



THURAYA

Ascom 21 User Manual

total mobile solution



Satellite Phone

with **GSM + GPS**

ascom



Overview





Safety Instructions

General

The satellite mobile phone is used for transmitting voice, data and fax via the GSM-900 and the Thuraya satellite network and to utilize the GPS facilities.

Handle your mobile phone with care and keep it dry.

Avoid exposing your mobile phone to extreme hot or cold temperatures.

Avoid placing your mobile phone close to cigarettes, open flames or any source of heat.

Only use a soft damp cloth to clean your mobile phone.

To avoid impaired performance, please ensure your mobile phone's antenna is not bent or damaged.



In a car

It is not recommended to use your mobile phone while driving a vehicle due to traffic safety reasons. When using a mobile phone, park the vehicle before telephoning. Do not place objects, including either permanently installed or portable mobile phone, in the area above the airbag or in the airbag deployment area. If an in-vehicle mobile phone is improperly installed and the airbag inflates, it could result in serious injury.

Do not transport or store flammable gas, liquid or explosives in the passenger compartment of a vehicle which contains your mobile phone and accessories.



In the vicinity of blasting work and in explosive environments

Never use the mobile phone where blasting work is in progress. Observe all restrictions and follow any regulations or rules.

Areas with a potentially explosive environment are often, but not always, clearly marked. Do not use the mobile phone while at a filling station. Do not use near fuel or chemicals.



In aircraft

Turn off your mobile phone before boarding any aircraft. Do not use it on the ground without crew permission.



In hospitals

Follow any regulations or rules. Turn off your mobile phone when near medical equipment.



Electronic devices

Certain electronic equipment may not be shielded against the RF signals emitted by your mobile phone.



Qualified service

Do not attempt to disassemble your mobile phone. A broken warranty seal will void the warranty. The mobile phone does not contain consumer serviceable components. Only qualified service personnel may install or repair equipment.



Batteries and accessories

Use approved batteries and accessories only. Use of non-approved accessories may result in loss of performance, damage to the mobile phone, fire, electric shock or injury.



Connecting devices

Never connect incompatible products. When connecting the mobile phone to any other device, read its user's guide for detailed safety instructions.



Antenna and SAT reception

Do not remove the antenna yourself. If your mobile phone's antenna becomes damaged, please take it to a certified service partner.

Only use an antenna that has been specifically designed for your mobile phone.

Unauthorised antennas, modifications or attachments could damage the mobile

phone and may violate the relevant regulations, causing loss of performance and radio frequency (RF) energy above the recommended limits.

Do not hold the antenna when the mobile phone is in use. Holding the antenna affects call quality, may cause the mobile phone to operate at a higher power level than needed and shortens talk and standby times.

Hold the mobile phone

- **in GSM mode** as you would any other telephone. While speaking directly into the microphone, angle the antenna in a direction up and over your shoulder.
- **in SAT mode:** Extend the antenna and point it in the assumed direction of the satellite. Making and receiving a call is only possible outside houses or cars and with no obstructions between the mobile phone and satellite.



Emergency calls

To make or receive calls, the mobile phone must be turned on and in a service area with adequate radio signal strength. Emergency calls may not be possible on all mobile phone networks or when certain network services and/or mobile phone features are in use. Check with your local service provider.

► With pacemakers and hearing aids



Pacemakers

The various brands and models of cardiac pacemakers available exhibit a wide range of immunity levels to radio signals. Therefore, people who wear a cardiac pacemaker and who want to use a mobile phone should seek the advice of their cardiologist. If, as a pacemaker user, you are still concerned about interaction with mobile phones, we suggest you

- maintain a distance of 15 cm (6 inches) between the mobile phone and your pacemaker
- do not hold your mobile phone to your chest, e.g., do not carry the mobile phone in a breast pocket
- when using the mobile phone, place it to your ear opposite the pacemaker
- refer to your pacemaker product literature for information on your particular device.

If you have any reason to suspect that interference is taking place, turn off your mobile phone immediately!



Hearing aids

Most new models of hearing aids are immune to radio frequency interference from mobile phones that are more than 2 metres away. Some are also immune to interference when the mobile phone is brought up to the same hearing-aided ear. Many types of **older** hearing aids may be susceptible to interference, making it very difficult to use a mobile phone. Should interference be experienced, there are things that can be done which may improve the situation:

- if possible use the mobile phone with your non-aided ear
- use a hands-free accessory.



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Note:

Where code numbers are given in brackets, they provide 'menu quick access' (see page 7)

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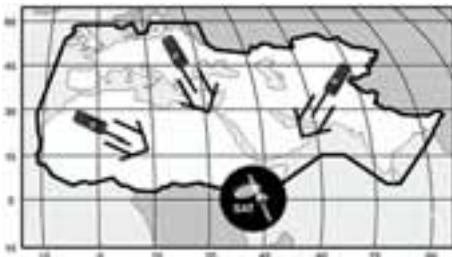
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►► Introduction

Your **ascom 21** is a new generation mobile phone combining satellite (SAT), GSM-900 (Global System for Mobile communication at 900 MHz) and GPS (Global Positioning System) technologies. This provides you with the advantages of three technologies in one single mobile phone. Its operation in satellite mode is virtually identical to that of GSM mode. Operations that you may be familiar with using a typical GSM mobile phones will work in a very similar manner when you are using the Thuraya satellite service. There are, however, a few specific differences between GSM and Satellite operation. The purpose of this section is to make you aware of these differences.

When the mobile phone is idle on the satellite system and has good signal strength, calls can be received without the need of extending the antenna. However, **when a satellite call is answered or initiated the antenna must be pulled out entirely.** Watch the signal strength indicator on the display and move the mobile phone for best connection quality. Satellite calls require the mobile phone to have a clear open surroundings with no obstruction. The presence of obstacles such as buildings, trees or mountains between the mobile phone and the satellite will generally prevent communication. To maintain good call quality, it is also important that the mobile phone's antenna be pointed roughly in the direction of the satellite:



High Power Alerting

The Thuraya system features a 'High Power Alerting' capability that allows you to be notified of incoming calls even when your mobile phone has poor signal coverage. When the mobile phone receives a High Power Alerting signal it will alert you with an 'early ring' and a special display message (see page 9). To answer the call, you must immediately extend the antenna and move the mobile phone into a position that has a clear 'line of sight' to the satellite. When this has occurred the mobile phone display will change, prompting you to answer the call and proceed with conversation. If the call is not answered promptly after the High Power Alerting signal is received, the calling party will be diverted to voice mail and/or an announcement stating that you are not available to answer.

Just like GSM, the satellite coverage area is divided into many different service regions. The mobile phone searches the network automatically (see page 42) and determines which service region is active by registering its presence with the Thuraya system. If the mobile phone has not been able to update this registration due to a weak signal, the registration information will become out of date or 'stale'. This is indicated on the display by a blinking SAT icon in the left of the signal strength indicator. This condition will clear automatically once signal conditions improve and a call is made or a period of time elapses. You also have the option to speed up that procedure by manually having the mobile phone register with the Thuraya system. This is accomplished with the function **SAT Registration** in the mobile phone's menu (see page 43). Make sure you have good SAT signal strength before starting this operation.

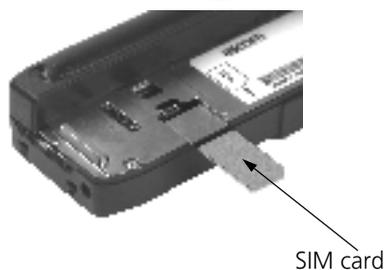
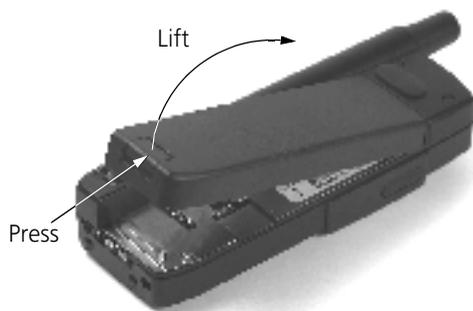
▶▶ Initial steps

▶ Inserting the SIM card

The SIM card (Subscriber Identity Module) is the 'plug' to the network and provides the mobile phone number, memory for storing phone numbers and short text messages (SMS).

To insert the SIM card:

1. Switch off the mobile phone before removing the battery and inserting the SIM card
2. Lift the battery from the back of the mobile phone and insert the SIM card as shown in the pictures below

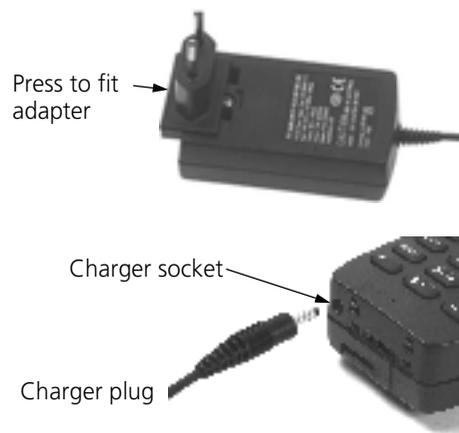


▶ Connect the charger and charge the battery

You should charge the battery supplied with the mobile phone as soon as possible to obtain full battery charge.

To charge the battery:

1. Fit the country specific adapter into the charger
2. Plug the charger plug into the charger socket
3. Connect the charger to an AC source



While the battery is charging you see the  symbol changing to  cyclically. The battery is fully charged after 2 hours. The charger stops charging automatically when the battery is full. As long as the charger is not disconnected it restarts charging after a while to keep the battery fully charged.

Further information on using charger and battery is given on page 57.

You may still use the mobile phone while charging the battery.

The internal clock for time, date (see page 36) and alarms (see page 47) will still keep on running for about one hour if neither the battery nor the charger is connected, but no alarm will sound unless a charged battery is connected.

► Switch the mobile phone on/off

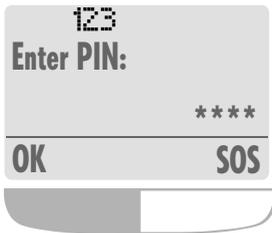
Press  for 2 seconds to switch the mobile phone on.

Press  for 2 seconds again to switch the mobile phone off.

► Enter your PIN

The PIN (Personal Identification Number; 4 to 8 digits) is initially supplied together with the SIM card by your service provider and can be changed later (see page 31).

1. Enter PIN using keys on keypad.
Each digit entered is displayed as an *
2. Press fox key below **OK** to confirm PIN



Note:

Press  to delete an incorrectly entered digit (digit to left of cursor position). Then enter the correct digit.

► Emergency call (SOS)

Until you have entered the correct PIN, you can make only emergency calls.

To make an emergency call before having entered the PIN:

1. Press fox key below **SOS**
2. Press fox key below **SOS** again
The emergency number is called

or:

1. Enter a specific emergency number
2. Press 

The softkey **SOS** is available even

- when the SIM card in your mobile phone is not valid
- when you have a valid SIM card but no roaming with the selected service provider is possible.

After the PIN is accepted, you have to make an emergency call in the same way as you make a 'normal' call.

When making an emergency call, remember to give your name and mobile phone number as well as the location of the emergency, as accurately as possible. Remember that your mobile phone may be the only means of communication at the scene of an accident do not cut off the call until given permission to do so.

Note:

- Emergency calls may not be possible on all cellular telephone networks or when certain network services are in use.
- In uneven terrain or close to large buildings, the operating range can be limited, which affects the connection.
- With some service providers it may not be possible to make an emergency call if no SIM card is inserted in the mobile phone.

Emergency numbers

Emergency numbers normally are

- in GSM mode: 112
- in SAT mode: 112, 911, 999.

Note:

Check with your network service provider for local emergency numbers in your area.

► Lock/unlock the keypad

By locking the keypad you disable the keys so that a number can not accidentally be dialled, e.g. while the mobile phone is in your pocket or bag.

With the keypad locked, you can still answer incoming calls.

Lock

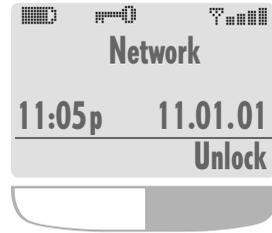
1. Press fox key below **Menu**
2. Press fox key below ▲
(to scroll to **Keypad Lock**)
3. Press **Select**

or:

1. Press fox key below **Menu**
2. Press * within 3 seconds

Unlock

If the keypad is locked, the softkey line shows **Unlock** and in the status line the symbol is displayed:



1. Press fox key below **Unlock**
2. Press * within 3 seconds

►► Display

► Display areas

After you have set up your mobile phone according to the previous section, the display will look similar to this:



The pattern of the display areas is simple:

1. The **status line** shows symbols indicating the operating conditions of the mobile phone.
2. The **main area** shows data relating to calls, menus and their submenus, and displays the editors for the phonebook and SMS messages. In idle mode (stand-by), the network name, time and date are displayed.
3. The **softkey line** operates together with the fox key beneath this line. It provides access to menus and controls navigation (see 'Using the fox key and the menu' on page 6).

The display is organised into three areas; every symbol and every input/output displayed has its own proper place. This helps you to keep control over your 'workspace', even when your circumstances are changing constantly.

► Display symbols

| | | | |
|---|---|---|--|
|  | Battery charge level indicator (4 filling levels). |  | While editing text in upper case letters |
|  | symbol blinking: Battery empty, one minute is left to end an active call at the most |  | While editing text in lower case letters |
|  | Call set up or call in progress |  | Numeric input mode (e.g. phone-book) |
|  | Ringing tone is switched off |  | While writing an SMS: 'Character count-down', starts with '160' |
|  | An alarm is set |  | While sending to and receiving data from an external device (e.g. using the mobile phone as a modem connected to a PC):  : Sending data to PC,  : Receiving data from PC |
|  | An unconditional diversion is activated |  | Mobile Phone operates in GPS (G lobal P osition S ystem) mode. The icon is blinking if the mobile phone loses connection to the GPS |
|  | 1. Keypad is locked 2. Blinking symbol during a call: Depending on the network, the symbol indicates that ciphering (call encryption) is off |  | Signal strength in GSM mode: 4 bars indicate best conditions |
|  | Simplified menu is activated |  | Signal strength in SAT mode. The satellite symbol blinks when SAT registration is no longer up to date. Filling of the right symbol indicates SAT signal strength |
|  | New voice message has arrived |  | Signal strength in High Power Alerting mode (weak receive signal). The satellite symbol is blinking when SAT registration is no longer up to date |
|  | Unread SMS |  | Roaming sign: Displayed when using a network different from your service provider's network |
|  | Read SMS | | |
|  | Saved (draft) SMS | | |
|  | Active call | | |
|  | Call on hold | | |
|  | Waiting call | | |

▶▶ Using the fox key and the menu

In idle mode your mobile phone offers functions and settings which allow you to adapt the mobile phone to your needs. You access these functions through menus and sub-menus by scrolling or by using the appropriate shortcut.

During a call or while you are editing a number or text, the menu system changes and gives access to various functions, depending on the context.

The following section describes the principles of using the menu.

▶ Softkey actions and menu navigation

Softkey actions for function calls and navigation in menus and lists is performed through entries in the softkey line in conjunction with the the fox key below this line.

Depending on the number of softkey actions offered (1 to 3), the fox key changes the number of its available operating zones:



Press fox key on the left side to select the **Names**



Press fox key on the right side to select the **Menu**



Press fox key on the left side to select the left softkey (e.g. to **scroll up** in a list)



Press fox key in the middle to select the middle softkey



Press fox key on the right side to select the right softkey (e.g. to **scroll down** in a list)

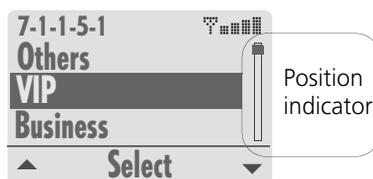


Press fox key anywhere to select a single softkey displayed

Once you have entered the menu, you may also scroll through it by pressing the upper and lower volume key beside the loudspeaker (see page 10).

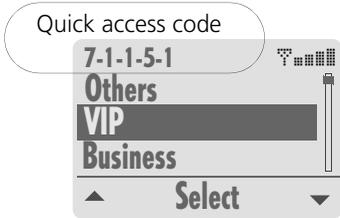
▶ Menu position indicator

Within a menu level the 'position indicator' shows you the position of the entry currently selected:



► Menu navigation using quick access codes

Instead of navigating by means of softkeys, you can alternatively navigate the menu by means of 'quick access codes'. The quick access code in the display tells you the current position in the branch of the menu tree:



To make use of quick access codes for the example above:

Press fox key below **Menu**
Press **7** PQRS **1** Q.O **1** Q.O **5** JKL

Step back one menu level

If you want to continue working with the menu and need to step back one level higher:

Press **C** or **☎**

Exit the menu

If you want to exit the menu system and go back to idle mode:

Press **C** for 2 seconds

► Simplified menu

You may find that you do not want to use the complete menu all the time. In this case, you can switch to the 'simplified menu' which offers access to the most important entries of the standard menu.

To switch to the simplified menu:

Press fox key below **Menu** for 2 seconds
*The **☰** symbol in the display reminds you that the simplified menu is activated*

To switch back to the standard menu:

Press fox key below **Menu** for 2 seconds again

► Notation in this manual

From here on, wherever this manual describes menu navigation by scrolling with **▲** / **▼** and pressing **Select**, this will be presented using the notation

Select **Menu > Settings > Sound & Alert > Ringing > Caller Groups**

instead of a long 9 step presentation like this:

1. Press fox key below **Menu**
2. Scroll to **Settings**
3. Press fox key below **Select**
4. Scroll to **Sound & Alert**
5. Press fox key below **Select**
6. Scroll to **Ringing**
7. Press fox key below **Select**
8. Scroll to **Caller Groups**
9. Press fox key below **Select**

The steps in this example take you to the point at which you can change the setting.

Quick access notation

The **quick access codes** will be written in this manual between brackets like this: (7-1-1-5).

Furthermore you will find the complete list of quick access codes together with the menu tree on page 59.

▶▶ Making and receiving calls

To make calls you have to be logged in to a network and the signal strength must be adequate.

If in SAT mode the SAT icon  is flashing, make sure that the mobile phone has a clear view of the sky so that proper registration can take place.

Note:

For more information about making and receiving calls, see 'Options during a call' on page 17.

▶ Dial using the keypad

To dial a number in the 'traditional' way:

Enter the number via the keypad.

For international calls press  first, until + is displayed.

Then enter the country code without a leading '0'

Press 

Note:

To add a pause in your dialling string you may long press the  key (**p** is displayed to indicate the pause).

End a call

Press 

▶ Receiving a call

When you receive a call this is indicated in several ways:

- You hear the ringing tone (melody and volume according to the current setting)
- The  symbol is displayed
- The calling number is displayed if it is transmitted. If the number is stored in the phonebook, the corresponding name is displayed instead of the number

Incoming calls (examples):



Accept a call

Press 

Reject a call

Press **Reject** or 

Turn ringing off

If you are called in a situation when ringing is disturbing, you have the option to turn the ringing tone off temporarily while the incoming call is being signalled:

Press **Silent**

High Power Alerting

If someone tries to call you in SAT mode, but field strength is insufficient, the call cannot be transmitted. Instead of this you will hear a special ringing melody and the message **'SAT Alerting, Find Improved Reception'** indicated on the display and the High Power Alerting symbol (📶📶📶) is displayed:



In High Power Alerting mode a call cannot be accepted unless the user moves to a better place for SAT signal reception (see "Introduction"), it can only be rejected and the High Power Alerting melody can be silenced.

The call, however, will remain active as long as the caller doesn't end it.

Turn High Power Alerting melody off

Press **Silent**
The High Power Alerting melody is silenced, you can take measures to accept the call (see below)

Reject the call

'Rejecting' the call in this case means that the mobile phone does not try to get a connection any longer.

Press **Reject**
The call is definitely terminated

Measures to accept the call

- Try to find a place for improved reception
- Pull out the mobile phone's antenna
- Point it to the estimated satellite position
- Watch the field strength indicator

As soon as field strength is strong enough the warnings disappear from the display; now you can accept the call as usual

If the call cannot be accepted, it is diverted to your voice mailbox or another phone number if activated.

▶▶ Setting the volumes

You can make volume settings in idle mode and during a call with the left-hand side key of the mobile phone. The settings made with this key apply to

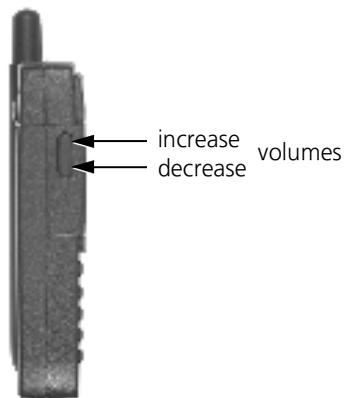
- the ringing volume
- the listening volume
- the listening volume of a connected earset

The volumes can be set within the range of 6 levels and will be retained until the next change.

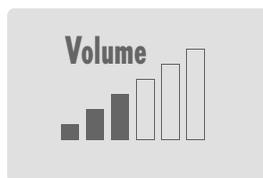
If you want to set the ringing volume **only**, refer to page 44.

To set the volumes:

Press the upper or lower key on the left-hand side of the mobile phone:



With each press of the volume key, the volumes increase or decrease and the current level is displayed in a bar chart:





Phone number lists

There are four different lists which are stored in your mobile phone and which you can use to call phone numbers:

- the phonebook
- the list of dialled numbers,
- the list of received calls
- the list of missed calls

▶▶ Phonebook

The phonebook you can create on your SIM card is a convenient aid to allow you to call people by names instead of numbers.

Only the phonebook entries of the SIM card presently inserted are available.

The number of phonebook entries you can store and the maximum number of characters and digits for each entry depend on the service provider's SIM card.

Once numbers and names have been stored in the phonebook, the mobile phone is able to identify the names of callers (or SMS senders) by means of the phone numbers transmitted. So instead of numbers, the corresponding names are shown in the display when you are called from a phone number which is assigned to a phonebook name.

Moreover, the names from the phonebook entries are found and displayed in the following lists:

- list of dialled numbers
- list of missed calls
- list of received calls.

The phonebook can also be used in all call functions where it is possible to call another number.

You can set up another 'phonebook' for 'fixed dialling', so that only certain numbers can be called (see page 34).

Input sources for phonebook entries

There are different ways to make a new phonebook entry:

1. First enter a number to be dialled and then store the number in the phonebook by pressing **Save**.
2. Open the phonebook first and make a new entry.
3. Store a number from the list of dialled numbers in the phonebook (see page 15).

And, provided that the number was transmitted:

4. The number of an SMS sender while you are reading the SMS (see page 26).
5. A number from the list of missed calls (see page 16).
6. A number from the list of received calls (see page 16).

Phonebook entries from the service provider

Some service providers store service numbers in the phonebook (e.g. hotline numbers); these entries may possibly not be replaced or deleted.

► Make a phonebook entry

To make a new phonebook entry starting from idle mode:

Enter the number to be stored

Press **Save**

The phonebook editor is displayed

Note:

The first entry in the phonebook has always to be made as described above.

or:

Press **Names**

The phonebook is displayed

Press **Options**

Select **Add new**

Enter the phone number

Press **Next**

Enter the name to be assigned to the number

How to enter letters, see 'Character and digit input in text editor mode' on page 58



Press **Save**

The number is saved in the phonebook

Tip:

Store numbers with the international prefix (+) and country code so that they can be used while roaming.

Assign a short dialling number

After you have saved a phone number and name in the phonebook, the mobile phone assigns the entry to a short dialling number from 2 up to a maximum of 255, depending on the SIM card. Short dialling number 1 is automatically assigned to the voice mailbox number (see page 20). The maximum number of phonebook entries is determined by your SIM card.

To change the assignment of a short dialling number to a displayed phonebook entry:

Press **Options**

Select **Short Dialling**

The currently assigned short dialling number is displayed

Accept the number or enter a different number

Press **Save**

Note:

Phonebook entries assigned to a number from 2 to 9 can be dialled with 'one touch dialling', if activated (see page 40).

Assign entry to a caller group

Furthermore you may (but need not) assign the entry to a special 'caller group' to which you can also assign a special ringing tone (see page 45).

You can assign a phonebook entry to one of the following caller groups:

- **VIP**
- **Business**
- **Private**
- **Family**
- **Others**

To assign a phonebook entry to a caller group:

Select **Options > Caller Group**

The list of caller groups is displayed

Scroll to the desired caller group

Press **Select**

► Replace a phonebook entry

In case you are about to add a phonebook entry, but the phonebook memory of your SIM card is full, you are alerted to this and requested to enter the phonebook in order to select an existing entry which will be replaced by the new one. Phonebook entries stored by your service provider may possibly not be replaced.

To replace an existing entry:

Scroll to the entry to be replaced
Press **Replace**

If you don't want to replace an entry:

Press 
The new entry will not be added to the list

► Dial from the phonebook

Dial from the list

Press **Names**
The phonebook is displayed

Select the name to be called

or:

Press the key with the first letter of the name to be dialled as often as indicated by its position on the key

e.g. three times ; the first name in the list beginning with 'L' is displayed

If necessary scroll up or down the list until the desired name is highlighted

Press 

Dial short dialling numbers

In idle mode:

Enter the short dialling number assigned to the phonebook entry (e.g.  )

Press 
The assigned phonebook entry is displayed

Press 

One touch dialling

Phonebook entries assigned to a number from 2 to 9 can be dialled at the press of a single key if 'one touch dialling' is activated

In idle mode:

Press  to  for 2 seconds
The assigned name is displayed, the number is dialled automatically

Note:

One touch dial key  is automatically assigned to your voicemail number after you have activated it (see page 20).

► Check phonebook entries

You can see the complete entry including the phone number and short dialling number if assigned.

To check the data of a phonebook entry:

Press **Names**
The phonebook is displayed
Select the phonebook entry
Press **Options**
Select **Details**
All data of the entry is displayed

You may check free capacity for phonebook entries as described on page 49.

► Send phonebook entry as SMS

You can send a number from the phonebook together with the corresponding name to an SMS recipient:

Press **Names**
The phonebook is displayed
Select the phonebook entry to be sent
Press **Options**
Select **Send As SMS**
The SMS editor is displayed (see page 23) with the phonebook entry to be sent

► Change a phonebook entry

You can edit a complete entry, including the phone number, caller group assignment and short dialling number.

Change a number and/or name

- Press **Names**
The phonebook is displayed
- Select the phonebook entry
- Press **Options**
- Select **Edit**
- Change the number
- Press **Next**
- Change the name (see page 58)
- Press **Save**

Change a short dialling number

- Press **Names**
The phonebook is displayed
- Select the phonebook entry
- Press **Options**
- Select **Short Dialling**
The current setting is displayed
- Change the short dialling number
- Press **Save**

Change a caller group assignment

- Press **Names**
The phonebook is displayed
- Select the phonebook entry
- Press **Options**
- Select **Caller Group**
The list of caller groups is displayed
- Select the caller group

► Delete a phonebook entry

You can delete the complete entry, including the phone number and short dialling number if assigned. Phonebook entries stored by your service provider may possibly not be deleted.

To delete a single phonebook entry

- Press **Names**
The phonebook is displayed
- Scroll to the phonebook entry to be deleted
- Press **Options**
- Select **Delete**
- Press **Delete**

► Delete the phonebook (7-7-1)

If **Fixed Dial** is not activated:

- Select **Menu > Settings > Reset > Phonebook**
- Press **OK**

If **Fixed Dial** is activated:

- Select **Menu > Settings > Reset > Phonebook**
- Enter PIN2
- Press **OK**
- Press **OK**

Note:

Phonebook entries stored by your service provider may possibly not be deleted.

▶▶ List of dialled numbers (2-3)

Your mobile phone stores the last 10 numbers you have dialled.

Note:

In case the number is stored in the phonebook and assigned to a name, the corresponding name is displayed in the list of dialled numbers instead of the number.

▶ See details of a dialled number

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Scroll to the number to be redialled

Press **Options**

Select **Details**

Name (if the corresponding phonebook entry exists), number and dialling time and date are displayed

▶ Redial a number from the list

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Scroll to the number to be redialled

Press **Options**

Select **Call**

Tip: Quick redial

To redial a formerly dialled number you may also use a quick access to the dialled numbers.

To redial the **last** called number:

Press  twice

For 'automatic redial' see page 39.

To redial a **previously** called number

You can select a specific number from the list of dialled numbers and dial it again:

Press 

Scroll to the number to be called

Press 

▶ Store number in the phonebook

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Scroll to the number to be stored

Press **Options**

Select **Save**

The phonebook editor is displayed (see page 12)

▶ Delete a number from the list

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Scroll to the number to be deleted

Press **Options**

Select **Delete**

Press **Delete**

▶ Delete all numbers in the list

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Press **Options**

Select **Clear List**

Press **Clear**

▶ Send as SMS

Select **Menu > Call Register > Dialled Calls**
The list of dialled numbers is displayed, showing the most recently dialled number

Scroll to the number to be sent

Press **Options**

Select **Send As SMS**

The SMS editor is displayed (see page 23)

▶▶ List of missed calls (2-1)/List of received calls (2-2)

There are two more call lists in which numbers are stored and which you can make use of in the very same way as the list of dialled numbers (with the exception of 'quick re-dial'):

- The **list of missed calls** provides numbers of calls that have unsuccessfully tried to call you
- The **list of received calls** provides numbers of calls you have accepted

▶ List of missed calls

If you have missed one call or more, this will be displayed (e.g. **2 Missed Calls**), and the left softkey changes to **List**.

By pressing **List**, you will enter the list of missed calls directly.

After you have entered the list by this way the note and the softkey **List** will be no longer available, unless you miss another call.

Note:

In case a new SMS or a new cell broadcast arrives after the missed call, the SMS or the cell broadcast advise respectively will replace the missed call note.

To enter the list of missed calls, when no new missed call is displayed:

Select **Menu > Call Register > Missed Calls**

▶ List of received calls

To enter the list of received calls:

Select **Menu > Call Register > Received Calls**

Options during a call

Your mobile phone offers a number of options which are only available during a call. You cannot use all of these features at all times, because they vary depending on current circumstances.

Note:

Some supplementary services will be unavailable during satellite calls to other Thuraya mobile phones.

▶▶ Muting/unmuting the microphone

You can switch off the microphone so that the caller is not able to hear what is being said at your end of the line.

To mute the microphone:

Press **Options**
Select **Mute**

To unmute the microphone again:

Press **Unmute**

▶▶ Sending DTMF signals during a call

During a call you can send DTMF (Dual Tone Multi Frequency) signals, even if sending of DTMF tones is not set in advance (see page 38).

By this you can send DTMF tones during a call to a service which accepts only DTMF tones, e.g. in order to enter access codes for listening to an answering machine. After the function is switched on, a DTMF tone is sent with each key press.

The function has to be called for each DTMF tone sequence to be sent.

To send DTMF tones during an active call:

Press **Options**
Select **Send DTMF**

You can now dial control codes for a service that requires DTMF tones

Press **Send**

Note:

To add a pause in your dialling string you may long press the ***** key (**p** is displayed to indicate the pause).

▶▶ Put a call on hold

If you have registered for this function in your contract with your service provider, you can interrupt a call temporarily without shutting down the connection.

To put a call 'on hold':

Press **Options**
Select **Hold**

To return to the call:

Press **Unhold**

▶▶ Read/write SMS messages

You can read or write SMS messages during a call:

- Press **Options**
 Select **Messages**
*The menu items **Write Message** and **List Messages** are displayed*

For details on how to write, send and handle messages see page 23.

▶▶ See duration of the current call

To see the duration of the current call:

- Press **Options**
 Select **Call Duration**
The elapsed time of the current call is displayed
- Press **C** to return to the call display

▶▶ Handling more than one call simultaneously

If you have registered for this function in your contract with your service provider, your mobile phone allows you to handle more than one call simultaneously. You may

- put a call that is in progress on hold, while you make or answer a second call, and then switch between the two calls
- set up a 'conference call' to have a joint conversation with up to five people
- put an individual or a group of conference members on hold while you add other people to the conference call
- put conference members on hold while you talk to someone privately (see 'Connect a private call' on page 19).

If you handle more than one call simultaneously the following symbols show a call's status together with the name from the phonebook or with the number of the call, if transmitted:

-  active call
-  call on hold
-  waiting call

▶ Call Waiting

When you receive a call while you are already in a call, the new call ('waiting call') is announced by a special ringing tone.

To use this feature, you need to switch on 'call waiting' (see page 39).

Accept a waiting call

You can answer the waiting call, which puts the active call on hold:

- Press **Options**
 Select **Accept**

Then you may swap between these active calls (see page 19).

Reject a waiting call

To reject the waiting call:

- Press **Reject**

► Make a new call

During a call you may call a new number. The active call will be put on hold.

Enter the number via the keypad

Press 

or:

Press **Options**
Select **New Call**

Enter the number via the keypad

Press 

Make a new call using the phonebook

Press **Options**
Select **Names**

The phonebook is displayed

Scroll to the desired name

Press 

► Swap between parties

When you are connected with two parties you can switch between the active call and the call on hold. Swapping to one party puts the other one on hold.

To swap:

Press **Options**
Select **Swap**

► Transfer a call

If you have one single call on hold and a second one active you can connect the two parties and disconnect yourself:

Press **Options**
Select **Call Transfer**

► Conference call

You can have up to 6 parties in a conference call (including yourself). You may add parties to a conference using the phonebook, the list of dialled numbers or the keypad.

To add a party during a call:

Make a new call (see above)

Press **Options**

Select **Conference**

You now can talk to all parties at the same time.

To add another call:

Make a new call and repeat these steps

Connect a private call

You can isolate a party from the conference and talk exclusively with this 'private call'. The other parties of the conference will be put on hold and will not hear what you are speaking with the 'private' party:

Press **Options**

Select **Private**

The list of active calls is displayed

Scroll to the party you want to make a private call with

Press **Select**

The conference is put on hold and you can talk with the private party

Note:

You can only have up to two active calls at one time. Therefore you can select **Private** only if your second line is not busy with another call.

► End one call

To remove one call from the conference:

Press **Options**

Select **Remove**

A list of all parties is displayed

Scroll to the call to be disconnected

Press **Remove**

► End all calls in one step

Ending all calls in one step terminates the multiparty call. All parties will be disconnected from each other and they will hear the tone for 'line busy'.

Press **Options**

Select **End All Calls**



Diverting calls (3)

This network feature diverts incoming calls to another phone number or to your voice mailbox.

If you are not equipped to receive data, incoming data calls can be diverted to a PC connected to a modem or a similar device.

You may divert all fax calls to a fax machine or – as with data calls – to a PC.

You may also divert fax calls to the voice mailbox, if your service provider supports this feature.

Incoming calls can also be diverted to

- a different phone number or
- to your voice mailbox. Prerequisite for this: you have already stored your voice mailbox number; see below.

Depending on the network you are advised briefly during every call setup if a diversion is set and what kind of diversion condition it is. Your mobile phone may also display certain diversion settings.

You may activate or deactivate each diversion and you can check the divert status.

If all calls are diverted, this is indicated with the  icon.

▶▶ Using the voice mailbox (7-2-6)/(1-4)

This service provides an 'answering machine' in the network, and is useful when the mobile phone is turned off or unobtainable, or if you don't want to be disturbed. The service can be provided for voice and fax calls. Using the voice mailbox service may require a subscription from your service provider.

1. Before you can use the voice mailbox, you must store your voice mailbox number on your SIM card. This number is usually given to you by your service provider.
2. To make use of the voice mailbox function, you must divert incoming calls to your voice mailbox.

▶ Store voice mailbox number (7-2-6)

Select **Menu > Settings > Phone > Voicemail No.**

Enter the number of your voice mailbox
Press **Save**
Now the number is stored on your SIM card

▶ Listen to voice messages (1-4)

A new message in your voice mailbox may be indicated by the  symbol on the status line, but note that some service providers do not support announcing new messages by this way.

To listen to voice messages:

Select **Menu > Messages > Listen Voicemail**
or:
Press  for two seconds

Further instructions about how to handle the voice mailbox are given during the call and in your service provider's guide.

▶▶ Diverting voice calls (3-1)

You can divert incoming voice calls to your voice mailbox or to another phone number.

Diversion conditions

Incoming voice calls can be forwarded for the following conditions:

- **All Voice** (3-1-1):
All calls in general and regardless of any circumstances are diverted to your voice mailbox or to another phone number (perhaps if you don't want to be disturbed – your mobile phone will not even ring); also called 'unconditional diversion'
- **Busy** (3-1-2):
Calls are diverted to your voice mailbox or to another phone number only if you are talking to someone else on the mobile phone
- **No Reply** (3-1-3):
Calls are diverted to your voice mailbox or to another phone number after your mobile phone has rung for some time, but you haven't answered
- **Not Reachable** (3-1-4):
Calls are diverted to your voice mailbox or to another phone number only if your mobile phone is switched off or the signal strength is too weak to establish connection to your mobile phone.

Note:

You may set more than one diversion for voice calls at a time (e.g. for **Busy** and **No Reply**), but selecting **All Voice** has the highest priority and will override the others.

▶ Divert calls to the voice mailbox

Select **Menu > Call Divert > Voice > [diversion condition] > Activate > Voicemail**

If you have not yet stored your voice mailbox number, you now will get the opportunity to do this; then the diversion will be set

▶ Divert calls to a phone number

Select **Menu > Call Divert > Voice > [diversion condition] > Activate > Other Number**

The last set number is displayed

Enter or change the number, or leave the number unchanged

Press **Save**

Note:

You may select a number from the phonebook by pressing **Names**.

▶ Delay time for 'No Reply'

If you select the divert condition **No Reply**, an incoming voice call will be diverted after 15 seconds by default. You can change this setting:

Select **Menu > Call Divert > Voice > No Reply > Activate > Set Delay**

Select the delay time from the list

▶ Show diversion status

Select **Menu > Call Divert > Voice > [diversion condition] > Status > Voicemail or Other Number**

The current status is displayed

▶ Clear voice call diversion

Select **Menu > Call Divert > Voice > [diversion condition] > Deactivate > Voicemail or Other Number**

▶ Clear all voice call diversions (3-1-5)

Select **Menu > Call Divert > Voice > Clear Divert**

▶▶ Diverting fax calls (3-2)

You can divert incoming fax calls to your voice mailbox or to another phone number.

▶ Divert faxes to voice mailbox

Select **Menu > Call Divert > All Fax > Activate > Voicemail**

If you have not yet stored your voice mailbox number, you now will get the opportunity to do this; then the diversion will be set

▶ Divert faxes to a phone number

Select **Menu > Call Divert > All Fax > Activate > Other Number**

The last set number is displayed

Enter or change the number, or leave the number unchanged

Press **Save**

Note:

You may select a number from the phone-book by pressing **Names**.

▶ Show status of fax diversion

Select **Menu > Call Divert > All Fax > Status > Voicemail** or **Other Number**

▶ Clear fax diversion

Select **Menu > Call Divert > All Fax > Deactivate > Voicemail** or **Other Number**

▶▶ Diverting data calls (3-3)

Usually voice mailboxes cannot store data calls. So diverting data calls to your voice mailbox probably won't work.

▶ Divert data to a phone or PC number

Select **Menu > Call Divert > All Data > Activate > Other Number**

The last set number is displayed

Enter or change the number, or leave the number unchanged

Press **Save**

Note:

You may select a number from the phone-book by pressing **Names**.

▶ Show status of data diversion

Select **Menu > Call Divert > All Data > Status > Voicemail** or **Other Number**

▶ Clear data diversion

Select **Menu > Call Divert > All Data > Deactivate > Voicemail** or **Other Number**

▶▶ Clear all diversions (3-4)

You can clear all diversions in one step:

Select **Menu > Call Divert > Clear All Divert**



SMS messages

You can receive and send short text messages (SMS), each consisting of up to 160 characters.

This is a network feature and requires a subscription with the service provider.

Messages can be stored on the SIM card and sent and received via GSM or SAT.

Prerequisite:

Store number of SMS center (7-8-1)

Before you can send or receive any messages, you need to set the number of your message center; you get this number from your service provider:

Select **Menu > Settings > SMS Parameter > SMS Center**

Enter the number of the SMS center

Press **Save**

▶▶ Writing an SMS (1-1)

To write an SMS, you have to open the SMS editor:

Select **Menu > Messages > Write Message**
The SMS editor is displayed

▶ Editing tips

1. For instructions on how to use the keys and move the cursor, see 'Character and digit input in text editor mode' on page 58.
2. When you press a key, the characters which can be typed with this key are displayed in the middle of the softkey line.
3. The 'count down' number in the status line tells you how many characters you can add to the message.
4. While entering lower case letters you see abc in the status line; while writing upper case letters, you see ABC.

Display while pressing a key:



The current letter is displayed inverted in the softkey line.

Display while no key is pressed:



▶ Send a message

Select **Options > Send**

Enter the number or press **Names** to select the number from the phonebook

Press **Send**

► Save a sent message

You may save the message; perhaps for further editing or as a template:

- Press **Options**
- Select **Save**

Replace an SMS in the list

In case you are about to save an SMS, but the memory of your SIM card is full, you are alerted to this and requested to enter the SMS list in order to select an SMS which will be replaced by the new one.

To replace an existing SMS after having pressed **Save** for a displayed SMS:

- The SMS list is displayed*
- Scroll to the entry to be replaced
- Press **Replace**

If you don't want to replace an entry:

- Press **C**
- The SMS will not be added to the list*

► Set temporary SMS parameters

Some of the general SMS settings (see page 27) can be changed before sending or saving an SMS.

SMS format

By altering the general setting you may define a different format for the current SMS before sending, forwarding or saving:

- Select **Menu > Messages > Write Message**
- Write the message
- Press **Options**
- Select **Format**
- The current setting is displayed*
- Press **Change**
- Select the desired format

Delivery report

By altering the general setting you may order or cancel a delivery report for the current SMS before sending, forwarding or saving:

- Select **Menu > Messages > Write Message**
- Write the message
- Press **Options**
- Select **Delivery Report**
- The current setting (On or Off) is displayed*
- Press **Change**
- Press **Save**

Validity

By altering the general setting you may set a different validity period for the current SMS before sending, forwarding or saving:

- Select **Menu > Messages > Write Message**
- Write the message
- Press **Options**
- Select **Validity**
- The current setting is displayed*
- Press **Change**
- Select the desired validity period

▶▶ Reading an SMS (1-2)

When a new message has arrived, this is displayed together with the total number of new messages, e.g.:



If you don't want to see the reminder, you can clear it by pressing **C**. The counter will be reset for the next SMS messages to arrive.

Note:

In case you have missed a call, or a new cell broadcast has arrived after the arrival of an SMS, the missed call advise will replace the message note.

The  symbol in the status line reminds you that there are unread messages on your SIM card. If the symbol on the status line is blinking, your SIM memory for messages is full! You should remove some old messages. If an SMS could not be sent to your SIM card because of a lack of memory space, the SMS centre stores it until you have deleted some old messages.

In order to read an SMS, you first have to enter the SMS list and select the SMS to be read.

Select a newly received SMS

To select a **newly received SMS** for reading, you can enter the SMS list immediately:

Press **List**
The SMS list is displayed

Select an old or a saved SMS

In order to display a previously read or a saved draft SMS:

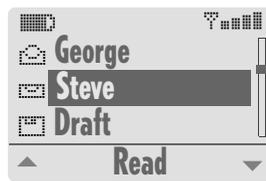
Select **Menu > Messages > List Messages**
Statistics of the SMS list are displayed:

- Number of unread messages
- Total number of messages on SIM
- Free SIM space for messages

Press **List**
The SMS list is displayed

▶ SMS list

The SMS list contains all SMS messages you have saved and received:



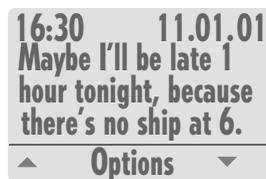
SMS status

At the beginning of each entry in the list, a symbol indicates the status of the SMS:

-  Read SMS
-  Unread SMS
-  Saved (draft) SMS

▶ Display message text

Select the SMS to be read from the list
Press **Read**
The message is displayed:



▶▶ Handling SMS messages

When the SMS message text is displayed, you have several options to handle the SMS:

- Reply to the SMS
- Edit the message text
- Forward the SMS to another recipient
- Delete the SMS
- Save the sender's number in the phonebook

If the message text is not already displayed, you have to select the SMS and display the message text as described in chapter 'Reading an SMS' on page 25.

▶ Reply to an SMS

You may reply to the sender of the displayed SMS by sending a new text message:

Press **Options**
 Select **Reply**
The SMS editor is displayed
(see page 23)

Enter the message text
 Press **Options**
 Select **Send**

Note:

'Reply' is not possible for 'draft' messages.

▶ Edit a received SMS

You may edit a received SMS, e.g. before you save or forward it:

Press **Options**
 Select **Edit**
The SMS editor is displayed
(see page 23)

▶ Forward an SMS

You may send a received or saved SMS to a different recipient:

Press **Options**
 Select **Forward**
 Enter the recipient's number or press **Names** to select the number from the phonebook
 Press **Send**

▶ Delete an SMS

You may delete the displayed SMS:

Press **Options**
 Select **Delete**
 Press **Delete**

▶ Store sender's number in the phonebook

Press **Options**
 Select **Save Number**
The phonebook editor is displayed
(see page 12)

▶▶ General SMS parameters (7-8)

For the following SMS parameters you can make settings which will be applied as general SMS parameters for all of your messages; nevertheless some can be changed for an individual SMS (see page 24):

– **SMS Center** (7-8-1)

Select to enter or change the center number provided by your service provider

– **Validity** (7-8-2)

You can choose the period before the SMS is deleted automatically in the message center. Selectable validity periods are: 1 h, 6 h, 12 h, 24 h, 48 h, 1 week, maximum time

– **Format** (7-8-3)

You can choose from the following different SMS formats:

- Text
- Fax
- E-mail
- ERMES

(European **R**adio **M**essage **S**ystem)

– **Delivery Reports** (7-8-4)

Display of information when the message has been delivered to its destination or reason if it is delayed or if delivery is not possible.

▶ **SMS center** (7-8-1)

Select **Menu > Settings> SMS Parameter > SMS Center**

Enter the number of your SMS center
Press **Save**

▶ **Validity** (7-8-2)

Select **Menu > Settings> SMS Parameter > Validity**

The current setting is displayed

Press **Change**

Select the desired validity period

▶ **SMS format** (7-8-3)

Select **Menu > Settings> SMS Parameter > Format**

The current setting is displayed

Press **Change**

Select the desired format

▶ **Delivery reports** (7-8-4)

Select **Menu > Settings> SMS Parameter > Delivery Reports**

The current setting (On or Off) is displayed

Press **Change**

Press **Save**

Info broadcast (1-3)

Certain service providers offer an information service (broadcast), e.g. local dialling codes, traffic information, weather forecast, events and other local information services.

The following options for handling broadcasts are available:

- **Status** (1-3-1)
You can switch broadcasting on or off.
- **Topic** (1-3-2)
To receive info broadcasts, you need a special list of info broadcast channel numbers from your service provider. You can enter these numbers in your list to receive the desired information.
- **Set Language** (1-3-3)
You may select the language(s) for displayed broadcasts. This setting is different from the general language settings of the mobile phone. Only information in the selected language(s) will be displayed.

▶▶ Switch info broadcast on/off (1-3-1)

Information broadcasts related to the activated topics are sent to you automatically at specific intervals when broadcasting is switched on.

To switch broadcasting on/off:

- Select **Messages > Info Broadcast > Status**
The current setting (On or Off) is displayed
- Press **Change**
- Press **Save**

▶▶ Handling info broadcast topics (1-3-2)

▶ Insert a topic

Ask your service provider for the available topics.

- Select **Messages > Info Broadcast > Topic**
The topic list is displayed
- Press **Options**
- Select **Insert**
- Enter the topic number
- Press **Next**
- Enter the topic name
- Press **Save**

▶ Select/deselect a topic (1-3-2)

To receive information about a topic, you have to select the topic by marking it in the topic list.

- Select **Messages > Info Broadcast > Topic**
The topic list is displayed
- Scroll to the topic to select
- Press **Options**
- Select **Mark** or **Unmark**

► Edit a topic

Select **Messages > Info Broadcast > Topic**

The topic list is displayed

Scroll to the desired topic

Press **Options**

Select **Edit**

Edit the topic number

Press **Next**

Edit the topic name

Press **Save**

► Delete a topic

Select **Messages > Info Broadcast > Topic**

The topic list is displayed

Scroll to the topic to delete

Press **Options**

Select **Delete**

▶▶ Set broadcast language(s) (1-3-3)

Topics from the info broadcast system can be displayed in several languages.

To set the broadcast language(s) for displayed topics:

Select **Messages > Info Broadcast >**

Set Language

A list with possible language settings is displayed (All = receive the messages in all languages)

Scroll to the desired language

Press **Mark** or **Unmark**

Repeat this for each language to be displayed

▶▶ Read an info broadcast

When a new broadcast arrives, the topic name is displayed together with the first line of the info.

To read the whole info:

Press **Read**



Security settings (6)

You can protect your mobile phone against unauthorised use by setting appropriate restrictions.

All restrictions are controlled by codes which differ depending on the type of restriction selected.

There are various codes you have to enter to gain access to some of the functions of your mobile phone:

PIN (4 to 8 digits)

The PIN (**P**ersonal **I**dentification **N**umber) protects your SIM card against unauthorised use and is supplied with the SIM card. The PIN is required to

- switch on the mobile phone (if PIN control is activated)
- change the PIN itself.

If you enter an incorrect PIN, your input is rejected, you are advised to reenter the PIN. The number of attempts you have left is displayed.

After entering an incorrect PIN three times in succession, operation of the mobile phone is blocked and can only be unlocked by means of the PUK.

PIN2 (4 to 8 digits)

The PIN2 is given to you together with the SIM card by your service provider and is required to

- insert, edit and delete fixed dialling numbers and activate or deactivate them
- change cost charging unit counters
- delete all phonebook entries
- change the PIN2 itself.

If you enter an incorrect PIN2, your input is rejected, you are advised to reenter the PIN2. The number of attempts you have left is displayed.

After entering an incorrect PIN2 three times in succession, all functions requiring PIN2 entry are blocked and can only be unlocked by means of the PUK2.

PUK/PUK2

If your PIN/PIN2 functions are blocked, you need PUK/PUK2 (**P**ersonal **U**nlocking **K**ey) to activate PIN/PIN2 control again. PUK and PUK2 are given from your service provider together with the SIM card, PIN and PIN2.

When PUK/PUK2 is required, you are asked for it in a display. In this case do the following:

- Enter the PUK/PUK2 and press **OK**
- Enter a new PIN/PIN2 code and press **OK**
- Enter the new PIN/PIN2
- Press **OK** to confirm

If you enter an incorrect PUK/PUK2 ten times in succession your SIM card is locked, you cannot use it any longer and it has to be exchanged by your service provider.

Security code (5 digits)

By default, the security code is not set. You can use the security code to

- protect your mobile phone against unauthorised use even if another mobile phone's SIM card is used
- restore the factory settings of your mobile phone
- switch security control by security code off or on
- change the security code itself.

If you enter an incorrect security code 10 times in succession, the mobile phone is locked for one hour, before you have 10 more attempts and so on. Only emergency calls can be made during this hour. If all attempts fail, contact the manufacturer (see at the end of this manual).

Barring code (4 digits)

The barring code (also called 'network password') is supplied with the SIM card from your service provider and will be needed to handle the security with the network. It is possible to lock some mobile phone features that interact with the network. The barring code is required to

- activate or deactivate the barring of calls
- change the barring code itself.

The procedures after having entered an incorrect barring code vary depending on service providers.

▶▶ Handling PINs, security code and barring code (6-3/6-4/6-5)

▶ Activate/deactivate PIN request (6-3)

You can switch PIN control off or on, but beware of the risk of unauthorised use when PIN control is switched off!

- Select **Menu > Security > PIN Code**
The current setting is displayed
- Press **Change**
- Press **Save**
- Enter PIN
- Press **OK**

▶ Activate/deactivate security code (6-5)

The security code can be deactivated and activated again:

- Select **Menu > Security > Security Code**
The current setting is displayed
- Press **Change**
- Press **Save**
- Enter security code
- Press **OK**

Note:

There is no preset security code in your new mobile phone, you are advised to set it, when you select this function for the first time.

► Change PIN (6-4-1)

You can change your PIN to any 4 to 8 digit number:

- Select **Menu > Security > Change Codes > Change PIN**
- Enter PIN
- Press **OK**
- Enter new PIN
- Press **OK**
- Enter new PIN to confirm
- Press **OK**

► Change PIN2 (6-4-2)

You can change your PIN2 to any 4 to 8 digit number:

- Select **Menu > Security > Change Codes > Change PIN2**
- Enter PIN2
- Press **OK**
- Enter new PIN2
- Press **OK**
- Enter new PIN2 to confirm
- Press **OK**

► Change Security Code (6-4-3)

You can change the security code (5 digits):

- Select **Menu > Security > Change Codes > Security Code**
- Enter security code
- Press **OK**
- Enter new security code
- Press **OK**
- Enter new security code to confirm
- Press **OK**

► Change Barring Code (6-4-4)

The call barring restrictions are controlled in your network. Your barring code (network password) is available from your service provider.

- Select **Menu > Security > Change Codes > Barring Code**
- Enter barring code
- Press **OK**
- Enter new barring code
- Press **OK**
- Enter new barring code to confirm
- Press **OK**

►► Call Barring (6-1)

The location of your mobile phone can be checked by the network and in accordance to this the destinations for outgoing call types can be categorised.

Barring functions require subscription and the barring code (network password).

Note:

Your mobile phone gives you the possibility to bar incoming and/or outgoing calls altogether, but it doesn't distinguish between the services which you might want to bar (SMS, fax call, voice call or data call) and those you don't. If you wish to selectively bar one or more of these services, then you must arrange to do so with your service provider. A corresponding barring code will be given to you, which you then must enter in your mobile phone as follows: *[barring code]#.

In addition it is not possible to set certain call barrings if certain call diversions are active. So you should check the result of the call barring activation.

► Barring of outgoing calls (6-1-1)

Barring of the following outgoing call types can be activated/deactivated and the current barring status for each of them can be displayed:

- **All Calls** (6-1-1-1)
All outgoing calls are blocked except emergency calls (numbers 112 for GSM and 112, 911 and 999 for SAT).
- **All Int. Calls** (6-1-1-2)
Only national calls can be made.
- **Int. Except Home** (6-1-1-3)
Only calls within and to your home country can be made.

Activate/deactivate (6-1-1)

Select **Menu > Security > Call Barring > Outgoing > [call type] > Activate or Deactivate**
Enter barring code
Press **OK**

Display status (6-1-1)

Select **Menu > Security > Call Barring > Outgoing > [call type] > Status**

► Barring of incoming calls (6-1-2)

Barring of the following incoming call types can be activated/deactivated and the current barring status for each of them can be displayed:

- **All Calls** (6-1-2-1)
No calls can be received.
- **Calls Abroad** (6-1-2-2)
Calls can only be received when you are in reach of your home network.

Activate/deactivate (6-1-2)

Select **Menu > Security > Call Barring > Incoming > [call type] > Activate or Deactivate**
Enter barring code
Press **OK**

Display status (6-1-2)

Select **Menu > Security > Call Barring > Incoming > [call type] > Status**

► Clear barring of calls (6-1-3)

Clearing barring functions requires the barring code (network password).

Clear all barring of outgoing calls (6-1-3-1)

Select **Menu > Security > Call Barring > Clear Barrings > Outgoing**
Enter the barring code
Press **OK**

Clear all barring of incoming calls (6-1-3-2)

Select **Menu > Security > Call Barring > Clear Barrings > Incoming**
Enter the barring code
Press **OK**

Clear all call barrings (6-1-3-3)

Select **Menu > Security > Call Barring > Clear Barrings > All**
Enter the barring code
Press **OK**

▶▶ Fixed Dial (6-2)

This function provides a second phonebook on the SIM card for 'fixed dial'. If 'fixed dial' is activated, only numbers from this list can be dialled. It is possible to save partial numbers, for example area codes.

Example:

4 numbers are stored in the fixed list: The number groups 0171, 0172, 0173 and the unique number +4989892629.

So you are allowed to dial:

0171145875..., **0171**56471299 ... ,

0172565634..., **0172**95741642... ,

0173125862..., **0173**32567815... and +4989892629 only.

If you dial a number which does not correspond with the set of fixed dialling numbers, an error message is displayed briefly.

▶ Add fixed dialling numbers (6-2-3)

If the fixed dialling list is full, you have to delete an entry (see page 34) before you can add a new one.

Select **Menu > Security > Fixed Dial > Add New**

Enter PIN2

Press **OK**

Enter number – or initial digit(s)

Press **Save**

Enter name

Press **Save**

▶ Activate/deactivate fixed dialling (6-2-2)

Select **Menu > Security > Fixed Dial > On / Off**

Press **Change**

Press **Save**

Enter PIN2

Press **OK**

Note:

If 'fixed dial' is activated, but the fixed dial list is empty, no calls can be made!

▶ Change fixed dialling number (6-2-1)

You can change the number and/or name for an entry in the fixed dialling list:

Select **Menu > Security > Fixed Dial > Show List**

Scroll to the entry to be changed

Press **Options**

Select **Edit**

Enter PIN2

Press **OK**

Change the number

Press **Next**

Change the name (see page 58)

Press **Save**

Replace a fixed dialling number

In case you are about to add a fixed dialling number to the list, but the memory of your SIM card is full, you are alerted to this and soon after you are advised by a message to replace an existing entry.

To replace an existing entry in the list:

Scroll the list to the entry to be replaced

Press **Replace**

If you don't want to replace an entry:

Press **Ⓢ**

The new entry will not be added to the list

▶ Delete fixed dialling number (6-2-1)

Select **Menu > Security > Fixed Dial > Show List**

Scroll to the desired name/number

Press **Options**

Select **Delete**

Enter PIN2

Press **OK**

Press **Delete**

► Show details of fixed dialling numbers (6-2-1)

Select **Menu > Security > Fixed Dial > Show List**

Scroll to the desired name/number

Press **Options**

Select **Detail**

Name and number of the entry are displayed

►► Closed User Groups (6-8)

Some service providers offer subscription to the 'closed user group' feature. You may save call costs by making calls within a closed user group. A closed user group is a pool of phone numbers which your service provider specifies by index number.

To activate this function you need to obtain the index number for the desired closed user group from your service provider.

► Activate a closed user group

Select **Menu > Security > Closed Group**
The current setting is displayed

Press **Change**

Select **On** or **Preset**
(Preset = as arranged with your service provider)

Only if you select **On**:

Enter the index number for the closed user group given by your service provider

Press **Save**

► Deactivate the closed user group

Select **Menu > Security > Closed Group**
The current setting is displayed

Press **Change**

Select **Off**

Phone and call settings (7)

▶▶ Greeting text (7-2-3)

You can define a greeting text that is displayed after you entered the PIN.

▶ Edit greeting text

Select **Menu > Settings > Phone > Greeting**
The editor opens for editing the text (see 'Character and digit input in text editor mode' on page 58)

Edit the greeting text
Press **Save**

▶▶ Time and date (7-5)

Time and date of the internal clock are indicated in idle mode.

The time stamps are also required for

- the list of dialled numbers
- the list of missed calls
- the list of received calls and
- setting and alerting alarms.

The internal clock for alarms will still keep on running for about one hour if neither the battery nor the charger is connected.

▶ Set time (7-5-1)

Select **Menu > Settings > Clock > Set Time**
The current setting is displayed
Enter the correct time in the set format via keypad
Press **Save**

▶ Set time format (7-5-2)

The setting is possible in 12 hour format (e.g. 11:05p) or 24 hour format (e.g. 23:05):

Select **Menu > Settings > Clock > Time Format**
The current setting is displayed

Press **Change**
Scroll to the desired the time format
Press **Select**

▶ Set date (7-5-3)

Select **Menu > Settings > Clock > Set Date**
The current setting is displayed
Enter the correct date in the set format 'DD.MM.YY' (e.g. 11.09.00)
Press **Save**

▶▶ Language (7-2-1)

The default language for general use (e.g. for displayed text) is preset in the SIM card (see page 49) but you may select a custom language.

The languages for the info broadcast service can be selected independently; see page 29.

To change the language setting:

Select **Menu > Settings > Phone > Language**
The current setting is displayed
Scroll to the desired language
(Automatic = language preset in the SIM card)
Press **Select**

▶▶ Numbers for voice, fax and data (7-2-4)

If you have obtained more than one mobile phone number from your service provider and the SIM card supports this, you can store different mobile phone numbers for voice, data and fax calls on the SIM card as a reminder.

To store numbers for services:

- Select **Menu > Settings > Phone > Own Number > Voice or Fax or Data**
- Enter the number
- Press **Save**

▶▶ Cost settings (7-3-7)

To keep control over your call costs, you may set a charge rate, i.e. an amount of money (in some currency) per call unit, and an accumulated call cost limit (expressed as a number of call units or as an amount of money). Furthermore, you may select whether or not the cost will be displayed at the end of a call.

You can make charge settings for:

- **Charge Rate** (7-3-7-1)
You can choose to display cost just in number of units in a currency. If you want to display cost in currency you need to enter a charge rate per unit.
- **Cost limit** (7-3-7-2)
You can define a cost limit; the mobile phone will suspend service when the cost limit is reached.
- **Cost displayed** (7-3-7-3)
Cost information will be displayed after finishing a call. This function depends on the functionality of the network and can be switched off or on.

You may also display cost statistics and the amount of remaining credit; see page 48.

▶ Set charge rate

- Select **Menu > Settings > Call > Cost > Charge Rate**
The current setting is displayed
- Press **Change**
- Enter PIN2
- Press **OK**
- Select the currency
- Enter the currency symbol
- Press **Save**
- Enter the desired charge rate per unit
*For the decimal point use the **
- Press **Save**

▶ Set cost limit

- Select **Settings > Call > Cost > Cost Limit**
The current setting is displayed
- Press **Change**
- Enter PIN2
- Press **OK**
- Enter the desired cost limit
- Press **Save**

▶ Switch display of cost on/off

- Select **Settings > Call > Cost > Cost Displayed**
The current setting is displayed
- Press **Change**
- Press **Save**

▶▶ Setting baud rate for data transmission (7-9)

You can connect your mobile phone to a PC to use it as a modem for data and fax services. The PC connection also supports the downloading of GPS information from the mobile phone to the PC. To connect the mobile phone to a PC you need a data cable compatible with the mobile phone.

Usually the mobile phone discovers the accurate baud rate setting for data transmission to a PC automatically (setting **Automatic**). But some devices do not work with the automatic baud rate setting. In this case you have to set the baud rate manually.

The baud rate setting affects the connection speed between the mobile phone and the PC only. The connection speed in the GSM and satellite network is limited to 9600 baud.

The following baud rates can be set:

- **Automatic** (=standard setting of the connected device is recognised; max. 19200 baud)
- **300 Baud, 1200 Baud, 2400 Baud, 4800 Baud, 9600 Baud, 19200 Baud**

Note:

The GPS NMEA protocol always uses 4800 Baud (you can not change this).

To set the baud rate with external devices:

- Select **Menu > Settings > Data Link Rate**
The current setting is displayed
- Press **Change**
- Scroll to the desired baud rate
- Press **Select**

▶▶ Any key answer (7-3-1)

This function enables answering a call by pressing any key (except , the volume key and the fox key™).

This function can be switched off or on:

- Select **Menu > Settings > Call > Any Key Answer**
The current setting is displayed
- Press **Change**
- Press **Save**

▶▶ Send DTMF tone (7-3-2)

This function enables sending DTMF (Dual Tone Multi Frequency) tones during a call to a service which accepts only DTMF tones, e.g. in order to enter access codes for listening to an answering machine. If you have switched this feature on, a DTMF tone is sent with each key press during a call.

This function can be switched on or off:

- Select **Menu > Settings > Call > DTMF Tone**
The current setting is displayed
- Press **Change**
- Press **Save**

▶▶ Set call waiting (7-3-3)

If your service provider supports this feature, you can answer a call while you are telephoning with another person. Answering the new call ('waiting' call) will put the first call on hold until you swap to it again (see 'Options during a call' on page 17).

▶ Activate/deactivate 'call waiting' (7-3-3)

Select **Menu > Settings > Call > Call Waiting > Activate or Deactivate**
Press **OK**

▶ Display status (7-3-3)

Select **Menu > Settings > Call > Call Waiting > Status**

▶▶ Sending of own number (7-3-4)

This is a network feature: Usually your mobile phone number is transmitted to the phone being called. In case you don't want to be identified, you may disable or enable the sending of your mobile phone number.

Your service provider can set that your number is never shown to the called party even if you switch on sending of your own number.

To switch off or on the sending of your mobile phone number:

Select **Menu > Settings > Call > Send Own No.**
The current setting is displayed
Scroll to **On, Off** or **Preset**
(Preset=as arranged with service provider)
Press **Save**

▶▶ Automatic redial (7-3-5)

If automatic redial is switched on, the mobile phone automatically redials a dialled number which was busy or not reachable during the first attempt.

You can interrupt redialling at any time by pressing **End** or .

To switch automatic redial off or on:

Select **Menu > Settings > Call > Autom. Redial**
The current setting is displayed
Press **Change**
Press **Save**

▶▶ Activate/deactivate 'one touch dialling' (7-3-6)

This function enables calling the number of a phonebook entry assigned to a number from 1 to 9 by a long press to the corresponding key **1 00** ... **9 WXYZ** (see page 12).

Note:

1 00 is automatically assigned to your voicemail number (see page 20).

This function can be switched on or off:

- Select **Menu > Settings > Call > One Touch Dial**
The current setting is displayed
- Press **Change**
 Press **Save**

▶▶ Use in a car (7-4)

The following functions are helpful when using the mobile phone in a car.

- **Auto Answer** (7-4-1)
 Your mobile phone answers incoming calls after 3 seconds automatically, when connected to a vehicle docking adapter.
- **Backlight** (7-4-2)
 This feature determines whether the display and keys are illuminated all the time or only when you use the mobile phone when connected to a vehicle docking adapter.

Both, 'Auto Answer' and 'Backlight' can be switched on or off:

- Select **Menu > Settings > Car > Auto Answer or Backlight**
- Press **Change**
 Press **Save**

For details on how to connect and use the vehicle docking adapter refer to the manual delivered with the accessory.

▶▶ Restore factory settings (7-7-2)

You can reset the phone's settings to the way they were when you bought your phone.

Note that SIM and network settings remain unchanged.

To restore the mobile phone's factory settings:

- Select **Menu > Settings > Reset > Factory Set**
 Enter your security code
- Press **OK**
 Press **OK**

▶▶ LCD Contrast (7-2-5)

You can select the LCD contrast from 6 levels.

- Select **Menu > Settings > Phone > LCD Contrast**
The current level is displayed in a bar chart
- Scroll to the desired level
 Press **Select**



Network management (4/5)

You have the choice to telephone in satellite mode (SAT) or in GSM 900 mode (GSM) – or to switch automatically between the two modes if you happen to be in an area where only one of the two is possible.

There are several ways to fine-tune the mobile phone's access to networks so that you are never in danger of losing connection with the network.

Note:

For display symbols indicating the network status and status of signal strength, see page 5.

▶▶ Operating mode: GSM and/or SAT (5)

You can set the mobile phone's operating mode to GSM or to SAT access. Or you may use both of them by switching between them.

▶ Single mode

Irrespective of whether you select exclusive **GSM Only** or **SAT Only** mode, you will lose network connection if you leave the coverage area that can be reached in that single mode.

To set the operation mode:

- Select **Menu > System Pref.**
The current setting is displayed
- Press **Change**
- Select **GSM Preferred** or **SAT Preferred** or **GSM Only** or **SAT Only**

▶ Preferred mode

If you decide to set the 'preferred' access either to GSM mode or to SAT mode, the mobile phone will normally operate in that preferred mode. Only if signal strength for operation in the preferred mode becomes too weak the mobile phone switches to operate in the alternative mode:

- If **GSM Preferred** is selected: The mobile phone will initially attempt to access a GSM network, if no GSM network is available it will automatically attempt to access a SAT network. When operating on a SAT network, the mobile phone periodically scans for available GSM networks and will switch to GSM if the service is available
- If **SAT Preferred** is selected: The mobile phone will initially attempt to access a SAT network, if no SAT network is available it will automatically attempt to access a GSM network. When operating on a GSM network the mobile phone will only switch to SAT service if the GSM signal is lost. If SAT operation is desired, the mobile phone can be manually switched to SAT mode using the 'SAT Only' single mode setting.

▶▶ Network selection (4-3/4-2)

Once you have set the operating mode, access to a certain GSM or SAT network can be selected automatically or manually.

Automatic network selection:

The mobile phone automatically selects the most preferred network available in your area. If this is not your home network, you will see the roaming symbol  in the display. For roaming purposes, there is a network preference list which can be configured.

Manual network selection:

You can select the desired network from a list of available networks. The mobile phone uses only this one selected network, and remains in manual mode until the automatic mode is selected or until a different SIM card is inserted.

▶ Automatic network selection (4-3)

- Select **Menu > Network > Network Mode**
The current setting is displayed
- Press **Change**
- Select **Automatic**

Network preference (4-2)

As long as field strength is strong enough and the network allows you, calls will be transmitted via the preferred network. You will be connected to a different available network only if reception of the preferred network is too poor.

You can create a list of preferred networks.

Add network to preference list

You can add networks to the preference list by yourself. You need the network code of the network to be added.

- Select **Menu > Network > Preference**
Your network preference list is displayed
- Press **Options**
- Press **Insert**
- Select a service provider from the list

Delete network from list

- Select **Menu > Network > Preference**
Your network preference list is displayed
- Press **Options**
- Select **Delete**
- Press **Delete**

Add a new service provider to the list of available service providers

- Select **Menu > Network > Preference**
Your network preference list is displayed
- Press **Options**
- Press **Insert**
- Select **Further Networks**
- Enter the country code
- Press **Next**
- Enter the network code
- Press **Next**
- Enter the service provider name
- Press **Save**

► Manual network selection (4-3)

With manual network selection, you can select a service provider from a list of available ones.

To set manual network selection:

- Select **Menu > Network > Network Mode**
The current setting is displayed
- Press **Change**
- Select **Manual**
After a few seconds a list of service providers for the active mode (GSM or SAT) is displayed
- Scroll to the desired service provider
- Press **Select**

If **GSM Preferred** is selected, the terminal searches the list of GSM networks only. There is the entry **Search SAT** at the end of the found GSM networks. Select **Search SAT** to see the available SAT networks:

- Scroll to **Search GSM** respectively **Search SAT** at the bottom of the service provider list
- Press **Select**
After a pause, a list of service providers for the alternative mode (GSM or SAT) is displayed; SAT search may take up to a few minutes
- Scroll to the desired service provider
- Press **Select**

►► Manual SAT registration (4-1)

You may find that you are no longer able to receive SAT calls if your SAT registration is out of date. This is indicated by the SAT icon blinking or if the displayed service area appears to be incorrect. In this case you have to update SAT registration manually to correct this mismatch.

Note:
To use this function, your mobile phone has to operate in SAT mode.

To send the signal for SAT registration:

- Select **Menu > Network > SAT Registration**

Sound & Alert (7-1)

You may choose from a variety of different acoustic signals for ringing and alerting tones.

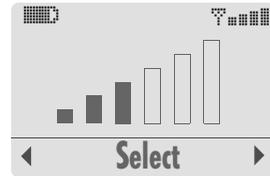
Note:

Control of the loudspeaker volume and of the ringing volume is described on page 10.

▶▶ Ringing volume (7-1-1-8)

If you want to set the ringing volume **only**, you have to use the menu. You can select from 6 volume levels.

Select **Menu > Settings > Sound & Alert > Ringing > Volume**
The current level is displayed in a bar chart:



Press **Select**
 Scroll to the desired volume level
While adjusting the volume, the ringing tone is played at the particular level and the level is shown in the display

Press **Select**

▶▶ Ringing melody (7-1-1)

You can select from a list of ringing melodies to set different ringing melodies for

- incoming voice calls
- incoming faxes and data
- High Power Alerting
- alarms
- caller groups

When selecting a ringing melody as described below, first the currently active melody and then the melody of the current list position is played.

▶ Melody for incoming voice calls (7-1-1-1)

You can set the general ringing melody for all voice calls, except for caller groups you have assigned to a special melody:

Select **Menu > Settings > Sound & Alert > Ringing > Voice**
The current setting is displayed

Press **Change**
 Scroll to the desired melody
 Press **Select**

► Melody for incoming faxes and data (7-1-1-2)

You can set a ringing melody for incoming fax and data calls:

Select **Menu > Settings > Sound & Alert > Ringing > Data / Fax**
The current setting is displayed

Press **Change**
Scroll to the desired melody
Press **Select**

► Melody for High Power Alerting (7-1-1-3)

You can select a specific melody which will sound when the signal strength is too weak to connect you with an incoming call but is still strong enough to send an alert that someone is trying to reach you, so you can move to a better place for reception.

Select **Menu > Settings > Sound & Alert > Ringing > SAT Alerting**
The current setting is displayed

Press **Change**
Scroll to the desired melody
Press **Select**

► Melody for alarms (7-1-1-4)

Select **Menu > Settings > Sound & Alert > Ringing > Alarm**
The current setting is displayed

Press **Change**
Scroll to the desired melody
Press **Select**

► Melodies for caller groups (7-1-1-5)

It is possible to assign different ringing melodies for different caller groups corresponding to the caller groups in the phonebook.

Note:

The setting of melodies for caller groups only applies to voice calls! So, when you receive a fax or a data call from a number, which is recorded in a caller group, you will not hear the ringing melody assigned to the concerned caller group. Instead of it the melody for incoming faxes and data (see page 45) will be played.

To assign ringing melodies to caller groups:

Select **Menu > Settings > Sound & Alert > Ringing > Caller Groups > VIP** or **Business** or **Private** or **Family** or **Others**
The current setting is displayed

Press **Change**
Scroll to the desired ringing melody
Press **Select**

► Earset alerting (7-1-1-6)

When earset alerting is set to **On**, you will hear the ringing only in a connected earset. If earset alerting is set to **Off**, you will hear the ringing from the buzzer *and* in the earset.

Select **Menu > Settings > Sound & Alert > Ringing > Earset Alert**
The current setting is displayed

Press **Change**
Press **Save**

▶▶ Ringing type (7-1-1-7)

You can fine-tune the set ringing melodies by means of the following options:

- **Ring Once**
The specified melodies are played only once when a call comes in.
- **Increasing**
The specified melodies are played at the lowest volume at first and keep on getting louder each time they are repeated until the maximum volume is reached.
- **Continuous**
The specified melodies are played at the set volume repeatedly until you answer the call or mute it.
This is the standard setting.
- **Silent**
The specified ringing melodies are switched off. As a reminder you see the  symbol in the status line.

- **Beep Once**
When a call comes in, you are alerted not actually by a melody, but by a short single beep.

To set the ringing type for the ringing melodies:

- Select **Menu > Settings > Sound & Alert > Ringing > Ringing Type**
The list of possible settings is displayed
- Press **Change**
- Press **Select**

▶▶ Tones on/off (7-1-2/7-1-3/7-1-4)

You can switch alerting tones on or off.

The ringing tone may be switched off in the **Ringing Type** menu (see above). Earset alerting can also be switched on and off in the **Ringing** menu (see page 45).

▶ Message tone (7-1-2)

When you receive a text message your mobile phone emits a message tone.

- Select **Menu > Settings > Sound & Alert > Message Tone**
The current setting is displayed
- Press **Change**
- Press **Save**

▶ Keypad tone (7-1-3)

This sets the tone off/on, you hear when you press the mobile phone's keys.

- Select **Menu > Settings > Sound & Alert > Keypad Tone**
The current setting is displayed
- Press **Change**
- Press **Save**

▶ Warning tone (7-1-4)

This sets the warning and error tones off/on. You will hear it when e. g. connecting accessories or after making wrong entries with the keypad.

- Select **Menu > Settings > Sound & Alert > Warning Tone**
The current setting is displayed
- Press **Change**
- Press **Save**

▶▶ Sound on/off

You can switch all sounds on and off.

If all sounds are off the  symbol is indicated.

Press **Menu**
Press **#** within 3 seconds

▶▶ Alarms (7-6)

You may set 2 separate alarm entries with a time, date, interval (daily, once or weekly) and a reminder message which will be displayed, when the alarm is triggered.

The internal clock for alarms will still keep on running for about one hour if neither the battery nor the charger is connected.

▶ Set or edit the alarm (7-6-1-3/7-6-2-3)

Select **Menu > Settings > Alarm > Alarm1** or **Alarm2 > Edit**
The alarm editor is displayed

Enter the time

Press **Next**

Enter the date

Press **Next**

Enter the reminder message

Press **Next**

Select the interval (**Daily**, **Once** or **Weekly**)

Press **Save**

Now the alarm is switched on

▶ Switch the alarm on/off (7-6-1-2/7-6-2-2)

Select **Menu > Settings > Alarm > Alarm1** or **Alarm2 > On/Off**
The current setting is displayed

Press **Change**

Press **Save**

When an alarm is switched on, this will be indicated in idle mode by the  symbol.

The alarm functions even when the mobile phone is turned off.

▶ See the alarm setting details (7-6-1-1/7-6-2-1)

Select **Menu > Settings > Alarm > Alarm1** or **Alarm2 > Detail**
Time, date, interval and reminder message are displayed

▶ Stop an alarm

When the alarm is triggered, the alarm melody is played and the reminder message (if set) is displayed.

To confirm the alarm:

Press **Stop**
The mobile phone is in idle mode again and the alarm tone is switched off

or:

Press **Snooze**
After 5 minutes the alarm will alert again; it will be repeated max. 3 times

If an alarm is not stopped within 30 seconds, the alarm stops and will be repeated max. 3 times every 5 minutes.



▶▶ Call duration (2-4)

Your mobile phone automatically records the amount of time you have used for calls.

The call durations since the last counter reset can be displayed for the following call categories:

- Last Call
- All Calls
- All Incoming
- All Outgoing
- SAT Incoming
- SAT Outgoing
- GSM Incoming
- GSM Outgoing

To display call duration:

- Select **Menu > Call Register > Call Duration > [call category]**
The call duration is displayed.

Reset time counter (2-7-1)

You can reset the time counter of each call category:

- Select **Menu > Call Register > Reset Counter > Time > [call category]**

▶▶ Call costs (2-5)

Your mobile phone automatically records the approximate cost you have run up making calls. The displayed amount of cost depends on your cost settings (see page 37).

Call costs since the last counter reset can be displayed for the following call categories:

- Last Call
- All Calls
- All Incoming
- All Outgoing
- SAT Incoming
- SAT Outgoing
- GSM Incoming
- GSM Outgoing

To display call costs:

- Select **Menu > Call Register > Call Costs > [call category]**
The costs are displayed

Reset cost counter (2-7-2)

You can reset the cost counter of each call category:

- Select **Menu > Call Register > Reset Counter > Cost > [call category]**

▶▶ Remaining Credit (2-6)

You can display the remaining credit as amount of call units (if you selected to display costs as amount of call units) or as the amount of money, if you selected to display costs as amount of money (see 'Cost settings (7-3-7)' on page 37).

To display the remaining credit:

- Select **Menu > Call Register > Remaining Credit**
The remaining credit is displayed

▶▶ SIM info (6-6)

The following SIM information is available:

- **Name Capacity** (6-6-1)
 Displays the remaining space for phone-book entries and for the fixed dial list on the SIM card
- **Msg. Capacity** (6-6-2)
 Displays the maximum space and the remaining space for SMS messages on the SIM card
- **Language** (6-6-3)
 Displays the preset language on the SIM card

To display the SIM info:

- Select **Menu > Security > SIM Info > Name Capacity** or **Msg. Capacity** or **Language**
The corresponding info is displayed

▶▶ Cell info (7-2-2)

Your mobile phone receives the name of the cell it is connected to. Sending the name of the cell is network dependent.

In SAT mode also a region string denoting the location can be received.

To switch displaying cell info on or off:

- Select **Menu > Settings > Phone > Cell Info**
The current setting is displayed
- Press **Change**
 Press **Save**

▶▶ IMEI number (6-7)

You may find displaying your mobile phone's identity number (IMEI: **I**nternational **M**obile **E**quipment **I**dentifier) quite useful for service and security purposes.

To display the IMEI number:

- Select **Menu > Security > IMEI Number**
The number is displayed

Using the GPS facilities (8)

The GPS system can display information relating to the latitude, longitude, altitude, UTC (**U**niversal **T**ime **C**oordinated, previously 'Greenwich Time') time and date.

While you are using the location track feature, you still can make and receive calls (see page 51).

While using all other GPS facilities, you can only receive calls. In all cases the GPS features are suspended during calls.

Note:

To use the GPS facilities successfully, the mobile phone must have a good view of the open sky.

▶▶ Display your current position (8-1)

You can display the latitude, longitude, altitude, date and time of your current position, save it under a way point name or send it as an SMS message. The 'Z' after the time stamp indicates UTC.

To display data of your current position:

- Select **Menu > GPS Manager > Current Position**
After a while (this may last up to several minutes), the current latitude and longitude data is displayed
- Press ▼ to display altitude data and time/date
- Press ▲ to display latitude and longitude again.

▶ Send position as SMS

- Press **Options**
- Select **Send as SMS**
The SMS editor (see page 23) with the current GPS data is displayed

▶ Save position as way point

The GPS data are displayed in units of degrees, minutes and seconds; you can save the position by assigning it for instance to the name of the place.

- Press **Options**
The way point list is displayed
- Select a storage location
If a location is selected where another way point is already stored, it will be overwritten without warning.
- The GPS editor is displayed*
- Enter a name to designate the position
- Press **Save**

Saved way points can be referred to by the menu item **Way Points**.

▶▶ Way point manager (8-2)

The way point manager shows the list with your saved way points (up to 10). You can display the data of a way point, edit and delete the way points, send them as SMS. Or you may send them via a data cable to the V.24/V.28 interface of a PC in order to track your way manually.

The GPS NMEA protocol is used for transmitting way points to the PC at 4800 Baud. You can not change this.

► See details of a way point

- Select **Menu > GPS Manager > Way Points**
Your way point list is displayed
- Scroll to the desired way point
- Press **Options**
- Select **Details**
Latitude, longitude and altitude of the way point are displayed

► Send way point as SMS

- Select **Menu > GPS Manager > Way Points**
Your way point list is displayed
- Scroll to the desired way point
- Press **Options**
- Select **Send as SMS**
The SMS editor (see page 23) with the way point name and the GPS data is displayed

► Send to PC

- Select **Menu > GPS Manager > Way Points**
Your way point list is displayed
- Scroll to the desired way point
- Press **Options**
- Select **Send to PC**

► Edit way point name

- Select **Menu > GPS Manager > Way Points**
Your way point list is displayed
- Scroll to the desired way point
- Press **Options**
- Select **Edit**
The GPS editor is displayed
- Change the name of the way point (see page 58)
- Press **Save**

► Delete way point from list

When your way point list contains 10 entries and you want to add a new way point, you can delete entries instead of overwriting them with a new ones:

- Select **Menu > GPS Manager > Way Points**
Your way point list is displayed
- Scroll to the desired way point
- Press **Options**
- Select **Delete**
- Press **Delete**

►► Switch location track on/off (8-3)

To send the data from the mobile phone to a PC you have to connect it via a data cable to the PC whereby the NMEA 0183 V2.20 software standard is used.

The mobile phone can only be connected to a PC serial port, not to an NMEA port.

To switch location track on or off:

- Select **Menu > GPS Manager > Location Track**
The current setting ('on' or 'off') is displayed
- Press **Change**
- Press **Save**

Note:

Location Track is suspended during calls.

►► Show continuous position (8-4)

This function is similar to 'Display your current position (8-1)', the difference being that the displayed GPS data is constantly updated at short intervals. This might be useful when you are in motion, e.g. on the deck of a ship or in an open car.

By pressing **Options** you can use the currently displayed data for the same features as provided for **Current Position** (see page 50).

- Select **Menu > GPS Manager > Cont. Position**
The current latitude and longitude data is displayed and updated every few seconds
- Press ▼ to display altitude data and time/date
- Press ▲ to display latitude and longitude data again



Appendix

▶▶ Troubleshooting

| Problem | Possible reasons/Possible measures |
|------------------------|--|
| Unable to switch on | <ul style="list-style-type: none"> – Empty battery. Charge it. Check charging indication on display. – Battery contacts dirty. Clean contacts. Try switching on and off again. – Battery has been replaced. Recharge. |
| Unable to make calls | <ul style="list-style-type: none"> – Check your mobile phone's display to make sure that the mobile phone is switched on. If the mobile phone does not display information on its screen, check if the battery is fully charged and properly installed. – Check that the SIM card is not damaged and is correctly installed in your mobile phone. – Check that you have dialled the number correctly. – Satellite mobile phones should have a clear view of the sky. If you are inside a building, tunnel, or other structure that limits your view of the sky, the satellite signal may be weak or unavailable. To check signal strength, access the menu and follow the prompts on the display. The higher the number of bars displayed on your mobile phone, the better the signal. – In SAT mode make a manual SAT Registration with the menu item Network > SAT Registration. – Check that the mobile phone is switched to the proper mode. – Check that the correct SIM card PIN has been entered. For your security, the SIM card is blocked if an incorrect PIN is entered three times consecutively. – Check that outgoing calls are not barred. If barring is enabled, cancel the bar by referring to section 'Security settings'. – Check that the antenna is fully extended. The antenna should point towards the satellite with a clear view to the sky. |
| Unable to accept calls | <ul style="list-style-type: none"> – The satellite signal may be weak or unavailable if you are inside a building, tunnel, or other structure. Your mobile phone should have a clear view of the sky. – Check active call diversions. – Check that incoming calls are not barred. If barring is enabled, cancel the bar by referring to section 'Security settings'. |

| Problem | Possible reasons/Possible measures |
|---|---|
| No calls possible | <ul style="list-style-type: none"> – Dialling error. Use full national area code. – All calls barred. Check (barring code needed to clear). – New SIM card fitted. Check for new restrictions. – Charge limit reached. Call your service provider or use PIN2 to reset. |
| Certain calls not possible | <ul style="list-style-type: none"> – Call restriction set. Restrictions may be set by your service provider. Check restrictions. – Number is too long. Check number. |
| Calls are dropped | <ul style="list-style-type: none"> – Make sure no obstruction is blocking the satellite signal. Make sure that your mobile phone has a clear view of the sky. If you are inside a building, tunnel, or other structure that limits your view of the sky, the satellite signal may be weak or unavailable. |
| Mobile phone does not ring when a call comes in | <ul style="list-style-type: none"> – Check that the mobile phone is set to ring. |
| Interference from other satellite mobile phones | <ul style="list-style-type: none"> – If you are near another satellite mobile phone not designed for the Thuraya system, switch the other satellite mobile phone off or move as far away as possible to avoid interference. In some situations, the distance required to prevent interference may be up to 200 metres. If you see the direction in which the other satellite mobile phone is transmitting, move out of the communication path. On ships, move as far away as possible from the ship's satellite antenna. |
| System busy | <ul style="list-style-type: none"> – Check that the antenna is properly positioned. The satellite mobile phone requires the antenna to be fully extended. – Make sure that your mobile phone has a clear view of the sky. If you are inside a building, tunnel, or other structure that limits your view of the sky, the satellite signal may be weak or unavailable. |
| People experience delays when calling me | <ul style="list-style-type: none"> – When someone calls you at your mobile phone number, there may be a delay of up to 60 seconds while the system locates your mobile phone. |
| No network connection | <ul style="list-style-type: none"> – Weak signal. Move higher, to a window or open space. – Outside GSM/SAT coverage area. Check service provider's network coverage. – SIM card not valid. Call your service provider. – New network not authorized. Try selecting manually, or try other network. |
| Mobile phone loses network | <ul style="list-style-type: none"> – Weak signal. Reconnection or connection to another service provider is automatic. Switching off and on may accelerate this. |

| Problem | Possible reasons/Possible measures |
|--|--|
| Call diversion does not work | <ul style="list-style-type: none"> – Check that you have entered the destination phone number correctly, including the country code and any required area or city codes. – Call barring of outgoing calls is not possible if any call diversion for voice is switched on. – Some call forwarding and call barring options may not be used at the same time. For example, enabling call divert of all calls and barring of all outgoing calls is not possible. |
| Missed calls are not diverted to the voice mailbox | <ul style="list-style-type: none"> – Make sure that call divert is set to your voice mailbox number. Verify your call diversion settings by following the instructions in section 'Diverting calls'. – Check that call barring is not active. Call diversion cannot be used when call barring is active. |
| Cannot save phone numbers or messages | <ul style="list-style-type: none"> – Check that the SIM card memory is not full. Delete phonebook entries. |
| Cannot find phonebook | <ul style="list-style-type: none"> – SIM card has been changed. Refit original SIM card. |
| Charging problem | <ul style="list-style-type: none"> – Battery defective. Replace it; after several years of average use, a gradual decline may be expected. – Contact problem. Check mains socket and connection to mobile phone. |
| Mobile phone shuts down even with good network connection and sufficiently charged battery | <ul style="list-style-type: none"> – Mobile phone/battery is overheated. Let the mobile phone/battery cool down. – Mobile phone/battery is too cold. Allow the battery/mobile phone to warm up (e.g. in your pocket). – Wait until 'Normal Temperature' is displayed. |
| Warning is displayed: 'Attention – Critical temperature' | <ul style="list-style-type: none"> – Wait until 'Normal Temperature' is displayed. |
| SIM card error | <ul style="list-style-type: none"> – SIM card damaged. Carry out visual check. Return SIM card to your service provider. – SIM card contact dirty. Clean SIM card and mobile phone contacts with a dry cloth. – SIM card inserted wrong way round. Make sure that SIM card is inserted right way round. – 5V SIM card inserted. Order 3V or 3/5V SIM card from your service provider |
| PUK error | <ul style="list-style-type: none"> – 3 incorrect entries. Enter PUK supplied with your SIM card as instructed. If you have lost your PUK, call your service provider for assistance. – Service not authorised. Call your service provider. |

| Problem | Possible reasons/Possible measures |
|------------------------------|---|
| SIM card does not accept PIN | – If your SIM card does not accept your correctly entered PIN, contact your service provider. |
| Voice mailbox is not working | – Diversion not set. Set call diversion. |
| Cannot send a message | – Message memory full. Delete a message to make room. – Service provider does not support this service. Check with your service provider. – Check if sending of SMS barred (outgoing calls). – SMS centre and message type not set. Set number of SMS centre. – Destination does not have compatible mobile phone. Check. |
| Cannot set a function | – Not supported by your service provider or registration required. Call your service provider. |

If the mobile phone sustains a shock

- Remove and refit battery and SIM card.
- Do not dismantle.

If the mobile phone becomes wet (water)

- Dry the mobile phone off quickly with a cloth.
- Do not heat.
- Dry the contacts thoroughly.
- Remove and refit the battery and SIM card.
- Stand upright in an open space with free air flow.
- Do not dismantle.

▶▶ Technical specifications

▶ Mobile Phone

Dual-mode satellite/GSM mobile phone:

- GSM at 900 MHz
- SAT at 1.5/1.6 GHz

3V and 3/5V SIM card (GSM compatible)

GPS function with 12 Channel receiver

GPS location tracking

Serial port PC interface

Standard lithium-ion battery: 7.2 V

- GSM mode:
 - talk time 4 h, standby time 50 h
- SAT mode:
 - talk time 2.5 h, standby time 35 h

Travel charger: 110/220 VAC, 50/60 Hz

▶ Call functions

Note:

Some of the functions are network dependent.

Primary user services:

- voice
- fax (with 9-wire V.24/V.28 data cable accessory)
- data (with 9-wire V.24/V.28 data cable accessory): transmission rate automatic or adjustable from 2.4 to 19.2 Kbps

Network services:

- short message service (SMS)
- voice mailbox
- supplementary service

Call cost/call time display

Signal strength display

Conference calls

Call waiting/call hold

Separate call/fax/data divert

DTMF signalling

Automatic or manual network selection

Calling line identification presentation (CLIP)

Calling line identification restriction (CLIR)

Connected line identification presentation (COLP)

Connected line identification restriction (COLR)

▶ Call management

Automatic redial

Any key answering

Caller group identification with melodies

Welcome message

One touch dialling

Short dialling

▶ Paging

High Power Alerting

▶ Security and cost control

Emergency calls without SIM card (network dependent)

PIN, PIN2, security code, barring code

Various call barring possibilities

Fixed dialling of numbers/prefixes

Advice of charge (GSM, SAT)

Last and cumulative call duration and charge

▶ Short Message Service

SMS class 0, 1, 2, 3

Send and receive messages up to 160 characters

SMS parameters format:

- Text
- Fax G3
- ERMES
- E-mail

Delivery report

Info Broadcast support

▶▶ Using battery and charger

For charging and recharging your mobile phone battery, see page 2.

- Use specified Ascom chargers only.
 - Never change or remove battery while the mobile phone is connected to the charger!
 - Always disconnect charger from the power source, when not in use!
 - Do not incinerate battery.
 - Do not disassemble or crush battery.
 - Never leave the mobile phone connected to a charger for more than one week! Overcharging may shorten its life.
 - Electronic products and batteries must be disposed of properly at the end of their life, in accordance with local facilities and regulations.
 - Never use any charger or battery that is damaged or worn out!
- Never short-circuit the battery! Short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals, e.g. when you carry a spare battery in your pocket or purse.
 - Do not expose battery to high temperature 60 °C (140 °F).
 - For best performance try to keep the battery between 15 °C (59 °F) and 25 °C (77 °F). A mobile phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. The performance of Li-Ion batteries is particularly limited in temperatures below 0 °C (32 °F).
 - When the battery is running out of power and only about a minute of talk time remains, a warning tone is heard and a warning displayed. When no more talk time is left, a note is displayed, a warning tone is sounding and the mobile phone is switched off automatically.

▶▶ Character and digit input in text editor mode

When your mobile phone is in text editor mode, e.g. when you are writing a name in the phonebook or when you are writing an SMS, you use the keys on your keypad.

To write a character, press the corresponding key as often as indicated by the character's position printed on the key.

The table below gives you all the characters which can be typed:

Upper case – lower case

You can switch from writing upper case letters to lower case letters and switch back again by pressing any of the keys **2 ABC** to **9 WXYZ** for 2 seconds.

Example:

To write an 'E' press **3 DEF** two times. To continue with an 'i', first press **4 GHI** for 2 seconds and then press it 3 times again for a normal short time.

| | | |
|---------------|---------------------------------|------------------------------------|
| 1 QO | no upper/lower case distinction | 1 . ? , ! - : ; ' " ' j ç |
| 2 ABC | upper case: lower case: | A B C 2 Ä Å Æ Ç a b c 2 ä å æ ç |
| 3 DEF | upper case: lower case: | D E F 3 É d e f 3 è é |
| 4 GHI | upper case: lower case: | G H I 4 g h i 4 ì |
| 5 JKL | upper case: lower case: | J K L 5 j k l 5 |
| 6 MNO | upper case: lower case: | M N O 6 Ñ Ò Ø m n o 6 ñ ò ø |
| 7 PQRS | upper case: lower case: | P Q R S 7 ß p q r s 7 ß |
| 8 TUV | upper case: lower case: | T U V 8 Ü t u v 8 ü ù |
| 9 WXYZ | upper case: lower case: | W X Y Z 9 w x y z 9 |
| 0 + | no upper/lower case distinction | 'space' + 0 @ & ↵ § £ \$ ¥ |
| * | no upper/lower case distinction | * / - () < = > % □ |
| # | no upper/lower case distinction | # Δ Φ Γ Λ Ω Π Ψ Σ Θ Ξ |

Delete characters

If you want to delete one character to the left of the cursor, press **⏪**.

If you want to delete all characters, press **⏪** and hold it down until all the characters are deleted.

Move the cursor

Whenever it is possible to move the cursor left, right, up or down, this is indicated in the softkey line: **◀ ▶ ▲ ▼**. To move the cursor, press the fox key under the corresponding symbol in the softkey line.

▶▶ Menu system and quick access codes

▶ Simplified menu

- 1 Write Message
- 2 List Messages
- 3 Listen Voicemail
- 4 Divert Voicemail
- 5 System Pref.
- 6 Ringing Volume
- 7 Ringing Type
- 8 Current Position
- 9 Keypad Lock

▶ Standard menu tree

- 1 Messages
 - 1-1 Write Message
 - 1-2 List Messages
 - 1-3 Info Broadcast
 - 1-3-1 Status
 - 1-3-2 Topic
 - 1-3-3 Set Language
 - 1-4 Listen Voicemail
- 2 Call Register
 - 2-1 Missed Calls
 - 2-2 Received Calls
 - 2-3 Dialed Calls
 - 2-4 Call Duration
 - 2-5 Call Costs
 - 2-6 Remaining Credit
 - 2-7 Reset Counter
 - 2-7-1 Time
 - 2-7-2 Cost
- 3 Call Divert
 - 3-1 Voice
 - 3-1-1 All Voice
 - 3-1-2 Busy
 - 3-1-3 No Reply
 - 3-1-4 Not Reachable
 - 3-1-5 Clear Divert
 - 3-2 All Fax
 - 3-3 All Data
 - 3-4 Clear All Divert
- 4 Network
 - 4-1 SAT Registration
 - 4-2 Preference
 - 4-3 Network Mode
- 5 System Pref.
- 6 Security
 - 6-1 Call Barring
 - 6-1-1 Outgoing
 - 6-1-1-1 All Calls
 - 6-1-1-2 All Int. Calls
 - 6-1-1-3 Int. Except Home
 - 6-1-2 Incoming
 - 6-1-2-1 All Calls
 - 6-1-2-2 Calls Abroad
 - 6-1-3 Clear Barrings
 - 6-1-3-1 Outgoing
 - 6-1-3-2 Incoming
 - 6-1-3-3 All
 - 6-2 Fixed Dial
 - 6-2-1 Show List
 - 6-2-2 On/Off
 - 6-2-3 Add New
 - 6-3 PIN Code
 - 6-4 Change Codes
 - 6-4-1 Change PIN
 - 6-4-2 Change PIN2
 - 6-4-3 Security Code
 - 6-4-4 Barring Code
 - 6-5 Security Code
 - 6-6 SIM Info
 - 6-6-1 Name Capacity
 - 6-6-2 Msg. Capacity
 - 6-6-3 Language
 - 6-7 IMEI Number
 - 6-8 Closed Group

7 Settings

7-1 Sound & Alert

7-1-1 Ringing

7-1-1-1 Voice

7-1-1-2 Data/Fax

7-1-1-3 SAT Alerting

7-1-1-4 Alarm

7-1-1-5 Caller Groups

7-1-1-5-1 VIP

7-1-1-5-2 Business

7-1-1-5-3 Private

7-1-1-5-4 Family

7-1-1-5-5 Others

7-1-1-6 Earset Alert

7-1-1-7 Ringing Type

7-1-1-8 Volume

7-1-2 Message Tone

7-1-3 Keypad Tone

7-1-4 Warning Tone

7-2 Phone

7-2-1 Language

7-2-2 Cell Info

7-2-3 Greeting

7-2-4 Own Number

7-2-4-1 Voice

7-2-4-2 Fax

7-2-4-3 Data

7-2-5 LCD Contrast

7-2-6 Voicemail No.

7-3 Call

7-3-1 Any Key Answer

7-3-2 DTMF Tone

7-3-3 Call Waiting

7-3-4 Send Own No.

7-3-5 Autom. Redial

7-3-6 One Touch Dial

7-3-7 Cost

7-3-7-1 Charge Rate

7-3-7-2 Cost Limit

7-3-7-3 Cost Displayed

7-4 Car

7-4-1 Auto Answer

7-4-2 Backlight

7-5 Clock

7-5-1 Set Time

7-5-2 Time Format

7-5-3 Set Date

7-6 Alarm

7-6-1 Alarm1

7-6-1-1 Detail

7-6-1-2 On/Off

7-6-1-3 Edit

7-6-2 Alarm2

7-6-2-1 Detail

7-6-2-2 On/Off

7-6-2-3 Edit

7-7 Reset

7-7-1 Phonebook

7-7-2 Factory Set

7-8 SMS Parameter

7-8-1 SMS Center

7-8-2 Validity

7-8-3 Format

7-8-4 Delivery Reports

7-9 Data Link Rate

8 GPS Manager

8-1 Current Position

8-2 Way Points

8-3 Location Track

8-4 Cont. Position

9 Keypad Lock



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