

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

SAMSUNG ELECTRONICS



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SPH-A420
User's Guide



Important safety precautions



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

Drive safely at all times

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

Switch off the phone when refuelling

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

Switch off in an aircraft

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

Switch off the phone near all medical equipment

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

Interference

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

Be aware of special regulations

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


Water resistance

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

Sensible use

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

Emergency calls

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

Keep your phone away from small children

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

Accessories and batteries

Use only Samsung-approved batteries and accessories, such as headsets and PC data cables. Use of any unauthorised accessories could damage you or 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.



At very high volumes, prolonged listening to a headset can damage your hearing.

Qualified service

Only qualified service personnel may repair your phone.






For more detailed safety information, see "Health and safety information" on page 75.

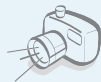


About this Guide

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

In this guide, the following instruction icons appear:

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



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

Special features of your phone



- **Media player**
Play media files on your phone. You can enjoy high quality music and videos.



- **Web browser**
Access the wireless web to get up-to-the-minute information and a wide variety of media content.



- **Photo printing**
Print your photos to preserve your best moments forever.

- **Picture Mail service**
Send and receive picture mail with a combination of text, images, video, and audio.



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



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

- **Memory disk**
Connect your phone to a computer to copy files directly to and from it.



- **Alarm**
Use your phone as an alarm clock to wake you up in the morning or notify you of an impending event.



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



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

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Overview of menu functions

To access Menu mode, press [**MENU OK**] in Idle mode. The order of menus may differ depending on the menu style you select.

1 Web	▶ p.30	6 Music	▶ p.36	9 Tools	▶ p.46	0 Contacts	▶ p.63
2 Call History	▶ p.31	7 My Content	▶ p.37	1 Mass Storage	▶ p.46	1 Find	▶ p.63
1 Outgoing Calls	▶ p.31	Games	▶ p.37	2 Planner	▶ p.50	2 Add New Entry	▶ p.63
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4 Recent Calls	▶ p.32	Applications	▶ p.38	5 Alarm Clock	▶ p.55	5 My Name Card	▶ p.65
3 Media Player	▶ p.32	Caller Tunes	▶ p.39	6 Calculator	▶ p.55	# Settings	▶ p.66
4 Voice Services	▶ p.35	8 Messaging	▶ p.39	* Pictures	▶ p.56	1 Display	▶ p.66
1 Voice Memo	▶ p.35	1 Send Message	▶ p.39	1 Camera	▶ p.56	2 Sounds	▶ p.67
2 Services	▶ p.36	2 Picture Mail	▶ p.41	2 Camcorder	▶ p.58	3 Internet	▶ p.69
5 Missed Alerts	▶ p.36	3 Text Message	▶ p.43	3 Picture Mail	▶ p.60	4 Security	▶ p.69
		4 Go to Email	▶ p.44	4 My Albums	▶ p.60	5 Launch Pad	▶ p.70
		5 Voice Mail	▶ p.45	5 Order Prints	▶ p.61	6 Others	▶ p.71
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		7 Settings	▶ p.45	7 Settings and Info	▶ p.62		

Unpack

Make sure you have each item



Phone



Travel Adapter



Battery



User's Guide

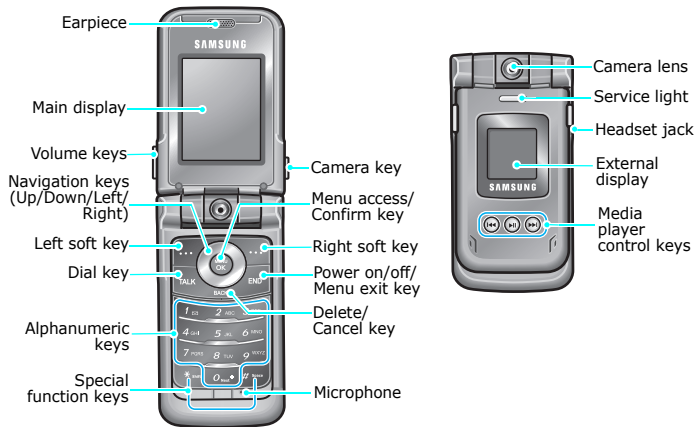
You can obtain various accessories from your local Samsung dealer.



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

Your phone

Keys, features, and locations

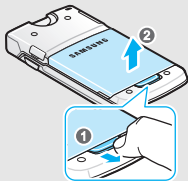


Get started

First steps to operating your phone

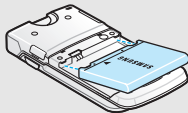
Install and charge the phone

- 1 Remove the battery cover.

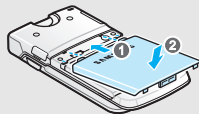


- If the phone is already on, first turn it off by pressing and holding [**END**].

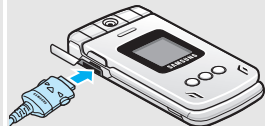
- 2 Install the battery.



- 3 Reattach the battery cover.



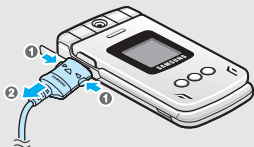
- 4 Plug the travel adapter into the phone.



- 5 Plug the adapter into a standard AC wall outlet.


- 6 When the phone is completely charged (the battery icon becomes still), unplug the adapter from the power outlet.

- 7 Remove the adapter from the phone.



Low battery indicator

When the battery is low:

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

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

Power on or off

Switch on

1. Open the phone.

Do not turn on the phone when mobile phone use is prohibited.

2. Press and hold **[END]**.

Switch off

1. Open the phone.

2. Press and hold **[END]**.

Keys and display

Keys



Perform the function indicated on the bottom line of the display.



In Idle mode, access your favourite menus directly. ► p. 70
In Menu mode, scroll through menu options.



In Idle mode, access Menu mode.
In Menu mode, select the highlighted menu option or confirm input.



Make or answer a call.
In Idle mode, retrieve numbers recently dialled, missed, or received.



Delete characters from the display.
In Menu mode, return to the previous menu level.



Press and hold to switch the phone on and off.
End a call.
In Menu mode, cancel input and return the phone to Idle mode.



Enter numbers, letters, and some special characters.
In Idle mode, press and hold [1] to access your voicemail server. Press and hold [0] to enter an international call prefix.



Enter special characters.
In a text input field, press [*] to change case. Press [#] to insert a space.



Adjust the phone volume.
In Idle mode, with the phone open, adjust the ringer volume. With the phone closed, press to turn on the backlight.



In Idle mode, press and hold to turn on the camera.

In Camera mode or Camcorder mode, take a photo or record a video.

During a call, record your conversation.



Return to the previous file during music playback on Music Store.



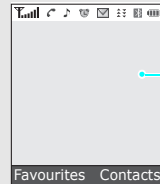
In Idle mode, press to access Music Store and start playback.



Skip to the next file during music playback on Music Store.

Display

Layout



Icons
display various icons.

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

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

Icons



Received signal strength



Call in progress



Out of your service area; you cannot make or receive calls



Roaming network



1x mode active



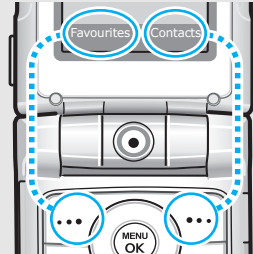
EVDO mode active

- ✉ New message
- PhoneOff** Airplane mode ▶ p. 71
- 📍 Location service active ▶ p. 73
- ☎ TTY mode ▶ p. 72
- 🕒 Alarm set ▶ p. 55
- 🎵 Call ringer settings ▶ p. 67
 - 🎵 : Level 1~8 or 1-Beep
 - 🎵📶 : Level 1~8 or 1-Beep with vibration
 - 📶 : Ringer Off
 - 📶📶 : Ringer Off with vibration
- 🔇 Silent mode
- 📶 Vibration mode
- 🔋 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 your Favourites menus.

Press the right soft key to access the **Find** menu in **Contacts**.

Select an option

1. Press [**MENU OK**] or a desired soft key.
2. Press the Navigation keys to move to the next or previous option.
3. Press [**MENU OK**] to confirm the function displayed or option highlighted.
4. To exit, choose either of the following methods:
 - Press [**BACK**] to move up one level.
 - Press [**END**] to return to Idle mode.

Use shortcuts

Press the number key corresponding to the option you want.

Customise your phone

Call ringer melody

1. In Idle mode, press [**MENU OK**] and select **Settings** → **Sounds** → **Ringer Type** → **Voice Calls**.
2. Select **With Caller ID** or **No Caller ID**.
3. Select a ringtone category.
4. Select a ringtone.

Idle mode wallpaper

You can set wallpaper for the idle screen.

1. In Idle mode, press [**MENU OK**] and select **Settings** → **Display** → **Screen Saver** → **Main LCD**.
2. Select an image category.
3. Scroll to an image or a video clip and press <**Assign**>.

Menu mode options

You can customise the menu display in Menu mode.

To set a menu style:

1. In Idle mode, press [**MENU OK**].
2. Press <**Options**> and select **Menu Style**.
3. Select a menu style.

To set a theme:

1. In Idle mode, press [**MENU OK**].
2. Press <**Options**> and select **Theme**.
3. Press [Left] or [Right] to select a theme.
4. Press <**Assign**>.

To set a background image:

1. In Idle mode, press [**MENU OK**].
2. Press <**Options**> and select **Background**.
3. Select an image category.
4. Scroll to an image and press <**Assign**>.

Menu shortcuts

You can set the Navigation keys to function as shortcuts to access your favourite menus.

1. In Idle mode, press [**MENU OK**] and select **Settings** → **Launch Pad**.
2. Select a key.
3. Select a menu to be assigned to the key.

Favourites menus

You can set up a list of your own favourite menus.

To add a Favourites menu:

1. In Idle mode, press **<Favourites>**.
2. Select an empty location.
3. Select the menu you want.

To access a Favourites menu:

1. In Idle mode, press **<Favourites>**.
2. Select the menu you want.

Silent mode/ Vibration mode

You can switch the phone to Silent mode or Vibration mode to avoid disturbing other people.

To activate Silent mode:

1. In Idle mode, press [▲/▼] until **Silence All** displays.
2. Press <**Done**>.

To activate Vibration mode:

1. In Idle mode, press [▲/▼] until **Vibrate All** displays.
2. Press <**Done**>.

Phone lock

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

1. In Idle mode, press [**MENU OK**] and select **Settings** → **Security**.
2. Enter the default password, the last 4-digit of your phone number.
3. Select **Change Lock**.
4. Enter a new 4-digit password and press <**Next**>.
5. Enter the new password again and press <**Done**>.
6. Select **Lock Phone**.
7. Select **Lock Now** or **On Power-Up**.

Make/Answer calls

Make a call

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

Answer a call

1. When the phone rings, press [**TALK**].
2. To end the call, press [**END**].

Adjust the volume during a call

Press [**▲/▼**].

Step outside the phone

Begin with your camera, the web, and other special features

Use the camera

Take a photo

1. Open the phone.
2. In Idle mode, press and hold [**📷\∞**] to turn on the camera.
3. Aim the lens at the subject by rotating the camera lens and make any desired adjustments.



4. Press [**MENU OK**], <**Capture**>, or [Ⓜ\Ⓜ] to take a photo. The photo is saved automatically.
5. Press [**MENU OK**] or [**BACK**] to take another photo.

View a photo

1. In Idle mode, press [Ⓜ\Ⓜ] and select **My Albums**.
2. Select an album.
3. Scroll to the photo you want and press <**Expand**>.

Record a video

1. In Idle mode, press and hold [Ⓜ\Ⓜ] to turn on the camera.
2. Press <**Options**> and select **Camcorder** → **Video Mail** or **Long Video**.
3. Press [**MENU OK**], <**Record**>, or [Ⓜ\Ⓜ] to start recording.
4. Press [**MENU OK**], <**Done**>, or [Ⓜ\Ⓜ] to stop recording. The video is saved automatically.
5. Press [**MENU OK**] or [**BACK**] to record another video.

Play a video

1. In Idle mode, press [Ⓜ\Ⓜ] and select **My Albums**.
2. Select an album.
3. Scroll to the video you want.
4. Press <**Options**> and select **Play**.

Browse the web

Using a built-in web browser, you can easily access the wireless web to get a variety of up-to-date services and information and to download web content.

Launch the web browser

In Idle mode, press [**MENU OK**] and select **Web**.

Navigate the web

- To scroll line by line, press [Up] or [Down].
- To scroll page by page, press [**▲/▼**].
- To select a browser item, press <**Go**> or [**MENU OK**].
- To return to the previous page, press [**BACK**].
- To access options, press <**Menu**>.

Use Contacts

Add a contact

1. In Idle mode, enter a phone number and press [**MENU OK**].
2. For the first saved number, select a number type.
For the additional saved number, select **New Entry** → a number type.
3. Specify contact information: Name, Phone number, E-mail, URL, Nickname, Memo, Group, Ringer, and Photo.
4. Press <**Done**> to save the contact.

Find a contact

1. In Idle mode, press **<Contacts>**.
2. Enter the first few letters of the name you want.
3. Select a contact.
4. Scroll to a number and press **[TALK]** to dial.

Create a name card

1. In Idle mode, press **[MENU OK]** and select **Contacts** → **My Name Card**.
2. Press **<Edit>**.
3. Enter your contact information.
4. Press **<Done>** to save the name card.

Send messages

Send a text message (SMS)

1. In Idle mode, press **[MENU OK]** and select **Messaging** → **Send Message** → **Text**.
2. Enter a phone number or e-mail address or select it from Contacts or recent message log.
3. Press **<Next>**.
4. Enter your message and press **<Next>**.
5. Press **<Send>** to send the message.

Send picture mail

1. In Idle mode, press [**MENU OK**] and select **Messaging** → **Send Message** → **Picture Mail**.
2. Enter a phone number or e-mail address or select it from Contacts or recent message log.
3. Press <**Next**>.
4. Select a photo or video clip from your phone's memory or online album.
5. Press <**Next**>.
6. Scroll to **Subj** and press <**Add**>.
7. Enter the message subject and press <**Next**>.
8. Scroll to **Text** and press <**Add**>.
9. Enter the message text and press <**Next**>.
10. Scroll to the box next to **Audio** and press <**Record**>.
11. Press <**Record**> to record a voice memo, and save it.
12. Select a priority level of the message.
13. Press <**Send**> to send the message.

View messages

View a text message

When a notification appears:

The message opens.

When you have any missed alerts:

The message appears on the missed alert list.

Scroll to the message and press <**View**>. The message opens.

From the Inbox:

1. In Idle mode, press [**MENU OK**] and select **Messaging** → **Text Message** → **Inbox**.
2. Select a text message.

View picture mail

When a notification appears:

The message opens.

When you have any missed alerts:

The received message appears on the missed alert list.

Scroll to the message and press <**View**>. The message opens.

From the Inbox:

1. In Idle mode, press [**MENU OK**] and select **Messaging** → **Picture Mail** → **Inbox**.
2. Select picture mail.

Enter text

T9(English), Alpha, Symbol, and Number modes

You can enter text for some features such as messaging, Contacts, or Calendar, using T9(English) mode, Alpha mode, Symbol mode, and Number mode.

Changing the text input mode

1. In a text input field, press <Options>.
2. Select the input mode you want.

Using T9(English) mode

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

Entering a word in T9(English) 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(English) 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.

Other T9(English) mode operations

- Press [1] to enter periods or apostrophes automatically.
- Press [*] to change case. Lower case (**T9word**), Initial capital (**T9Word**), and Capital lock (**T9WORD**) are available.
- Press [#] to insert a space.
- Press the Navigation keys to move the cursor.
- Press [BACK] to delete characters one by one. Press and hold [BACK] to clear the entire display.

Using Alpha mode

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

Key	Characters in order displayed	
	Upper case	Lower case
1	. , @ 1 ? ! * # /	
2	A B C 2	a b c 2
3	D E F 3	d e f 3
4	G H I 4	g h i 4
5	J K L 5	j k l 5
6	M N O 6	m n o 6
7	P Q R S 7	p q r s 7
8	T U V 8	t u v 8
9	W X Y Z 9	w x y z 9
0	0	

Other Alpha mode operations

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

- Press [*] to change case. Lower case (**abc**), Initial capital (**Abc**), and Capital lock (**ABC**) are available.
- Press [#] to insert a space.
- Press the Navigation keys to move the cursor.
- Press [BACK] to delete characters one by one. Press and hold [BACK] to clear the entire display.

Using Symbol mode

Symbol mode enables you to insert symbols.

- To display more symbols, press [Left] or [Right].
- To select a symbol, press the corresponding number key.

Using Number mode

Number mode enables you to enter numbers.

Press the keys corresponding to the digits you want.

Call functions

Advanced calling features

Making a call

1. In Idle mode, enter the area code and phone number.

Press [**BACK**] to clear the last digit or press and hold [**BACK**] to clear the entire display.

2. Press [**TALK**].
3. When you want to end the call, press [**END**].

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 [**TALK**].

Redialling recent numbers

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

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

Making a call from Contacts

Once you have stored a number in Contacts, you can dial the number by selecting it from Contacts. ▶ p. 59

You can also use the speed dial feature to assign number keys to your most frequently dialed numbers. ▶ p. 60

Pause dialling

When you call an automated system, like a banking service, you are required to enter a password or account number. Instead of manually entering the numbers each time, you can enter the necessary DTMF tones separated by pauses before dialling.

DTMF tones are the tones you hear when you press the number keys. DTMF tones allow you to communicate with computerised telephone systems, for example, voicemail servers or telebanking systems.

1. In Idle mode, enter the phone number you want to dial, such as a bank's teleservice number.
2. Press <**Options**> and select **Hard Pause** or **2sec Pause** to insert a pause.
 - **Hard Pause:** insert a hard pause. Numbers after the "P" pause will be sent when you press [**TALK**].
 - **2sec Pause:** insert a 2-second pause. Numbers after the "T" pause will be sent automatically.
3. Enter a number to be sent after the pause, such as your account number, PIN, etc.
4. Repeat steps 2 and 3 to add more pauses and numbers, if necessary.
5. Press [**TALK**] to make a call.
6. After connecting, wait for a prompt from the system, and then press [**TALK**] at each prompt, if applicable.
The DTMF tones are sent.

Answering a call

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

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

Tips for answering a call

- When **Any Key** is active, you can press any key, except for <**Ignore**>, [**END**], and [**▲/▼**]. ▶ p. 68
- When **Flip Open** is active, you can simply open the phone. ▶ p. 68
- Press <**Ignore**>, or press and hold [**▲/▼**] to reject a call.
- Press [**▲/▼**], [**BACK**], or [**END**] to mute the call ringer.

Viewing missed calls

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

1. Press [**MENU OK**].
2. If necessary, scroll through the missed calls.

3. Press [**TALK**] to dial the number you want.

When the missed call record appears on the missed call alert list, scroll to the missed call and press <**Call**> or [**TALK**] to dial the number.

Using the headset

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

Connect the headset to the jack on the right side of the phone. The button on the headset works as follows:

To	Press
redial the last call	and hold the button.
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 press [**▼**] to decrease the volume level.

Answering a second call

You can answer an incoming call while already on the phone, if your network supports this function and you have activated the call waiting feature.

1. Press <**Answer**> or [**TALK**] to answer the call. The first call is automatically put on hold.
2. Press [**TALK**] to switch between the calls.
3. To end the current call, press [**END**].

Making a three-way call

If you have activated three-way calling service, you can have a conversation with two people simultaneously.

1. During a call, make another call. The first caller is placed on hold.

- When you are connected to the third participant, press [3] and then [TALK] to begin the three-way call.

- You can press [1] and then [TALK] to disconnect the third participant's call and switch back to the first call, or press [2] and then [TALK] to switch between the calls.

Switching your microphone off or on

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

Press <Mute>. To switch the microphone on, press <UnMute>.

Using In-call options

Press <Options> to access the following options during a call:

- Speaker On/Speaker Off:** turn on the speakerphone feature or switch back to Normal mode.

- Key Mute/Key Unmute:** mute the key tones so that the person you are talking to cannot hear any keypresses, or unmute them to allow the person to hear the key tones.

- To communicate with answering machines or computerised telephone systems, **Key Unmute** must be selected.

- Contacts:** access the **Contacts** menu.
- Messaging:** access the **Messaging** menu.
- 3-Way Call:** converse with two people simultaneously.
- Call History:** access the **Call History** menu.
- Voice Memo:** record your conversation.
- Tools:** access the **Tools** menu.
- Phone Info:** view your phone information.

Menu functions

All menu options listed

Web (Menu 1)

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

To access this menu, press [**MENU OK**] in Idle mode and select **Web**.

Launching the web browser

Selecting this menu launches the web browser and accesses the homepage of your service provider.

Navigating the web browser

To	Press
scroll line by line	[Up] or [Down].
scroll page by page	[▲/▼].
select a browser item	<Go> or [MENU OK].
return to the previous page	[BACK].

Using browser options

From any web page, press <Menu> to access the following options:

- **Home:** return to the homepage.
- **Forward:** move forward through pages in history.
- **Mark this Page:** bookmark the current page.
- **View Bookmarks:** access the bookmark list.
- **Search:** launch a Google search.
- **Send page to...:** send the URL of the current page via SMS.

- **Go to URL:** enter a URL address manually.
- **History:** access the list of web pages you have accessed.
- **Refresh this page:** reload the current page with updated information.
- **More:** change the various settings for the browser.

Show URL: display the URL address of the current web page.

Restart Browser: restart the browser without exiting it.

About Browser: access version and copyright information about the browser.

Preferences: change the browser display and sound settings.

Exiting the browser

Press [**END**] to end the network connection and exit the browser.

Call History *(Menu 2)*

Use this menu to view the calls you have dialled, received, or missed.

To access this menu, press [**MENU OK**] in Idle mode and select **Call History**.

Outgoing Calls *(Menu 2.1)*

This menu displays the most recent calls you have dialled.

Accessing a call record

1. Press [Left] or [Right] to move to another call type.
2. Press [Up] or [Down] to scroll through the call list.
3. Press [**MENU OK**] to view the details of a call, or press <**Call**> or [**TALK**] to dial a number.

Using call record options

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

- **Send Msg:** send a message to the selected number.

Menu functions

- **Show Contacts:** access the contact information, if the caller is saved in Contacts.
- **Save:** save the number in Contacts, if the caller is not saved.
- **Prepend:** add an area code or service number before dialling the selected number.
- **Erase:** delete the call record.

Incoming Calls *(Menu 2.2)*

This menu displays the most recent calls you have received.

Missed Calls *(Menu 2.3)*

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

Recent Calls *(Menu 2.4)*

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

Media Player *(Menu 3)*

The Media Player enables you to play audio clips or video clips on the multimedia channel list or in your phone's memory.

To access this menu, press [**MENU OK**] in Idle mode and select **Media Player**.

Accessing your multimedia channels

You can access audio clips and video clips on the multimedia channel list.

From the Media Player window, select **Channel Listing**.

The preview channels supplied by your service provider or any multimedia channels you have purchased will be displayed.

Accessing media files in your phone's memory

You can access audio clips and video clips stored in your phone's memory.

From the Media Player window, select **Mass Storage**.

The media files you have imported from a PC will be displayed.

Playing media files from your play list

You can play audio clips or video clips from a play list you have created.

Creating a play list

1. From the Media Player window, select **Play List**.
2. Press **<Options>** and select **New Play List**.
3. Enter a name for the play list and press **<Done>**.
4. Select the play list you have created and select **Yes**.
5. Select the files to be added to the play list.

Playing a media file

1. From the Media Player window, select **Play List**.
2. Select a play list and then a file. The media player opens.

During playback, use the following keys to control the media player:

Key	Function
MENU OK	Pauses or resumes playback.
Left	Returns to the previous file. Moves backward in a file when held down.
Right	Skips to the next file. Moves forward in a file when held down.
Up	Accesses the current play list.
Down	Changes the repeat mode.
▲/▼	Adjusts the volume level.

Using Media player options

During playback, press <**Options**> to access the following options:

- **Media Listing:** access audio clips or video clips in your phone's memory.
- **Channel Listing:** access audio clips or video clips on your multimedia channels.
- **Visual Effect:** change the playback animation.
- **Original View/Enlarged View:** change the view mode.
- **Info:** access the file properties.
- **Exit:** exit the **Media Player** menu.

Accessing a play list

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

- **Channel Listing:** access audio clips or video clips on your multimedia channels.

- **Media Listing:** access audio clips or video clips in your phone's memory.
- **Add New:** add files to the play list.
- **Move:** move the file to another play list.
- **Copy:** copy the file to another play list.
- **Erase:** delete the file.
- **Info:** access the file properties.
- **Memory Storage Info:** access memory information for the media player.
- **Exit:** exit the **Media Player** menu.

Playing a file with the phone closed

Press and hold [▶||] to open Music Store and start playback.

- ☑ If Key Guard mode is activated, press and hold [▲/▼] and [Ⓜ] to temporarily unlock the exposed keys. ▶ p. 68

Use the following keys to control the media player:

Key	Function
▶	Pauses or resumes playback.
◀◀	Returns to the previous file.
▶▶	Skips to the next file.
☐\σ	Accesses the play list. This key function is available only when you play a file from the Media Player menu and then close the phone.
▲/▼	Adjusts the volume.

Voice Services *(Menu 4)*

Use this menu to access voice-related features.

To access this menu, press [**MENU OK**] in Idle mode and select **Voice Services**.

Voice Memo *(Menu 4.1)*

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

Record *(Menu 4.1.1)*

Use this menu to record voice memos and save them in the phone's memory.

1. Speak into the microphone.
 - Press <**Pause**> to pause recording.
 - Press <**Resume**> to resume recording.
2. When you have finished, press <**Finish**> or [**MENU OK**]. The voice memo is saved automatically.

Review (Menu 4.1.2)

Use this menu to access the voice memos you have recorded. Select the voice memo you want.

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

- **Erase:** delete the selected file.
- **Edit Caption:** change the file name.
- **Info:** access the file properties.

Erase All (Menu 4.1.3)

Use this menu to delete all of voice memos in the phone's memory.

Services (Menu 4.2)

Your phone is pre-programmed with contact numbers for various services. Use this menu to dial your customer service centre or service representative for direct assistance.

Missed Alerts (Menu 5)

When you are unable to acknowledge an alarm for scheduled items or when you have missed a call, or an alert for a message, the phone stores the alarm, the call record, or the message until you confirm it.

To access this menu, press [**MENU OK**] in Idle mode and select **Missed Alerts**.

Music (Menu 6)

Use this menu to access Music Store, an online music distribution site that lets you purchase and download music files to play on your phone.

To access this menu, press [**MENU OK**] in Idle mode and select **Music**.

My Content *(Menu 7)*

The **My Content** menu allows you to access games, ringtones, sound clips, screensavers, and various applications stored in your phone's memory.

To access this menu, press [**MENU OK**] in Idle mode and select **My Content**.

Games

Use this menu to access games you have downloaded from the wireless web.

Accessing a game

Select a game from the game list and follow the onscreen instructions. The procedure may differ from game to game.

Using game options

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

- **Run:** launch the selected application.
- **Erase:** delete the selected application.

- **Erase All:** delete all applications.
- **Settings:** set permission settings for services charging you additional costs, such as network access and GPS service.
- **Properties:** access the application properties.

Downloading games

1. Select **Get New Games**. You are connected to the website preset by your service provider.
2. Search for the game you want and follow the onscreen instructions to download it.

Ringers

Use this menu to access ringtones and sound clips you have downloaded from the wireless web.

Using ringtone options

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

- **Listen:** play the ringtone.
- **Set As..:** set the ringtone as your call ringer.

- **Erase:** delete the selected file.
- **Erase All:** delete all files.
- **Properties:** access the file properties.

Downloading ringtones

1. Select **Get New Ringers**. You are connected to the website preset by your service provider.
2. Search for the file you want and follow the onscreen instructions to download it.

Screen Savers

Use this menu to access screensavers you have downloaded from the wireless web.

Using screensaver options

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

- **View:** open the screensaver file.
- **Set As..:** set the screensaver file as wallpaper for the idle screen.
- **Erase:** delete the selected file.

- **Erase All:** delete all files.
- **Properties:** access the file properties.

Downloading screensavers

1. Select **Get New Screen Savers**. You are connected to the website preset by your service provider.
2. Search for the file you want and follow the onscreen instructions to download it.

Applications

Use this menu to access various applications you have downloaded from the wireless web.

Using application options

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

- **Run:** launch the selected application.
- **Erase:** delete the selected application.
- **Erase All:** delete all applications.

- **Settings:** set permission settings for services charging you additional costs, such as network access and GPS service.
- **Properties:** access the application properties.

Downloading various applications

1. Select **Get New Applications**. You are connected to the website preset by your service provider.
2. Search for the application you want and follow the onscreen instructions to download it.

Caller Tunes

Use this menu to connect to the website preset by your service provider, and access ringtones to use on your phone for ringback tone service.

Messaging (Menu 8)

Use the **Messaging** menu to send and receive text messages, picture mail, and hand written messages.

To access this menu, press [**MENU OK**] in Idle mode and select **Messaging**.

Send Message (Menu 8.1)

Use this menu to create and send messages.

Creating and sending a text message

Short Message Service (SMS) allows you to send or receive text messages.

1. Select **Text**.
2. Enter a destination phone number or e-mail address manually in the **Mobile #** or **Email** box and press <**OK**>.

You can also select **Contacts** to retrieve a phone number or e-mail address from Contacts, or press <**Recent List**> to retrieve it from the list of destinations to which you have sent messages.

3. Press <**Next**>.
4. Enter your message and press <**Next**>.

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

5. Press <**Send**> to send the message.

Creating and sending picture mail

Picture Mail Service delivers picture mail containing a combination of text, image, video, and audio, from phone to phone or from phone to e-mail. To use the Picture Mail service, you need to register for the picture message server.

1. Select **Picture Mail**.
2. Enter a destination phone number or e-mail address manually in the **Mobile #** or **Email** box and press <**OK**>.

You can also select **Contacts** to retrieve a phone number or e-mail address from Contacts, or press <**Recent List**> to retrieve it from the list of destinations to which you have sent messages.

3. Press <**Next**>.
4. Select one of the following options:
 - **In Phone**: select a photo from your phone's memory.
 - **Online Albums**: select a photo from your online album.
 - **Take New Picture**: take a new photo.
 - **Take New Video**: record a new video clip.
 - **Text Only**: enter the message text without attaching a photo to the message.
5. Press <**Next**>.
6. Scroll to **Subj** and press <**Add**>.
7. Enter the message subject and press <**Next**>.
8. Scroll to **Text** and press <**Add**>.

9. Enter the message text and press **<Next>**.
10. Scroll to the box next to **Audio** and press **<Record>**.
11. Press **<Record>** to record a voice memo, and save it.
12. Select a priority level of the message.
13. Press **<Send>** to send the message.

Creating and sending a hand written message

1. Select **Hand.Msg**.
2. Enter a destination phone number or e-mail address manually in the **Mobile #** or **Email** box and press **<OK>**.
You can also select **Contacts** to retrieve a phone number or e-mail address from Contacts, or press **<Recent List>** to retrieve it from the list of destinations to which you have sent messages.
3. Press **<Next>**.
4. Take a photo of your handwriting. The handwriting text photo will be added on the white background.

5. Press **<Send>**.
6. Follow the instructions from the step 6 in "Creating and sending picture mail."

Picture Mail *(Menu 8.2)*

Use this menu to access picture mail you have received, sent, or saved.

Inbox

This folder stores picture mail you have received.

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

- **Reply all:** reply to the sender and all recipients.
- **Reply Via:** reply to the sender via a text message, Picture Mail service, or hand written message.
- **Call:** dial the selected number.
- **Launch URL:** connect to the URL specified in the message.
- **Forward:** forward a message to other people.

Menu functions

- **Save..:** extract URLs, e-mail addresses, or phone numbers from the message and save it in Contacts. You can also save the message in the **Saved Mail** folder.
- **Print Media:** extract an image from the message and send it to a destination preset by your service provider, or a photo printing shop via Picture Mail service. This service will be available in late 2006.
- **Erase:** delete the message.
- **Assign Media:** set an image as a caller ID image for a Contacts entry or an incoming call, or set an image or video clip as wallpaper for the idle screen.
- **Message Info:** access the message properties.

Sent Mail

This folder stores picture mail you have sent.

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

- **Forward:** forward the message to other people.
- **Call:** dial the selected number.

- **Launch URL:** connect to the URL specified in the message.
- **Save..:** extract URLs, e-mail addresses, or phone numbers from the message and save it in Contacts. You can also save the message in the **Saved Mail** folder.
- **Print Media:** extract an image from the message and send it to a destination preset by your service provider, or a photo printing shop via Picture Mail service. This service will be available in late 2006.
- **Erase:** delete the message.
- **Assign Media:** set an image as a caller ID image for a Contacts entry or an incoming call, or set an image or video clip as wallpaper for the idle screen.
- **Message Info:** access the message properties.

Saved Mail

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

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

- **Call:** dial the selected number.
- **Launch URL:** connect to the URL specified in the message.
- **Forward:** forward the message to other people.
- **Save..:** extract URLs, e-mail addresses, or phone numbers from the message and save it in Contacts.
- **Print Media:** extract an image from the message and send it to a destination preset by your service provider, or a photo printing shop via Picture Mail service. This service will be available in late 2006.
- **Erase:** delete the message.
- **Assign Media:** set an image as a caller ID image for a Contacts entry or an incoming call, or set an image or video clip as wallpaper for the idle screen.
- **Message Info:** access the message properties.

Pending

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

Text Message *(Menu 8.3)*

Use this menu to access messages you have received, sent, or which have failed in sending.

Inbox *(Menu 8.3.1)*

This folder stores all of the text messages you have received.

Using message options

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

- **Go:** connect to the URL specified in the message.
- **Call:** extract phone numbers from the message and dial a number.
- **Reply Via:** reply to the sender.
- **Forward:** forward the message to other people.

Menu functions

- **Lock/Unlock:** lock the message from being deleted, or unlock the message.
- **Save..:** extract a phone number or e-mail address from the message and save it in Contacts.
- **Erase:** delete the message.
- **Erase Multiple:** delete the messages you select.

Outbox (Menu 8.3.2)

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

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

- **Forward:** forward the message to other people.
- **Resend:** resend the message.
- **Lock/Unlock:** lock the message from being deleted, or unlock the message.
- **Compose New:** create a new text message.
- **Erase:** delete the message.
- **Erase Multiple:** delete the messages you select.

Drafts (Menu 8.3.3)

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

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

- **Go:** connect to the URL specified in the message.
- **Call:** extract phone numbers from the message and dial a number.
- **Send:** send the message.
- **Compose New:** create a new text message.
- **Erase:** delete the message.
- **Erase Multiple:** delete the messages you select.

Send Text (Menu 8.3.4)

Use this menu to create and send text messages.

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Go to Email (Menu 8.4)

Use this menu to access the website for the e-mail service supplied by your service provider.

Voice Mail (Menu 8.5)

Use this menu to connect to the voicemail server and access your voicemail.

- Your service provider can give the voicemail server number.

- **Call Voicemail:** access your voicemail server and listen to your voicemail.
- **Clear Envelope:** remove the voicemail icon from the screen.

Premium Msg (Menu 8.6)

Use this menu to access premium messages including images, videos, and audio received from your service provider, or a third party provider. For further details on receiving premium messages, contact your service provider.

Settings (Menu 8.7)

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

General (Menu 8.7.1)

You can set up the options for sending and receiving messages.

- **Notification:** set how the phone informs you of new messages.
- **Preset Messages:** edit preset messages you frequently use.
- **Edit Signature:** set your signature to be added to the end of messages. You can enter your signature.
- **Message Alert:** change the message alert settings.

Volume: select a volume for a message alert.

Type: select a message alert type.

Reminder: set how often the phone reminds you of new messages.

Menu functions

- **Auto-Erase:** set what will happen if new messages arrive when the Inbox is full.
Yes: the phone automatically erases old messages in order to receive new messages
No: the phone alerts you that new messages are being rejected because the Inbox is full.

Text Message (Menu 8.7.2)

You can set up the options for sending text messages.

- **Save in Outbox:** set to save messages in Outbox after sending.
- **Priority:** select a priority level of messages.
- **Call Back #:** set the callback number to be added to outgoing text messages.

Tools (Menu 9)

To access this menu, press [**MENU OK**] in Idle mode and select **Tools**.

Mass Storage (Menu 9.1)

Use this menu to connect your phone to a PC and copy media files from/to a PC, as you would use an external memory disk.

Connect to PC (Menu 9.1.1)

Use this menu to connect the phone to a PC via a PC data cable.

1. Connect a PC data cable to the jack on the left side of the phone and the USB port of a PC.
2. Access the **Connect to PC** menu. Your phone switches to Memory Disk mode and the removable disk automatically opens.

If the removable disk does not automatically open, open **My computer** on your PC and double-click the corresponding removable disk to open the phone's file directory.

3. Copy files from the phone to the PC, or vice versa.
4. When you have finished, press **<Done>**.
5. Select **Yes** to exit Memory Disk mode.

- When the phone is in Memory Disk mode, all calls and messages are blocked.
- Use the Safely Remove Hardware programme from the Windows task bar for removing the PC data cable from the computer; otherwise, the files may be corrupted and, thus, may not be played properly.
- If you change a folder name, all data in the folder may be deleted or the corresponding feature may not work properly.

File Manager (Menu 9.1.2)

Use this menu to access media files you have imported from a PC.

Viewing a file

You can view various document files and images files stored in the phone's memory.

The following file formats are available:

- Documents: Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Adobe PDF, Plain text, HTML
- Images: GIF, JPEG

Select an image or document file. File Viewer runs to open the file.

- Depending on the file size or memory capacity of File Viewer, some files may not open properly.
- If a document file contains languages unsupported by File Viewer, the content of the document will not display correctly.

Menu functions

Use the following keys to view the image or document:

Key	Function
Up/Down/ Left/Right	Pans around the image or page in the document.
1/3	Zooms in or out.
2	Rotates the image or document.
4	Returns to the previous page in the document.
5	Fits the document to the page size.
6	Returns to the next page in the document.

Using file options

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

- **Fit to Screen:** fit the file to the screen width or screen height.

- **Rotate:** rotate the image or document.
- **Hide Icons/Show Icons:** hide or display the tool icons on the screen.
- **Help:** access the help information.

Memory Info. (Menu 9.1.3)

Use this menu to view memory information for media items in the phone's memory.

Planner (Menu 9.3)

Use this menu to keep track of your schedule, create a list of tasks you need to complete, or set your phone as a countdown timer.

Today (Menu 9.3.1)

Use this menu to access Planner items stored for the current day.

Press [Left] or [Right] to display your schedule items, tasks, or countdown timers.

For further details about storing items, see the following menus.

Scheduler (Menu 9.3.2)

Use this menu to manage your monthly, weekly, or daily schedule.

When you enter the **Scheduler** menu, the calendar in Month view appears with today's date indicated by a pink box.

Selecting a day on the calendar

- Press [Left] or [Right] to move by day.
- Press [Up] or [Down] to move by week.
- Press [▲/▼] to move by month.






Creating an item

1. Select a date on the calendar.
2. Press <**Options**> and select **Add New**.
3. Enter the item information and press <**Next**>.
4. Press [Left] or [Right] to select the item type and press [Down].
5. Press [Left] or [Right] to set how long before the item the alarm is to alert you and press [Down].
6. Press [Left] or [Right] to select a repeat option and press [Down].
7. Select the Melody line and select an alarm tone and press [Down].
8. Enter the starting date and time for the item and press [Down].

9. Enter the ending date and time for the item and press [Down].
10. Select the Contact line and select a phone number to be displayed when the alarm alerts you to the item.
11. Press <Done> to save the item.

Viewing an item

Once you have scheduled items, the following icons and the number of items for a specific day appear at the bottom of the calendar.

-  Personal
 -  Business
 -  Appointment
 -  Birthday
 -  Vacation
1. Select a date on the calendar to display the items for the day.
 2. Select an item to view its details.

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

- **Jump to date:** enter the specific date you want to access.
- **Assign:** set the Planner items for the current day to be displayed in Idle mode.
- **Erase:** delete the selected item.
- **Erase All:** delete all items on the calendar.

Using calendar options

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

- **Add New:** add a new Planner item.
- **View Type:** change the view mode of the calendar.
- **Jump to date:** enter the specific date you want to access.
- **Assign:** set the current calendar to be displayed in Idle mode.
- **Erase All:** delete all items on the calendar.

Task List (Menu 9.3.3)

Use this menu to create a list of tasks that you need to complete.

Entering a task

1. Enter the task information. If there is any task already stored, press <**Add New**>.
2. Press <**Next**>.
3. Press [Left] or [Right] to select a priority and then press [Down].
4. Enter the ending time and press [Down].
5. Enter the ending date.
6. Press <**Done**> to save the task.

Viewing a task

When you access the **Task List** menu, a list of tasks you have created displays.

From the task list, select the task you want.

Using task options

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

- **Add New:** add a new task.

- **Erase:** delete the selected task.

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

- **Add New:** add a new task.
- **Set State:** change the task status.
To Do: the task is not complete.
In Process: the task is in process.
Completed: the task is complete.
- **Assign:** set the task to be displayed in Idle mode.
- **Erase:** erase the selected task.
- **Erase All:** delete all of the completed tasks or all tasks from the list.

Countdown (Menu 9.3.4)

Use this menu to set a time and date for a future event and then check to see how many days, hours, and minutes remain before that event. You can also check how much time has passed since an event has passed.

Creating a countdown timer

1. Enter the details for the countdown timer. If there is already an existing timer, press **<Add New>**.
2. Enter text and Press **<Next>**.
3. Enter the time to/from which you want to count down.
4. Press [Down].
5. Enter the date to/from which you want to count down.
6. Press **<Done>** to save the timer.

Using timer options

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

- **Add New:** add a new timer.
- **Erase:** delete the selected timer.

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

- **Assign:** set the timer to be displayed in Idle mode.

- **Erase:** delete the selected timer.
- **Erase All:** delete all timers.

Memo Pad (Menu 9.4)

Use this menu to make memos of important things you need to remember.

Creating a memo

1. Enter a memo. If there is any memo already stored, press **<Add New>**.
2. Press **<OK>** to save the memo.

Viewing a memo

When you access the **Memo Pad** menu, a list of memos you have created displays.

From the memo list, select a memo.

Using memo options

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

- **Set Skin:** change the background image for the memo text. Press [Left] or [Right] to select an image and press **<Assign>**.

- **Add New:** add a new memo.
- **Erase:** delete the selected memo.

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

- **Erase:** delete the selected memo.
- **Erase All:** delete all memos.

World Time (Menu 9.5)

Use this menu to find out the current time in another part of the world.

Viewing world time

From the world map, press [Left] or [Right] to scroll to the city you want. As the time line moves, the time and date of the given zone display.

Applying daylight saving time

From the world map, press <**DST Setting**> and select **On**.

Alarm Clock (Menu 9.6)

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

Setting an alarm

1. Select an alarm.
2. Set each alarm option:
 - **Alarm:** activate the alarm.
 - **Time:** enter the time for the alarm to sound.
 - **Alarm tone:** select an alarm tone.
 - **Repeat:** select a repeat option.
 - **Snooze Interval:** set the alarm to sound again after the specified length of time has elapsed.
3. Press <**Done**>.

Stopping an alarm

- Press any key.
- Press <**Snooze**> to stop the alarm and have it sound again after a specified length of time has elapsed. To stop the snoozing alarm, press <**Dismiss**>.

Deactivating an alarm

1. On the Alarm screen, scroll to the alarm you want to deactivate.
2. Press <**Reset**>.

Calculator (Menu 9.7)

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

1. Enter the first number.
 - Press [*****] or the left soft key to insert a decimal point.
 - Press [**#**] to change the number to a negative sign (-) or positive sign (+).
2. Press one of the Navigation keys to access the math function you want.
3. Enter the second number.
4. Press [**MENU OK**] to view the result.
5. If necessary, repeat from step 2 to continue the calculation.

Pictures (Menu *)

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

To access this menu, press [**MENU OK**] in Idle mode and select **Pictures**, or press [**☰**].



- Do not take photos of people without their permission.
- Do not take photos in a place where cameras are not allowed.
- Do not take photos in a place where you may interfere with another person's privacy.

Camera (Menu *.1)

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

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

Taking a photo

1. Access the **Camera** menu to turn on the camera and switch the display to Camera mode. You can also press and hold [ \∞] in Idle mode.
2. Make any desired adjustments.
 - Press <**Options**> to access camera options.
 - ▶ next section
 - Press [▲/▼] to flip the image vertically.
 - Press [Up] or [Down] to zoom in or out. This feature is not available for the maximum image resolution.
3. Press [**MENU OK**], <**Capture**>, or [ \∞] to take a photo. The photo is automatically saved in the **My Albums** folder.

To	Press
access photo options	< Options >. ▶ p. 54
move around the photo	[Left] or [Right].
return to Capture mode	[MENU OK] or [BACK].

Using camera options in Camera mode

In Camera mode, press <**Options**> to access the following options:

- **Flash:** determine the use of the flash.
- **Self-Timer:** set a time delay before the camera takes a photo.
- **Fun Tools..:** apply a decorative frame or change the colour tone.
- **Controls..:** adjust the brightness or white balance.
- **Settings..:** change the default settings for taking a photo.
 - Resolution:** select an image resolution.
 - Quality:** select an image quality setting.
 - Shutter Sound:** select the sound that you hear when you press the shutter release.
 - View Mode:** select the preview mode.
 - Status Bar:** hide or display the camera icons on the screen.

- **Review Pictures:** access the **My Albums** folder.
- **Camcorder:** switch to Camcorder mode.

Taking a postcard photo

Use this menu to take photos for postcards. You can take a photo for a background image and another of your handwriting text and create a postcard using them. The photo of your text will be added in the foreground.

1. In Camera mode, take a photo.
2. Press **<Options>** and select **Postcard**. The preview screen appears.
3. Take a photo of your message. The second photo is superimposed on the first one and displayed.
4. Press **<Options>** to access the following editing options:
 - **Ink Color:** change the colour tone of the photo of your message.
 - **Shadow:** apply a shadow effect to the photo of your message.
 - **Rotate:** rotate the photo of your message.

- **Zoom:** zoom in or out.
- **Move:** move the photo of your message.

5. When you have finished, press **<Done>**.
6. Press **<Options>** and select **Save** to save the photo in the **My Albums** folder.

Using photo options

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

- **Send Msg:** send the photo via Picture Mail service.
- **Camera Mode:** return to Camera mode.
- **Upload:** upload the photo to your online album.
- **Assign:** set the photo as a caller ID for a Contacts entry, as wallpaper for the idle screen, or as an image to be displayed when a call comes in.
- **Erase:** delete the photo.
- **Order Prints:** send the photo to a destination preset by your service provider, or a photo printing shop via Picture Mail service. This service will be available in late 2006.

- **Post to Service:** post your photo to an online third party service. This service will be available in late 2006.
- **Review Pictures:** access the **My Albums** folder.
- **Postcard:** take the second photo to be superimposed on the first taken photo for a postcard. ▶ p. 54

Camcorder (Menu *.2)

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

Recording a video

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

1. Access the **Camcorder** menu.
2. Select **Video Mail** to record a video suitable for messaging.
Select **Long Video** to record a video within the limit of the currently available memory.

The camcorder turns on and the display switches to Camcorder mode.

3. Make any desired adjustments.
 - Press **<Options>** to access camcorder options.
 - ▶ next section
 - Press [**▲/▼**] to flip the image vertically.
 - Press [Up] or [Down] to zoom in or out.
4. Press [**MENU OK**], **<Record>**, or [**Ⓜ\σ**] to start recording.
5. Press [**MENU OK**], **<Done>**, or [**Ⓜ\σ**] to end recording. The video is automatically saved in the **My Albums** folder.

Using camcorder options in Camcorder mode

In Camcorder mode, press **<Options>** to access the following options:

- **Movie Light:** determine the use of the flash.
- **Self-Timer:** set a time delay before the camcorder starts recording a video.
- **Color Tones:** change the colour tone.

- **Controls..**: adjust the brightness or white balance.
- **Settings..**: change the default settings for recording a video
 - Quality**: select an image quality setting.
 - View Mode**: select the preview mode.
- **Video Length**: select a recording mode. Selecting **Video Mail** allows you to record a video suitable for a picture mail.
- **Review Album**: access the **My Albums** folder.
- **Camera Mode**: switch to Camera mode.

Using video options

After saving a video clip, press <**Next**> to access the following options:

- **Send Msg**: send the video clip via Picture Mail service.
- **Play**: play the video clip.
- **Upload**: upload the video clip to your online album.

- **Assign**: set the video clip as wallpaper for the idle screen or as your ringtone for voice calls. You can also set the video clip as a caller ID image and ringtone for a Contacts entry.
- **Erase**: delete the video clip.
- **Camcorder**: return to Camcorder mode.
- **Review Album**: access the **My Albums** folder.


Picture Mail (Menu *.3)

Use this menu to access picture mail you have received, sent, or saved. ▶ p. 39

My Albums (Menu *.4)

Use this menu to access the photos or video clips in your phone's memory. You can also access your online album.

Viewing a photo

1. Select an album.
2. Scroll to a photo () and press <**Expand**>.


Using photo options

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

- **Send:** send the photo via Picture Mail service.
- **Upload:** upload the file to your online album.
- **Post to Service:** post your photo to an online third party service. This service will be available in late 2006.
- **Print..:** print the photo via a PictBridge-compatible printer. You can also send the photo to a printing service shop via Mail service or Print retails service.
- **Assign:** set the photo as a caller ID for a Contacts entry, as wallpaper for the idle screen, or as an image to be displayed when a call comes in.
- **Erase:** delete the file.
- **Detail/Edit:** change the file name or access file properties.

- **Album list:** return to the album list.
- **Media Filter:** select a filter to display photos or video clips, or both.
- **Camera Mode:** switch to Camera mode.

Playing a video clip

1. Select an album.
2. Scroll to a video clip ()
3. Press <**Options**> and select **Play**.

Using video options

When a video clip is selected, press <**Options**> to access the following options:

- **Play:** play the video clip.
- **Send:** send the video clip via Picture Mail service.
- **Upload:** upload the file to your online album.
- **Post to Service:** post the video clip to an online third party service. This service will be available in late 2006.

Menu functions

- **Assign:** set the video clip as wallpaper for the idle screen or as your ringtone for voice calls. You can also set the video clip as a caller ID image and ringtone for a Contacts entry.
- **Erase:** delete the file.
- **Detail/Edit:** change the file name or access file properties.
- **Album list:** return to the album list.
- **Media Filter:** select a filter to display photos or video clips, or both.
- **Camcorder:** switch to Camcorder mode.

Order Prints (Menu *.5)

Use this menu to send photos to a destination preset by your service provider, or a photo printing shop via Picture Mail service. This service will be available in late 2006.

PictBridge Print (Menu *.6)

Use this menu to print images via a PictBridge-compatible printer.

1. In Idle mode, press [**MENU OK**] and select **Pictures** → **PictBridge Print**.
2. Connect your phone to a printer via a PC data cable.
3. Press [**MENU OK**] to select the images you want and press <**Next**>.
4. Specify the following printing options:
 - **Copies:** select the number of copies to be printed.
 - **Type:** select a printing type, **Standard** or **Index**.
 - **Size:** select a page size.
 - **Date Print:** set the current date to be printed.
 - **Border On/Off:** set a page border to be printed.
5. Press <**Print**> to print the image.
6. Select **Yes** to confirm printing.

Settings and Info (Menu *.7)

Use this menu to change the default settings for using the camera or camcorder. You can also access your Picture Mail account information or memory information.

- **Status Bar:** hide or display the camera icons on the screen.
- **Account Info:** access your account information and memory information for picture mail or media items.
- **View Mode:** select a preview screen. When you turn on the camera or camcorder, the selected preview screen appears.

Contacts (Menu 0)

You can store phone numbers with associated names in your phone's memory called Contacts to make it easy for you to make a call without having to remember the phone number.

To access this menu, press [**MENU OK**] in Idle mode and select **Contacts**.

Find (Menu 0.1)

Use this menu to search for contact information in Contacts.

- You can quickly access this menu by pressing <**Contacts**> in Idle mode.

Finding a contact

1. Enter the first few letters of the name that you want to find.
2. Select the contact from the list.
3. Scroll to a number and press [**TALK**] to dial.

Using Contacts options

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

- **Edit:** edit contact information.
- **Prepend:** add an area code or service number before dialling the selected number.
- **Erase #:** delete the contact.
- **Send Contact:** send the contact.

Add New Entry *(Menu 0.2)*

Use this menu to add a new contact to Contacts.

1. Change the settings or enter information about the contact.
 - **Name:** assign a name.
 - **Phone number:** enter a number and select a number type.
 - **E-mail:** assign an e-mail address.
 - **URL:** enter a homepage address.
 - **Nickname:** assign a nickname.
 - **Memo:** add a memo about the person.

- **Group:** assign the contact to a caller group.
- **Ringer:** assign a ringtone to alert you to a call from the person.
- **Photo:** assign an image to alert you to a call from the person.

2. Press **<Done>** to save the contact.

Speed Dial #'s *(Menu 0.3)*

Once you have stored phone numbers in Contacts, you can set up to 99 speed-dial entries and then dial them easily by pressing the associated one or two number keys.

Assigning speed dial numbers

1. Enter the location number you want or scroll to the number. Key **1** is reserved for your voicemail server.
2. Press **<Assign>**.
3. Enter the first few letters of the name you want.
4. Select a contact from the list.

5. Select a number, if the contact has more than one number.

Managing speed dial entries

From the Speed dial list, scroll to an entry and press <**Options**> to access the following options:

- **Erase:** clear the selected speed dial setting for a key.
- **Erase All:** clear all speed dial settings.

Dialling speed dial numbers

- For 1-digit locations, press and hold the corresponding number key in Idle mode.
- For other locations, press the first number key and press and hold the last number key in Idle mode.

Group *(Menu 0.4)*

Use this menu to organise your contacts in caller groups.

Creating a new caller group

1. Scroll to an empty location.

2. Press <**Rename**>.
3. Enter a name for the group and press <**Done**>.

Adding members to a caller group

1. Select a group.
2. Press <**Options**> and select **Add member**.
3. Press [**MENU OK**] to select the contacts you want.
4. Press <**Done**>.

Managing caller groups

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

- **Add Member:** add members to the selected group.
- **Rename group:** change the group name.
- **Erase group:** delete the selected group. Group members, however, will not be deleted from Contacts.
- **Set Ringer:** assign a ringtone to alert you to a call from the group members.

My Name Card (Menu 0.5)

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

Saving your name card

1. Press <**Edit**>.
2. Enter your contact information.
3. Press <**Done**> to save the name card.

Sending your name card

You can send your name card to other people.

From the My Name Card screen, press <**Send Contact**>, or press <**Options**> and select **Send Contact**.

Settings (Menu #)

The **Settings** menu provides you with various setting options to customise the phone to your preferences and needs. You can also reset the settings to their default status.

To access this menu, press [**MENU OK**] in Idle mode and select **Settings**.

Display (Menu #.1)

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

Screen Saver (Menu #.1.1)

You can set up the idle screen on both displays.

- **Main LCD:** select an image or a video clip to be displayed on the main display.
- **Sub LCD:** select an image to be displayed on the external display.

Set Foreground (Menu #.1.2)

Use this menu to set the phone to display a function screen in the idle screen.

- **Digital Clock:** display the current date and time with a digital clock. You can change the item placement by pressing the Navigation keys.
- **Analog Clock:** display the current date and time with an analog clock.
- **Calendar:** display the current calendar. You can change the item placement by pressing the Navigation keys.
- **Others:** display your schedule items for the current date or all items on the calendar, tasks, or countdown timers.

Dialing Font (Menu #.1.3)

Use this menu to select a font type for the numbers entered while dialling. If you select **Basic**, select the font colour and size you want.

Incoming Call (Menu #.1.4)

Use this menu to select an image that will be displayed on the screen when you have incoming calls. You can identify incoming calls with the caller ID service by the image.

Greeting (Menu #.1.5)

Use this menu to set a greeting message to be displayed at the bottom of the display in Idle mode.

Backlight (Menu #.1.6)

You can change the backlight settings.

- **Main Display:** select the length of time the main display backlight stays on.
- **Keypad:** select the length of time the keypad backlight stays on.
- **Pwr Save Mode:** set whether or not the phone switches to Save mode when not use.
- **Brightness:** adjust the brightness of the main display for varying lighting conditions.

Service Light (Menu #.1.7)

Use this menu to activate or deactivate the use of the service light on the front of the phone. The service light blinks at regular intervals when your network is available.

Sounds (Menu #.2)

Use this menu to customise various sound settings.

Volume (Menu #.2.1)

Use this menu to select a ringer volume for incoming calls, message alert, alarms, or application alerts. You can also set the phone to vibrate the sound effect while playing a game.

- **Use Ringer Volume:** select this option to use a volume used in **Ringer**.
- **Separate Volume:** select this option to change a ringer volume:

Ringer Off: the phone does not ring.

1-Beep: the phone sounds a beep.

Level 1~8: select a volume for the call ringer. The more bars, the louder the volume.

- **Always Vibrate:** select this option to set the phone to vibrate.

Ringer Type (Menu #.2.2)

Use this menu to select a ringtone for incoming calls, message alert, scheduler alarm, or roaming alert.

Alerts (Menu #.2.3)

Use this menu to have the phone alert (beep) you to inform you that certain things have happened.

- **Minute Beep:** set the phone to beep every minute during an outgoing call to keep you informed of the length of your call.
- **Service:** set the phone to beep when you exit a service area or return to a service area.
- **Connect:** set the phone to beep when an outgoing call is connected to the system.
- **Sig. Fade Tone:** set the phone to beep when a dropped call occurs during conversation in response to fading signal strength.

- **Power On:** set the phone to beep when you turn it on.
- **Power Off:** set the phone to beep when you turn it off.

Key Tone (Menu #.2.4)

Use this menu to select the type and volume of tones that the keypad sounds each time you press a key.

- **Tone Type:** select a key tone.
- **key Tone Level:** select the volume level of the key tones.
- **Tone Length:** set short or long DTMF (dual-tone multi-frequency) tones to be sent to access teleservices, such as a bank account. If the service is digital, as most are, short DTMF tones will almost always work.

Internet (Menu #.3)

You can enable Internet service, activate the Net guard feature, or update a profile.

Enable Internet (Menu #.3.1)

The first time you access this menu, your phone will be automatically customised by the network so that you are allowed to access the network services. Disabling Internet service will avoid any charges associated with network services. While signed out, you can still place or receive phone calls, check voicemails, and use other voice services.

Net Guard (Menu #.3.2)

Use this menu to alert you each time the phone is connected to the wireless web. This helps you avoid connecting accidentally to the web.

Update Profile (Menu #.3.3)

Use this menu to update your connection profile to the latest profile.

Security (Menu #.4)

Use this menu to protect the phone against unauthorised use.

To access the **Security** menu, you must enter the phone password. The password is preset to the last 4-digit of your phone number.

Lock Phone (Menu #.4.1)

Use this menu to lock your phone.

- **Unlocked:** deactivate Lock mode.
- **On Power-Up:** lock the phone. Each time turning on the phone, you need to enter the password to use the phone.
- **Lock Now:** lock the phone just one time. Once the password is entered, the phone unlocks.

In Lock mode, you can only make calls to numbers on your Special # list or emergency calls. All other calls or use of the phone's menu functions are prohibited.

Lock Pic/Video (Menu #.4.2)

Use this menu to lock access to the **Pictures** menu.

Change Lock (Menu #.4.3)

Use this menu to change your phone password.

Special # (Menu #.4.4)

Use this menu to set up the list of phone numbers to which you can make calls when outgoing calls are restricted to the Special # list or when your phone is in Lock mode.

Erase Contacts (Menu #.4.5)

Use this menu to delete all entries in Contacts.

Erase My Content (Menu #.4.6)

Use this menu to delete all files and applications in the **My Content** menu.

Erase Pic/Video (Menu #.4.7)

Use this menu to delete all of the photos and video clips in the **My Albums** menu.

Reset Phone (Menu #.4.8)

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

1. Select **Yes**.
2. Select **Yes** again. The phone automatically turns itself off and then back on.

Lock Services (Menu #.4.9)

Use this menu to lock voice call functions or Internet access.

Launch Pad (Menu #.5)

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

1. Select a key to be used as a shortcut key.
2. Select a menu to be assigned to the key.

Others (Menu #.6)

You can customise various phone settings.

Call Setup (Menu #.6.1)

Use this menu to set up the call options.

- **Abbrev. Dial:** set a 5- or 6-digit prefix to the phone number when dialling. You just need to enter the last 4 or 5 digits of any phone number and the phone adds the entered prefix to dial the number.
- **Restriction:** restrict outgoing calls.
 - Allow all:** the phone restricts all outgoing calls.
 - Contacts Only:** the phone make a call to only those phone number saved in Contacts.
 - Special# Only:** the phone make a call to only the phone numbers specified in the Special # list.
 - ▶ p. 66

- **Call Answer:** set how to answer incoming calls.
Any Key: the phone answers calls when you press any key, except for <Ignore>, [END], and [▲/▼].
Talk Key: the phone answers calls when you press <Answer> or [TALK].
Flip Open: the phone answers calls when you open the phone. If the phone is already is open, press <Answer> or [TALK].
- **Auto Answer:** set the phone to automatically answer calls after a specified time when you use the headset or an optional hands-free car kit.

Airplane Mode (Menu #.6.2)

Use this menu to switch the phone to Airplane mode, in which the phone functions requiring network connections are deactivated. You can use non-wireless functions, such as, scheduler, games, contacts, and voice recorder on an airplane during flight.

If you select **On Power Up**, the phone will automatically switch to Airplane mode each time you turn it on.

Key Guard (Menu #.6.3)

You can prevent accidental key presses by using Key Guard mode.

To activate Key Guard mode, select the period of time your phone waits for before locking the keypad.

When you have an incoming call or the time for an alarm comes in Key Guard mode, the mode is automatically deactivated and the phone goes to Idle mode. It will be automatically activated after the specified amount of time when you end the call or stop the alarm.

Once Key Guard mode is activated, you can temporarily unlock the exposed keys by pressing and holding [▲/▼] and [☎\☎] at the same time.

Audio Routing (Menu #.6.4)

Use this menu to change the sound output on the phone. If you select **Headset Only**, you need to plug the headset into your headset jack to make or receive calls.

TTY Options (Menu #.6.5)

A TTY (also known as a TDD or Text Telephone) is a telecommunications device that allows people who are deaf, hearing impaired, or who have speech or language disabilities, to communicate by telephone.

Your phone is compatible with TTY devices. Please check with the manufacturer of your TTY device to ensure that it supports digital wireless transmission. Your phone and TTY device will connect via a special cable that plugs into your phone's headset jack. If this cable was not provided with your TTY device, contact your TTY device manufacturer to purchase the connector cable.

- If TTY mode is enabled, the audio quality of non-TTY devices connected to the headset jack may be impaired.

The following options are available:

- **TTY Full:** you can type what you want to say and receive printed messages of what the person on the phone is saying.

- **TTY+Hear:** you can receive printed messages of what the person on the phone is saying.
- **TTY+Talk:** you can type what you want to say.
- **TTY Off:** deactivate TTY mode.

Location (Menu #.6.6)

The Location service allows the network to determine your current location. Use this menu to activate or deactivate the service.

Phone Info (Menu #.7)

Use this menu to access your phone information.

- **Phone Number:** check your phone number.
- **Icon Glossary:** view the icon information to be displayed on the screen when you use the phone.
- **Version:** view the software version on your phone.
- **Advanced:** access the advanced information of your phone.

Help and personal needs

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

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

Your correspondent cannot reach you

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

Your correspondent cannot hear you speaking

- Be sure that you have switched on the microphone.
- Be sure that you are holding the phone close enough to your mouth. The microphone is located at the bottom of the phone.

The phone starts beeping and “Low Battery Recharge Soon” 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 **Find** menu to ensure the number has been stored correctly.
- Re-store the number, if necessary.

The battery does not charge properly or the phone sometimes turns itself off

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

If the above guidelines do not help you to solve the problem, take note of:

- The model and serial numbers of your phone
- Your warranty details
- A clear description of the problem

Then contact your local dealer or Samsung after-sales service.

SAR certification information

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 FCC exposure limits are derived from the recommendations of two expert organizations, the National Council on Radiation Protection and Measurement (NCRP) and the Institute of Electrical and Electronics Engineers (IEEE). In both cases, the recommendations were developed by scientific and engineering experts drawn from industry, government, and academia after extensive reviews of the scientific literature related to the biological effects of RF energy.

The exposure limit set by the FCC for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR is a measure of the rate of absorption of RF energy by the human body expressed in units of watts per kilogram (W/kg).

The FCC requires wireless phones to comply with a safety limit of 1.6 watts per kilogram (1.6 W/kg). The FCC exposure limit incorporates a substantial margin of safety to give additional protection to the public and to account for any variations in measurements.

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 exposure limit established by the FCC. Tests for each model phone are performed in

positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

The highest SAR values for this model phone as reported to the FCC are

Head : 1.42 W/Kg, Body-worn: 0.541 W/Kg.

For body worn operation, this model phone has been tested and meets the FCC RF exposure guidelines when used with a Samsung accessory designated for this product or when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body. Non-compliance with the above restrictions may result in violation of FCC exposure guidelines.

The FCC has granted an Equipment Authorization for this mobile phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on

file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID A3LSPHA420A.

Consumer Information on Wireless Phones

The U.S. Food and Drug Administration (FDA) has published a series of Questions and Answers for consumers relating to radio frequency (RF) exposure from wireless phones. The FDA publication includes the following information:

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.

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.

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.

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 absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phones 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.

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 ten 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.

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 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.

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.

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.

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.

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.

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 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.

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.gov/SLTC/radiofrequencyradiation/index.html>
- National institute for Occupational Safety and Health (NIOSH):
- <http://www.cdc.gov/niosh/emfpg.html>
- World health Organization (WHO):
- <http://www.who.int/peh-emf/>
- International Commission on Non-Ionizing Radiation Protection:
- <http://www.icnirp.de>
- National Radiation Protection Board (UK):
- <http://www.nrpb.org.uk>
- Updated 4/3/2002: US food and Drug Administration
- <http://www.fda.gov/cellphones>

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 additional 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 address book takes 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 people you are talking with aware 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 9-1-1 or other local 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 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 non-emergency wireless assistance number when necessary. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured, or a vehicle you know to be stolen, call roadside assistance or other special non-emergency number.

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

For more information, please call 1-888-901-SAFE, or visit our web-site www.wow-com.com

Provided by the Cellular Telecommunications & Internet Association

Operating Environment

Remember to follow any special regulations in force in any area and always switch your phone off 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).

Using Your Phone Near Other 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 your phone off 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 your phone off 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 your phone off in any facility where posted notices require you to do so.

Potentially Explosive Environments

Switch your phone off 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 the phone off 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:

If the phone is not on, switch it on.

Key in the emergency number for your present location (for example, 911 or other official emergency number). Emergency numbers vary by location.

If certain features are in use (call barring, for example), you may first need to deactivate those features before you can make an emergency call. Consult this document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible. Remember that your phone may be the only means of communication at the scene of an accident; do not cut off the call until given permission to do so.

Restricting Children's access to your Phone

Your phone is not a toy. Children should not be allowed to play with it because they could hurt themselves and others, damage the phone or make calls that increase your phone bill.

FCC Notice and Cautions

FCC Notice

- This device complies with Part 15 of the 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.
- 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.

The phone may cause TV or radio interference if used in close proximity to receiving equipment. The FCC can require you to stop using the phone if such interference cannot be eliminated.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this

standard, contact the National Fire Protection Association, One Battery March Park, Quincy, MA 02269, Attn: Publication Sales Division.

Cautions

Changes or modifications made in the radio phone, not expressly approved by Samsung, will void the user's authority to operate the equipment.

Only use approved batteries, antennas and chargers. The use of any unauthorized accessories may be dangerous and void the phone warranty if said accessories cause damage or a defect to the phone.

Although your phone is quite sturdy, it is a complex piece of equipment and can be broken. Avoid dropping, hitting, bending or sitting on it.

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 your phone off before boarding an aircraft. The use of wireless phone in aircraft is illegal and may be dangerous to the aircraft's operation.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Product Performance

Getting the Most Out of Your Signal Reception

The quality of each call you make or receive depends on the signal strength in your area. Your phone informs you of the current signal strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal.

If you're inside a building, being near a window may give you better reception.

Understanding the Power Save Feature

If your phone is unable to find a signal after 15 minutes of searching, a Power Save feature is automatically activated. If your phone is active, it periodically rechecks service availability or you can check it yourself by pressing any key.

Anytime the Power Save feature is activated, a message displays on the screen. When a signal is found, your phone returns to standby mode.

Maintaining Your Phone's Peak Performance

For the best care of your phone, only authorized personnel should service your phone and accessories. Faulty service may void the warranty.

There are several simple guidelines to operating your phone properly and maintaining safe, satisfactory service.

- Hold the phone with the antenna raised, fully-extended and over your shoulder.
- Try not to hold, bend or twist the phone's antenna.
- Don't use the phone if the antenna is damaged.
- Speak directly into the phone's receiver.

- Avoid exposing your phone and accessories to rain or liquid spills. If your phone does get wet, immediately turn the power off and remove the battery. If it is inoperable, call Customer Care for service.

Availability of Various Features/Ring Tones

Many services and features are network dependent and may require additional subscription and/or usage charges. Not all features are available for purchase or use in all areas. Downloadable Ring Tones may be available at an additional cost. Other conditions and restrictions may apply. See your service provider for additional information.

Battery Standby and Talk Time

Standby and talk times will vary depending on phone usage patterns and conditions. Battery power consumption depends on factors such as network configuration, signal strength, operating temperature, features selected, frequency of calls, and voice, data, and other application usage patterns.

Battery Precautions

- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the phone near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.
- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0 °C (32 °F).
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.

- Dispose of used batteries in accordance with local regulations. In some areas, the disposal of batteries in household or business trash may be prohibited. For safe disposal options for Li-Ion batteries, contact your nearest Samsung authorized service center. Always recycle. Do not dispose of batteries in a fire.

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 your phone and all its parts and accessories out of the reach of small children and pets. They may accidentally damage these things or choke on small parts.
- Keep the phone dry. Precipitation, humidity, and liquids contain minerals that 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.
- 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, stove, or radiator. The phone may explode when overheated.
- When the phone or battery gets wet, the label indicating water damage inside the phone changes colour. In this case, phone repairs are no longer guaranteed by the manufacturer's warranty, even if the warranty for your phone has not expired.
- If your phone has a flash or light, do not use it too close to the eyes of people or animals. This may cause damage to their eyes.
- 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.