



ENGLISH



User Guide

LG-A447



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# LG-A447 User Guide



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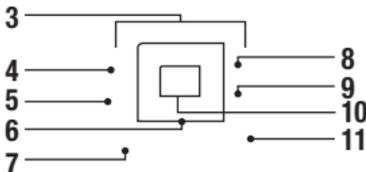
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# Your Phone

## Phone Components

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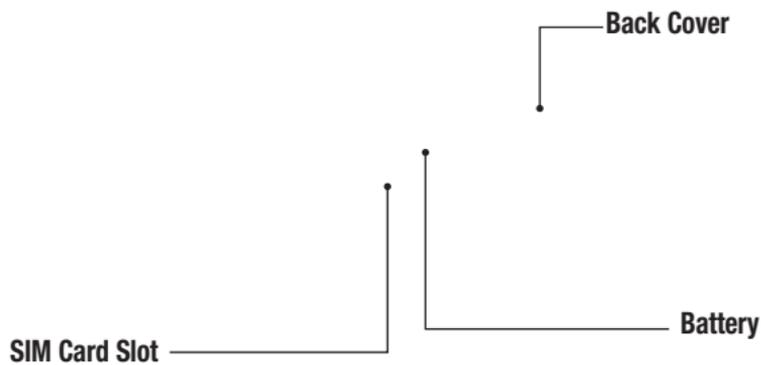
Press and hold to  
activate/deactivate  
Vibrating Mode.

# Your Phone

- 1. Earpiece:** Lets you hear the caller during a call.
- 2. Main LCD:** Displays phone status icons, menu items, web items, web information, pictures and more, in full color.
- 3. Left Soft Key/Right Soft Key:** Each of these keys perform the functions indicated by the text on the display immediately above them.
- 4. Camera Key:** Lets you activate the Camera and take pictures.
- 5. Message Hot Key:** Trigger this key to directly go to **Create Message**.
- 6. Navigation Keys**  
Home screen functions:
  -  Games & Apps
  -  Contacts
  -  Alarm Clock
  -  Music

- In a menu: Navigates between menus.
- 7. Send Key:** Press this key in standby mode to quickly access the most recent missed, dialed, and received calls. Also dials a call when you enter a number.
- 8. Clear/Back Key:** Allows you to return to the previous screen. Press and hold to activate the Voice Command function.
- 9. TTS Mode Key:** Lets you turn the TTS mode on/off.
- 10. OK Key:** Select options and menus.
- 11. End/Power Key:** Allows you to power the phone on or off, end calls, or return to standby mode.
- 12. Volume Keys:** Allows you to control the Master Volume while in standby mode and the earpiece volume during a call.
- 13. Charger/USB Port:** Allows you to connect a charger or other supported accessories.

## Rear view



# Getting Started

## Installing the SIM card and battery

### 1. Remove the back cover

Place your thumb at the top part of the back cover and slide it downwards to remove it.

### 2. Remove the battery

Hold the top edge of the phone and use the fingernail cutout near the bottom of the battery to lift the battery from the phone.

#### **Warning**

Do not remove the battery when the phone is turned on; this can damage the phone.

### **3. Install the SIM card**

Slide the SIM card into the SIM card slot (as shown below). Make sure that the gold contact area on the card is facing downwards. To remove the SIM card, pull it gently in the opposite direction.

### **4. Install the battery**

Insert the top of the battery first into the top edge of the battery compartment. Ensure that the battery contacts align with the terminals on the phone. Press the bottom of the battery down until it snaps into place.

### **5. Install the back cover**

Align the back cover on the battery compartment and slide it upwards until it locks into place.

# Getting Started

## Battery Information and Care

Always unplug the charger from the wall socket after the phone is fully charged to save unnecessary power consumption of the charger.

## Charging your phone

Locate the Charger/USB Port on the left side of your phone. Insert the charger connector to the phone (the 'B' side of the connector has to be facing up when connecting to the phone) and then plug into the wall socket. Your LG-A447 will need to be charged until the Full Battery message appears on the screen.

### **Important!**

You must insert the battery before charging.

### **Warning**

Use of unauthorized accessories could damage your phone and void your warranty.

## On-Screen Icons

The table below describes various display indicators or icons that appear on the phone's display screen.

ICON/ INDICATOR	DESCRIPTION
	Network signal strength (number of bars will vary)
	No network signal
	Low Battery
	New text message
	New email
	An alarm is set
	Ring profile in use
	Silent All profile in use
	EDGE network available
	Bluetooth is active
	3G network available
	The browser is active

ICON/ INDICATOR	DESCRIPTION
	Vibrating Mode On
	Speakerphone
	Call in Progress
	Voicemail
	Battery Full
	Battery Charging
	Flight Mode On
	Camera in use
	Camcorder in use
	Camcorder timer

# General Functions

## Before you begin

Remember that you can select the menu icons from Menu screen using the number keys if you set the Menu Style as **List**. If you set the Menu Style as **Icon**, you can only use the Navigation Keys to select the menu icons.

## Making a Call

- 1 Make sure your phone is powered on.
- 2 Enter a phone number including the area code. To edit a number on the display screen, simply press the Clear/Back Key  to erase one digit at a time.
  - ▶ Press and hold the Clear/Back Key  to erase the entire number.
- 3 Press the Send Key  to call the number.
- 4 To end the call, press the End/Power Key .

## Making a Call with the Send Key

- 1 Press the Send Key  to display the most recent missed, dialed and received calls will be displayed.
- 2 Highlight the desired number by using the Navigation Keys.
- 3 Press the Send Key .

## Making International Calls

- 1 Press and hold the  key and the international access character '+' will appear.
- 2 Enter the country code, area code, and the phone number.
- 3 Press the Send Key  to call the number.

## Ending a Call

To end a call, press the End/Power Key .

## Making a Call from the Contacts

You can store frequently called names and phone numbers in the SIM card as well as in your Contacts List.

You can dial a number by simply highlighting a name in the Contacts List and pressing the Send Key .

- 1 Press the down Navigation Key  to access the Contact List.
- 2 Highlight the Contact and press the Send Key .

## Answering a Call

When you receive a call, the phone displays a notification on the screen and rings and/or vibrates. If the caller can be identified, the caller's phone number (or name, if stored in your Contacts) is displayed.

- 1 Press the Send Key  or the Left Soft Key  **Accept** to answer an incoming call.

If the **Answer Mode** has been set as

**Any Key** (  **Menu** > **Settings** >  **Call** >  **Answer Mode**), any

key press will answer a call, except for the End/Power Key , the Right Soft Key , or the Volume Keys.

- 2 End the call by pressing the End/Power Key .

### Note

You can answer a call while using other functions or features.

## Adjusting the Volume

Use the Volume Keys during a call to adjust the earpiece volume.

While in standby mode, you can adjust the Master Volume using the Volume Keys.

# General Functions

## Vibrating Mode (Quick)

Vibrating Mode can be activated by pressing and holding down the  key.

## Signal Strength

If you are inside a building, being near a window may give you better reception. You can see the strength of your signal by the signal indicator on your phone's display screen.

## Entering Text

You can enter alphanumeric characters by using the phone's keypad. For example, storing names in the Contacts, writing a message, or scheduling events in the calendar all require text to be entered.

## Changing the Text Input Mode

Change the text input mode by pressing  when in a text entry field.

You can check the current text input mode in the upper right corner of the screen.

The following text input modes are available on the phone.

## ABC Mode

This mode allows you to enter letters by pressing the key labeled with the required letter.

## 123 Mode (Numbers Mode)

Type numbers using one keystroke per number. To change to 123 mode in a text entry field, press the  key until 123 mode is displayed in the upper right corner.

## Symbol Mode

The Symbol Mode enables you to enter various symbols or special characters. To enter a symbol, press the  key. Use the Navigation Keys to highlight the desired symbol and press the OK Key .

## Using the ABC Mode

Use the alphanumeric keypad to enter your text.

- 1 Press the key labeled with the required letter.
- 2 To insert a space, press the  key once. To delete letters, press the Clear/Back Key . Press and hold down the Clear/Back Key  to erase all of the entered text.

### Note

Refer to the table below for more information on the characters available using the keys.

Key	Characters in the Order Displayed	
	Upper Case	Lower Case
1	., ' @?!- : / 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

Key	Characters in the Order Displayed	
	Upper Case	Lower Case
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	Space Key, 0 (Long press)	Space Key, 0 (Long press)

## Using the 123 (Numbers) Mode

The 123 Mode enables you to enter numbers in a text message (a telephone number, for example) more quickly. Press the keys corresponding to the required digits before manually switching back to the appropriate text entry mode.

# In-Call Menu

## During a Call

Your phone provides a number of control functions that you can use during a call. To access these functions during a call, press the Left Soft Key  **Options**.

## Making a Second Call

You can select a number you wish to dial from the Contacts to make a second call.

- 1 Press the Left Soft Key  **Options**, then select **Contacts**.
- 2 Highlight the contact, then press the Send Key  to make a second call.

## Swapping Between Two Calls

Once the second call has been dialed (or answered), you can switch between the calls by using one of the following three methods:

- ▶ Press the Send Key .
- ▶ Press the Left Soft Key  **Options** and then select **Swap Calls**.
- ▶ Press the up or down Navigation Keys.

## Answering an Incoming Call

To answer an incoming call when the handset is ringing, simply press the Send Key . The handset is also able to warn you of an incoming call while you are already on a call. A tone sounds in the earpiece and the display will show that a second call is waiting. This feature, known as **Call Waiting**, is only available if your network supports it.

If Call Waiting is turned on, you can put the first call on hold and answer the second call by pressing the Send Key .

## Rejecting an Incoming Call

You can reject an incoming call without answering by simply pressing the End/Power Key .

## Muting the Microphone

You can mute the microphone during a call by pressing the Right Soft Key  **Mute**.

The handset can be unmuted by pressing the Right Soft Key  **Unmute**. When the handset is muted, the caller cannot hear you, but you can still hear the caller.

## Using the Speakerphone

You can use the integrated Speakerphone during a call by pressing the OK Key .

**Spk. On.** The loudspeaker is automatically deactivated when you end the call.

### Warning

Due to increased volume levels, do not place the phone near your ear while the speakerphone is enabled.

# Contacts

## Contact List

This menu allows you to save and manage contact address information. The Contact List allows you to add a new address or search saved contact addresses by name.

To access Contact List, from the standby screen, press the Left Soft Key  **Menu**, **Contacts** and  **Contact List**.

## New Contact

This menu allows you to add a new contact to the Contact List. You can enter contact address information including name, phone numbers, email addresses, group information items, memos, ring tones, and a contact Picture ID.

To access New Contact, from the standby screen, press the Left Soft Key  **Menu**, **Contacts** and  **New Contact**.

## Groups

This menu allows you to manage group information. You can also configure a ring tone for a group so that the group ring tone sounds when a call from a specific contact address within that group is received and there is no ring tone configured for the specific contact address.

To access Groups, from the standby screen, press the Left Soft Key  **Menu**, **Contacts** and  **Groups**.

## Speed Dial

This menu allows you to assign a frequently-called contact to the Speed Dial List. You can select a number from 2 to 9 as a speed dial.

To access Speed Dial List, from the standby screen, press the Left Soft Key  **Menu**, **Contacts** and  **Speed Dial**.

## SIM Management

This menu allows you to copy information from your SIM card to your handset and vice versa. If a name is duplicated during the copying operation, the information is also duplicated. You can also delete information from the SIM card.

To access SIM Management, from the standby screen, press the Left Soft Key  **Menu, Contacts** and  **SIM Management.**

## Own Number

This displays your phone numbers stored in the SIM card.

To access Own Number, from the standby screen, press the Left Soft Key  **Menu, Contacts** and  **Own Number.**

## My Business Card

This displays your business card stored in the handset. You can also delete or edit it.

To access My Business Card, from the standby screen, press the Left Soft Key  **Menu, Contacts** and  **My Business Card.**

# Messages

This menu includes functions related to SMS (Short Message Service), MMS (Multimedia Message Service), Voicemail as well as the network's service messages.

## Create Message

- 1 From the standby screen, press the Left Soft Key  **Menu**.
- 2 Select **Messages**.
- 3 Press  **Create Message**.

### OR

You can simply press the Message Hot Key  from the standby screen.

#### Note

If you insert a Picture, Audio, or Video file while writing a multimedia message, the file loading time will take about 5 seconds. You will not be able to activate any key during the file loading time. When the file loading is complete, you will be able to write a multimedia message.

## Editing a message

The following options are available when editing a message.

### Using Insert

While entering text, press the Right Soft Key  **Insert**. The following options are available.

- ▶ **Symbol:** You can insert various symbols into your message. Pressing the Left Soft Key  and Right Soft Key  scrolls through the pages.
- ▶ **Picture:** You can select a picture to insert by using the Navigation Keys. You can preview the selected picture by pressing the Right Soft Key  **View**.
- ▶ **Audio:** You can insert an audio file from your saved audio files.
- ▶ **Video:** You can insert a video clip from your saved video clips.
- ▶ **Take New Picture:** You can take and insert a picture in your message.

► **Record New Audio:** You can record a new audio clip by pressing the OK Key  **Record**. Press the Left Soft Key  **Options** before you begin recording to set the options (below). After recording a new audio clip, you can delete it by pressing the Left Soft Key  **Discard**.

- **Quality:** Set the audio's quality to **Fine**, **Normal**, or **Economy**.
- **Record New Video:** You can record a new video by pressing the OK Key  **Rec**. When finished recording, press the OK Key  **Insert**.
- **Slide:** Allows you to insert another slide before or after the current slide.
- **Template**
  - **Text:** Allows you to easily insert frequently used sentences in the text message.

- **Multimedia:** Preset multimedia templates can be created (  **Menu** > **Messages** >  **Message Settings** >  **Multimedia Message** >  **Multimedia Templates** >  **New**).
- **Signature:** Allows you to insert your own created signature.
- **More:** Allows you to insert vCard, vCalendar, vNote, vTask or Contact.

#### Note

vCard, vCalendar, vNote and vTask are created by the Contacts, Calendar, Notepad, and Tasks functions, respectively. Go to the Tools and Contacts sections in this Manual for more detailed information.

# Messages

## Using Options

While entering text, press the Left Soft Key

 **Options.**

- **Text Entry Mode:** Sets the text input mode. For more details, refer to Entering Text (page 14).
- **Text Entry Settings**
  - **Text Entry Language:** Allows you to set the text entry language to English or Spanish.
  - **T9 Word Candidate List:** Displays the word candidates as you type.
  - **T9 Next Word Prediction:** Allows the phone to predict the next word when typing in T9 mode.
  - **T9 Dictionary:** Allows you to add, delete, reset, and modify words.

**Save to Drafts:** Saves the message to Drafts.

**Cancel Message:** Allows you to exit the text input mode without saving your message.

## Sending a Message

After completing a message, press the OK Key  **Send To** to select a recipient.

- Enter the recipient(s). For more options, press the Left Soft Key  **Options.** In this menu, you can choose from the following options:
  - **Enter Number:** Allows you to enter the phone number using the keypad.
  - **Enter Email:** Allows you to enter an email address instead of a phone number.
  - **Insert Symbol:** Allows you to enter symbols.
  - **Caller Groups:** Displays Contacts Groups.
  - **Recent Messages:** Choose a Contact from Recent Messages.
  - **Recent Calls:** Choose a Contact from Recent Calls.
  - **Delivery Options:** Allows you to set the options for Add Cc and Add Bcc.
  - **Save to Drafts:** Saves the selected message to Drafts.

- **Text Entry Mode**
- **Text Entry Settings**
- **Cancel Message:** Allows you to cancel the message.

## Inbox

You will be alerted when you receive a message. New messages are stored in the Inbox. In the Inbox, you can identify each message by icons. If you are notified that you have received a multimedia message, you can download the whole multimedia message by selecting it in the Inbox menu. To reach the Inbox, from the standby screen, press the Left Soft Key  **Menu** > **Messages** >  **Inbox**.

When you press the Right Soft Key  **Reply**, you can reply to the sender of the message.

While viewing the Inbox, press the Left Soft Key  **Options** for the following options:

- ▶ **Add to Contact:** You can save the sender's phone number in the Contact List.

- ▶ **Delete:** You can delete the selected message.
- ▶ **Forward:** You can forward the selected message to another person.
- ▶ **Copy to SIM:** You can copy to Phone or SIM depending on where the text message is stored.
- ▶ **Move to SIM:** You can move to Phone or SIM depending on where the text message is stored.
- ▶ **Select Multiple:** You can select multiple messages.
- ▶ **Sort By:** Allows you to sort the messages by date, sender, read/unread, or subject.
- ▶ **Message Details:** You can view the following information about received messages: message Type, Subject, From, and message Time.
- ▶ **Delete All Read Msg:** You can delete all read messages.

# Messages

## Drafts

Allows you to view and edit the messages saved as drafts. To access drafts, from the standby screen, press the Left Soft Key

 **Menu, Messages,** and  **Drafts.**

When you press the Right Soft Key  **Delete,** it allows you to delete the message.

While viewing the Drafts, press the Left Soft Key  **Options** for the following options:

- ▶ **Select Multiple:** Allows you to select multiple messages to delete.
- ▶ **Message Details:** Allows you to view the details of the message.

## Outbox

Outbox is the storage place for recently sent messages. When you press the Send Key , you can call the recipient of the selected message.

If the message is not sent from the Outbox, you will receive a sound alert along with a Message Sending Failure notice on the screen. Another attempt will be made to send the failed message and after two

unsuccessful attempts, the message will no longer be sent automatically.

To access the Outbox, from the standby screen, press the Left Soft Key  **Menu, Messages,** and  **Outbox.**

The following options are available for the Outbox folder by pressing the Left Soft Key

 **Options:**

- ▶ **View Status:** Display the status of message.
- ▶ **Delete:** Deletes the selected message.
- ▶ **Edit:** Allows you to edit the selected message.
- ▶ **Select Multiple:** Allows you to select multiple messages to delete.
- ▶ **Sort By:** Allows you to sort the messages by date and recipient.
- ▶ **Message Detail:** Allows you to view the details of the message.

Press the Right Soft Key  **Resend** to send the selected message to another.

## Message Settings

To access and configure your Message Settings, from the standby screen, press the Left Soft Key  **Menu, Messages**, and  **Message Settings**.

### Message Alert

Allows you to set the Sounds, Volume, Alert Type, and Alert Interval.

### Save To

Allows you to choose whether to save to the SIM Card or the Phone.

### Signature

Allows you to create, edit, and delete your signature, which can be configured to be sent out with your outgoing messages.

## Text Message

Allows you to set preferences for text messages.

The following options are available:

- ▶ **Text Templates:** Predefined messages that can quickly be sent. Press the Left Soft Key  **Options** to access the following available options:
  - **Send:** Allows you to send the selected template via Message.
  - **Delete:** Allows you to delete the selected template message.
  - **Edit:** Allows you to edit the selected template message.
  - **Delete All:** Deletes all messages in the folder.
  - **Cancel:** Cancel the template you were creating.

# Messages

- ▶ **Msg Center No.:** Allows you to view and edit the phone number for the Message Center. Do not edit unless instructed to do so by your service provider.
- ▶ **Email Gateway:** Allows you to view and edit the Email Gateway. Do not edit unless instructed to do so by your service provider.
- ▶ **Insert Signature:** Allows you to turn the Signature feature on or off.

## Multimedia Message

Allows you to set your preferences for multimedia messages.

The following options are available:

- ▶ **Multimedia Templates:** Allows you to add, edit, and delete multimedia templates. Press the Right Soft Key  **New** to create a new multimedia template. Press the Left Soft Key  **Options** while creating a message to access the following available options:
  - **Text Entry Mode:** Sets the text input mode. For more details, refer to Entering Text (page 14).

- **Text Entry Settings**

- **Text Entry Language:** Allows you to set the text entry language to English or Spanish.
- **T9 Word Candidate List:** Displays the word candidates as you type.
- **T9 Next Word Prediction:** Allows the phone to predict the next word when typing in T9 mode.
- **T9 Dictionary:** Allows you to add, delete, reset, and modify words.
- **Cancel:** Allows you to exit the text input mode without saving your message.

## Voicemail

This menu allows you to set the Voicemail Center Number if this feature is supported. Please check with [your service provider](#) for details of their service in order to configure the handset correctly.

# Music

## Music

You can access Music by pressing the Left Soft Key  **Menu** and selecting **Music**.

The following options are available:

- ▶ **All Songs:** Allows you to view all the songs in your music library.
- ▶ **Playlists:** Allows you to create your own playlists.
- ▶ **Artists:** Shows the list of artists of all the songs in your music library, and shows all the songs by a chosen artist.
- ▶ **Albums:** Shows the list of albums of all the songs in your music library, and shows all the songs on a chosen album.
- ▶ **Genres:** Shows the list of genres of all the songs in your music library, and shows all songs of a specific genre.
- ▶ **Shuffle Songs:** Allows you to play all the songs in your music library in random order.

### Tip!

The music player plays formats such as MP3, AAC, AAC+, and WMA.

### Note

Music files may be protected by copyright and intellectual property laws. Please ensure that you adhere to the applicable Terms of Use of materials laws prior to downloading or copying files.

## Playing Music

To listen to music that you have in your phone, follow these quick easy steps:

- 1 Press the Left Soft Key  **Menu** to open the Main Menu.
  - 2 Select **Music** and then choose from **Now Playing**, **All Songs**, **Playlists**, **Artists**, **Albums** and **Genres** or **Shuffle Songs** to shuffle your collection.
- Press the OK Key  **Play/Pause** to play and pause a selected song. While playing, press the up or down Navigation Keys to change the volume and the left or right Navigation Keys to go to the previous or next song.

# Music

- While playing music, press the Left Soft Key  **Options** to access other functions while music is playing.

## Adding Music To Your Handset

Music files can be added to your handset by using one or more of the following methods:

- Download music and ringtones over the network directly to your device.
- From your PC using music subscription services.

### Note

Some sites are data intensive (i.e. previews via streaming) so the user should be enrolled in an unlimited data plan before using these services to avoid per-use data charges.

Additional charges may apply when downloading music, ringtones, etc.

## Additional Music Services

There may be other music applications preloaded or available for your phone that allow you to:

- Identify the name, artist, and album to a song from a song sample.
- Listen to the latest Classic, jazz, pop, rock anywhere you go.
- View the latest music videos.
- View music news and information.
- Cut custom-made ringtones from the favorite parts of your favorite songs, etc.

## Recent Calls

This menu allows you to see the list of recently received calls. To access Recent Calls, from the standby screen, press the Left Soft Key  **Menu** and **Recent Calls**.

You can access the following menus:  
All Calls, Missed Calls, Dialed Calls, and Received Calls.

## Games & Apps

This menu allows you to download or access the various games.

To access the Games, from the standby screen, press the Left Soft Key  **Menu** and **Games & Apps**.

# Email

## Sending an email using your new account

To send/receive an email, you should set up an email account.

- 1 Press the Left Soft Key  **Menu**, select **Email** and choose the account you want to use.
- 2 Press the Left Soft Key  **Options** and choose  **Write Email** to write an email.
- 3 Enter the recipient's address in the **To** field. Then use the down Navigation Key to access the Subject and Messages fields.
- 4 Enter your message using the keypad and press the OK Key  **Send** to send the email.

## Retrieving your email

- 1 Press the Left Soft Key  **Menu**, and select **Email**.
- 2 Select the account you want to use.
- 3 Press the Left Soft Key  **Options** and select  **Refresh** to connect to your email account and retrieve your new messages.

### Note

You can manually retrieve your email only if you set to Push Off.

## Message folders

Open **Email**, press the Left Soft Key  **Options**, and select  **Mailbox**. The list of folders will be displayed.

**Write Email** - Create your new message.

**Inbox** - All the e-mails you receive are placed into your Inbox. From here you can reply, forward and more.

**Drafts** - If you don't have time to finish writing a e-mail, you can save what you have written so far in here.

**Outbox** - This is a temporary storage folder while e-mail are being sent or stores the messages that are failed to sent.

**Sent** - Copies of all the e-mail you send are kept into your Sent folder.

**Trash** - All the e-mail you remove are placed into your Trash.

## Changing your email settings

1 Press the Left Soft Key  **Menu**,  
choose **Email** > Left Soft Key   
**Options** >  **Mailbox** >   
**Options** >  **Settings**.

2 Set any of the following options.

**Accounts** - You can edit e-mail account settings.

**Schedule** - Allows you to configure the email schedule.

**Notification** - Choose whether or not to be alerted to new emails.

**Default Account** - Choose which account to compose e-mail by default.

**Signature** - Create an email signature and switch this feature on.

# Camera

To access Camera from the standby screen, press the Left Soft Key  **Menu** and select **Camera**.

## Take Photo

Using the camera you can take pictures of people or events while on the move. Additionally, you can send photos to other people in a picture message.

The following options will appear (as icons) at the bottom of the screen.

- ▶  **Album:** Allows you to see saved image and video files.
- ▶  **Video:** Allows you to switch to Camcorder mode.
- ▶  **Capture:** Allows you to capture the image.
- ▶  **Zoom:** Allows you to set the zoom level.
- ▶  **Brightness:** Allows you to set the Brightness.

Press the Right Soft Key  **Settings** for the following options:

## Preview Tab

- ▶ **Image Size:** The resolution of the image can be captured in 1280\*960, 640\*480, 320\*240.
- ▶ **Color Effects:** Allows you to choose from Off, Mono, Sepia, or Negative.
- ▶ **White Balance:** Set the White Balance as Auto, Daylight, Cloudy, Illuminate, or Indoors.
- ▶ **Night Mode:** Set Night Mode to On or Off.
- ▶ **Timer:** Timer can be set to Off, 3 Seconds, 5 Seconds, or 10 Seconds.
- ▶ **Shot Mode**
  - **Normal:** This set as normal camera mode.
  - **Continuous Shot:** This is great for taking photos of moving objects or at sporting events. The continuous shot is only available in QVGA(320x240) mode and can be set to 3, 6, or 9 shots per event.

- ▶ **Image Quality:** The quality of the captured image can be set to Super Fine, Fine, or Normal.

## Others Tab

- ▶ **Shutter Tones:** You can choose from Tone 1, Tone 2, Tone 3, or Off.
- ▶ **Reset settings:** Allows you to set the Camera to the default settings.

## Using Zoom

In Camera mode, you can zoom in and out by using the up and down Volume Keys. The maximum zoom scale depends on the resolution as follows.

Resolution	Zoom scale
1280*960	Not Available
640*480	Level 1 ~ Level 10
320*240	Level 1 ~ Level 10

## Record Video

Allows you to record a video clip with your phone. Before starting to record, press the Left Soft Key  **Settings** to configure your settings.

The following options will appear (as icons) at the bottom of the screen.

- ▶  **Album:** Allows you to see saved image and video files.
- ▶  **Photo:** Allows you to switch to the Camera function so you to take a picture.
- ▶  **Rec:** Allows you to begin recording the video.
- ▶  **Zoom:** Allows you to set the zoom level.
- ▶  **Brightness:** Allows you to set the Brightness.

# Camera

Press the Left Soft Key  **Settings** for the following options:

## Preview Tab

- ▶ **Color Effects:** Allows you to choose from Off, Mono, Sepia, or Negative.
- ▶ **White Balance:** Set the White Balance as Auto, Daylight, Cloudy, Illuminate, or Indoors.
- ▶ **Video Quality:** Allows you to set video quality to Super Fine, Fine, or Normal.
- ▶ **Duration:** Set the recording duration to General Mode or MMS Video Mode.

## Others Tab

- ▶ **Recording Tones:** Allows you set Recording Tones to On or Off.
- ▶ **Reset settings:** Allows you to set the Camcorder to the default settings.

## Note

In Video mode, you can adjust the zoom scale by using the up and down Volume Keys. The zoom scale ranges from Level 1 to Level 9.

## Camera Album

Allows you to view the pictures and videos that are captured with the camera. When a file is highlighted, the following options are available when you press the Left Soft Key

### **Options:**

For image file:

**Use As/Send Via/Print Via Bluetooth/Delete/Rename/Select Multiple/File Information.**

For video file:

**Send Via/Delete/Rename/Select Multiple/File Information**

# My Folder

## Audio

To access Audio, from the standby screen, press the Left Soft Key  **Menu, My Folder**, and  **Audio**.

- ▶ **Buy Ringtones** Allows you to buy ring tones.
- ▶ **Record Voice:** Allows you to record voice notes.
- ▶ Saved audio files are displayed in the list.

## Pictures

To access Picture, from the standby screen, press the Left Soft Key  **Menu, My Folder**, and  **Pictures**.

- ▶ **Buy Graphics:** Connects to Color Graphics download site.
- ▶ **Take Photo:** Allows you to take a picture.
- ▶ The picture files saved on your phone are displayed.

## Video

To access Video, from the standby screen, press the Left Soft Key  **Menu, My Folder**, and  **Video**.

- ▶ **Record Video:** Allows you to record a video.
- ▶ The video files saved on your phone are displayed.

### Note

Please note that DRM can restrict some functions, such as sending and editing.

## Other Files

When you receive files of an undefined format (such as .vcs, .vcf, etc.) via email, the files are saved in this folder.

To access Other Files, from the standby screen, press the Left Soft Key  **Menu, My Folder**, and  **Other Files**.

## My Folder

The following options are available by pressing the Left Soft Key  **Options:**

- ▶ **Send Via:** Send the selected file via Message, Email, or Bluetooth.
- ▶ **Delete:** Allows you to delete the selected file.
- ▶ **Move:** Allows you to move the selected file to another folder.
- ▶ **Copy:** Allows you to copy the selected file to another folder.
- ▶ **Rename:** Allows you to edit the name of the selected file.
- ▶ **Select Multiple:** Allows you to select multiple files at once to perform various functions.
- ▶ **Sort By:** Allows you to sort the files by Name, Date, and Type.
- ▶ **File Information:** Allows you to view information about the selected file or used memory space on your phone.

## File Manager

This function allows you to view the content in your internal phone memory.

To access File Manager, from the standby screen, press the Left Soft Key  **Menu, My Folder,** and  **File Manager.**

# Tools

## Voice Command

Voice Command is the function whereby your phone's voice recognition engine identifies the voice of the user and carries out the requested commands. When the user operates the Voice Command function, there are four possible commands, Call <Name or Number>, Listen Voicemail, Missed Calls, and Time & Date. To activate the Voice Command function, hold down the Clear/Back Key  while the phone is in standby mode or press the Left Soft Key .

**Menu, Tools**, and  **Voice Command**.

**1 Call <Name or Number>:** This function is activated only when the user says the command "Call" followed by the name stored in the address book or say the phone number. Please note that interfering noise might cause a problem displaying candidates. Additionally, the user has the option to select a number type at the end, such as "mobile", "home", or "work".

**2 Listen Voicemail:** This command is activated when the user says "Listen Voicemail". The user will then be automatically connected to voicemail.

**3 Missed Calls:** This command is activated when the user says the words "Missed Calls". The mobile phone presents the missed call list.

### • Follow-up Commands Available

- **Yes:** Make the phone call.
- **No:** Moves to the next result.
- **Cancel:** Go back to the main Voice Command menu.
- **Exit:** Terminate Voice Command.
- **Next:** Moves to the next result.

**4 Time & Date:** This command is activated when the user says "Time & Date". The phone displays the current local time and date.

# Tools

## Voice Command Options

When the Voice Command option is activated, you can press the Left Soft Key



**Options** for the following options:

- **Mode**

- **Speed:** Voice Command is abbreviated.
- **Normal:** Voice Command is played normally with prompts.

- **Best Match**

- **1 Match:** The most likely match will be displayed when finding a number from the address book.
- **4 Matches:** The four most likely matched names will be displayed when finding a name from the address book.

- **Sensitivity**

- **High:** Operation and performance of the voice recognition engine is rarely affected by the user's voice command and surrounding sound.
- **Medium:** Operation of the voice recognition engine is normally affected by user's voice command and surrounding sound.

- **Low:** Operation of the voice recognition engine is strongly affected by user's voice command and surrounding sound.

- **Spk. On Mode**

- **Automatic On:** When this option is selected, the speakerphone is turned on and the sound is loud enough so you can hear the output when the phone is away from the ear, at a distance
- **Off:** When this option is selected, the speakerphone is turned off and the sound is quieter and cannot be heard when the phone is away from the ear, at a distance

## Alarm Clock

The alarm function allows you to set up multiple separate alarms. You can also set the time, repetition interval, and alarm tone. If there is no alarm setting, press the Left Soft Key  **New** to add a new alarm.

To access Alarm Clock, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Alarm Clock**.

### Edit Alarm

- ▶ **Time:** Input your desired alarm time by specifying the hour and minutes.  
You can also choose a predefined amount of time (15 Minutes Later, 30 Minutes Later, 45 Minutes Later, 1 Hour Later, Off).
- ▶ **Repeat:** Select the desired repeat mode (Once, Daily, Mon ~ Fri, Sat ~ Sun, Select Weekday).
- ▶ **Alarm Tone:** Press the OK Key  **List** to access the list of available Alarm Tones.
- ▶ **Volume:** Set the volume of the alarm by pressing the up and down Volume Keys.

- ▶ **Type:** Select the Ring Alert Type between Ring, Vibrate, Ring & Vibrate and Vibrate after Ring.
- ▶ **Memo:** Enter an alarm name.
- ▶ **Snooze Interval:** Select the snooze interval between 5 Minutes, 15 Minutes, 30 Minutes, 45 Minutes, 1 Hour and Off.

Press the Left Soft Key  **Save** to save your new Alarm.

## Calendar

When you enter this menu, a calendar will be displayed. The red square cursor is used to locate a particular day. The bottom bar on the calendar indicates saved schedules (if any) for that day. This function helps you keep track of your schedule. The phone can sound an alarm tone if it has been set for a specific schedule item.

# Tools

The chart below shows the keys that can be used to navigate the Calendar:

Key	Description
	Weekly
	Daily
	Annually
	Monthly

To access Calendar, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Calendar**.

The following options are available when a Calendar event is selected from the Calendar menu.

- ▶ **Search:** Allows you to search the saved schedule(s).
- ▶ **Set Holiday:** Allows you to set specific dates to display as Holidays on your calendar.
- ▶ **View All:** Allows you to view all saved schedules.
- ▶ **Week View:** Allows you to view the calendar by week.

- ▶ **Go to Date:** Allows you to jump to a specific date.
- ▶ **Selective Delete:** Allows you to delete Old Schedules or All Schedules selectively.
- ▶ **Settings:** Allows you to set various calendar settings.

## Notepad

You can create up to a maximum of 30 memos.

To access Notepad, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Notepad**.

- 1 Press the Left Soft Key  **New** to create a new memo.
- 2 Input the memo and press the OK Key  **Save** to save.

## Calculator

The Calculator function allows you to calculate simple mathematical equations.

To access Calculator, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Calculator**.

## Tasks

This feature allows you to save and manage a task.

To access Tasks, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Tasks**.

- 1 To add a new task item, press the Left Soft Key  **New**.
- 2 Input the Due Date, Note, Priority, and Status information for the new Task.
- 3 Press the Left Soft Key  **Save** to save the Task item.

The following options are available in the Task list by pressing the Left Soft Key  **Options**:

- ▶ **Mark 'Complete'**: Allows you to change the status of the selected task as Completed.
- ▶ **Edit**: Allows you to edit a saved task.
- ▶ **Delete**: Deletes the selected task.
- ▶ **Selective Delete**: Allows you to delete All Completed/All Past Tasks selectively.
- ▶ **Send Task Via**: Enables the selected task to be sent via Text Message, Multimedia Message, Email or Bluetooth.
- ▶ **Select Multiple**: Allows you to select multiple Tasks.
- ▶ **View Calendar**: Allows you to view the Calendar.

# Tools

## Stopwatch

This menu allows you to record the elapsed time of an event. The duration of an individual lap time (up to 20 laps) and the total time can also be displayed.

To access Stopwatch, from the standby screen, press the Left Soft Key  **Menu, Tools**, and  **Stopwatch**.

- 1 To start timing, press the OK Key  **Start**. The running time is displayed as HH.MM.SS.hh (hours, minutes, seconds, hundredths of a second).
- 2 During the timing, you can record an individual lap time by pressing the Right Soft Key  **Lap**. Up to 20 lap times can be recorded.
- 3 You can stop or restart timing by pressing the OK Key  again.
- 4 To reset the stop watch, press the OK Key  **Stop** to stop the time, then press the Right Soft Key  **Reset**. If you've recorded laps, press the Right Soft Key  **Reset**.

## Tip Calculator

This feature allows you to quickly and easily calculate the tip amount based on the total bill as well as the split of the total bill based on the number of people.

To access Tip Calculator, from the standby screen, press the Left Soft Key  **Menu, Tools**, and  **Tip Calculator**.

## Unit Converter

This function allows you to convert units of measurement.

There are 6 types of units that can be converted: Area, Length, Weight, Temperature, Volume, and Velocity.

To access Unit Converter, from the standby screen, press the Left Soft Key  **Menu, Tools**, and  **Unit Converter**.

## Voice Recorder

Allows you to record an audio clip to your phone. The recorded audio file is saved automatically in the Audio menu.

To access Record Voice, from the standby screen, press the Left Soft Key  **Menu**, **Tools**, and  **Voice Recorder**.

The following options are available when you press the Left Soft Key  **Options**:

- ▶ **Record Mode:** Sets the recording mode to either MMS Mode or General Mode.
- ▶ **Quality:** Allows you to set the quality of an audio clip. You can set it to Fine, Normal, or Economy.

When you press the Right Soft Key  **Gallery**, it will take you to the Audio gallery.

# Browser

Browser is one of the services provided by your network operator and it gives you access to all the cool things you can do with your wireless phone.

## Note

Check the availability of services, pricing, and tariffs with your network operator and/or the service provider whose service you wish to use. Service providers will also give you instructions on how to use their services.

Please contact your service provider to open an Internet account.

## Launch the Browser

To launch the browser from the standby screen, press the Right Soft Key 

**Browser** or press the Left Soft Key  **Menu** and select the **Browser** using the Navigation Keys.

To exit the browser at any time, press the End/Power Key  .

## Using the Browser

Once you are connected to the Internet, the following menu options are available when you press the Left Soft Key  **Options**:

▶ **Zoom**: Allows you to zoom in/out for better look.

## Note

You can also adjust the Browser text and image size by pressing the up and down Volume Keys to zoom in and out.

- ▶ **Home**: Directs you to the homepage.
- ▶ **Enter URL**: Allows you to enter URL you desire to visit.
- ▶ **Send Link**: Allows you to send link
- ▶ **Bookmarks**: You can add or save the current page to Bookmarks or view the list saved under Bookmarks.
- ▶ **Navigation Mode**: Allows you to select Back, Forward, and Refresh.
- ▶ **Search Text**: Allows you to search the text.

- ▶ **Recent Pages:** Allows you to view your history of recently viewed web sites.
- ▶ **Settings:** Allows you to set options for web pages and appearance.

## **Menus for the Browser**

You can surf the Internet using either the phone keys or the Browser menu.

## **Using the Navigation Keys**

When surfing the Internet, the Navigation Keys function similarly from when the phone is on standby mode.

# Settings

## Audio & Ringtones

This menu allows you to configure the audio and ringtone settings for your phone.

To access Audio & Ringtones, from the standby screen, press the Left Soft Key

 **Menu, Settings,** and  **Audio & Ringtones.**

### Ringtone

- ▶ **Sounds:** Allows you to set a sound as the ringtone for your phone.
- ▶ **Volume:** Allows you to control your Ringtone volume.
- ▶ **Alert Type:** Supports 3 ring alert types: Ring, Ring and Vibration, and Ring after Vibration.
- ▶ **Increasing Ringtone:** Allows you to enable or disable the Increasing Ringtone function, which is played when you receive an incoming call.

#### Note

Full length music tracks cannot be set as either ringtones or message tones.

## Message Tone

- ▶ **Sounds:** Allows you to set a sound as your message tone.
- ▶ **Volume:** Allows you to control your Message Tone volume.
- ▶ **Alert Type:** Supports 4 message alert types: Silent, Vibrate, Ring Only, Ring & Vibrate.
- ▶ **Alert Interval:** Allows you to set the Message Alert Interval.

## Alert Tone

- ▶ **Sounds:** Allows you to select a set of alert tones. Supports 2 alert tone types: Alert Tone 1 and Alert Tone 2.
- ▶ **Volume:** This menu allows you to control your Alert Tone volume.
- ▶ **Alert Type:** You can select to turn Alert Tones to Ring or Silent.

## Keypad Tone

This menu option allows you to select a tone that the phone sounds when a key is pressed on the dialpad. You can select an option from Beep and Voice and set the volume.

## Multimedia

This menu allows you to control your Multimedia volume.

## Call

This menu allows you to control your Call volume.

## Phone Settings

This menu allows you to configure the Phone Settings. To access Phone Settings, from the standby screen, press the Left Soft Key

 **Menu, Settings,** and  **Phone Settings.**

## Languages

Allows you to change the language for the display text on your phone. This change will also affect the Language Input mode.

## Set Hotkeys

Allows you to change the preferences on the Hotkeys that are currently assigned for your Navigation Keys (when in standby mode).

## Flight Mode

This allows you to only use the phone's features that do not require the use of the wireless network, excluding emergency calls, when you are in an airplane or in places where the wireless network is prohibited. If you set the flight mode on, the flight mode icon will be displayed on the screen instead of the network signal icon.

- ▶ **On:** You cannot make (or receive) calls, excluding emergency calls, or use other features that require network coverage.
- ▶ **Off:** You can deactivate the flight mode to access the network.

# Settings

## Security

Various codes and passwords are used to protect the features and settings of your phone.

- ▶ **Phone Lock:** You can use a security code to avoid unauthorized use of the phone.

If you set the Phone Lock to **When Power On**, the phone will request a security code whenever you switch the phone on. If you set the Phone Lock to **Lock Phone Now**, your phone will lock immediately.

- ▶ **Change Codes:** The Change Codes feature allows you to change your current password to a new one. You must enter the current password before you can specify a new one.

## Reset Settings

This function allows you to restore factory settings. To do this, you need the security code.

- ▶ **Master Reset:** Restores the phone settings (e.g.: Audio, Display, Language, Bluetooth Settings) to default values.
- ▶ **Master Clear:** Deletes downloaded/user created contents (e.g.: images, videos) from the phone.
- **Phone**
  - Deletes all downloaded/user created images and audios from the phone memory.
  - Deletes personal information stored in the phone memory (e.g.: Contacts, Messages, Tasks, Alarm, Calendar Schedules).
  - Restores the settings stored in the phone memory to the default values.

## Display

This menu allows you to configure your Display settings.

To access Display, from the standby screen, press the Left Soft Key  **Menu**, **Settings**, and  **Display**.

## Wallpapers

This menu allows you to set a picture or color as your background.

## Fonts

You can configure the font size and color of the font that your phone uses.

## Clocks & Calendar

This feature allows you to select a Clock or Calendar to display on the standby screen.

## Brightness

You can set the brightness of the display screen.

## Backlight Timer

Use this to set the duration of the display backlight.

## Menu Styles

You can set the main menu style to Icon or List view.

## Call

This menu allows you to configure your Call settings.

To access Call, from the standby screen, press the Left Soft Key  **Menu**, **Settings**, and  **Call**.

## Send My Number

This network service allows you to set your phone number to be displayed or hidden from the person you are calling. You can select **Set by Network** if you prefer to have different settings for different service providers.

# Settings

## Answer Mode

This allows you to determine how to answer the phone.

- ▶ **Any Key:** Allows you to answer an incoming call by pressing any key, except the End/Power Key , Volume Keys, or the Right Soft Key  **Silent.**
- ▶ **Send Key Only:** Allows you to only answer an incoming call by pressing the Send Key  or Left Soft Key  **Accept.**
- ▶ **Flip Open:** Allows you to Flip open the phone to answer an incoming call.

## Senior Mode

Senior mode is a function that amplifies a sound for seniors to hear the voice well by emphasizing a low voice. It is used for enhancing the speech quality while you are on the phone.

You can set the Senior Mode to On or Off.

## Time & Cost

Allows you to view information about Call Duration and Data Counter.

## Accessibility

- ▶ **TTY:** Allows you to enable TTY Mode in order to contact other TTY devices. Select from **TTY Full, TTY Talk, TTY Hear, TTY Off.**

## Bluetooth

Your phone has built-in Bluetooth wireless technology, which makes it possible for you to connect your phone wirelessly to other Bluetooth devices such as a hands-free device, PC, laptop, or other phones.

The devices registered in your phone can only be connected one at a time (To make a connection to the same type of device or change Bluetooth preferences, disconnect the existing device first).

You can also exchange, for example, business cards, calendar items, and pictures.

To access Bluetooth, from the standby screen, press the Left Soft Key  **Menu**, **Settings**, and  **Bluetooth**.

### **Hands-free profile**

This  appears when the hands-free profile is used between the hands-free device. This allows you to call using a Bluetooth connection.

### **A2DP profile**

This  appears when the A2DP profile is used between the stereo headset device and the phone. This allows you to listen to an audio clip. A2DP is the Advanced Audio Distribution Profile, which provides support for streaming either mono or stereo audio using Bluetooth.

### **Hands-free + A2DP profile**

This  appears when both profiles of the hands-free and the A2DP are used between the compatible device and the phone. This allows you to call and listen to an audio clip using a Bluetooth connection.

When using each device, see the manual that comes with the device.

### **Note**

We recommend that your phone and the Bluetooth device you are communicating with should be no more than 10 meters apart. The connection may be improved if there are no solid objects between your phone and the other Bluetooth device.

### **Turn On/Off**

Allows you to turn your Bluetooth functionality on or off.

### **Search New Device**

This function allows you to search for and add new devices.

### **My Devices**

This function allows you to view the list of all devices that are paired with your phone.

### **My Bluetooth Info**

This menu allows you to configure the profile for Bluetooth.

# Settings

- ▶ **My Device Visibility:** Allows you to set your device to be visible to other Bluetooth devices.
- ▶ **Device Name:** Allows you to change the handset's name which can be seen by other Bluetooth devices.
- ▶ **Supported Services:** Shows you all services that the handset supports.
- ▶ **My Bluetooth Address:** Displays your device's Bluetooth address.

## To pair with another device

- 1 From the standby screen, press the Left Soft Key  **Menu**, **Settings**,  **Bluetooth**, and  **Search New Device**.
- 2 If you want to stop searching, press the Right Soft Key  **Cancel**.
- 3 All of the devices found are displayed.
- 4 Select the desired device by pressing the OK Key  **Add** and entering the password.

# Memory

This menu allows you to configure your Memory settings.

To access Memory, from the standby screen, press the Left Soft Key  **Menu**, **Settings**, and  **Memory**.

## Used Space

This function shows the memory status of the handset.

### ▶ Phone Common

This function shows the Memory Status of the phone and the memory being used by Audio, Pictures, Video, Multimedia Msg, Email, Java, and Others types of files.

### ▶ Phone Reserved

This function shows the status of the reserved memory used by Text Message, Contacts, Calendar, Tasks, and the Notepad.

### ▶ SIM Card

This function shows the status of the SIM Card memory.

## Applications

This menu allows you to configure application settings

To access Applications, from the standby screen, press the Left Soft Key  **Menu**, **Settings**, and  **Applications**.

## Messages

For more details, refer to Message Settings on page 25.

## Browser

This menu allows you to configure the Browser settings.

## Appearance

You can choose the settings of the browser appearance (Text Size, Character Encoding, Show Image, Java Script).

## Cache

The web pages you have accessed are stored in the phone memory. This menu allows you to manage that function.

- ▶ **Clear Cache:** Remove all cached data in the memory.
- ▶ **Cache:** Allows you to turn the memory cache on or off.

### Note

Cache is a type of buffer memory, which is used to store data temporarily, especially when it is online.

## Cookies

The information of services you have accessed are stored in what is called a cookie.

From this menu, you can choose to allow cookies or to delete cookies that are already on your phone.

# Settings

## Clear Login Info.

You can delete the history of ID or Password information that you have saved previously.

## Screen Settings

You can change the settings of the browser screen (Rendering Mode).

## Security

A list of the available certificates is shown.

- ▶ **Certificates:** You can see the list of certificates and view them in detail.
- ▶ **Clear Session:** Removes the secure session.

## Navigation Mode

You can change the methods of browser navigation.

- ▶ **4 Way Navigation:** The cursor of the browser moves scroll amounts or follows hyperlinks.
- ▶ **Mouse Pointer:** You can move the cursor like a mouse pointer.

## Secure Popup

You can activate or deactivate the pop-up which indicates a secure page.

## Shortcuts

If set to On, you can use the Browser more quickly and conveniently with the keypad in the phone. If Shortcuts is on, the following shortcuts are available:

- |                   |                  |
|-------------------|------------------|
| 1. Enter URL      | 2. This Page     |
| 3. View Bookmarks | 4. Page Overview |
| 5. Full Screen    | 6. Saved Pages   |
| 7. Page Up        | 8. Recent Pages  |
| 9. Zoom In        | 0. Search Text   |
| *. Page Down      | #. Zoom Out      |

You can adjust the Browser text and image size by pressing the up and down Volume Keys to zoom in and out.

## Voice Command

This menu allows you to set various Voice command options. Refer to page 38.

## TTS (Text-to Speech)

When you set this on, text messages and Notepad notes be read out.

### Note

When the phone is in Vibration mode, TTS does no work.

## Phone Information

This menu is used to view My Numbers, Manufacturer, Model Name, Device ID, Hardware Version, Software Version, Language.

To access Phone Information, from the standby screen, press the Left Soft Key

 **Menu, Settings, and  Phone Information.**

## Accessories

There are a variety of accessories available for your mobile phone, some of which may be sold separately. You can select these options according to your personal communication requirements. Consult your local dealer for availability.

### Travel Adapter

This adapter allows you to charge the battery.



### Battery

Standard battery is available.



### Note

- Always use genuine LG accessories. Failure to do this may invalidate your warranty.
- Accessories may be different in different regions; please check with our regional service company or agent for further enquiries.

# Safety

## **TIA(Telecommunications Industry Association) Safety Information**

The following is the complete TIA Safety Information for wireless handheld phones.

### Exposure to Radio Frequency Signal

Your wireless handheld portable phone is a low power radio transmitter and receiver.

When it is ON, it receives and also sends out Radio Frequency (RF) signals. In

August, 1996, the Federal Communications Commissions (FCC) adopted RF exposure

guidelines with safety levels for handheld wireless phones. Those guidelines are

consistent with the safety standards

previously set by both U.S. and international standards bodies:

- ▶ ANSI C95.1 (1992) \*
- ▶ NCRP Report 86 (1986)
- ▶ ICNIRP (1996)
- ▶ Health Canada, Safety Code 6, 1999.

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For

example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1). The design of your phone complies with the FCC guidelines, IC Regulations (and those standards).

## **Antenna Care**

Use only the supplied or an approved replacement antenna.

Unauthorised antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

## **Phone Operation**

**NORMAL POSITION:** Hold the phone as you would any other telephone with the antenna pointed up and over your shoulder.

# Safety

## Tips on Efficient Operation

For your phone to operate most efficiently: Do not touch the antenna unnecessarily when the phone is in use.

Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

## Driving

Check the laws and regulations on the use of wireless phones in the areas where you drive and always obey them. Also, if using your phone while driving, please observe the following:

- ▶ Give full attention to driving -- driving safely is your first responsibility;
- ▶ Use hands-free operation.

## Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

## Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research.

## Persons with Pacemakers

- ▶ Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;
- ▶ Should not carry the phone in a breast pocket;
- ▶ Should use the ear opposite the pacemaker to minimize the potential for interference;
- ▶ Should turn the phone OFF immediately if there is any reason to suspect that interference is taking place.

## **Hearing Aids**

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives.) Optional for each phone manufacturer.

## **Other Medical Devices**

If you use any other personal medical device, 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.

## **Health Care Facilities**

Turn 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 use 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**

Turn your phone OFF in any facility where posted notices so require.

## **Aircraft**

FCC and Transport Canada regulations prohibit using your phone while in the air. Switch OFF your phone before boarding an aircraft.

## **Blasting Areas**

To avoid interfering with blasting operations, turn your phone OFF when in a “blasting area” or in areas posted: “Turn off two-way radio”. Obey all signs and instructions.

# Safety

## Potentially Explosive Atmosphere

Turn 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.

Areas with a potentially explosive atmosphere are often, but not always marked clearly. Potential areas may include: fueling areas (such as gasoline stations); below deck on boats; fuel or 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.

## For Vehicles Equipped with an Air Bag

An air bag inflates with great force. DO NOT place objects, including either installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

## Charger and Adapter Safety

- ▶ The charger and adapter are intended for indoor use only.
- ▶ Do not expose the battery charger or adapter to direct sunlight or use it in places with high humidity, such as a bathroom.

## Battery Information and Care

- ▶ Please dispose of your battery properly or take it to your local wireless carrier for recycling.
- ▶ Do not dispose of your battery by fire or with hazardous or flammable materials.

- ▶ Never use an unapproved battery since this could damage the phone and/or battery and could cause the battery to explode.
- ▶ The battery does not need to be fully discharged before recharging.
- ▶ Use only LG-approved chargers specific to your phone model since they are designed to maximize battery life.
- ▶ Do not disassemble or shortcircuit the battery.
- ▶ Keep the battery's metal contacts clean.
- ▶ Replace the battery when it no longer provides acceptable performance. The battery can be recharged several hundred times before replacement.
- ▶ Recharge the battery after long periods of non-use to maximize battery life.
- ▶ Battery life will vary due to usage patterns and environmental conditions.
- ▶ Use of extended backlighting, MiniBrowser, and data connectivity kits affect battery life and talk/standby times.

## **Safety Information**

Please read and observe the following information for safe and proper use of your phone and to prevent damage. Also, keep the user's guide in an accessible place at all the times after reading it.

## **Explosion, Shock, and Fire Hazards**

- ▶ Unplug the power cord and charger during lightning storms to avoid electric shock or fire.
- ▶ Make sure that no sharp-edged items such as animal's teeth, nails, come into contact with the battery. There is a risk of this causing a fire.
- ▶ Do not use harsh chemicals(such as alcohol, benzene, thinners, etc.) or detergents to clean your phone. There is a risk of this causing a fire.
- ▶ Do not handle the phone with wet hands while it is being charged. It may cause an electric shock or seriously damage your phone.

# Safety

- ▶ Do not drop, strike, or shake your phone severely. Such actions may harm the internal circuit boards of the phone.
- ▶ Do not put your phone in a place subject to excessive dust and keep the minimum required distance between the power cord and heat sources.
- ▶ Unplug the power cord prior to cleaning your phone, and clean the power plug pin when it is dirty.
- ▶ Do not damage the power cord by bending, twisting, pulling, or heating. Do not use the plug if it is loose as it may cause a fire or electric shock.
- ▶ When using the power plug, ensure that it is firmly connected. If it is not, it may cause excessive heat or fire.
- ▶ Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause fire or electric shock.
- ▶ Do not disassemble the phone.
- ▶ Do not place or answer calls while charging the phone as it may short-circuit the phone and/or cause electric shock or fire.
- ▶ If you put your phone in a pocket or bag without covering the receptacle of the phone (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the phone. Always cover the receptacle when not in use.
- ▶ Do not short-circuit the battery. Metallic articles such as a coin, paperclip or pen in your pocket or bag may short-circuit the + and – terminals of the battery (metal strips on the battery) upon moving. Short-circuit of the terminal may damage the battery and cause an explosion.
- ▶ Never place your phone in a microwave oven as it will cause the battery to explode.

## General Warnings and Cautions

- ▶ Only use the batteries, antennas, and chargers provided by LG. The warranty will not be applied to products provided by other suppliers.
- ▶ Store the battery in a place out of reach of children.
- ▶ Using a damaged battery or placing a battery in your mouth may cause serious injury.
- ▶ Do not place items containing magnetic components such as a credit card, phone card, bank book or subway ticket near your phone. The magnetism of the phone may damage the data stored in the magnetic strip.
- ▶ Do not hold or let the antenna come in contact with your body during a call.
- ▶ Talking on your phone for a long period of time may reduce call quality due to heat generated during use.
- ▶ When the phone is not used for a long period time, store it in a safe place with the power cord unplugged.
- ▶ Using the phone in proximity to receiving equipment (i.e., TV or radio) may cause interference to the phone.
- ▶ Only authorized personnel should service the phone and its accessories. Faulty installation or service may result in accidents and consequently invalidate the warranty.
- ▶ Do not use the phone if the antenna is damaged. If a damaged antenna contacts skin, it may cause a slight burn. Please contact an LG Authorized Service Center to replace the damaged antenna.
- ▶ Do not use the phone in areas where its use is prohibited. (For example: aircraft)
- ▶ Do not immerse your phone in water. If this happens, turn it off immediately and remove the battery. If the phone does not work, take it to an LG Authorized Service Center.
- ▶ Use accessories, such as earphones and headsets, with caution. Ensure that cables are tucked away safely and do not touch the antenna unnecessarily.

# Safety

## Warning! Important Safety Information

### Avoiding hearing damage

- ▶ Permanent hearing loss may occur if you use your phone and/or headset at a high volume. Set the volume to a safe level. You can adapt over time to a higher volume of sound that may sound normal but can be damaging to your hearing. If you experience ringing in your ears or muffled speech, stop listening and have your hearing checked. The louder the volume, the less time is required before your hearing could be affected. Hearing experts suggest that to protect your hearing:
- ▶ Limit the amount of time you use your phone and/or headset at high volume.
- ▶ Avoid turning up the volume to block out noisy surroundings.

- ▶ Turn the volume down if you can't hear people speaking near you. For information about how to set a maximum volume limit on your phone, see the features guide for your phone.

### Using your phone safely

Use of your phone while operating a vehicle is not recommended and is illegal in some areas. Be careful and attentive while driving. Stop using your phone if you find it disruptive or distracting while operating any type of vehicle or performing any other activity that requires your full attention.

### FDA Consumer Update

The U.S. Food and Drug Administration's Center for Devices and Radiological Health Consumer Update on Mobile Phones:

#### **1. Do wireless phones pose a health hazard?**

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones

are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the Main Menu Screen. 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.

## **2. What is the FDA's role concerning the safety of wireless phones?**

Under the law, the FDA does not review the safety of radiationemitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has

authority to take action if wireless phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, the 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, the 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.

The FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF

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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.
- ▶ Occupational Safety and Health Administration.
- ▶ National Telecommunications and Information Administration.

The National Institutes of Health participates in some interagency working group activities, as well. The 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. The FCC relies on the FDA and other health agencies for safety questions about wireless phones. The 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 subject of the safety questions discussed in this document.

### **3. What kinds of phones are the subject of this update?**

The term “wireless phone” refers here to handheld wireless phones with built-in antennas, often called “cell”, “mobile”, or “PCS” phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user’s head. These RF exposures are limited by FCC safety guidelines that were developed with the advice of the 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 far below the FCC safety limits.

#### **4. What are the results of the research done already?**

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods.

Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are

not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health. Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures.

However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

#### **5. 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

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

## **6. What is the FDA doing to find out more about the possible health effects of wireless phone RF?**

The 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). The 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. The FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. The FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts with 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.

### **7. How can I find out how much radio frequency energy exposure I can get by using my wireless phone?**

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radio frequency energy (RF) exposures. The FCC established these guidelines in consultation with the FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones

must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

### **8. What has the FDA done to measure the radio frequency energy coming from wireless phones?**

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radio frequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users.

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The test method uses a tissue-simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

## **9. 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.

## **10. 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.

### **11. What about wireless phone interference with medical equipment?**

Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, the 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 the 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. The FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a “compatible” phone and a “compatible” hearing aid at the same time. This standard was approved by the IEEE in 2000. The FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, the FDA will conduct testing to assess the interference and work to resolve the problem.

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## 12. Where can I find additional information?

For additional information, please refer to the following resources: FDA web page on wireless phones (<http://www.fda.gov/>) Federal Communications Commission (FCC) RF Safety Program (<http://www.fcc.gov/oet/rfsafety>) International Commission on Non-Ionizing Radiation Protection (<http://www.icnirp.de>) World Health Organization (WHO) International EMF Project (<http://www.who.int/peh-emf/en/>) National Radiological Protection Board (UK) (<http://www.hpa.org.uk/radiation/>)

## Consumer Information on SAR (Specific Absorption Rate)

This Model Phone Meets the Government's Requirements for Exposure to Radio Waves. Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These

limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC/IC is 1.6 W/kg\*. Tests for SAR are conducted using standard operating positions specified by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although 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. Because the phone is designed to operate at multiple power levels 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 phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model.

The highest SAR value for this model phone when tested for use at the ear is 0.50 W/kg and when worn on the body, as described in this user guide, is 0.56 W/kg (body-worn measurements differ among phone models, depending upon available accessories and FCC/IC requirements). While there may be differences between SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF emission 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/ea/> fccid after searching on FCC ID: ZNFA447. Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) website at <http://www.ctia.org/>

\* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

\* Product meets current FCC & IC Radio Frequency Exposure Guidelines.

FCC ID: ZNFA447

IC ID: 2703C-A447

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## Body-worn Operation

This device was tested for typical body-worn operations with the back of the phone kept 1.5cm (0.59 inches) between the user's body and the back of the phone. To comply with FCC RF exposure requirements, a minimum separation distance of 1.5cm (0.59 inches) must be maintained between the user's body and the back of the phone. Third-party belt-clips, holsters, and similar accessories containing metallic components may not be used. Body-worn accessories that cannot maintain 1.5cm (0.59 inches) separation distance between the user's body and the back of the phone, and have not been tested for typical bodyworn operations may not comply with FCC RF exposure limits and should be avoided.

## FCC Part 15.19 statement

This device complies with part 15 of FCC rules and ICES-003 Class B digital apparatus requirements for Industry Canada. 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.

## Part 15.21 statement

Change or Modifications that are not expressly approved by the manufacturer could void the user's authority to operate the equipment.

## Part 15.105 statement

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.