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

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SAMSUNG

SGH-X486
User's Guide

Draft version
2005. 03. 10

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 call

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 58.

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 "Getting 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.
[*key name*]	Indicates a key on the phone. For example, [*i*]
<*soft key*>	Indicates a soft key, whose function is displayed on the phone screen. For example, <**Menu**>

- **Tri-band operation**
  Use your phone in worldwide GSM networks, in any of 900, 1800, and 1900 bands.

Special features of your phone

- **Simple, compact design with Intenna**
  Samsung's powerful intenna technology allows the best call quality without an annoying external antenna.

- **WAP browser**
  Access the wireless web and access various services and up-to-the-minute information.

- **Phonebook**
  Store up to 2000 contact numbers.

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

- **Melody composer**
  Create your own melodies and set them as your call ringer.

- **Calendar and To do list**
  Keep track of your daily, weekly, and monthly schedules and tasks.

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

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

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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

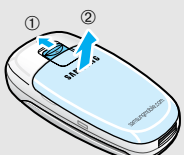
First steps to operate your phone

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.

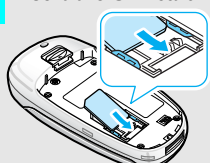
Install and charge the phone

1 Remove the battery.



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

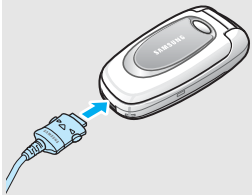
2 Insert the SIM card.



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

3 Install the battery.

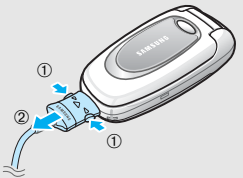
4 Plug the travel adapter into the phone.



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

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

Power off	1. Open the phone.
	2. Press and hold [ ].

Keys and display

Key(s)	Description
	Performs the function indicated on the bottom line of the display.
	In Idle mode, access the following menus respectively. • Up/Down: your favourite menu option ▶ p. 55 • Left: **Text messages** • Right: **Ring tone** In Menu mode, scroll through the menu options.
	In Idle mode, launches the Wireless Application Protocol (WAP) browser. In Menu mode, selects the highlighted menu option.
	Sends or answers a call. In Idle mode, retrieves the last number dialled, missed, or received.

Key(s)	Description
	Deletes characters from the display. In Menu mode, returns to the previous menu level.
	Ends a call. Hold down to switch the phone on and off. In Menu mode, cancels input and returns the phone to Idle mode.
	Enter numbers, letters, and some special characters. In Idle mode, hold [**1**] down to access your voicemail.
	Enter special characters. In Idle mode, hold [#] down to activate or deactivate Silent mode.
(on the left)	Adjust the volume of various sounds for the phone. In Idle mode, adjust the keypad tone volume. In Menu mode, scroll through menu options.

Display

Layout

The display has the three areas.

Icons
displays various icons.

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

Soft key function indicators
shows 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
	Call diverting feature is active ▶ p. 26
	GPRS network
	Roaming

Icons (continued)

	New text message
	New voicemail message
	New multimedia message
	Alarm set
	Mute mode is active ▶ p. 21
	Active Silent mode or call ringer set to vibrate ▶ p. 12, p. 29
	Battery power level

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 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*] to confirm the function displayed or option highlighted. 4. To exit, choose either of the following methods: • Press <⟲> 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 **Phone settings** → **Language**.
2. Select a language.

Call ringer melody

1. In Idle mode, press <**Menu**> and select **Sound settings** → **Ring tone**.
2. Select a ringer melody.

Idle mode wallpaper

You can set a wallpaper for the idle screen.

1. In Idle mode, press <**Menu**> and select **Phone settings** → **Display settings** → **Wallpaper** → **Wallpaper list**.
2. Select an image.
3. Scroll to the image you want.
4. Press <**Select**>.

Switch to Silent mode

You can switch the phone to Silent mode to avoid disturbing other people with your phone sounds.

Press and hold [#] in Idle mode.

Phone lock

You can protect the phone against unauthorised use with a phone password.

1. In Idle mode, press <**Menu**> and select **Phone 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**>.

Phone lock (continued)	5. Select **Phone lock**. 6. Select **Enable**. 7. Enter the password and press <**OK**>.

Make / answer calls

Make a call	1. 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 WAP, melody composer, messages, and other special features

Browse WAP

Using a built-in WAP (Wireless Access Protocol) browser, you can get easy access to the wireless web to receive a variety of updated services and information and to enjoy download of web contents.

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

Use Phonebook

Add an entry

To the phone's memory

1. In Idle mode, enter a phone number and press <**Save**>.
2. Select a number type.
3. Select **Phone**.
4. Enter a name and press <**OK**>.
5. Press <**OK**> to save the entry.

To the SIM card

1. In Idle mode, enter a phone number and press <**Save**>.
2. Select a number type.
3. Select **SIM**.
4. Enter a name and press <**OK**>.
5. Press <**OK**> to save the entry.

Find an entry

1. In Idle mode, press <**Phonebook**> and select **Search**.
2. Select an entry.
3. Select a number.
4. Press [↗] to dial, or <**Options**> to access options.

Send messages

Send a text message (SMS)

1. In Idle mode, press <**Menu**> and select **Messages** → **Text messages** → **Create**.
2. Enter the message text.
3. Press <**Options**> and select **Save and send** or **Send only**.
4. If you selected **Save and send**, select a memory location.
5. Enter a destination number and press <**OK**>.

Send a multimedia message (MMS)

1. In Idle mode, press <**Menu**> and select **Messages** → **Multimedia messages** → **Create**.
2. Enter the message subject press <**Next**>.
3. Select **Add here** and add message contents.
4. When you finish, press <**Options**> and select **Send**.
5. Select a destination type.
6. Select one of **Phone number**, **E-mail**, or **Phone book**.
7. Enter a destination number or an e-mail address, or select from Phonebook and press <**OK**>.

Send a multimedia message (MMS) (continued)

8. To add other destinations, select **Add destination** and repeat from step 6.
9. To add destinations of other types, press <↺> and repeat from step 5.
10. When you finish, select **Send message**.

View messages

View a text message

When a notification appears:

Press <**View**>. The message displays.

From the Inbox:

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

View a multimedia message

When a notification appears:

1. Press <**View**>.
2. Press <**Options**> and select **Retrieve**. The message displays.

From the Inbox:

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

Compose your melody

Create a melody

1. In Idle mode, press <**Menu**> and select **Funbox** → **Melody composer** → **Compose melody**.
2. Move the selection point up or down by pressing [Up] or [Down].

Create a melody (continued)

3. Select a note or rest and press <**Select**>.
4. Repeat steps 1 to 3 to add more notes and rests.
5. When you have finished, press <**Options**> and select **Save**.
6. Enter a melody name and press <**OK**>.

Playing a melody

1. In Idle mode, press <**Menu**> and select **Funbox** → **Melody composer** → **Compose melody**.
2. Press <**Options**> and select **Open**.
3. Select the melody you want and press <**Open**>.
4. Press <**Options**> and select **Play**.

Enter text

ABC, T9, Number, and Symbol mode

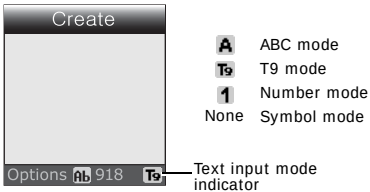
You can enter text for some features such as messaging, Phonebook, or Organiser, using ABC mode, T9 mode, Number mode, and Symbol mode.

Changing the text input mode

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

Press the right soft key to change the input mode.

Example: Writing a text message



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 Ä Å Æ Ç Γ	a b c 2 à ä å æ Γ
3	D E F 3 É Δ Φ	d e f 3 è é Φ
4	G H I 4 Θ Ψ	g h i 4 ì Ψ
5	J K L 5 Λ	j k l 5 Λ
6	M N O 6 Ñ Ø Ö ö	m n o 6 ñ ø ò ö
7	P Q R S 7 Π Σ Ξ	p q r s 7 β Σ Ξ
8	T U V 8 Ü ü	t u v 8 ù ü
9	W X Y Z 9 Ω	w x y z 9 Ω
0	space + = < > € £ $ % & ¥ ¤ 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 insert a space.

- Press [*] to change case. Capital lock (AB), Lower case (ab), and Initial capital (Ab) are available.
- Press [Left] or [Right] 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 in T9 mode. Capital lock (AB), Lower case (ab), and Initial capital (Ab) are available.
- Press [Left] or [Right] 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, **Add** displays on the bottom line.
3. Press <**Add**>.

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 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.

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. 49

You can also use the speed dial feature to assign your most frequently called numbers to specific number keys. ▶ p. 51

Dialling a number from the phone's memory

1. In Idle mode, press and hold [**0**]. A + appears.
2. Enter the location number for the phone number you want and press [#].
3. Press [Up] or [Down] to scroll through other numbers.
4. Press <**Dial**> or [ ] to dial the number you want.

Dialling a number from the SIM card

1. In Idle mode, enter the location number for the phone number you want and press [#].
2. Press [Up] or [Down] to scroll through other numbers.
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 [ ] or <**Accept**> to answer the call.

Tips for answering a call

- When **Anykey answer** in the **Extra settings** menu is active, you can press any key to answer a call, except for [ ] and <**Reject**>. ▶ p. 55
- Press <**Reject**> or [ ] to reject a call.
- When **Active folder** is active, you can just open the phone to answer a call.

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	the button twice.
answer a call	and hold the button.
end a call	and hold 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.

Placing a call on hold/Retrieving

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

Using the menu functions

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

Switching off the microphone (Mute mode)

You can temporarily switch off your phone's microphone so that the other 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.

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 Phonebook

You can access the **Phonebook** menu to locate or store entries. ▶ p. 49

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

Answering a second call

You can answer an incoming call, if your network supports it and you have activated the call waiting feature. ▶ p. 27

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 [ ].

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 **Select one**.
2. Select a name or number from the participant list.
3. Select **Private**.

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

Dropping one participant

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

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

Menu functions

All menu options listed

SIM AT *(Menu 1)*

This menu is available if you use a SIM AT 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.

Call records *(Menu 2)*

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**.

Missed calls *(Menu 2.1)*

This menu displays the 20 most recently received calls that you did not answer.

Received calls *(Menu 2.2)*

This menu displays the 20 most recent calls you have received.

Dialled calls *(Menu 2.3)*

This menu displays the 20 most recent calls you have dialled.

Delete all *(Menu 2.4)*

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

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

Call time *(Menu 2.5)*

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. 54

Call costs *(Menu 2.6)*

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 since your last reset the cost counter. 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. You need to enter your PIN2.
- **Set max cost**: set the maximum cost authorised for your calls. You need to enter your PIN2.
- **Price/unit**: set the price per unit that is applied when the cost of your calls is calculated. You need to enter your PIN2.

Network services *(Menu 3)*

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

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

Call diverting *(Menu 3.1)*

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**: diver 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 your service provider or when your phone is switched off.
   - **Cancel all**: cancel all call diverting options.
2. Select the type of calls to be diverted.
3. To activate call diverting, press <**Activate**>.

   Otherwise, press <**Options**> and select **Remove**.
4. Enter the number to which calls are to be diverted and press <**OK**>.
5. If you selected **No reply**, select the length of time the network delays before diverting a call and press <**Select**>.

Call barring *(Menu 3.2)*

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 when you are abroad, and to your home country, defined as where your home network provider is located.
   - **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 obtained from your service provider.

2. Select the type of calls to be barred.
3. Press <**Activate**>. To deactivate call barring, press <**Deactivate**>.
4. Enter the call barring password supplied by your service provider and press <**OK**>.

Call waiting *(Menu 3.3)*

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. Press <**Activate**>. To deactivate call waiting, press <**Deactivate**>.

Network selection *(Menu 3.4)*

This network service allows you to either automatically or manually select the network used when 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 3.5)*

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.

Closed user group *(Menu 3.6)*

Use this menu to set incoming and outgoing calls to be restricted to a selected user group. For details about how to create a closed user group, contact your service provider.

- **Index list**: list, add, or delete CUG index numbers. Press <**Options**> to access the options for setting up an index list.
- **Outside access**: enable calls to numbers other than those in the Closed user group. This feature depends on the nature of your CUG subscription.
- **Default group**: enable the default CUG, if you have set one with your service provider. When making a call, you are given the option of using your default CUG, instead of selecting one from the list.
- **Deactivate**: deactivate the CUG function, if the default group is enabled or a CUG index is selected.

Band selection *(Menu 3.7)*

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: GSM 1900 and Combined GSM 900/1800.

The country where you purchased your phone determines the default band that it uses. When you travel abroad, you must remember 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.

Sound settings *(Menu 4)*

Use this menu to customise various sound settings.

Ring tone *(Menu 4.1)*

Use this menu to select a ring tone for the call ringer. You can select one of the default ring melodies, downloaded sounds, or the melodies you have created.

Ring volume *(Menu 4.2)*

Use this menu to adjust the ringer volume.

Alert type *(Menu 4.3)*

Use this menu to specify how you are to be informed of incoming calls.

- **Light only**: the phone flashes the service light.
- **Melody**: the phone rings using the selected ring tone.
- **Vibration**: the phone vibrates but not rings.
- **Vibra+melody**: the phone vibrates three times and then starts ringing.

Keypad tone *(Menu 4.4)*

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 4.5)*

Use this menu to select a ring tone or alert type for incoming messages.

- **SMS tone**: specify how you are informed of a new SMS message.
- **SMS-CB tone**: specify how you are informed of a new cell broadcast (CB) message.
- **MMS tone**: specify how you are informed of a new MMS message.
- **Repetition**: specify how often the phone informs you of a new message.

Folder tone *(Menu 4.6)*

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

Power on/off *(Menu 4.7)*

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

Alert on call *(Menu 4.8)*

Use this menu to select whether or not the phone informs you when you receive a new message or when the time for an alarm comes during a call.

Extra tones *(Menu 4.9)*

Use this menu to customise additional tones for the phone.

- **Error tone**: set the phone to beep when you make a mistake.
- **Minute minder**: set the phone to beep every minute during an outgoing call to keep you informed of the length of your call.
- **Connect tone**: set the phone to beep when it is connected to the system.

Messages *(Menu 5)*

Use the **Messages** menu to send and receive short messages, and multimedia messages. You can also use WAP push message, Voice mail, and Cell broadcast message features.

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

Text messages *(Menu 5.1)*

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

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

Create *(Menu 5.1.1)*

You can create and send a text message.

1. Enter your message.
2. Press <**Options**> to access the following options:
   - **Text formatting**: change the text attributes.
   - **Add content**: add a sound, melody, picture, or animation to the message.
   - **Add templates**: retrieve a text template.
   - **Add emoticon**: retrieve an emoticon.
   - **Add from phonebook**: add a Phonebook entry.
   - **Add from bookmarks**: add a web page's address.
   - **Language**: change the language used in T9 input mode.
3. Press <**Options**> and select **Save and send** or **Send only**.
4. If you select **Save and send** or **Save only**, select a memory location.
5. Enter a destination number.
6. Press <**OK**> to send the message.

Inbox *(Menu 5.1.2)*

You can view received text messages in this menu.

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

- **Delete**: delete the message.
- **Send**: forward the message.
- **Text reply**: reply to the sender.
- **Call back**: call the sender.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Move to phone**: move the message from the SIM card to the phone's memory.
- **Move to SIM**: move the message from the phone's memory to the SIM card.
- **Select content**: save images or sounds from the message into your phone.

Outbox *(Menu 5.1.3)*

You can view sent or saved text messages.

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

- **Delete**: delete the message.
- **Send**: forward the message.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Move to phone**: move the message from the SIM card to the phone's memory.
- **Move to SIM**: move the message from the phone's memory to the SIM card.
- **Select content**: save images or sounds from the message into your phone.

Templates *(Menu 5.1.4)*

You can preset maximum 5 templates to write a text message.

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

- **Edit**: edit the template.
- **Send**: send the template as an SMS message.
- **Delete**: delete the template.

Emoticon templates *(Menu 5.1.5)*

You can preset emoticon templates and retrieve them to use in a message.

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

- **Add**: add a new emoticon.
- **Edit**: edit the selected emoticon.
- **Send**: send a message using the emoticon.
- **Delete**: delete the emoticon.

Settings *(Menu 5.1.6)*

Use this menu to customise the SMS settings.

☑ The setting options available in this menu may vary depending on your service provider.

- **Setting x** (where **x** is the setting group number): each group has its own submenu.

  Setting name: change the name of the setting group.

Service center: store or changes the number of your message centre.

Default destination: store a default destination number.

Default type: set the default message type.

Validity period: set the length of time your messages are stored in the message centre while the network attempts to deliver them.

- **Common settings**: The following options are available.

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

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

  Bearer selection: select the **GSM** or **GPRS preferred** bearer type.

  Character support: select a character encoding type. If you select **Automatic**, 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.

Multimedia messages *(Menu 5.2)*

Multimedia Message Service (MMS) delivers messages containing a combination of text, picture, and sound, from phone to phone or from phone to e-mail.

Create *(Menu 5.2.1)*

You can create and send an MMS message.

1. Enter a message subject and press <**Next**>.
2. Press <**Options**> and add message contents using one of the following options:
   - **Add text**: add message text.
   - **Add picture**: add pictures to the message.
   - **Add sound**: add sounds to the message.
   - **Send**: send the message.
   - **Save**: save the message in the Draft or Templates box.
   - **Settings**: change the message settings.
   - **Add destination**: enter destination numbers or addresses.
   - **Preview**: view the message you created.

3. If you want to change the added items, highlight one and press <**Options**> to access the following options:
   - **Edit text/picture/sound**: edit the text, picture, or sound.
   - **Add page**: add pages. Move to each page by pressing the Left or Right key on the message screen.
   - **Delete**: delete the item from your message.
   - **Duration**: set how long one page displays. After the specified time, the display automatically scrolls to the next page.
4. When you have finished, select **Send** from the options.
5. Select a destination type (To, Cc, Bcc).
6. Select one of **Phone number**, **E-mail**, or **Phone book**.
7. Enter a destination number or an e-mail address, or select a number from Phonebook and press <**OK**>.
8. To add more destinations, select **Add destination** and repeat from step 6.
9. To enter additional numbers or addresses to other destination types, press <>and repeat from step 5.
10. When you have finished, select **Send message**.

Inbox *(Menu 5.2.2)*

This menu displays MMS messages that you have received. The following icons tell you the message status:

- notification that you have read
- notification that you have not read
- you are retrieving from the server
- the server is processing your request
- the server is failed to send
- you have read
- you have not read

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

- **Delete**: delete the message.
- **Reply**: reply to the sender.
- **Callback**: call the sender.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Forward**: forward the message to another person.
- **Save picture**: save an image from the message into the **Images** folder.
- **Save sound**: save a sound from the message into the **Sounds** folder.
- **Properties**: view the message properties.

☑ When you select a notification, you can access **Retrieve** to retrieve the message from the MMS server.

Outbox *(Menu 5.2.3)*

This menu displays MMS messages that you have sent. The following icons tell you the message status:

- currently being sent
- sent
- your phone couldn't send
- to be sent
- deferred

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

- **Delete**: delete the message.
- **Cut address**: extract URLs, e-mail addresses, or phone numbers from the message.
- **Send**: send or resend the message.
- **Edit**: edit the message.
- **Properties**: view the message properties.

Draft *(Menu 5.2.4)*

After creating a multimedia message, you can store it in this message box for sending later.

You can view a message and use the options the same as in the Outbox.

Templates *(Menu 5.2.5)*

This menu stores messages you saved as templates so that you can use them to create new messages.

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

- **Edit**: send the message using the template.
- **Delete**: delete the template.

Settings *(Menu 5.2.6)*

You can customise the settings for sending and receiving MMS messages.

- **Delivery report**: set the network to inform you when your message has been delivered.
- **Read reply**: request a reply from the recipient.
- **Auto download**: set whether or not your phone retrieves new incoming messages from the MMS server without notifications.
- **Message acceptance**: select the category of messages you want to receive.
- **Hide ID**: hide your phone number on the recipient's phone.
- **Validity period**: set the length of time your messages are stored in the message centre.
- **Delivery time**: set the time delay before messages are sent.
- **Priority**: set the priority level of your messages.
- **Report allowed**: send a delivery report from the network to the sender.
- **Page duration**: set how long one page in your outgoing messages displays. After a specified time, the display automatically scrolls to the next page.

MMS profile *(Menu 5.2.7)*

You can configure required network settings for MMS. The last profile accessed is automatically activated for sending or receiving subsequent messages.

☑ Check with your service provider before you change any MMS settings on your phone.

- **Profile name**: assign a name to the MMS profile.
- **Connection URL**: enter the address of your MMS server.
- **Security**: select a data transmission mode.
- **IP address**: enter the gateway address.
- **User name**: assign the user ID.
- **Password**: enter the password.
- **APN**: enter the access point name used for the address of the MMS server.

Push messages *(Menu 5.3)*

Use this menu to access messages from the WAP server.

- **Inbox**: view push messages you have received.
- **Receive**: determine whether or not your phone receives push messages.

  Never: the phone rejects push messages.

  Always: the phone receives all push messages.
- **Delete all**: delete all of push messages.

Delete all *(Menu 5.4)*

Use this menu to delete all of the messages in each message box.

1. Select a message type.
2. Press [*i*] to check the message box(es) to be cleared.
3. Press <**Delete**>.
4. Press <**Yes**> twice to confirm the deletion.

Voice mail *(Menu 5.5)*

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 the voice server number.

- **Connect to voice server**: connect to the voice 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**: change the voice mail server name or number.

Broadcast messages *(Menu 5.6)*

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

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

- **Read**: open received messages.

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

  The **Archive** box saves network messages indefinitely. Press <**Options**> and select **Save** when a text notification appears. The message is saved in the **Archive** box.
- **Receive**: enable or disable the reception of broadcast messages.
- **Channel list**: 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 total number of messages you can store and the number of messages you have stored on the SIM card, in the phone's memory, and in the CB memory.

Funbox *(Menu 6)*

The **Funbox** menu allows you to use the WAP browser, play Java games, and access images and sounds stored in the phone's memory.

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

WAP browser *(Menu 6.1)*

The Wireless Application Protocol (WAP) browser on your phone allows you to access the wireless web. Using the WAP browser, you can access updated information and a wide variety of media content, such as wallpapers and ring tones.

Home *(Menu 6.1.1)*

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*] in Idle mode.

Navigating with the WAP browser

To	Press
access browser options	<**Menu**>.
scroll through browser items	[Up] or [Down].
select a browser item	[*i*].
return to the previous page	[**C**].
return to the homepage	<**Menu**> and select **Home**.

Selecting and using browser menu options

1. Press <**Menu**> and select a menu.
2. Select one of the following browser options:
   - **Bookmarks**: open the bookmarks list.
   - **Reload**: reload the current page.
   - **Home**: go back to the homepage.
   - **Go to URL**: enter a URL address manually.
   - **Show URL**: view the URL address of the current web page.

- **Clear cache**: delete information stored in the cache.
- **Security info**: view security information.
- **Inbox**: read messages received from a web server.
- **Show image**: view the image on the current web page in order.

Exiting the WAP browser

Press [ ] to exit the browser.

Bookmarks *(Menu 6.1.2)*

Use this menu to save URL addresses to quickly access a website.

Adding a bookmark

1. Select an empty location.
2. Enter a URL address and press <**Enter**>.
3. Enter a name for the bookmark and press <**Enter**>.

Accessing a bookmarked page

Scroll to a bookmark item and press [ ].

Using bookmark options

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

- **Go to URL**: access the website.
- **Edit**: edit the address and name of the bookmark.
- **Delete**: delete the bookmark.

http:// *(Menu 6.1.3)*

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

WAP profiles *(Menu 6.1.4)*

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

For each server, the following options are available:

- **Profile name**: assign a name to the server profile.
- **Homepage URL**: set the address of your homepage.
- **Security**: select a data transmission mode.
- **Bearer**: select a bearer for each type of network address accessed; **GPRS** or **Data**.

*When the bearer is set to **GPRS**:*

- **IP address**: enter the WAP gateway address.
- **User name**: enter the user ID.
- **Password**: enter the password.
- **APN**: enter the access point name of the GPRS network gateway.

*When the bearer is set to **Data**:*

- **IP address**: enter the WAP gateway address.
- **Login name**: enter the User ID.
- **Password**: enter the password.
- **Dial-up number**: enter the PPP server phone number.
- **Data call type**: select a data call type.

Clear cache *(Menu 6.1.5)*

Use this menu to clear the cache, which is the temporary memory that stores the web pages you have recently accessed.

Games *(Menu 6.2)*

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

☑ Java services may not available, depending on your service provider.

Launching a MIDlet

1. Select the MIDlet you want on the games list.
2. On the startup screen of the MIDlet, you can access the following options:
   - **START GAME**: start a new game.
   - **CONTINUE**: continue the last game you played.
   - **HIGH SCORE**: view the high score table. This option may not be available for some games.
   - **HOW TO PLAY**: view how to play the game and the key functions for the game.
   - **OPTION**: switch on or off the game sound.
3. Press [*i*] to confirm your selection.

Viewing MIDlet information

Scroll to the MIDlet you want and press <**Info**>.

Changing DNS settings

You may need to change the DNS setting of the Java server at your service provider's instructions.

1. Select **Setting** on the Games list.
2. Enter the primary address and press <**OK**>.
3. Enter the secondary address and press <**OK**>.

Sounds *(Menu 6.3)*

This menu displays sounds downloaded from the wireless web or received in messages.

While accessing a sound, press <**Options**> to access the following options:

- **Rename**: change the name of the sound.
- **Delete**: delete the sound.
- **Set as ringtone**: set the sound as your ring tone.

Images *(Menu 6.4)*

This menu displays images downloaded from the wireless web or received in messages.

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

- **Rename**: change the name of the image.
- **Delete**: delete the image.
- **Set as wallpaper**: set the image as your wallpaper for the idle screen.

Delete all *(Menu 6.5)*

You can delete all of the downloaded items in the **Games**, **Sounds**, and **Images** folders.

1. Press [*i*] to check the folder(s) to be cleared.
2. Press <**Delete**>.
3. Press <**Yes**> twice to confirm the deletion.

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.

Melody composer *(Menu 6.7)*

Use this menu to compose your own melodies using a variety of musical components. You can set one of your melodies as your call ringer.

Compose melody *(Menu 6.7.1)*

When you access the **Compose melody** menu, a stave screen displays with a selection point at the first note position (Do).

Creating a melody

1. Move the selection point up or down by pressing [Up] or [Down].
2. Press <**Input**>.
3. Select a note or rest.
4. Repeat steps 1 to 3 to add more notes and rests.
5. When you have finished, press <**Options**> and select **Save**.
6. Enter a melody name and press <**OK**>.

Editing a melody

While composing a melody or after opening a saved melody, you can edit it.

1. To change an entered note or rest, move the selection point by pressing [Up] or [Down].
2. Change the position of the note or type of the note or rest the same as you would when inserting it.
3. Press [*] or [#] to move a note to the next semitone higher or lower position.

   You can access the following options by pressing <**Options**>:

   - **Range**: select more than one note or rest. The selected ones are indicated in yellow.
   - **Copy**: copy the note or rest.
   - **Cut**: cut the note or rest.
   - **Paste**: paste the note or rest.
   - **Change**: change the note or rest.

- **Delete**: delete the note or rest.
- **Play**: play the current melody.

4. After editing, press [Right] until the selection point moves to an input position.
5. Press <**Options**> and select **Save** to save the changes to the melody, or **Save as** to save the melody under a different name.

Using composer options

While composing a melody, press <**Options**> to access the following options:

- **New**: open a new composer screen.
- **Open**: open the list of your own melodies.
- **Play**: play the current melody.
- **Save**: save the melody.
- **Save as**: save the melody under a different name.
- **Instrument**: change the musical instrument to be used for playing the melody.
- **Background melody**: use a background melody.
- **Add note**: add notes to the melody.
- **Tempo**: change the tempo.
- **Volume**: adjust the volume level of the main and background melodies separately.

Memory status *(Menu 6.7.2)*

You can check the total amount of memory and the amount of memory currently in use for melodies you have created.

Organiser *(Menu 7)*

The Organiser feature enables you to keep track of your schedule and tasks, and to make a voice memo. You can also set the time and date and use convenient features, such as alarms, calculator, and currency exchange.

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

Alarm *(Menu 7.1)*

Use this menu to set alarms to ring at a specific time.

Setting an alarm

1. Select the type of alarm.
2. Enter the time for the alarm to sound.
3. Select **AM** or **PM** in 12-hour time format.

   ☑ Your phone is preset to a 24-hour format. You can change the time format. ▶ p. 46

4. If you selected **Morning call** in step 1, choose **Monday to friday** or **Monday to saturday**.

Stopping an alarm

- When the alarm sounds, press any key.
- To remove an alarm set, access it, press <**Options**> and select **Remove alarm**.
- To remove all alarm sets, select **Remove alarm** from the **Alarm** menu.

Setting the alarm to ring even if the phone is off

From the Alarm screen, select **Autopower** → **Enable**.

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

Calendar *(Menu 7.2)*

Use this menu to consult the calendar, write memos, or set alarms to act as a reminder.

Writing a memo

1. Select a date on the calendar.

   ☑ Press [▲/▼] to move to the next or previous month.

2. Enter your memo and press <**OK**>.
3. Press [*i*] to set an alarm to ring on the chosen day.

   Otherwise, press <**Skip**>.

4. Enter the time for the alarm.

   To select an alarm melody, press <**Melody**>.

5. Select **AM** or **PM** in 12-hour format.

   ☑ Your phone is set to a 24-hour format. You can change the format. ▶ p. 46

   The colour of the date on the calendar changes to green to indicate that a memo exists for that date.

Viewing a memo

On the calendar screen, press <**Options**> to access the following options:

- **Search all**: view all of the memos you created.
- **Delete all**: delete all memos.
- **Go to date**: go to a specific date.
- **Exit**: exit the Calendar feature.

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

- **New**: add a new memo.
- **Edit**: edit the memo.
- **Alarm**: set an alarm for the memo.
- **Delete**: delete the memo.
- **Copy to**: copy the memo to another date.
- **Move to**: change the date of the memo.

Time & date *(Menu 7.3)*

Use this menu to change the time and date displayed on your phone. Before setting the time and date, specify your time zone in **World time**.

- **Set time**: enter the current time.
- **Set date**: enter the current date.
- **World time**: set your local time zone and find out what time it is in another part of the world.

  ☑ To apply Daylight Savings Time to a time zone, press <**Options**> and select **Set daylight saving time**.

- **Time format**: select 12-hour or 24-hour time format.

Calculator *(Menu 7.4)*

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 and a bracket.

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

2. Press the Navigation keys to access the math function you want.
3. Enter the second number.
4. Press [i] to view the result.

To do list *(Menu 7.5)*

Use this menu to create tasks and manage them.

Creating the To do list

1. Press <**New**>.
2. Enter the first task and press <**OK**>.
3. Select a priority level.
4. Enter your deadline and press [i].

   Otherwise, press <**Skip**>.

Viewing the To do list

When you select the To do list menu, the tasks display with a check mark, if the task has been done, and a priority level indicator; for High, for Normal, and for Low.

☑ To change the status of a specific task, press [*].

While viewing a task from the list or the details for the task, press <**Options**> to access the following options:

- **New**: add a new task.
- **Mark**: change the status of the task.
- **Edit**: edit the task.
- **Sort**: sort the task by priority or status.
- **Copy**: copy the task.
- **Copy to calendar**: copy the task to the calendar as a memo.

- **Delete**: delete the task.
- **Delete all**: delete all tasks.
- **Exit**: exit the **To do list** menu.

Voice memo *(Menu 7.6)*

Use this menu to record voice memos. A voice memo can be up to 30 seconds.

Record voice *(Menu 7.6.1)*

1. Press <**Record**> to start recording.
2. Speak into the microphone.
3. When you press <**Stop**>, or if the recording time expires, the following options display:
   - **Replay**: play back your memo.
   - **Re-record**: discard the memo and records another one.
   - **Save**: save the memo.
   - **Quit**: cancel your recording and exits the **Record voice** menu.
4. Select **Save** to save the voice memo.
5. Enter a name of the voice memo and press <**OK**>.

Voice list *(Menu 7.6.2)*

Use this menu to access the list of voice memos you have recorded.

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

- **Play**: play back your voice memo.
- **Send**: send the voice memo via MMS.
- **Rename**: change the name of the voice memo.
- **Properties**: view the properties of the voice memo.
- **Delete**: delete the voice memo.

Delete all *(Menu 7.6.3)*

Use this menu to delete all of the voice memos you have recorded at one time.

Memory status *(Menu 7.6.4)*

You can check the total amount of memory and the amount of currently in use for voice memos.

Currency exchange *(Menu 7.7)*

Use this menu to do currency conversions.

1. Enter the rate of foreign currency and press <**OK**>.
2. Enter the amount of the source currency you want to convert and press <**OK**>.

   You can enter a demical point (.) using the [#] key.

   The amount you entered and its equivalent value in the foreign currency display.

Phonebook *(Menu 8)*

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**.

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

Search *(Menu 8.1)*

Use this menu to search for numbers in Phonebook.

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 the Phonebook options.

Using Phonebook options

While viewing an entry in Phonebook, press <**Options**> to access the following options:

- **Edit**: edit the entry information.
- **Copy**: copy the number to the phone's memory or SIM card.
- **Paste**: paste the number into the normal dialling mode.
- **Delete**: delete the number from Phonebook.
- **Caller group**: assign a caller group.
- **Add entry**: add a new entry.

Add entry *(Menu 8.2)*

Use this menu to add a new entry to Phonebook.

Storing a number or an e-mail address in the phone's memory

1. Select a number type.
2. Select **Phone**.
3. Enter a name and press <**OK**>.
4. Enter a number or an e-mail address and press <**Save**>.
5. Change the location number, if you want, and press <**OK**>.

Storing a number on the SIM card

1. Select a number type.
2. Select **SIM**.
3. Enter a name and press <**OK**>.
4. Enter a number and press <**Save**>
5. Change the location number, if you want, and press <**OK**>.

Group search *(Menu 8.3)*

Use this menu to search your entries in Phonebook in caller groups.

1. Enter the first few letters of the group name.
2. Select a group and press <**View**>.
3. Select the name you want.
4. Press [ ] to dial the number or <**Options**> to access the Phonebook options.

Group edit *(Menu 8.4)*

Use this menu to edit your caller groups' properties.

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

- **Call ringtone**: set a ring tone for incoming calls from the group.
- **SMS tone**: set a ring tone for incoming messages from the group.
- **Graphic**: set a graphic icon for incoming calls from the group.
- **Group name**: assign a name to the group.

Speed dial list *(Menu 8.5)*

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

Assigning speed dial entries

1. Select a key location from **2** to **9**. Key **1** is reserved for your voice mail server.
2. Select the name you want from the Phonebook list.
3. Select the number you want.

Managing speed dial entries

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

- **Change**: assign a different number to an assigned key.
- **Delete**: delete the setting for the key.
- **Delete all**: delete the settings for all the keys.
- **Number**: view the number assigned to the key.

Dialling speed dial entries

Press and hold the appropriate key in Idle mode.

Delete all *(Menu 8.6)*

Use this menu to delete all of the entries from Phonebook.

1. Press [*i*] to check the location(s) to be cleared.
2. Press <**Delete**>.
3. Enter the phone password and press <**OK**>.
4. Press <**Yes**> twice to confirm the deletion.

Memory status *(Menu 8.7)*

Use this menu to check the total number of entries you can store and the number of the entries you have stored in Phonebook.

SDN *(Menu 8.8)*

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 [↗].

Phone 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 **Phone settings**.

Display settings *(Menu 9.1)*

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

Wallpaper *(Menu 9.1.1)*

You can change the background image and the settings for the text of Idle mode.

- **Wallpaper list**: select a background image.
- **Text display**: determine the phone displays the time and date.
- **Text color**: select a colour of the text

Menu style *(Menu 9.1.2)*

You can select the menu display style.

Back light *(Menu 9.1.3)*

You can select the length of time the backlight and the display stay on.

- **Back light On**: select the length of time the backlight is on.
- **Back light Dim**: select the length of time the display is in Dimming mode after the backlight turns off. After a specified time, the display turns off.

Contrast *(Menu 9.1.4)*

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

Service light *(Menu 9.1.5)*

You can select whether or not the service light is used. You can also select a colour in which it flashes.

Graphic logo *(Menu 9.1.6)*

Use this menu to display your service provider's logo instead of its name.

Greeting message *(Menu 9.2)*

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

Own number *(Menu 9.3)*

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 on your SIM card.

Language *(Menu 9.4)*

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

Security *(Menu 9.5)*

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 /PIN 2 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 9.5.1)*

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 9.5.2)*

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

Phone lock *(Menu 9.5.3)*

The Phone lock 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 9.5.4)*

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

Privacy *(Menu 9.5.5)*

Use this menu to lock your media contents, including MMS messages, voice list, images, and sounds.

1. Press [*i*] to check the item(s) to be locked.
2. Press <**OK**> 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.

SIM lock *(Menu 9.5.6)*

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 9.5.7)*

If supported by your SIM card, Fixed Dialing 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 stored in Phonebook. To use this feature, you must enter your PIN2.

Change PIN2 *(Menu 9.5.8)*

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

Extra settings *(Menu 9.6)*

You can turn the automatic redialing or answering features on or off.

- **Auto redial**: make up to ten attempts to redial a phone number after an unsuccessful call.
- **Active folder**: answer an incoming call simply by opening the phone.
- **Anykey answer**: answer an incoming call by pressing any key, except [ ] or <**Reject**>.

  When this option is set to **Off**, you must press [ ] or <**Accept**> to answer a call.

Side key *(Menu 9.7)*

Use this menu to set how the Volume key acts when a call comes in.

Reject: allow you to reject calls by holding down the key.

Silence: turn the ringer off by holding down the key.

Short cut *(Menu 9.8)*

You can use the Navigation keys as shortcut keys to access specific menus directly from Idle mode. Use this menu to change the shortcut assignments for the Up or Down key.

1. Select the key to be used as a shortcut key.
2. Scroll to the menu that will be assigned to the key.
3. Press <**Select**>.

Reset settings *(Menu 9.9)*

Use this menu to reset the phone to its default settings.

Enter the 4- to 8-digit phone password and press <**OK**>.

☑ The password is preset to **00000000**. You can change this password. ▶ p. 54

Solve problems

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 locked enter password"

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

Your correspondent cannot hear you speaking

- Be sure you have switched off the microphone.
- Be sure 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 Contacts entry

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

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.

For Body Operation

To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm. separation distance between the user's body and the back of the phone, including the antenna. The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The

use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

For more Information concerning exposure to radio frequency signals, see the following websites:

Federal Communications Commission (FCC)
http://www.fcc.gov/rfsafety

Cellular Telecommunications Industry Association (CTIA):
http://www.wow-com.com

U.S.Food and Drug Administration (FDA)
http://www.fda.gov/cdrh/consumer

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

Precautions When Using Batteries

- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the phone near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.
- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.

- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0 °ýC (32 °ýF).
- Do not short-circuit the battery. Accidental shortcircuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and . terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.
- Dispose of used batteries in accordance with local regulations. Always recycle. Do not dispose of batteries in a fire.

Road Safety

Your wireless phone gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility accompanies the benefits of wireless phones, one that every user must uphold.

When driving a car, driving is your first responsibility. When using your wireless phone behind the wheel of a car, practice good common sense and remember the following tips.

1. Get to know your wireless phone and its features, such as speed dial and redial. If available, these features help you to place your call without taking your attention off the road.

2. When available, use a hands-free device. If possible, add an extra layer of convenience and safety to your wireless phone with one of the many hands-free accessories available today.

3. Position your wireless phone within easy reach. Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voice mail answer it for you.

4. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice and even heavy traffic can be hazardous.

5. Do not take notes or look up phone numbers while driving. Jotting down a To Do list or flipping through your phonebook takes your attention away from your primary responsibility, driving safely.

6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Make the

people with whom you are talking aware that you are driving and suspend conversations that have the potential to divert your attention from the road.

8. Use your wireless phone to call for help. Dial the emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!

9. Use your wireless phone to help others in emergencies. If you see a car accident, crime in progress or other serious emergency where lives are in danger, call the emergency number, as you would want others to do for you.

10. Call roadside assistance or a special nonemergency 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 nonemergency wireless number.

Operating Environment

Remember to follow any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

When connecting the phone or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position (held to your ear with the antenna pointing over your shoulder).

Electronic Devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Consult the manufacturer to discuss alternatives.

Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15 cm (6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research and recommendations of Wireless Technology Research.

Persons with pacemakers:

- Should always keep the phone more than 15 cm (6 inches) from their pacemaker when the phone is switched on
- Should not carry the phone in a breast pocket
- Should use the ear opposite the pacemaker to minimize potential interference

If you have any reason to suspect that interference is taking place, switch off your phone immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives. Other Medical Devices If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its

representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Switch off your phone in any facility where posted notices require you to do so.

Potentially Explosive Atmospheres

Switch off your phone when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Users are advised to switch off the phone while at a refueling point (service station).

Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Emergency calls

This phone, like any wireless phone, operates using radio signals, wireless and landline networks, as well as user-programmed functions, which cannot guarantee connection in all conditions. Therefore, you should never rely solely on any wireless phone for essential communications (medical emergencies, for example).

Remember, to make or receive any calls the phone must be switched on and in a service area with adequate signal strength. Emergency calls may not be possible on all wireless phone networks or when certain network services and/or phone features are in use. Check with local service providers.

To make an emergency call, proceed as follows.

1. If the phone is not on, switch it on.
2. Key in the emergency number for your present location (for example, 112 or any other official emergency number). Emergency numbers vary by location.
3. Press the 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 end the call until given permission to do so.

Other important safety information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the phone, its parts, or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch off your phone before boarding an aircraft. The use of wireless phones in aircraft may be dangerous to the operation of the aircraft, and is illegal.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Care and maintenance

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity, and liquids contain minerals that will corrode electronic circuits.

- Do not use the phone with a wet hand. 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 the phone. 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. Unauthorised 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 governmentadopted 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: 1.01(GSM850), 0.84(GSM1900) W/kg Body-worn: 0.514(GSM850), 0.357(GSM1900) W/kg.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on FCC ID A3LSGHX486.

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 seat belts and requiring other passengers to do the same.

But with wireless phone use, driving safely means a little more. This brochure is a call to wireless phone users everywhere to make safety their first priority when behind the wheel of a car. Wireless telecommunications is keeping us in touch, simplifying our lives, protecting us in emergencies and providing opportunities to help others in need. When it comes to the use of wireless phones, safety is your most important call.

Wireless Phone “Safety Tips”

Below are safety tips to follow while driving and using a wireless phone which should be easy to remember:

1. Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

2. When available, use a hands free device. A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.

3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.

4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.

5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a “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 their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely.

“The wireless industry reminds you to use your phone safely when driving.”

Cellular Telecommunications & Internet Association
For more information, please call 1-888-901-SAFE.
For updates: http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID =85

Appendix C: Consumer Update on Wireless Phones

U.S. Food and Drug Administration

1. What kinds of phones are the subject of this update?

The term wireless phone refers here to hand-held wireless phones with built-in antennas, often called cell, mobile, or PCS phones. These types of wireless phones can expose the user to measurable radio frequency 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 radio frequency 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 radio frequency 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 radio frequency 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 radio frequency 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 radio frequency 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 radio frequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure.

Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists

that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

7. Do hands-free kits for wireless phones reduce risks from exposure to RF emissions?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with wireless phones for convenience and comfort. These systems reduce the absorption of RF energy in the head because the phone, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the phone is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Wireless phones marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

8. Do wireless phone accessories that claim to shield the head from RF radiation work?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special phone cases, while others involve nothing more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike “hand-free” kits, these so-called “shields” may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

9. What about wireless phone interference with medical equipment?

Radio frequency 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 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 radio frequency 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, gioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

11. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

12. Which other federal agencies have responsibilities related to potential RF health effects?

Additional information on the safety of RF exposures from various sources can be obtained from the following organizations.

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*

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

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