

* Some of the contents in this manual may differ from your phone, depending on the software installed or your service provider.



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Important safety precautions

Read these guidelines before using your wireless phone. Failure to comply with them may be dangerous or illegal.

Road safety at all times

Do not use a hand-held phone while driving; park the vehicle first.

Switching off when refuelling

Do not use the phone at a refuelling point (service station) or near fuels or chemicals.

Switching off in aircraft

Wireless phones can cause interference. Using them in aircraft is both illegal and dangerous.

Switching off near all medical equipment

Switch off your phone near the medical equipment. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy. Follow any regulations or rules in force.

Interference

All wireless phones may be subject to interference, which could affect their performance.

Special regulations

Meet any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger (in a hospital for example).

Water resistance


Your phone is not water-resistant. Keep it dry.

Important safety precautions

Sensible use

Use only in the normal position (held to the ear).
Avoid unnecessary contact with the antenna when the phone is switched on, especially when the phone is in service.

Emergency call

Key in the emergency number for your present location, then press the  key. Give all the necessary information as accurately as possible. Do not cut off the call until given permission to do so.

Keeping small children away from your phone

Keep the phone and all its parts including accessories out of the reach of small children.

Accessories and batteries

Use only Samsung-approved accessories. Use of any unauthorised accessories could damage your phone and may be dangerous.

Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers.

Qualified service

Only qualified service personnel may install or repair your phone.

For more detailed safety information, see "Health and safety information" on page 169.

CAUTION

RISK OF EXPLOSION IF A BATTERY IS REPLACED
BY AN INCORRECT TYPE.

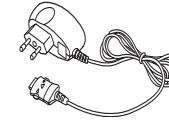
DISPOSE USED BATTERIES ACCORDING
TO THE INSTRUCTIONS.

Unpacking

Your package contains the following items:



Phone



Travel adapter



Battery



Owner's manual

In addition, you can obtain the following accessories for your phone from your local Samsung dealer:

- Advanced handsfree car kit
- Simple handsfree car kit
- PC data link kit
- Headset

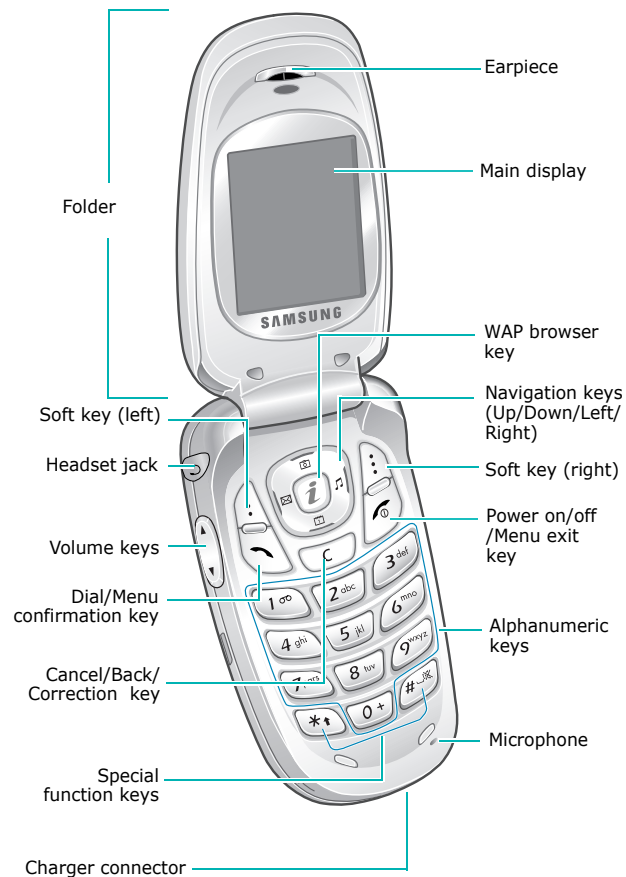
Note: This items supplied with your phone and available accessories may be different, depending on your country or service provider.

Your phone

Phone layout

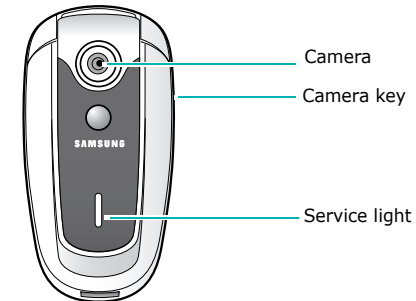
The following illustrations show the main elements of your phone:

Open view



Your phone

Closed view



Key(s) Description








Perform the functions indicated by the text above them, on the bottom line of the display.







In menu mode, scroll through the menu options and the Phonebook memory. In idle mode, the Left key accesses the new SMS message writing screen (**Menu 5.1.1**), the Right key accesses the incoming call melody setting menu (**Menu 4.1.1**), the Up key accesses the camera menu (**Menu 8**), and the Down key accesses the calendar menu (**Menu 7.2**).



In idle mode, launches the WAP (Wireless Application Protocol) browser directly.

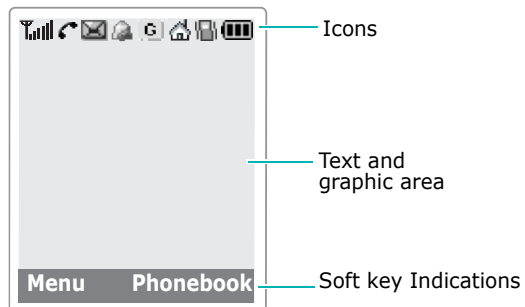
Key(s)	Description
	Initiates or answers a call. In idle mode, accesses the call log list. In menu mode, selects a menu function or stores information that you have entered, such as a name in the phone or SIM memory.
	Deletes characters from the display. When pressed and held in idle mode, quickly accesses the new memo screen (Menu 7.1). In menu mode, returns to previous screen.
	Ends a call. When pressed and held, switches the phone on or off. In menu mode, cancels your input and returns to idle mode.
	When pressed and held in idle mode, quickly accesses your voice mail server.
	Enter numbers, letters, and some special characters.

Key(s)	Description
	Used for various purposes in different functions. When pressed and held while entering a phone number, the * key enters a pause.
	When pressed and held in idle mode, the # key enters or exits quiet mode.
	(on the left side of the phone) During a call, adjusts the earpiece volume. In idle mode with the phone open, adjusts the key tone volume. When pressed and held as a call is coming in, rejects the call or silences the ring tone. See page 159. In the capture mode, flip the picture vertically by pressing the volume up key and horizontally by pressing the volume down key.
	(on the right side of the phone) When pressed and held, turns the camera capture mode on. In capture mode, works as the camera shutter release.

Display

Display layout

The display has three areas:



Area	Description
First line	Displays various icons. See page 15.
Middle	Display messages, instructions, and any information that you enter, such as a number to be dialled.
Last line	Shows the functions currently assigned to the two soft keys.




Icons

Icon	Description
	Shows the received signal strength. The more bars, the stronger the signal.
	Appears when a call is in progress. When your SIM card supports ALS (Alternate Line Service), this icon may appear with the number 1, 2, or both. For example , , or .
	Appears when you are out of a service area. When it displays, you cannot make or receive calls.
	Appears when you have new or unchecked voice messages. When your SIM card supports ALS (Alternate Line Service), this icon may appear as , , or .
	(This icon may be shown only if your service provider supports this.)
	Appears when you have new or unread messages.
	Appears when you have new or unchecked multimedia messages.
	Appears when you are retrieving a multimedia message.
	Appears when you are sending a multimedia message.

Icon Description (continued)

Appears when you set the alarm(s) to ring at a specified time.



Appears when the Call diverting feature is activated. When your SIM card supports ALS (Alternate Line Service), this icon may appear with the number 1, 2, or both. For example: , , or . (This icon may be shown only if your service provider supports this.)



Appears when you are connected to the GPRS network.



Appears when you are in your home zone. (May be shown only if your service provider supports this feature)



Appears when you are in your office zone. (May be shown only if your service provider supports this feature)



Appears when you set the alert type for incoming calls to **Vibration** or **Vibration then melody**. For further details, see page 81.



Appears when the quiet mode is active.



Shows the level of your battery. The more bars you see, the more power you have left.

Backlight on mode

The displays and the keypad are illuminated by a backlight. When you press any key or open the

folder, the backlight illuminates. It turns off if no key is pressed within a given period of time, depending on the **Backlight** option settings. See page 153 for further details.

Dim mode

If no key is pressed for a given period of time which you can set in the **Backlight** menu option (**Menu 9.1.3**), the backlight dims to save power. Press any key to awaken it from dim mode.

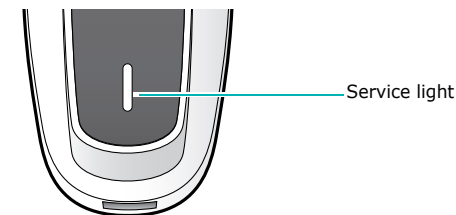
Display off mode

If no key is pressed for one minute after the backlight dims, the main display shuts off. Press any key to reactivate the main display.

Service light

The service light is on the folder. It flashes when services are available on the phone.

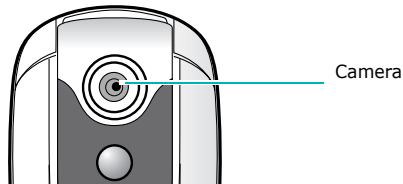
To activate or deactivate the service light, set the **Service light** menu (**Menu 9.1.5**). See page 154.



Camera

The camera embedded in your phone allows you to take a picture of people or events while on the move.

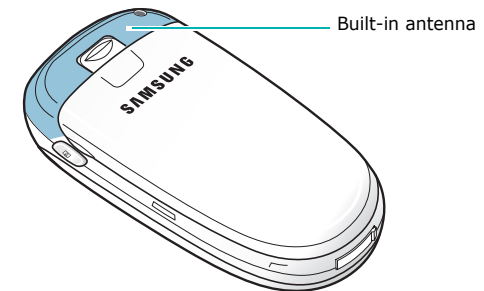
For further details about using the Camera feature, see page 143.



Built-in antenna

Your phone has a built-in antenna. As with other mobile radio transmitting equipment, do not touch the antenna unnecessarily when the phone is switched on. Contact with the antenna affects call

quality and may cause the phone to operate at a higher power level than needed.



Getting started

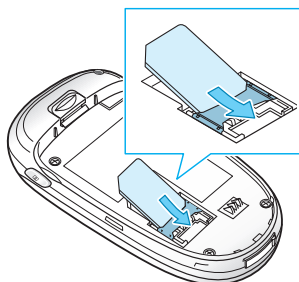
Inserting/Removing the SIM card

When you subscribe to a cellular network, you are provided with a SIM card loaded with your subscription details, such as your PIN, any optional services available, and so on.

- Keep all SIM cards out of the reach of small children.
- The SIM card and its data can be easily damaged by scratches or bending, so be careful when you are handling, inserting, or removing the card.
- When you are installing the SIM card, always make sure that the phone is switched off, as you will need to remove the battery.

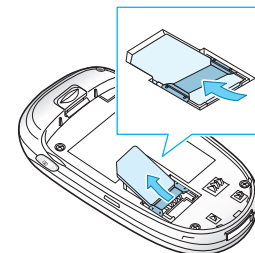
Inserting the SIM card

1. If necessary, remove the battery by referring to page 22.
2. Insert and slide the SIM card under the tab, ensuring that the notched corner goes to the top left and the gold contacts of the card face go into the phone.



Removing the SIM card

To remove the SIM card, slide the card out of the holder, as shown.



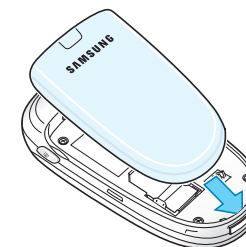
Installing/Removing/Charging the battery

Your phone is powered by a rechargeable Li-ion battery. Use only approved batteries and chargers. Ask your local Samsung dealer for further details.

Note: You must fully charge the battery before using your phone for the first time. A discharged standard battery is fully recharged in approximately 130 minutes.

Installing the battery


1. Insert the teeth on the bottom of the battery into the corresponding slots on the phone.

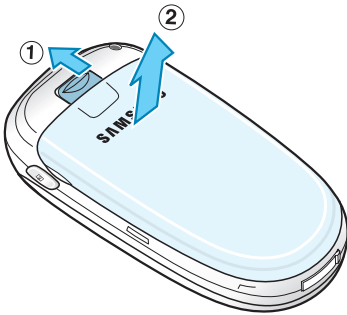


2. Press the battery against the back of the phone until it clicks into place.



Removing the battery

1. Switch off the phone by pressing and holding the  key.
2. To remove the battery, pull the battery catch toward the top of the phone and hold it in that position. Lift the battery away from the phone.

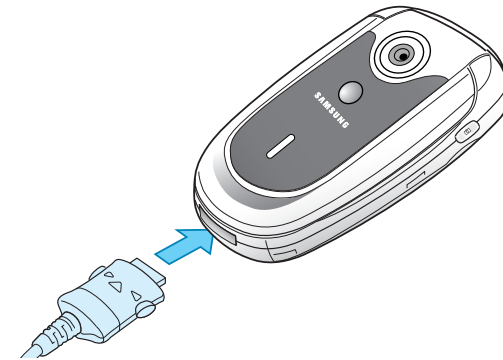


Charging the battery by using the travel adapter

Note: The phone can be used while the battery is being charged, but this causes the battery to charge more slowly.

1. Plug the travel adapter connector into the jack at the bottom of the phone.

Check that the arrow on the connector is facing up, as is the phone.




2. Plug the adapter into a standard AC wall outlet.

While charging, the battery icon at the top right-hand corner of the display repeatedly fills to show that the battery is charging.

- When charging is finished and the 'Fully charged' message is displayed, disconnect the adapter from the power outlet and from the phone by pressing the grey tabs on both sides of the connector and pulling the connector out.




Low Battery Indicator

When the battery is weak and only a few minutes of talk time remain, the battery sensor informs you in the following ways: an empty battery icon flashes (), you hear a warning tone, and a message repeats at regular intervals on the display.

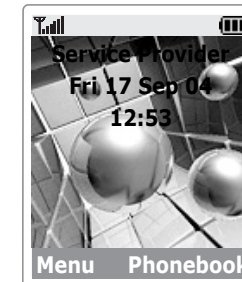
When the battery becomes too weak for the phone to operate, it switches off automatically.

Switching the phone on or off

To switch the phone on:


- Hold down the  key until the phone switches on.
- If the phone asks for a PIN, enter the PIN and press the **OK** soft key. For further details, see page 166.

The phone searches your network and the current date and time appear on the display. After your phone finds its network, you can make and receive a call.





Note: To change the language, use the **Language** menu option (**Menu 9.3**). For further details, see page 155.

To switch the phone off:

Hold down the  key until the power-off animation displays.

Selecting functions and options

Your phone offers a set of functions that allows you to customise your phone. These functions are arranged in menus and sub-menus, accessed via the two soft keys marked  and . Each menu and sub-menu allows you to view and alter the settings of a particular function.

The roles of the soft keys vary according to the current context; the labels or icons on the bottom line of the display, just above the soft keys, indicate their current roles.

Example:





Press the left soft key to access the menu functions.

Press the right soft key to access the Phonebook feature.

To view various functions/options available or select the one you want:

1. Press the appropriate soft key.


2. To	Press the
select the: <ul style="list-style-type: none"> • function displayed • option highlighted 	Select soft key.
view the next function or highlight the next option on a list	Down key.
move back to the previous function or option on a list	Up key.
move back up one level in the structure	 (or Back) soft key or C key.
return to idle mode	 key.

In some functions, you may be asked for a password or PIN. Enter the required code and press the **OK** soft key.

Call functions

Making a call

Using the number keypad


When the idle screen is displayed, enter the area code and phone number, and press the  key.

Note: If you have set the **Auto redial** option (**Menu 9.5**) to **On**, the number will be redialled automatically up to ten times if the person you called does not answer or the line is busy. For further details, see page 158.

Correcting the number

To clear	Press the
the last digit displayed	C key.
any other digit	Navigation keys until the cursor () is immediately to the right of the digit to be cleared and press the C key. You can also insert a missing digit simply by pressing the appropriate key.
all digits displayed	C key and hold it down for more than one second.

Making an international call

1. Press and hold the **0** key for the international prefix. The + character appears.
2. Enter the country code, area code, and phone number and press the  key.

Making a call from Phonebook


You can store the names and phone numbers you call regularly in the SIM card and the phone's memory, which are jointly called Phonebook. You then do not need to remember all your numbers; simply select the required name to recall the associated number.

For further details about the Phonebook feature, see page 57.




Using the call logs


The phone stores up to 20 calls dialled, received, or missed, chronologically. The last call is saved in the first position. If the same number occurs more than once, only the latest occurrence is saved.

To recall any of these numbers:

1. Press the  key in idle mode to access the Call log list.
2. Use the Up and Down keys to scroll through the list until the number you want highlights.

The call logs are listed with the following icons:

- : Dialled calls (Menu 2.3)
- : Received calls (Menu 2.2)
- : Missed calls (Menu 2.1)

3. To dial the number, press the  key.

To view each call record separately, see 'Call records' on page 68.

Viewing missed calls


If you have a subscription that includes Caller Line Identification (CLI) and you are unable to answer a call, you can find out who was calling you so that you can call the person back.

The number of missed calls displays on the idle screen immediately after a call has been missed.


To view the missed calls immediately:

1. If the folder is closed, open it up.
2. Press the **Missed** soft key.

The list of missed calls displays.

3. If necessary, scroll to the number you want by pressing the Up or Down key.
4. To dial the number, press the  key.


To use the missed call options, see 'Missed calls' on page 68.

Note: To clear the missed call notification on the display, press the  key. When you also have missed calls, voice mails, short messages or multimedia messages, and multiple Cell Broadcasts (CBs), the right soft key indication changes in the following order: **Missed**, **Connect**, **View**, **CB**, and **Phonebook**.

Speed-dialling from Phonebook

Once you have stored numbers in the Phonebook, you can dial a number simply by pressing one or two keys. For further details, see page 61.


Ending a call

When you want to finish your call, briefly press the  key or close the folder.

Answering a call


When somebody calls you, the phone rings and displays the incoming call animation.

If the caller can be identified, the caller's phone number, or name if stored in your Phonebook, displays.

To answer a call, open the folder. If it is already open, press the  key or **Accept** soft key.

Note: You can answer a call while using the Phonebook or menu features. The current operation stops.

Rejecting a call

To reject an incoming call, press the  key.

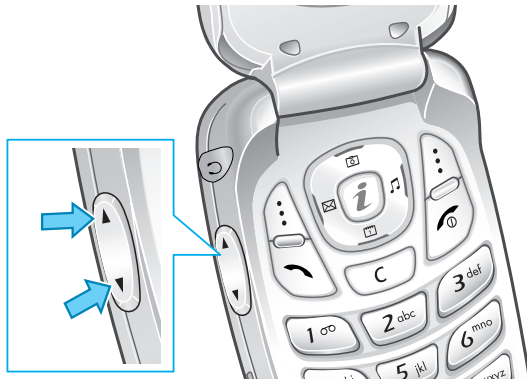
If the **Side key** option is set to **Reject**, you can press and hold either of the volume keys on the left side of the phone to reject an incoming call; see page 159.

Adjusting the volume

During a call, if you wish to adjust the earpiece volume, use the volume keys on the left side of the phone.

When you hear a sound, such as a ringtone, you can also adjust the earpiece volume. However, the volume adjustment will not be permanent.

Press the ▲ key to increase the volume level and the ▼ key to decrease it.



In idle mode with the folder open, you can adjust the key tone volume using ▲ and ▼ keys.

Note: When a call comes in, you can reject the call or mute the call ringer by pressing and holding one of the volume keys, depending on the **Side key** option settings (**Menu 9.8**). For further details, see page 159.

Accessing options during a call

Your phone provides a number of control functions that you can use during a call.

Using the loudspeaker

You can speak and listen to the phone from a short distance without holding the phone to your ear.

Turn on / off the loudspeaker

1. Press the **Options** soft key.
2. Press the Up or Down key to highlight the **Loud spk. on / Loud spk. off** option. Press the **Select** soft key.

CAUTIONS: Do not hold the phone near to your ear when you use the loudspeaker, as the volume may be extremely loud.

Using Voiceclarity

Voiceclarity feature makes received sound louder and clearer during a call. It is useful when you are in a noisy place.

The phone turns on Voiceclarity feature automatically after a while when you are in a noisy place and Voiceclarity is set to on.

Turn on / off Voiceclarity

1. Press the **Options** soft key.
2. Press the Up or Down key to highlight the **Voiceclarity on / Voiceclarity off** option. Press the **Select** soft key.

Note: You cannot activate Voiceclarity when you use the loudspeaker or the handsfree car kit.

Putting a call on hold

You can place a call on hold whenever you want. You can make another call while you have a call in progress if this service is supported by your network. Of these two calls, one is active and the other is on hold, and you can switch between the two.


To place a call on hold, simply press the **option** key and select the **Hold** option. You can reactivate the call whenever you want by pressing **Retrie.** soft key.

Switching the microphone off (Mute)

You can temporarily switch your phone's microphone off so that the person with whom you are speaking cannot hear you.

Example: You may wish to say something to another person in the room, but do not want the person on the phone to hear you.

1. Press the **Options** soft key.
2. When **Mute** highlights, press the **Select** soft key.

The Mute icon () appears on the bottom line of the display and your correspondent can no longer hear you.

To switch the microphone back on:

1. Press the **Options** soft key.

2. When **Unmute** highlights, press the **Select** soft key.

The Mute icon disappears and your correspondent can once again hear you.

Muting/Sending key tones

You can turn the key tones off or on during a call. When the **Mute keys** option is selected, your phone does not transmit key tones. This allows you to press keys without hearing annoying key tones during a call.

To communicate with answering machines or computerised telephone systems, the **Send keys** option must be selected.

Searching for a number in Phonebook

You can search for a number in your Phonebook during a call.

1. Press the **Options** soft key.
2. If necessary, press the Up or Down key to highlight the **Phonebook** option. Press the **Select** soft key.
3. Select the **Find name** option and press the **Select** soft key.

The Phonebook entries are listed.

4. Enter the first few letters of the name that you want to find. The Phonebook entries will be listed, starting with the first entry matching your input.

Note: You can also scroll through Phonebook from the beginning, by pressing the Up or Down key.

5. To view the highlighted entry, press the **OK** soft key.

For further details about the Phonebook feature, see page 57.

Sending DTMF tones

You can send the DTMF (Dual Tone Multi-Frequency) tones of the number on the display during a call.

This option is helpful for entering a password or account number when you call an automated system, like a banking service.

To send the DTMF tones:

1. When you are connected to the teleservice system, press the **Options** soft key.
2. Press the Up or Down key to highlight the **Send DTMF** option. Press the **Select** soft key.
3. Enter the number you want to send and press the **OK** soft key.

The tones of the displayed number are sent.

Using the message service

You can read or write a new message during a call.

1. Press the **Options** soft key.
2. Press the Up or Down key to highlight the **Message** option. Press the **Select** soft key.

3. To read a received message, select the **Inbox** option, and then scroll to the message that you want to read.

To write a new message, select the **Create** option.

4. Press the **Select** soft key.

For further details about the SMS feature, see page 85.

Recording the telephonic conversation

You can record your conversation during a call.

This option is helpful to save some important conversations for a future reference. You can find conversation you have recorded on the **Voices** menu (**Memo 7.6.2**). For more information, see page 137.

Using the SIM-AT (SIM Application Toolkit)


If you use a SAT card that provides additional services, the SAT menu displays. For further details, see your SIM card instructions.

Making a second call

You can make another call while you have a call in progress, if this service is supported by your network.

To make a call while you have a call in progress:

1. Enter the phone number that you want to dial or look it up in the Phonebook.

2. Press the  key to dial the second call.
The first call is automatically put on hold.


Or alternatively:

1. Put the current call on hold by pressing the **option** soft key and the **Hold** option.
2. Make the second call in the normal way.

To switch between the two calls, simply press the **option** softkey and the **Swap** option.

The current call is placed on hold and the call on hold is reactivated so that you can continue conversing with the other person.


To end the call on hold, press the **Options** soft key and select the **End held call** option.

When you want to finish, end each call normally by pressing the  key. If you want to finish all calls at once, close the folder.


Answering a second call

You can answer an incoming call while you have a call in progress, if this service is supported by your network and you have activated the **Call waiting** option (see page 77). You will be notified of an incoming call by a call waiting tone.

To answer a call while you have another call in progress:

1. Press the  key to answer the incoming call.
The first call is automatically put on hold.
2. To switch between the two calls, press the **option** softkey and select the **Swap** option.

3. To end the call on hold, press the **Options** soft key and select the **End held call** option.

To end the current call, press the  key.
The call on hold is automatically reconnected to you.

Transferring a call

You can transfer the current call to the call on hold if this service is supported by the network, so that the callers can talk to each other. You are disconnected from both of them.

1. During a call, answer or make a call in the normal way, and press the **Options** soft key.
2. Press the Up or Down key to select the **Transfer** option and press the **Select** soft key.

The two people are connected to each other.

Making a multi-party call

A multi-party calling is a feature of some networks service that allows up to six people to take part simultaneously in a multi-party or conference call. For more information, contact your service provider.

Setting up a multi-party call

1. Call the first participant in the normal way.
2. Call the second participant in the normal way.
The first call is automatically put on hold.
3. To join the first participant to the multi-party call, press the **Options** soft key and select the **Join** option. Press the **Select** soft key.

- To add a new person to the multi-party call, call the person in the normal way. Then press the **Options** soft key and select the **Join** option. Press the **Select** soft key.


You can add incoming callers by answering the call and selecting the **Join** option. Repeat as needed.


Getting a second call during a multi-party call

To make a call when you are on a multi-party call:

See 'Making a second call' on page 37.

To answer a call when you have the multi-party call:

- Press the  key to answer the incoming call. The multi-party call is automatically put on hold. The other call participants can continue talking.
- To switch between the two calls, press the **option** softkey and the **Swap** option.
- To end the call on hold, press the **Options** soft key and select the **End held multiparty** option or **End held call** option.

To end the current call, press the  key. The call on hold is recontinued to you.

Having a private conversation with one participant


- Press the **Options** soft key and select the **Split** option. Press the **Select** soft key.
- Press the Up or Down key to highlight a participant and press the **Select** soft key.

Now you can talk privately with that person. The other participants can continue to converse with each other.

- To return to the multi-party call, press the **Options** soft key and select the **Join** option.
- Press the **Select** soft key.

All of the multi-party call participants can now hear each other.

Removing one participant

- Press the **Options** soft key and select the **Remove** option.
- Press the Up or Down key to highlight a participant and press the **Select** soft key.
The call with that participant ends, but you can continue to talk with the other participants.
- End the multi-party call by pressing the  key.

Using the headset

With the headset, you can make or answer a call without holding the phone.

When you connect the headset to the jack at the left side of the phone, the button on the headset works as listed below:

To	Press
redial the last call	the button twice in idle mode.
answer a call	and hold the button.
end a call	and hold the button.

Entering text

There are many situations in which you need to enter text, such as when storing a name in Phonebook, writing a message, creating your personal greeting, or scheduling events on your calendar.

You are provided with the following text input modes:

- **ABC mode**

This mode allows you to enter letters by pressing the key labelled with the required letter once, twice, three, or four times until the desired letter displays.

- **T9 mode***

This mode allows you to enter words with only one keystroke per letter. Each key on the keypad has more than one letter – for example, when you press the **5** key, J, K, or L can be displayed. The T9 mode automatically compares your keystrokes with an internal linguistic dictionary to determine the correct word, thus requiring far fewer keystrokes than the traditional ABC mode.

- **Symbolic mode**

This mode allows you to enter special characters.

- **Number mode**

This mode allows you to enter numbers.

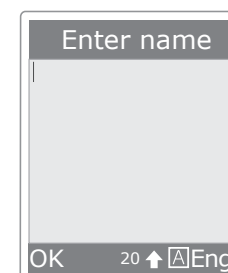
Note: The maximum number of characters which can be entered in a message is reduced to approximately half in length if you enter text using uni-code characters such as â.

* **T9** is a registered trademark of Tegic Communications, Inc. and is licensed under U.S. Patent 5,818,437/ 5,953,541/ 6,011,554.

Changing the text input mode

When you are in a field that allows characters to be entered, you will see the text input mode indicator at the bottom of the display.

Example: Entering a name in the Phonebook





Text input mode indicator:
ABC English mode

To change to another text input mode:

1. Press the right soft key indicating the current text input mode.
2. Scroll to the mode you want to use by pressing the Up or Down key.

The **Language select** option allows you to change the text input language.

You can use the **Add word** option to add new words into the T9 dictionary. See page 47.

Note: If you want to exit the menu without changing the mode, press the  soft key or  key.

3. Press the **Select** soft key to confirm the highlighted text input mode.

Quickly changing the text input mode

To switch between the	Press and hold the
Number and previous mode	# key.
Symbol and previous mode	* key.
ABC and T9 mode	right soft key.

Using ABC mode

When inputting words in ABC mode, press the key labelled with the required letter:

- Once for the first letter
- Twice for the second letter
- And so on

Example: To display the letter "C", quickly press the **2** key three times. To display the letter "K", press the **5** key twice. This method is called Multi-tap typing.

Note: The cursor moves to the right when you press a key. When entering the same letter twice or a different letter on the same key, just press the Right key, or alternatively, wait a few seconds for the cursor to move to the right automatically, and then enter the next letter.

Refer to the table below for more information about the characters available. The characters vary, depending on the text input language.

You can select the language by setting one of the following options:

- **Language select:** see page 43.
- **Input mode (Menu 9.3.2):** see page 155.

List of the characters available

Key	characters in the order displayed
1	. , - ? ! ' @ : 1
2	A B C 2
3	D E F 3
4	G H I 4
5	J K L 5
6	M N O 6
7	P Q R S 7
8	T U V 8
9	W X Y Z 9
0	0

(Capital Lock mode in English)

Changing the case

To change the case of the next letter(s) that you enter, press the * key. There are three cases:

- Lower Case (no indicator)
- Initial Capital (⇧)
- Capital Lock (⇧)

Inserting a space

To insert a space between words, press the # key.

Scrolling

To move the cursor to the left, right, up, or down within the text, press the navigation keys.

Clearing letters and words

To clear the letter to the left of the cursor, press the **C** key. You can clear all of the letters on the display by pressing and holding the **C** key.

Returning to the previous screen

After the text input field has been cleared, you can press and hold the **C** key to return to the previous screen.

Using T9 mode

To input a word in T9 mode:

1. Start entering the word by pressing keys **2** to **9**. Press each key only once for each letter.

Example: To enter "hello" in the T9 mode, press the **4**, **3**, **5**, **5**, and **6** keys.

The word you are typing appears on the display. It may change with each key that you press.

2. Enter the whole word before editing or deleting any keystrokes.
3. If the word is correct, start entering the next word. Otherwise, while the word is highlighted, press the **0** key repeatedly to display alternative word choices for the keys that you have pressed.

Example: Both "of" and "me" have the sequence of **6** and **3**. The phone displays the most commonly used choice first.

4. Insert a space between words by pressing the **#** key.
5. Enter the next word.

If **Spell** appears above the left soft key while you are entering text, the word does not exist in the T9 dictionary. To type words not found in the T9 dictionary, change the text input mode to the ABC mode, or proceed as follows:

1. Press the **Spell** soft key, or press the right soft key and select the **Add word** option.
2. Enter the word you want to add using the ABC mode (see page 44) and press the **OK** soft key.

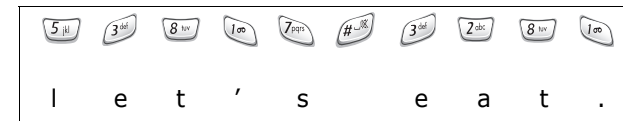
The word is saved in the T9 dictionary and inserted in the input field.

3. Continue entering other words in the T9 mode.

Smart punctuation

To enter periods, hyphens, or apostrophes, press the **1** key. The T9 mode applies rules of grammar to insert the correct punctuation.

Example: The **1** key is used twice to display two punctuation marks.



Changing the case

To change the case of the next letter(s) that you enter, press the **✖** key. There are three cases:

- Lower Case (no indicator)
- Initial Capital (⇧)
- Capital Lock (⇧)

Inserting a space

To insert a space between words, press the **#** key.

Entering a number directly

To enter a number, press and hold the number key.

Scrolling

To move the cursor to the left, right, up, or down within the text, press the navigation keys.

Clearing letters and words

To clear the letter to the left of the cursor, press the **C** key. You can clear all of the letters on the display by pressing and holding the **C** key.

Returning to the previous screen

After the text input field has been cleared, you can press and hold the **C** key to return to the previous screen.

Using symbolic mode

Symbolic mode enables you to enter symbols in your text.

To	Press the
display more symbols	Up or Down key.
enter a symbol	corresponding number key.
return to the previous text input mode with entered symbol(s)	OK soft key.
return to the previous text input mode without entered symbol(s)	↶ soft key.

Using number mode

Number mode enables you to enter numbers in your text. Press the keys corresponding to the digits you want to enter.

Using the menus

The phone offers a range of functions that allows you to tailor the phone to your needs. These functions are arranged in menus and sub-menus.

Accessing a menu function

The menus and sub-menus can be accessed by pressing the **Menu** or **Phonebook** soft key in idle mode, then scrolling with the navigation keys.

1. In idle mode, press the **Menu** soft key to access the main menu or press the **Phonebook** soft key to access Phonebook menu.
2. Scroll through the menus using the navigation keys. If you are using the main menu, press **select** soft key to choose what you want.
3. Find the sub-menu that you wish to use by scrolling with the Up or Down key.
4. Press the **Select** soft key to access the sub-menu.

If the menu that you have selected contains further sub-menus, repeat steps 3 and 4.

5. Scroll to the option you want to choose with the Up or Down key.
6. Press the **Select** soft key to choose the setting.

Note: You can return to the previous menu level by pressing the **Back** soft key.

You can also access the menus and sub-menus by quickly entering the corresponding menu number.

Example: Accessing the **Voice mail** menu option, press the **Menu** soft key and **5, 5** in idle mode.

List of menu functions

Various menus let you check or change your phone settings. The following list shows the menu structure.

The numbers assigned to each menu option may not match the menu number on the phone. It depends on the services supported by your SIM card.

Phonebook menu

1. Phonebook (see page 57)

- 1.1 Find name
- 1.2 Add entry
- 1.3 Speed-dial list
- 1.4 Copy all to phone
- 1.5 Delete all

2. Management (see page 64)

- 2.1 Own number
- 2.2 Group setting
- 2.3 Memory status

3. Services (see page 66)

- 3.1 Service directory

Main menu**1. SIM-AT (SIM Application Toolkit)***
(see page 67)**2. Call records (see page 68)**

- 2.1 Missed calls
- 2.2 Received calls
- 2.3 Dialed calls
- 2.4 Delete all
- 2.5 Call time
 - 2.5.1 Last call time
 - 2.5.2 Total sent
 - 2.5.3 Total received
 - 2.5.4 Reset timers
- 6. Call costs*
 - 2.6.1 Last call cost
 - 2.6.2 Total cost
 - 2.6.3 Max cost
 - 2.6.4 Reset counters
 - 2.6.5 Set max cost
 - 2.6.6 Price/Unit

3. Network services (see page 72)

- 3.1 Call diverting
 - 3.1.1 Divert always
 - 3.1.2 Busy
 - 3.1.3 No reply
 - 3.1.4 Unreachable
 - 3.1.5 Cancel all
- 3.2 Call barring
 - 3.2.1 All outgoing
 - 3.2.2 International
 - 3.2.3 International except to home
 - 3.2.4 All incoming
 - 3.2.5 Incoming while abroad
 - 3.2.6 Cancel all
 - 3.2.7 Change barring password

*Shown only if it is supported by your SIM card.

- 3.3 Call waiting
- 3.4 Network selection
- 3.5 Caller ID
- 3.6 Active line*

4. Sound settings (see page 80)

- 4.1 Incoming calls
 - 4.1.1 Default melodies
 - 4.1.2 My sounds
 - 4.1.3 Ring volume
 - 4.1.4 Alert type
- 4.2 Messages
 - 4.1 Short messages
 - 4.2 Multimedia messages
- 4.3 Power on/off
- 4.4 Connection tone
- 4.5 Key tone
- 4.6 Minute minder
- 4.7 Quiet mode
- 4.8 Alerts on call

5. Messages (see page 85)

- 5.1 Short messages
 - 5.1.1 Create
 - 5.1.2 Inbox
 - 5.1.3 Outbox
 - 5.1.4 Delete all
- 5.2 Multimedia messages
 - 5.2.1 Create
 - 5.2.2 Inbox
 - 5.2.3 Outbox
 - 5.2.4 Draft
 - 5.2.5 My folder
 - 5.2.6 Delete all
- 5.3 Push messages
 - 5.3.1 Inbox
 - 5.3.2 Setting
 - 5.3.3 Delete all

*Shown only if it is supported by your SIM card

- 5.4 Preset messages
- 5.5 Voice mail
 - 5.5.1 Connect to voice mail
 - 5.5.2 Voice server number
- 5.6 Broadcast
 - 5.6.1 Read
 - 5.6.2 Receive
 - 5.6.3 Channel
 - 5.6.4 Language
- 5.7 Settings
 - 5.7.1 Short messages
 - 5.7.2 Multimedia messages
- 5.8 Memory status
 - 5.8.1 Short messages
 - 5.8.2 Multimedia messages

6. Fun box (see page 112)

- 6.1 WWW services*
 - 6.1.1 Home
 - 6.1.2 Bookmark
 - 6.1.3 Go to URL
 - 6.1.4 Clear cache
 - 6.1.5 Proxy settings
 - 6.1.6 Current proxy
- 6.2 Media box
 - 6.2.1 Photos
 - 6.2.2 Images
 - 6.2.3 Sounds
 - 6.2.4 Delete all
 - 6.2.5 Memory status
- 6.3 JAVA world
 - 6.3.1 Downloads
 - 6.3.2 Internet settings
 - 6.3.3 Memory status

* May not be shown or supported by your network service provider.

7. Organiser (see page 126)

- 7.1 New memo
- 7.2 Calendar
- 7.3 To do list
- 7.4 Clock
 - 7.4.1 Set time
 - 7.4.2 Set date
 - 7.4.3 Set world time
 - 7.4.4 Set format
- 7.5 Alarm
- 7.6 Voice recorder
- 7.7 Calculator
- 7.8 Conversion
 - 7.8.1 Currency
 - 7.8.2 Length
 - 7.8.3 Weight
 - 7.8.4 Volume
 - 7.8.5 Area
 - 7.8.6 Temperature
- 7.9 Timer
- 7.10 Stopwatch

8. Camera (see page 143)

- 8.1 Take photos
- 8.2 My photos
- 8.3 My albums
- 8.4 Delete all
- 8.5 Settings
- 8.6 Memory status

9. Phone settings (see page 152)

- 9.1 Display
 - 9.1.1 Wallpaper
 - 9.1.2 Skin
 - 9.1.3 Backlight
 - 9.1.4 LCD contrast
 - 9.1.5 Service light
- 9.2 Greeting message
- 9.3 Language
 - 9.3.1 Text language
 - 9.3.2 Input mode
- 9.4 Security
 - 9.4.1 PIN check
 - 9.4.2 Change PIN
 - 9.4.3 Phone lock
 - 9.4.4 Change password
 - 9.4.5 Privacy
 - 9.4.6 SIM lock
 - 9.4.7 FDN mode*
 - 9.4.8 Change PIN2*
- 9.5 Auto redial
- 9.6 Voiceclarity
- 9.7 Active folder
- 9.8 Side key
- 9.9 Anykey answer
- 9.10 Reset settings
 - 9.10.1 Sound settings
 - 9.10.2 Phone settings
 - 9.10.3 All settings

* Shown only if it is supported by your SIM card.

Phonebook menu

Phonebook offers the following features:


- **Phonebook:** allows you to find, create, and set up the speed-dialling feature, and manage Phonebook.
- **Management:** allows you to create, or remove your own number, set up caller groups and check memory status.
- **Services:** allows you to use the service directory depending on your SIM card.

Find name (Phonebook 1.1)

To search for a number in Phonebook, proceed as follows.

1. Enter the initial letter(s) of the name that you want to find.

Phonebook entries are listed, highlighting the entry matching your input.
2. If necessary, press the Up or Down key to scroll to the entry you want.
3. Once you have found the entry, press the **OK** soft key.

4. To	Press the
dial the displayed number	 key.
change Phonebook entries	Options soft key. For further details, see page 58.

Editing phone memory entries

While looking at a Phonebook entry, scroll to the category that you want to edit by pressing the Left or Right key. The following categories are available and you can edit the information of each category by pressing the **Options** soft key.

Category	Then
Mobile Home Office Fax Other	<p>Select one of the following options. For details about these options, refer to the page 59.</p> <p>Edit number Change name Send message (shown if the category contains a number) Copy (shown if the category contains a number) Delete entry</p>
E-Mail	Enter or edit e-mail address.
Note	Enter or edit the memo.
Group	Set one of the groups or no group.
Graphic	Set one of the images or no image.
Alert	Set one of the melodies or do not assign a melody

Editing SIM memory entries

To change SIM memory entry information, press the **Options** soft key.

The following options are available:

Edit number

This option allows you to change the number. You can also add a new number if none has been stored for the selected entry.

Change name

This option allows you to change the name of the entry.

To clear the old name, press the **C** key. For more information about how to enter characters, see page 42.

Send message

This option allows you to send a message to the number. For more information about how to send a message, see page 87.

Copy

This option allows you to copy the entry from the SIM card to the phone's memory.

Delete entry

This option allows you to delete the entry from Phonebook. To confirm the deletion, press the **Yes** soft key. Otherwise, press the **No** soft key.

Add entry *(Phonebook 1.2)*

You can store phone numbers and the corresponding names in the memory of your SIM card. In addition, you can store up to 1000 names in the phone's memory, and each name can be associated with up to five numbers.

1. Enter the number you want to save.

Notes:

- If you make a mistake while entering a number, correct it using the **C** key. For further details, see page 28.
- To insert a dialling pause for special phone services, such as banking by phone, hold down the ***P** key. "P" is displayed to indicate that a pause will be inserted at that point in the dialling.

2. When you are sure that the number is correct, press the **Save** soft key.
3. Select the memory where the number is to be stored, either **Phone** or **SIM**, and press the **Select** soft key.

Note: If you change phones, any numbers stored in your SIM card will automatically be available with the new phone, whereas any numbers stored in the phone's memory must be entered again.

4. If you select **SIM** in step 3, go to step 5.

If you select **Phone** in step 3, choose a number type using the Up or Down key and press the **Select** soft key.

5. Enter the associated name.



For information about how to enter characters, see page 42.

6. When you are satisfied, press the **OK** soft key.

7. If you select **Phone** in step 3, go to step 8.

If you select **SIM** in step 3, enter the location number and press the **OK** soft key.

8. If you want to change the entry, use the options. for information about how to do it, see page 58.

If you want to return to idle mode, press the  soft key or the  key.

Storing a number in idle mode

As soon as you start to enter a number in idle mode, **Save** appears above the left soft key to allow you to store the number in Phonebook.

Continue the procedure from step 1 on page 60 to store the number.

Speed-dial list *(Phonebook 1.3)*



You can set up to eight speed-dial entries and then dial them easily whenever you want, simply by pressing the associated number key.

Setting up speed-dial entries



1. Press the Up or Down key to scroll to an empty location and press the **Select** soft key.
2. When the **Edit number** option highlights, press the **Select** soft key.

3. Enter a phone number and press the **OK** soft key. Or,


To retrieve a number from your Phonebook, press the **Phonebook** soft key. Select an entry from the list and press the **OK** soft key. Press the **OK** soft key to save it.

4. When you have finished, press the  soft key or the  key to exit.

Editing speed-dial entries

1. Select the speed-dial entry you want to edit from the list and press the **Select** soft key.
2. Select one of the following menu options by pressing the Up or Down key and press the **Select** soft key:
 - **Edit number:** allows you to change the number.
 - **Change name:** allows you to change the name of the entry.
 - **Delete:** allows you to clear the setting so that no number is assigned to the key.
3. When you have finished, press the  soft key or the  key to exit.

Using the speed-dial feature

When the idle screen is displayed, press the number key, **2** to **9**, assigned to the speed-dial entry and press the  key. You can also press and hold the number key.

Note: The **1** key is reserved for your voice mail server number.

Dialling a number stored in the SIM card

Once you have stored phone numbers in your SIM card, you can dial them easily whenever required.

To dial a number stored in the SIM card:

1. Enter the number of the SIM card location where the number you want to dial is stored.

2. Press the **#** key.

The display shows the name and number stored in that location.

3. Press the **Dial** soft key or the  key.



Copy all to phone *(Phonebook 1.4)*

You can copy all of the numbers stored in the SIM card to the phone's memory.

1. When a confirming message appears, press the **Yes** soft key to copy.

The numbers in the SIM card are copied to the phone's memory, labelled with **Mobile** by default.

Otherwise, press the **No** soft key.

2. When you have finished, press the  soft key or the  key to exit.

Delete all *(Phonebook 1.5)*

You can delete Phonebook entries selectively depending on their memory location, or all entries at once.

1. Scroll to a desired memory selection and place a check mark ahead of it by pressing the **Select** soft key.

Selecting **All** places check marks on both of the memory sites.



2. If necessary, repeat step 1 to check another option.
3. When you have finished checking, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the entries in the memory or memories. Then enter the phone password and press the **OK** soft key. The password is preset to "00000000" by default. To change it, see page 157.

Otherwise, press the **No** soft key.



Own number *(Phonebook 2.1)*

To store your own phone number(s) with a name:

1. Scroll to an empty location by pressing the Up or Down key and press the **Select** soft key.
2. When **Edit number** highlights, press the **Select** soft key.
3. Enter your number and press the **OK** key.

4. To assign a name, press the Down key to move to **Change name** and press the **Select** soft key.
5. Enter a name and press the **OK** soft key.
6. When you have finished, press the  soft key or the  key to exit.

To remove one of your numbers:

1. Select the entry you want to delete from the Own number list and press the **Select** soft key.
2. Scroll to **Delete** by pressing the Up or Down key and press the **Select** soft key.
3. When a confirming message appears, press the **Yes** soft key to delete the number.
Otherwise, press the **No** soft key.
4. When you have finished, press the  soft key or the  key to exit.

Group setting *(Phonebook 2.2)*

You can change the settings of the ten predefined caller groups.



1. Select a caller group by pressing the Up or Down key and press the **Select** soft key.
2. Scroll to a setting option by pressing the Up or Down key and press the **Select** soft key.

The following options are available:

- **Melody:** allows you to select a melody to sound when a call comes in from a member of the group.



Phonebook menu

- **Change name:** allows you to change the name of the group; for further details about how to enter characters, see page 42.
 - **View image:** shows the image to display when a call comes in from a member of the group.
3. Change the setting as required and press the **Select** soft key.
 4. Repeat steps 2 and 3 to change other options.

When you have finished, press the  soft key or the  key to exit.

Memory status *(Phonebook 2.3)*


You can check how many names and numbers are stored in Phonebook, phone's memory, SIM card, and how many free locations remain.

When you have finished, press the  soft key or the  key to exit.

Service directory *(Phonebook 3.1)*

Note: This feature may not be available depending on your SIM card.

The display shows the list of the numbers in the Service directory.

If necessary, scroll to a number by pressing the Up or Down key and press the  key to dial the number.



SIM-AT (SIM Application Toolkit)


If you use a SAT card that provides additional services, the SAT menu displays. For further details, see your SIM card instructions.

Shown only if it is supported by your SIM card.

Call records

Via this menu, you can view the:

- calls you missed, received, or dialled.
- cost of your calls.
- length of your calls.

Note: You can access the phone numbers that are in the three types of call records by pressing the  key in idle mode.

Missed calls *(Menu 2.1)*

This option lets you view the last 20 unanswered calls, if caller line identification is available.

The number, or name if available, displays together with the date and time when the call was missed.

By pressing the **Options** soft key, you can also:

- delete the current call record from the list.
- delete all of the calls.
- paste the number into Phonebook.

Received calls *(Menu 2.2)*

This option lets you view the last 20 received calls, if caller line identification is available.

The number, or name if available, displays together with the date and time when the call was received.

By pressing the **Options** soft key, you can also:

- delete the current call record from the list.
- delete all of the calls.
- paste the number into Phonebook.

Dialled calls *(Menu 2.3)*

This option lets you view the last 20 dialled numbers.

The number, or name if available, displays together with the date and time when the call was made.

By pressing the **Options** soft key, you can also:

- delete the current call record from the list.
- delete all the calls.
- paste the number into Phonebook.

Delete all *(Menu 2.4)*

You can delete all of the numbers stored in each call record.

When a confirming messages appears, press the **Yes** soft key to confirm.

Otherwise, press the **No** soft key.

Call time *(Menu 2.5)*

This option lets you view the timers for calls made and received.

Notes:

- If your SIM card supports ALS (Alternate Line Service), you must first select the appropriate line.
- The actual time invoiced for calls by your service provider may vary, depending on network features, rounding-off for billing purposes, and other reasons.

The following timers are available:

Last call time: the length of the last call.

Total sent: the total length of all calls made since the timer was last reset.

Total received: the total length of all calls received since the timer was last reset.

Reset timers: this option used to reset the call timers. You need to enter the phone password and then press the **OK** soft key.

Call costs *(Menu 2.6)*

This feature lets you view the cost of calls.

Notes:

- Shown only if it is supported by your SIM card.
- This feature is not intended to be used for billing purposes.
- AOC (Advice Of Charge) information may display in idle mode, depending on your SIM card or service provider.

The following options are available:

Last call cost: cost of the last call made.

Total cost: total cost of all calls made since the cost counter was last reset. If the total cost exceeds the maximum cost set via the **Set max cost** option, you can not make any calls until you reset the counter.

Max cost: maximum cost set via the **Set max cost** option.

Reset counters: this option is used to reset the cost counter; you must first enter your PIN2 (see page 167) and then press the **OK** soft key.

Set max cost: this option is used to enter the maximum cost that you authorise for your calls; you must first enter your PIN2 (see page 167) and then press the **OK** soft key.

Price/Unit: this option is used to set the cost of one unit (the units by which your cost is calculated. It may be 5 or 10 or 20 seconds, and is set by the Network); this price per unit is applied when calculating the cost of your calls; you must first enter your PIN2 (see page 167) and then press the **OK** soft key.

Network services

These menu functions are network services. Please contact your service provider to check their availability and subscribe to them, if you wish.

Call diverting *(Menu 3.1)*

Note: Call divert options may be different depending on your SIM card. Those not supported by your network operator may not be shown on your phone.

This network service enables incoming calls to be rerouted to a number that you specify.

Example: You may wish to divert your business calls to a colleague while you are on holiday.

Call diverting can be set up in the following ways:

Divert always: all calls are diverted.

Busy: calls are diverted if your phone is engaged on another call.

No reply: calls are diverted if you do not answer the phone.

Unreachable: calls are diverted if you are not in an area covered by your service provider.

Cancel all: all call diverting options are deactivated.

You can specify individual call diverting options for each of the following call types:

- Voice calls only

- Data calls only (not available when line 2 is in use)

Example: You can divert voice calls to your colleague if you are already using the phone.

Setting call diverting options

1. Select the type of call diverting by pressing the Up or Down key and then press the **Select** soft key.
2. Select the type of calls to be diverted by pressing the Up or Down key and then press the **Select** soft key.
3. Press the **Activate** soft key to confirm your settings.
4. Enter the number to which the calls are to be diverted.

To enter an international code, hold down the **0** key until the + sign displays.

You can also select a number in Phonebook or the voice mail server number, by pressing the **Options** soft key, followed by **Phonebook** or **Voice server**.

5. When you are satisfied, press the **OK** soft key.

The phone sends your settings to the network and displays the network's acknowledgement.

Deactivating specific call diverting options

1. Select the call diverting option to be deactivated.
2. Select the type of calls to which this option applies.
3. Press the **Remove** soft key.

The phone sends your settings to the network and displays the network's acknowledgement.

You can also deactivate all call diverting options by selecting the **Cancel all** option.

Call barring *(Menu 3.2)*

The call barring network service allows you to restrict your calls.

Call barring can be set up in the following ways:

All outgoing: calls cannot be made.

International: international calls cannot be made.

International except to home: when abroad, calls can be made only to numbers within the current country and to your home country, that is the country where your home network provider is located.

All incoming: calls cannot be received.

Incoming while abroad: calls cannot be received when you are using your phone outside the country of your service network.

Cancel all: all call barring options are deactivated; calls can be made and received normally.

You can specify individual call barring options for each of the following call types:

- Voice calls only
- Data calls only (not available when line 2 is in use)

Setting call barring options

1. Select the type of call barring by pressing the Up or Down key and then press the **Select** soft key.
2. Select the type of calls to be barred by pressing the Up or Down key and then press the **Select** soft key.
3. Press the **Activate** soft key to confirm your settings.
4. Enter the call barring password supplied by your service provider and press the **OK** soft key.

The phone sends your settings to the network and displays the network's acknowledgement.

Deactivating specific call barring options

1. Select the call barring option to be deactivated.

2. Select the type of calls to which this option applies.
3. Press the **Deactivate** soft key.
4. Enter the call barring password supplied by your service provider.

The phone sends your settings to the network and displays the network's acknowledgement.

You can also deactivate all call barring options by selecting the **Cancel all** option.

Changing the barring password

You can set and change the call barring password obtained from your service provider.

1. Select **Change barring password** from the Call barring screen, and press the **Select** soft key.
2. Enter the current password and press the **OK** soft key.
3. Enter a new password and press the **OK** soft key.
4. Enter the new password again to confirm it and press the **OK** soft key.

Call waiting *(Menu 3.3)*

This network service informs you when someone is trying to reach you while you are on another call.

You can specify individual call waiting options for each of the following call types:

- Voice calls only
- Data calls only (not available when line 2 is in use)

Activating the call waiting feature

1. Select the type of calls to which the call waiting option is to be applied by pressing the Up or Down key and then press the **Select** soft key.
2. Press the **Activate** soft key to confirm your settings.

The phone sends your settings to the network and displays the network's acknowledgement.

Deactivating specific call waiting options

1. Select the type of call to which the option applies.
2. Press the **Deactivate** soft key.

The phone sends your settings to the network and displays the network's acknowledgement.

You can also deactivate all call waiting options by selecting the **Cancel all** option.

Network selection *(Menu 3.4)*

The Network selection feature enables you to manually select the network used when roaming outside your home area or to let the phone automatically select the roaming network.

Note: You can select a network other than your home network only if it has a valid roaming agreement with your home network.

To choose to automatically or manually select the network when roaming:

1. Press the Up or Down key until the appropriate option highlights and press the **Select** soft key.

If you select **Automatic**, you are connected to the first available network when roaming.

If you select **Manual**, the phone scans for the available networks. Go to step 2.

2. Press the Up or Down key until the preferred network highlights and press the **Select** soft key.

You are connected to that network when roaming.

Caller ID *(Menu 3.5)*

You can prevent your phone number from being displayed on the phone of the person being called.

Note: Some networks do not allow the user to change this setting.

The following options are available:

Default: the default setting provided by the network is used.

Hide number: your number does not display on the other person's phone.

Send number: your number is sent each time you make a call.

Active line *(Menu 3.6)*

Some SIM cards may be used with two subscriber numbers. This functions is available only if your SIM card supports it.

This menu option allows you to select the line to be used to make calls. However, calls can be answered on both lines, regardless of the selected line.

Sound settings

You can use the Sound settings feature to customise various settings, such as the:

- ringtone, volume, and type for incoming calls or messages.
- sounds made when your call is connected or when you press a key.
- quiet mode to which your phone switches to when you hold down the # key in idle mode.

Incoming calls *(Menu 4.1)*

This option allows you to set up the ringer for incoming calls.

Note: If your SIM card supports ALS (Alternate Line Service), you must first select the line you wish to change.

The following options are available:

Each time you select a melody from the list, the melody plays.

Default melodies: allows you to select one of the predefined melodies.

My sounds: allows you to select a sound received from other sources, such as WAP sites, EasyStudio PC software, or received multimedia messages.

Ring volume: allows you to adjust the ring volume. Use the Up and Down keys or the volume keys on the left side of the phone. The more bars you see, the louder the volume will be.

Alert type: lets you specify how you are informed of incoming calls.

Melody: the phone plays the melody selected via the **Melody** option. See above.

Vibration: the phone vibrates, but does not ring.

Vibration then melody: the phone first vibrates and then plays the melody selected via the Melody option. See above.

Light only: only the text notification appears; the phone neither rings nor vibrates.

Messages *(Menu 4.2)*

This option allows you to set up separate alert types for incoming short and multimedia messages.

Short messages *(Menu 4.2.1)* / Multimedia messages *(Menu 4.2.2)*

The following options are available:

Tone: lets you choose from many different tones. Each time you select a tone from the list, the tone is played.

Alert type: lets you specify how you are informed of any incoming messages.

Light only: only the text notification appears; the phone neither rings nor vibrates.

Tone: the phone plays the tone selected via the **Tone** option. See above.

Vibration: the phone vibrates, but does not ring.

Vibration then tone: the phone first vibrates and then plays the tone selected via the **Tone** option.

Repetition: allows you to specify how often the phone informs you of a new message. You can choose either **Once** or **Periodic**.

Power on/off *(Menu 4.3)*

This option allows you to select the melody that the phone sounds when you switch it on or off.

You can choose either **Basic** or **Cheerful**. If you don't want the phone to play any sound at all when turning on or off, select **Off**.

Connection tone *(Menu 4.4)*

This menu option allows you to specify whether or not the phone beeps when it connects to the network.

The following options are available:

Off: the phone does not beep.

On: the phone beeps when your phone connects to a network.

Key tone *(Menu 4.5)*

This menu option allows you to select the tone that the keypad sounds when you press the dial keys.

The following options are available:

Off: the keys do not make any sound.

Tone: each key, when pressed, makes a different sound.

Beep: each key, when pressed, makes the same sound.

Piano / Drum: each key, when pressed, makes the sound of a piano or a drum, depending on which you choose.

To adjust the key tone volume, press the volume keys on the left side of the phone in idle mode.

Minute minder *(Menu 4.6)*

This menu option allows you to specify whether or not the phone beeps every minute during a call to keep you informed of the length of your call.

The following options are available:

Off: the phone does not beep.

On: the phone beeps every minute.

Quiet mode *(Menu 4.7)*

When you hold the **#** key down in idle mode, the phone switches to quiet mode. You can specify whether the phone vibrates or mutes all sounds in quiet mode.

The following options are available:

Vibration: the phone vibrates rather than rings when in quiet mode.

Mute: the phone mutes all sound in quiet mode.

Alerts on call *(Menu 4.8)*

This menu allows you to choose whether or not the phone informs you when you receive a new message or when an alarm goes off during a call.

The following options are available:

Off: the phone doesn't alert you to incoming messages or alarms.

On: the phone alerts you with a beep. The alert occurs only in your earpiece, so the person with whom you are talking doesn't hear it.

Messages

This menu allows you to create, send, read, and save messages with the Short Message Service (SMS: text messages), Enhanced Message Service (EMS: messages including simple images, animations, or melodies) and Multimedia Message Service (MMS: messages supporting the presentation of various media types, such as full colour images, polyphonic ring tones). Voice mails are also available.


Note: This feature is only available if your service provider's network supports it. Contact your service provider for more information.

Short messages *(Menu 5.1)*


Short message service (SMS) allows you to send and receive short text messages to and from other GSM mobile phones. In addition, your phone supports the Enhanced Messaging Service (EMS), which enables you to create short messages consisting of simple pictures, melodies, animations, and stylized text, all of which adds a new dimension to simple text messages.

To send text messages by phone, you must obtain the number of the SMS centre from your service provider.



Receiving a new message

When you receive a new message, the New message icon () and a text notification showing the number of the message appear on the display. You also hear an alert, depending on the message sound setting; for further details, see page 81.

To read the new message(s) immediately, press the **View** soft key. The list of messages appears.

Note: To clear the new message notification on the display, press the  key. Also when you have missed calls, voice mails, short messages or multimedia messages, and multi CBs, the right soft key indication changes in the following order: **Missed**, **Connect**, **View**, **CB**, and **Phonebook**.

Managing memory

Inbox and Outbox share a given amount of memory on your phone or SIM card. When the message memory is full, the New message icon () blinks and an error message displays. (It disappears when you press the  key, but it reappears if you don't delete any messages to free up some memory.) In this situation, you cannot receive any new messages. You must delete one or more messages to create space for incoming messages. You can do this by using the **Delete** option in Inbox or Outbox, or by using the **Delete all** option; for further details, see page 91.

Create (Menu 5.1.1)

Using this menu, you can write messages containing text, images, and melodies.

1. Create a message.

On the first line of the display, you see the remaining number of characters you are able to enter, the designated number of the current message with the maximum number of

messages you can create, and the font style you set in the **Text** option.

Note: For further information about how to enter characters, see page 42.

2. While entering your message, press the **Options** soft key to use the following options.

- **Send:** allows you to send the message. Refer to the next step.
- **Text:** allows you to format the text. The following text attributes can all be combined as required.

Text size: Small/Medium/Large

Text mode: Normal/Underscore/Strikethrough

Bold: Off/On

Italic: Off/On

Alignment: Left/Center/Right

- **Add media:** allows you to add pictures, animations, and/or melodies to the message. Select a category: **Add picture**, **Add animation** or **Add melody**. You can then choose a factory-set object or an object that you have received from another source and stored in the Media box. See page 118.
- **Preset messages:** allows you to add a preset message to your text. Select one of nine messages stored in the **Preset messages** menu option (**Menu 5.4**) See page 104.
- **Save message:** allows you to save the message so that it can be sent later. You can read the message in the Outbox.

3. When you have finished entering your message, choose **Send** from the options.

4. Enter a destination number on the Address screen.

You can search for a number in Phonebook by pressing the **Phonebook** soft key.

Note: To clear part or all of your input, press or press and hold the **C** key. If or when there is no input, you can press and hold the **C** key to move to the previous screen.

To send the message up to 5 different destinations, press the **Add** soft key and repeat step 4.

5. When you have finished entering the numbers, press the **OK** soft key.
6. If the Enter centre screen displays, enter the SMS service centre number and press the **OK** soft key.




You can store the SMS service centre number on your phone. For details, see page 107.

Note: If the message is not sent successfully, press the **Retry** soft key to try to send the message again. Or, press the **No** soft key and the **Save** soft key to save the message, or exit the menu by pressing the **No** soft key.



Inbox (Menu 5.1.2)

Your phone receives incoming messages and saves them in the Inbox. SMS messages are usually saved on the SIM card, but if the SIM memory is full, the incoming messages will be saved in the phone's memory.

When the **Inbox** menu is selected, the list of messages received displays with the:

- sender's phone number, or name if stored in Phonebook.
- message status;  for a read message,  for a message to read or  for an incomplete message.

To view a message, scroll to it and press the **Select** soft key. The screen shows the:

- date and time when the message was received.
- memory site where the message is stored:  for the SIM card or  for the phone's memory.
- message contents.

You can scroll to the next or previous message by pressing the Left or Right key.

To scroll through the message contents, press the Up or Down key. When you select on an object that includes a melody, the melody is played.

You can choose the following options by pressing the **Options** soft key:

Delete: allows you to delete the message.

Message reply: allows you to reply to a message.

Call back: allows you to call the sender back.

Cut address: extracts phone numbers, email addresses, or URL addresses in the text, so that you can call the number or send a message to the number or save it in your Phonebook.

Send: allows you to send the message to another person.

Edit: allows you to edit the message.



Extract media: you can save media (except predefined EMS animations and sounds) from the message into the Media box. You can then use these items when writing future messages.

Transfer: allows you to transfer the message from the SIM card to the phone's memory or vice versa.





Outbox *(Menu 5.1.3)*

Outbox stores any messages that you have already sent, or saved without sending.

When the **Outbox** menu option is selected, the list of messages you have sent or saved displays with the:

- recipient's phone number, or name if stored in Phonebook.
- message status:  for a sent message or  for a message to send.

To view a message, scroll to it and press the **Select** soft key. The screen shows the:

- message status:  for a sent message or  for a message to send.
- memory site where the message is stored:  for the SIM card or  for the phone's memory.
- message contents.

You can scroll to the next or previous message by pressing the Left or Right key.

To scroll through the message, press the Up or Down key.

You can choose the following options by pressing the **Options** soft key:

Delete: allows you to delete the message.

Cut address: extracts phone numbers, email addresses, or URL addresses in the text, so that you can call the number or send a message to the number or save it in your Phonebook.

Send: allows you to send the message to another person.

Edit: allows you to edit the message.

Transfer: allows you to transfer the message from the SIM card to the phone's memory or vice versa.

Delete all *(Menu 5.1.4)*

You can delete all messages stored in the SIM card and phone's memory.

1. Scroll to a message box and place a check mark next to it by pressing the **Select** soft key.

Selecting **All** places check marks on all of the message boxes.
2. If necessary, repeat step 1 to check other boxes.
3. When you have finished making your selections, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the messages in the selected box(es).

Otherwise, press the **No** soft key.

Multimedia messages *(Menu 5.2)*



Multimedia Message Service (MMS) is a messaging service very similar to Short Message Service (SMS). It provides automatic and immediate delivery of personal multimedia messages from phone to phone or from phone to e-mail.

In addition to the familiar text content of text messages, multimedia messages can contain images, graphics, voice, and sounds. An MMS message is a multimedia presentation in a single entry. It is not a text file with attachments.

Using the MMS feature, your phone can receive multimedia messages. You can also send multimedia messages. This function is available only if it is supported by your service provider. Only phones that offer multimedia message features can receive and display multimedia messages.


Note: When you buy media content from the Internet, this content is delivered to you in MMS messages. You can retrieve the messages from the server and then save the items in your phone's memory. You can't forward these messages to other people or add the saved items to a MMS message.





Retrieving a new message

When you are retrieving a message, the Retrieving icon () appears on the display. When you finish retrieving a new message, the New message icon () and a text notification showing the number of the message appear on the display. You also hear an alert, depending on the message sound setting; for further details, see page 81.



To read the new message in idle mode, press the **View** soft key. You will see the Inbox contents. Select a message to view it.

Notes:

- When you set **Message reception** (see page 109) to **Automatic**, you cannot enter the **Downloads** menu (**Menu 6.3.1**) and also cannot access WAP sites while retrieving a new message. If a message comes in while you are playing a Java game, a notification message only will be delivered to your phone. After you have finished your game, you can retrieve the message by accessing the notification message.
- To clear the new message notification on the display, press the  key. When you have also missed calls, voice mails, short messages or multimedia messages, and multi CBs, the right soft key indication changes in the following order: **Missed**, **Connect**, **View**, **CB**, and **Phonebook**.

If **Message reception** has been set to **Manual** (for details, see page 109), when the new message icon () appears on the display, you must go to the Inbox to retrieve the message. You can select messages with the following icons: , , or . Then you can retrieve or delete the message using the **Opt.** soft key.

Managing memory

When the memory is full, the New message icon () blinks and an error message displays. (It disappears when you press the  key, but it reappears if you don't delete any messages to free up some memory.) In this situation, you cannot receive any new messages. You must delete one or more messages to create space for incoming

messages. You can do this by using the **Delete** option in Inbox, Outbox, Draft, or My folder, or by using the **Delete all** option; for further details, see page 103.

Notes:

- You can receive up to 150 messages.
- Multimedia message boxes, Camera, and Media box share a given amount of memory in your phone. You can use the **Delete** or **Delete all** option to delete some sounds or images in Camera or Media box.

Create (Menu 5.2.1)

This menu option allows you to create a new multimedia message and then send it to one or multiple destinations.

1. There are four categories of items that can be added to multimedia messages: scroll to select the one that you want, and press the **Add** soft key. Then proceed according to the instructions below.

Item	How to add
Subject	<ol style="list-style-type: none"> 1. Enter a subject for your message. For details about entering characters, see page 42. 2. Press the OK soft key. <p>Note: To move to a previous screen while entering a subject, delete all of the entered characters and hold down the C key.</p>


Item	How to add
Picture	<p><u>To add a new picture:</u></p> <ol style="list-style-type: none"> 1. Select the Create new option. 2. Take a photo using the camera feature. For details about the camera feature, see page 143. 3. Select a picture you want to add. The picture is displayed. 4. Press the Add soft key. <p><u>To add a picture from Media box:</u></p> <ol style="list-style-type: none"> 1. From the MMS images file, select the picture you want to add to the message. The picture will be displayed. 2. Press the Add soft key. <p>You may not be able to add some downloaded images if they are not in the correct format.</p>
Sound	<p><u>To add a new sound:</u></p> <ol style="list-style-type: none"> 1. Select the Record new option. 2. Press the Record soft key to start recording. 3. Press the Stop soft key to stop recording. 4. Press the Play soft key to replay the sound. Or, press the Add soft key to add the sound. Enter a name for the sound and press the OK soft key. The sound will be both added to the message and saved in the Media box.

Item	How to add
Sound (Con't)	<p><u>To add a sound from Media box:</u></p> <ol style="list-style-type: none"> 1. Select one of the sound storage sites. Sounds stored at the site are displayed. 2. Select the sound you want to add. 3. Press the Select soft key to add it. <p>You may not be able to add some downloaded sounds if they are not in the correct format.</p>
Message	<ol style="list-style-type: none"> 1. Enter a new message. Or you can enter a preset message. <p>To enter a preset message;</p> <ul style="list-style-type: none"> • Press the Opt. soft key and select Preset messages. • Select one of the preset messages. <ol style="list-style-type: none"> 2. Press the Opt. soft key and select Done to add the message. <p>Note: To move to a previous screen while entering a message, press and hold the C key.</p>

2. Press the **Opt.** soft key to use the following options.

- **Preview:** shows your message as it will display on the recipient's phone. To go back to the message screen, press the **Edit** soft key. To send the message, press the **Send** soft key and go to step 4.
- **Send:** allows you to send the message. Refer to the next steps.

- **Add page:** allows you to add up to 10 pages. You can move to each page using the Left or Right key on the message screen.
- **Page timing:** allows you to set how long one page of the message will display to the recipient before scrolling automatically to the next page.
- **Text effect:** allows you to set the colour, size, and style of the message text.
- **Clear subject/picture/sound/message:** allows you to delete the subject, image, sound, or message, separately.
- **Delete page:** allows you to delete the current page.
- **Save message:** saves the message in **Draft** (see page 101) or **My folder** (see page 102).

Note: To go back to the edit screen, press the  soft key or the **C** key.

3. When you finish creating the message, select **Send** from the options.
4. Select an entry on the Send screen.

If the entry is empty, enter a destination as below. Select:

Number: to enter a destination number.

Email: to enter an e-mail address.

Phonebook: to enter a destination from Phonebook.

After entering a destination, press the **OK** soft key.

If the entry is not empty, you can choose one of the following. Select:

Edit address: to edit the selected address.

Delete address: to delete the selected address.

Note: To clear part or all of your input, press or press and hold the **C** key. If there is no input displayed, press and hold the **C** key to move to the previous screen.






5. To send the message to up to 20 different destinations, repeat step 4.
6. When you have finished entering the destinations, press the **Send** soft key.




If you want to cancel a sending message or resend a message that you failed to send, go to the **Outbox**. Then select the message and the option in point. For further details, see page 100.

Inbox (Menu 5.2.2)

Your phone receives incoming messages and saves them in the Inbox.

When the **Inbox** menu is selected, the list of messages received displays with the:


- message's subject, or no subject if the message has no subject.
- sender's phone number, or name if stored in Phonebook.
- message status:  for a retrieving message,  for a read message,  for an unread message,  for a read notification message, and  for an unread notification message.

Note: There are several different message status icons (, , ) corresponding to the priority assigned to the message by the sender (see page 108).

To view a message, scroll to it and press the **Select** soft key.

To scroll through the message contents, press the Up or Down key. When the message has more than one page, you can press the Left or Right key to move through the pages, or the pages will cycle automatically according to time settings determined by the sender.

Notes:

- Your phone may not be able to play or display some types of sound or picture files.
- If an incoming message has a video clip attached, the attachment icon() appears on the title line. You will not be able to view the attachment, nor extract it from the message.

While viewing a message, you can choose the following options by pressing the **Opt.** soft key:

Delete: deletes the message

Replay: replays the message.

Reply: allows you to send a reply to the sender.

Forward: forwards the message to another person. When the message contains media contents you has bought on the Internet, forwarding is not available.

Call back: allows you to call the sender.

Cut media: extracts a picture or sound, so that you can set them as wallpaper or a ringtone, or you can include them as part of a multimedia message.

Cut address: extracts phone numbers, email addresses, or URL addresses in the text, so that you can call the number, or send a message to the address, or save it in your Phonebook.







Properties: shows detailed information about the message.

Move to My folder: moves the message to My folder for later use.

Outbox *(Menu 5.2.3)*

Outbox stores messages that you have sent, are sending, have failed in transmission, or have been cancelled.

When the **Outbox** menu option is selected, the list of messages you have sent or saved displays with the:

- message's subject or or 'No subject', if the message has no subject.
- recipient's phone number.
- message status:  for a message being sent,  for a sent message,  for a message that you failed to send or you cancelled sending, and  for a delivery report. When a recipient retrieves a message you sent and the **Delivery report** option (see page 108) is set to on,  is changed to .

To view a message, scroll to it and press the **Select** soft key. You cannot view a message that is in the process of being sent.

To cancel transmission of a message that is in the process of being sent, scroll through and select the message by pressing the Up or Down key, and then press the **Select** soft key. Then the confirming

message appears. In the message, you can cancel transmission by pressing the **Yes** soft key.

To resend a message that failed or was cancelled in transmission, scroll through and select the message by pressing the Up or Down key, and press the **Select** soft key. Then press the **Opt.** soft key, and then select the **Send** option.

To scroll through the message, press the Up or Down key. When the message has more than one page, you can press the Left or Right key to move through the pages, or the pages cycle automatically, according to a timer set by the sender.

You can choose the following options by pressing the **Opt.** soft key:

Delete: deletes the message.

Replay: replays the message.

Send: sends the message.

Properties: shows you detailed information about the message.

Move to My folder: moves the message to the My folder for later use.

Draft *(Menu 5.2.4)*

This message box stores messages that you save and messages whose creation was interrupted by an incoming call or message.

Note: Messages whose transmission failed are saved in Outbox.

To view a message, scroll to it and press the **Select** soft key.

You can choose the following options by pressing the **Opt.** soft key:

Send: sends the message.

Replay: replays the message.

Delete: deletes the message.

Properties: shows you detailed information about the message.

My folder *(Menu 5.2.5)*

You can move messages stored in Inbox or Outbox to My folder by using the **Move to My folder** option. While making a new message, you can also save it to My folder by using the **Save message** option.

To view a message in My folder, scroll to it and press the **Select** soft key.

You can choose the following options by pressing the **Opt.** soft key:

Delete: deletes the message.

Replay: replays the message.

Send: sends the message.

Cut media: extracts a picture or a sound, so that you can set them as wallpaper or a ringtone, or you can send them as part of a multimedia message.

Cut address: extracts phone numbers, email addresses, or URL addresses in the text, so that you can call the number, or send a message to the email address, or save it in Phonebook.

Properties: shows you detailed information about the message.

Delete all *(Menu 5.2.6)*

This menu option allows you to delete all of the messages in each message box separately. You can also delete all of your messages at one time.

1. Scroll to a message box and place a check mark next to it by pressing the **Select** soft key.

Selecting **All** places check marks on all of the message boxes.

2. If necessary, repeat step 1 to check other boxes.
3. When you have finished checking, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the messages in the box(es).

Otherwise, press the **No** soft key.

Push messages *(Menu 5.3)*

This menu allows you to set your phone to receive push messages.

The following options are available:

Inbox: Your phone receives push messages and saves them in the Inbox. You can read push messages from Inbox.

Setting: This option allows you to set the push message receiving options.

Always: allow all push messages.

Never: reject all push messages.

Optional: allows only push messages whose setting matches the number set in this option. The preset number is that of the SMS service centre. You can edit the number.

Delete all: deletes all push messages.

Preset messages *(Menu 5.4)*


In this menu, you can preset up to nine messages that you use most frequently. When you access this menu, the preset message list displays.

1. Scroll to a message or an empty entry by pressing the Up or Down key.
2. Press the **Select** soft key and enter a new message or change the old message.

For further details about entering characters, see page 42.

3. Press the **OK** soft key to save the message.

Voice mail *(Menu 5.5)*

When you receive a voice mail, your phone displays the  icon and you hear an alert.

Connect to voice mail

- In idle mode, when you receive a new voice mail, press the **Connect** soft key to access your voice mail server and follow the instructions provided.
- In idle mode, hold the **1** key down to access your voice mail server and follow the instructions provided.
- Call your voice mail server number by accessing the **Connect to voice mail** menu and follow the instructions provided.

Voice server number

Before using the voice mail service, you must store the voice mail server number obtained from your service provider.

When you select an entry in the Voice server number menu, the following options are available:

Edit number: enter a voice mail server number or press the **Phonebook** soft key to enter a number from Phonebook. Then press the **OK** soft key.

Change name: enter a server name and press the **OK** soft key to save it.

Delete: when the confirming message appears, press the **Yes** soft key. To cancel, press the **No** soft key.

Broadcast *(Menu 5.6)*

This network service allows you to receive text messages on various topics, such as the weather or traffic. Messages are displayed immediately as they are received, provided that:

- the phone is in idle mode.
- the **Receive** option (**Menu 5.6.2**) is set to **On**.
- the message channel is currently active on the channel list.

When you get broadcast messages, you can see the messages in idle mode. If the message is short, you will be able to see it on the display; otherwise, press the **CB** soft key to read the entire message.

In the **Broadcast** menu option, the following options are available:

Read: lets you read received broadcast messages.

Archive: shows the list of messages you have saved from the temporary list.

Temporary: shows the latest messages. These messages will disappear when the phone is switched off.

If the message is long, press the Up or Down key to scroll through the message.

When you read a message, press the **Options** soft key to access the following options:

Cut number: shows a list of numbers included in the message. You can extract the number(s) later use.

Save: (Temporary only) saves this message to the Archive list.

Delete: delete this message.

Delete All: delete all message on the list.

Receive: allows you to turn the reception of broadcast messages on or off.

Channel: a check mark inside the **All** check box indicates that the channel is enabled.

To enable or disable this channel, press the **Select** soft key, then select **Enable** or **Disable**.

The **Add channel** option allows you to add a new channel to the channel list. Enter the appropriate channel code obtained from your service provider, and a title for the channel.

Language: selects your preferred language. You will receive cell broadcast messages only in the language you have selected.

Settings *(Menu 5.7)*

Short messages *(Menu 5.7.1)*

Using this menu, you can set up default SMS information. The following options are available:

Service centre: allows you to store or change the number of your SMS centre. This number is required in order to send messages. You must obtain this number from your service provider.

Validity period: allows you to set the length of time your messages are stored at the message centre while attempts are made to deliver them.

Message type: allows you to set the type of messages you want to receive, either **Text**, **Fax**, **Voice**, **ERMES**, **X400**, or **E-Mail**. The network can convert the messages into the selected format.

Reply path: allows the recipient of your SMS message to send you a reply via your message centre, if the service is provided by the network.

Delivery report: if you set this to on, the network will send you notice regarding the delivery status of messages you have sent.

Character support: allows you to select the character set when editing and sending messages.

GSM-alphabet: you can only send messages using GSM characters.

Uni-code: you can send a message using Unicode characters, including GSM alphabets. However the maximum number of characters which can be entered in a message is reduced to half in length.

Automatic: if you select **Automatic**, the phone selects the character set depending on whether you use Unicode characters or not.

Multimedia messages *(Menu 5.7.2)*

Using this menu, you can set up default settings for sending or receiving MMS messages. The following options are available:

Send settings: The following options are available:

Priority: allows you to set the priority of messages that you send. Messages can be set as Low, Normal, or High priority.

Validity period: allows you to set the length of time your messages are stored at the message centre while attempts are made to deliver them.

Delivery after: you can set the delay time before the phone sends your messages.

Address hiding: when this option is set to **On**, your phone number does not display on the recipient's phone.

Delivery report: when this option is set to **On**, the network informs you whether or not your message has been delivered.

Read reply: when this option is set to **On**, a recipient's phone sends a message to inform you of when your message was opened.

Receive settings: the following options are available:

Msg. reception: allows you to set how you receive a message. You can select between **Manual**, **Automatic**, and **Reject**.

Anonymous reject: when this option is set to **On**, your phone rejects messages sent without caller ID.

Adverts reject: when this option is set to **On**, your phone rejects advertisements.

Report allowed: when this option is set to **Off**, when you receive a message, your phone will not send a reply message when you open the message, even if the sender has so requested.

MMS profiles: in this menu, you can configure MMS profile settings that are required when you send or receive multimedia messages.

Current profile: allows you to select the profile to be used with the current message.

Profile setting: allows you to set up to five profiles.

- Profile name: enter the name of the profile.
- Server URL: enter the address of the server.
- GSM setting: allows you to change the proxy settings for the GSM network.
 - Gateway: enter the IP address and IP port.
 - Data call type: select a network connection type between ISDN and Analogue.
 - Dial number: enter the server phone number.
 - Login ID: enter the server login ID.
 - Password: enter the server password.
- GPRS setting: allows you to change the proxy settings for the GPRS network.
 - Gateway: enter the IP address and IP port.
 - APN: enter the access point name used for the address of the GPRS network gateway.
 - Login ID: enter the user ID required to connect to GPRS network.
 - Password: enter the password required to connect to the GPRS network.



- Bearer: select the bearer to be used for each type of network access.
 - GPRS only: only functions on a GPRS network.
 - GSM only: only functions on a GSM network.

Memory status *(Menu 5.8)*

You can check the memory status for messages.

Short messages *(Menu 5.8.1)*

You can check how many messages are stored on the SIM card and phone's memory.

When you have finished, press the  soft key or the  key to exit.

Multimedia messages *(Menu 5.8.2)*

Multimedia message boxes, Camera, and Media box share a given amount of memory in your phone.

The display shows the amount of free and used memory.

You can see the memory status of multimedia message boxes, Camera, and Media box by pressing the Left or Right key.

The **Fun box** menu contains several amusement options:

- WWW Services
- Media box
- JAVA world

WWW services (Menu 6.1)

Your phone comes equipped with a WAP (Wireless Application Protocol) Browser, making it possible for you to access the Wireless Web.

Each time you start the WAP Browser, the phone connects to the Wireless Web and the service indicator icon (or) appears on the display to inform you that you are connected to the Wireless Web and will be billed accordingly. Rates vary according to your service option.

The WAP Browser ends the network connection after a certain period of inactivity and automatically reconnects as necessary. For this reason, you may find that you are billed for several network connections within a single session. This is normal and is designed to minimise your bill.


Home (Menu 6.1.1)

When you select this menu option, the phone connects to the network and loads the homepage of the Wireless Web service provider.



Once connected, the homepage displays. The content depends on the service provider.

Note: To quickly launch the WAP browser from idle mode, press the **i** key.

To scroll through a displayed screen, use the Up and Down keys.

To exit the browser, press the  key at any time. The phone returns to idle mode.

Navigating the wap browser

To	Press the
scroll through and select browser items	Up or Down key until the item you want highlights, and then press the  soft key.
select a numbered item	corresponding numeric key.
return to the previous page	 (or Back) soft key or C key.
return to the startup homepage	* key and select the Home browser option. For details, see page 113.

Entering text in the WAP browser

When you are prompted to enter text, the current text input mode appears above the right soft key.

For further information on how to enter text, see page 42.

Using the WAP browser menus

There are various menu options available when surfing the Wireless Web.

To access the WAP Browser menu:

1. Press the * key or scroll to the logo on the top left of all WAP pages and then press the ✓ soft key. A list of options appears.
2. Highlight the required option using the Up or Down key.
3. Press the ✓ soft key to select the option.
4. If necessary, select a secondary option by pressing the Up or Down key and then press the ✓ soft key.

Note: Available WAP Browser operations may vary, depending on your version of the browser.

The following WAP Browser operations are available:

Back: returns to the previous page.

Home: takes you back to the homepage of the Wireless Web service provider.


Exit: exits the WAP browser.

Reload: reloads the current page.

Show URL: shows the URL address of the WAP page you are currently accessing.

About: shows information about the browser.

Using WAP browser options

Several options are available when you are surfing the Wireless Web. To access these options, press the  key once connected to the Wireless Web.

Goto URL: allows you to manually enter the URL address of the site that you wish to access.


Bookmark: allows you to use the **Bookmark** menu option. For details, see page 115.

Messages: allows you to read or write an SMS message. For details, see page 85.

Media box: allows you to use your Media box. For details, see page 118.

Answering a call during a WAP connection

You can receive an incoming call while you are using the WAP browser.

Answer the call by pressing the  key or the **Accept** soft key, as you normally would. After ending the call, you can continue navigating on the WAP page you were previously accessing.

Bookmark (Menu 6.1.2)

This menu option allows you to store the URL addresses of up to 15 of your favourite Web sites.

To store a URL address:

1. Select an empty location and press the **Select** soft key.
2. Enter the address and press the **OK** soft key to save it.
3. Assign a name to the bookmark and press the **OK** soft key.

For further information about how to enter text, see page 42.

Once you have stored an address, the following options are available when you select it.

Go: allows you to access the site directly.

Edit: allows you to change the name and URL address of the bookmark.

Delete: allows you to delete the bookmark.

Go to URL (Menu 6.1.3)

This menu option allows you to manually enter the URL address of the Web site that you wish to access.

Enter the URL address and press the **OK** soft key.

For further information about how to enter text, see page 42.

Clear cache (Menu 6.1.4)

This menu option allows you to clear the information stored in the cache. The cache is the phone's temporary memory, used to store the most recently accessed Web pages.

Proxy settings (Menu 6.1.5)

This menu option allows you to set up five proxy servers.

Note: You do not need to change the browser settings in most cases. Change the settings only when your network provider asks you to.

For each proxy, the following options are available:

Proxy name: enter the name of the HTTP proxy server.

GSM setting: you can change the proxy settings for the GSM network.

Gateway: enter the IP Address and IP Port

Data call type: select a network connection type: **ISDN** or **Analogue**.

Dial number: enter the PPP server phone number.

Login ID: enter the PPP server login ID.

Password: enter the PPP server password.

GPRS setting: you can change the proxy settings for the GPRS network.

Gateway: enter the IP Address and IP Port.

APN: enter the access point name used for the address of the GPRS network gateway.

Login ID: enter the user ID required to connect to the GPRS network.

Password: enter the password required to connect to the GPRS network.

Home URL: you can change the address of your startup homepage.

When the default homepage displays, you can delete it using the **C** key and enter your own choice. To enter any special characters, / for example, use Symbolic mode; see page 49.

Bearer: you can select the bearer to be used for each type of network access.

GPRS first: your phone will search for the GPRS network first. If this service is not available, you can use a GSM service temporarily.

GPRS only: the phone only works in GPRS networks.

GSM only: the phone only works in GSM networks.

Current proxy (Menu 6.1.6)

This menu option allows you to activate one of the proxies you set up to use the WAP connection.

Media box (Menu 6.2)

This menu option stores various media items from outside sources, such as WAP sites, or multimedia messages you have received.

Photos (Menu 6.2.1)

This option allows you to view pictures you have taken.

My photos: allow you to view the photos stored in my photos.

My album1 / My album 2: allow you to view the photos in the selected album.

When you view a photo, press the **Options** soft key to do the following:

Send: allows you to send the photo via a message.

Rename: allows you to rename it.

Delete: allows you to delete it.

Move to album: allows you to move it to one of the albums.

Set as: allows you to set it as wallpaper or a caller ID.

Wallpaper: allows you to set it as a wallpaper.

Caller ID: allows you to set it as a caller ID for an entry in Phonebook.

Protection: allows you to protect it from deletion or not.

Properties: allows you to view the detailed information about the photo.

Images (Menu 6.2.2)

This option allows you to view images extracted from EMS or MMS messages, downloaded from WAP sites, or from EasyStudio PC software.

To view the image, press the View soft key.

When you view a photo, press the **Options** soft key to do the following:

Send: allows you to send the image as a multimedia message.

Rename: allows you to rename it.

Delete: allows you to delete it.

Set as wallpaper: allows you to set it as wallpaper.

Properties: allows you to view the detailed information about the image.

Sounds (Menu 6.2.3)

This option allows you to listen to recorded voices and melodies received from outside sources, such as WAP sites or multimedia messages you have received.

Voices: allow you to listen to voice recordings.

My sounds: allow you to listen to various melodies.

When you select a sound, press the **Options** soft key to send, rename, delete, set as a ringtone (only in **My sounds**), or view its properties.

Delete all *(Menu 6.2.4)*

This option deletes all photos, images, and sounds from Media box.

Photos

1. Scroll to a box and place a check mark next to it by pressing the **Select** soft key.

Selecting **All** places check marks on all of the items. If you want to delete protected photos and caller ID photos, select the **With protected photos** option and the **With caller ID photos** option.

2. If necessary, repeat step 1 to check another box.
3. When you have finished checking, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the selected photos.

Otherwise, press the **No** soft key.

Images

Follow the instructions for Photos. When a confirming message appears, press the **Yes** soft key to delete all images.

Otherwise, press the **No** soft key.

Sounds

1. Scroll to a sound box and place a check mark next to it by pressing the **Select** soft key.

Selecting **All** places check marks in all of the boxes.
2. If necessary, repeat step 1 to check other box.
3. When you have finished checking, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the selected sounds.

Otherwise, press the **No** soft key

Memory status *(Menu 6.2.5)*

Media box, Camera, and multimedia message boxes share a given amount of memory in your phone.

This display shows the status of free and used memory.

You can see memory status for the Media box, Camera, and multimedia message boxes by pressing the Left or Right key.

JAVA world *(Menu 6.3)*

You can download MIDlets (Java applications that run on mobile phones) from various sources using the WAP Browser and store them on your phone.

Downloads *(Menu 6.3.1)*

A list of Java games is displayed. Two MIDlets (Java games) have been pre-loaded on your phone. If the Java games list is empty, a pop-up message is displayed inviting you to download a new game. To add MIDlets to the list, download them from the Web.

To	Press the
find a game	Up or Down key.
run a game	Launch soft key.
view detail information	Info soft key.
delete the game	Delete soft key in the information display.

SnowBallFight

The goal of this game is to challenge and defeat the snowball fight champions of four different teams.

Accessing a game

After loading the game, press any key twice to go to the first menu screen. At the first menu screen, press the **#** key to play a game, or press the ***** key to access the game's main menu.

Play: allows you to start a new game or a saved game. The saved game option allows you to continue playing from where you left off the last time you played the game.

Instructions: shows you the explanation of control keys and offensive and defensive items.

Configuration: allows you to turn the sound or vibration on or off, and to select the speed of the game from 1 to 5.

Quit: quits the game and returns to the downloads menu screen.

Playing a game

Move the character along the street using the navigation key. If you have enough coins, earned while fighting, you can buy defensive items at the drug store, and offensive items at the item shop. Move the character to the currently fighting team and press the **#** key to join in. When the snowball fight starts, hit the rival kids with snowballs and avoid theirs. While fighting, you can make use of any items you have. If you raise enough mana, you can also use special attack. You must win all fights in four stages in order to challenge the champions.

Key Commands

4/6 or Left/Right: move left or right

2,5 or Up, **i** :control the distance at the first press and throw the snowball at the next press.

8 or Down: use a special attack depending on your mana.

3: enters item mode in order to use the items in your inventory. Select the item you want to use by pressing 2, 5, Up or **i** key.

Special attacks

Level 1: Aurora, all enemies are hit by snowballs.

Level 2: Ice dragon, all enemies are hit by snowballs and frozen for 8 seconds.

Level 3: Icicle storm, double powered snowball attack on all enemies. Enemies' attack accuracy is decreased for 10 seconds.

BubbleSmile

BubbleSmile is an arcade puzzle game.

Accessing a game

After loading the game, you will see the following options. Press **i** key to select one of them:

Start game: allows you to start a new game in timed mode or skilled mode.

- **Timed mode:** You have until time runs out to play. You must align bubbles of the same colour to make them disappear, and when you do, your time increases.
- **Skilled mode:** you have to make more than 4 bubbles disappear at once for skill bar gauge to increase. If less than 4 bubbles disappear, then the gauge falls.

Continue: allows you to continue the last game you played. The menu is only available when a game has already been played.

High score: shows you the high score table.

How to play: shows you the instructions for this game.

Option: allows you to turn the sound on or off.

Playing a game

Your score goes up when you make bubbles disappear. You must align at least 3 bubbles horizontally or diagonally to make them vanish. You will see a band surrounding three bubbles, and you

can rotate the bubbles within the band to make them line up within the matrix, to match colours. You can also move the band to surround three different bubbles. When the game ends, if your score was within the top three, it will appear on the display.

Key Commands

2, 4, 6, 8, or navigation key: move the band up, down, left, or right

1: rotate the bubbles in the band counterclockwise

3: rotate the bubbles in the band clockwise

Internet settings *(Menu 6.3.2)*

This menu option allows you to set the information to connect to the Java server. This information is provided by the network operator automatically, but you can change it manually.

APN: enter the access point name used for the address of the GPRS network gateway.

Login ID: enter the user ID required to connect to the GPRS network.

Password: enter the password required to connect to the GPRS network.

DNS settings: enter the DNS address. The DNS (Domain Name Server) address to connect to the Java server is automatically set when the data set-up call is made.

Memory status *(Menu 6.3.3)*

You can check memory space available for Java downloads. The display also shows the total memory and used memory.

Organiser

Organiser

The Organiser feature enables you to:

- view the calendar and/or write a memo or make a to do list.
- set the current date and time, and find out what time it is in various cities around the world.
- set the alarm so that the phone rings at a specific time.
- use your phone as a calculator, unit convertor, timer, or stopwatch.

New memo *(Menu 7.1)*

This menu option allows you to create a memo.

Note: You can also access this menu by holding down the **C** key in idle mode.

1. Write a memo of up to 100 characters, and press the **OK** soft key.

For further information about how to enter text, see page 42.

2. Select the category to which you want to save the memo and press the **Select** soft key.

The following categories are available:

- **Scheduler:** normally scheduled events, such as appointments or meetings.
- **To do list:** tasks you need to do.
- **Call:** calls you need to make.

- **Anniversary:** anniversaries to be remembered, such as wedding anniversaries, birthdays, or other special days.

Note: You can save up to 25 items in each category, giving you a total capacity of 100 memos.

3. Scroll to a date on the calendar by pressing the navigation keys. Press the **Select** soft key.

4. If applicable, depending on the category that you have selected, enter the event time, and press the **OK** soft key.

5. If you have selected the 12-hour time format (see page 133), select **AM** or **PM** by pressing the Up or Down key, and then press the **Select** soft key.

6. To set an alarm for the memo, press the **Yes** soft key.

Otherwise, press the **No** soft key. The memo is saved immediately. Go to step 10.

7. Enter the time for the alarm to sound, and press the **OK** soft key.



8. If you have selected the 12-hour time format (see page 133), select **AM** or **PM** by pressing the Up or Down key, and then press the **Select** soft key.

9. Select an alarm melody and press the **Select** soft key.

The memo is saved and then displays on the screen.

10. After you have finished creating your memo, you can choose from the following options by pressing the **Options** soft key:

- **Add**: allows you to create a new memo.
- **Delete**: allows you to delete the memo.
- **Edit**: allows you to edit the memo.
- **Move**: allows you to move the memo to a different date.
- **Copy**: allows you to copy the memo to a different date.

11. When you have finished, press the  soft key or the  key to exit.

Calendar *(Menu 7.2)*

The calendar helps you to keep track of your schedule, calls that you need to make, tasks that you need to do, and anniversaries. You can set an alarm to sound on the date of a scheduled item.

Consulting the calendar

To	Press the
move to another day	Left or Right key.
move to another week	Up or Down key.
move to the previous or next month	Up or Down key and hold it down
move to the previous or next year	Left or Right key and hold it down.

The following options are available when you press the **Options** soft key on the Calendar display:

Add memo: allows you to create a new memo on the day.

Go to date: allows you to enter a particular date and then schedule an event on that date.

View all: shows all of the events that you have scheduled.

Delete day: deletes the events scheduled on the selected day.

Delete all: deletes all of the events that you have scheduled.

Creating a new memo

1. Scroll to a date on the calendar, referring to page 128, and press the **Select** soft key.
2. Write your memo and press the **OK** soft key.

For further information about how to enter characters, see page 42.

3. Select the category to which you want to save the memo, and press the **Select** soft key.





The following categories are available:

- **Scheduler**: normally scheduled events, such as appointments or meetings.
- **To do list**: tasks you need to do.
- **Call**: calls you need to make.
- **Anniversary**: anniversaries to be remembered, such as wedding anniversaries, birthdays, or other special days.

4. Follow the procedure from step 4 on page 127 onwards to save the memo.

Viewing your calendar memos

A date that has a memo associated with it is highlighted in a red box. If you select a date on which events have already been scheduled, the number of memos of each type is shown at the bottom of the calendar.

-  : General schedule events
-  : To do list
-  : Calls
-  : Anniversaries

Press the **Select** soft key to view the memos.

If you have created more than one memo on the same day, you can scroll to the event you want to view by pressing the Left or Right key.

The following options are available when you press the **Options** soft key:

Add: allows you to add a new memo. For further information about how to add a memo, see page 126.

Delete: allows you to delete the memo.

Edit: allows you to edit the memo.

Move: allows you to move the memo to a different date.



Copy: allows you to copy the memo to a different date.

To do list *(Menu 7.3)*

This menu allows you to view your list of tasks.

To create a new memo of the To do list type:

1. Write the memo and press the **OK** soft key.
For more information about how to enter characters, see page 42.
2. Scroll to a date on the calendar, referring to page 128, and press the **Select** soft key.
3. Follow step 4 on page 127 onwards to save the memo.

Once you have defined a task, it is listed with a status mark ( for Done or  for Undo) on the **To do list** menu.

To scroll to a specific task, press the Up or Down key, and press the **Select** soft key. The task displays with the deadline, alarm setting, job details, and status mark.

You can scroll to the previous or next task by pressing the Left or Right key.

The following options are available when you press the **Options** soft key:

Add: allows you to add a new task. For details about adding To do list-type memos, see page 126.

Mark: allows you to change the status mark.

Edit: allows you to edit the contents of the task.

Move: allows you to move the task to a different date.

Copy: allows you to copy the task to a different date.

Delete: allows you to delete the task.

Delete all: allows you to delete all of tasks from the list.

Clock *(Menu 7.4)*

This option allows you to change the current time and date displayed. You can also check the current time for Greenwich Mean Time (GMT) and 22 major cities around the world.

The following options are available:

Set time: allows you to enter the current time. You can choose the time format in the **Set format** menu option; see page 133.

Note: Before setting the time, you must specify your time zone in the **Set world time** menu option.

Set date: allows you to enter the day, month, and year. You can change the date format in the **Set format** menu option; see page 133.

Set world time: allows you to check the current GMT, as well as the current time in 22 major cities around the world. Scroll through the cities using the Left or Right key.

The screen shows the:



- city name.
- current date and time.
- time difference between the selected city and your city if you have set the local time (see below) or GMT (by default).



To select your time zone:

1. Select the city corresponding to your time zone by pressing the Left or Right key one or more times.

The local date and time display.

2. Press the **Set** soft key.

3. To	Select
update the current date/time with this new setting	Set local.
indicate that the time zone is currently using the daylight saving time	Set DST. The  icon is shown next to the time difference.
indicate that the time zone is no longer using the daylight saving time	Remove DST (only available when the  icon is shown next to the time difference).

4. When you have finished, press the  soft key or the  key to exit.

Set format: allows you to change the time and date formats.

Time format: 24 hours
12 hours



Date format: DD/MM/YYYY (day/month/year)
YYYY/MM/DD (year/month/day)

Alarm *(Menu 7.5)*

This option allows you to set an alarm to sound at a specific time. You can set up to three alarms or set the phone to sound an alarm when it is switched off.



To set an alarm:


1. Select either **Morning call**, **Alarm1**, or **Alarm2** by pressing the Up or Down key.

The  icon means that no alarm is currently set. The  icon means that an alarm has already been set.

2. Press the **Select** soft key.
3. Press the **Options** soft key.
4. Scroll to an option by pressing the Up or Down key and press the **Select** soft key. Change the setting, as needed.
 - **Alarm day:** place or remove a check mark on the day(s) of the week by pressing the **Select** soft key. If you want to set a daily alarm, select **Everyday**. If you want to set an alarm to sound only a single time, select **One-time alarm**. When you press the **OK** soft key after making your selection, your phone asks you to enter the alarm time.
 - **Alarm time:** enter the time for the alarm to sound.
 - **Alarm tone:** select an alarm melody.
 - **Remove alarm:** deactivates the alarm.

Note: Alarms 1 and 2 will alert you with the alarm tone you set, or with vibration, depending upon the incoming call alert type (**Menu 4.1.4**). Morning call, however, will alert you with the melody you set, regardless of the incoming call setting.



5. Repeat step 4 to change each setting.
6. When you have finished, press the  soft key or the  key to exit.

Once an alarm has been set, you will see the Alarm icon () on the top line of the display. To turn off the alarm when it sounds, open and close the phone, or press any key.

Note: When quiet mode has been activated, Alarms 1 and 2 will not sound. However, Morning call will sound regardless of whether or not quiet mode has been activated.

To set the alarm to ring even if your phone is switched off:

1. Scroll to **Auto power** on the Alarm list and press the **Select** soft key.
2. If necessary, press the Up or Down key to select **On**.

To turn the Auto Power feature off, select **Off**.
3. Press the **Select** soft key to save the setting.
4. When you have finished, press the  soft key or the  key to exit.

Once you have activated the auto power alarm, a check mark appears next to **Auto power**. If the phone is off at the specified alarm time, it automatically switches on and sounds the alarm. It then automatically switches off again.

To turn off an alarm:

- Press the **Confirm** soft key.
- When the morning call alarm tone sounds, press any key to stop the alarm. Or, you can press the **Snooze** soft key to stop the alarm for five minutes, after which it will resume. You can do this a maximum of five times.







The snooze alarm tone sounds while the phone is switched off and the **Auto power** is set to on, and the quiet mode is activated. If you reset the morning call alarm time, or deactivate the morning call alarm, the snooze alarm is cancelled.

Voice recorder *(Menu 7.6)*

You can record voice memos. After recording, you can send a memo to other people via Multimedia Message Service.

Record *(Menu 7.6.1)*

This menu allows you to record a new voice memo.


1. To start recording, select  key by pressing **Select** key.
2. Record a voice memo by speaking into the microphone.
3. When you select the  soft key, or if the recording time expires, the voice memo is saved in your phone automatically. Select the  to play the recorded voice. You can also pause, rewind, or forward by pressing , , or .
4. Otherwise, press **Options** soft key to use the following options:

Send: allows you to send the voice memo to other people by using the Multimedia Message Service. See page 94 for further details about sending a message.





Rename: allows you to change the memo's name.

Delete: deletes the memo.

Properties: displays information about the memo, such as the name, memory size, and file format.

5. To exit, press the **C** or  key.

Voices *(Menu 7.6.2)*

This option shows you the list of voice memos you have recorded. Scroll to the voice memo which you want and press the **Select** soft key. The voice memo will play back automatically. While playing, you can stop playing, pause, rewind, or forward it by selecting the , , , or . The following options are available when you press the **Options** soft key:

Send: allows you to send the voice memo to other people by using the Multimedia Message Service. See page 94 for further details about sending a message.

Rename: allows you to change the memo's name.

Delete: deletes the memo.

Properties: displays information about the memo, such as the name, memory size, and file format.

Delete all *(Menu 7.6.3)*

This option allows you to delete all of the recorded voice memos. When a confirmation message appears, press the **Yes** soft key to confirm. Otherwise, press the **No** soft key.

Settings *(Menu 7.6.4)*

This option allows you to change the default configuration of the voice recorder.

The following options are available:

Recording time: allows you the duration of recording.

Normal: you can record your voice memo until you fill out the phone's memory capacity.

Limit size (for MMS): you can record your voice memo upto 2 minutes which enables you to attach the recorded voice memo to multimedia messages.

Volume: allows you to adjust the voice memo recording volume.

Default name: allows you to change the default prefix name of the voice memo.

Memory status *(Menu 7.6.5)*

You can check the amount of memory being used and the memory remaining for voice memos.

The display shows the total, free, and used memory, including the memory size of voice memos you recorded.

Calculator *(Menu 7.7)*

You can use the phone as a calculator. The calculator performs basic arithmetic functions, such as addition, subtraction, multiplication, division, and remainder computation.

To perform a calculation:

1. Enter the first number using the number keys.
Note: To erase any mistakes or clear the display, press the **C** key.
2. Press the **✳** key to enter a decimal point (.) or the **#** key as often as necessary to select the

appropriate operation: **+** (add), **-** (subtract), **✳** (multiply), **/** (divide), **%** (remainder), **(**, or **)**.

3. Enter the second figure.
4. Repeat steps 2 and 3, if necessary.
5. Press the **Equals** soft key to view the result.

The result appears in the **Answer** box.

Note: The result is rounded off to six decimal places.

6. When you have finished, press the **↶** soft key or the **⓪** key to exit.

Conversion *(Menu 7.8)*

This menu option allows you to convert one type of measurement to another.


To convert a value:

1. Scroll to the type of conversion to be performed: **Currency, Length, Weight, Volume, Area, or Temperature**. Press the **Select** soft key.
2. Enter the value to be converted and press the Down key to enter it into the **From** field.



You can enter a decimal point (.) using the **✳** key. You can enter a minus sign (-) using the **#** key in **Temperature**.
3. Select the original unit of measurement by pressing the Left or Right key. Then press the Down key to move to the **To** field.

Refer to the table on the following page for the units available.

- Select the unit of measurement to which you want the value converted by pressing the Left or Right key.

- Press the **OK** soft key or the  key to view the result.

The result appears in the **Answer** box.

- When you have finished, press the  soft key or the  key to exit.

Units available

Type	Units		
Currency	EURO	DEM	ITL
	FRF	ESP	NLG
	ATS	BEF	FIM
	PTE	GRD	IEP
	LUF		
Length	mm	cm	m
	km	in	ft
	yard	mile	
Weight	g	kg	ton
	grain	oz	pound
Volume	cm ³	m ³	l
	in ³	ft ³	yd ³
	gal		
Area	cm ²	m ²	a
	in ²	ft ²	yd ²
	acre		
Temperature	°C	°F	

Timer (Menu 7.9)

Using the Timer feature, you can set the phone to sound an alarm after a specified period of time has elapsed.

- Press the **Set** soft key.
- Enter the length of time you want to count down hours:minutes and press the **OK** soft key.
- Press the **Start** soft key to start counting down.

Even if you exit the Timer screen, the timer will continue running. After the specified time has expired, the phone informs you by playing a melody and displaying a text notification.

To stop the timer melody when it sounds, open and close the phone or press any key.

To stop the timer before the set time has expired, press the **Stop** soft key on the Timer screen. The phone will retain the timer setting at the time you stopped it. If you want to clear the setting, press the **Set** soft key. The timer will display 00:00. Press the **OK** soft key.

Notes:


- The timer uses power from the battery; consequently, the phone's operating time will be reduced
- When the quiet mode is activated, the melody will not play when the timer expires.

Stopwatch *(Menu 7.10)*

The stopwatch can be used to measure times for various sports.

Up to four intervals (such as lap times) can be measured.

The precision of the stopwatch is one one-hundredth of a second. The maximum measurement time is 10 hours.

1. To start the stopwatch, press the **OK** soft key.
2. To check an interval time, press the **OK** soft key. The stopwatch continues to run, but the interval time is displayed on the first line. Repeat this step for subsequent intervals, or to finish.
3. Press the **Reset** soft key to clear the stopwatch.
4. Press the **C** or  key to exit.

Camera

Using the camera module embedded in your phone, you can take pictures of people or events while on the move. Additionally, you can send photos to other people in a picture message or as an e-mail attachment. The camera produces JPEG pictures.

CAUTIONS:


- Do not take photos of people without their permission.
- Do not take photos in a place where cameras are not allowed.
- Do not take photos in a place where you may interfere with another person's privacy.

Take photos *(Menu 8.1)*

This menu allows you to take a picture to send a photo as a picture message to other destinations. You can use the picture as a background and store it separately in the My album folder.

Taking a picture with the folder open

1. To access this menu, press the **Select** soft key when **Take photos** highlights. Or, press the Up key in idle mode.

To take pictures immediately in idle mode, press and hold the Camera () key on the right side of the phone.



The image to be captured appears on the display.

The icons on the top line of the display indicate the size, quality, and current mode (shown if you have selected the multi-shot mode or night mode).


- Adjust the image by aiming the camera at the subject.

To	Press the
adjust the brightness	Left or Right key.
zoom in or out	Up or Down key.
invert the image	volume up key
reverse the image like a mirror image	volume down key
turn the viewfinder's frame on or off	1 key
change the picture size	2 key
change the picture quality	3 key
select a mode	4 key
select an effect	5 key
use the anit-banding noise feature	6 key
select the frame	7 key
select a delay time	8 key
go to the My photos menu	9 key

For more information about these functions, see "Using the camera options" on page 146.

- Press the  soft key or the Camera () key on the right side of the phone to take a picture.

The picture is automatically saved in the **My photos** folder(see page 149).

4. To	Press the
use the options	Options soft key. For details about the options, see below.
delete the picture file	Delete soft key.
return to the capture mode to take another picture.	C key.
turn the camera off and return to idle mode	 key.

When you press the **Options** soft key after taking a picture, the following options are available. Scroll to the option you want by pressing the Up and Down keys and press the **Select** soft key:

Send: allows you to send a multimedia message containing the picture you have taken. For further details about sending multimedia messages, see page 92.

Rename: allows you to rename the picture.

Go to my photos: allows you to see the pictures you have taken in the **My photos** folder (see page 149).

Set as: allows you to set the image as wallpaper or as a caller ID.


Wallpaper: allows you to set the image as wallpaper.

Caller ID: allows you to set it as a caller ID.

Protection: allows you to protect the picture from deletion or not.



Properties: this option shows you information about the picture, such as name, size, date, resolution, protection type, and format.

Using the camera options

When you press the  soft key in capture mode, the following options are available for the current shot:

Mode: You can take a picture in various modes. Once you change the mode, its indicator appears at the top right on the display.

Normal shot: you can take a picture in the normal manner.

Multi-shot: you can take action stills. Select the speed and the number of pictures you want to take. When you press the  soft key or the Camera () key on the right side of the phone, the phone automatically takes the number of pictures you set, in sequence, and saves them. The Mobile (128*120) size will be set by default.

Night mode: this option allows you to take a picture of the best quality when it is dark.

Capture only: pictures that you take are saved directly to the My photos folder (see page 149) and not displayed on the screen.

Frame: this option allows you to set a frame around the picture. Press the navigation key to find the frame format you want to use. You can preview the image with the frame format by using the

Preview soft key. The Mobile (128*120) size will be set by default.

Note: The zoom control bar and the brightness control bar do not display when you set a frame.

Effects: this option allows you to apply special effects to the picture. Press the Up or Down key to find the tone you want to use. **Gray, Negative, Sepia, Emboss,** and **Sketch** are available. To deactivate the effect setting, select **Off**.



Rotation: this option allows you to flip the image vertically or reverse it as a mirror image.

Timer: you can select a delay time. When you press the capture key, the phone takes the picture after a delay of the specified time. When you exit camera mode or select **Off** in the **Timer** menu, the timer is deactivated.

Settings: this option allows you to change the settings for taking a picture. This option is synchronized with the **Settings** menu. See page 150.

Photo size: sets the image size to **VGA (640*480)**, **QVGA (320*240)**, **QQVGA (160*120)**, and **Mobile (128*120)**. The selected image size displays on the capture screen.

Photo quality: allows you to select the image quality from **Super fine, Fine, Normal,** and **Economy**. The option you select appears at the top of the display.


Shutter sound: allows you to select a sound when you press the shutter release, the  soft key, or the Camera () key on the right side of the phone.

Note: This sound setting is not applied in multi-shot mode.


Default name: allows you to change the default prefix name of the picture.

Help: this option shows you the functions of the navigation keys and the volume keys in the capture mode.

Taking a picture with the folder closed


1. Close the folder.
2. To turn the camera on, press and hold the Camera () key on the right side of the phone.

The volume keys control the zoom function.

3. Press the Camera () key on the right side of the phone to take the picture.


The picture is automatically saved in the **My photos** folder.

4. To review the picture, open the folder. You can delete the picture by pressing the **Options** soft key and select the **Delete**. To return to the camera mode, pressing the **Preview** soft key.

To exit the camera mode, open the folder and press the  key.

My photos (Menu 8.2)

In this menu, you can review the pictures you have taken.

To	Press the
scroll through the pictures	navigation keys.
show the selected picture at full size	View soft key.
go back to the multiple view mode	Multi soft key.
use the options	Options soft key. For details, see page 145.
turn the camera off and return to idle mode	 key.

My albums (Menu 8.3)

My Album allows you to store pictures in separate photo albums. Select one of albums. It shows the pictures saved in the album. For details about viewing your pictures and using them, see page 149.

Delete all *(Menu 8.4)*

You can delete all the photos saved in each category.

1. Scroll to the desired category and place a check mark next to it by pressing the **Select** soft key.

Selecting **All** places check marks in all of the boxes. If you want to delete the protected photos and the caller ID photos, select the **With protected photos** option and the **With caller ID photos** option.

2. If necessary, repeat step 1 to check another box.
3. When you have finished checking, press the **OK** soft key.
4. When a confirming message appears, press the **Yes** soft key to delete all of the photos in the selected category(ies).

Otherwise, press the **No** soft key.

Settings *(Menu 8.5)*



This menu option allows you to change the camera feature's default option settings.

The following options are available:

Photo size: sets the image size to **VGA (640*480)**, **QVGA (320*240)**, **QQVGA**

(160*120), and **Mobile (128*120)**. The selected image size displays on the capture screen.

Photo quality: allows you to select the image quality from **Super fine**, **Fine**, **Normal**, and **Economy**. The option you select appears on the top of the display.

Shutter sound: allows you to select a sound when you press the shutter release, the  soft key, or the Camera () key on the right side of the phone.

Note: This sound setting is not applied in Multi-shot mode.

Default name: allows you to change the default prefix name of the picture.

Memory status *(Menu 8.6)*

Camera, Media box, and multimedia message boxes share a given amount of memory in your phone.

The display shows the status of free and used memory.

You can see the status of memory use in Camera, Media box, and multimedia message boxes by pressing the Left or Right key.

Phone settings

Many different features of your phone can be customised to suit your preferences via the **Phone settings** menu.

Display *(Menu 9.1)*

You can change the background image and the colour of the display components, according to your preferences and needs.

Wallpaper *(Menu 9.1.1)*

This option allows you to change the background image displayed in idle mode.

The following options are available:

Animations: allows you to select an animated scene.

Photos: allows you to select one of the photos you have taken as wallpaper.

Images: allows you to select one of images in the **Images** box in **Media box** which have been downloaded from WAP sites, EasyStudio PC software, or received multimedia messages.

Text position: allows you to select the position of the text displayed on the idle screen, such as the operator's name, current date and time, and text notifications of missed calls or new messages. Choose either **Top** or **Bottom**. If you set this option to **Off**, your phone displays only the wallpaper image.

Text style: allows you to set the style of the text displayed on the idle screen.

Note: When you set the wallpaper image to **Calendar**, the Text position and Text style options are not applied.

Skin *(Menu 9.1.2)*

You can change the colour setting of the display components, such as soft key indication areas, or menu names, and icons.

Backlight *(Menu 9.1.3)*

You can specify how long the backlight stays on. Select how long the backlight remains on after the last key has been pressed or the folder left open.

LCD contrast *(Menu 9.1.4)*

This option allows you to adjust the brightness of the display screens.

This option allows you to adjust the brightness of the display screens.

Adjust the brightness by using the Up and Down keys or the volume keys on the left side of the phone.

When you are satisfied, press the **OK** soft key to save the selection.


Service light (Menu 9.1.5)

You can turn on or off the service display.

Greeting message (Menu 9.2)

This menu option allows you to set a greeting message to be displayed briefly when the phone is switched on.

When you access this menu, the current message displays.

To	Press the
clear the existing message	C key and hold it down.
enter a new message	appropriate alphanumeric keys.
save your input	OK soft key.
cancel your input and return to idle mode	 key.

For further information on how to enter text, see page 42.

Language (Menu 9.3)

You can select a different language for the display text and text input modes. The following options are available:

Text language: allows you to change the language of the display text, such as menus, options, or warning messages.

Input mode: allows you to set the default language to be used in the text input mode.

Security (Menu 9.4)

The security settings enable you to restrict the use of your phone to the people and types of calls of your choice.

Various codes and passwords are used to protect the features of your phone. For more information, see page 166 -168.

PIN check (Menu 9.4.1)

When the PIN Check feature is enabled, you must enter your PIN each time you switch the phone on. Consequently, any person who does not have your PIN cannot use your phone without your approval.

Note: Before disabling the PIN Check feature, you must enter your PIN.

The following options are available:

Disable: the phone connects directly to the network when you switch it on.

Enable: you must enter the PIN each time the phone is switched on.

To change your PIN, see the **Change PIN** menu option below.

Change PIN *(Menu 9.4.2)*

This feature allows you to change your current PIN to a new one, provided that the PIN Check feature is enabled. You must enter the current PIN before you can specify a new one.

Once you have entered a new PIN, you are asked to confirm it by entering it again.

Phone lock *(Menu 9.4.3)*

When the Phone lock feature is enabled, the phone is locked and you must enter the 8-digit phone password each time the phone is switched on.

The password is preset to "00000000" at the factory. To change the phone password, see the **Change password** menu option below.

Once the correct password has been entered, you can use the phone until you switch it off.

The following options are available:

Disable: you are not asked to enter the phone password when you switch the phone on.

Enable: you are required to enter the phone password when you switch the phone on.

Change password *(Menu 9.4.4)*

The Change password feature allows you to change your current phone password to a new one. You must enter the current password before you can specify a new one.

The password is preset to "00000000" at the factory. Once you have entered a new password, you are asked to confirm it by entering it again.

Privacy *(Menu 9.4.5)*

This feature allows you to lock or unlock the usage of the phone contents, such as multimedia messages, photos, images, and sounds.

To enable or disable the Privacy feature, you must enter your phone password.

SIM lock *(Menu 9.4.6)*

To enable the SIM lock feature, you must enter a new four- to eight-digit SIM lock code, and confirm it by entering it again.

The following options are available:

Disable: you can use any other SIM cards with your phone.

Enable: you must enter the SIM lock code to use another SIM card with your phone.

To unlock the SIM, enter the SIM lock code.

FDN mode *(Menu 9.4.7)*

The FDN (Fixed Dial Number) mode, if supported by your SIM card, allows you to restrict your outgoing calls to a limited set of phone numbers.

The following options are available:

Disable: you can phone any number.

Enable: you can only call phone numbers stored in Phonebook. You must enter your PIN2.

Note: Not all SIM cards have a PIN2. If your SIM card does not, this menu option is not displayed.

To change your PIN2, see the **Change PIN2** menu option below.

Change PIN2 (Menu 9.4.8)

The Change PIN2 feature allows you to change your current PIN2 to a new one. You must enter the current PIN2 before you can specify a new one.

Once you have entered a new PIN2, you are asked to confirm it by entering it again.

Note: Not all SIM cards have a PIN2. If your SIM card does not, this menu option is not displayed.

Auto redial (Menu 9.5)

With the Auto redial function, the phone makes up to ten attempts to redial a phone number after an unsuccessful call.

Note: The interval between two call attempts varies.

The following options are available:

Off: the number is not redialled.

On: the number is redialled automatically.

Voiceclarity (Menu 9.6)

Voiceclarity feature makes received sound louder and clearer during a call. It is useful when you are in a noisy place.

For further details about the Voiceclarity feature, see page 33.

Active folder (Menu 9.7)

This menu allows you to set whether you can answer an incoming phone call by opening the folder, or not.

The following options are available:

Off: you must press a key, depending on the setting of the **Anykey answer** option, to answer a call.

On: you can answer a call by opening the folder.

Side key (Menu 9.8)

This menu option allows you to change the function of the volume keys on the left side of the phone when you receive an incoming call.


The following options are available:


Reject: the incoming call is rejected when you hold down one of the volume keys.

Silence: the ring tone is silenced when you hold down one of the volume keys; the call is not rejected.

Anykey answer *(Menu 9.9)*

You can answer incoming calls by pressing almost any key on the phone.

Off: you can only press  or the **Accept** soft key to answer incoming calls.

On: you can press any key, except  to answer incoming calls.

Reset settings *(Menu 9.10)*

This menu option allows you to reset your phone to its default configuration. You can reset the sound settings, phone settings, or all of the settings together.

1. Select one of the settings to reset by pressing the **Select** soft key.
2. When a confirming message appears, press the **Yes** soft key to reset settings. Then enter the phone password and press the **OK** soft key.

The password is preset to "00000000" by default. To change it, see page 157.

Otherwise, press the **No** soft key.

Using ALS (Alternate Line Service)

The ALS feature enables two lines to be associated with one SIM card. Consequently, you can make and receive calls on either line. If you subscribe to this network service, a few additional menu options enable you to set up this feature.

Note: Please contact your service provider to check the availability of this feature and how to subscribe to ALS.

Selecting a line

You can select a line for each call via the **Active line** menu option. For further details, refer to page 79.

Editing the line name

You can enter a name for each line via the **Own number** menu option.

When you edit the name of a line, this name replaces "Line 1" or "Line 2". For further details, refer to page 64.

Setting the ring type

To distinguish between incoming calls on the two lines, you can select a different ring tone for each line via the **Incoming calls** menu option. For further details, see page 80.

Setting call diverting options

You can set up call diverting via the **Call diverting** menu option. This service reroutes incoming calls on the line of your choice to a specified number. For further details, see page 72.

Viewing call information

You can view call times and last call cost information for each line. For further details, see page 70.

Solving problems

Before calling for service, perform the following simple checks for the problems listed. You may save the time and expense of an unnecessary service call.

When you switch your phone on, one of the following messages appears:

No SIM card

Check that the SIM card is correctly installed.

Phone locked: enter password

The Phone lock feature is enabled. You must enter the phone's password before you can use the phone.

Enter PIN

- You are using your phone for the first time. You must enter the Personal Identification Number supplied with the SIM card.
- The PIN check feature is enabled. Every time the phone is switched on, you must enter the PIN. To disable this feature, use the **PIN check** menu option. See page 155.


Enter PUK

The PIN was entered incorrectly three times in succession and the phone is now blocked. Enter the PUK supplied by your network operator.


"No service" displays

- The network connection has been lost. You may be in a weak reception area (in a tunnel or surrounded by buildings). Move and try again.
- You are trying to access an option for which you have not taken out a subscription with your service provider. Contact the service provider for further details.

You have entered a number but it was not dialled

- Have you pressed the  key?
- Are you accessing the right cellular network?
- You may have set an outgoing call barring option.

Your correspondent cannot reach you

- Is your phone switched on (the  key pressed for more than one second)?
- Are you accessing the right cellular network?
- You may have set an incoming call barring option.




Your correspondent cannot hear you speaking

- Have you switched off the microphone (**Mute** appears)?
- Are you holding the phone close enough to your mouth? The microphone is located at the bottom of the phone.

The phone starts beeping and "Battery Low" flashes on the display

The battery is insufficiently charged. Replace the battery and recharge it.

The audio quality of the call is poor

- Check the signal strength indicator on the display (); the number of bars indicates the signal strength from strong () to weak ().
- Try moving the phone slightly or moving closer to a window if you are in a building.

No number is dialled when you recall a Phonebook entry

- Check that the number has been stored correctly by using the Phonebook Search feature.
- Re-store the number, if necessary.

If the above guidelines do not help you to solve the problem, take a note of:

- the model and serial numbers of your phone
- your warranty details
- a clear description of the problem

Then contact your local dealer or Samsung after-sales service.

Access codes

There are several access codes that are used by your phone and its SIM card. These codes help you protect the phone against unauthorised use.

Some access codes can be changed using the **Security** menu option. See page 155 for further details.

Phone password

The Phone lock feature (see page 156) uses the phone password to protect your phone against unauthorised use.

The phone password supplied with the phone is preset to "00000000" at the factory. To change the password, use the **Change password** menu option. See page 157.

PIN

The PIN (Personal Identification Number) protects your SIM card against unauthorised use. It is usually supplied with the SIM card. When the PIN Check feature is enabled (see page 155), you must enter the PIN each time you switch on the phone.

If you key in an incorrect PIN three times in succession, you will have to key in the PUK and press the **OK** soft key to unlock the phone. Key in a new PIN and press the **OK** soft key. Key in the new PIN again and press the **OK** soft key.

PIN2

The PIN2, supplied with some SIM cards, is required to access some functions, such as charging unit counters. These functions are only available if supported by your SIM card.

If you key in an incorrect PIN2 three times in succession, you will have to key in the PUK2 and press the **OK** soft key to unlock the phone. Key in a new PIN2 and press the **OK** soft key. Key in the new PIN2 again and press the **OK** soft key.

PUK

The PUK (PIN Unblocking Key) is required to change a blocked PIN. The PUK may be supplied with the SIM card. If not, contact your local service provider.

If you key in an incorrect PUK ten times in succession, the SIM card cannot be used anymore. Contact your service provider for a new card.

You cannot change the PUK. If you lose the code, contact your service provider.

PUK2

The PUK2, supplied with some SIM cards, is required to change a blocked PIN2.

If you key in an incorrect PUK2 ten times in succession, you cannot use the functions requiring the PIN2. Contact your service provider for a new card.

You cannot change the PUK2. If you lose the code, contact your service provider.

Call barring password

The 4-digit call barring password is required when you use the Call Barring function. You obtain the password from your service provider when you subscribe to this function.

You can change this password using the **Change barring password** menu option (**Menu 3.2.7**). For further details, see page 76.

Health and safety information

Exposure to Radio Frequency (RF) Signals

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on the safety standards that were developed by independent scientific organizations through periodic and through evaluation of scientific studies.

The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless phones employs a unit of measurement known as Specific Absorption Rate (SAR). The SAR limit set by the FCC is 1.6W/kg.*

SAR tests are conducted using standard operating positions specified by the FCC with the phone transmitting at its highest certified power level in all

* In the U.S. and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output of the phone.

Before a new model phone is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID printed in the label on the phone.

FCC certification information for this model phone is attached separation paper.

For Body Operation

To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm. separation distance between the user's body and the back of the phone, including the antenna.

The use of belt-clips, holsters and similar accessories

should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Non-compliance with the above conditions may violate FCC RF exposure guidelines.

For more Information concerning exposure to radio frequency signals, see the following websites:

Federal Communications Commission (FCC)

<http://www.fcc.gov/rfsafety>

Cellular Telecommunications Industry Association (CTIA): <http://www.wow-com.com>

U.S. Food and Drug Administration (FDA)

<http://www.fda.gov/cdrh/consumer>

World Health Organization (WHO)

<http://www.who.int/peh-emf/en>

Precautions When Using Batteries

- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the phone near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.

- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0 °C (32 °F).
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.

- Dispose of used batteries in accordance with local regulations. Always recycle. Do not dispose of batteries in a fire.

Road safety

Your wireless phone gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility accompanies the benefits of wireless phones, one that every user must uphold.

When driving a car, driving is your first responsibility. When using your wireless phone behind the wheel of a car, practice good common sense and remember the following tips.

1. Get to know your wireless phone and its features, such as speed dial and redial. If available, these features help you to place your call without taking your attention off the road.
2. When available, use a hands-free device. If possible, add an extra layer of convenience and safety to your wireless phone with one of the many hands-free accessories available today.
3. Position your wireless phone within easy reach. Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voice mail answer it for you.
4. Let the person you are speaking with know you are driving; if necessary, suspend the call in

heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice and even heavy traffic can be hazardous.

5. Do not take notes or look up phone numbers while driving. Jotting down a To Do list or flipping through your phonebook takes your attention away from your primary responsibility, driving safely.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, dial only a few numbers, check the road and your mirrors, then continue.
7. Do not engage in stressful or emotional conversations that may be distracting. Make the people with whom you are talking aware that you are driving and suspend conversations that have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Dial the emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!
9. Use your wireless phone to help others in emergencies. If you see a car accident, crime in progress or other serious emergency where lives are in danger, call the emergency number, as you would want others to do for you.
10. Call roadside assistance or a special non-emergency wireless assistance number when necessary. If you see a broken-down vehicle

posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured, or a vehicle you know to be stolen, call roadside assistance or any other special non-emergency wireless number.

Operating environment

Remember to follow any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

When connecting the phone or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position (held to your ear with the antenna pointing over your shoulder).

Electronic devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Consult the manufacturer to discuss alternatives.

Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15 cm (6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research and recommendations of Wireless Technology Research.

Persons with pacemakers:

- Should always keep the phone more than 15 cm (6 inches) from their pacemaker when the phone is switched on
- Should not carry the phone in a breast pocket
- Should use the ear opposite the pacemaker to minimize potential interference

If you have any reason to suspect that interference is taking place, switch off your phone immediately.

Hearing aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives.

Other medical devices

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information. Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or

health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.

You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Switch off your phone in any facility where posted notices require you to do so.

Potentially explosive atmospheres

Switch off your phone when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Users are advised to switch off the phone while at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air

contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Emergency calls

This phone, like any wireless phone, operates using radio signals, wireless and landline networks as well as user-programmed functions, which cannot guarantee connection in all conditions. Therefore, you should never rely solely on any wireless phone for essential communications (medical emergencies, for example).

Remember, to make or receive any calls the phone must be switched on and in a service area with adequate signal strength. Emergency calls may not be possible on all wireless phone networks or when certain network services and/or phone features are in use. Check with local service providers.

To make an emergency call, proceed as follows.

1. If the phone is not on, switch it on.
2. Key in the emergency number for your present location. Emergency numbers vary by location.
3. Press the <SEND> key.

If certain features are in use (call barring, for example), you may first need to deactivate those features before you can make an emergency call. Consult this document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible. Remember that your 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.

Other important safety information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the phone, its parts or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch off your phone before boarding an aircraft. The use of wireless phones in aircraft may be dangerous to the operation of the aircraft, and is illegal.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Care and maintenance

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children's.
- Keep the phone dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not touch the phone with a wet hand while it is charging. Doing so may cause an electric shock to you or damage to the phone.
- Do not use or store the phone in dusty, dirty areas, as its moving parts may be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When the phone warms up to its normal operating temperature, moisture can form inside the phone, which may damage the phone's electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the phone. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint it. Paint can clog the device's moving parts and prevent proper operation.

- Do not put the phone in or on heating devices, such as a microwave oven, a stove or a radiator. The phone may explode when overheated.
- Use only the supplied or an approved replacement antenna. Unauthorized antennas or modified accessories may damage the phone and violate regulations governing radio devices.
- If the phone, battery, charger or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.

Acknowledging Special Precautions and the FCC and Industry Canada Notice

Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. FCC Compliance Information

This device complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received.

Including interference that may cause undesired operation.

Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Appendix A: CERTIFICATION INFORMATION (SAR)

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency(RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on safety standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate(SAR). The SAR limit set by the FCC is 1.6 W/kg. SAR Tests are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output

Before a new model phone is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations(e.g., at the ear and worn on the body) as required by the FCC for each model.

The highest SAR values for this model phone as reported to the FCC are Head: 0.560W/Kg, Body-worn: 0.303W/Kg.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID A3LSGHX640*.

Appendix B: Guide to Safe and Responsible Wireless Phone Use

Cellular Telecommunications & Internet Association

"Safety is the most important call you will ever make."

A Guide to Safe and Responsible Wireless Phone Use

* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kilogram(W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

TENS OF MILLIONS OF PEOPLE IN THE U.S. TODAY TAKE ADVANTAGE OF THE UNIQUE COMBINATION OF CONVENIENCE, SAFETY AND VALUE DELIVERED BY THE WIRELESS TELEPHONE. QUITE SIMPLY, THE WIRELESS PHONE GIVES PEOPLE THE POWERFUL ABILITY TO COMMUNICATE BY VOICE-ALMOST ANYWHERE, ANYTIME-WITH THE BOSS, WITH A CLIENT, WITH THE KIDS, WITH EMERGENCY PERSONNEL OR EVEN WITH THE POLICE. EACH YEAR, AMERICANS MAKE BILLIONS OF CALLS FROM THEIR WIRELESS PHONES, AND THE NUMBERS ARE RAPIDLY GROWING.

But an important responsibility accompanies those benefits, one that every wireless phone user must uphold. When driving a car, driving is your first responsibility. A wireless phone can be an invaluable tool, but good judgment must be exercised at all times while driving a motor vehicle-whether on the phone or not.

The basic lessons are ones we all learned as teenagers. Driving requires alertness, caution and courtesy. It requires a heavy dose of basic common sense-keep your head up, keep your eyes on the road, check your mirrors frequently and watch out for other drivers. It requires obeying all traffic signs and signals and staying within the speed limit. It means using seatbelts and requiring other passengers to do the same.

But with wireless phone use, driving safely means a little more. This brochure is a call to wireless phone users everywhere to make safety their first priority when behind the wheel of a car. Wireless telecommunications is keeping us in touch, simplifying our lives, protecting us in emergencies and providing opportunities to help others in need.

When it comes to the use of wireless phones, safety is your most important call.

Wireless Phone "Safety Tips"

Below are safety tips to follow while driving and using a wireless phone which should be easy to remember.

1. Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.
2. When available, use a hands free device. A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.
4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic.

As a driver, your first responsibility is to pay attention to the road.

5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a note to do a list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip-dial only a few numbers, check the road and your mirrors, then continue.
7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix-they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations-with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical

emergency. Remember, it is a free call on your wireless phone!

9. Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely.

"The wireless industry reminds you to use your phone safely when driving."

Cellular Telecommunications & Internet Association

For more information, please call 1-888-901-SAFE.

For updates: <http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID=85>

Appendix C: Consumer Update on Wireless Phones

U.S. Food and Drug Administration

1. What kinds of phones are the subject of this update?

The term "wireless phone" refers here to hand-held wireless phones with built-in antennas, often called cell, mobile, or PCS phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures well within the FCC's compliance limits.

2. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

Health and safety information

3. What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

Support needed research into possible biological effects of RF of the type emitted by wireless phones;

Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and

Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

National Institute for Occupational Safety and Health
Environmental Protection Agency

Federal Communications Commission

Occupational Safety and Health Administration

National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the

wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the primary subject of the safety questions discussed in this document.

4. What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF).

FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues.

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

5. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?

If there is a risk from these products, and at this point we do not know that there is, it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna.

Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

6. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure.

Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

7. Do hands-free kits for wireless phones reduce risks from exposure to RF emissions?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with wireless phones for convenience and comfort. These systems reduce the absorption of RF energy in the head because the phone, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the phone is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Wireless phones marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

8. Do wireless phone accessories that claim to shield the head from RF radiation work?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF

absorption use special phone cases, while others involve nothing more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike "hand-free" kits, these so-called "shields" may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal Trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

9. What about wireless phone interference with medical equipment?

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI.

FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance

requirements for hearing aids and wireless phones so that that no interference occurs when a person uses a compatible phone and a compatible hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

10. What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary

brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

11. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

12. Which other federal agencies have responsibilities related to potential RF health effects?

Additional information on the safety of RF exposures from various sources can be obtained from the following organizations.

Health and safety information

FCC RF Safety Program:

<http://www.fcc.gov/oet/rfsafety/>

Environmental Protection Agency (EPA):

<http://www.epa.gov/radiation/>

Occupational Safety and Health Administration^oØs
(OSHA):

[http://www.osha-slc.gov/SLTC/
radiofrequencyradiation/index.html](http://www.osha-slc.gov/SLTC/radiofrequencyradiation/index.html)

National Institute for Occupational Safety and
Health (NIOSH):

Health and safety information

<http://www.cdc.gov/niosh/emfpg.html>

World health Organization (WHO):

<http://www.who.int/peh-emf/>

International Commission on Non-Ionizing adiation
Protection:

<http://www.icnirp.de>

National Radiation Protection Board (UK):

<http://www.nrp.org.uk>

Updated 4/3/2002: US Food and Drug
Administration <http://www.fda.gov/cellphones>

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


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Access the Menu Functions	<div><div>① Press the Menu soft key in idle mode.</div><div>② Scroll with the navigation keys through the main menus until you reach the required menu.</div><div>③ Press the Select soft key.</div><div>④ Scroll with the Up or Down key through the list of options until the required option is selected.</div><div>⑤ Press the Select soft key to confirm.</div></div> <div>Each of the two soft keys ( and ) performs the function indicated by the text above them, on the bottom line of the display.</div>
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GPRS telephone SGH-X640 Quick reference card	
Switch On/Off	Press and hold the  key.
Make a Call	<div>① Enter the number.</div> <div>② Press the  key.</div>
Adjust the Volume	Press the volume keys on the left side of the phone.
Answer a Call	Open the phone or Press the  key.
End a Call	Briefly press the  key.

Declaration of Conformity (R&TTE)

For the following product :

GSM900/GSM1800 Dualband Digital

Portable Cellular Telephone

(Product description)

SGH- X640

(Model name)

Manufactured at :

- Samsung Electronics Co., Ltd, 94-1, Imsoo-Dong, Gumi City, Kyung-Buk, Korea,
730-350

(factory name, address)

to which this declaration relates, is in conformity with the following standards and/or other normative documents.

Safety	: EN 60950-1:2001
EMC	: EN 301 489-01 v1.3.1 (2001-09) EN 301 489-07 v1.1.1 (2000-09)
SAR	: EN 50360:2001 EN 50361:2001
Network	: EN 301 511 v7.0.1 (2000-12)

We hereby declare that [all essential radio test suites have been carried out and that] the above named product is in conformity to all the essential requirements of Directive 1999/5/EC.

The conformity assessment procedure referred to in Article 10 and detailed in Annex[IV] of Directive 1999/5/EC has been followed with the involvement of the following Notified Body(ies):

BABT, Claremont House, 34 Molesey Road,
Walton-on-Thames, KT12 4RQ, UK
Identification mark: 0168

CE 0168

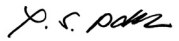
The technical documentation kept at :

Samsung Electronics Euro QA Lab.

which will be made available upon request.
(Representative in the EU)

Samsung Electronics Euro QA Lab,
Blackbushe Business Park, Saxony Way,
Yateley, Hampshire, GU46 6GG, UK
2004.08.31






(place and date of issue)



Yong-Sang Park / S. Manager

(name and signature of authorized person)

■ It is not the address of Samsung Service Centre. For the address or the phone number of Samsung Service Centre, see the warranty card or contact the retailer where you purchased your phone.

View Missed Calls Immediately After Missing Them	<p>① Open the phone and press the Missed soft key.</p> <p>② Scroll with the Up and Down keys through the missed calls.</p> <p>③ To make a call, press the  key.</p>	Store Numbers in Phonebook	<p>① Enter the number.</p> <p>② Press the Save soft key.</p> <p>③ Select the memory type and press the Select soft key.</p> <p>④ If you select Phone, select the number type and press the Select soft key.</p> <p>⑤ Enter the name and press the OK soft key.</p> <p>⑥ If you select SIM, enter the location number and press the OK soft key.</p>
Redial the Last Number	Press the  key twice.		
Speed-Dial	In idle mode, hold down the appropriate key (2 to 9). Or, press the key (2 to 9) and the  key.	Search for a Number in Phonebook	<p>① Press the Phonebook soft key in idle mode.</p> <p>② Select Find name.</p> <p>③ Enter a name.</p> <p>④ Press the OK soft key.</p> <p>⑤ Press the Left or Right key, if necessary.</p> <p>⑥ Press the  key to dial.</p>
Dial a Number in Your SIM Card	Enter the SIM location, press the # key, and press the  key.		
Listen to Your Voice Mail	Press and hold the 1 key.		