiting for the fixed network connection, see page 32.

Functions during a call

Consultation

During a call:

Ext.Call Press the display key.

Enter the number or transfer from the directory and press talk key.

The number will be dialled via the handset's VoIP sending number.

Please note:
After a few seconds, the number selected for a consultation call is saved in the last number redial list.

If the participant answers, you have the following options:

- Toggling:
  - ▸ Use to toggle between the participants.
  - – End call with active participant: Options End Active Call.
- Conference call:
  - – Call both participants: press the display key Conf..
  - – End the conference call (toggling): press display key EndConf.
  - – End call with both participants: press the end call key.

Accepting a waiting call

Precondition: Call waiting is activated (page 30).

Accept Press the display key.

You have the option of toggling or holding a conference call.

Please note:
- – If the first call was an internal call, the internal connection is ended.
- – An internal call waiting is shown on the display. You can neither accept the internal call nor reject it.

Using the directory and lists

The options are:

- Directory/call-by-call list
- If applicable, online directories
- Last number redial list
- SMS, e-mail and messenger list
- Calls list

You can store a maximum of 150 entries in the directory and call-by-call list (the actual number depends on the size of the individual entries).

You create the directory and call-by-call list for your own individual handset. However, you can send the lists or individual entries to other handsets (page 36).

Directory/call-by-call list

In the **directory** you store numbers and corresponding names.

▶ With the handset in idle status, open the directory by pressing the ◁▽▷ key.

The **call-by-call list** is used to store access codes for network providers (called 'call-by-call numbers'), that can be put ahead of the numbers when dialling via the fixed network.

▶ Open the call-by-call list in idle status by pressing the [⇨] key.

Length of an entry

Number: max. 32 digits
Name: max. 16 characters

Please note:

– Some VoIP providers do not support local calls for calls to the fixed network. In this case, always enter the fixed network number with the area code in your directory.
Alternatively, you can also use the Web configurator to define an area code, which is automatically prefixed to all numbers that are dialled without an area code for calls via VoIP (page 94).
– You can assign a number from the directory to a key for quick dialling (page 35).

Storing a number in the directory

◁▽▷ ➔ **New Entry**

▶ Change multiple line input:

Number :
Enter number.

Name :
Enter name.

Annivers.:
Enter anniversary if required (page 36).

Speed Dial:
Select number key for speed dial.
Each of the keys [2 abc] to [9 wxyz] can be assigned one number from the directory. The number is then dialled by simply pressing a key (page 35). Insert a hash (#) at the end of the number, if the number is to be dialled via the default connection (page 65).

▶ Save changes (page 112).

Please note:

– To find out how to enter IP addresses, turn to page 21.
– If you add a star (*) at the end of the number, the number will be dialled via the non-standard connection (page 65), even if you press and release the [✆] talk key.
– You can use the Web configurator to save the directory to a file on your PC, where it can be edited and then sent back to the handset (page 95). Or you can transfer Outlook contacts from the PC to the handset's directory.

Storing a number in the call-by-call list

[⇨] ➔ **New Entry**

▶ Change multiple line input:

Number :
Enter number.

Name :
Enter name.

Selecting entries in the directory and call-by-call list

◁▷ / ▭ Open directory or call-by-call list.

You have the following options:

- Use ◁▷ to scroll to the entry until the required name is selected.
- Enter the first character of the name, or scroll to the entry with ◁▷.

Dialling with the directory/call-by-call list

◁▷ / ▭ ➔ ◁▷ (Select entry; page 35)

✆ Briefly press/press and hold the talk key. The number is dialled using the selected connection type (page 21).

Please note:
You can only dial IP addresses via VoIP.

Managing directory/call-by-call list entries

◁▷ / ▭ ➔ ◁▷ (Select entry; page 35)

Viewing entries

View Press the display key. The entry is displayed.
Back with OK.

Editing entries

View Edit Press display keys one after the other.

▸ Carry out changes and save.

Using other functions

◁▷ / ▭ ➔ ◁▷ (Select entry; page 35)

Options Open menu.

The following functions can be selected with ◁▷:

Display Number
Change or add to a saved number and then dial it (press talk key ✆).

Edit Entry
Edit selected entry.

Delete Entry
Delete selected entry.

VIP Entry (directory only)
Mark a directory entry as **VIP** (Very Important Person) and assign it a particular ringer tone. You can then identify VIP calls by their ringer tones.

Precondition: Calling Line Identification (page 22).

Copy Entry
Send a single entry to a handset (page 36).

Delete List
Delete **all** entries in the directory or in the call-by-call list.

Copy List
Send complete list to a handset (page 36).

Available Memory
Display the available entries in the directory and call-by-call list.

Using speed dial keys

▸ Press and **hold** the required speed dial key (page 34).

If a hash (#) is placed at the end of the relevant phone number, the number will be dialled via the standard connection; otherwise, it is always dialled via the non-standard connection (page 65).

Sending the directory/call-by-call list to another handset

Preconditions:

- The sending and receiving handsets must both be registered on the same base station.
- The other handset can send and receive directory entries.

◁▷ / ▭ ➜ ◁▷ (Select entry; page 35) ➜ Options ➜ Copy Entry / Copy List

Enter the internal number of the receiving handset. You see Copying entry.

A successful transfer is confirmed by a message and confirmation tone on the receiving handset.

If you have sent a single entry, you can transfer another entry with Yes.

Please note:

- Entries with identical numbers are not overwritten in the receiver handset.
- The transfer is cancelled if the phone rings or if the memory of the receiving handset is full.

Copying a displayed number to the directory

You can copy numbers displayed in a list, e.g. the calls list or the last number redial list, in an SMS or during a call to the directory.

A number is displayed:

Options ➜ Copy to Directory

▸ Complete the entry, see page 34.

Copying a number from the directory

You can open the directory in many operating situations e.g. to copy a number. Your handset need not be in idle status.

▸ Depending on the operating situation, open the directory with ◁▷ or 🕮.

◁▷ Select an entry (page 35).

Saving an anniversary in the directory

You can save an anniversary for every number in the directory and specify a time when you will receive a reminder call on the anniversary.

◁▷ ➜ ◁▷ (Select entry; page 35)

View Edit

Press display keys one after the other.

◁▷ Scroll to the Annivers.: line.

Edit Press the display key.

▸ Change multiple line input:

Date:
Enter the day/month in 4-digit format.

Time:
Enter the hour/minute for the reminder call in 4-digit format.

Prompt:
Select the type of signal for the reminder and press OK.

▸ Save changes (page 112).

Please note:
A time must be specified for reminder calls. If you select a visual signal, a time is not required and is automatically set to 00.00.

Deleting anniversaries

◁▷ ➜ ◁▷ (Select entry; page 35)

View Edit

Press display keys one after the other.

◁▷ Scroll to the Annivers.: line.

Edit Delete Save

Press display keys one after the other.

Reminder call on an anniversary

A reminder call is signalled on the handset using the selected ringer tone.

Off Press the display key to stop the reminder call.

Last number redial list

The last number redial list contains the ten numbers last dialled with the handset (max. 32 numbers). If one of the numbers is in the directory, the corresponding name will be displayed.

Dialling from the last number redial list

	Press the key **briefly**.
	Select an entry.
	Briefly press/press and hold the talk key. The number is dialled using the selected connection type (page 21).

When a name is displayed, you can display the corresponding phone number by pressing the View display key.

Managing entries in the last number redial list

	Press the key **briefly**.
	Select an entry.
Options	Open menu.

The following functions can be selected with :

Display Number (as in the directory, page 35)

Copy to Directory
Copying a displayed number to the directory (page 36).

Delete Entry
Delete selected entry.

Delete List
Delete complete list.

Opening lists with the message key

You can use the message key to open the following lists:

- SMS list
  If **several** mailboxes are set up (page 45), several lists will be displayed, if required.
- Incoming e-mail list
  The list is only shown if new messages have arrived in the mailbox for the incoming e-mail server.
- Messenger message list
  The list is only shown on the handset that is online.
- Configuring the Network mailbox
  If your network provider supports this function and the network mailbox is configured for fast access (page 71).
- Calls list

An advisory tone sounds as soon as a **new message** arrives in a list. The key flashes (it goes off when the key is pressed). In idle status, the displays shows an icon for the new message.

Icon	New message...
	... in the network mailbox
	... in calls list
	... in the SMS, messenger or e-mail list

The number of new entries is shown beneath the corresponding icon.

Pressing the button will only display lists that contain messages (with the exception of the network mailbox). Lists with new messages are shown first and identified in bold. The number of messages received in each are shown in brackets. If a list contains no new messages, the number of old messages will be shown.

Select a list with . To open, press OK.

Please note:
If calls are saved in the network mailbox you will receive a message if the appropriate settings have been made (see the network mailbox instructions of your network provider).

Incoming SMS list

All received SMS messages are saved in the incoming message list, see page 42.

Calls list

Precondition: Calling Line Identification (CLIP, page 22).

Depending on the type of list set, the calls list contains

- all incoming (marked with ☑) and outgoing calls
- missed calls only

The numbers of the last 30 calls are saved.

Multiple calls from the same number will be stored once in the list of missed calls (the latest call). The number of calls from this number is shown in brackets after the entry.

Multiple calls from the same number are stored several times in the list of answered calls.

Please note:
Only calls to the receiving numbers assigned to your handset are stored in the calls list (page 93).
If no receiving numbers are assigned, all calls will be stored in the calls list for all handsets.

Setting the calls list type

➔ Settings ➔ Base ➔ Calls List Type

Missed Calls / All Calls
Select and press OK (☑ = on).

Press and **hold** (idle status).

The calls list entries are retained when you change the list type.

Opening the calls list

➔ Calls List: (2)

Select entry.

The last incoming call is displayed in the **calls list**.

List entry

New messages are on top.

Example of list entries:

- List type (in header)
- Status of entry
  Bold: new entry
- Number or name of caller
  You can add the caller's number to the directory (page 36).
- Date and time of call (if set, page 9)
- Type of entry:
  – answered calls (☑)
  – missed calls

Pressing the display key Delete deletes the marked entry.

Managing entries in the calls list

After pressing the display key **Options** you can select more functions with ⊙:

Copy to Directory
Copying a displayed number to the directory.

Information
If a URI was received and stored for a VoIP call, this will be shown. The URI is dialled if you press the talk key ✆. The URI is not entered on the last number redial list.

Delete List
Delete complete list.

When you leave the calls list all entries are set to the status 'old', i.e. the next time you call the list up they will no longer be shown in bold.

Selecting from the calls list

✉ → **Calls List: (2)**

⊙ Select entry.

✆ Briefly press/press and hold the talk key. The number is dialled using the selected connection type (page 21).

Making cost-effective calls

Using the Internet (VoIP) is the preferred cost-effective way of making calls. If you make calls via the fixed network, select a network provider who offers very low call charges (call-by-call) or have the call duration displayed on your handset after the call. You can manage call-by-call numbers in the call-by-call list

Displaying the call duration

The duration of a call is displayed

- during the conversation,
- until about three seconds after the call has ended if you do not replace the handset in the charging cradle.

Please note:
The actual duration of the call can vary from that shown by a few seconds.

Linking call-by-call numbers with a number

You can insert the dialling code of a network provider ahead of the number ('linking').

⇨ Open call-by-call list.

⊙ Select entry (call-by-call number).

Options Press the display key.

Display Number
Select and press **OK**.

⌨ / ⊙ Enter number or dial number from the directory (page 36).

✆ Press the talk key. Both numbers are dialled.

SMS (text messages)

You can only send and receive SMS messages via the fixed network.

When an SMS is sent, the base station automatically establishes a connection via the fixed network.

Your unit is supplied ready for sending SMS messages immediately.

Preconditions:

- Calling Line Identification is enabled for your fixed network connection.
- Your network provider supports SMS in the fixed network (information on this can be obtained from your network provider).
- You are registered with your service provider to send and receive SMS messages.

SMS messages are exchanged between SMS centres that are operated by service providers. You must enter the SMS centre through which you wish to send and receive SMS messages into your phone. You can receive SMS from **every** SMS centre that is entered, provided you have registered with your service provider.

Your SMS messages are sent via the **Service Centr.** that is entered as the **active send service centre**. However, you can select any other SMS centre as the active send service centre to send a current message (page 46).

If no SMS Service Centre is entered, the SMS menu only contains the entry **Settings** . Enter an SMS Service Centre (page 46).

Please note:

- Each incoming SMS is signalled by a single ring (ringer tone as for external calls). If you accept an SMS 'call', the SMS will be lost. To prevent this ring, suppress the first ringer tone for all external calls (page 62).
- If your phone is connected to a PABX, please read page 47.
- To receive text messages you must be registered with your service provider.

Writing/sending an SMS

Writing an SMS

 → **Messaging** → **SMS**

Mailbox 2 Select mailbox if necessary and press **OK** (page 45).

Enter mailbox PIN if necessary and press **OK**.

New SMS Select and press **OK**.

Write an SMS.

Options Press the display key.

Send Select and press **OK**.

SMS Select and press **OK**.

Sending an SMS

 /  /

Select number with area code (even if you are in that area) from the directory or call-by-call list, or enter number directly. For SMS to an SMS mailbox: add the mailbox ID to the **end** of the number.

Options Press the display key.

Send Select and press **OK**. The SMS will be sent as soon as your phone's fixed network connection is free.

Please note:
- If you are interrupted by an external call while writing an SMS, the text is automatically saved in the draft message list.
- If the memory is full, or if the SMS function on the base station is being used by another handset, the operation is cancelled. An appropriate message appears in the display. Delete SMS messages you no longer require or send the SMS later.

Using other functions

Precondition: you are writing a text message.

Options Open menu.

The following functions can be selected with ◉:

Send
Send an SMS.

Predef. Sound
Insert ringer tone.

Predef. Picture
Insert a picture.

Predictive Text
Activate/deactivate predictive text EATONI, page 112.

Select Language
For EATONI: select the language in which you wish to write the text and press **OK**.

SMS status report

Precondition: Your network provider supports this feature.

If you have activated the status report, you will receive an SMS with a confirmation message after sending.

Activating/deactivating a status report

◉ → ✉ **Messaging** → **SMS** → **Settings**

Status Report
Select and press **OK** (☑ = on).

Reading/deleting a status report

▸ Open the incoming message list (page 42) and then:

◉ Select SMS with the **State OK** or **State not OK** status.

Read Press the display key.

Or:

Delete Press the display key. The SMS is deleted.

Draft message list

You can save an SMS in the draft message list and edit and send it later.

Saving an SMS in the draft message list

▸ You are writing an SMS (page 40).

Options Press the display key.

Save Select and press **OK**.

Please note:
After saving, the SMS editor with your SMS will be displayed again. You can continue writing the text and save it again. The SMS that was saved previously will be overwritten.

Opening the draft message list

◉ → ✉ **Messaging** → **SMS** → (mailbox, mailbox PIN)

Outgoing (3)
Select and press **OK**. The number of the SMS messages in the list will be shown in brackets (e.g.(3)).

The first list entry is displayed, e.g.:

```
1234567890
21.09.05  09:45
```

Reading or deleting individual SMS messages

▸ Open the draft message list and then:

◉ Select SMS.

Read Press the display key. The entry will be displayed. Scroll line by line using ◉.

Or:

Options Open menu.

Delete Entry Press **OK**. The SMS is deleted.

Writing/editing an SMS

▶ You are reading an SMS in the draft message list.

Options Open menu.

You have the following options:

New SMS
Write a new SMS and then send (page 40) or save it.

Edit
Edit the text of the saved SMS and then send (page 40).

Character Set
Text is shown in the selected character set.

Deleting draft message list

▶ Open the draft message list and then:

Options Open menu.

Delete all Select, press **OK** and confirm with **Yes**. The list is cleared.

Press and **hold** (idle status).

Sending SMS messages to an e-mail address

If your service provider supports the SMS to e-mail feature, you can also send your SMS messages to e-mail addresses.

The e-mail address must be at the beginning of the text. You must send the SMS to the e-mail service of your SMS send centre.

→ **Messaging** → **SMS** → (mailbox, mailbox PIN) → **New SMS**

Enter the e-mail address. End the entry with a space or colon (depending on the service provider).

Enter the SMS text.

Options Press the display key.

Send Select and press **OK**.

E-mail Select and press **OK** If the number of the e-mail service is not entered (page 46), enter the number of the e-mail service.

Send Press the display key. The SMS will be sent as soon as your phone's fixed network connection is free.

Receiving an SMS

All received SMS messages are saved in the incoming message list. Linked SMS messages are displayed as **one** message. If this is too long (it consists of more than 8 linked individual SMS messages) or if it was not fully transmitted, it will be split into several individual SMS messages.

Since an SMS remains in the list even after it has been read, you should **regularly delete SMS messages from the list**.

The display tells you if the SMS memory is full.

▶ Deleting SMS messages you no longer require (page 43).

Incoming message list

The incoming message list contains:

- All received SMS messages, starting with the most recent
- SMS messages that could not be sent due to an error
- SMS status messages, if the status report is activated (page 41).

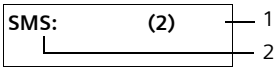
New SMS messages are signalled on all Gigaset S45 handsets by the ✉ icon in the display, the flashing message key and an advisory tone.

Opening the incoming message list with the key

Press.

Select mailbox if necessary and enter mailbox PIN.

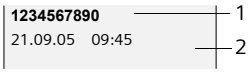
The incoming message list is displayed as follows (example):



1 Number of entries in the list.
2 Name of mailbox, here: general mailbox

Open list with OK.

An entry in the list is displayed e.g. as follows:



1 Number of the sender or name of the directory entry
2 **SMS status:**
bold: new unread SMS messages
regular: old read SMS messages

Opening the incoming message list via the SMS menu

➔ ✉ **Messaging** ➔ **SMS** ➔ (mailbox, mailbox PIN) ➔ **Incoming (2)**

Reading or deleting individual SMS messages

- Open the incoming message list.
- Continue as described at "Reading or deleting individual SMS messages", page 41.

A new SMS which you have read receives the status **Old**.

Changing the character set

- Read the SMS (page 43):

If you cannot see any text or symbols, the SMS may have been written with a different character set.

Options Press the display key.

Character Set
Select and press OK.

Select character set and press OK.

Text is shown in the selected character set.

Deleting incoming message list

All **new and old** SMS messages in the list are deleted.

- Open the incoming message list.

Options Open menu.

- To continue, see "Deleting draft message list", page 42.

Replying to or forwarding text messages

- Read the SMS (page 43):

Options Press the display key.

You have the following options:

Reply
Write and send a reply SMS directly (page 40).

Edit
Edit the text in the SMS and then send it (page 40). Attachments (e.g. pictures, melodies) are not sent.

Forwarding an SMS

- You are reading an SMS (page 43):

Options Press the display key.

Forward Select and press OK. For further information, see page 40.

Attachments are forwarded. If a service provider does not permit the forwarding of attachments:

- Select **Edit** to forward the SMS without attachments.
- Confirm the prompt **New SMS will not contain picture/ melody. Continue?** with **Yes**.

Accept number in the directory

Adding the sender's number

▶ Open incoming message list and select entry (page 42).

Options Press the display key. For further information, see page 36.

Please note:
- You can create a special directory for SMS messages within your main directory by putting a star (*) before the names.
- An attached mail box identifier is added to the directory. They must be deleted for 'normal calls'.

Dialling numbers from SMS texts/ transferring to the directory

▶ Read SMS (page 43) and scroll to the telephone number.

The digits are reverse-highlighted.

Press the talk key to dial the number.

Or:

→📖 Press the display key to transfer the number to the directory.

The directory is opened.

New Entry Press **OK** to confirm.

The highlighted number will be transferred into the **Number :** field. For further information, see page 34.

Please note:
- The + symbol is not transferred for international dialling codes.
  - ▶ You should then enter '00' at the start of the number.
- If an SMS contains several numbers, the next number will be highlighted if you scroll down until the first number disappears from the display.

If you wish to use the number to send an SMS:

▶ Save the number with the area code (dialling code) in the directory.

Notification by SMS

You can arrange to be notified about missed calls by SMS.

Precondition: For missed calls, the caller's number (CLI) must have been transmitted.

Notification is sent to your mobile phone or another phone with SMS functionality.

You only need to set the phone number to which notification should be sent (notification number) and the notification type.

Please note that your network provider will usually charge for SMS notifications.

Storing the notification number

→ **Messaging** → **SMS** → **Settings** → **Notify Number**

Enter the number (including dialling code) to which the SMS is to be sent.

Save Press the display key.

Press and **hold** (idle status).

Warning:
Do **not** enter your own fixed network number for the notification of missed calls. This can lead to chargeable endless looping.

Setting the notification type

→ **Messaging** → **SMS** → **Settings** → **Notify Type**

Missed Calls:
Set **On** if you require SMS notification.

▶ Save changes (page 112).

SMS mailboxes

The **General Mailbox** is the default setting. Anyone can access this mailbox and it cannot be protected by a PIN. You can additionally set up three **personal mailboxes** and protect these with a **PIN**. Each mailbox is identified by a name and a 'Mailbox ID' (a kind of extension number).

Please note:

- If you operate a number of devices (base stations) with SMS functionality on a single phone line, then each SMS mailbox ID may only occur once. In this case you must also change the preset ID of the general mailbox ('0').
- You can only use personal mailboxes if your service provider supports this function. You can tell whether this is the case by the addition of a star (*) to the number of a (preset) SMS centre.
- If you have forgotten your mailbox PIN, you can reset it by restoring the base station's default settings. This will **delete all SMS messages from all mailboxes**.

Setting up and changing a personal mailbox

Setting up a personal mailbox

➜ Messaging ➜ SMS ➜ Settings ➜ SMS Mailboxes

Select a mailbox, e.g. Mailbox 2, and press OK.

▸ Change multiple line input:

On/Off:
Activate or deactivate mailbox.

ID:
Select mailbox ID (0–9). You can only select the available numbers.

Protection:
Activate/deactivate PIN protection.

PIN
If necessary, enter 4-digit PIN.

▸ Save changes (page 112).

Active mailboxes are marked with ☑ in the mailbox list. They are shown in the SMS list and can, if necessary, be displayed by pressing the message key.

Deactivating a mailbox

▸ Set On/Off: to Off. Confirm message with Yes if necessary.

Save — Press the display key.

All SMS messages saved in this mailbox will be deleted.

Deactivating PIN protection

▸ Set Protection: to Off.

The mailbox PIN is reset to '0000'.

Changing the name of a mailbox

➜ Messaging ➜ SMS ➜ Settings ➜ SMS Mailboxes ➜ R R
(Select mailbox)

Edit — Press the display key.

Enter new name.

Save — Press the display key.

Press and **hold** (idle status).

Changing a mailbox's PIN and ID

➜ Messaging ➜ SMS ➜ Settings ➜ SMS Mailboxes ➜ R R
(Select mailbox)

Enter mailbox PIN if required und press OK.

▸ Set ID:, Protection: and PIN (page 45).

Sending an SMS to a personal mailbox

To send an SMS to a personal mailbox, the sender must know your ID and enter it after your number.

▸ You can send your SMS contact an SMS via your personal mailbox.

Your SMS contact will receive your SMS number with current ID and can save it in their directory. If the ID is invalid, the SMS will not be delivered.

Setting SMS centre

Entering/changing SMS centres

- You should find out about the services and special functions offered by your service provider **before you make a new application** and/or before you delete pre-configured call numbers.

→ Messaging → SMS → Settings → Service Centres

Select SMS centre (e.g. Service Centr. 1) and press OK.

- Change multiple line input:

Active Send:
Select Yes if the text messages are to be sent via the SMS centre. For the SMS centres 2 to 4, the setting only applies to the next SMS.

SMS:
Press the display key Edit. Enter the number of the SMS service and insert a star if your service provider supports personal mailboxes.

E-mail:
Press the display key Edit. Enter the number of the e-mail service.

- Save changes (page 112).

Please note:
Ask your service provider for details on how to enter service numbers if you wish to use personal mailboxes (precondition: your service provider supports this function).

Sending an SMS through another SMS centre

- Activate the SMS centre (2 to 4) as active send service centre.
- Send the SMS.

This setting only applies to the next SMS to be sent. Thereafter, the setting returns to Service Centr. 1.

SMS info services

You can have your service provider send you certain information (e.g. weather forecasts or lottery numbers) via SMS. A total of up to 10 info services can be stored. You can obtain information about the info services available and their costs from your service provider.

Setting up/ordering an info service

Ordering an info service

→ Messaging → SMS → SMS Service

	Select info service.
Send	Press the display key.

Setting up an info service

- Select an empty entry for an info service (see above). Then:

Edit	Press the display key.
	Enter the code, name and destination number as appropriate.
Save	Press the display key.

Editing the entry of an info service

- Select the info service (see above). Then:

Options	Open menu.
Edit Entry	Select and press OK.
	If necessary, change the code, designation or destination number.
Save	Press the display key.

Deleting an info service

- Select the info service (see above). Then:

Options	Open menu.
Delete Entry	Select and press OK.

SMS on a PABX

- You can only receive an SMS when the **Calling Line Identification** is **forwarded to the extension of the PABX (CLIP)**. The CLIP of the phone number for the SMS centre is evaluated in your **Gigaset**.
- If required, you must prefix the number for the SMS centre with the access code (depending on your PABX).

  If in doubt, test your PABX, e.g. by sending an SMS to your own number: once with and once without the access code.
- When you send SMS messages, your sender number may be sent without your extension number. In this case the recipient cannot reply to you directly.

Sending and receiving SMS **on ISDN PABXs** is only possible via the MSN number assigned to your base station.

Activating/deactivating SMS function

If you deactivate the SMS function, you cannot send or receive SMS messages with your phone.

The settings which you have made for sending and receiving SMS messages (e.g. the call numbers of the SMS centres) and the entries in the incoming and draft message lists are saved even after you switch off your phone.

 Open menu.

5 jkl 5 jkl 9 wxyz 2 abc 6 mno
Enter the digits.

0 + OK Deactivate SMS function.

Or:

1 ∞ OK Activate SMS function (default settings).

SMS troubleshooting

Error codes when sending

E0	Calling Line Identification permanently withheld (CLIR) or Calling Line Identification not activated.
FE	Error occurred during SMS transfer.
FD	Connection to SMS centre failed, see self-help.

Self-help with errors

The following table lists error situations and possible causes and provides notes on troubleshooting.

You cannot send messages. 1. You have not requested the CLIP service (Calling Line Identification Presentation). ▸ Ask your service provider to enable this service. 2. SMS transfer was interrupted (e.g. by an incoming call). ▸ Re-send the SMS. 3. Network provider does not support this feature. 4. No number or an invalid number is entered for the SMS centre set as the active send service centre. ▸ Enter the number (page 46).
You receive an incomplete SMS. 1. Your phone's memory is full. ▸ Delete old SMS messages (page 43). 2. The provider has not yet sent the rest of the message.
You have stopped receiving SMS messages. 1. You have changed the ID of your mailbox. ▸ Give your SMS contacts your new ID or undo the change (page 45). 2. You have not activated your mailbox. ▸ Activate your mailbox (page 45). 3. Call forwarding is activated with **When: All Calls** or the call forwarding **All Calls** is activated for the network mailbox. ▸ Change the call forwarding.
The message is played back. 1. The 'display call number' service is not activated. ▸ Ask your service provider to activate this function (chargeable). 2. Mobile phone operator and fixed network SMS service provider have not agreed on a cooperation. ▸ Obtain information from your fixed network SMS service provider. 3. Your terminal is recorded by your SMS provider as having no fixed network SMS functionality, i.e. you are no longer registered with the provider. ▸ Obtain information from your fixed network SMS service provider. ▸ Have the device (re-)registered to receive SMS messages.
Messages are only received during the day. 1. The terminal is recorded in your SMS provider's database as having no fixed network SMS functionality, i.e. you are no longer registered with the provider. ▸ Obtain information from your fixed network SMS service provider. ▸ Have the device (re-)registered to receive SMS messages (see above).

E-mail notifications

Your phone will notify you when new e-mail messages have been received on your incoming e-mail server.

It periodically connects to the e-mail server (around every 15 minutes) and checks for any new messages.

Any new messages that have been received are displayed on all Gigaset S45 handsets that have been registered: you will hear an advisory tone, the message key ✉ will flash and symbol ✉ will be displayed in the idle display.

Please note:
The symbol ✉ is also displayed if new SMS messages or messenger messages have been received.
If new e-mail messages have been received, pressing the message key ✉ will display them in list **E-mail:** .

You can use your phone to connect to the incoming e-mail server and display the sender, date and time of receipt and subject for every e-mail message in the list of incoming mail (page 50).

Preconditions:

- You have set up an e-mail account with an Internet provider.
- The incoming e-mail server uses the POP3 protocol.
- You have stored the name of the incoming e-mail server and your personal access data (account name, password) in the phone (page 49).

Entering access data for the incoming e-mail server

For the handset to check for new e-mails, you must save the address of your Internet service provider's incoming e-mail server and the username and password for access to your mailbox on the phone. Your Internet provider will supply you with this information.

Please note:
For how to make the setting using the Web configurator, see page 98.

Entering the incoming e-mail server

◉ → ✉ **Messaging** → **E-mail** → **Settings** → **Incoming (POP3)**

▸ Enter the name of the incoming e-mail server (POP3 server) (max. 74 characters). Example: pop.theserver.com.

▸ Select **Options** → **Save** and press **OK**.

Entering access data

◉ → ✉ **Messaging** → **E-mail** → **Settings** → **Registration**

▸ Change multiple line input:

Username:
Enter the user name (account name) agreed with the Internet provider (max. 32 characters).

Authent. Password:
Enter the password that you agreed with your provider for accessing the incoming e-mail server (max. 32 characters; case sensitive).

▸ Press the display key **Save** to save entries.

The characters will be displayed as entered when you enter your password, as long as the cursor is on this line. Thereafter, the password will be replaced by a row of asterisks for security reasons.

Opening the incoming e-mail server

→ Messaging → E-mail → Inbox

Or if new e-mail messages have been received (the message key is flashing):

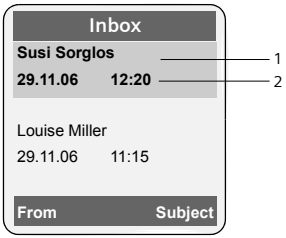
→ E-mail:

The phone will connect to the incoming e-mail server. A list of e-mail messages that are stored there will be displayed.

New unread messages appear above old read messages. The most recent entry is at the head of the list.

The name or e-mail address of the sender (one line, abbreviated if necessary) is shown along with the date and time for every e-mail (the date and time only have correct values if the sender and recipient are located in the same time zone).

Example display:



1 E-mail address or name transmitted by the sender
Bold: New message.
2 Date and time of receipt of e-mail message

If the incoming message list on the incoming e-mailserver is empty, **No entries** will be displayed.

Please note:
Many e-mail providers operate standard spam protection measures. E-mail messages classified as spam are stored in a separate folder and are therefore not shown on the list of incoming mail.
Some e-mail providers allow you to deactivate spam protection or show spam e-mails on the list of incoming mail.
Other e-mail providers may send a message to the Inbox when a new spam e-mail is received. This is to inform you that a suspected spam e-mail has been received.
Date and sender of this mail are repeatedly updated, so that it is always displayed as a new message.

Messages when establishing a connection

The following problems may occur when connecting to the incoming e-mail server. The messages are displayed in the handset's display for a few seconds.

Server not accessible!
The connection to the incoming e-mail server could not be established. This may have the following causes:
- Incorrect entry for name of incoming e-mail server
- Temporary problems with the incoming e-mail server (server is down or is not connected to the Internet).

▶ Check settings (page 49).
▶ Try again later.

Currently not possible!
The resources your phone requires to make the connection are busy, e.g.:
- Two VoIP connections have already been made
- Another handset is currently connected to the incoming e-mail server.

▶ Try again later.

Log-in failed!

Error during login to incoming e-mail server. This may have the following cause:

– Incorrect entries for name of incoming e-mail server, user name and/or password.

▶ Check settings (page 49).

Mailbox settings incomplete!

Incorrect entries for name of incoming e-mail server, user name and/or password.

▶ Check settings and complete if necessary (page 49).

View the message header of an e-mail

Precondition: You have opened the incoming mail list (page 50).

Select e-mail entry.

Subject Press the display key.

The subject of the e-mail message will be displayed (max. 120 characters).

Press the display key to return to the incoming message list.

View e-mail sender's address

Precondition: You have opened the incoming mail list (page 50).

Select e-mail entry.

From Press the display key.

The sender's e-mail address is shown in full.

Press the display key to return to the incoming message list.

Example:

Messenger

The messenger in your handset enables **instant messaging** (immediate message transfer, chatting). The phone supports the XMPP messenger (Jabber).

Instant messaging refers to communication between 'friends' on the Internet. Subscribers exchange short messages which are forwarded immediately. This gives rise to a flowing 'conversation' similar to chatting.

The precondition for this form of communication is that both subscribers have a connection to the **messenger server** of the same instant messaging provider. Therefore, both subscribers must be '**online**'. The messenger server forwards the messages to the recipient.

The subscribers to instant messaging are called **buddies**.

Most messenger servers allow you to create what are known as **buddy lists.** You can store the buddies you want to chat to in the buddy list.

The messenger server informs you as soon as one of your buddies comes online or goes offline. **Offline** means that the buddy has disconnected from the messenger server.

In addition to this, each buddy can determine their own (communication) **status** (**state of presence,** see page 54), from which buddies can tell whether they are in the mood to chat or wish to remain undisturbed.

The Web configurator on your phone gives you the following options:

- Go **online** (page 53).
- Display the list of your contacts (**buddies**) on the handset that you previously created on the PC. This will indicate for each buddy whether they are available (**online**) and ready to chat (**state of presence**, see page 54).
- Exchange messages with your buddies. Your handset notifies you about new messages with a flashing message key ✉ and a beep.
- Call your buddies directly from your buddy list (page 58).

Requirements for instant messaging:

- You have registered with an instant messaging provider via the Web browser on your PC and (optionally) agreed a Web name (nickname).
- You have created a buddy list via the messenger client on the PC.
- You have saved the messenger server address and your access data for the messenger server (user ID, password) in the phone using the Web configurator (page 97). The phone needs the data to establish a connection with the messenger server.

Please note:
If your instant messaging provider doesn't support the phone's messenger client, then you can open an account with an open Jabber server and use the Web configurator to enter its address in your phone. Many of these Jabber servers offer gateways to other messenger servers (e.g. AOL, ICQ, MSN, Yahoo!).
You can find a list of Jabber servers and an overview of the gateways to other messenger servers on the Internet at http://www.jabber.org.
You can find information on setting up a Jabber account with connections from ICQ, MSN or Yahoo on the Internet, e.g. at : http://web.swissjabber.ch

Establishing a connection, going online

When you go online, your buddy list will be displayed on the handset and you will receive messages from your buddies.

Only one of the handsets connected to the base station can connect to the messenger server. You can then only 'chat' on this handset.

An external call will interrupt the 'chat', but you will still be online. You can continue your chat after you end or reject the call.

Precondition: You have saved the messenger server address and your access data for the messenger server (user ID and password) in the phone using the Web configurator (page 97).

➔ ➔ **Messaging** ➔ **Messenger**

Yes Press the display key to confirm the prompt.

The phone attempts to establish a connection. You are informed about the status of the connection by messages on the display.

If the connection can be established, you are **Online** . The display will show the submenu for your messenger. You can open your buddy list, send and receive messages and call your buddies.

The following is displayed when the handset is in idle status:

You remain online until you set your status to **Offline** (page 54) or the connection to the messenger server is terminated (page 58).

You also remain online if you press the end call key .

If the connection cannot be established, you will receive an appropriate message. Please try again later (page 58).

Please note:
You can also assign the messenger to one of the display keys on your handset (page 60). The connection is established when you press the display key.

Lost connection

If your phone loses its connection to the messenger server, the display key will flash on the handset that had been connected to the messenger. In idle status it will display "**Messenger connection failed!**". All messages that you previously had received, as well as any message you were currently writing, will be saved.

Reconnecting:

Press the message key.

Yes Press the display key to confirm the prompt.

The phone will attempt to reconnect. You are informed about the status of the connection by messages on the display.

If you reply to the request with **No** the phone will behave as during regular disconnection. All messenger messages will be deleted. The phone is offline.

Changing/checking your personal status, going offline

You want to log off (go offline) or let your buddies know whether you wish to chat or would prefer to remain undisturbed.

You have the following options:

Offline

You log off from the messenger server. The messenger server informs your buddies that you are no longer available.

The handset switches to idle status. You can neither send nor receive messages.

Online

(Setting after successful connection)

You are logged on to the messenger server and can send and receive messages.

Ready for chat

You are **Online** and can send and receive messages.

You invite your buddies to 'chat' with you.

Away / Extended Away / Do not disturb

You are **Online** and can send and receive messages. You inform your buddies that you currently cannot/do not wish to 'chat', i.e. will not reply to their messages immediately.

Invisible

You are **Online** and can send and receive messages.

However, the messenger server indicates to your buddies that you are **Offline** .

Please note:
All status settings apart from **Offline** only inform other buddies about your communication status. Whether this information is passed on to your buddies depends on the provider.

Changing status

 → **Messaging** → **Messenger** → **User Status** → **Change Status**

 Select status and press **OK** (☑ = on).

 Press **and hold** if necessary (idle status).

Disconnect, go offline

▸ Select **Offline** status, and respond **Yes** .to the security prompt.

The connection to the messenger server will be terminated. The handset returns to idle status. New messenger messages are no longer sent to you. The messenger message list is deleted. The buddy list is no longer available.

Please note:
Whether messages directed to you are deleted or stored in the messenger server depends on the provider. Stored messages are sent to you when you go online again.

Checking your status and user ID

 → **Messaging** → **Messenger** → **User Status** → **Info**

If you are online, the following information may be displayed (depending on your provider):

- Your Web name (nickname, abbreviated if necessary)
- Your current status
- Your user ID (format: userid@provider-domain; abbreviated if necessary)

Only **Offline** will be displayed if you are offline.

Opening the buddy list

Precondition: you are **Online** and have already created a buddy list (using the PC) on your provider's messenger server.

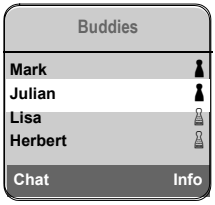
→ **Messaging** → **Messenger** → **Buddies**

Only the first 20 (maximum) buddies on the buddy list will be read by the messenger server and displayed on the handset. The number depends on the available memory space.

The buddies that are displayed depend on which buddies were transferred from the messenger server first.

Please note:
You can also receive and respond to messages from buddies who are not on the list displayed on the handset.

Example:



The Web names (nicknames) of your buddies are displayed on the list. If they do not have a Web name, the user ID is displayed.

If the name of a buddy is longer than one line, it will be abbreviated. You can navigate the list with the control key.

The buddies appear on the list in the following order. You can interpret their status by means of the colour of the icon next to the buddies (page 54):

1. Buddies with **Online** status or **Ready for chat** in alphabetical order. The icon is **green**.
2. Buddies with **Away** , **Extended Away** or **Do not disturb** status in alphabetical order. The icon is **orange**.
3. Buddies with **Offline** or **Invisible** status in alphabetical order. The icon is **red**.

Please note:
The buddy list will remain open until you exit it (press and release or press and hold). The handset will not automatically return to idle status.

Changes in the status of buddies

You have opened the buddy list and one of the buddies changes their status. The following distinctions are made:

- A buddy changes to status **Online** / **Ready for chat** :

  You are informed via a message on the display. The buddy list is updated.
- In the event of another status change, the buddy list is updated. No message is displayed.

Please note:
If the buddy changes to **Offline** status, your messages are no longer sent to them. Whether the messenger server stores the messages until the buddy is **Online** again or deletes them depends on the provider.

Requesting information about buddies

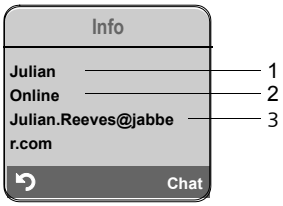
You have opened the buddy list (page 55).

◁▷ Select buddy..

Info Press the display key.

The display depends on the provider.

Example:



1 Web name (nickname, abbreviated if necessary)
2 Status
3 User ID (format: userid@provider-domain; abbreviated if necessary). (Resource names are not displayed.)

If the buddy changes their status the entry is updated.

Press ↩ to return to your buddy list. Press Chat if you want to 'chat' with the buddy.

Chatting to buddies

You want to 'chat' to a buddy, i.e. send a message.

Precondition: you have opened the buddy list (page 55) and selected a buddy with ◁▷.

- Press the display key Chat. The text editor is opened.
- Write and send your message (page 57).

The buddy list is shown again.

Receiving messages

Precondition: you are online.

Newly arrived buddy or info messages (page 57) are indicated by a flashing message key ✉ and a beep, even if you are in a messenger menu or text editor.

The messages are stored in the **Messenger:** message list.

Please note:
The list messenger is only displayed if you are online.

Opening the message list using the ✉ key

The message key flashes.

- Press the message key ✉.
- Select list **Messenger: (2)** if required and press OK. The number in brackets indicates the number of new messages.

Please note:
If you are in the messenger menu or one of its submenus/text editors and you press the flashing message key ✉, this will open the messenger list directly.

To open the message list from the menu:

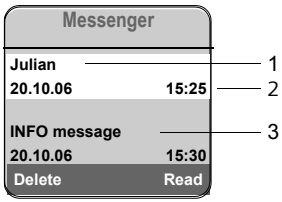
In the handset idle status:

◁▷ → ✉ **Messaging** → **Messenger** → **Messages**
Select and press OK.

Message list

The messages on the list are sorted chronologically, with the oldest message at the head of the list.

Example of a list display:



1 Sender's Web name/user ID
Bold: new/unread message
2 Date and time of message
3 Message from the messenger server (page 57)

If the memory is full and new messages arrive, the oldest message(s) will be overwritten. If there are not old (read) messages, the oldest (unread) messages will be overwritten.

Message types

In instant messaging, a distinction is made between the following types of message:

- **Buddy messages** are the 'instant messages' you receive from your buddies. You can answer the messages.
- **Info messages** are special information from the provider. They are forwarded to you, but you cannot reply to them.

  Example: With some messaging providers you receive an info message when another subscriber tries to add you to their buddy list. You are prompted to check the messages on the messenger client on your PC.

  Via the messenger client on your PC you can agree to the action or refuse permission. Without your agreement, the other subscriber cannot add you to their buddy list.

Reading messages

Precondition: You have opened the message list and selected a message with ⊙.

▶ Press the display key **Read**.

The message is opened for you to read.

You have the following options:

Delete Delete a message from the list You will return to the message list.

Or:

Answer (for buddy messages only) Reply to message. The text editor is opened. You can write a reply (see "Writing and sending messages" on page 57).

Or:

📠 Back to the message list.

Deleting a message

Precondition: You have opened the message list and selected a message with ⊙.

▶ Press the display key **Delete**.

Writing and sending messages

Precondition:

- You are reading a buddy's message and press the display key **Answer** or
- You have pressed the display key **Chat** in the buddy list or the buddy profiles.

A text editor is opened.

▶ Use the handset keys to enter a message (max. 612 characters, EATONI predictive text is available, page 112).

▶ Select **Menu** ➜ **Send** and press **OK**.

The message is sent to the buddy.

If the messenger server is unable to send the message to the buddy, a message will be displayed.

▶ Confirm the message by clicking on **OK**.

The text-editor will re-open with your message. You can then retry sending the message.

Interruption while writing

If you receive a call while you are writing a message or the connection to the messenger server is interrupted, the text editor is terminated. Your message is stored temporarily until ...

- ... you start up a chat with the same buddy (page 56). The text editor is opened with the stored text. You can finish writing the message and send it.
- ... you wish to write a message to another buddy. The stored text is deleted. The text editor is empty.
- ... you go offline. The text is deleted.

Menu options for the text editor

By pressing **Menu** within the text editor you have the following options:

Send
Send message to buddy.

Delete Text
Delete the whole text.

Predictive Text
Activate/deactivate predictive text, see page 112.

Select Language
For predictive text: select the language in which you wish to write the text and press **OK**.

Calling a buddy

You can call a buddy directly.

Precondition: the messenger server supports calls using vCard and your buddy's vCard contains a phone number.

Preconditions:

- You have opened the buddy list and selected a buddy

  or

- You have opened the buddy's profile

  or

- You have opened the **Messenger:** list and selected a buddy

  or

- You are reading a message from a buddy

/ Press and **release**/**hold** the talk or handsfree key.

The phone will try to establish a VoIP/fixed network connection.

The first number that is found on the vCard will be dialled.

Ending a call

Press the end call key.

Self-help with errors

While establishing a connection to the messenger server, during connection and when sending messages the following errors may occur.

Behaviour when the connection is lost

If the connection to the messenger server is interrupted, an appropriate message is shown in the display. You are **Offline** .

If you are in a submenu of the messenger, the handset switches to the messenger menu.

▶ Try to re-establish the connection (page 53).

Errors when sending

If it is not possible to send a message, a distinction is made between the following situations:

- The connection to the messenger server is interrupted:

  A message is shown in the display to indicate that the connection to the messenger server has been interrupted.

  The message is stored temporarily (page 57).

  ▶ Try to re-establish the connection (page 53) and send the message again.

- The server is unable to send the message:

  A message is shown in the display to indicate that the message could not be sent. If, for example, the buddy is not available, the message you have sent will also be displayed.

  The message is stored temporarily (page 57).

  ▶ If necessary, check the buddy's user ID and send the message again later.

Setting the handset

Your handset is preconfigured, but you can change these settings to suit your individual requirements.

Changing the display language

You can view the display texts in different languages.

➔ Settings ➔ Handset ➔ Language

The current language is marked with ☑.

Select a language and press OK.

Press and **hold** (idle status).

If you accidentally choose a language you do not understand:

5 jkl 4 ghi 1 ∞

Press keys in sequence.

Select the correct language and press OK.

Setting the display

You have a choice of four colour schemes and several different contrasts.

➔ Settings ➔ Display

Colour Scheme

Select and press OK.

Select a colour scheme and press OK (☑ = current colour).

Press **briefly**.

Scroll to the Contrast line.

Contrast Select and press OK.

Select contrast.

Save Press the display key.

Press and **hold** (idle status).

Setting the screen picture

You can display a screen picture (picture or digital clock) when the handset is in idle status. This will replace the idle status display. It may conceal the date, time and name.

The screen picture is not displayed in certain situations, e.g. during a call or when the handset has been de-registered.

If a logo has been activated, the menu item Screen Picture is marked with ☑.

➔ Settings ➔ Display ➔ Screen Picture

The current setting is displayed.

▸ Change multiple line input:

Activation:
Select On (screen picture is displayed) or Off (no screen picture).

Selection:
Change screen picture if necessary (see below).

▸ Save changes (page 112).

If the screen picture conceals the display, press the end call key **briefly** to show the idle display with time and date.

Changing the screen picture

➔ Settings ➔ Display ➔ Screen Picture

Scroll to the Selection line.

View Press the display key. The active screen picture is displayed

Select a picture or Clock .

Save Press the display key.

▸ Save changes (page 112).

Setting the display backlight

Depending on whether or not the handset is in the base station you can set different levels of display backlight. If the base station is switched on, the display is permanently dimmed.

 → Settings → Display → Backlight

The current setting is displayed.

▶ Change multiple line input:

In Charger
Select **On** or **Off**.

without Charger
Select **On** or **Off**.

Save Press the display key.

 Press and **hold** (idle status).

Please note:
When the display backlight is switched on, the standby time of the handset is reduced to approx. 30 hours.

Assigning the handset's display keys

The default settings for the handset's display keys are preset with functions in idle status. You can change the assignment of the display keys, i.e. assign other functions to the display keys. The change is handset-specific.

Assigning a function

▶ In idle status **press and hold** the right or left display key (e.g. **FixedLine**).

The list of possible key assignments is opened. The following can be selected:

◆ **INT** (**INT**)
Opens the list of internal subscribers.

◆ **SMS** (**SMS**)
Opens the SMS submenu for writing, sending and reading SMS messages (page 40):
Messaging → SMS

◆ **SMS Service** (**SMS Info**)
Opens the menu for ordering an info service (page 46):
Messaging → SMS → SMS Service

◆ **SMS Notific.** (**Notif.**)
Opens the menu for activating SMS notification (page 44):
Messaging → SMS → Settings → Notify Type

◆ **E-mail** (**EMail**)
Opens the e-mail submenu for receiving and reading e-mail notifications (page 49):
Messaging → E-mail

◆ **Messenger** (**Messgr.**)
Opens the Messenger submenu for chatting with friends on the Internet (page 52):
Messaging → Messenger

◆ **Fixed Line Call** (**FixedLine**)
Opens the pre-dialling option for making a call via the fixed network (fixed line).

◆ **IP Call** (**IP**)
Opens the pre-dialling option for making a call via VoIP.

 Select a function and press **OK**.

The handset returns to idle status.
The label of the display key has changed (e.g. **Messgr.** when choosing: **Messenger**).

Starting a function

▶ With the handset in idle status, press the display key **briefly**.

The function menu (page 60) is opened.

Activating/deactivating auto answer

If you have activated this function, when you get a call you can simply lift the handset out of the base station without having to press the talk key.

→ Settings → Handset

Auto Answer

Select and press OK (☑ = on).

Press and **hold** (idle status).

Adjusting the loudspeaker volume

You can set the loudspeaker volume for handsfree talking to five different levels and the earpiece volume to three different levels. You can only make these adjustments during a call.

The handsfree volume can only be adjusted when this function is set.

You are conducting an external call.

Open menu.

Select volume.

Save — Press display key if necessary to save the setting permanently.

If is assigned with another function, e.g. when toggling (page 31):

Options — Open menu.

Volume — Select and press OK.

Configure setting (see above).

Changing ringer tones

- Volume:
  You can choose between five volumes (1–5; e.g. volume 2 =) and the "Crescendo" ring (6; volume increases with each ring =).
- Ringer tones:
  You can choose between 15 different melodies.

You can set different ringer tones for the following functions:

- Ext. Calls: for external calls
- Internal Calls: for internal calls
- All: the same ringer tone for all functions

Settings for individual functions

Set the volume and melody depending on the type of signalling required.

→ Settings → Audio Settings → Ringer Settings

Ext. Calls / Internal Calls

Select and press OK.

▸ Change multiple line input:

Set volume (1–6).

Scroll to the next line.

Select melody.

Save — Press the display key to save the setting.

In idle status, you can also open the menu Ringer Settings by pressing **briefly**.

Same ringer tone for all functions

→ Settings → Audio Settings → Ringer Settings → All

▸ Set volume and ringer tone (see "Settings for individual functions").

Yes — Press the display key to confirm the prompt.

Press and **hold** (idle status).

Activating/deactivating the ringer tone

You can deactivate the ringer tone on your handset before you answer a call or when the handset is in idle status; the ringer tone can be deactivated permanently or just for the current call. The ringer tone cannot be re-activated while an external call is in progress.

Deactivating the ringer tone permanently

(*) Press and hold the star key until the icon appears in the display.

Re-activating the ringer tone

(*) Press and **hold** the star key.

Deactivating the ringer tone for the current call

Silence Press the display key.

Activating/deactivating the alert tone

In place of the ringer tone you can activate an alert tone. When you receive a call, you will hear **a short tone** ("Beep") instead of the ringer tone.

(*) Press and **hold** the star key and **within 3 seconds:**

Beep Press the display key. A call will now be signalled by **one** short alert tone. You will now see in the display.

Activating/deactivating muting of the first ring

Open menu.

5 jkl 5 jkl 9 wxyz 1 9 wxyz
Press keys.

0 + OK Make the first ringer tone audible.

Or:

1 OK Suppress the first ringer tone.

Press and hold (idle status).

Activating/deactivating advisory tones

Your handset uses "advisory tones" to tell you about different activities and statuses. The following advisory tones can be activated and deactivated independently of each other:

- **Key click**: every key press is confirmed.
- **Advisory tones**:
  - **Confirmation tone** (ascending tone sequence): at the end of an entry/setting and when an SMS or a new entry arrives in the calls list
  - **Error tone** (descending tone sequence): when you make an incorrect entry
  - **Menu end tone**: when scrolling at the end of a menu
- **Battery tone**: The batteries need to be charged.

→ Settings → Audio Settings → Advisory Tones

▶ Change multiple line input:

Key Tones:
Select On or Off.

Confirm.:
Select On or Off.

Battery:
Select On, Off or In Call. The battery warning tone is only activated/deactivated and only sounds during a call.

▶ Save changes (page 112).

You cannot deactivate the confirmation tone for placing the handset in the base station.

Setting the alarm clock

Precondition: The date and time have already been set (page 9).

Activating/deactivating the alarm clock and setting the wake-up time

➜ Alarm Clock

▶ Change multiple line input:

Activation:
Select **On** or **Off**.

Time:
Enter the wake-up time in 4-digit format.

Melody:
Select melody.

Volume:
Set the volume (1-6).

▶ Save changes (page 112).

You will see the icon.

A wake-up call with the selected ringer melody is signalled on the handset. The wake up call sounds for 60 seconds. The display shows **Alarm Clock** . If no key is pressed, the wake-up call is repeated twice at five minute intervals and then switched off.

During a call, the wake-up call is signalled by a short tone.

Deactivating the wake-up call/ repeating after a pause (snooze mode)

Precondition: A wake-up call is sounding.

OFF Press the display key. The wake-up call is deactivated.

or

Snooze Press the display key or any key. The wake-up call is deactivated and then repeated after 5 minutes. After the second repetition the wake-up call is deactivated completely.

Restoring the handset default settings

Each individual handset setting is reset, in particular the language, display, volume, ringer and alarm clock settings (see from page 59). The last number redial list is cleared.

➜ ➜ Handset ➜ Reset Handset

Yes Press the display key. You can cancel the restoring process by pressing or the display key **No**.

Press and **hold** (idle status).

Base station settings

The base station settings are carried out using a registered Gigaset S45 handset.

Protecting against unauthorised access

Protect the system settings of the base station with a PIN known only to yourself. The system PIN is one of the items you must enter when registering and deregistering a handset, changing the VoIP settings or restoring to factory settings.

Changing the system PIN

You will have to enter the system PIN e.g. when you register a handset with the base station, change the VoIP settings or start the Web configurator.

You can change the base station's 4-digit default system PIN ("0000") to a 4-digit system PIN known only to yourself.

 → **Settings** → **Base** → **System PIN**

 Enter current system PIN and press **OK**.

 Enter new system PIN.

 Scroll to the **Re-enter PIN:** line.

 Now re-enter the new system PIN and press **OK**.

For security reasons, "****" is displayed instead of the system PIN.

 Press and **hold** (idle status).

Restoring the base station to factory settings

Resetting the base station via the menu

Each individual setting is reset, in particular:

- VoIP settings such as VoIP provider and account data and DTMF settings (page 67, page 83, page 93)
- Settings for the local network (page 68, page 82)
- Default connection (page 65)
- The names of the handsets (page 74)
- SMS settings (e.g. SMS centres, page 40)
- Settings for the connection to the PABX (page 70)

SMS lists and calls list are deleted.

The date and time and the system PIN are retained. The handsets are still registered.

 → **Settings** → **Base** → **Base Reset**

 Enter the system PIN and press **OK**.

Yes Press the display key to confirm.

Resetting the base station using a key on the base station

As with resetting the base station via the menu, all individual settings are reset. The system PIN will also be reset to "0000" and **all handsets registered above and beyond the delivery scope are deregistered.**

Please note:
For how to reregister the handsets after resetting, if necessary, see page 72.

- Remove the cable connections from the base station to the router (page 11) and fixed network (page 11).
- Remove the base station mains unit from the socket (page 11).
- **Press and hold** the registration/paging key (page 1).
- Plug the mains unit back into the power socket.
- Press and hold the registration/paging key (at least 2 sec.).
- Release the registration/paging key. The base station has now been reset.

Activating/deactivating music on hold

➔ Settings ➔ Base

Music on hold

Select and press OK to activate or deactivate music on hold (☑ = on).

Activating/deactivating repeater mode

With a repeater you can increase the range and reception strength of your base station. You will need to activate repeater mode. This will terminate any calls being made via the base station at that time.

Precondition: a repeater is registered with the base station.

➔ Settings ➔ Base ➔ Add. Features

Repeater Mode

Select and press OK (☑ = on).

Yes — Press the display key to confirm the security prompt.

Setting the default connection

You can make settings according to whether you want to make calls via VoIP or fixed network by default.

➔ Settings ➔ Telephony ➔ Default Line

VoIP / Fixed Line

Select and press OK (☑ = on).

When making calls:

- Press the talk key **briefly** if you want to make the call via the default connection.
- Press and **hold** the talk key if you want to make the call via the other connection type.

Updating the base station firmware

If necessary, you can update your base station firmware.

The firmware update is downloaded directly from the Internet by default. The relevant website is preconfigured in your phone.

As an alternative to uploading the firmware via the Internet, it can also be loaded from a local PC. You can specify the PC via the Web configurator (page 99). This setting applies only to the following firmware update.

Precondition:

The base station is in idle status, i.e.:

- No calls are being made via the fixed network or VoIP.
- There is no internal connection between the registered handsets.
- No other handset has opened the base station menu.

Starting the firmware update manually

→ Settings → Base

Software Update

Select and press OK.

Enter the system PIN and press OK.

The base station establishes a connection to the Internet or to the local PC.

Yes Press the display key to start the firmware update.

Please note:

- The firmware update can last up to 3 minutes.
- When updating from the Internet, checks are made to ensure that no newer version of the firmware exists. If this is not the case, the operation is terminated and a message is issued to that effect.
- If an error arises during a firmware update from a local PC, the most recent version of the firmware is automatically downloaded from the Internet. Your phone should therefore be connected to the Internet during every firmware update.

Automatic firmware update

Your phone will check daily whether a newer firmware update is available via the Internet on the Siemens configuration server. If this is the case, the message New firmware available will be displayed when the handset is in idle status, and the message key ✉ flashes.

✉ Press the message key.

Yes Press the display key to confirm the prompt.

The firmware will be loaded onto your phone.

Please note:

- If you reply to the request with No, the display will not be repeated. The message New firmware available will only be shown again if a newer version of the firmware than the one rejected is available.
- You can specify the automatic version check via the Web configurator (page 100).

Making VoIP settings

In order to be able to use VoIP, you must set a few parameters for your phone.

You can make the following settings using your handset.

- Download the general access data for your VoIP provider from the Siemens configuration server and store them on your phone.
- Enter your personal access data for your first VoIP account (first VoIP phone number). You can configure the access data for five further VoIP account via the phone's Web configurator.
- Setting the phone's IP address in the LAN.

Please note:
You can set these and other parameters conveniently via the Web configurator on a PC connected to your local network (see page 78).

The connection assistant on your phone can help you make the settings.

Using the connection assistant

The connection assistant starts automatically when you set the handset and base station up for the first time, or when you try to connect to the Internet before making the necessary settings.

You can also start the connection assistant via the menu:

 → Settings → Telephony

Connection Assist.

Select and press OK.

 Enter the system PIN and press OK.

For how to enter VoIP settings using the connection assistant, see page 12.

Changing settings without the connection assistant

You can change your provider's VoIP settings and the VoIP user data via the menu without starting the connection assistant.

Downloading your VoIP provider's settings

The general settings for various VoIP providers are available for download on the Internet. The relevant website is preconfigured in your phone.

Precondition: your phone is connected to the Internet.

 → Settings → Telephony → VoIP

 Enter the system PIN and press OK.

Select Provider

Select and press OK.

The phone establishes a connection to the Internet.

 Select country and press OK.

 Select VoIP provider and press OK.

Your VoIP provider data is downloaded and saved in your phone.

Please note:
- If an error occurs during the download, an error message will be displayed. You can find possible messages and measures in the table on page 102.
- You can make and adapt the general settings for your VoIP provider manually via your phone's Web configurator, see page 84.

Automatic update for the VoIP provider settings

After the first download of the VoIP provider settings, your phone will check daily whether a newer version of the file for your VoIP provider is available via Internet on the Siemens configuration server. If this is the case, when the handset is in idle status the message **New profile available**

will be displayed, and the message key flashes.

Press the message key.

Yes — Press the display key to confirm the prompt.

Enter the system PIN and press OK.

The new data for your VoIP provider will be downloaded and saved on the phone.

Please note:
- If you reply to the request with No, the display will not be repeated. The message New profile available will only be shown again if a newer version of the VoIP settings than the one rejected is available.
- You can specify the automatic version check via the Web configurator (page 100).

Entering/changing VoIP user data

The VoIP settings must also be extended for your personal data. You will receive all necessary data from your VoIP provider.

Please note:
Please note when making these entries that the VoIP user data is case sensitive. To enter text see page 112.

→ Settings → Telephony → VoIP (enter system PIN) → Provider Registr.

▸ Change multiple line input:

Username:
Enter the user name (caller ID) for your VoIP provider account. The Username is usually identical to your Internet phone number (the first part of your SIP address see page 85).

Authent. Name: / Authent. Password:
Enter the provider-dependent access data that has to be transferred by the phone to the SIP service at registration.

▸ Click Save to save the settings.

Setting the phone's IP address in LAN

The base station requires an IP address in order to be "recognised" by the LAN.

The IP address can be assigned to the base station (by the router) automatically or manually.

- If performed **dynamically,** the router's DHCP server automatically assigns the base station an IP address. The base station's IP address can be changed according to router settings.
- If performed manually/**statically**, you assign the base station a static IP address. This may be necessary depending on your network configuration.

Please note:
- For how to make the local network settings on the Web configurator, turn to page 82.
- To assign the IP address dynamically, the DHCP server on the router must be activated. Please also read the user guide for your router.

→ Settings → Base → Local Network

Enter the system PIN and press OK.

▸ Change multiple line input:

IP Address Type:
Select Static or Dynamic. Select

If you select Static, you must manually define the IP address and the subnet mask for the base station in the next lines, as well as the standard gateway and DNS server.

IP Address:
For IP Address Type = Dynamic:

The IP address that is currently assigned to the base station will be displayed. It cannot be amended.

For IP Address Type = Static:

Enter the IP address that is to be assigned to the base station (overwriting the current settings).

192.168.2.2 has been preset.

For the IP address see also page 126.

Subnet Mask:

For **IP Address Type** = **Dynamic**:

The subnet mask that is currently assigned to the base station will be displayed. It cannot be amended.

For **IP Address Type** = **Static**:

Enter the IP address that is to be assigned to the base station (overwriting the current settings).

The default setting is 255.255.255.0

For the subnet mask see also page 129.

DNS Server:

For **IP Address Type** = **Static**:

Enter the IP address for the preferred DNS server. The DNS server (Domain Name System) converts the symbolic name of a server (DNS name) into the public IP address for the server when the connection is made.

You can specify your router's IP address here. The router forwards phone address requests to its DNS server.

192.168.2.1 has been preset.

Default Gateway:

For **IP Address Type** = **Static**:

Enter the IP address for the standard gateway, by means of which the local network is connected with the Internet. This is generally the local (private) IP address for your router (e.g. 192.168.2.1). Your phone requires this information to be able to access the Internet.

192.168.2.1 has been preset.

▶ Click **Save** to save the settings.

Please note:
You can find notes on the IP address and the subnet mask on page 82 and in the glossary on page 126/page 129.

Activating/deactivating display of VoIP status messages

If the function is activated, a VoIP status code for your service provider is displayed.

Activate the function e.g. if you have problems with VoIP connections. You will receive a provider-specific status code, which supports the service when the problem is analysed. You will find a table with the possible status screens in the appendix (page 105).

→ **Settings** → **Telephony** → **VoIP**

Enter the system PIN and press **OK**.

Show Stat. on HS

Select and press **OK** (☑ = on).

Please note:
For how to make the setting on the Web configurator, see page 101.

Check the base station MAC address

Depending on your network configuration, you may have to enter your base station MAC address, for example, into your router's access control list. You can check your base station MAC address:

5 jkl 5 jkl 9 wxyz 2 abc 0 +

The base station MAC address is displayed.

Press and **hold** (idle status).

Operating the base station on the PABX

The following settings are only necessary when your PABX requires them; see the PABX user guide. The settings only concern fixed network connections.

You cannot send or receive SMS messages on PABXs that do not support Calling Line Identification.

Setting the flashing time

You can set the flashing time.

→ Settings → Telephony → Fixed Line → Recall

Select flashing time and press OK.

The current language is indicated by ☑.

Press and **hold** (idle status).

Setting pauses

Changing pause after line seizure

You can set the length of the pause inserted between pressing the talk key and sending the phone number.

5 jkl 5 jkl 9 wxyz 1 ␣ 6 mno

Enter a number for the length of the pause (**1** = 1 sec.; **2** = 3 secs.; **3** = 7 secs.) and press OK.

Press and **hold** (idle status).

Changing the pause after the recall key

You can change the length of the pause if your PABX requires this (refer to the user guide for your PABX).

5 jkl 5 jkl 9 wxyz 1 ␣ 1 ␣

Enter a number for the length of the pause (**1** = 1 sec.; **2** = 2 secs.; **3** = 3 secs.; **4** = 6 secs.) and press OK.

Press and **hold** (idle status).

Switching temporarily to tone dialling (DTMF)

If your PABX still operates with dial pulsing (DP), but you need touch tone dialling (DTMF) for a connection (e.g. to listen to the network mailbox) you must switch to touch tone dialling for the call.

Precondition: You are currently conducting an external call via the fixed network or you have dialled an external fixed network number or an external call is signalled.

Options Open menu.

Tone Dialing Select and press OK.

Touch tone dialling is now activated **for this call only**.

Using the network mailbox

Some fixed network providers and VoIP providers offer answering machines on the network – network mailboxes.

You can use the relevant network mailbox if you have **requested** it from your fixed network or VoIP provider.

The network mailbox only answers incoming calls made via the relevant line (fixed network or VoIP). To record all calls, you should therefore set up network mailboxes for both fixed network and VoIP.

Please note:
You can only set up fast access to one of the network mailboxes.
You can assign speed dial numbers to the number for another network mailbox in the directory (e.g. the 2 abc key) (page 34).
You must assign the speed dial numbers to every handset that is registered.

Configuring the network mailbox for fast access

With fast access you can dial a network mailbox directly.

The network mailbox is preconfigured for fast access. You only need to enter the number of a network mailbox.

The number is dialled via the default connection.

Tip: A fixed network answer machine should always be controlled via the fixed network connection. If VoIP is set as the default connection on your phone, add a star (*) to the end of the number of the network mailbox. The connection is then established via the fixed network.

Configuring the network mailbox for fast access and entering the network mailbox number

→ Settings → Voice Mail → Set Key 1

Network Mailb.

Select and press OK (☑ = on).

Enter the number for the network mailbox.

Save — Press the display key.

Press and **hold** (idle status).

Fast access is automatically activated.

The setting for fast access applies to all Gigaset S45 handsets.

Please note:
– If no number has been entered: press and **hold** 1 oo to enter the number.
– To deactivate fast access, you must delete the number.

Calling the network mailbox

1 oo — Press and **hold**. You are connected straight to the network mailbox.

If necessary, press the handsfree key. You hear the network mailbox announcement.

Please note:
If you have set an automatic area code (page 94), the area code is also prefixed to the number of the network answer machine if it does not start with 0 and is dialled via VoIP.
If the phone number for your network provider does not begin with 0, ask your VoIP provider. A network mailbox can frequently be accessed via an alternative phone number (with dialling code) too.

Viewing the network mailbox report

When a message is recorded, you receive a call from the network mailbox. If you have requested Calling Line Identification, the display shows the network mailbox number.

If you take the call, the new messages are played back.

If you do not take the call, the network mailbox number will be saved in the missed calls list and the message key flashes (page 37).

Using several handsets

Registering handsets

You can register up to six handsets to your base station.

You can register your Gigaset S45 handset on up to four base stations.

Please note:
- If there are several handsets registered to your base station, then you can use one to make a call via the Internet and the other to make a call via the Internet or the fixed network at the same time. A maximum of two internal connections can also be made.
- As a rule, all calls from a registered GAP handset are dialled via the connection types (fixed network or VoIP, see page 65) that have been set up as Default Line. If you want to establish a connection via the other connection type, enter a "*" (star) after the phone number. **Example:** 049891234567*.
- After registration, all the phone numbers for the phone will be assigned to the handset as receiving numbers. It will use the fixed network number and the first VoIP number as sending numbers. For how to change the assignments, see page 93.

Registering another Gigaset S45 handset on the Gigaset SP450 IP

Before you can use your handset, you must register it to a base station.

You must initiate handset registration on the handset and on the base station.

If the handset was registered successfully, the display will show the internal name for the handset, e.g. **Int 1**. If it does not, repeat the procedure.

On the handset

 → **Settings** → **Handset** → **Register H/Set**

 Enter the system PIN of the base station (the default is 0000) and press **OK**. The display shows e.g. **Regstr.Procedure** and **Base 2** flash.

On the base station

▶ Within 60 secs. press and **hold** the registration/paging key on the base station (page 1) (min. 1 sec.).

The handset is assigned the lowest unassigned internal number (1–6). If several handsets are registered to the base station, the internal number is shown in the display after registration, e.g. **INT 2**. This means that the handset has been assigned the internal number 2.

Please note:
If six handsets are already registered to the base station, there are two options:
- The handset with the internal number 6 is in idle status: the handset you wish to register is assigned the number 6. The handset that was previously number 6 is de-registered.
- The handset with the internal number 6 is being used: the handset you wish to register cannot be registered.

Registering other handsets on the Gigaset SP450 IP

You can register other Gigaset handsets and handsets for other devices with GAP functionality as follows.

On the handset

▶ Start to register the handset as described in its user guide.

On the base station

▶ Press and hold the registration/paging key on the base station (page 1) (min. 1 sec.).

Please note:
You can also make changes on the base station with a Gigaset C45 handset.

De-registering handsets

You can de-register any registered handset from any registered Gigaset S45 handset.

	Open list of internal users. The handset you are currently using is indicated by **<** .
	Select the handset to be de-registered.
Options	Press the display key.
De-reg. H/Set No.	Select and press OK.
	Enter the base station system PIN (default setting: 0000).
Yes	Press the display key to confirm the prompt.
	Press and **hold** (idle status).

The handset is de-registered immediately, even if it is not in idle status.

Locating a handset ("paging")

You can locate your handset using the base station.

▶ Press the registration/paging key on the base station (page 1) **briefly**.

▶ All handsets will ring at the same time ("paging"), even if ringer tones are switched off.

Ending paging

▶ Press the registration/paging key on the base station (page 1) **briefly**.

Or

▶ Press talk key on a handset.

Changing the base station

If your handset is registered to more than one base station, you can set it to a particular base station or to the base station that has the best reception (Best Base).

→ Settings → Handset → Select Base

Select one of the registered base stations or Best Base and press OK.

Changing a handset's internal number

A handset is **automatically** assigned the lowest free number on registration. In the list of internal subscribers, the handset is sorted according to its internal number.

You can change the internal number of all registered handsets (1–6). Numbers 1–6 can only be assigned once each.

Open list of handsets. Your own handset is indicated by <.

Options — Press the display key.

Edit H/Set No. — Select and press OK. The list of handsets and their internal numbers will be displayed. The internal number for the first handset flashes.

Select handset.

Enter the new internal number (1–6). The handset's old number is overwritten.

If necessary, select further handsets and change numbers.

After all the changes are completed:

Save — Press the display key to save the input.

Press and **hold** (idle status).

You will hear the error tone if an internal number has been allocated twice.

- Repeat the procedure with a free number.

Changing the name of a handset

The names "INT 1", "INT 2" etc. are assigned automatically at registration. You can change these names. The changed name is displayed in every handset's list.

Open list of handsets. Your own handset is indicated by <.

Select handset.

Edit — Press the display key.

C — Delete previous name if necessary.

Enter the new name (max. 10 characters).

Save — Press the display key.

Press and **hold** (idle status).

Please note:
If you delete the current handset name and then press Save without entering a new name, the handset will automatically be allocated the standard name "INT x" (x= internal number).

Making internal calls

Internal calls to other handsets registered on the same base station are free.

Calling a specific handset

Initiate internal call.

Enter the number of the handset.

Or:

Initiate internal call.

Select handset.

Press the talk key.

Calling all handsets ("group call")

Initiate internal call.

Press the star key. All handsets are called.

Ending a call

Press the end call key.

Transferring a call to another handset

You can forward (connect) an external call, made via fixed network or VoIP, to another handset.

Open list of handsets.
The external caller hears music on hold if activated (page 65).

Select a handset or **Call All** and press **OK**.

When the internal participant answers:

▶ If necessary announce the external call.

Press the end call key.

The external call is transferred to the other handset.

If the internal participant does **not** answer or the line is busy, press the display key **End**, to return to the external call.

When transferring a call you can also press the end call key before the internal participant lifts the receiver.

Then, if the internal participant does not answer or the line is busy, the call will automatically return to you (the display will show **Recall**).

Initiating internal consultation call, conference call

You are talking to an **external** participant (via fixed network or VoIP) and can call an **internal** participant at the same time to hold a consultation call.

Open list of handsets.
The external caller hears music on hold if activated (page 65).

Select handset and press **OK**.

When an internal participant answers you can speak to them.

You have the following options:

Ending a consultation call

End Press the display key.

You are reconnected with the external subscriber.

Initiating a conference call

Conf. Press the display key.

You are in a three-way conference call with the external and the internal subscriber.

If the internal subscriber who has been called ends the call (press end call key), you will be connected with the external subscriber. If you press end call key , the external call will be transferred to the internal subscriber.

Accepting/rejecting call waiting during an internal call

If you get an **external** call while conducting an **internal** call, you will hear the call waiting tone (short tone). With Calling Line Identification, the caller's number will appear in the display.

Ending an internal call, accepting an external call

Accept Press the display key.

The internal call is **ended**. You are connected to the external caller.

Rejecting the external call

Precondition: the external call is waiting on the fixed network connection.

Reject Press the display key.

The call waiting tone is turned off. You remain connected with the internal subscriber. The ringer tone can still be heard on other registered handsets.

Please note:
You can not reject calls on the VoIP connection.

Using a handset as a room monitor

If the room monitor is activated, a previously stored destination number is called as soon as a set noise level is reached in the room.

You can store an internal or external number in your handset as the destination number.

The room monitor call to an external number stops after around 90 seconds. The room monitor call to an internal number (handset) stops after around 3 minutes (depending on the base station). During use as a room monitor, all keys are barred except for the end call key. The speaker of the handset is muted. The end call key can only be used to deactivate the handset.

When the room monitor is activated, incoming calls to the handset are indicated **without a ringer tone** and are only shown on the screen. The display and keypad are not illuminated and advisory tones are also turned off.

If you accept an incoming call, the room monitor mode is suspended for the duration of the call, but the function **remains** activated.

If you switch off the handset, the room monitor mode is deactivated. You must reactivate the function when you switch the handset back on.

Caution!

- **You should always check the operation of the room monitor before use. For example, test its sensitivity. Check the connection if you are diverting the room monitor to an outside number.**
- When the function is switched on the handset's operating time is severely reduced. If necessary, place the handset on the base station. This ensures that the batteries do not run down.
- Ideally the handset should be positioned 1 to 2 metres away from the baby. The microphone must be directed towards the baby.
- The connection to which the room monitor is diverted must not be blocked by an activated answer machine.

Activating the room monitor and entering the number to be called

→ Add. Features → Room Monitor

▶ Change multiple line input:

Room M.:

Select **On** to activate.

Call to:

Press the display key **Edit** and enter destination number.

External number: Select number from the directory or enter directly. Only **the last 4 characters** are displayed.

Internal number: Delete any stored external number. **INT** (select handset or **Call All**, if all registered handsets are to be called) **OK**.

Store number with **Save**.

Level:

Set noise level sensitivity (**Low** or **High**).

▶ Save changes (page 112).

The function is now activated. With , you can move directly to settings.

Please note:

An external number will be dialled via the set standard connection (VoIP or fixed network). If the number is to be dialled via the non-standard connection, enter a star (*) at the end of the number.

Changing previously set external destination number

→ ★ **Add. Features** → **Room Monitor**

Scroll to the **Call to:** line.

Edit Press the display key.

<C Delete existing number.

- Enter number as described in "Activating the room monitor and entering the number to be called" (page 76).
- Save changes (page 112).

Changing previously set internal destination number

→ ★ **Add. Features** → **Room Monitor**

Scroll to the **Call to:** line.

Edit Press the display key.

Yes Press the display key to confirm the prompt.

- Enter number as described in "Activating the room monitor and entering the number to be called" (page 76).
- Save changes (page 112).

Web configurator

The Web configurator is the Web interface for your handset. It allows you to make the settings for your phone's base station via your PC's Web browser.

Please note:
Depending on your VoIP provider, it is possible that you will be unable to change individual settings in the Web configurator.

Configuring the phone via your PC

Preconditions:

- A standard Web browser is installed on the PC, e.g. Internet Explorer version 6.0 or higher, or Firefox version 1.0.4 or higher.
- The phone and PC are connected with each other via a router.

Please note:

- The phone is **not** blocked while you make your settings in the Web configurator. You can also use your phone to make calls or change base station or handset settings on your handset at the same time.
- While you are connected to the Web configurator, it is blocked to other users. It cannot be accessed by more than one user at any time.

With the Web configurator on your phone you have the following options:

- Configure your phone access to the local network (IP address, gateway to the Internet).
- Configure your phone for VoIP.
- Define the data server for firmware updates and load new firmware onto the phone if necessary.
- Copy contacts from the Outlook address book on your PC into the handset directories or back up your handset's directories on your PC.
- Obtain information about your phone's status (firmware version, MAC address etc.).

Connecting PC with Web configurator

- Launch the Web browser on your PC.
  Precondition: The settings of an available firewall on the PC allow the PC and telephone to communicate with each other.
- Enter the phone's IP address into the address field of the Web browser, e.g. http://192.168.2.2.
  Your phone's IP address can change if you have activated dynamic IP address assignment (page 82).
  You can check the phone's current IP address on the handset (page 68).
- Press the return key.

A connection is established to the phone's Web configurator.

Registering, setting the Web configurator language

Once you have successfully established the connection, the Web page **Login** will be displayed in the Web browser.

You can select the language you want the menus and Web configurator dialogs to be displayed in. The language that is currently selected is displayed in the top field of the Web page.

- If necessary, click on to open the list of available languages.
- Select the language.
- In the bottom field of the Web page, enter your phone's system PIN (default setting: 0000) to access the Web configurator functions.
- Click on **OK**.

Once you have successfully registered, a **Home** opens with general information on the Web configurator.

Please note:

- If you have forgotten your system PIN, you must restore your device's factory settings. Please note that this will restore all other settings too (page 65).
- If you do not make any entries for a lengthy period (around 10 minutes), you will be automatically logged off. The next time you try to make an entry or open a Web page, the **Login** Web page will be displayed. Enter the system PIN again to log in again.
- Entries that had not yet been saved on the phone before automatic log-off are lost.

Logging off

In the menu bar (page 80) at the top right of every Web page in the Web configurator, you will see the command **Log Off**. Click on **Log Off** to log off from the Web configurator.

Warning:
Always use the command **Log Off** to end the connection to the Web configurator. If, for example, you close the Web browser without logging off beforehand, it is possible that access to the Web configurator will be blocked for a few minutes.

Structure of the Web pages

The Web pages contain the UI elements displayed in see Figure 2.

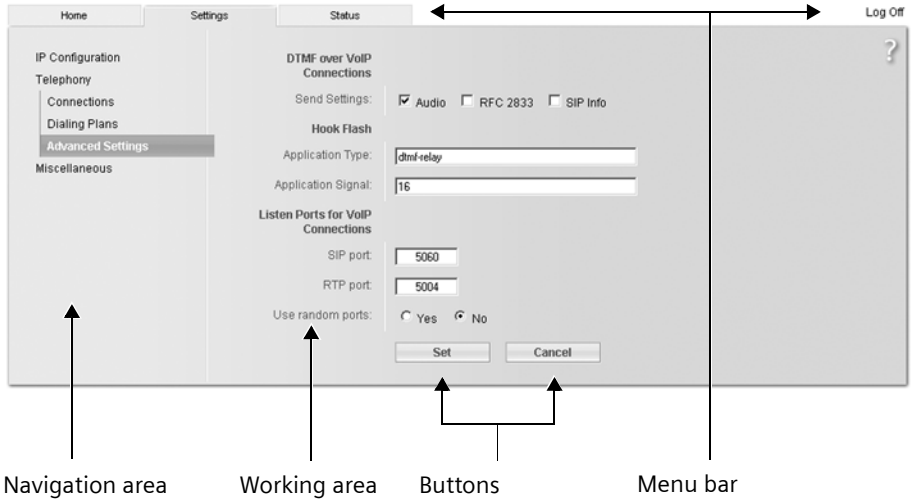


Figure 2 Example of the structure of a Web page

Menu bar

In the menu bar, the Web configurator menus are depicted in the form of tab pages.

The following menus are available:

- **Home**
  The start screen is opened once you have registered with the Web configurator. It contains information on the Web configurator functions.
- **Settings** (page 81)
  This menu allows you to make settings on your phone.
- **Status** (page 101)
  This menu gives you information about your phone.

If you click on the **Settings** menu, a list with this menu's functions is displayed in the navigation area (see below).

You will find the **Log Off** function to the right of the menu bar on every Web page (page 79).

Please note:
You will find an overview of the Web configurator menu on page 20.

Navigation area

In the navigation area, the functions of the menu selected in the menu bar (page 80) are listed.

If you click on a function, the associated page opens in the working area with information and/or fields for your inputs.

If a function is assigned subfunctions, these are displayed with the function as soon as you click on the function. The relevant page for the first subfunction is displayed in the working area.

Working area

Depending on the function selected, information or dialog boxes are displayed in the working area, which allow you to make or change your phone settings.

Making changes

Make settings for entry fields, lists or options.

- There may be restrictions regarding the possible values for a field, e.g. entering special characters or certain value ranges.
- To open a list, click on . You can choose between default values.
- There are two kinds of options:
  – Options in a list, from which you can activate one or several options. Active, i.e. selected, options are highlighted with , non-active options with . You can activate an option by clicking on . The status of the other options on the list does not change. You can deactivate an option by clicking on .
  – Alternative options The active option on the list is highlighted with , and the non-active with . You can activate an option by clicking on . The previously activated option is deactivated. You can only deactivate an option by activating another option.

Applying changes

As soon as you have made your change on a page, activate the new setting on the phone by clicking on **Set**.

If your input in a field does not comply with the rules for this field, an appropriate error message will be displayed. You can then repeat the input.

Warning:
Changes that have not been saved on your phone are lost if you move to another Web page or if the connection to the Web configurator is terminated, e.g. due to exceeding the time limit (page 79).

Buttons

Buttons are displayed in the bottom section of the working area.

Set
Save entries on the phone

Cancel
Reject changes made on the Web page and reload the settings that are currently saved on your phone to the Web page.

Opening Web pages

A brief outline of the navigation to the individual Web configurator functions is given below.

Example:

Setting DTMF signalling

Settings ➔ **Telephony** ➔ **Advanced Settings**

To open this Web page, carry out the following steps after registration:

- Click on the **Settings** menu in the menu bar.
- Click on the **Telephony** function in the navigation area.
  The subfunctions of **Telephony** are displayed in the navigation tree.
- Click on the **Advanced Settings** subfunction.

The Web page from see Figure 2 will be shown in the Web browser.

Setting the phone with Web configurator

You can make the following settings using the Web configurator:

- Connecting your phone to the local network (page 82)
- Configuring for the telephony
  - Make VoIP provider settings (page 84)
  - Configure VoIP accounts
  - Specify name of the fixed network
  - Activate/deactivate the Gigaset.net connection
  - Make settings to improve voice quality for the VoIP connections
  - Assign VoIP phone numbers to individual handsets and the answer machine
- User-specific dialling rules (page 94)
- Type of DTMF signalling (for remote operation of a network mailbox)
- Data server for firmware update downloads (page 99)
- Displaying VoIP status messages on your handset (page 100)

IP Configuration

Assigning the IP address

Make the necessary settings for operating your phone in your local network and to connect it to the Internet. For more detailed explanations on the individual components/terms, see the glossary (page 122).

- Open the following Web page **Settings** ➔ **IP Configuration**.
- In the **Address Assignment** area, select the **IP address type**.

Select **Obtained automatically** if you want your phone to be assigned a dynamic IP address by a DHCP server in your local network. No further settings are necessary for the local network.

Select **Static** if you would like to set up a static IP address for your phone. A static IP address is useful, for example, if port forwarding or a DMZ is set up on the router for the phone.

The following fields are displayed when you select **IP address type** = **Static**:

IP address
Enter an IP address for you phone. This IP address allows it to be reached by other subscribers in your local network (e.g. PC).

192.168.2.2 has been preset.

Please note the following:

– The IP address must be from the address block for private use that is used in the router. This is generally in the range 192.168.0.1 – 192.168.255.254 with **Subnet mask** 255.255.255.0. The subnet mask determines that the first three parts of the IP address must be identical for all subscribers in your LAN.
– The static IP address must not belong to the address block (IP pool range) that is reserved for the DHCP server. It must also not be used by another device on the router.

If necessary, check the settings on the router.

Subnet mask
Enter the subnet mask for your device's IP address. For addresses from the address block 192.168.0.1 – 192.168.255.254, the subnet mask 255.255.255.0 is generally used. This is preconfigured when the phone is supplied.

Default gateway
Enter the IP address for the standard gateway, by means of which the local network is connected with the Internet. This is generally the local (private) IP address for your router (e.g. 192.168.2.1). Your phone requires this information to be able to access the Internet.

192.168.2.1 has been preset.

Preferred DNS server
Enter the IP address for the preferred DNS server. DNS (Domain Name System) allows you to assign public IP addresses to symbolic names.
The DNS server is required to convert the DNS name into the IP address when connection is being established to a server.

You can specify your router's IP address here. The router forwards phone address requests to its DNS server.

192.168.2.1 has been preset.

Alternate DNS server (optional)
Enter the IP address for the alternative DNS server that should be used in situations where the preferred DNS server cannot be reached.

Click on **Set** to save the changes.

Click on **Cancel** to reject the changes.

Allow access from other networks

The default setting for you phone is that you can only access your phone's Web configurator via a PC that is in the same local network as your phone. The subnet mask of the PC must match that of the phone.

You can also allow access from PCs in other networks.

Warning:
Expansion of access entitlement to other networks increases the risk of unauthorised access.
It is therefore recommended to deactivate remote access again if you no longer need it.

- Open the following Web page **Settings** ➔ **IP Configuration**.
- In the **Remote Management** area, activate the option **Yes** to permit access from other networks.

  To deactivate remote access, click on the **No** option. Access is then limited to PCs in your own local network.

Access to the Web configurator services from other networks is only possible if your router is set accordingly. The router must pass on the service requests from "outside" to Port 80 (standard port) of the phone. Please also read the user guide for your router.

To establish a connection, the public IP address or the DNS name of the router and, where applicable, the port number on the router, must be indicated in the Web browser of the remote PC.

Configuring telephone connections

You can configure up to seven phone numbers on your phone: your fixed network number and six VoIP phone numbers.

You need to set up a VoIP account with a VoIP provider for each VoIP phone number. You must save the access data for each account and for the relevant VoIP provider in the phone. You can assign a name to each connection (VoIP and fixed network).

To configure the connections:

- Open the following Web page: **Settings** ➔ **Telephony** ➔ **Connections**.

A list (see Figure 3) will be shown with all possible connections that you can configure, or have already configured, for your phone.

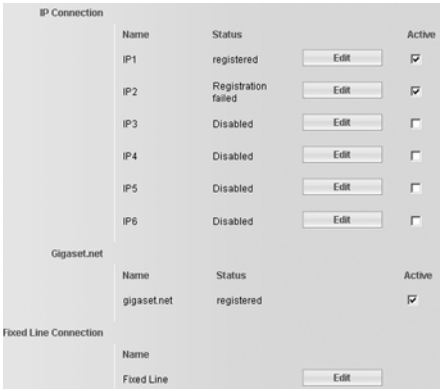


Figure 3 List of possible connections

The list will show the following:

Name

Name of the connection. This will show the name that you have defined for the connection (page 85, page 89) or the default name (**IP 1** to **IP6** for VoIP connections, **Fixed Line** for fixed network connections).

Status

The status of the connection will be shown for VoIP connections:

registered

The connection is activated. The phone has been successfully registered. You can use the connection to make calls.

Disabled

The connection is deactivated. The phone is not registering with the corresponding account with the VoIP service. You can not use the connection to make or receive calls.

Registration failed / **Server not accessible** (Examples)

The phone could not be registered with the VoIP service, e.g. because the VoIP access data is incomplete or incorrect, or because the phone is not connected to the Internet. There is information about this in the section entitled "Questions and answers" from page 102.

Active

You can use the option in the **Active** column to activate (☑) and deactivate (☐) VoIP connections. If a connection is deactivated, the phone will not register for this connection. The connection can be activated/deactivated by clicking directly on the option. The change does not need to be saved.

To configure a connection or to change the configuration of a connection:

- Click on the **Edit** button behind the connection.

This will open a Web page where you can make the settings needed. Read on:

- in the section "Configuring the VoIP connection" on page 84 or
- in the section "Configuring the fixed network connection" on page 89

Configuring the VoIP connection

Open the Web page:

- Open the following Web page: **Settings** → **Telephony** → **Connections**.
- Click on the **Edit** button behind the VoIP connection that you want to configure or whose configuration you want to change.

This will open a Web page where you can make the settings that your phone needs to access your provider's VoIP server.

The Web page always displays the following areas:

- **IP Connection** (page 85),
- **Personal Provider Data** and (page 85)
- **Call Forwarding** (page 86).

The areas

- **General Provider Data** (page 86) and
- **Network** (page 87)

can be shown and hidden by clicking on the buttons **Show Advanced Settings** and **Hide Advanced Settings**.

You must enter the VoIP provider's general access data in these areas. You can download the general access data for many VoIP providers from the Internet (page 89).

- Make the settings on the Web page.
- Save them in the phone, see page 88.
- Active the connection if necessary, see page 88.

Area: IP Connection

Connection Name or Number

Enter a name for the VoIP connection or the VoIP phone number (max. 16 characters). The connection will be shown under this name on the handset and in the Web configurator interface, e.g. when assigning sending and receiving numbers (page 93), with call display (page 22).

Provider

The name of your VoIP provider will be shown if you have already selected it.

Click on the **Select VoIP Provider** button to select your provider, and to start downloading the general data for the VoIP provider from the Internet if required. To find out how to do this, please read "Selecting the VoIP provider and downloading the VoIP provider data" on page 89.

Please note:

- If you click on the **Select VoIP Provider** button, any changes that have been made to the Web page will be saved and checked. Values may need to be corrected before the **Select VoIP Provider** operation is started.
- The downloaded VoIP provider data will be entered in the areas **General Provider Data** (page 86) and **Network** (page 87), so that, generally speaking, no further settings need to be made.

  If the general data for your VoIP provider is not available for download, you will need to make these settings yourself as described below.

Area: Personal Provider Data

Enter the configuration data that is necessary for accessing your VoIP provider's SIP service. This data can be obtained from your VoIP provider.

Authentication Name

Specify the registration or authentication ID agreed with your VoIP provider. The registration ID serves as the access ID that your phone must specify when registering with the SIP proxy/registrar server. The **Authentication Name** is mainly identical to the **Username**, i.e. to your Internet phone number.

Authentication password

Enter the password that you have agreed with your VoIP provider in the **Authentication password** field. The phone needs the password when registering with the SIP proxy/registrar server.

Username

Enter the caller ID for your VoIP provider account. This ID is usually identical to the first part of your SIP address (URI, your Internet phone number).

Example: If your SIP address is "987654321@provider.com", enter "987654321" in **Username**.

Display name (optional)

Enter any name that should be shown in the other party's display when you call him via the Internet (example: Anna Sand). All characters in the UTF8 character set (Unicode) are permitted. This name must not exceed 32 characters

If you do not enter a name, your **Username** VoIP phone number will be displayed.

Ask your VoIP provider if this feature is supported.

Area: Call Forwarding

You can also forward calls for this VoIP number to another external number (VoIP, fixed network or mobile phone). The forwarding is done via VoIP.

The **Call Forwarding** area is where you define whether and when calls for this VoIP number should be forwarded to another number.

You can also use the handset to set the diversion and activate/deactivate it, see page 32.

Status
Activate the **On** / **Off** option to activate or deactivate the call forwarding.

When
You choose when an incoming call should be forward: **When busy** / **No reply** / **Always**.

Call number
Enter the phone number to which the calls should be forwarded. Note that you may have to enter the area code when diverting to a fixed network number in the same area (depending on your VoIP provider and the setting for the automatic area code, see page 94).

The settings only affect the selected VoIP phone number.

Area: General Provider Data

If you have downloaded the general settings for the VoIP provider from the Siemens configuration server (page 89), then the fields in this area will be preset with the data from this download. Generally speaking you will not need to make any settings in this area.

Domain
Specify the last part of your SIP address (URI) here.

Example: For the SIP address "987654321@provider.com", enter "provider.com" in **Domain**.

Proxy server address
The SIP proxy is your VoIP provider's gateway server. Enter the IP address or the (fully-qualified) DNS name of your SIP proxy server. **Example:** myprovider.com.

Proxy server port
Enter the number of the communication port that the SIP proxy uses to send and receive signalling data (SIP port).

Port 5060 is used by most VoIP providers.

Registrar server
Enter the (fully-qualified) DNS name or the IP address of the registrar server.

The registrar is needed when the phone is registered. It assigns the public IP address/port number to your SIP address (**Username@Domain**) that were used by the phone at registration. With most VoIP providers, the registrar server is identical to the SIP server. **Example:** reg.myprovider.com.

Registrar server port
Enter the communication port used in the registrar. It is mainly port 5060 that is used.

Registration refresh time
Enter the time intervals at which the phone should repeat the registration with the VoIP server (SIP proxy) (a request will be sent to establish a session). The repeat is required so that the entry of the phone in the tables of the SIP proxy is retained and the phone can therefore be reached. The repeat will be carried out for all activated VoIP phone numbers.

The default is 180 seconds.

If you enter 0 seconds, the registration will not be repeated periodically.

Area: Network

Please note:
If you have downloaded the general settings for your VoIP provider from the Siemens configuration server (page 89), then some fields in this area will be preset with the data from this download (e.g. the settings for the STUN server and the outbound proxy).

If your phone is connected to a router with NAT (Network Address Translation) and/or a firewall, you must make some settings in this area so that your phone can be reached from the Internet (i.e. can be addressed).

Through NAT, the IP addresses of subscribers in the LAN are concealed behind the public IP address of the router.

For incoming calls

If port forwarding is activated or a DMZ is set up for the phone on the router, no special settings are required for incoming calls.

If this is not the case, an entry in the NAT routing table (in the router) is necessary in order for the phone to be reached. This entry is created when the phone is registered with the SIP service. In the interest of security, this entry is automatically deleted at certain intervals (session timeout). The phone must therefore confirm its registration at certain intervals (see **NAT refresh time**, page 87), so that the entry stays in the routing table.

For outgoing calls

The phone needs its public address in order to receive caller voice data.

There are two possibilities:

- The phone requests the public address from a STUN server on the Internet (Simple Transversal of UDP over NAT). STUN can only be used with asymmetric NATs and non-blocking firewalls.
- The phone does not direct the connection request to the SIP proxy but to an outbound proxy on the Internet that supplies the data packets along with the public address.

The STUN server and outbound proxy are used alternately to work around the NAT/firewall in the router.

STUN enabled
Click on **Yes** if you want your phone to use STUN as soon as it is used on a router with asymmetric NAT.

STUN server
Enter the (fully-qualified) DNS name or the IP address of the STUN server on the Internet.

If you selected the option **Yes** in the **STUN enabled** field, you must enter a **STUN server** here.

STUN port
Enter the number of the communication port on the STUN server. The default port is 3478.

STUN refresh time
Enter the time intervals at which the phone should repeat the registration with the STUN server. The repeat is required so that the entry of the phone in the tables of the STUN server is retained. The repeat will be carried out for all activated VoIP phone numbers.

Ask your VoIP provider for the **STUN refresh time**.

The default is 240 seconds.

If you enter 0 seconds, the registration will not be repeated periodically.

NAT refresh time
Specify the intervals at which you want the phone to update its entry in the NAT routing table. Specify an interval in seconds that is a little smaller than the NAT session timeout.

As a rule you should not change the preconfigured value for the **NAT refresh time**.

Outbound proxy mode

Specify when the outbound proxy should be used.

Always

All signalling and voice data sent by the phone is sent to the outbound proxy.

Auto

Data sent by the phone is only sent to the outbound proxy when the phone is connected to a router with symmetric NAT or blocking firewall. If the phone is behind an asymmetric NAT, the STUN server is used.

If you have set **STUN enabled** = **No** or have not entered a STUN server, the outbound proxy is always used.

Never

The outbound proxy is not used.

If you do not make an entry in the **Outbound proxy** field, the phone behaves independently of the selected mode, as with **Never**.

Outbound proxy

Enter the (fully qualified) DNS name or the IP address of your provider's outbound proxy.

Please note:
With many providers, the outbound proxy is identical to the SIP proxy.

Outbound proxy port

Enter the number of the communication port used by the outbound proxy.

The default port is 5060.

Saving settings on phone

▶ Click on **Set** to save the changes.

The **Connections** list will be shown after saving (see Figure 3 on page 83).

If you want to reject the changes that have been made, click on **Cancel**. The Web page is re-loaded with the data saved on the phone.

Please note: If you do not make any entries for a lengthy period, the connection to the Web configurator is automatically terminated. Unsaved entries are lost. If necessary, implement temporary security measures. You can subsequently continue the entry and make changes if necessary.

Activating new connection

If you have configured a new VoIP connection, you must also activate it.

In the **Connections** list:

▶ Activate the relevant option in the **Active** column (☑ = activated).

Your phone will register itself using the relevant access data with the VoIP provider. If the registration is successful, after a short period the **Status** column will show **registered** for the connection. You can now be reached on this VoIP phone number.

Please note:
Once the new entry has been made, the VoIP phone number for each handset is assigned as a receiving number. For how to adjust the assignment, see page 93.

Selecting the VoIP provider and downloading the VoIP provider data

Profile files with the general access data for the most important VoIP providers are available for download on the Siemens server on the Internet. The address for the server is stored in your phone (page 99).

Navigation:

- Open the following Web page: **Settings** ➔ **Telephony** ➔ **Connections**.
- Click on the **Edit** button next to the VoIP connection for which you wish to download the provider data.
- In the **IP Connection** area, click on the **Select VoIP Provider** button.

This will display information on the download procedure.

The phone establishes a connection with the Siemens server on the Internet. The download procedure has several steps:

- Click on **Next**.
- From the list, select the country for which the list of VoIP providers is to be loaded.
- Click on **Next**.
- Select a VoIP provider from the list. If your provider is not included in the list, select **Other Provider**. You will then have to enter all the VoIP data manually (page 84).
- Click on **Finish**.

The data for the provider selected will be loaded onto your phone.

Configuring the fixed network connection

You can assign a name to your fixed network connection. The connection will be shown under this name on the handset and in the Web configurator interface, e.g. when assigning sending and receiving numbers (page 93), with call display (page 22).

- Open the following Web page: **Settings** ➔ **Telephony** ➔ **Connections**.
- In the **Fixed Line Connection** area, click on the **Edit** button.
- Enter your fixed network (fixed line) number or the name of your choice (max. 16 characters) for your fixed network connection in the **Connection Name or Number** field. The default is "**Fixed Line**".

Activating/deactivating the Gigaset.net connection

Your phone is assigned a Gigaset.net phone number on delivery. As soon as you have connected your phone to the Internet, you can make calls using the Gigaset.net and receive calls from other Gigaset.net subscribers, provided that your Gigaset.net connection has been activated. You can deactivate the Gigaset.net connection.

- Open the following Web page: **Settings** ➔ **Telephony** ➔ **Connections**. The list of connections will be displayed (see Figure 3 on page 83).
- In the **Gigaset.net** field use the option in the **Active** column to activate (☑) or deactivate (☐) the Gigaset.net connection.

Please note:
If you do not use your Gigaset.net connection for six weeks, it is automatically deactivated. You cannot be reached for calls from the Gigaset.net.
The connection is reactivated:
– as soon as you start a search in the Gigaset.net directory (page 27) or
– make a call via the Gigaset.net (dial a number with #9 at the end) or
– activate the connection via the Web configurator as described above.

Optimising voice quality for VoIP connections

You can make general and connection-specific settings to improve the voice quality for VoIP telephony.

▶ Open the following Web page: **Settings** ➔ **Telephony** ➔ **Audio**.

The voice quality for VoIP connections is mainly determined by the **voice codec** used for transferring the data and the available **bandwidth** of your DSL connection.

In the case of the voice codec, the voice data is digitalised (coded / decoded) and compressed. A "better" codec (better voice quality) means more data needs to be to be transferred, i.e. perfect voice data transfer requires a DSL connection with a larger bandwidth.

The following voice codecs are supported by your phone:

G711 a law / G711 µ law
Excellent voice quality (comparable with ISDN). The necessary bandwidth is 64 kbit/s per voice connection.

G726
Good voice quality (inferior to that with G.711 but better than with G.729).
Your phone supports G.726 with a transmission rate of 32 kbit/s per voice connection.

G729
Average voice quality. The necessary bandwidth is less than 8 kbit/s per voice connection.

Both sides of a phone connection (caller/sender side and receiver side) must use the same voice codec. The voice codec is negotiated between the sender and the recipient when establishing a connection.

You can influence the voice quality by selecting (bearing in mind the bandwidth of your DSL connection) the voice codecs your phone is to use, and specifying the order in which the codecs are to be suggested when a VoIP connection is established.

Area: Settings for Bandwidth

The settings in this area influence all VoIP connections (VoIP phone numbers).

Allow 1 VoIP call only
Generally speaking, you can make two VoIP calls simultaneously on your phone. If, however, your DSL connection has a narrow bandwidth, there may be problems if two VoIP calls are made at the same time. The data is no longer transferred properly (long voice delay, data losses etc.).

▶ Activate the **Yes** option next to **Allow 1 VoIP call only** to prevent any further parallel VoIP phone connections being established.

▶ If you wish to permit two VoIP connections, activate the **No** option.

Please note: If only one VoIP connection is permitted, the following VoIP network services are **no longer** available:
– Call waiting
Call waiting is not displayed during a call via VoIP.
– External consultation call from a VoIP call
– Toggling and initiating a conference call via VoIP

Voice Quality

Default settings for the codecs used are stored in your phone: one setting optimised for narrow bandwidths and one setting optimised for wide bandwidths.

- Activate one of the options **Optimized for low bandwidth** / **Optimized for high bandwidth** if you wish to accept a default setting for all VoIP connections. The settings are shown in the **Settings for Connections** area and cannot be changed.
- Activate the **Own Codec preference** option if you wish to select and set connection-specific voice codecs yourself (see "Area: Settings for Connections").

Area: Settings for Connections

In this area you can make specific settings for each of your VoIP phone numbers.

You can make the following settings for each VoIP phone number configured on your phone:

Volume for VoIP Calls

Depending on the VoIP provider, it is possible that the received voice/earpiece volume is too low or too high, so that adjusting the volume via the handset is not adequate.

Specify whether the received volume range is too high or too low. The following options are available:

Low

Voice/earpiece volume is too high. Activate this option to reduce the volume by 6 dB.

Normal

The voice/earpiece volume does not need to be raised/lowered.

High

Voice/earpiece volume is too low. Activate this option to reduce the volume by 6 dB.

Voice codecs

Precondition: The **Own Codec preference** option is activated for the **Voice Quality** in the **Settings for Bandwidth** area.

Select the voice codecs your phone is to use, and specify the order in which the codecs are to be suggested when a VoIP connection is established via this VoIP phone number.

- Apply the voice codecs that your phone is to suggest with outgoing calls into the **Selected codecs** list.
  To do this, in the **Available codecs** list click on the voice codec that you want to apply (you can mark several entries using the Shift key or the Ctrl key). Click on the **<Add** button.
- Move the voice codecs that you do not want the phone to use into the **Available codecs** list.
  Also, select the voice codecs in the **Available codecs** list (see above) and click on the **Remove>** button.
- Sort the voice codecs in the **Selected codecs** list into the order in which they should be suggested to the receiving device when a connection is established. To do this, use the **Up** and **Down** buttons.

When establishing a VoIP connection, the phone suggests the 1st voice codec in the **Selected codecs** list to the receiving device to begin with. If the receiving device does not accept this voice codec (e.g. because it is not supported), the 2nd voice codec on the list is suggested and so on.

If the receiving device does not accept any of the voice codecs in the **Selected codecs** list, the connection is **not** established. An appropriate message will be displayed on the handset.

Please note:
- You should only deactivate codecs (put them in the **Available codecs** list) if there is a particular reason. The more codecs that are deactivated, the greater the danger that calls will not be able to be established due to unsuccessful codec negotiations.
- With incoming calls, all supported voice codecs are always permitted.

Area: Settings for Codecs

To save additional bandwidth and transmission capacity, on VoIP connections that use codec **G729** you can suppress the transmission of voice packets in pauses ("Silence Suppression"). Then, instead of the background noises in your environment, your caller hears a synthetic noise generated in the receiver.

Please note: "Silence Suppression" can sometimes lead to deterioration in the voice quality.

- In the **Enable Annex B for codec G729** field, state whether, when using codec **G729**, transmission of data packets for pauses is to be suppressed (activate **Yes** option).

Saving settings on the phone

- Click on the **Set** button to save the settings for the voice quality.

Please note:
You should observe the following for good voice quality:
- When making calls using VoIP, avoid performing other Internet activities (e.g. surfing the net).
- Irrespective of the codec used and the network capacity utilisation, please note that voice delays can occur. Therefore, allow your VoIP calling partner to finish speaking. Avoid interrupting your calling partner.

Voice quality and infrastructure

With your Gigaset S450 IP you have the opportunity to make calls with good voice quality via VoIP.

However, your phone's performance with VoIP – and therefore the voice quality – also depends on the properties of the entire infrastructure.

The following VoIP provider components are just some of the things that can influence performance:

- Router
- DSLAM
- DSL transmission line and speed
- Connection paths over the Internet
- If necessary, other applications that also use the DSL connection

In VoIP networks, the voice quality is influenced by various things including the "quality of service" (QoS). If the entire infrastructure demonstrates QoS, voice quality is better (fewer delays, less echoing, less crackling etc.).

If, for example, the router does not have QoS, then the voice quality is not as good. Please see the specialist documentation for further information.

Assigning sending and receiving numbers to handsets

Your phone can be assigned up to seven phone numbers: the fixed network number and up to six VoIP phone numbers.

You can assign these numbers to the individual handsets that are connected to your base station as receiving and sending numbers. The means that for each handset, you define the calls that it will ring for, and which VoIP account (sending number) is used by your VoIP provider to calculate outgoing VoIP calls.

Please note:
A handset is assigned the following numbers after it is registered with the base station:
- Receiving numbers: all phone numbers assigned to the phone (fixed network and VoIP).
- Sending numbers: the fixed network number and the VoIP phone number that you entered at the start of the phone configuration.

▶ Open the following Web page: **Settings** ➔ **Telephony** ➔ **Number Assignment**.

This will display the names of all registered handsets, and a list for each handset with the phone numbers that are configured and activated for the phone. The connection names are shown in the **Connections** column. The fixed network connection is always at the end of the list.

▶ Define a VoIP phone number as the sending number for each handset. To do this, click on the option behind the phone number in the **Send** column. The previous assignment will automatically be deactivated.

Please note:
The fixed network number is permanently assigned to each handset as a sending number. This assignment cannot be deactivated. This guarantees that emergency numbers can be dialled from every handset.

▶ Select the phone numbers for each handset (fixed network, VoIP) that are to be assigned to the handset as receiving numbers. To do this, click on the option behind the phone number in the **Receive** column. Every handset can be assigned several phone numbers or no phone number (☑ = assigned).

▶ Now click on **Set** to save your settings.

Please note:
- If a VoIP phone number that has been assigned to a handset as a sending number is deleted, then the handset will automatically be assigned the first VoIP phone number.
- If a phone number is not assigned to any handset as a receiving number, calls to this number will be signalled on all handsets.
- If you have not assigned receiving numbers to any of the handsets, calls to all connections will be signalled on all handsets.

Setting DTMF signalling for VoIP

DTMF signalling is required, for example, for playing and controlling some network mailboxes via key codes (digits).

For VoIP specify how key codes are to be converted and sent as DTMF signals: as audible information in the voice channel or as a "SIP Info" message.

Ask your VoIP provider which type of DTMF transmission it supports.

▶ Open the following Web page: **Settings** ➔ **Telephony** ➔ **Advanced Settings**.

In the **DTMF over VoIP Connections** area, make the required settings for sending DTMF signals. Bear in mind your provider's guidelines.

▶ Activate **Audio** or **RFC 2833** if DTMF signals are to be transmitted acoustically (in voice packages).

▶ Activate **SIP Info** if DTMF signals are to be transmitted as code.

▶ Now click on **Set** to save your settings.

Please note:
The settings for DTMF signalling apply to all VoIP connections (VoIP accounts).

Defining local communication ports for VoIP

▶ Open the following Web page: **Settings** ➔ **Telephony** ➔ **Advanced Settings**.

In the **Listen Ports for VoIP Connections** area, specify which local ports the telephone is to use for VoIP telephony. The ports must not be used by any other subscriber in the LAN.

SIP port
Specify the local communication port that the phone should use to send and receive signalling data. Specify a number between 1024 and 49152. The default port number for SIP signalling is 5060.

RTP port
Specify the local communication port that the phone should use to send and receive voice data. Enter an **even** number between 1024 and 49152. The port number must **not** be the same as the port number in the **SIP port** field. If you enter an odd number, the even number just below it will be set (e.g. if you enter 5003, 5002 is set). The default port number for voice transmission is 5004.

Use random ports
Click on the **Yes** option if you do not want the phone to use fixed ports for **SIP port** and **RTP port**, but rather to use any free ports.

The use of random ports makes sense if you want several phones to be operated on the same router with NAT. The phones must then use different ports so that the router's NAT is only able to forward incoming calls and voice data to one (the intended) phone.

If you click on **No**, the phone will use the ports specified in **SIP port** and **RTP port**.

▶ Now click on **Set** to save your settings.

Defining dialling plans

You can define user-specific dialling plans for your phone.

▶ Open the following Web page: **Settings** ➔ **Telephony** ➔ **Dialing Plans**.

Setting Area Code Predialling

In VoIP calls you must generally always dial the area code – even for local calls.

You can save the annoying need to dial the area code for local calls by activating the **Area Code Predialling** function. In VoIP calls, the area code entered is then prefixed to all numbers that do not start with 0 – even when dialling numbers from the directory and other lists.

▶ Enter your area code in the **Area Code** field, e.g. 089.

▶ Click on the **Yes** option next to **Predial area code for local calls through VoIP** to activate the function.

If you click on **No** you must enter the area code even for local calls via VoIP. Numbers in the directory must always contain the area code for dialling via VoIP.

▶ Click on **Set** to save the settings.

Please note that if the option is activated, the area code is prefixed to all phone numbers that do not start with 0 and are dialled via VoIP. This is especially the case for numbers of the network answer machine (page 71) and, if the **Emergency calls always via fixed line** option is deactivated (see below), for emergency numbers.

Changing settings for dialling emergency numbers

You can store up to five emergency numbers in your telephone. The default setting for the phone is that these emergency numbers are always dialled via the fixed network – irrespective of which connection type you select. The fixed network supports general emergency numbers (e.g. establishing a connection to the **local** police emergency number).

You can deactivate the setting for emergency numbers to always be dialled via the fixed network.

Emergency numbers may have been preset in your phone. They are displayed on the **Dialing Plans** Web page. You can change the emergency phone numbers.

Warning:
- If you deactivate the **Emergency calls always via fixed line** option, make sure that your VoIP provider supports emergency numbers, such as the **local** police emergency number.
- Emergency numbers cannot be dialled if the key lock is activated. Before dialling, press **and hold** the hash key [#], to release the key lock.

The preconfigured emergency numbers are displayed in the **Emergency Numbers** area.

- Enter the emergency numbers in the empty fields and edit emergency numbers that have already been entered.
- If you click on **No** next to **Emergency calls always via fixed line**, the emergency numbers are dialled via the type of connection you specify when dialling (by pressing the talk key [↶] **briefly** or pressing and **holding**).

  If you click on the **Yes** option, your phone will always dial emergency numbers via the fixed network (fixed line) (default setting).
- Click on **Set** to save the settings.

Loading/deleting directories into/from the PC

The Web configurator has the following options for editing the directories of the registered handbooks.

- Store the handset directories on a PC. They will be stored in tsv-ASCII files (tsv = tabulator separated values). These files can be edited with an ASCII editor (e.g. Notepad/Editor in Windows accessories) and loaded onto every handset that is registered. You can also transfer directory entries from the tsv file into your Outlook™ address book.
- Transfer Outlook™ contacts to the handset directories. Export Outlook™ contacts into a tsv-ASCII file and transfer this into the directories. Find out how to do this in the section "Format of the directory file (tsv file)" on page 96.
- Delete the directory on the handset. If you have edited the directory file (tsv file) on the PC and would like to use this modified directory on the handset, you can delete the current directory from the handset first. **Tip:** Back up the current directory on your PC before deleting it. You can then load it back onto the handset if the modified directory is affected by formatting errors and some, or all, of it cannot be loaded onto the handset.

Preconditions:
- The handset can send and receive directory entries.
- The directory on the handset is not being accessed, i.e. the directory is not open.
- Open the following Web page: **Settings** → **Telephony** → **Telephone Directory**.
- In the **Handset** area, select the handset whose directory you want to edit. To do this, click on the option before the handset.

Load the directory file from the PC to the handset

- In the **File for upload** field: enter the tsv file (complete path name) that is to be loaded onto the handset. Click on the **Browse** button to navigate to the file.
- Click on the **Upload** button to start the transfer.

The display will show how many of the entries from the tsv file are being transferred to the directory. If a formatting error occurs, the line number for the affected entry will be specified.

Transfer rules

The directory entries from a tsv file that are loaded onto the handset will be added to the directory. No directory entries will be overwritten or deleted.

If the phone number for a directory entry is identical to the phone number for an entry in the tsv file, the entry is not copied to the handset.

Loading the directory from the handset to the PC

- In the **Handset Directory** area click on the **Download** button. A Windows dialogue will be shown to save the file.
- Enter the directory on the PC (complete path name) in which the directory file is to be stored. Click on the **Save** button or **OK**.

Deleting the directory

- In the **Handset Directory** area, click on the **Delete** button.
- Confirm the prompt **Telephone directory of the selected handset will be deleted. Continue?** with **OK**.

All directory entries will be deleted, including the entries for the online directories.

Please note:
For how to delete the directory on the handset, see page 35

Format of the directory file (tsv file)

The following describes the structure of the tsv file as it is created from the phone. The phone expects the same structure if you load a tsv file from the PC onto a handset. A tsv file created by Outlook™ may need editing with an ASCII editor before it can be loaded onto a handset.

Every directory entry in the tsv file is recorded in one line (which is closed with an end-of-line symbol).

The data in each entry has a specific position within the line. The positions are separated by tabs (<tab>). The following data is written in the file in the specified order:

1. Internal code (can remain empty)
2. Name
3. Number
4. Anniversary date (DD.MM.) and the time of the reminder call (HH:MM) separated by a space
5. Number of the melody that has been set for the reminder call on the anniversary (number between 0 and 9; 0 = optical signalling)
6. Status of the reminder call (1=on)
7. Number of the VIP melody (number between 0 and 9)
8. SMS mailbox address (number between 0 and 9)

If one of the above parameters in a directory entry is not set, then the relevant position must remain empty (<tab><tab>).

Example:

You want to create an entry for Anna Sand with the number 123456. Anna Sand should be entered as a VIP (no anniversary).

The tsv file must contain the following in a line:
<tab>Anna Sand<tab>123456<tab><tab><tab><tab><tab>5<tab><enter>

Saving messenger access data

The messenger client in your base station enables **instant messaging** (immediate message transfer, chatting). The phone supports the XMPP messenger (Jabber).

In order for you to use your phone's messenger to "go online" and "chat" on the Internet, the access data of a messenger server must be saved on your phone.

Your phone is already registered with the Gigaset.net Jabber server. An account has already been assigned to the phone. You can chat to other Gigaset.net subscribers via this account. You must also create a buddy list on your PC (see "Setting up a Gigaset.net Jabber-Account" on page 98).

You can also register with another instant messaging provider that supports XMPP Messenger (Jabber). You must then save the messenger server address and your access data on your phone.

You can define a **Resource** name and a **Priority** for your phone. Both are required if you are logged in (online) with the messenger server with several devices (phone, desktop PC and notebook) at the same time using the same **Jabber ID**.

The **Resource** name is used to distinguish between these devices. The phone cannot log in with the messenger server if it does not have a resource name.

You should assign a **Priority**, as each message will only be sent to one device for each Jabber ID. The **Priority** determines which of the devices receives the message.

Example: You are online using one of your phone's handsets and your PC both at the same time. You have assigned your phone (**Resource**-name "**phone**") the **Priority** 5 and your PC (resource name "PC") the priority 10. In this case, any message addressed to your Jabber ID will be sent to your phone.

- Open the following Web page: **Settings** ➔ **Messaging** ➔ **Messenger**.
- In the **Messenger Account** field, select whether you wish to use the **Gigaset.net** Jabber server or another provider's messenger server (**Other**).

  The access data for **Gigaset.net** are already stored in the base station. They are displayed in **Jabber ID**, **Authentication password** and **Jabber server**. With this data you can also register with the Gigaset.net Jabber server through your PC.
- Enter the user ID (max. 50 characters) and password (max. 20 characters) that you used to register with the messenger server in the **Jabber ID** and **Authentication password** fields. If you have selected **Messenger Account = Gigaset.net**, the fields are preconfigured with your Gigaset.net account.
- In the **Jabber server** field, enter the IP address or the DNS name of the messenger server with which you are registered for instant messaging.

  Max. 74 alphanumeric characters.

  If you have selected **Messenger Account = Gigaset.net**, the field is preconfigured with the name of the Gigaset.net server.
- Enter the number of the communication port on the Jabber server in the **Jabber server port** field. The default port is 5222.

  If you have selected **Messenger Account = Gigaset.net**, the port number is preconfigured.
- Enter a resource name (max. 20 characters) in the **Resource** field.

  The default is: **phone**.
- Enter the priority for your phone in the field **Priority**. Select a number between 128 (highest priority) and 127 (lowest priority) for the priority.

  The default is: 5
- Click on the **Set** button.

Setting up a Gigaset.net Jabber-Account

Your phone is already registered with the Gigaset.net Jabber server. An account has already been assigned to the phone.

In order to chat with other Gigaset.net subscribers via this account, you must transfer the required Gigaset.net subscribers to a contact list (buddy list) on your PC. You can use any conventional Jabber client to do this (e.g. PSI, Miranda; see also e.g. http://www.swissjabber.ch).

In order to use the Gigaset.net Jabber account, proceed as follows:

- Start the Web configurator, open the **Settings** ➔ **Messaging** ➔ **Messenger** Web page and select the **Messenger Account Gigaset.net** field. Your account data is displayed in **Jabber ID** and **Authentication password**. You need this to create a buddy list via the Jabber client on your PC.
- Start the Jabber client on your PC.
- Enter your Gigaset.net **Jabber ID** in the Jabber client. The **Jabber ID** is composed of your Gigaset.net number and "@jabber.gigaset.net"

  Example: 21721123901#9@jabber.gigaset.net
- Now enter your **Authentication password**.

Please note:
- Do **not** select the "Create new account" option. Your Gigaset.net Jabber account has already been created in Gigaset.net.
- The "SSL connection" option must be **deactivated** in the Jabber client.

- Now you can enter Gigaset.net subscribers as contacts (buddies).

  For the Jabber ID of each subscriber, enter the subscriber's Gigaset.net number with "@jabber.gigaset.net" (example: 2141524901#9@jabber.gigaset.net).

A request to "Add to contact list" is sent to the subscriber.

If the subscriber answers this request positively, he is added to your buddy list. The updated buddy list will be displayed on your handset the next time you restart Messenger. To restart: If necessary, close your connection to the messenger server (page 54) and then go back online (page 53).

Please note:
For how to use your handset to go online and chat with or call buddies, see page 52.

Making e-mail settings

You can use your phone to be notified about new e-mail messages on your incoming e-mail server (page 49).

You must store the address/DNS name of your incoming e-mail server and your personal access data in the phone and activate the e-mail request on your incoming e-mail server, so that it can connect to the incoming e-mail server and your mailbox.

As soon as the data is stored in the phone, it will periodically (approx every 15 minutes) connect to the incoming e-mail server and check if any new messages have been received.

- Open the following Web page: **Settings** ➔ **Messaging** ➔ **E-Mail**.
- Enter the user name (account name) agreed with the Internet provider (max. 50 characters) in the field **Authentication Name**.
- Enter the password that you agreed with your provider for accessing the incoming e-mail server (max. 20 characters; case sensitive) in the field **Authentication password**.
- Enter the name of the incoming e-mail server (POP3 server) (max. 74 characters) in the field **POP3 Server**. Example: pop.theserver.com.

- From the **Check for new E-Mail** list, select the time interval at which your phone is to check whether new e-mail messages have been received on the incoming e-mail server. Select **Never** to deactivate the check. Select one of the other values to activate the check for new e-mails.

  Only activate the check if a messaging-capable handset (e.g. Gigaset S45) is registered to your base station.
- Click on the **Set** button to save the settings in your phone.

Please note:
For how to show the messages from your mailbox on your handset, see page 50

Defining the server for firmware updates, starting the update

If necessary, you can load updates of the base station firmware onto your phone. You can either download the updates directly from the Internet or from a PC in your local network.

Using the Web configurator you can specify from where the firmware should be loaded.

- Open the following Web page: **Settings** ➔ **Miscellaneous**.

Download the firmware update directly from the Internet

The server on which Siemens makes new firmware versions available for your base station is set by default. The URL of the Internet server is displayed in the **Data server** field.

The firmware is loaded from the Internet if you do not enter a local file in the **User defined firmware file** field before this update.

Please note:
- When updating from the Internet, checks are made to ensure that no **newer** version of the firmware exists. If this is not the case, the operation is terminated.
- You should not change the URL for the Internet server because this address is also used to load provider information from the Internet. If you have entered another URL, you can re-activate the default URL by restoring the base station default settings (page 64).

Conducting the firmware update locally

Precondition: A Web server is running on the local PC (e.g. Apache).

- First, load the desired version of the firmware from the Internet onto a local PC.
- In the **User defined firmware file** field enter the IP address of the PC in your local network and the complete path and name of the firmware file on the PC. Example: 192.168.2.105/S450IP/Firmware_Datei.bin.
- Click on **Set** to save the changes.

This setting is automatically used for the **subsequent** firmware update. The Internet server URL stays saved and is re-used for further firmware updates. If you want to use a local PC again for another update, then you have to re-enter the IP address and file name.

Please note:
If an error arises during a firmware update from a local PC, the most recent version of the firmware is automatically downloaded from the Internet.

Starting firmware update

Preconditions:

- No calls are being made via the fixed network or VoIP.
- There is no internal connection between the registered handsets.
- The base station menu is not open in any of the handsets.

▶ Click on **Update Firmware**.

The firmware is updated. This process can take up to 3 minutes.

Please note:
You can also start the firmware update on the handset (page 66).

Activating/deactivating the automatic version check

When the version check is activated, the phone checks on a daily basis whether the Siemens configuration server is carrying a new version of the phone firmware or of the file with the general settings for your VoIP provider.

If a new version is available, a notification is sent to the handset and the message key flashes. You can then carry out an automatic update of the firmware (page 66) or of the VoIP provider settings (page 67).

▶ Open the following Web page: **Settings** ➔ **Miscellaneous**.

▶ Click on the **Yes** option next to **Automatic check for software/profile updates** to activate the automatic version check.

Click on **No** if you do not want a version check to be carried out.

▶ Click on **Set** to save the changes.

Activating VoIP status message display

Display VoIP status messages on your handset when there are VoIP connection problems. These messages give you information on the status of a connection and contain a provider-specific code that helps the service team when they are analysing the problem.

▶ Open the following Web page: **Settings** ➔ **Miscellaneous**.

▶ Click on the **Yes** option after **Show VoIP status on handset** to activate status message display

If you click on **No**, no VoIP status messages are displayed.

▶ Click on **Set** to save the changes.

Please note:
A table with possible status codes and their meaning can be found in the Appendix on page 105.

Checking status information via your phone

General information about your phone is displayed.

- In the menu list, click on the **Status** register.

The following information is displayed:

IP Configuration

IP address
The phone's current IP address within the local network. For assigning the IP address, see page 82.

MAC address
The phone's device address.

Software

Firmware version
Version of the firmware currently downloaded. You can download updates of the firmware on your phone (page 66). Firmware updates are available on the Internet.

EEPROM version
Version of your phone's EEPROM storage chip (page 124).

Appendix

Care

- Wipe the base station, charging cradle and handset with a **damp** cloth (do not use solvent) or an antistatic cloth.

Never use a dry cloth. This can cause static.

Contact with liquid ⚠

If the handset has come into contact with liquid:

1. **Switch off the handset and remove the battery pack immediately**.
2. Allow the liquid to drain from the handset.
3. Pat all parts dry, then place the handset with the battery compartment open and the keypad facing down in a dry, warm place **for at least 72 hours** (**not** in a microwave, oven etc.).
4. **Do not switch on the handset again until it is completely dry.**

When it has fully dried out, you will normally be able to use it again.

Questions and answers

If you have any questions about using your phone, visit us at any time at www.siemens.com/gigasetcustomercare. The table below contains a list of common problems and possible solutions.

Please note:
To support the service team, it can be helpful if you have the following information to hand:
– Version of firmware, EEPROM and your phone's MAC address
You can check this information with the Web configurator (page 101). For how to display the MAC address on your handset, turn to page 69.
– VoIP status code (page 105)
For problems with VoIP connections, you should set VoIP status messages to be displayed on your handset. (page 68, page 100). These messages contain a status code that helps when the problem is analysed.

The display is blank.

1. The handset is not switched on.
   - Press **and hold** the end call key.
2. The battery is flat.
   - Charge the battery or replace it (page 7).

The keys of a handset do not respond when pressed.

The key lock is activated.
- Press and **hold** the hash key (page 24).

Base "X" flashes **on the display.**

1. The handset is outside the range of the base station.
   - Move the handset closer to the base station.
2. The base station is not switched on.
   - Check the base station's mains adapter (page 10).
3. An update of the base station firmware is currently being conducted (page 66/ page 99).
   - Please wait until the update is complete.

Base Search flashes in the display.

The handset is set to **Best Base** and no base station is switched on or within range.
- Move the handset closer to the base station.
- Check the base station mains adapter.

Please register flashes in the display.

The handset is not registered.
- Register the handset (page 72).

Handset does not ring.

The ringer tone is switched off.
- Activate the ringer tone (page 62).

You cannot hear a ring/dialling tone from the fixed network.

Base station's phone cord has been replaced.
- When purchasing a new cord, ensure that it has the correct pin connections (page 11).

The other party cannot hear you.

You have pressed the (INT) key. The handset is "muted".
- Switch on the microphone again (page 23).

When making calls from the fixed network, the caller's phone number is not displayed although CLIP (page 22) is set.

Phone number identification is not enabled.
- The **caller** should ask his network provider to enable Calling Line Identification (CLI).

You hear an error tone when keying an input
(a descending tone sequence).

Action has failed/invalid input.
- Repeat the operation.
  Watch the display and refer to the user guide if necessary.

You cannot connect to the router and the phone is assigned a static IP address.

- Check on the router whether the IP address is already being used by another device in the LAN or belongs to the block of IP addresses that is reserved on the router for dynamic address assignment.
- If necessary, change the phone's IP address (page 68).

You have made a call via VoIP but cannot hear the other participant.

Your phone is connected to a router with NAT/firewall.
- Your STUN server (page 87) or outbound proxy (page 88) settings are incomplete or incorrect. Check the settings.
- No outbound proxy is entered or the outbound proxy mode **Never** is activated (page 88) and your phone is connected to a router with symmetric NAT or a blocking firewall.
- Port forwarding is activated on your router, but no permanent IP address has been assigned to your phone.

You cannot make calls via VoIP. **Server not accessible!** is displayed.

- First wait a few minutes. This is often a short-term event that corrects itself after a short time.

If the message is still displayed, proceed as follows:
- Check whether your phone's Ethernet cable is correctly connected to the router.
- Check your router's cable connection to the Internet.
- Check whether the phone is connected to the LAN. Set a ping command, for example, on the phone (ping ␣ <local IP address of the phone>). It may be that no IP address could be assigned to the phone or a permanently set IP address is already assigned to another LAN subscriber. Check the settings on the router, you may have to activate the DHCP server.

You cannot make calls via VoIP. Either **Provider registration failed!** or **Registration failed** is shown.

- First wait a few minutes. This is often a short-term event that corrects itself after a short time.

The message may still be displayed for the following reasons:

1. The personal VoIP access data (**Username**, **Authent. Name** and **Authent. Password**) you have entered may be incomplete or wrong.
   - Check your information. In particular, check your use of upper and lower case.
2. The general settings for your VoIP provider are incomplete or incorrect (incorrect server address).
   - Start the Web configurator and check the settings.

You cannot establish a connection to the phone with your PC's Web browser.

- When establishing a connection, check the phone's local IP address that has been entered. You can check the IP address on your handset.
- Check the LAN connections for the PC and phone.
- Check that your phone can be reached. Set a ping command, for example, on the phone (ping ␣ <local IP address of the phone>).
- You have tried to reach the phone via a secure http (https://...). Try again with http://....

You cannot be reached for calls from the Internet.

- There is no entry for your phone in your router's routing table. Check the settings for the **NAT refresh time** (page 87).
- Your phone is not registered with the VoIP provider.
- You have entered the wrong user ID or an incorrect domain (page 85).

No firmware update or VoIP profile download is carried out.

1. If **Currently not possible!** is displayed, the VoIP connections may be busy or a download/update is already being carried out.
   - Repeat the process at a later time.
2. If **File corrupted!** is displayed, the firmware or profile file may be invalid.
   - Please use only firmware and downloads that are made available on the preconfigured Siemens server (page 99) or at www.siemens.com/gigasetcustomercare.
3. If **Server not accessible!** is displayed, the download server may not be accessible.
   - The server is currently not accessible. Repeat the process at a later time.
   - You have changed the preconfigured server address (page 99). Correct the address. If necessary, reset the base station.
4. If **Transmission Error XXX** is displayed, an error has occurred in the transmission of the file. An HTTP error code is displayed for XXX.
   - Repeat the process. If the error occurs again, consult the Service department.
5. If **Check IP settings!** is displayed, your phone may not be connected to the Internet.
   - Check the cable connections between the phone and router and between the router and the Internet.
   - Check whether the phone is connected to the LAN, i.e. it can be reached at its IP address.

VoIP status codes

If you have problems with your VoIP connections, activate the **Show Stat. on HS** function (page 68, page 100). You will then receive a VoIP status code that will support you in problem analysis. Also enter the code during problem analysis by the Service department.

In the following tables you will find the meanings of the most important status codes and messages.

Status code	Meaning
0x300	The called party can be reached under several phone numbers. If the VoIP provider supports this, a list of the phone numbers is transmitted as well as the status code. The caller can select to which number he/she wants to make the connection.
0x301	Permanently redirected. The called party can no longer be reached under this number. The new number is transmitted to the phone together with the status code, and the phone then no longer accesses the old number but dials the new address immediately.
0x302	Temporarily redirected. The phone is informed that the called party cannot be reached under the number dialled. The duration of redirecting is time-limited. The phone is also informed of the duration of redirecting.
0x305	The query is redirected to another proxy server, e.g. to balance query loads. The phone will make the same query once again to another proxy server. This is not a redirection of the address per se.
0x380	Other service: The query or the call could not be made. But the phone is notified what other options there are to be able to connect the call.
0x400	Wrong call
0x401	Not authorised
0x403	The requested service is not supported by the VoIP provider.
0x404	Wrong phone number. No subscriber to this number. Example: In a local call you have not dialled the area code although your VoIP provider does not support local calls
0x405	Method not permitted.
0x406	Not acceptable. The requested service cannot be provided.
0x407	Proxy authentication required.
0x408	The party cannot be reached (e.g. account has been deleted)
0x410	The requested service is not available from the VoIP provider.
0x413	Message is too long.
0x414	URI is too long.
0x415	Query format is not supported.
0x416	URI is faulty.
0x420	Incorrect ending
0x421	Incorrect ending
0x423	The requested service is not supported by the VoIP provider.
0x480	The dialled number is temporarily unavailable.
0x481	The recipient is not available.
0x482	Double service query
0x483	Too many "hops": The query was rejected because the service server (proxy) has decided that this query has already run through too many service servers. The maximum number was previously specified by the original sender of the query.
0x484	Wrong number: In most cases this response means that you have simply omitted one or more digits in the phone number.
0x485	The URI dialled is not unique and can not be processed by the VoIP provider.

Status code	Meaning
0x486	The called party is busy.
0x487	General faults: The call was interrupted before a call was established. The status code confirms receipt of the interruption signal.
0x488	The server cannot process the query because the data entered in the media description is not compatible.
0x491	The server notifies that the query will be processed as soon as a previous query has been completed.
0x493	The server rejects the query because the phone cannot decrypt the message. The sender has used an encryption method that neither the server nor the receiver phone can decrypt.
0x500	The proxy or the receiving device has discovered a fault while executing the query, which makes further execution of the query impossible. In this case, the caller or the phone displays the fault and repeats the query after a few seconds. The number of seconds after which the query can be repeated may be transmitted to the caller or phone by the receiving device.
0x501	The query cannot be processed by the recipient because the recipient does not have the functionality that the caller requires. If the recipient understands the query but does not process it because the sender does not have the necessary rights or the query is not permitted in the current context, a 405 is sent instead of 501.
0x502	In this case, the receiving device that transmits this error code is a proxy or a gateway and has received an invalid response from its gateway via which this query is to be processed.
0x503	The query cannot currently be processed by the receiving device or the proxy because the server is either overloaded or is being serviced. If it is possible for the query to be repeated in the foreseeable future, the server informs the caller or the phone of this.

Status code	Meaning
0x504	Time limit at the gateway
0x505	The server rejects the query because the indicated version number of the SIP protocol does not at least concur with the version that the server or the SIP device use that is involved in this query.
0x515	The server rejects the query because the message exceeds the maximum permitted size.
0x600	The called party is busy.
0x603	The called party has rejected the call.
0x604	The called URI does not exist.
0x606	The communication settings are not acceptable.
0x701	The called party has hung up.
0x703	Connection interrupted because of time-out.
0x704	Connection interrupted because of a SIP error
0x705	Wrong dialling tone
0x706	No connection established
0x751	Busy tone: No codec match between the calling and called subscribers.
0x810	General Socket Layer Error: User is not authorised.
0x811	General Socket Layer Error: Wrong Socket Number
0x812	General Socket Layer Error: Socket is not connected.
0x813	General Socket Layer Error: Memory error
0x814	General Socket Layer Error: Socket not available – check IP settings/connection problem/VoIP setting incorrect
0x815	General Socket Layer Error: Illegal application on the socket interface.

Searching for service information

You may need the service information of your phone (base station and handset) for Customer Services.

Base station service information

Precondition: You are conducting an external call. The connection has been established for at least 8 sec.

Options ➔ Service Info
Confirm selection with OK.

The following information is displayed:

1: Serial number of the base station (RFPI)

2: Serial number of your handset (IPUI)

3: Informs the service employees of the base station settings (in hex diagram), e.g. the number of registered handsets, repeater mode. The last 4 digits indicate the number of operating hours (hexadecimal).

4: Variant, version of the firmware (digits 3 to 5).

5: Gigaset.net number of your phone. With this number you can call a service employee over the Internet without needing to be registered with a VoIP provider. This means that he/she can test online connections and VoIP telephony irrespective of the VoIP provider.

Service information of the handset

In the handset idle status:

Open the menu by pressing ⊙

▶ Press the following keys one after the other: * # 0 + 6 mno #

The following information is displayed via the handset:

1: Serial number (IPUI)

2: Number of operating hours

3: Variant, version of handset software

Service (Customer Care)

You can get assistance easily when you have technical questions or questions about how to use your device by using our online support service on the Internet at:

http://www.siemens.com/gigasetcustomercare

This site can be accessed at any time wherever you are. It will give you 24/7 support for all our products. It also a list of FAQs and answers plus user guides for you to download. You will also find frequently asked questions and answers in the **Questions and Answers** section of this user guide in the appendix.

If the device needs to be repaired, please contact one of our Customer Care Centers:

Abu Dhabi. 97 12 62 23 800
Argentina 0800-888-9878
Australia 1300 665 366
Austria .05 17 07 50 04 (0,065 Euro/Min.)
Bahrain 97 31 73 11 173
Belgium 0 78 15 66 79
Bosnia Herzegovina 033 276 649
Brazil. . . . . .
Grande Capitais e Regiões Metropolitanas:
. . . . . 4003 3020
. . . . . (US$ 0,59)
Demais localidades: 0800 707 1248
. . . . . (US$ 0,59)
Bulgaria. 02 873 94 88
Canada 701-355-3984
China 0 21 400 670 6007
Croatia . . . . . 016 10 53 81 (0,23 Kun)
Czech Republic 233 032 727
Denmark. 35 25 86 00
Dubai 97 14 39 69 944
Egypt. 202 7623441
Finland 09 23 11 34 25
France. 01 56 38 42 00
Germany .01805 333 222 (0,14 Euro/Min.)
Greece . . . . . 801 11 11 11 6 (0,026 Euro)
Hungary . . . . . .06 14 71 24 44 (27 Ft)
Ireland 18 50 77 72 77
Italy. 199 15 11 15
Kuwait 96 52 44 4200
Latvia 7 50 11 18
Luxembourg 40 66 61 56 40
Malaysia. 603 77124304
Malta . . . . . +353 21 4940 632
Mexico. 01 80 07 11 00 03
Netherlands
. . . . . .0900-3333102 (0,25 Euro/min.)
New Zealand 08 00 27 43 63
Norway 22 70 84 00
Oman. 96 82 47 09 281
Poland 0 801 140 160
Portugal. 808781223
Romania 02 12 04 60 00
Russia. 8 (495) 228 1312
Serbia. 01 13 07 00 80
Singapore 62 27 11 18
Slovak Republic
. . . . . 02 59 68 22 66
Slovenija . . . . . 0 14 74 63 36 (6,30 Tolar)
South Africa. 08 60 10 11 57
Spain 902 103935
Sweden 0 87 50 99 11
Switzerland
. . . . . 0848 212 000 (0,08 SFr./Min.)
Taiwan 02 23 96 10 06
Thailand. 02 722 1118
Turkey 0 21 64 59 98 59
Ukraine . . . . . .+380-44-451-71-72
United Arab Emirates 0 43 66 03 86
United Kingdom 0 84 53 67 08 12
USA 1-866 247-8758
. . . . . (toll free)

Please address any questions about DSL access and VoIP access to the respective service provider.

Please have your record of purchase ready when calling.

Replacement or repair services are not offered in countries where our product is not sold by authorised dealers.

Authorisation

This device is intended for analogue phone lines in your network.

Voice over IP telephony is possible with an additional modem via the LAN interface.

Country-specific requirements have been taken into consideration.

We, Siemens Home and Office Communication Devices GmbH & Co. KG, declare that this device meets the essential requirements and other relevant regulations laid down in Directive 1999/5/EC.

A copy of the 1999/5/EC Declaration of Conformity is available at this Internet address: http://www.siemens.com/gigasetdocs.

CE 0682

Specifications

Recommended batteries

(Valid at the time of going to press)

Nickel-metal-hydride (NiMH):

- Sanyo Twicell 650
- Sanyo Twicell 700
- Panasonic 700 mAh "for DECT"
- GP 700 mAh
- Yuasa Technology AAA Phone 700
- VARTA Phone Power AAA 700 mAh
- GP 850 mAh
- Sanyo NiMH 800
- Yuasa Technology AAA 800

The handset is supplied with two recommended batteries.

Handset operating times/charging times

The following information relates to batteries with a capacity of 650 mAh.

Standby time	around 170 hours (7 days)
Talktime	around 13 hours
Charging time	around 6 hours

The operating and charging times apply only when using the recommended batteries.

Please note:
When the display backlight is switched on, the standby time of the handset is reduced to around 30 hours.

Base station power consumption

Depending on current status, around 2.5 W.

General specifications

Interfaces	Fixed network, Ethernet
No. of channels	60 duplex channels
Radio frequency-range	1880–1900 MHz
Duplex method	Time multiplex, 10 ms frame length
Channel grid	1728 kHz
Bit rate	1152 kbit/s
Modulation	GFSK
Language code	32 kbit/s
Transmission power	10 mW, average power per channel
Range	up to 300 m outdoors, up to 50 m in buildings
Base station power supply	230 V ~/50 Hz
Environmental conditions in operation	+5 °C to +45 °C; 20% to 75% humidity
Dialling mode	DTMF (touch tone dialling)
Flash time	250 ms
Codecs	G711, G726, G729AB with VAD/CNG
Quality of Service	TOS, DiffServ
Protocols	DECT, GAP, SIP, RTP, DHCP, NAT Traversal (STUN), HTTP

Symbols

This section explains the meaning of certain symbols and typographical conventions that are used in this user guide.

Copy Entry / **Copy List** (example)
Select one of the two specified menu functions.

Enter digits or letters.

Save
The display keys' current functions are shown reverse highlighted in the bottom display line. Press the display key below to launch the function.

Press the control key at the top or bottom: scroll up or down.

Press the control key on the right or left: e. g. select setting.

/ 0 + / * etc.
Press the matching key on the handset.

Example of a menu input

The steps you need to perform are shown in abbreviated form in the user guide. This is illustrated below using the example of "Setting the contrast for the display". The things you have to do are explained in the boxes.

→ Settings → Display

- With the handset in idle status, press on the right of the control key to open the main menu.
- Use the control key to select the Settings line – by pressing the control key repeatedly up or down until the menu function is selected.
- Press the display key OK to confirm the selection.

The Settings submenu is displayed.

- Press up or down on the control key repeatedly until the Display menu function is selected.
- Press the display key OK to confirm the selection.

Contrast Select and press OK.

- Press the control key at the bottom until the Contrast menu function is selected.
- Press the display key OK to confirm the selection.

Select contrast.

- Press on the right or left of the control key to set the contrast.

Save Press the display key.

- Press the display key Save to save the setting.

Press and **hold** (idle status).

- Press and hold the end call key until the handset returns to idle status.

Example: multiple line input

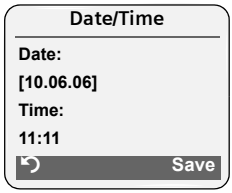
In many situations you can change settings or enter data in several lines of a display.

In this user guide symbols are used to guide you step by step through multiple line input. This is illustrated below using the example of "Setting the date and time". The things you have to do are explained in the boxes.

To change the time, open the input field with:

→ Settings → Date/Time

You will see the following display (example):



Date:
Enter day, month and year in 6-digit format.

The second line is marked with [ ] to show it is active.

- Enter the date using the digit keys.

Time:
Enter hours/minutes in 4-digits format.

- Press the key.

The fourth line is marked with [ ] to show it is active.

- Enter the date using the digit keys.

▶ Save the changes.

▶ Press the display key **Save**.
▶ Then press and **hold** the key.
The handset switches to idle status.

Writing and editing text

The following rules apply when writing a text:

- Control the cursor with ◁ ▷ △ ▽.
- Characters are inserted on the left of the cursor.
- Press the star key * to show the table of special characters.
- The first letter of the name of directory entries is automatically capitalised, followed by lower case letters.

Entering special characters

▶ Press the star key *.

A table is opened containing all the special characters. The cursor is on the character "." (full stop).

␣	_	!	?	@	,	'	"	¤
(	)	;	:	.	-	+	&	%
*	=	<	>	/	€	£	$	¥
[	]	§	↵	\	~	^	¿	¡
{	}	#	|					

▶ Navigate to the required character with the control key ▽, ▷. Example: To select @, press ▽ four times and ▷ twice.

▶ Press the display key **Insert**. The character is inserted into the text.

Pressing ↩ again closes the table without inserting a character

Writing a text/name (without predictive text)

Press and **hold** the hash key # to switch from "Abc" mode to "123" and from "123" to "abc" and from "abc" to "Abc" (upper case: 1st letter upper case, all others lower case). Press the hash key # **before** entering the letter.

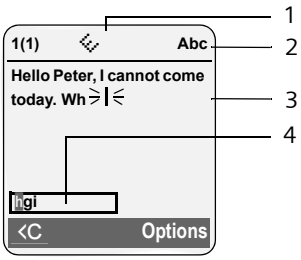
The following applies when writing an SMS/Messenger message:

- The display shows whether upper case, lower case or digits is selected. "Abc", "abc" or "123" appears at the top right of the display.
- When you press and **hold** a key, the characters of the corresponding key are displayed in the **bottom display line** and marked one after another. When you release the key, the highlighted character is inserted into the input field.

Writing SMS (with predictive text)

EATONI predictive text helps you when you are writing SMS messages.

Each key between 0 + and 9 wxyz is assigned several letters and characters (see special characters, page 112). These appear in a selection line immediately under the text panel (over the display keys) as soon as you press a key. The letter you are most likely looking for is shown in reversed highlights and is at the beginning of the selection line. It is copied into the text panel.



1 EATONI is activated
2 Upper/lower case or digits
3 SMS text
4 Selection line

If this letter is the one you want, confirm it by pressing the next key. If it does not match the one you want, press the hash key # **briefly** until the letter you are looking for is reverse highlighted in the display line and then transferred to the text field.

If you press and **hold** the hash key # you switch from "Abc" mode to "123" and from "123" to "abc" and from "abc" to "Abc".

Activating/deactivating predictive text

▶ You are writing an SMS (page 40) or a Messenger message (page 57).

Options — Press the display key.

Predictive Text — Select and press OK (☑ = on).

Press the end call key **briefly** to return to the text field. Enter the text.

Setting input language

▶ You are writing an SMS (page 40) or a Messenger message (page 57).

Options — Press the display key.

Select Language — Select and press OK.

Select input language and press OK.

Press the end call key **briefly** twice to return to the text panel.

The input language setting only applies to the current SMS.

Order of directory entries

The directory entries are usually sorted in alphabetical order. Spaces and digits take first priority. The sort order is as follows:

1. Space
2. Digits (0–9)
3. Letters (alphabetical)
4. Other characters

To get round the alphabetical order of the entries, insert a space or a digit in front of the name. These entries will then move to the beginning of the directory. Names that you have prefixed with a star will move to the end of the directory.

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www.siemens.com/gigasetcustomercare

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Version 2.1, February 1999

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

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free library to free software only, so we use the Lesser General Public License.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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All accessories and batteries are available from your phone retailer.

Only use original accessories. This will avoid possible health risks and damage to property, and also ensure that all the relevant regulations are complied with.

Glossary

A

ADSL
Asymmetric Digital Subscriber Line
Special form of **DSL**.

ALG
Application Layer Gateway
NAT control mechanism of a router.

Many routers with integrated NAT use ALG. ALG lets the data packets in a VoIP connection pass and adds the public IP address of the secure private network.

The router's ALG should be deactivated if the VoIP provider offers a STUN server or an outbound proxy.

See also: **Firewall**, **NAT**, **Outbound proxy**, **STUN**.

Authentication
Restriction of access to a network/service by use of a password to log in.

Automatic ringback
See **Ringback when the number is busy**.

B

Block dialling
Enter the complete phone number, and correct it if necessary. Then pick up the receiver or press the handsfree key to dial the phone number.

Broadband Internet access
See **DSL**.

Buddy
Subscriber with whom you exchange brief messages on the Internet in real time (chatting).

See also: **Instant messaging**.

C

Call forwarding
CF
Automatic forwarding of a call to a different telephone number. There are three kinds of call forwarding:

– CFU, Call Forwarding Unconditional
– CFB, Call Forwarding Busy
– CFNR, Call Forwarding No Reply

Call waiting
CW
VoIP provider feature. A beep during a call indicates that another caller is waiting. You can accept or reject the second call. You can activate/deactivate the feature.

Chatting
Form of communication on the Internet. During a chat, brief messages are exchanged between the communicating parties in real time. Chatting in this sense is understood to be a written form of communication.

Client
Application that requests a service from a server.

Codec
Coder/decoder
Codec is a procedure that digitises and compresses analogue voice before it is sent via the Internet and decodes – i.e.translates into analogue voice – digital data when voice packets are received. There are different codecs that vary, for instance, according to the level of compression.

Both parties involved in the telephone connection (caller/sender and recipient) must use the same codec. This is negotiated between the sender and the recipient when establishing a connection.

The choice of codec is a compromise between voice quality, transmission speed and the necessary bandwidth. A high level of compression, for example, means that the bandwidth

required for each voice connection is low. However, it also means that the time needed to compress/decompress the data is greater, which increases execution time for data in the network and thus impairs voice quality. The time required increases the delay between the sender speaking and the recipient hearing what has been said.

Consultation call

You are making a call. With a consultation call, you interrupt the conversation briefly to establish a connection to another participant. If you terminate the connection to this participant immediately, then this was an enquiry call. If you switch to and fro between the first and second participants, it is called **Toggling**.

D

DHCP

Dynamic Host Configuration Protocol

Internet protocol which handles the automatic assignment of **IP addresses** to **Network subscribers**. The protocol is made available in the network by a server. A DHCP server can e.g. be a router.

The phone contains a DHCP client. A router that contains a DHCP server can assign the IP addresses for the phone automatically from a defined address block. This dynamic assignment means that several **Network subscribers** can share one IP address, although they use it alternately and not simultaneously.

With some routers you can specify that the IP address for the phone is never changed.

Displayed name

VoIP provider feature. You can specify any name that is to be shown to the other party call instead of your phone number.

DMZ (Demilitarised Zone)

DMZ describes a part of a network that is outside the firewall.

A DMZ is set up, as it were, between a network you want to protect (e.g. a LAN) and a non-secure network (e.g. the Internet). A DMZ permits unrestricted access from the Internet to only one or a few network components, while the other network components remain secure behind the firewall.

DNS

Domain Name System

Hierarchical system that permits the assignment of **IP addresses** to **Domain names** that are easier to note. This assignment has to be managed by a local DNS server in each (W)LAN. The local DNS server determines the IP address, if necessary by enquiring of superordinate DNS servers and other local DNS servers in the Internet.

You can specify the IP address of the primary/secondary DNS server.

See also: **DynDNS**.

Domain name

Name of one (of several) Web server on the Internet (e.g. Siemens Home) The domain name is assigned to the relevant IP address by DNS.

DSCP

Differentiated Service Code Point

See **Quality of Service (QoS)**.

DSL

Digital Subscriber Line

Data transfer technology which allows Internet access at e.g. **1.5 Mbps** over conventional phone lines. Requirements: DSL modem and the appropriate service offered by the Internet provider.

DSLAM

Digital Subscriber Line Access Multiplexer

The DSLAM is a switch cabinet in an exchange at which all subscriber connectors converge.

DTMF
Dual Tone Multi-Frequency
Another description for dual tone multi-frequency dialling (DTMF).

Dynamic IP address
A dynamic IP address is assigned to a network component automatically via **DHCP**. The dynamic IP address for a network component can change every time it registers or at certain time intervals.
See also: **Static IP address**

DynDNS
Dynamic DNS
Domain names and IP addresses are realised via **DNS**. For **Dynamic IP addresses** this service is now enhanced with so-called Dynamic DNS (DynDNS). This permits the use of a network component with a changing IP address as a **Server** on the **Internet**. DynDNS ensures that a service can always be addressed on the Internet under the same **Domain name** irrespective of the current IP address.

E

ECT
Explicit Call Transfer
Participant A calls Participant B. He puts the connection on hold and calls Participant C. Rather than connect everyone in a three-party conference, A now transfers Participant B to C and hangs up.

EEPROM
Electrically Eraseable Programmable Read Only Memory
Your phone's storage chip with fixed data (e.g. user-specific device settings made at the factory) and automatically saved data (e.g. c alls list entries).

Ethernet network
Wired **LAN**.

F

Firewall
You can use a firewall to protect your network against unauthorised external access. This involves combining various measures and technologies (hard and/or software) to control the flow of data between a private network you wish to protect and an unprotected network (e. g. the Internet).
See also: **NAT**.

Firmware
Device software in which basic information is saved for the functioning of a device. A new version of the firmware can be loaded into the device's memory (firmware update) to correct errors or update the device software.

Flat rate
System of billing for an **Internet** connection. The Internet provider charges a set monthly fee. There are no additional charges for the duration of the connection or number of connections.

Fragmentation
Data packets that are too big are split into smaller packets (fragments) before they are transferred. They are put together again when they reach the recipient (defragmented).

Full duplex
Data transmission mode in which data can be sent and received at the same time.

G

G.711 a law, G.711 µ law

Standard for a **Codec**.

G.711 delivers a very good voice quality that corresponds to that in the ISDN fixed network. As there is little compression, the necessary bandwidth is around 64 Kbit/s per voice connection, but the delay caused by coding/decoding is only 0.125 ms.

"a law" describes the European standard and "µ law" describes the North American/Japanese equivalent.

G.726

Standard for a **Codec**.

G.726 delivers a good voice quality. It is inferior to the quality with codec **G.711** but better than with **G.729**.

G.729A/B

Standard for a **Codec**.

The voice quality is rather less with G.729A/B. As a result of the high level of compression, the necessary bandwidth is only around 8 Kbit/s per voice connection, but the delay is around 15 ms.

Gateway

Connects two different **Networks**, e.g. a router as an Internet gateway.

For phone calls from **VoIP** to the telephone network, a gateway has to be connected to the IP network and the telephone network (gateway/VoIP provider). It forwards calls from VoIP to the telephone network as required.

Gateway Provider

See **SIP provider**.

Global IP Address

See **IP address**.

GSM

Global System for Mobile Communication

Originally, European standard for mobile networks. GSM can now be described as a worldwide standard. In the USA and Japan national standards are now more frequently supported than in the past.

H

Headset

Combination of microphone and headphone. A headset makes handsfree talking more comfortable. There are headsets available which are connected to the handset by a cable.

HTTP Proxy

Sever via which the **Network subscribers** can process their Internet traffic.

Hub

Uses one **Infrastructure network** to connect several **Network subscribers**. All data sent to the hub by one network subscriber is forwarded to all network subscribers.

See also: **Gateway**, **Router**.

I

IEEE

Institute of Electrical and Electronics Engineers

International body that defines standards in electronics and electrotechnology, concerned in particular with the standardisation of LAN technology, transmission protocols, data transfer rate and wiring.

Infrastructure network

Network with central structure: all **Network subscribers** communicate via a central **Router**.

Instant messaging

(German: immediate exchange of messages)

Service that uses a client program to allow chatting in real time, i.e. to send brief messages to other subscribers on the Internet.

Internet

Global **WAN**. A series of protocols have been defined for exchanging data, known by the name TCP/IP.

Every **Network subscribers** is identifiable via its **IP address**. **DNS** assigns a **Domain name** to the **IP address**.

Important services on the Internet include the World Wide Web (WWW), e-mail, file transfer and discussion forums.

Internet Service Provider

Enables access to the Internet for a fee.

IP (Internet Protocol)

TCP/IP protocol on the **Internet**. IP is responsible for addressing parties in a **Network** using **IP addresses** and routes data from the sender to the recipient. IP determines the paths (routing) along which the data packets travel.

IP address

A unique address for a network component within a network on the basis of the TCP/IP protocols (e.g. LAN, Internet). On the **Internet**, domain names are usually assigned instead of IP addresses. **DNS** assigns the corresponding IP address to the domain name.

The IP address has four parts (decimal numbers between 0 and 255) separated by full stops (e.g. 230.94.233.2).

The IP address is made up of the network number and the number of the **Network subscribers** (e.g. phone). Depending on the Subnet mask the front one, two or three parts make up the network number and the rest of the IP address addresses the network component. The network number of all the components in any one network must be identical.

IP addresses can be assigned automatically with DHCP (dynamic IP addresses) or manually (static IP addresses).

See also: **DHCP**.

IP pool range

Range of IP addresses that the DHCP server can use to assign dynamic IP addresses.

L

LAN

Local Area Network

Network with a restricted physical range. A LAN can be wireless (WLAN) and/or wired.

Local IP Address

The local or private IP address is the address for a network component in the local network (LAN). The network operator can assign any address he or she wants. Devices that act as a link from a local network to the Internet (gateway or router) have a public and a private IP address.

See also **IP address**.

Local SIP Port

See **SIP port/Local SIP port**.

M

MAC address

Media Access Control Address

Hardware address by means of which each network device (e.g. network card, switch, phone) can be uniquely identified worldwide. It is composed of six parts (hexadecimal numbers), separated by a "-" (e.g. 00-90-65-44-00-3A).

The MAC address is assigned by the manufacturer and cannot be changed.

Mbps

Million bits per second

Unit of the transmission speed in a network.

MRU

Maximum Receive Unit

Defines the maximum user data volume within a data packet.

MTU

Maximum Transmission Unit

Defines the maximum length of a data packet that can be carried over the network at a time.

Music on hold

Music that is played while you are **Consultation call** or **Toggling**. The waiting participant hears music while on hold.

N

NAT

Network Address Translation

Method for converting (private) **IP addresses** to one or more (public) IP addresses. NAT enables the IP addresses of **Network subscribers** (e.g. VoIP telephones) in a **LAN** to be concealed behind a shared IP address for the **Router** on the **Internet**.

VoIP telephones behind a NAT router cannot be reached by VoIP servers (on account of the private IP address). In order to "get around" NAT, it is possible to use (alternatively) **ALG** in the router, **STUN** in the VoIP telephone, or for the VoIP provider to use an **Outbound proxy**.

If an outbound proxy is made available you must allow for this in the VoIP settings for your phone.

Network

Group of devices. Devices can be connected in either wired or wireless mode.

Networks can also differ in range and structure:

- Range: local networks (**LAN**) or wide-area networks (**WAN**)
- Structure: **Infrastructure network** or ad-hoc network

Network subscribers

Devices and computers that are connected to each other in a network, e.g. servers, PCs and phones.

O

Outbound proxy

Alternative NAT control mechanism to STUN and ALG.

Outbound proxies are implemented by the VoIP provider in Firewall/NAT environments as an alternative to **SIP proxy server**. They control data traffic through the firewall.

Outbound proxy and STUN servers should not be used simultaneously.

See also: **STUN** and **NAT**.

P

PIN

Personal Identification Number

Protects against unauthorised use. When the PIN is activated a number combination has to be entered in order to access a protected area.

You can protect your base station configuration data with a system PIN (4-digit number combination).

Port

Data is exchanged between two applications in a **Network** via a port.

Port forwarding

The Internet gateway (e.g. your router) forwards data packets from the **Internet** that are directed to a certain **Port** to the port concerned. This allows servers in the **LAN** to offer services on the Internet without you needing a public IP address.

Port number

Indicates a specific application of a **Network subscribers**. Depending on the setting in the **LAN**, the port number is permanently assigned or else it is newly assigned with each access.

The combination of **IP address**/**Port** number uniquely identifies the recipient or sender of a data packet within a network.

Pre-dialling
See **Block dialling**.

Private IP Address
See **Public IP address**.

Protocol
Describes the agreements for communicating within a **Network**. It contains rules for opening, administering and closing a connection, about data formats, time frames and possible error handling.

Proxy/Proxy server
Computer program that controls the exchange of data between **Client** and **Server** in computer networks. If the phone sends a query to the VoIP server, the proxy acts as a server towards the phone and as a client towards the server. A proxy is addressed via **IP address**/**Domain namen** and **Port**.

Public IP address
The public IP address is the address for a network component on the Internet. It is assigned by the Internet Service Provider. Devices that act as a link from a local network to the Internet (gateway, router) have a public and a local IP address.

See also: **IP address**, **NAT**

Q

Quality of Service (QoS)
Describes the Quality of Service in communication networks. Differentiations are made between various Quality of Service classes.

QoS influences the flow of data packets on the Internet e. g. by prioritising data packets, bandwidth reservation and packet optimisation.

In VoIP networks, QoS influences the voice quality. If the whole infrastructure (router, network server etc.) has QoS, the voice quality is better, i. e. fewer delays, less echoing, less crackling.

R

RAM
Random Access Memory
Memory in which you have reading and storage rights. Items such as melodies and screen pictures are saved in the RAM after being loaded onto the phone via the Web configurator.

Registrar
The registrar manages the **Network subscribers**'s current IP addresses. When you register with your VoIP provider, your current IP address is saved on the registrar. This means you can also be reached when on the move.

Ringback when the call is not answered
= CCNR (Completion of Calls on No Reply). If a participant does not respond when called, a caller can arrange an automatic ringback. As soon as the destination phone has completed a call and is free again the caller is rung back. This feature must be supported by the exchange. The ringback request is automatically cancelled after about 2 hours (depending on the VoIP provider).

Ringback when the number is busy
= CCBS (Completion of Calls to Busy Subscriber). If a caller hears the busy tone, he or she can activate the ringback function. As soon as the connection is free the caller is rung back. As soon as the caller lifts his receiver the connection is made automatically.

ROM
Read Only Memory
A type of memory that can only be read, as opposed to RAM which can be both read and written.

Router
Routes data packets within a network and between different networks via the quickest route. Can connect **Ethernet networks** and WLAN. Can be a **Gateway** to the Internet.

Routing

Routing is the transmission of data packets to another subscriber in your network. On its way to the recipient, the data packet is sent from one router to the next until it reaches its destination.

If data packets were not forwarded in this way, a network like the Internet would not be possible. Routing connects the individual networks to this global system.

A router is a part of this system; it transmits data packets both within a local network and from one network to the next. Transmission of data from one network to another is performed on the basis of a common protocol.

RTP

Realtime Transport Protocol

Global standard for transferring audio and video data. Often used in conjunction with UDP. In this case, RTP packets are embedded in UDP packets.

RTP port

(Local) **Port** which is used to send and receive voice data packets for VoIP.

S

Server

Provides a service to other **Network subscribers** (**Clients**). The term can indicate a computer/PC or an application. A server is addressed via **IP address**/**Domain name** and **Port**.

SIP (Session Initiation Protocol)

Signalling protocol independent of voice communication. Used for establishing and ending a call. It is also possible to define parameters for voice transmission.

SIP address

See **URI**.

SIP port/Local SIP port

(Local) **Port** which is used to send and receive SIP signalling data for VoIP.

SIP provider

See **VoIP provider**.

SIP proxy server

IP address of your VoIP provider's gateway server.

Static IP address

A static IP address is assigned to a network component manually during network configuration. Unlike a **Dynamic IP address**, a static (fixed) IP address never changes.

STUN

Simple Transversal of UDP over NAT

NAT control mechanism.

STUN is a data protocol for VoIP telephones. STUN replaces the private IP address in the data packets of the VoIP telephone with the public address of the secure private network. To control data transfer, a STUN server is also required on the Internet. STUN cannot be implemented with symmetric NATs.

See also: **ALG**, **Firewall**, **NAT**, **Outbound proxy**.

Subnet

Segment of a **Network**.

Subnet mask

IP address consist of a fixed network number and a variable subscriber number. The network number is identical for all **Network subscribers**. The proportion of the IP address made up of the network number is determined in the subnet mask. For the subnet mask 255.255.255.0, for example, the first three parts of the IP address are the network number and the last part is the subscriber number.

Symmetric NAT

A symmetric NAT assigns different external IP addresses and port numbers to the same internal IP addresses and port numbers – depending on the external target address.

T

TCP
Transmission Control Protocol
Transport protocol. Session-based transmission protocol: it sets up, monitors and terminates a connection between sender and recipient for transporting data.

TLS
Transport Layer Security
Protocol for encrypting data transmissions on the Internet. TLS is a superordinated **Transport protocol**.

Toggling
Toggling allows you to switch between two callers or between a conference call and an individual caller without allowing the waiting caller to listen in.

Transmission rate
Speed at which data is transmitted in the **WAN** or **LAN**. The transmission rate is measured in data units per unit of time (Mbit/s).

Transport protocol
Controls data transport between communication partners (applications).
See also: **UDP**, **TCP**, **TLS**.

U

UDP
User Datagram Protocol
Transport protocol. Unlike **TCP**, **UDP** is a non session-based protocol. It does not establish a fixed connection. The data packets (datagrams) are sent as broadcast. The recipient is solely responsible for making sure the data is received. The sender is not notified about whether it is received.

URI
Uniform Resource Identifier
Character string used to identify resources (e.g. e-mail recipient, http://siemens.com, files).
On the **Internet** URIs are used as a uniform identification for resources. URIs are also described as an SIP address.
URIs can be entered in the phone as a number. By dialling a URI you can call an Internet subscriber with VoIP equipment.

URL
Universal Resource Locator
Globally unique address of a Domain on the **Internet**.
A URL is a subtype of **URI**. URLs identify a resource by its location in the **Internet**. For historical reasons the term is often used as a synonym for URI.

User ID
See **User identification**.

User identification
Name/number combination for access e.g. to your VoIP account.

V

Voice codec
See **Codec**.

VoIP
Voice over Internet Protocol
Telephone calls are no longer placed and transmitted over the telephone network but over the **Internet** (or other IP networks).

VoIP provider
A VoIP, SIP or **Gateway Provider** is an Internet service provider that provides a **Gateway** for Internet telephony. As the phone works with the SIP standard, your provider must support the SIP standard.
The provider routes calls from VoIP to the telephone network (analogue, ISDN and mobile radio) and vice versa.

W

WAN
Wide Area Network
Wide-area network that is unrestricted in terms of area (e.g. **Internet**).

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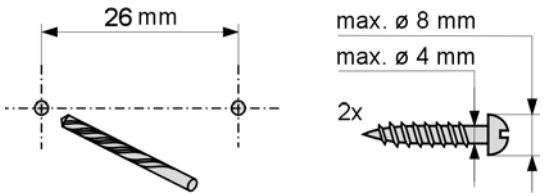
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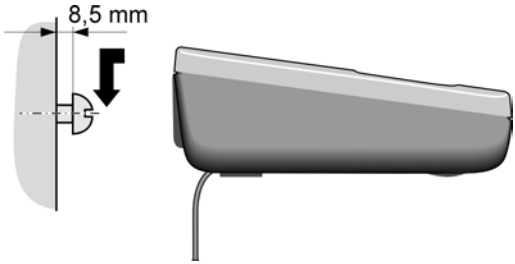
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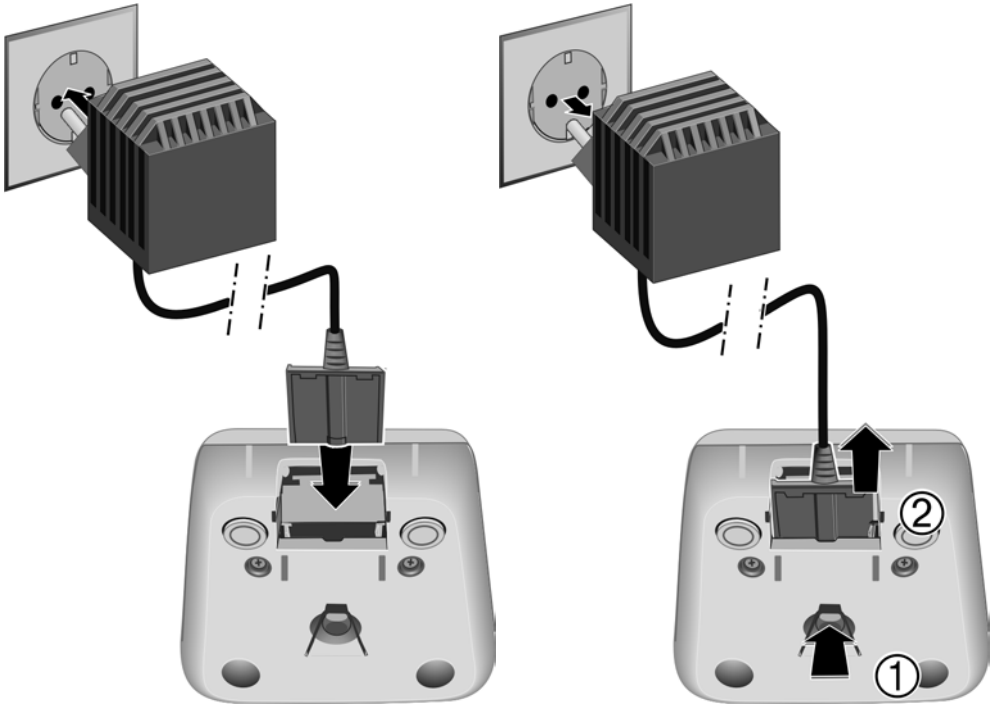
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