* Depending on the software installed or your service provider, some of the description in this manual may not match from your phone.
* Depending on your country, your phone and accessories may appear different from the illustrations in this manual.

SAMSUNG ELECTRONICS

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PRELIMARY

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SGH-E760
User's Manual

Important safety precautions

☑ Failure to comply with the following precautions may be dangerous or illegal.

Use road safety at all times

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

Switch off the phone when refuelling

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

Switch off in an aircraft

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

Switch off the phone near all medical equipment

Hospitals or health care facilities may be using equipment that could be sensitive to external radio frequency energy. Follow any regulations or rules in force.

Interference

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

Be aware of 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.

Water resistance

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

Sensible use

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

Emergency calls

Key in the emergency number for your present location, then press .

Keep your phone away from small children

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

Accessories and batteries

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

- The phone could explode if the battery is replaced with an incorrect type.
- Dispose of used batteries according to the manufacturer's instructions.

Qualified service

Only qualified service personnel may repair your phone.

For more detailed safety information, see "Health and safety information" on page 90.

About this Guide

This User's Guide provides you with condensed information about how to use your phone. To quickly learn the basics for your phone, please refer to "Get started" and "Step outside the phone."

In this guide, the following instruction icons appear:

☑	Indicates that you need to pay careful attention to the subsequent information regarding safety or phone features.
▶	Indicates that you can get more information on the referenced page.
→	Indicates that you need to press the Navigation keys to scroll to the specified option and then select it.
[ ]	Indicates a key on the phone. For example, [*i*/OK]
< >	Indicates a soft key, whose function is displayed on the phone screen. For example, <**Menu**>

- **Movement recognition**
  Your phone detects movement. It can carry out certain commands based on how you move the phone.

Special features of your phone

- **Camera and camcorder**
  Use the camera module on your phone to take a photo or record a video.

- **MP3 player**
  Play MP3 music files using your phone as a MP3 player.

- **Bluetooth**
  Send photos, images, videos, and other personal data, and connect to other devices using free, wireless Bluetooth technology.

- **Get personal with photo caller ID**
  See who's calling you when their very own photo displays.

- **Name card**
  Create name cards with your number and profile. Whenever introducing yourself to others, use this convenient electronic name card.

- **Compase**
  Check the directions using a compass.

- **Multimedia Message Service (MMS)**
  Send and receive MMS messages with a combination of text, images, video, and audio.

- **E-mail**
  Send and receive e-mails with images, video, and audio attachments.

- **Java**
  Enjoy Java™-based embedded games and download new games.

- **Calendar**
  Keep track of your daily, weekly, and monthly schedule.

- **Voice recorder**
  Record memos or sounds.

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Overview of menu functions

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* Shows only if supported by your SIM card.

Unpack

Make sure you have each item

Phone

Travel Adapter

Battery

User's Manual

You can obtain various accessories from your local Samsung dealer.

☑ The items supplied with your phone and the accessories at your Samsung dealer may vary, depending on your country or service provider.

Your phone

Buttons, features, and locations

Get started

First steps to operating your phone

SIM card information

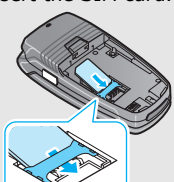
When you subscribe to a cellular network, you receive a plug-in SIM (Subscriber Identity Module) card loaded with your subscription details, such as your PIN, and available optional services.

Install and charge the phone

1 Remove the battery.

☑ If the phone is already on, first turn it off by holding [ ].

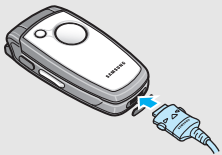
2 Insert the SIM card.



☑ Make sure that the gold-coloured contacts on the card face down into the phone.

3 Install the battery.

4 Plug the travel adapter into the phone.



5 Plug the adapter into a standard AC wall outlet.

6 When the phone is completely charged (the battery icon stops blinking), unplug the adapter from the power outlet.

7 Remove the adapter from the phone.

Low battery indicator

When the battery is low:

- a warning tone sounds,
- the battery low message displays, and
- the empty battery icon ( ) blinks.

If the battery level becomes too low, the phone automatically turns off. Recharge your battery.

Power on or off

Switch on Do not turn on the phone when mobile phone use is prohibited.	1. Open the phone.
	2. Press and hold [ ] to turn on the phone.
	3. If necessary, enter the PIN and press <**OK**>.
Switch off	1. Open the phone.
	2. Press and hold [ ].

Keys and display

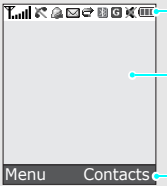
Key(s)	Description
	Perform the function indicated on the bottom line of the display.
	In Idle mode, access your favourite menus, directly. ▶ p. 78 In Menu mode, scroll through the menu options.
	In Idle mode, launch the Wireless Application Protocol (WAP) browser. In Menu mode, select the highlighted menu option.
	Delete characters from the display. In Menu mode, return to the previous menu level.

Key(s)	Description
	Send or answer a call. In Idle mode, retrieve the recent numbers dialled, missed, or received.
	End a call. Hold down to switch the phone on and off. In Menu mode, cancel input and return the phone to Idle mode.
	Enter numbers, letters, and some special characters. In Idle mode, hold [**1**] down to access your voice mail server. Hold [**0**] down to enter the international call prefix.
	Enter special characters. Hold [#] down to activate or deactivate Quiet mode. Hold [*] down to enter a pause between numbers.

Key(s)	Description
(on the left)	Adjust the phone volume. In Idle mode, with the phone open, adjust the keypad tone volume. With the phone closed, hold down to activate the external display.
(on the right)	In Idle mode, hold down to turn on the camera. In Camera mode, takes a photo or records a video.

Display

Layout



Icons
display various icons.

Text and graphics
display messages, instructions, and information you enter.

Soft key function indicators
show the current functions assigned to the two soft keys.

Icons*

- Received signal strength
- Call in progress
- Out of your service area; you cannot send or receive calls
- Alarm set
- New text message
- New multimedia message

Icons (continued)		New voicemail message
		New e-mail received or being sent
		One of the message Inboxes is full
		Call diverting feature is active ▶ p. 82
		Bluetooth feature is active ▶ p. 84
		GPRS network
		Home Zone, if you have registered for the appropriate service
		Office Zone, if you have registered for the appropriate service
		Call ringer set to vibrate ▶ p. 80
		Quiet mode is active ▶ p. 81
		Battery power level

* The icons shown on the display may vary, depending on your country or service provider.

Access menu functions

Use the soft keys

The roles of the soft keys vary depending on the function you are using. The bottom line of the display indicates their current role.

Press the left soft key to access Menu mode.

Press the right soft key to access **Contact list** in the **Phonebook** menu.

Select an option	1. Press the appropriate soft key. 2. Press the Navigation keys to move to the next or previous option. 3. Press <**Select**> or [*i*/OK] to confirm the function displayed or option highlighted. 4. To exit, choose either of the following methods. • Press <**Back**> or [**C**] to move up one level. • Press [ ] to return to Idle mode.
Use shortcuts	Press the number key corresponding to the option you want.

Customise your phone

Display language	1. In Idle mode, press <**Menu**> and select **Settings** → **Phone settings** → **Language**. 2. Select a language.
Call ringer melody	1. In Idle mode, press <**Menu**> and select **Settings** → **Sound settings** → **Incoming call** → **Ringtone**. 2. Select a ringer category by pressing [Left] or [Right]. 3. Select the ringer melody you want by pressing [Up] or [Down]. 4. Press <**Save**>.

Idle mode wallpaper

You can set your wallpaper for the main or external display.

1. In Idle mode, press <**Menu**> and select **Settings** → **Display settings** → **Wallpaper** → **Main display**.
2. Select an image category.
3. Select an image.

Menu mode skin colour

You can change the colour for the display components, such as title bars and highlight bars.

1. In Idle mode, press <**Menu**> and select **Settings** → **Display settings** → **Skin**.
2. Select a colour pattern.

Quiet mode

You can switch to Quiet mode to avoid disturbing other people with your phone sound.

Press and hold [**#**] in Idle mode.

Menu shortcuts

You can use the Navigation keys as shortcut keys to access specific menus directly from Idle mode.

To assign a menu to a key:

1. In Idle mode, press <**Menu**> and select **Settings** → **Phone settings** → **Short cut**.
2. Select a key.
3. Press <**Options**> and select **Change**.
4. Scroll to a menu to be assigned to the key.
5. Press <**Save**>.

Phone lock

You can protect the phone against unauthorised use with a phone password. The phone will require the password on power-up.

1. In Idle mode, press <**Menu**> and select **Settings** → **Security** → **Change password**.
2. Enter the default password, **00000000**, and press <**OK**>.
3. Enter a new 4- to 8-digit password and press <**OK**>.
4. Enter the new password again and press <**OK**>.
5. Select **Phone lock**.
6. Select **Enable**.
7. Enter the password and press <**OK**>.

Make/Answer calls

Make a call

1. In Idle mode, enter an area code and phone number.
2. Press [ ].
3. To end the call, press [ ].

Answer a call

1. When the phone is ringing, press [ ].
2. To end the call, press [ ].

Adjust the volume during a call

Press [▲/▼].

Step outside the phone

Begin with your camera, music, and other special features

Use camera

Take a photo

1. Open the phone.
2. If necessary, remove the camera cover.
3. In Idle mode, press and hold [📷] to turn on the camera.
4. Aim the lens at the subject and adjust the image.
5. Press [*i*/OK] to take a photo. The photo is saved automatically.
6. Press [*i*/OK] to return to Capture mode.

View a photo

1. In Idle mode, <**Menu**> and select **File manager** → **Images** → **Photos**.
2. Select the photo you want.

Record a video

1. In Idle mode, press and hold [📷] to turn on the camera.
2. Press [**1**] to switch to Record mode.
3. Press [*i*/OK] to start recording.
4. Press [*i*/OK] to stop recording. The video is saved automatically.
5. Press the right soft key to return to Record mode.

Play a video

1. In Idle mode, <**Menu**> and select **File manager** → **Videos** → **Video clips**.
2. Select the video clip you want.

Play MP3s

Copy MP3 files to the phone

Use these methods:

- Download from the wireless web ▶ p. 46
- Download from a computer using EasyStudio II ▶ EasyStudio II User's Guide
- Receive via Bluetooth ▶ p. 86

Create a play list

1. In Idle mode, press <**Menu**> and select **Applications** → **MP3 Player**.
2. Press <**Options**> and select **Add to list** → **Add all** or **Add a file**.
3. For **Add a file**, scroll to a file and press <**Add**>. Repeat from step 2.

Play MP3 file

1. From the MP3 player screen, press [*i*/OK].
2. During playback, use the following keys:
   - *i*/OK : Pauses or resumes playback.
   - Left: Goes back to the previous file.
   - Right: Skips to the next file.
   - Up: Opens the play list.
   - ▲/▼: Adjusts the volume.
   - Down: Stops playback.

Use the movement recognition feature	You can use the movement recognition feature while playing a music file with the phone closed. • Move the phone to the left to skip to the previous file. • Move the phone to the right to go back to the next file. • Move the phone to down to pause or resume playback. • Move the phone as you would when writing "X" to stop playback.

Browse the web

Using a built-in WAP (Wireless Application Protocol) browser, you can get easy access to the wireless web to get a variety of up-to-date services and information and to enjoy downloads of web content.

Launch the browser	In Idle mode, press [*i* /OK].
Navigate the Web	• To scroll through browser items, press [Up] or [Down]. • To select an item, press < ✓ >. • To return to the previous page, press <**Back**> or [**C**]. • To access browser options, press <**Menu**> and select **Menu**.

Use Phonebook

Add an entry

To the phone's memory:

1. In Idle mode, enter a phone number and press [i/OK].
2. Select **Phone** → a number type.
3. Specify the contact information: Last name, First name, Mobile, Home, Office, Fax, Other, Email, Graphic ID, Alert, Group, and Notes.
4. Press <**Save**> to save the entry.

To the SIM card:

1. In Idle mode, enter a phone number and press [i/OK].
2. Select **SIM**.
3. Enter a name.
4. Press [i/OK] to save the entry.

Find an entry

1. In Idle mode, press <**Contacts**>.
2. Enter a name or scroll to an entry.
3. Select an entry.
4. Select a number and press [ ] to dial, or press <**Options**> to access options.

Create and send a name card

1. In Idle mode, press <**Menu**> and select **Phonebook** → **My name card**.
2. Specify your contact information.
3. Press <**Save**> to save the name card.
4. To send the name card to other people, press <**Options**> and select **Send via** → the sending method you want.

Send messages

Send a text message (SMS)

1. In Idle mode, press <**Menu**> and select **Messages** → **Create new message** → **Text message**.
2. Enter the message text.
3. Press <**Options**> and select **Save and send** or **Send only**.
4. Enter a destination number.
5. Press [*i*/OK] to send the message.

Send a multimedia message (MMS)

1. In Idle mode, press <**Menu**> and select **Messages** → **Create new message** → **Multimedia message**.
2. Select **Subject**.
3. Enter the message subject and press [*i*/OK].
4. Select **Picture & Video** or **Sound** and add a media file.
5. Select **Message**.
6. Enter the message text and press [*i*/OK].
7. Press <**Options**> and select **Send**.
8. Enter a destination number.
9. Press [*i*/OK] to send the message.

Send an e-mail

1. In Idle mode, press <**Menu**> and select **Messages** → **Create new message** → **Email**.
2. Select **Subject**.
3. Enter the e-mail subject and press [*i*/OK].
4. Select **Message**.
5. Enter the e-mail text and press [*i*/OK].
6. Select **File attach**.
7. Add media files or other files.
8. Press <**Options**> and select **Send**.
9. Enter an e-mail address.
10. Press [*i*/OK] to send the e-mail.

View messages

View a text message

When a notification appears:

1. Press <**View**>.
2. Select a message from the Inbox.

From the Inbox:

1. In Idle mode, press <**Menu**> and select **Messages** → **My messages** → **Inbox**.
2. Select a text message.

View a multimedia message

When a notification appears:

1. Press <**View**>.
2. Press <**Options**> and select **Retrieve**.
3. Select a message from the Inbox.

From the Inbox:

1. In Idle mode, press <**Menu**> and select **Messages** → **My messages** → **Inbox**.
2. Select an MMS message.

View an e-mail

1. In Idle mode, press <**Menu**> and select **Messages** → **My messages** → **Email box**.
2. Select **Check new mail** to retrieve an e-mail or a header.
3. Select an e-mail or a header.
4. If you selected a header, press <**Options**> and select **Retrieve**.

Use Bluetooth

Your phone is equipped with Bluetooth technology which enables you to connect the phone wirelessly to other Bluetooth devices and exchange data with them, talk hands-free, or control the phone remotely.

Turn on Bluetooth

In Idle mode, press <**Menu**> and select **Settings** → **Bluetooth** → **Activation** → **On**.

Search for and pair with a Bluetooth device

1. In Idle mode, press <**Menu**> and select **Settings** → **Bluetooth** → **My devices** → **Search new device**.
2. Select a device.
3. Enter a Bluetooth PIN code or the other device's Bluetooth PIN code, if it has one, and press <**OK**>.

   When the owner of the other device enters the same code, pairing is complete.

Send data

1. Access an application.
2. Scroll to an item.
3. Press <**Options**> and select **Send via** → **Bluetooth**.
4. Select a device.
5. If necessary, enter the Bluetooth PIN and press <**OK**>.

Receive data

To receive data via Bluetooth, your phone's Bluetooth feature must be active.

If necessary, press <**Yes**> to confirm the reception.

Use compass

Your phone is equipped with the compass feature which enables you to check directions.

Calibrate directions

1. In Idle mode, press <**Menu**> and select **Applications** → **Compass**.
2. Press <**Cal.**>.

Enter text

ABC, T9, Number, and Symbol mode

You can enter text for some features such as messaging, Phonebook, or Calendar, using ABC mode, T9 mode, Number mode, and Symbol mode.

Changing the text input mode

The text input mode indicator appears when the cursor is in a text field.

- Press the right soft key to change the text input mode. (T9Eng : T9 mode, AEng : ABC mode, 1Eng : Number mode, and SymEng : Symbolic mode)
- Press and hold [*] to switch to Symbolic mode.

Using ABC mode

Press the appropriate key until the character you want appears on the screen.

Key	Characters in order displayed	
	Upper case	Lower case
1	. , - ? ! ’ @ : 1	
2	A B C 2	a b c 2
3	D E F 3	d e f 3
4	G H I 4	g h i 4
5	J K L 5	j k l 5
6	M N O 6	m n o 6
7	P Q R S 7	p q r s 7
8	T U V 8	t u v 8
9	W X Y Z 9	w x y z 9
0	0	

Tips for using ABC mode

- To enter the same letter twice or to enter a different letter on the same key, wait for the cursor to move to the right automatically or press [Right]. Then, enter the next letter.

- Press [*] to change case. Lower case (No indicator), Initial capital (⬆), and Capital lock (⬆) are available.
- Press [#] to insert a space.
- Press the Navigation keys to move the cursor.
- Press [**C**] to delete characters one by one. Press and hold [**C**] to clear the display.

Using T9 mode

T9 is a predictive text input mode that allows you to key in any character using single keystrokes.

Entering a word in T9 mode

1. Press [**2**] to [**9**] to start entering a word. Press each key once for each letter.

   For example, press [**4**], [**3**], [**5**], [**5**], and [**6**] to enter HELLO in T9 mode.

   T9 predicts the word that you are typing, and it may change with each key that you press.
2. Enter the whole word before editing or deleting characters.
3. When the word displays correctly, go to step 4. Otherwise, press [**0**] to display alternative word choices for the keys that you have pressed.

   For example, OF and ME use [**6**] and [**3**].
4. Press [#] to insert a space and enter the next word.

Tips for using T9 mode

- Press [**1**] to enter periods or apostrophes automatically.
- Press [*] to change case. Lower case (No indicator), Initial capital (⬆), and Capital lock (⬆) are available.
- Press [#] to insert a space.
- Press the Navigation keys to move the cursor.
- Press [**C**] to delete characters one by one. Press and hold [**C**] to clear the display.

Adding a new word to the T9 dictionary

This feature may not be available for some languages.

1. Enter the word that you want to add.

2. Press [**0**] to display alternative words for your key presses. When there are no more alternative words, **Spell** appears on the bottom line.
3. Press <**Spell**>.
4. Enter the word you want using ABC mode and press <**OK**>.

Using Number mode

Number mode enables you to enter numbers.

Press the keys corresponding to the digits you want.

Using Symbol mode

Symbol mode enables you to insert symbols.

To	Press
display more symbols	[Up] or [Down].
select a symbol	the corresponding number key.
clear the entered symbol(s)	[**C**].
insert the symbol(s)	<**OK**>.

Call functions

Advanced calling features

Making a call

1. In Idle mode, enter the area code and phone number.
2. Press [ ].

- Press [**C**] to clear the last digit or press and hold [**C**] to clear the whole display. You can move the cursor to edit an incorrect digit.
- Press and hold [*] to enter a pause between numbers.

Making an international call

1. In Idle mode, press and hold [**0**]. The **+** character appears.
2. Enter the country code, area code, and phone number, then press [ ].

Redialling recent numbers

1. In Idle mode, press [ ] to display the list of recent numbers.

2. Scroll to the number you want and press [ ].

Making a call from Phonebook

Once you have stored a number in Phonebook, you can dial the number by selecting it from Phonebook. ▶ p. 33

You can also use the speed dial feature to assign your most frequently called numbers to specific number keys. ▶ p. 35

Dialling a number from the SIM card

1. In Idle mode, enter the location number for the phone number you want and press [#].
2. Find the number you want.
3. Press <**Dial**> or [ ] to dial the number you want.

Ending a call

Close the phone or press [ ].

Answering a call

When you receive an incoming call, the phone rings and displays the incoming call image.

Press <**Accept**> or [ ] to answer the call.

Tips for answering a call

- When **Anykey answer** in the **Extra settings** menu is active, you can press any key, except for <**Reject**>, [ ], or [▲/▼]. ▶ p. 79
- When **Active folder** in the **Extra settings** menu is active, you can simply open the phone. ▶ p. 79
- Press <**Reject**> or [ ] to reject a call.
- Press and hold [▲/▼] to reject the incoming call or mute the ringer, depending on the **Side key** setting. ▶ p. 79

Viewing missed calls

If you have missed calls, the screen displays how many calls you have missed.

1. Press <**View**>.
2. If necessary, scroll through the missed calls.
3. Press [ ] to dial the number you want.

Using the headset

Use the headset to make or answer calls without holding the phone.

Connect the headset to the jack on the left side of the phone.

The buttons on the headset work as listed below:

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

Options during a call

You can access a number of functions during a call.

Adjusting the volume during a call

Use [▲/▼] to adjust the earpiece volume during a call.

Press [▲] to increase the volume level and [▼] to decrease the volume level.

Using the external speaker

Use the optional external speaker to talk and listen with the phone a short distance away. First, you must plug the speaker into the phone.

1. During a call, press [*i*/OK] to listen and talk to the other person hands-free. The icon appears.
2. Press [*i*/OK] again to return to normal phone mode. The icon appears.

Placing a call on hold/Retrieving

Press <**Hold**> or <**Retrieve**> to place a call on hold or retrieve the call.

Making a second call

You can make another call if your network supports it.

1. Press <**Hold**> to put the call on hold.
2. Make the second call in the normal way.
3. Press <**Swap**> to switch between the calls.
4. Press <**Options**> and select **End held call** to end the call on hold.
5. To end the current call, press [ ].

Answering a second call

You can answer an incoming call while already on the phone, if your network supports it and you have activated the call waiting feature. ▶ p. 83

1. Press [ ] to answer the call. The first call is automatically put on hold.
2. Press <**Swap**> to switch between the calls.
3. Press <**Options**> and select **End held call** to end the call on hold.
4. To end the current call, press [ ].

Transferring a call

You can transfer the currently active call to a caller on hold, if your network supports it. With this option, the two callers can talk to each other, but you are disconnected from the call.

Press <**Options**> and select **Transfer**.

Using a Bluetooth headset

Use an optional Bluetooth headset to talk on the phone without holding the phone to your ear. To use this feature, you first need to register your headset and connect it to the phone. ▶ p. 84

Press <**Options**> and select **Switch to headset** or **Switch to phone**.

Using the voice clarity feature

This feature increases the microphone's sensitivity so that the person with when you are speaking can hear you clearly even though you may be whispering.

Press <**Options**> and select **Voice clarity on** or **Voice clarity off**.

Switching off the microphone (Mute mode)

You can temporarily switch off your phone's microphone so that the person on the phone cannot hear you.

Press <**Options**> and select **Mute** or **Unmute**.

Muting or sending key tones

You can turn the key tones off or on.

Press <**Options**> and select **Mute keys** or **Send keys**.

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

Using Phonebook

You can access the **Phonebook** menu to locate or store entries. ▶ p. 33

Press <**Options**> and select **Phonebook**.

Sending a sequence of DTMF tones

Dual tone multi-frequency (DTMF) tones are the tones used in phones for tone dialling.

You can send DTMF tones as a group after entering the entire number you need to send or retrieving a number from Phonebook. This feature is helpful for entering a password or an account number when you call an automated system, like a banking service.

1. When connected with a teleservice system, press <**Options**> and select **Send DTMF**.
2. Enter the number you need to send and press <**OK**>.

Using the messaging feature

You can create and send an SMS message or access received messages. ▶ p. 49

Press <**Options**> and select **Message**.

Using SIM services

The **SIM service** menu is available if you use a SIM card in your phone. A SIM card provides services such as news, weather, sports, entertainment, and location services.

For details, see your SIM card instructions or contact your service provider.

Making a multi-party call

Use this feature to allow as many as six people to join a multi-party call, or conference call.

Your service provider must support multi-party calls for you to use this feature.

Setting up a multi-party call

1. Call the first participant.
2. Call the second participant. The first call is automatically put on hold.
3. Press <**Options**> and select **Join**. The first participant is added to the multi-party call.
4. If desired, call another person or answer an incoming call.
5. Press <**Options**> and select **Join**.
6. Repeat steps 4 and 5 as desired.

Having a private conversation with one participant

1. Press <**Options**> and select **Private**.
2. Select a name or number from the participant list.

   You can talk privately with that person, while the other participants converse with each other.
3. To return to the multi-party call, press <**Options**> and select **Join**.

Dropping one participant

1. Press <**Options**> and select **Remove**.
2. Select a name or number from the participant list.

   The participant is dropped from the call, but the call continues with the other parties.
3. Close the phone or press [ ] to end the multi-party call.

Menu functions

All menu options listed

Call records *(Menu 1)*

Use this menu to view the calls you have dialled, received, or missed, the length of your calls, and the cost of your calls.

To access this menu, press <**Menu**> in Idle mode and select **Call records**.

Current contacts *(Menu 1.1)*

This menu displays the most recent calls dialled, received, or missed.

Accessing a call record

1. Press [Left] or [Right] to select a call type.
2. Press [Up] or [Down] to scroll to a call record.
3. Press [*i*/OK] to view the details of a call, or [ ] to dial the number.

Using call record options

While viewing the call record list, press <**Options**> to access the following options:

- **Details**: access the properties of the call record.
- **Call**: dial the displayed number.
- **Save as contacts**: save the phone number to Phonebook.
- **Send message**: send an SMS or MMS message.
- **Delete**: delete the selected call record or all records.

Missed calls *(Menu 1.2)*

This menu displays the most recent calls that you did not answer.

Dialled calls *(Menu 1.3)*

This menu displays the most recent calls you have dialled.

Received calls *(Menu 1.4)*

This menu displays the most recent calls you have received.

Delete all *(Menu 1.5)*

Use this menu to delete all of the records in each call type.

1. Press [*i*/OK] to check the call record(s) to be cleared.
2. Press <**Delete**>.
3. Press <**Yes**> to confirm the deletion.

Call time *(Menu 1.6)*

This menu displays the time log for calls made and received. The actual time invoiced by your service provider will vary.

- **Last call time**: check the length of your last call.
- **Total sent**: check the total length of all the calls you have dialled.
- **Total received**: check the total length of all the calls you have received.
- **Reset timers**: reset the call timers. You need to enter the phone password.

☑ The password is preset to **00000000**. You can change this password. ▶ p. 87

Call costs *(Menu 1.7)*

This network feature displays the cost of calls. This menu is available only if your SIM card supports this feature. Note that this is not intended to be used for billing purposes.

- **Last call cost**: check the cost of your last call.
- **Total cost**: check the total cost of all of your calls. If the total cost exceeds the maximum cost set in **Set max cost**, you must reset the counter before you can make another call.
- **Max cost**: check the maximum cost limit set in **Set max cost**.
- **Reset counters**: reset the cost counters.
- **Set max cost**: set the maximum cost authorised for your calls.
- **Price/Unit**: set the price per unit that is applied when the cost of your calls is calculated.

Phonebook *(Menu 2)*

You can store phone numbers on your SIM card and in your phone's memory. The SIM card and phone's memory are physically separate, but they are used as a single entity called Phonebook.

To access this menu, press <**Menu**> in Idle mode and select **Phonebook**.

Contact list *(Menu 2.1)*

Use this menu to search for numbers in Phonebook.

> ☑ Press <**Contacts**> in Idle mode to quickly access this menu.

Finding an entry

1. Enter the first few letters of the name that you want to find.
2. Select the name you want from the list.
3. Press [ ] to dial the number, or <**Options**> to access Phonebook options.

Using Phonebook options

While viewing the contact details, press <**Options**> to access the following options:

- **Edit**: edit the contact information.
- **Send message**: send an SMS, MMS, or e-mail message.
- **Copy**: copy the selected number to the phone's memory, the SIM card, or the FDN list.
- **Send via**: send the contact via SMS, MMS, e-mail, or Bluetooth.
- **Delete**: delete the selected contact.
- **Print via bluetooth**: print the contact information by connecting the phone to a printer via Bluetooth.

FDN list *(Menu 2.2)*

Use this menu to create a list of contacts to be used in FDN (Fixed Dialling Number) mode, in which the phone allows outgoing calls only to the specified phone numbers, if your SIM card supports this feature. You can activate FDN mode in the **FDN mode** menu. ▶ p. 87

Adding a contact

1. From the FDN list, press <**Options**> and select **Add**.
2. Enter your PIN2 and press <**OK**>.
3. Follow the procedure in "Storing a number on the SIM card."

Using contact options

You can access contact options by pressing <**Options**> while viewing a contact. ▶ p. 33

Add new contact *(Menu 2.3)*

Use this menu to add a new contact to Phonebook.

Storing a number in the phone's memory

1. Select **Phone**.
2. Change the settings or enter information about the contact.
   - **Last name**/**First name**: assign a name.
   - **Mobile**/**Home**/**Office**/**Fax**/**Other**: add a number in any category.
   - **Email**: assign an e-mail address.
   - **Graphic ID**: assign an image as a caller ID image to alert you to a call from the person.
   - **Alert**: assign a ringer melody to alert you to a call from the person.
   - **Group**: assign the person to a caller group.
   - **Notes**: add a memo about the person.
3. Press <**Save**> to save the contact.

Storing a number on the SIM card

1. Select **SIM**.
2. Enter a name and press [Down].
3. Enter a phone number and press [Down].
4. If necessary, change the location number.

   ☑ If you select the **Graphic ID**, **Alert**, or **Group** line, the contact most be saved to the phone's memory.

5. Press <**Save**> to save the contact.

Group *(Menu 2.4)*

Use this menu to organise your contacts in caller groups.

Adding members to a caller group

1. Select a group.
2. Press <**Add**>. The list of contacts stored in your phone's memory is displayed.
3. Select a contact you want to add to the selected group.
4. To add more members, press <**Options**> and select **Add** → a contact. Repeat this as desired.

Managing caller groups

While viewing the group list, press <**Options**> to access the following options:

- **View**: display the members of the selected group.
- **Add**: add a new group.
- **Edit**: edit the properties of the selected group.
- **Send message**: send an SMS, MMS, or e-mail message to the member(s) you want.
- **Delete**: delete the selected group or all groups. Group members, however, are not deleted from Phonebook.

Speed dial *(Menu 2.5)*

Use this menu to assign a speed dial number (2 to 9) for eight of your most frequently called numbers.

Assigning speed dial numbers

1. Select a key location from **2** to **9**. [**1**] is reserved for your voice mail server.
2. Select a contact you want.
3. If the contact has more than one number, select the number you want.

Managing speed dial entries

From the Speed dial screen, press <**Options**> to access the following options:

- **Add**: assign a number to an unassigned key.
- **View**: display the number assigned to the key.
- **Change**: assign a different number to the assigned key.
- **Remove**: clear the speed dial setting.

Dialling speed dial entries

Press and hold the appropriate key in Idle mode.

My name card *(Menu 2.6)*

Use this menu to create your name card and send it to other people.

Saving your name card

The procedure for creating your name card is the same as the one for saving a phone number in the phone's memory. ▶ p. 34

Using name card options

After saving your name card, press <**Options**> to access the following options:

- **Edit**: edit the name card.
- **Send via**: send the name card via SMS, MMS, e-mail, or Bluetooth.
- **Exchange namecard**: exchange name cards with another person via Bluetooth.
- **Remove**: delete the name card.
- **Print via bluetooth**: print the name card by connecting the phone to a printer via Bluetooth.

Own number *(Menu 2.7)*

Use this feature to check your phone numbers, or to assign a name to each of the numbers. Changes made here do not affect the actual subscriber numbers in your SIM card.

Management *(Menu 2.8)*

Use this menu to manage Phonebook.

- **Default saving**: select a default memory location to save contacts.

  If you select **Ask on saving**, the phone will ask you to select a memory location when saving a number.
- **Copy all to phone**: copy all of the contacts stored in the SIM card to the phone's memory.
- **Sort by contacts**: sort your contacts by the first name or last name.
- **Delete all**: delete all of the contacts from your phone's memory, or your SIM card.

  1. Press [*i*/OK] to check the location(s) to be cleared.
  2. Press <**Delete**> and then <**Yes**>.

3. Enter the phone password and press <**OK**>.

> ☑ The password is preset to **00000000**. You can change this password. ▶ p. 87

- **Memory status**: display the number of contacts you have stored in Phonebook.

Service number *(Menu 2.9)*

This menu is available if your SIM card supports Service Dialling Numbers (SDN). Use this menu to view the list of SDNs assigned by your service provider, including emergency numbers, directory enquiries, and voice mail numbers.

Scroll to the number you want and press <**Dial**> or [ ].

Applications *(Menu 3)*

Use this menu to play Java games, to play music files, to record a voice memo, to set time zones and alarms, or to use your phone as a compass, calculator, timer, convertor, or stopwatch. You can also syncronise PIM data.

To access this menu, press <**Menu**> in Idle mode and select **Applications**.

MP3 Player *(Menu 3.1)*

Use this menu to enjoy music. First, you need to save MP3 files in your phone's memory.

Downloading or receiving music files

Use these methods to save MP3 files to your phone's memory:

- Download from the wireless web ▶ p. 46
- Download from a computer using the EasyStudio II program ▶ EasyStudio II User's Guide
- Receive via Bluetooth ▶ p. 86
- Copy files to the supplied memory card and insert the card into the phone.

Creating a play list

Add MP3 files to the play list so you can play them.

1. From the MP3 player screen, press <**Options**> and select **Add to list**.
2. Select either of the following options:

- **Add all**: add all of the files in the phone's memory to the play list.
- **Add a file**: add a file to the play list.

3. If you selected **Add a file**, scroll to a file and press <**Add**>.
4. Press <**Back**> to go back to the MP3 player screen.

Playing music files

From the MP3 player screen, press [*i*/OK].

During playback, use the following keys:

Keys	Function
i/OK	Pauses or resumes playback.
Left	Goes to the previous file.
Right	Skips to the next file.
Up	Opens the play list.
▲/▼	Adjusts the volume level.
2	Changes an equalizer type.
3	Changes the repeat mode.
6	Switch to Shuffle mode.
Down	Stops playback.

Using the movement recognition feature

Your phone is a motion sensitive phone. This means that you can move the phone to perform the following tasks, instead of keying in commands.

- Move the phone to the left to skip to the previous file.
- Move the phone to the right to go back to the next file.
- Move the phone down to pause or resume playback.
- Move the phone as you would when writing "X" to stop playback.

Using player options

From the MP3 player screen, press <**Options**> to access the following options:

- **Play via**: select how to listen to music.

- **Send via**: send the selected files via e-mail or Bluetooth.
- **Open play list**: display the play list.
- **Set as**: set the music file as your ringtone, alarm melody, or a caller alert melody for a Phonebook entry.
- **Delete**: delete the file.
- **Settings**: change the default settings for playing music files.

  Repeat: select a repeat mode.

  Shuffle: set the MP3 player to play music in random order.

  Volume: select a volume level.

  Lock volume key: lock [▲/▼] to prevent accidental key presses from affecting playback.

  Equalizer value: select an equaliser type.
- **Properties**: access the file properties.

Using play list options

From the MP3 player screen, press [Up] to access the play list and press <**Options**> to access the following options:

- **Play via**: select how to listen to music.
- **Add to list**: add files to the play list.
- **Move list**: move the file to the position you want within the play list.
- **Remove**: remove the file from the play list.
- **Remove all**: remove all files from the play list.

Voice recorder *(Menu 3.2)*

Use this menu to record voice memos. A voice memo can be up to one hour long.

Recording a voice memo

1. Press [*i*/OK] to start recording.
2. Speak into the microphone.

   Press [*i*/OK] to pause or resume the recording.
3. When you finish, press <**Stop**>. The voice memo is saved automatically.

Playing a voice memo

1. From the Voice record screen, press <**Options**> and select **Go to voice list**.
2. Select a voice memo. The memo plays.

During playback, use the following keys:

Keys	Function
i/OK	Pauses or resumes playback.
Left	Moves backward in the voice memo.
Right	Moves forward in the voice memo.
Up	Returns to Record mode.
▲/▼	Adjusts the volume.
Down	Stops playback.

Using voice memo options

From the Voice record screen, press <**Options**> to access the following options:

- **Record**: record a new voice memo.
- **Play**: play the voice memo.
- **Send via**: send the voice memo via MMS, e-mail, or Bluetooth.
- **Set as**: set the voice memo as your ringtone, alarm melody, or a caller alert melody for a Phonebook entry.
- **Delete**: delete the voice memo.
- **Rename**: change the name of the voice memo.
- **Move to favourite**: move the voice memo to the **Favourite sounds** folder.
- **Share for bluetooth**: share the selected voice memo or all voice memos with other Bluetooth devices.
- **Protection**: protect the voice memo from being deleted.
- **Properties**: access the properties of the voice memo.
- **Settings**: configure the following settings for a voice memo:

  Recording time: select the recording time.

  Volume: select the voice memo volume to be used during playback.

  Default name: change the default prefix of the voice memo.

  Equalizer value: select an equalizer type.
- **Go to voice list**: go to the list of voice memos you have recorded.

Java world *(Menu 3.3)*

Use this menu to access and play Java games and to set up a profile for accessing Java services.

Using Java game options

From the Java world screen, select **Downloads** and press <**Options**> to access the following options:

- **Launch**: launch the selected game.
- **Application settings**: set a game to be continued when a call comes in or an alarm sounds during the game. You can also set the phone to exchange game information with the network while playing an online game or when you need to connect to the Internet.
- **Delete**: delete the selected game.
- **Properties**: access the game properties.

Configuring Java settings

You can configure profile settings for accessing Java services.

1. From the Java world screen, select **Settings**.
2. Change the following settings:
   - **APN**: enter the access point name.
   - **Login ID**: enter the user ID.
   - **Password**: enter the password.
   - **Proxy**: select whether or not you use a proxy server to access network services. Depending on this setting, options in **Proxy settings** vary.
   - **Proxy settings**: provide you with the following options:

     When the proxy is set to **Enable**:

     IP address: enter the HTTP proxy IP address.

     Port: enter the proxy port number.

     When the proxy is set to **Disable**:

     DNS1: enter the primary DNS address.

     DNS2: enter the secondary DNS address.

Checking memory status

You can view the total amount of memory for the Java games as well as the amount of used memory.

From the Java world screen, select **Memory status**.

Games *(Menu 3.4)*

Use this menu to play games using the movement recognition feature.

World time *(Menu 3.5)*

Use this menu to set your local time zone and find out what time it is in another part of the world.

Setting your local time zone

1. From the world map, press [Left] or [Right] to select the city that corresponds to your home time zone. As the time line moves, the time and date of the given zone display.
2. Press [*i*/OK] to save the time zone.

Viewing and setting a foreign time zone

1. From the world map, press [Down].
2. Press [Left] or [Right] to select the foreign time zone you want.
3. Press [*i*/OK] to save the time zone.

Applying Daylight Savings Time (DST)

1. From the world map, press <**Options**> and select **Set daylight saving time**.
2. Press [*i*/OK] to check the time zone(s) you want.
3. Press <**Save**>.

Compass *(Menu 3.6)*

Use this menu to check the directions and change the settings for using the compass feature.

Calibrating directions

1. From the Compass screen, select **Calibration**.
2. Press <**Cal.**>.

Changing the compass settings

From the Compass screen, select **Settings**.

- **Coordinates**: set the standard for the calibration, **Megnetic north** or **North**.
- **Skin**: change the view mode of the compass, General analog mode or Luminous analog mode.

Alarm *(Menu 3.7)*

Use this menu to set alarms to sound at specific times.

Setting an alarm

1. Select the type of alarm.
2. Press [Left] or [Right] to select **On** and press [Down].
3. Enter the time for the alarm to sound and press [Down].
4. Press [Left] or [Right] to select **AM** or **PM** in 12-hour time format and press [Down].
5. Select a repeat option from the Repeat line.
6. Select the **Alarm tone** line and select an alarm melody.
7. Press <**Save**> and then <**Yes**> to set the alarm.

Stopping an alarm

- Press <**OK**> or any key to confirm the alarm.
- Press <**Snooze**> to stop the wake-up alarm for 5 minutes. You can do this a maximum of 5 times.

Setting the alarm to ring even if the phone is off

From the Alarm screen, select **Auto power** → **On**.

If the phone is off when it is time for the alarm to ring, the phone is switched on and sounds the alarm.

PIM sync *(Menu 3.8)*

You can synchronise personal information with corresponding PC applications by using a Widesync program.

Creating a synchronisation profile

1. Press <**Yes**> to confirm the creating.
2. Set up the following information for the profile:
   - **Profile name**: enter the setting name.
   - **Sync category**: select the application(s) you want to synchronize.
   - **Sync type**: select a synchronisation type.
3. When you finished, press <**Save**>.

Starting synchronization

1. Make sure that your PC has the Widesync program installed and the phone and the PC are connected by a USB.
2. From the PIM sync screen, select a profile and press <**Options**>.
3. Select **Start sync**. The synchronization begins.

Changing the PIM sync options

From the PIM Sync screen, press <**Options**> to access the following options:

- **Start sync**: start a synchronisation by the currently selected profile.
- **View result**: show the result of the last synchronisation.
- **New sync profile**: create a new profile.
- **Edit sync profile**: change the properties of the currently selected profile.
- **Delete**: delete the selected profile or all of profiles.

Calculator *(Menu 3.9)*

Use this menu to perform basic arithmetic functions, such as addition, subtraction, multiplication, and division.

1. Enter the first number.

   Press the left soft key to insert a decimal point or brackets.

   ☑ Press [*] or [#] to move the cursor.

2. Enter the operation for your calculation by pressing the Navigation keys.
3. Enter the second number.
4. Press [*i*/OK] to view the result.

Convertor *(Menu 3.0)*

Use this menu for common conversions, such as currency and temperature.

Performing a conversion

1. Select the convertor type you want.

2. Press [Left] or [Right] to select the original unit and press [Down].
3. Enter the value to be converted.
   - Press [*] to insert a decimal point.
   - Press [#] to change the temperature to above zero (+) or below zero (-).
4. Press [Down].
5. Press [Left] or [Right] to select the unit you want to convert to.

   The equivalent value for the amount you entered displays.

Using convertor options

Press <**Options**> to access the following options:

- **Clear**: clear the current values.
- **Reverse**: reverse the conversion.
- **Currency rates**: edit the currency rate list.

Timer *(Menu 3.*)*

Use this menu to set a period of time for the phone to count down. The phone will sound an alarm when the specified period of time has expired.

Starting the timer

1. Press <**Set**>.
2. Enter the length of time you want to count down and press <**OK**>.
3. Press [*i*/OK] to start counting down.

Stopping the timer

- Press <**Back**> or any key when the timer rings.
- Press [*i*/OK] on the Timer screen to stop the timer before it rings.

Stopwatch *(Menu 3.#)*

Use this menu to measure elapsed time. The precision of the stopwatch is one one-hundredth of a second. The maximum measurement time is 10 hours.

1. Press [*i*/OK] to start the stopwatch.
2. Press [*i*/OK] to check an interval. You can repeat this step for a total of 4 intervals.
3. To reset the stopwatch, press <**Reset**>.

SIM-AT *(Menu 3.11)*

This menu is available if you use a SIM card that provides additional services, such as news, weather, sports, entertainment, and location services. Available services may vary, depending on your service provider's plans.

For details, see your SIM card instructions or contact your service provider.

Browser *(Menu 4)*

The Wireless Application Protocol (WAP) browser on your phone allows you to access the wireless web. Using the WAP browser, you can access up-to-date information and a wide variety of media content, such as wallpapers, ringtones, and music files.

To access this menu, press <**Menu**> in Idle mode and select **Browser**.

Home *(Menu 4.1)*

Use this menu to connect your phone to the network and load the homepage of the wireless web service provider. You can also press [*i*/OK] in Idle mode.

Navigating the WAP browser

To	Press
scroll through browser items	[Up] or [Down].
select a browser item	<✓>.
return to the previous page	<**Back**> or [**C**].

Using browser menu options

Form any WAP page, press <**Menu**> and select **Menu**.

- **Back**: go back to the previous page.
- **Home**: go back to the homepage.
- **Exit**: exit the WAP browser.
- **Reload**: reload the current page.

- **Show URL**: display the URL address of the current webpage. You can also set the current page as the homepage for the WAP browser.
- **About**: access version information for your WAP browser.

Using WAP page options

From any WAP page, press [#] to access the following options:

- **Go to URL**: enter a URL address manually.
- **Bookmarks**: switch to the **Bookmarks** menu. ▶ p. 47
- **Messages**: check the messages stored in the **My messages** folder. You can also create and send a new SMS message. ▶ p. 52
- **File manager**: switch to the **File manager** menu. ▶ p. 65

Exiting the WAP browser

Press [ ] to exit the browser.

Bookmarks *(Menu 4.2)*

Use this menu to save URL addresses in order to quickly access websites.

Adding a bookmark

1. Select an empty location.
2. Enter a name for the bookmark.
3. Enter a URL address and press [i/OK].

Accessing a bookmarked page

Scroll to a bookmark item and press [i/OK].

Using bookmark options

After saving an item, press <**Options**> to access the following options:

- **Go**: access the bookmarked website.
- **Edit**: edit the bookmark.
- **Delete**: delete the selected bookmark.

Go to URL *(Menu 4.3)*

Use this menu to manually enter the URL address of a website and access the website.

Clear cache *(Menu 4.4)*

Use this menu to clear the cache, a temporary memory that stores recently accessed web pages.

Profile settings *(Menu 4.5)*

Use this menu to set up servers for the WAP browser. Contact your service provider for details about your setting options.

For each server, the following options are available:

- **Profile name**: assign a name to the server profile.
- **Home URL**: set the address of your homepage.
- **Bearer**: select a bearer for each type of network address accessed.
- **Proxy**: select whether or not the phone uses a proxy server to launch the WAP browser. Your service provider can tell you if your network requires a proxy server, and they can give you the appropriate settings.
- **GPRS settings**: customise the following GPRS network settings:

  *When the proxy is set to **Enable**:*

  Proxy IP: enter the proxy IP address.

  Proxy port: enter the proxy port number.

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

  Login ID: enter the user ID.

  Password: enter the password.

  *When the proxy is set to **Disable**:*

  DNS1: enter the primary address.

  DNS2: enter the secondary address.

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

  Login ID: enter the user ID.

  Password: enter the password.
- **GSM settings**: customise the following GSM network settings:

  *When the proxy is set to **Enable**:*

  Proxy IP: enter the proxy IP address.

  Proxy port: enter the proxy port number.

  Dial number: enter the PPP server phone number.

  Login ID: enter the user ID.

  Password: enter the password.

  Data call type: select a data call type.

*When the proxy is set to **Disable**:*

DNS1: enter the primary address.

DNS2: enter the secondary address.

Dial number: enter the PPP server phone number.

Login ID: enter the user ID.

Password: enter the password.

Data call type: select a data call type.

Current profile *(Menu 4.6)*

Use this menu to select a connection profile for accessing the WAP browser.

Messages *(Menu 5)*

Use the **Messages** menu to send and receive text messages, multimedia messages, and e-mails. You can also use WAP push message and cell broadcast message features.

To access this menu, press <**Menu**> in Idle mode and select **Messages**.

Create new message *(Menu 5.1)*

Use this menu to create and send SMS, MMS, or e-mail messages.

Text message *(Menu 5.1.1)*

Short Message Service (SMS) allows you to send or receive text messages that may include pictures, animated images, and melodies.

> ☑ The maximum number of characters allowed in a text message varies by your service provider. If your message exceeds the maximum number of characters, the phone will split the message.

1. Enter your message.
2. Press <**Options**> to access one of the following options:
   - **Insert**: add a template, Phonebook entry, or bookmark.
   - **Add picture**/**Add animation**/**Add melody**: add a picture, animated image, or melody to the message.
   - **Attach**: attach a name card or calender memo.

- **Save to**: save the message in the **Draft** or **My folder** box.
- **Text style**: change the text attributes.

3. When you have finished, press <**Options**> and select **Save and send** or **Send only**.
4. Enter a destination number.

   To send the message to more than one recipient, press [Down] and fill in additional destination fields.
5. Press [*i*/OK] to send the message.

Multimedia message *(Menu 5.1.2)*

Multimedia Message Service (MMS) allows you to send or receive multimedia messages containing a combination of text, image, video, and audio, from phone to phone or from phone to e-mail.

1. Select the **Subject** line.
2. Enter the message subject and press [*i*/OK].
3. Select the **Picture & Video** or **Sound** line add a media file.

   ☑ The maximum size allowed for an MMS message can differ depending on the country. If you cannot attach another file, add another page.
4. Select the **Message** line.
5. Enter the message text and press [*i*/OK].
6. Press <**Options**> to access the following options:
   - **Edit**: edit the message subject or text.
   - **Add image**/**Add video**/**Add sound**: add image, video, or sound file.
   - **Change image**/**Change video**/**Change sound**: change an added photo, video, or sound.
   - **Preview**: display the message you have created.
   - **Save to**: save the message in the **Draft**, **My folder** or **MMS template** box.
   - **Add page**: add pages. Move to each page by pressing [Left] or [Right] on the message screen.
   - **Delete page**: delete an added page.

- **Edit page**: set the page duration or move the current page to the next or previous page.
- **Attach**: attach a name card or calender data.
- **Remove subject**/**Remove message**: clear the subject or text.
- **Remove picture**/**Remove video**/**Remove sound**: remove an added photo, video, or sound.

7. When you have finished, press <**Options**> and select **Send**.
8. Enter a phone number or e-mail address.

   To send the message to more than one recipient, press [Down] and fill in additional destination fields.
9. Press [*i*/OK] to send the message.

Email *(Menu 5.1.3)*

You can send e-mails that include text and media files, such as images, videos, and audio. To use this feature, you need to subscribe to an e-mail service and set up your e-mail account and profile. ▶ p. 63

1. Select the **Subject** line.
2. Enter the subject of your e-mail and press [*i*/OK].
3. Select the **Message** line.
4. Enter the e-mail text and press [*i*/OK].
5. Scroll to the **File attach** line.
6. Press <**Options**> to access the following options:
   - **Add image**/**Add videos**/**Add sounds**/**Add music**: add photos, videos, or sounds. Depending on the file type or DRM (Digital Rights Management) system, some files may not be able to be forwarded.
   - **Other files**: add files in unsupported format.
   - **Attach**: add a name card or calendar memo.
7. Press <**Options**> to access the following options:
   - **Edit**: edit the subject or text.
   - **View**: open the attached file.
   - **Save to**: save the e-mail in the **Draft** or **My folder** box.
   - **Remove subject**/**Remove message**: clear the subject or text.
   - **Remove**: delete the selected attachment or all attachments.

8. When you have finished, press <**Options**> and select **Send**.
9. Enter an e-mail address.

   To send the e-mail to more than one recipient, press [Down] and fill in additional destination fields.
10. Press [*i*/OK] to send the e-mail.

My messages *(Menu 5.2)*

Use this menu to store all of the messages you have received, sent, failed to send, or saved to send it later.

Inbox *(Menu 5.2.1)*

This folder stores all types of the messages you have received, except for e-mails. MMS, SMS, voicemail, WAP push message from the WAP server, configuration messages and cell broadcast messages are stored here.

Configuration messages, which are send from your service provider, contain network parameters to let you easily apply network settings to your phone.

Viewing a message at the time of its receipt

When a message has been received, the phone alerts you by:

- Displaying a message icon with text notification
- Sounding a tone or vibrating, depending on the message alert setting

To read a message immediately, press <**View**> and select a message from the Inbox.

For an MMS notification, press <**Options**> and select **Retrieve**. The message is downloaded from the MMS server to the phone's memory.

Viewing a message in the Inbox

The following icons may appear on the message list; depending on the message type or status, icons may vary:

- SMS
- MMS
- MMS notification
- ??? Voicemail
- Configuration
- WAP push
- Delivery report

- Depending on the DRM (Digital Rights Management, you may not be able to forward some messages. They are indicated by the icon.
- An **!** icon next to a message icon indicates high priority. A grey-coloured message icon indicates low priority.

While viewing the message list, press <**Options**> to access the following options:

- **View**: open the message.
- **Reply via SMS**: send a reply message via SMS.
- **Reply via MMS to**: send a reply message via MMS.
- **Retrieve**: retrieve the MMS message from the server.
- **Forward**: forward the message to other people.
- **Connect**: connect to the voice mail server.
- **Delete**: delete the selected message or all messages.
- **Move to My folder**: move the message to the **My folder** box.
- **Move to phone**/**Move to SIM**: move the message to the phone's memory or the SIM card.
- **Sort by**: change the sort order of the list.
- **Print via bluetooth**: print the message by connecting the phone to a print via Bluetooth.
- **Protection**: protect the message from being deleted.
- **Properties**: access the message properties.

Using message options

While viewing a message, press <**Options**> to access the following options:

SMS messages

- **Reply via**: send a reply message via SMS or MMS.
- **Forward**: forward the message to other people.
- **Delete**: delete the message.
- **Move to phone**/**Move to SIM**: move the SMS message to the phone's memory or the SIM card.
- **Add to block list**: add the sender's number to the Block number list.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.

- **Cut media**: save media content from the message into your phone's memory.
- **Protection**: protect the message from being deleted.

MMS messages/MMS notifications

- **Retrieve**: retrieve the MMS message.
- **Reply via SMS**: send a reply message via SMS.
- **Reply via MMS to**: send a reply message via MMS.
- **Forward**: forward the message to another person.
- **Delete**: delete the selected message or all messages.
- **Add to block list**: add the sender's number to the Block number list.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Cut media**: save media content from the message into your phone's memory.
- **Protection**: protect the message from being deleted.
- **Properties**: access the message properties.

Configuration messages

- **Install**: apply the configuration specified in the message to your phone.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Delete**: delete the message.

WAP push messages

- **Go to URL**: connect to the URL from which the message is sent.
- **Add to block list**: add the sender's e-mail address to the Block address list.
- **Delete**: delete the message.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Protection**: protect the message from being deleted.

Delivery report messages

- **Delete**: delete the message.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.

- **Protection**: protect the message from being deleted.

Cell broadcast messages

- **Save**: save the messages.
- **Delete**: delete the message.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.

Draft *(Menu 5.2.2)*

This folder stores messages you have saved to send at a later time.

Press <**Options**> to access the following options:

- **View**: open the message.
- **Edit**: edit the message.
- **Delete**: delete the selected message or all messages.
- **Move to my folder**: move the message to the **My folder** box.
- **Move to phone**/**Move to SIM**: move the message to the phone's memory or the SIM card.
- **Sort by**: change the sort order of the list.
- **Print via bluetooth**: print the message by connecting the phone to a print via Bluetooth.
- **Protection**: protect the message from being deleted.
- **Properties**: access the message properties.

Outbox *(Menu 5.2.3)*

This folder stores messages that the phone is attempting to send or has failed to send.

While viewing a message or the message list, press <**Options**> to access the following options:

- **Cancel sending**: cancel sending the message, if the message is being sent.
- **View**: open the message.
- **Edit**: edit the message.
- **Open file**: open the attached file.
- **Save file**: save the attached file in the phone's memory.
- **Forward**: forward the message to other people.
- **Send**/**Send again**: resend the message.

- **Delete**: delete the selected message or all messages.
- **Move to my folder**: move the message to the **My folder** box.
- **Move to phone**/**Move to SIM**: move the message to the phone's memory or the SIM card.
- **Sort by**: change the sort order of the list.
- **Print via bluetooth**: print the message by connecting the phone to a printer via Bluetooth.
- **Protection**: protect the message from being deleted.
- **Properties**: access the message properties.

Sent box *(Menu 5.2.4)*

This folder stores messages that you have sent.

You can access message options by pressing <**Options**> while viewing a message or the message list. ▶ p. 55

Email box *(Menu 5.2.5)*

This folder stores e-mails that you have received.

1. Select an e-mail account.
2. Press <**Select**> when **Check new mail** is displayed to get new e-mails from the server.

   The phone checks for new e-mails and retrieves received e-mails.

   The following icons may appear on the message list; depending on the e-mail states, icons may vary:

   - has not been read
   - is being retrieved from the server
   - has not been retrieved

   ☑ An **!** icon next to a message icon indicates high priority. A grey-coloured message icon indicates low priority.
3. Scroll to an e-mail or header and press [*i*/OK].
4. If the e-mail has more than one page, press [▲/▼] to scroll through pages one by one.

   Press and hold [▲/▼] to move to the first or last page.
5. Select an attached file to view or play it.

   Press [#] or [*] to move to the previous or next e-mail.

While viewing the e-mail content or e-mail list, press <**Options**> to access the following options:

> ☑ Options may vary, depending on the status of the e-mail.

- **View**: open the e-mail.
- **Check new mail**: download new e-mails or headers from the e-mail server.
- **Reply to**: send a reply message to the sender or to all recipients.
- **Forward**: forward the e-mail.
- **Mark as read/Mark as unread**: mark the e-mail as read or as unread.
- **Delete selected**: delete the selected e-mail from the phone's memory, or the phone's memory and the server.
- **Delete all**: delete all e-mails from the phone's memory, or the phone's memory and the server.
- **Add to block list**: add the sender's e-mail address or the e-mail subject to the Block list.
- **Open file**: open the attached file.
- **Save file**: save the attached file in the phone's memory.
- **Delete all**: delete all e-mails.
- **Move to My Folders**: move the retrieved e-mail to the **My folder** box.
- **Sort by**: change the sort order of the list.
- **Protection**: protect the e-mail from being deleted.
- **Properties**: access the e-mail properties.

While viewing a header or e-mail, press <**Options**> to access the following options:

- **Retrieve**: retrieve the body of the e-mail.
- **Reply to**: send a reply message to the sender or to all recipients.
- **Forward**: forward the e-mail to other people.
- **Mark as read/Mark as unread**: mark the selected e-mail or all e-mails as read or as unread.
- **Delete**: delete the e-mail.
- **Add to block list**: add the sender's e-mail address or the e-mail subject to the Block list.
- **Cut address**: extract e-mail addresses, URLs, and phone numbers from the e-mail.

- **Cut attachment**: save the attachments from the e-mail into your phone's memory.
- **Protection**: protect the e-mail from being deleted.
- **Properties**: access the e-mail properties.

My folder *(Menu 5.2.6)*

Use this menu to view the message you have moved using the **Move to My folder** option while reading a message.

While viewing the message list, press <**Options**> to access the following options:

- **View**: open the message.
- **Edit**: edit the message.
- **Send**: send the message.
- **Delete**: delete the selected message or all messages.
- **Sort by**: change the sort order of list.
- **Protection**: protect the message from being deleted.
- **Properties**: access the message properties.

Templates *(Menu 5.3)*

Use this menu to create, edit, or send text or multimedia templates.

Text template *(Menu 5.3.1)*

Use this menu to preset frequently used text messages.

From the template list, press <**Options**> to access the following options:

- **Edit**: edit the template.
- **Send message**: send the template as an SMS, MMS, or e-mail.
- **Add new**: add a new template.
- **Delete**: delete the template.

MMS template *(Menu 5.3.2)*

When you access this menu, you can view the list of templates.

From the template list, press <**Options**> to access the following options:

- **View**: open the template.

- **Send**: send the template as an MMS message.
- **Edit**: edit the template.
- **New**: add a new template.
- **Delete**: delete the selected template or all templates.

Delete all *(Menu 5.4)*

Use this menu to delete all of the messages in each message folder one by at once.

1. Press [*i*/OK] to check the message box(es) you want.
2. Press <**Delete**>.
3. Press <**Yes**> to confirm the election.

Settings *(Menu 5.5)*

Use this menu to set up various options for using the messaging service.

Text message *(Menu 5.5.1)*

You can configure the SMS settings.

- **Send settings**: set up the following options:

  Reply path: allow the recipient to reply to you through your message centre.

  Delivery report: set the network to inform you when your message has been delivered.

  Character support: select a character encoding type. If you select **Auto**, the phone switches the encoding type from **GSM-alphabet** to **Unicode** if you enter a **Unicode** character. Use of **Unicode** encoding will reduce the maximum number of characters in a message to about half.

  If this menu is not shown, your phone provides the **Auto** character encoding by default.

  Bearer: select a bearer type.

  Validity period: set the length of time your messages are stored in the SMS centre.

  Message type: set the default message type.

  Service centre: store or change the number of your message centre.

- **Block number**: specify phone numbers from which messages will not be accepted.

- **SMS profile**: set the following properties in a profile:

  Service centre: store or change the number of your message centre.

  Default destination: set the default destination number.

  Default type: set the default message type.

  Validity period: set the length of time your messages are stored in the SMS centre.

  Setting name: enter a profile name.
- **Block address**: specify e-mail addresses from which messages will not be accepted.

Multimedia message *(Menu 5.5.2)*

You can configure the MMS settings.

- **Send settings**: set up the following options for sending MMS messages:

  Priority: set the priority level of your outgoing messages.

  Validity period: set the length of time your messages are stored in the MMS centre.

  Delivery after: set a time delay before messages are sent.

  Address hiding: set your address to be hidden from the recipient's phone.

  Delivery report: set the network to inform you when your message has been delivered.

  Read reply: determine whether or not the phone sends a read-reply request.
- **Receive settings**: set up the following options for receiving multimedia messages:

  Home reception: determine if your phone retrieves new messages automatically when you are in your home service area.

  Roaming reception: determine if your phone retrieves new messages automatically when you are roaming in another network.

  Home reception and Roaming reception have the following options:

  - **Automatic**: the phone automatically retrieves messages from the server.
  - **Reject**: the phone rejects all messages.

- **Manual**: the phone displays notifications. Use the **Retrieve** option to manually download new messages.

Anonymous reject: reject messages from anonymous senders.

Adverts reject: reject advertisements.

Report allowed: send a delivery report from the network to the sender.

- **Block number**: specify phone numbers from which messages will not be accepted.
- **MMS profiles**: configure required network settings for MMS.

Current profile: select a connection profile to be used for MMS.

Profile settings: customise the following options for each profile:

- **Profile name**: assign a name to the MMS profile.
- **Server URL**: enter the address of your MMS server.
- **Proxy**: connect to the GPRS network using the proxy server.
- **GPRS settings**: customise the settings required for connecting to the GPRS network.

IP address: (when the proxy is set to **Enable**) enter the IP address.

Port: (when the proxy is set to **Enable**) enter the port number.

DNS1: (when the proxy is set to **Disable**) enter the primary address.

DNS2: (when the proxy is set to **Disable**) enter the secondary address.

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

Login ID: enter the user ID.

Password: enter the password.

- **Version**: select an available OMA version and maximum size limit for sending or receiving messages.

☑ Depending on your service provider, it may not be possible to support the maximum limit 295KB. In this case, try again after changing the setting to 100KB.

Email *(Menu 5.5.3)*

You can configure the e-mail settings.

- **Send settings**: set up the following options for sending e-mails.

  Send copy to self: send a copy of your e-mail to your own e-mail address.

  Delivery confirm: set the network to inform you when your e-mail has been delivered.

  Read confirm: send a request for a reply along with your e-mail.

  Priority: select the priority level of your outgoing e-mail.

  Include signature: select to attach your name, phone number, or a simple memo to your e-mail.

  Edit name: enter your name.

  Edit telephone number: enter your phone number.

  Edit note: enter a simple memo.

- **Receive settings**: set up the following options for receiving e-mails.

  Check interval: determine how often the phone checks the server for incoming e-mails.

  If you set this option to **Not used**, you can use the **Check new mail** feature to check your e-mail manually.

  Read reply: determine whether or not the phone sends a read-reply request.

  When this option is set to **Announce**, the phone reminds you to send a read-reply request with your e-mail address.

  Retrieve option: determine whether the phone retrieves headers only or the entire e-mail.

  Delete option: determine whether e-mails are deleted immediately or the next time you connect to the server.

  Reject if over: determine the maximum size for incoming e-mails. Your phone will reject e-mails that exceed the specified size.

  Leave a copy of messages on the server: leave copies of e-mails after retrieving.

- **Block list**: specify e-mail addresses from which messages will not be accepted. You can also specify message subjects that you will not accept.
- **Email account**: set up your e-mail account(s) and select the one to be used:

  Current account: select an account to be used for e-mails.

  Account settings: configure up to five e-mail accounts using different e-mail servers.

  The following options are available for each account:

  - **In use**: select this option to use the account and to display the account in the **E-mail box**.
  - **Account name**: enter a name for the currently selected account.
  - **User name**: enter a name to be displayed as the sender's name in your outgoing e-mails.
  - **Email address**: enter your e-mail address.
  - **Reply address**: enter the e-mail address to which you want recipients to send reply messages.
  - **User ID**: enter your e-mail ID.
  - **Password**: enter your e-mail password.
  - **SMTP server**: enter the IP address or domain name of the outgoing e-mail server.
  - **SMTP port**: enter the SMTP port number.
  - **Protocol type**: select the protocol for the incoming e-mail server. The remaining options depend on the protocol type setting.

  *When the protocol type is **POP3***:

  - **POP3 server**: enter the IP address or domain name of the server that receives your e-mail.
  - **POP3 port**: enter the POP3 port number.
  - **APOP login**: connect to the server by using the APOP login scheme when this option is selected.

  *When the protocol type is **IMAP4***:

  - **IMAP4 server**: enter the IP address or domain name of the server that receives your e-mail.
  - **IMAP4 port**: enter the IMAP4 port number.
  - **Include attachments**: select this option to receive attachments with e-mails.

- **MAX retrieve E-mail**: set the number of headers you will retrieve from the server.

- **Email profile**: configure the network settings required to send or receive e-mails.

  Current profile: select a profile to be used for e-mails.

  Profile settings: configure up to five e-mail profiles. For each profile, the following options are required to connect to the GPRS network:

  - **Profile name**: enter a name for the e-mail profile.
  - **APN**: enter the access point name used for the GPRS network address.
  - **Login ID**: enter the user ID.
  - **Password**: enter the password.
  - **DNS1**: enter the primary address.
  - **DNS2**: enter the secondary address.

Push message *(Menu 5.5.4)*

You can change the settings for receiving WAP push messages from the wireless web server. The following options are available:

- **Receive**: set how your phone receives WAP push messages.
- **Service centre**: specify the address of the server from which you want to receive WAP push messages.

Broadcast messages *(Menu 5.6)*

The Cell Broadcast service delivers short messages on various topics, such as weather, sports, or traffic.

Use this menu to change the settings for the service and to access broadcast messages.

- **Read**: open received messages.

  The **Temporary** box saves network messages until the phone is switched off.

  The **Archive** box saves network messages indefinitely. Press <**Options**> and select **Save** to save messages to the **Archive** box when a text notification appears.

- **Receive**: enable or disable the reception of broadcast messages.

- **Channel**: specify the channels from which you receive broadcast messages.
- **Language**: select the language in which broadcast messages display.

Please contact your service provider for details.

Memory status *(Menu 5.7)*

Use this menu to view the maximum memory and available memory for each message type. You can also view the memory currently in use in each folder.

File manager *(Menu 6)*

The **File manager** menu allows you to access images, videos, music files, sound files, and other files stored in the phone's memory.

To access this menu, press <**Menu**> in Idle mode and select **File manager**.

> According to the DRM (Digital Rights Management) system, web content may not be able to be forwarded. The content is indicated by the icon.

Images *(Menu 6.1)*

This menu displays photos you have taken and images downloaded or received in messages.

Viewing an image

1. Select an image folder.
2. Scroll to an image and press [*i*/OK].

Using image options

While viewing an image, press <**Options**> to access the following options:

- **List**: go to the image list.
- **Send via**: send the photo via MMS, e-mail, or Bluetooth.
- **Set as**: set the photo as your wallpaper for the external or main display, or as a caller ID image for a Phonebook entry.
- **Edit**: decorate the photo by adding emoticons or applying a frame or special effect.
- **Delete**: delete the file.
- **Rename**: change the name of the file.

- **Move to favourite images**: move the file to the **Favourite images** folder.
- **Slide show**: set all images to display as a slide show.
- **Share for bluetooth**: share the selected file or all files with other Bluetooth devices.
- **Print via**: print the photo by connecting the phone to a printer via Bluetooth or USB cable.
- **Protection**: protect the photo from being deleted.
- **Properties**: access the file properties.

Videos *(Menu 6.2)*

This menu displays video clips you have recorded, downloaded, or received in messages.

☑ Video clips recorded on other devices, such as camcorders, may not play correctly.

Playing a video clip

1. Select a video folder.
2. Scroll to a video clip and press [*i*/OK].

During playback, you can use the following keys:

Keys	Function
i/OK	Pauses or resumes playback.
Up	Opens the play list.
Left	Move backward in a file when held down.
Right	Skips forward in a file when held down.
Down	Stops playback.

Using video options

From the play screen, press <**Options**> to access the following options.

- **Play**: play the file.
- **Send via**: send the file via MMS, e-mail, or Bluetooth.
- **Delete**: delete the selected file or all files.
- **Rename**: change the name of the file.
- **Move to favourite videos**: move the file to the **Favourite videos** folder.

- **Share for bluetooth**: share the selected file or all files with other Bluetooth devices.
- **Protection**: protect the file from being deleted.
- **Properties**: access the file properties.

Music *(Menu 6.3)*

This menu displays music files you have downloaded, received in messages, or imported from your computer.

Playing a music file

Scroll to a file and press [*i*/OK]. ▶ p. 38

Using music options

From the player screen, press <**Options**> to access the options. ▶ p. 38

Sounds *(Menu 6.4)*

This menu displays sound files you have recorded, downloaded, or received in messages.

Playing a sound clip

1. Select a sound folder.
   To access voice memos, scroll to the **Voice memos** folder. ▶ p. 39
2. Scroll to a clip and press [*i*/OK]. ▶ p. 39

During playback, you can use the following keys:

Keys	Function
i/OK	Pauses or resumes playback.
Left	Moves backward in a file.
Right	Moves forward in a file.
▲/▼	Adjusts the volume.
Down	Stops playback.

Using sound options

From the player screen, press <**Options**> to access options. ▶ p. 38

Other files *(Menu 6.5)*

Files that you have received but which are not supported by your phone are stored in this folder. You cannot open these files on the phone. Unsupported file formats include *.doc, *.ppt, and *.txt.

While viewing the file list, press <**Options**> to access the following options:

- **Send via**: send the file via e-mail or Bluetooth.
- **Delete**: delete the selected file or all files.
- **Rename**: change the name of the file.
- **Share for bluetooth**: share the selected file or all files with other Bluetooth devices.
- **Protection**: protect the file from being deleted.
- **Properties**: access the file properties.

Memory status *(Menu 6.6)*

You can check the total amount of memory for media items and the amount of memory currently in use in each media box.

Calendar *(Menu 7)*

The calendar feature enables you to keep track of your schedule and task, and to view missed alarm events.

To access this menu, press <**Menu**> in Idle mode and select **Calendar**.

Consulting the calendar

When you enter the **Calendar** menu, the calendar in Month view appears with today's date highlighted.

The number of events for the specific day appears at the bottom of the calendar. The following icons indicate the type of event:

- Scheduled event
- Anniversary
- Task
- Miscellaneous

Press <**Options**> to access the following options:

- **View mode**: change the view mode of the calendar.
- **Create**: add a new event.
- **Go to**: go to the current date or a specific date.

- **Sort by**: sort items by the type of event.
- **Delete**: access the following deleting options:

  Selected: delete the items stored on the currently selected date.

  previous: delete the items stored on the specific dates.

  This month: delete all of the items stored on the current month.

  All: delete all events.
- **Missed alarm events**: view events whose alarms you have missed.
- **Memory status**: access the memory status for items stored in the phone's memory.

Creating an event

You can schedule events on the calendar.

Entering a new scheduled event

1. Scroll to a date on the calendar.
2. Press <**Options**> and select **Create** → **Schedule** or **Miscellaneous**.
3. Enter information or change the settings in the following entry fields:
   - **Subject**: enter the event subject.
   - **Details**: enter event details.
   - **Start date** and **Start time**: enter the starting date and time for the event.
   - **AM/PM**: select **AM** or **PM** in 12-hour time format.
   - **End date** and **End time**: enter the ending date and time for the event.
   - **AM/PM**: select **AM** or **PM** in 12-hour time format.
   - **Location**: (for **Schedule**) enter information about the event location.
   - **Alarm**: select to set an alarm for the event and set the time for the alarm. You can also select an alarm tone.
   - **Repeat**: (for **Schedule**) select to set the event to recur. You can select a repeat unit and set the date to end repeating.
4. Press <**Save**> to save the event.

Entering a new anniversary

1. Select a date on the calendar.
2. Press <**Options**> and select **Create** → **Anniversary**.
3. Enter information or change the settings in the following entry fields:
   - **Occasion**: enter information about the anniversary.
   - **Date**: enter the date.
   - **Alarm**: select to set an alarm for the anniversary. You can set the number of days before the event date, the time for the alarm to sound, and an alarm tone.
   - **AM/PM**: select **AM** or **PM** in 12-hour time format.
   - **Repeat every year**: select to set the phone to remind you of the anniversary every year.
4. Press <**Save**> to save the event.

Entering a task

1. Select a date on the calendar.
2. Press <**Options**> and select **Create** → **To do**.
3. Enter information or change the settings in the following entry fields:
   - **To do**: enter information about the task.
   - **Start date**: enter the starting date.
   - **Due date**: enter the ending date.
   - **Priority**: select a priority level of the task.
4. Press <**Save**> to save the event.

Viewing an event

Square brackets on a calendar date indicate the following type of events scheduled for that day:

- Blue: Scheduled event
- Orange: Anniversary
- Red: Task
- Green: Miscellaneous

1. Select a date on the calendar to display the events for the day.
2. Select an event to view its details.

While viewing an event, press <**Options**> to access the following options:

- **Edit**: edit the event.

- **Create**: add a new event.
- **Send via**: send the event via SMS, MMS, e-mail, or Bluetooth.
- **View mode**: change the view mode of the calendar.
- **Done**/**Undone**: change the status of the selected task.
- **Delete**: delete the event.
- **Print via bluetooth**: print the selected event by connecting the phone to a printer via Bluetooth.

Viewing an event in different mode

By default, the calendar appears in Month view mode.

Press <**Options**> and select **View mode** to change the mode.

Day view

You can view events for the selected date. Select an event to view its details.

The following icons will be displayed according to the event's type and status:

- Alarm set
- Recurring event
- Completed to-do item
- To-do priority; its colour indicates the priority level (Red: high, Blue: normal, and Grey: low)

Week view

You can view miscellaneous and scheduled events for the selected week.

A cell on the timetable indicates the presence of event information. Select the cell that contains the event you want.

Viewing a missed alarm event

When you are unable to acknowledge an alarm, the phone displays a missed alarm notification.

- Press <**View**> to view the corresponding event.
- Press <**Exit**>.

Accessing missed alarm events

1. Press <**Options**> and select **Missed alarm events**.
2. Select an event.

Using missed alarm options

From the event list, press <**Options**> to access the following options:

- **View**: display the event details.
- **Delete**: delete the event.
- **Delete all**: delete all events.

Camera *(Menu 8)*

You can use the camera module embedded in your phone to take photos and record videos.

To access this menu, press <**Menu**> in Idle mode and select **Camera**, or press and hold [📷].

- 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 a photo *(Menu 8.1)*

You can take photos in various modes using the phone. The camera produces JPEG photos.

When you take a photo in direct sunlight or in bright conditions, shadows may appear on the photo.

Taking a photo with the phone open

1. If necessary, remove the camera cover.
2. Access the take a photo menu or press and hold [📷] to turn on the camera.

   The image to be captured appears on the display.
3. Adjust the image by aiming the camera lens at the subject.
   - Press the left soft key to access camera options. See the next section.
   - Use the keypad to change camera settings or switch to other modes.
4. Press [*i*/OK] to take a photo. The photo is saved in the **Photos** folder.
5.

To	Press
use photo options	<**Options**>. ▶ p. 75

5. To	Press
delete the photo	<**Delete**> and then <**Yes**>.
return to Capture mode	[*i*/OK].

Using camera options in Capture mode

In Capture mode, press the left soft key to access the following options:

- **Record video**: switch to Record mode. ▶ p. 75
- **Shooting mode**: take a photo in the following modes:

  Single shot: take a photo in normal mode.

  Multi shot: take a series of action stills. You can select the number of still images the camera will take.

  Mosaic shot: take several stills and save them in one frame. You can select the layout.
- **Effects**: change the colour tone or apply a special effect to the photo.
- **Frames**: apply a decorative frame to the photo.
- **Flash**: set the flash setting.
- **Timer**: set a time delay before the camera takes a photo.
- **Go to Photos**: go to the **Photos** folder.
- **Settings**: change the default settings for taking a photo.

  Size: select an image size.

  Photo quality: select an image quality setting.

  View finder: select a preview mode, either Full screen mode or Standard ratio mode with actual ratio.

  ISO: change the ISO setting, which controls the sensitivity of your camera. For low light situations, lower the ISO number to increase the quality.

  The higher the ISO number, the faster the camera shutter functions and the more sensitive the camera is to light. Higher ISO settings may bring some distortion to an image.

Spot focus: adjust the exposure based on a specific area of the image. Select **On** to display the spot focus frame in the middle of the image, and change the exposure according to the brightness of the image fragment in the frame.

Shutter sound: select the sound that you hear when you press the shutter release, [📷] or [i/OK].

Zoom sound: turn on or off the sound that you hear when zooming in.

Brightness sound: turn on or off the sound that you hear when adjusting the image brightness.

Default name: change the default prefix of the photo name.

- **Camera short cuts**: view the functions of the keys you can use.

Using the keypad in Capture mode

You can use the keypad to customise your camera settings in Capture mode.

Keys	Function
▲	Flips the image vertically.
▼	Shows the mirror image.
Left/Right	Adjusts the brightness of the image.
Up/Down	Zooms in or out.
1	Switches to Record mode.
2	Changes the image size.
3	Changes the image quality.
4	Changes the shooting mode and the number of photos.
5	Changes the colour tone or applies a special effect to the photo.
6	Reduces the distortion on the image to maximise detail and sharpness.
7	Selects a decorative frame.
8	Sets the timer.
9	Goes to the **Photos** folder.

Keys	Function
0	Set the flash setting.
*	Changes the preview screen.

Using photo options

After taking a photo, press <**Options**> to access the following options:

- **Take another**: return to Capture mode.
- **Send via**: send the photo via MMS, e-mail, or Bluetooth.
- **Set as**: set the photo as your wallpaper for the external or main display or as a caller ID image for a Phonebook entry.
- **Delete**: delete the photo.
- **Rename**: change the name of the photo.
- **Go to Photos**: go to the **Photos** folder.
- **Share for bluetooth**: share the photo with other Bluetooth devices.
- **Print via**: print the selected photo by connecting the phone to a printer via Bluetooth or USB cable.
- **Protection**: protect the photo from being deleted.
- **Properties**: access the photo properties.

Taking a photo with the phone closed

1. Press and hold [📷].
2. Adjust the image by aiming the camera lens at the subject.
   - Press [▲] to flip the image vertically.
   - Press [▼] to show the mirror image.
3. Press [📷] to take a photo. The photo is automatically saved in the **Photos** folder.

Record video *(Menu 8.2)*

You can record a video of what is displayed on the camera screen and save it.

1. If necessary, remove the camera cover.
2. Access the **Record video** menu.
3. Adjust the image by aiming the camera lens at the subject.
   - Press the left soft key to access camera options. See the next section.

- Use the keypad to change camera settings or switch to other modes. ▶ p. 77

4. Press [i/OK] to start recording.
5. Press [i/OK] to stop recording. The video is automatically saved in the **Videos** folder.
6.

To	Press
play back the video clip	[i/OK].
use video options	the left soft key. ▶ p. 77
delete the video clip	[**C**] and then <**Yes**>.
return to Record mode	the right soft key.

Using camera options in Record mode

In Record mode, press the left soft key to access the following options:

- **Take a photo**: switch to Capture mode.
- **Effects**: change the colour tone or apply a special effect to a video.
- **Flash**: set the flash setting.
- **Timer**: set a time delay before the camera starts recording.
- **Go to Videos**: go to the **Videos** folder.
- **Settings**: change the following settings for recording a video:

  Recording mode: select a video recording mode.

  Select **Limit for MMS** to record a video suitable for an MMS message.

  Select **Normal** to record a video within the limit of the currently available memory.

  Size: select a frame size.

  Quality: select an image quality.

  Audio rec.: turn on or off the audio.

  Zoom sound: turn on or off the sound that you hear when zooming in.

  Brightness sound: turn on or off the sound that you hear when adjusting the video image brightness.

  Default name: change the default prefix of the video clip name.
- **Camcorder short cuts**: view the functions of the keys you can use.

Using the keypad in Record mode

You can use the keypad to customise your camera settings in Record mode:

Keys	Function
▲	Flips the image vertically.
▼	Shows the mirror image.
Left/Right	Adjusts the brightness of the image.
Up/Down	Zooms in or out.
1	Switches to Capture mode.
2	Changes the frame size.
3	Changes the image quality.
4	Changes the video recording mode.
5	Changes the colour tone or applies a special effect to the video image.
6	Reduces the distortion on the image to maximise detail and sharpness.
7	Turn on or off the audio.
8	Sets the timer.
9	Goes to the **Videos** folder.
0	sets the flash setting.

Using video options

After recording a video clip, press the left soft key to access the following options:

- **Record another**: return to Record mode.
- **Send via**: send the video clip via MMS, e-mail, or Bluetooth.
- **Delete**: delete the video clip.
- **Rename**: change the name of the video clip.
- **Go to Videos**: go to the **Videos** folder.
- **Protection**: protect the video clip from being deleted.
- **Properties**: access the properties of the video clip.

Settings *(Menu 9)*

Use this menu to customise your phone settings. You can also reset the settings to their default values.

To access this menu, press <**Menu**> in Idle mode and select **Settings**.

Time & Date *(Menu 9.1)*

Use this menu to set the current time and date on your phone. Before setting the time and date, specify your time zone in the **World time** menu. ▶ p. 42

- **Set time**: enter the current time.
- **AM/PM**: select **AM** or **PM** in 12-hour time format.
- **Time format**: select the time format.
- **Set date**: enter the current date.
- **Date format**: select the date format.

Phone settings *(Menu 9.2)*

Many different features of your phone's system can be customised to suit your preferences.

Language *(Menu 9.2.1)*

Use this menu to select one of several languages for the display text.

Greeting message *(Menu 9.2.2)*

Use this menu to enter the greeting that is displayed briefly when the phone is switched on.

Short cut *(Menu 9.2.3)*

You can use the Navigation keys as shortcut keys to access specific menus directly from Idle mode. Use this menu to assign a shortcut menu to a key.

Assigning a menu to a key

1. Select a key to be used as a shortcut key.
2. Press <**Options**> and select **Change**.
3. Scroll to a menu to be assigned to the key.
4. Press <**Save**>.

Using shortcut options

Press <**Options**> to access the following options:

- **Change**: assign or change a shortcut menu.

- **Remove**: deactivate the shortcut assignment.
- **Remove all**: deactivate all shortcut assignments.

Side key *(Menu 9.2.4)*

Use this menu to set how the phone reacts when you press and hold [▲/▼] when a call comes in.

- **Mute**: the keys mute the call ringer.
- **Reject**: the keys reject the incoming call.

Extra settings *(Menu 9.2.5)*

You can turn the automatic redialling or answering feature on or off.

- **Auto redial**: set the phone to make up to ten attempts to redial a phone number after an unsuccessful call.
- **Anykey answer**: answer an incoming call by pressing any key, except [ ], <**Reject**>, and [▲/▼].

  When this option is not selected, you must press [ ] or <**Accept**> to answer a call.
- **Voice clarity**: increase the microphone's sensitivity to allow the other person on the phone to hear your voice clearly, even though you may be whispering.
- **Active folder**: answer an incoming call by opening the phone.
- **Cover keylock**: lock the exposed key to keep accidental presses from affecting performance while playing music files.

Display settings *(Menu 9.3)*

Use this menu to change settings for the display and light.

Wallpaper *(Menu 9.3.1)*

You can set up the idle screen on both displays.

- **Main display**: select an image to be displayed on the main display.
- **Cover display**: select an image or enter text to be displayed on the external display.

Text display *(Menu 9.3.2)*

You can customise the text appearance for the idle screen.

- **Text position**: select a text position on the display. If you don't want to display text in Idle mode, select **Off**.

- **Text style**: select a text style.
- **Text colour**: select a text colour.

Calendar *(Menu 9.3.3)*

Use this menu to display the calendar of the current month on the idle screen.

Skin *(Menu 9.3.4)*

You can select a skin colour for Menu mode.

LCD brightness *(Menu 9.3.5)*

You can adjust the brightness of the display for varying lighting conditions.

Backlight *(Menu 9.3.6)*

You can select the length of time the backlight stays on and the display is on in Dim mode, in which the backlight is off.

- **Main LCD on**: select the length of time the backlight is on.
- **Main LCD dim**: select the length of time the display is in Dim mode after the backlight turns off. After a specified time, the display turns off.
- **Show cover indicators**: set whether or not the cover display icons are shown on the external display.

Sound settings *(Menu 9.4)*

Use this menu to customise various sound settings.

Incoming call *(Menu 9.4.1)*

Use this menu to select a volume and alert type for incoming calls.

- **Ringtone**: select a ringtone for the call ringer.
- **Volume**: select a ringer volume.
- **Alert type**: specify how you are to be informed of incoming calls.

Keypad tone *(Menu 9.4.2)*

Use this menu to select the tone that the phone sounds when you press a key.

☑ You can adjust the keypad tone volume using [▲/▼] in Idle mode.

Message tone *(Menu 9.4.3)*

Use this menu to set up the ringer for incoming messages and e-mails.

- **Tone**: select one of several message tones.
- **Alert type**: specify how you are to be informed of any incoming messages.
- **Repetition**: specify how often the phone informs you of a new message.

Power on/off *(Menu 9.4.4)*

Use this menu to select the melody that the phone sounds when it is switched on or off.

Folder tone *(Menu 9.4.5)*

Use this menu to select the tone that the phone sounds when you open or close the phone.

Quiet mode *(Menu 9.4.6)*

Use this menu to set how the phone acts to alert you to a specific event in Quiet mode, instead of making sounds.

- **Vibration**: set the phone to vibrate.
- **Mute**: mute all sound settings.

Extra tones *(Menu 9.4.7)*

Use this menu to customise additional tones for the phone.

- **Minute minder**: set the phone to beep every minute during an outgoing call to keep you informed of the length of your call.
- **Connection tone**: set the phone to beep when it is connected to the system.
- **Alerts on call**: set the phone to beep when you receive a new message or when the time for an alarm comes during a call.
- **Indicative tone**: set the phone to beep when a pop-up window appears to indicate that your phone has completed an operation or that an error occurs.

Network services *(Menu 9.5)*

Use this menu to access network services. Please contact your service provider to check their availability and subscribe to them, if you wish.

Call diverting *(Menu 9.5.1)*

This network service reroutes incoming calls to a phone number that you specify.

1. Select a call diverting option:
   - **Divert always**: divert all calls.
   - **Busy**: divert calls when you are on another call.
   - **No reply**: divert calls when you do not answer the phone.
   - **Unreachable**: divert calls when you are not in an area covered by the network or when your phone is switched off.
   - **Cancel all**: cancel all call diverting options.
2. Select the type of calls to be diverted.
3. Select **Activate**. To activate call diverting, select **Deactivate**.
4. Move to the **Divert to** line.
5. Enter the number to which calls are to be diverted and press <**OK**>.
6. If you selected **No reply**, move to the **Sec** line and select the length of time the network delays before diverting a call.

Call barring *(Menu 9.5.2)*

This network service allows you to restrict your calls.

1. Select a call barring option:
   - **All outgoing**: prohibit all outgoing calls.
   - **International**: prohibit international calls.
   - **International except to home**: only allow calls to numbers within the current country.
   - **All incoming**: prohibit incoming calls.
   - **Incoming while abroad**: prohibit incoming calls when you use your phone outside of your home country.
   - **Cancel all**: cancel all call barring settings, allowing calls to be sent and received normally.
   - **Change barring password**: change the call barring password.
2. Select the type of calls to be barred.
3. Select **Activate**. To deactivate call barring, select **Deactivate**.
4. Enter the call barring password and press <**OK**>.

Call waiting *(Menu 9.5.3)*

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

1. Select the type of calls to which the call waiting option will apply.
2. Select **Activate**. To deactivate call waiting, select **Deactivate**.

Network selection *(Menu 9.5.4)*

This network service allows you to either automatically or manually select the network to be used while roaming outside of your home area.

You can select a network other than your home network only if there is a valid roaming agreement between the two.

- **Automatic**: connect to the first available network when roaming.
- **Manual**: select the network you want.

Caller ID *(Menu 9.5.5)*

This network service allows you to prevent your phone number from being displayed on the phone of the person being called. However, some networks do not allow the user to change this setting.

- **Default**: use the default setting provided by the network.
- **Hide number**: ensure your number does not display on the other person's phone.
- **Send number**: send your number each time you make a call.

Voice mail server *(Menu 9.5.6)*

Use this menu to store the number of the voice mail server and access your voice mails.

> ☑ You must enter the voice server number before you can access your voice mails. Your service provider can give you the voice server number.

- **Connect to voice mail**: connect to the voice mail server to allow you to listen to your messages. You can also connect to the voice mail server by pressing and holding [**1**] in Idle mode.
- **Voice server number**: edit the name and number for the voice mail server.

Band selection *(Menu 9.5.7)*

For the phone to make and receive phone calls, it must register with an available network. Your phone can handle any of the following types of networks: Combined GSM 900/1800, GSM 1900, and Tri band (GSM 900/1800/1900).

The country where you purchased your phone determines the default band that it uses. When you travel abroad, you may need to change to an appropriate band.

When you select a new band, your phone automatically searches for all available networks. Your phone registers with a preferred network within the band.

Bluetooth *(Menu 9.6)*

Use this menu to activate the Bluetooth feature.

Using the Bluetooth feature, you can connect the phone wirelessly to other Bluetooth devices and exchange data with them, talk hands-free, or control the phone remotely.

Bluetooth technology allows free wireless connections between all Bluetooth-compliant devices within a range of 10 meters. Since the devices communicate using radio waves, they do not need to be in line of sight to each other.

- You cannot use the Bluetooth feature while using multimedia features such as voice recorder, camera, and MP3 player, or vice versa.
- Some devices may not be compatible with your phone.

Setting up the Bluetooth feature

The **Bluetooth** menu provides the following options:

- **Activation**: activate or deactivate the Bluetooth feature.
- **My devices**: search for connectable Bluetooth devices. See the next section.
- **My phone's visibility**: allow other Bluetooth devices to search for your phone.
- **My phone's name**: assign a Bluetooth device name to your phone, which is then displayed on other devices.

- **Secure mode**: determine if the phone asks for your confirmation when other devices access your data.
- **Bluetooth services**: display available Bluetooth services.

Searching for and pairing with a Bluetooth device

1. From the Bluetooth setting options, select **My devices**.
2. Select **Search new device**.

   After searching, a list of devices to which you can connect displays. The following icons indicate the kind of device:

   - Hands-free or headset
   - Mobile phone
   - Computer
   - PDA
   - Printer
   - Unknown device

   The colour of the icon indicates the status of the the device:

   - Grey for unpaired devices
   - Blue for paired devices
   - Red for devices that are currently connected to your phone
3. Select a device.
4. Enter a Bluetooth PIN code and press <**OK**>. This code is used just once and you don't need to memorise it.

   When the owner of the other device enters the same code, pairing is complete.

> ☑ Some devices, especially headsets or hands-free car kits, may have a fixed Bluetooth PIN, such as **0000**. If the other device has a code, you must enter it.

Using device options

From the device list, press <**Options**> to access the following options:

> ☑ Options may vary depending on the paired device.

- **Connect**/**Disconnect**: connect to the currently selected device, or end the connection.
- **Browse files**: search for data from the device and import data directly to your phone.

- **Service list**: display available Bluetooth services for the selected device.
- **Rename**: rename the paired device.
- **Authorize device**/**Unauthorize device**: determine whether or not the phone asks you to permit connection when the device tries to connect to your phone.
- **Delete**: remove the selected device or all displayed devices from the device list.

Sending data via Bluetooth

1. Activate the Bluetooth feature.
2. Select the application in which the item you want to send is stored.
3. Scroll to the item you want and press <**Options**>.
4. Select **Send via** → **Bluetooth**.

   The phone searches for devices within range and displays a list of available devices.
5. Select a device.
6. If necessary, enter the Bluetooth PIN needed for pairing and press <**OK**>.

Receiving data via Bluetooth

To receive data via Bluetooth, your phone's Bluetooth feature must be active.

If an unauthorised Bluetooth device sends data to your phone, the phone displays a confirmation message. To receive data, press <**Yes**>.

Security *(Menu 9.7)*

Use this menu to protect the phone against unauthorised use by managing the several access codes of your phone and SIM card.

☑ If you enter an incorrect PIN/PIN2 three times in succession, the SIM card is blocked. To unblock it, you need to enter your PUK/PUK2 (Personal Unblocking Key). The codes are supplied by your network operator.

PIN check *(Menu 9.7.1)*

The 4- to 8-digit PIN (Personal Identification Number) protects your SIM card against unauthorised use. When this feature is enabled, the phone requires your PIN each time it is switched on.

Change PIN *(Menu 9.7.2)*

Use this menu to change your PIN. The PIN check feature must be enabled to use this feature.

Phone lock *(Menu 9.7.3)*

This feature locks the phone from unauthorised use.

When this feature is enabled, you must enter a 4- to 8-digit phone password each time the phone is switched on.

The password is preset to **00000000**. To change the password, use the **Change password** menu.

Change password *(Menu 9.7.4)*

Use this menu to change your phone password. The password is preset to **00000000**.

Privacy *(Menu 9.7.5)*

Use this menu to lock your media contents, including MMS messages, e-mails, images, videos, music files, and sounds.

1. Press [*i*/OK] to check the item(s) to lock.
2. Press <**Save**> to lock the marked items.
3. Enter the phone password and press <**OK**>.

To access a locked item, you need to enter the phone password. The password is preset to **00000000**.

SIM lock *(Menu 9.7.6)*

The SIM lock feature allows your phone to work only with the current SIM by assigning a SIM lock code. You must enter the SIM lock code to use a different SIM card.

FDN mode *(Menu 9.7.7)*

If supported by your SIM card, Fixed Dialling Number (FDN) mode restricts your outgoing calls to a limited set of phone numbers. When this feature is enabled, you can make calls only to phone numbers specified in the FDN list. ▶ p. 33

To activate this feature, you must enter your PIN2.

Change PIN2 *(Menu 9.7.8)*

If supported by your SIM card, the change PIN2 feature changes your current PIN2.

Memory status *(Menu 9.8)*

Use this menu to check the amount of memory being used for storing data in **Messages**, **File manager**, **Calendar**, **Phonebook**, and **JAVA world**. You can also check **Shared memory** for MMS, Email, and File manager.

Reset settings *(Menu 9.9)*

Use this menu to reset the phone settings, display settings, and sound settings individually. You can also reset all of the settings in your phone at the same time.

1. Press [*i*/OK] to check the setting category(ies) to be reset.
2. Press <**Reset**> to reset the marked items.
3. Press <**Yes**> to confirm the reset.
4. Enter the phone password and press <**OK**>.

> ☑ The password is preset to **00000000**. To change the password, use the **Change password** menu. ▶ p. 87

Solve problems

Help and personal needs

To save the time and expense of an unnecessary service call, perform the simple checks in this section before contacting a service professional.

When you switch on your phone, the following messages may appear:

"Insert SIM card"

- Be sure that the SIM card is correctly installed.

"Phone lock"

- The automatic locking function has been 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 PIN supplied with the SIM card.
- The PIN check feature is enabled. Every time the phone is switched on, the PIN has to be entered. To disable this feature, use the **PIN check** menu.

"Enter PUK"

- The PIN code has been entered incorrectly three times in succession, and the phone is now blocked. Enter the PUK supplied by your service provider.

"No service," "Network failure," or "Not done" displays

- The network connection has been lost. You may be in a weak signal area. Move and try again.
- You are trying to access an option for which you have no subscription with your service provider. Contact the service provider for further details.

You have entered a number but it was not dialled

- Be sure that you have pressed [ ].
- Be sure that you have accessed the right cellular network.
- Be sure that you have not set an outgoing call barring option.

Your correspondent cannot reach you

- Be sure that your phone is switched on. ([ ] pressed for more than one second.)
- Be sure that you are accessing the correct cellular network.
- Be sure that you have not set an incoming call barring option.

Your correspondent cannot hear you speaking

- Be sure that you have switched on the microphone.
- Be sure that you are 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

- Your battery is insufficiently charged. Recharge the battery.

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 re-call a Phonebook entry

- Use the Contact list feature to ensure the number has been stored correctly.
- Re-store the number, if necessary.

The battery doesn't charge properly or the phone sometimes turns itself off

Wipe the charging contacts both on the phone and on the battery with a clean soft cloth.

If the above guidelines do not help you to solve the problem, take 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.

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 *.

*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.

SAR tests are conducted using standard operating positions specified 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 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.

Health and Safety Information

For Body Operation
For body worn operation, this model phone has been tested and meets the FCC RF exposure guidelines when used with a Samsung-supplied or approved accessory designated for this product or when used with and accessory that contains no metal and that positions the handset a minimum from the body.
The minimum distance for this model phone is written in the FCC certification information from the body.
None 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

Health and Safety Information

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.

Health and Safety Information

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.

Health and Safety Information

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.

Health and Safety Information

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.

Health and Safety Information

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: 0.852W/Kg, Body-worn: 0.318W/Kg. Body-worn operations are restricted to Samsung-supplied, approved or none Samsung designated accessories that have no metal and must provide at least 1.5cm separation between the device, including its antenna whether extended or retracted, and the user's body. None compliance to the above restrictions may violate FCC RF exposure guidelines

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 A3LSGHE760.

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.

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

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.

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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 “to do” 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

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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

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.

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.

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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.

Appendix

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.

FCC RF Safety Program:
http://www.fcc.gov/oet/rfsafety/

Environmental Protection Agency (EPA):
http://www.epa.gov/radiation/

Occupational Safety and Health Administration's (OSHA):
http://www.osha-slc.gov/SLTC/radiofrequencyradiation/index.html

National Institute for Occupational Safety and Health (NIOSH):
http://www.cdc.gov/niosh/emfpg.html

World health Organization (WHO):
http://www.who.int/peh-emf/

International Commission on Non-Ionizing Radiation Protection:
http://www.icnirp.de

National Radiation Protection Board (UK):
http://www.nrpb.org.uk

Updated 4/3/2002: US Food and Drug Administration
http://www.fda.gov/cellphones

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