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 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.

LIMITED WARRANTY STATEMENT

1. WHAT THIS WARRANTY COVERS:

LG offers you a limited warranty that the enclosed subscriber unit and its enclosed accessories will be free from defects in material and workmanship, according to the following terms and conditions:

- (1) The limited warranty for the product extends for ONE (1) year beginning on the data of purchase of the product.
- (2) The limited warranty extends on to the original purchaser of the product and is not assignable or transferable to any subsequent purchaser/end user.
- (3) This warranty is good only to the original purchaser of the product during the warranty period as long as it is in the U.S., including Alaska, Hawaii, U.S. Territories and Canada.
- (4) The external housing and cosmetic parts shall not be covered under these limited warranty terms.
- (5) Upon request from LG, the consumer must provide information to reasonably prove the date of purchase.
- (6) The customer shall bear the cost of shipping the product to the Customer Service Department of LG. LG shall bear the cost of shipping the product back to the consumer after the completion of service under this limited warranty.

2. WHAT THIS WARRANTY DOES NOT COVER:

- (1) Defects or damages resulting from use of the product in other than its normal and customary manner.
- (2) Defects or damages from abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of LG, including damage caused by shipping blown fuses spills of food or liquid.
- (3) Breakage or damage to antennas unless caused directly by defects in material or workmanship.
- (4) That the Customer Service Department at LG was net notified by consumer of the alleged defect or malfunction of the product during the applicable limited warranty period.
- (5) Products which have had the serial number removed or made illegible.
- (6) The limited warranty is in lieu of all other warranties, express or implied either in fact or by operations law, statutory or otherwise, including, but limited to any implied warranty of marketability or fitness for a particular use.
- (7) Damage resulting from use of non-LG approved accessories.
- (8) All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal customer use.
- (9) Products operated outside published maximum ratings.
- (10) Products used or obtained in a rental program.
- (11) Consumables (such as fuses).

3. STATE LAW RIGHTS:

No other express warranty is applicable to this product. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. LG INFOCOMM INC. SHALL NOT BE LIABLE FOR THE LOSS OF THE USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, RISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT OR FOR ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY APPLICABLE TO THIS PRODUCT. Some states do not allow the exclusive of imitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

4. HOW TO GET WARRANTY SERVICE:

To obtain warranty service, please call the following web address: www.lgeservice.com

For Your Safety

Important Information

This user guide contains important information on the use and operation of this phone. Please read all the information carefully for optimal performance and to prevent any damage to or misuse of the phone. Any changes or modifications not expressly approved in this user guide could void your warranty for this equipment.

Before You Start

Safety Instructions

WARNING! To reduce the possibility of electric shock, do not expose your phone to high humidity areas, such as the bathroom, swimming pool, etc.

Always store your phone away from heat. Never store your phone in settings that may expose it to temperatures less than 32°F or greater than 104°F, such as outside during extreme weather conditions or in your car on a hot day. Exposure to excessive cold or heat will result in malfunction, damage and/or catastrophic failure.

Be careful when using your phone near other electronic devices. RF emissions from your mobile phone may affect nearby in adequately shielded electronic equipment. You should consult with manufacturers of any personal medical devices such as pacemakers and hearing aides to determine if they are susceptible to interference from your mobile phone.

Turn off your phone in a medical facility or at a gas station. Never place your phone in a microwave oven as this will cause the battery to explode.

IMPORTANT! Please read the TIA SAFETY INFORMATION on page 78 before using your phone.

Safety Information

Read these simple guidelines. Breaking the rules may be dangerous or illegal. Further detailed information is given in this user guide.

- Never use an unapproved battery since this could damage the phone and/or battery and could cause the battery to explode.
- Never place your phone in a microwave oven as it will cause the battery to explode.
- Do not dispose of your battery by fire or with hazardous or flammable materials
- ► Make sure that no sharp-edged items come into contact with the battery. There is a risk of this causing a fire.
- > Store the battery in a place out of reach of children.
- Be careful that children do not swallow any parts such as rubber plugs (earphone, connection parts of the phone, etc.). This could cause asphyxiation or suffocation.

- Unplug the power cord and charger during lightning storms to avoid electric shock or fire.
- When riding in a car, do not leave your phone or set up the hands-free kit near to the air bag. If wireless equipment is improperly installed and the air bag is activated, you may be seriously injured.
- Do not use a hand-held phone while driving.
- Do not use the phone in areas where its use is prohibited. (For example: aircraft).
- Do not expose the battery charger or adapter to direct sunlight or use it in places with high humidity, such as a hathroom
- Never store your phone in temperatures less than- 4°F or greater than 122°F.
- 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 drop, strike, or shake your phone severely. Such actions may harm the internal circuit boards of the phone.
- Do not use your phone in high explosive areas as the phone may generate sparks.
- 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

- 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 handle the phone with wet hands while it is being charged. It may cause an electric shock or seriously damage your phone.
- 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
- Only use the batteries, antennas, and chargers provided by LG. The warranty will not be applied to products provided by other suppliers.
- 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 hold or let the antenna come in contact with your body during a call.
- An emergency call can be made only within a service area. For an emergency call, make sure that you are within a service area and that the phone is turned on.

For Your Safety

FCC RF Exposure Information

WARNING! Read this information before operating the phone.

In August 1996, the Federal Communications (FCC) of he United States, with its action in Report and Order FCC 96-326, adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards hodies

The design of this phone complies with the FCC guidelines and these international standards.

CAUTION

Use only the supplied and approved antenna. Use of unauthorized antennas or modifications could impair call quality, damage the phone, void your warranty and/or result in violation of FCC regulations. Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with skin, a minor burn may result. Contact your local dealer for a replacement antenna.

Body-worn Operation

This device was tested for typical body-worn operations with the back of the phone kept 0.79 inches (2cm) between the user's body and the back of the phone. To comply with FCC RF exposure requirements, a minimum separation distance of 0.79 inches(2cm) 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 should not be used. Body-worn accessories that cannot maintain 0.79 inches(2cm) separation distance between the user's body and the back of the phone, and have not been tested for typical body-worn operations may not comply with FCC RF exposure limits and should be avoided.

Vehicle Mounted External Antenna (optional, if available)

A minimum separation distance of 8 inches (20cm) must be maintained between the user/bystander and the vehicle mounted external antenna to satisfy FCC RF exposure requirements. For more information about RF exposure, visit the FCC website at www.fcc.gov

FCC Part 15 Class B Compliance

This device and its accessories comply with part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device and its accessories may not cause harmful interference, and (2) this device and its accessories must accept any interference received, including interference that may cause undesired operation.

Cautions for Battery

- Do not disassemble.
- Do not short-circuit.
- ▶ Do not expose to high temperature: 60°C (140°F).]
- Do not incinerate.

Battery Disposal

- Please dispose of your battery properly or bring to your local wireless carrier for recycling.
- Do not dispose in fire or with hazardous or flammable materials.

Adapter (Charger) Cautions

- Using the wrong battery charger could damage your phone and void your warranty.
- The adapter or battery charger is intended for indoor use only.

Do not expose the adapter or battery charger to direct sunlight or use it in places with high humidity, such as the bathroom.

Menu Tree

The following illustration shows the available menu structure and indicates the:

- Number assigned to each menu option.
- ▶ Page where you can find the feature description.
- 1. Prepaid
- 2. Messaging
 - 2.1 New Message
 - 2.2 Inbox
 - 2.3 Drafts
 - 2.4 Outbox
 - 2.5 Sent
 - 2.6 Voicemail
 - 2.7 Templates
 - 2.7.1 Text Templates
 - 2.7.2 Multimedia
 - 2.7.3 My Business Card
 - 2.8 Message Settings
 - 2.8.1 Text Message
 - 2.8.2 Multimedia
 - 2.8.3 Voicemail
 - 2.8.4 Service Messages

- 3. Recent Calls
 - 3.1 Missed Calls
 - 3.2 Dialed Calls
 - 3.3 Received Calls
 - 3.4 All Calls
 - 3.5 Call Duration
 - 3 5 1 Last Call
 - 3.5.2 Dialed Calls
 - 3.5.3 Received Calls
 - 3.5.4 All Calls
 - 3.6 Call Costs
 - 3.7 Data Information
- 4. Games & Apps
 - 4.1 Games & Apps
 - 4.2 Java settings

5. WAP

- 5.1 Home
- 5.2 Bookmarks
- 5.3 Saved page
- 5.4 Enter address
- 5.5 History
- 5.6 Settings

6. Tools

- 6.1 Alarm Clock
- 6.2 Calendar
- 6.3 Notepad
- 6.4 Calculator
- 6.5 Tip Calculator
- 6.6 World Clock
- 6.7 To do
- 6.8 Stop Watch
- 6.9 Unit Converter

7. My Stuff

- 7.1 Game&Apps
- 7.2 Audio & Ringtones
- 7.3 Graphics
- 7.4 Camera & Recordings
- 7.5 Other Files

8. Address Book

- 8.1 Contact List
- 8.2 New Contact
- 8.3 Caller Groups
- 8.4 Caller Groups
- 8.5 Speed Dial List
- 8.6 Copy All Contacts
- 8.7 Delete All Contacts
- 8.8 My Business Card
- 8.9 My Numbers

Menu Tree

9. Settings

9.1 Audio & Ringtones

- 9.1.1 Ringtones
- 9.1.2 Volume
- 9.1.3 Message Alert Tones
- 9.1.4 Alert Type
- 9.1.5 Increasing Ringtone
- 9.1.6 Power On/Off Tones

9.2 Display

- 9.2.1 Wallpapers
- 9.2.2 Backlight Timer
- 9.2.3 Brightness
- 9.2.4 Languages

9.3 Bluetooth

- 9.3.1 Bluetooth on/off
- 9.3.2 Device list
- 9.3.3 Bluetoth settings

9.4 Date & Time

- 9.3.1 Set Date
- 9.3.2 Date Format
- 9.3.3 Set Time
- 9.3.4 Time Format
- 9.3.5 Auto Update

9. Settings

9.5 Call

- 9.4.1 Call Forwarding
- 942 Answer Mode
- 9.4.3 Send My Number
- 9.4.4 Call Waiting
- 9.4.5 Minute Minder
- 946 Auto Redial
- 947TTY
- 9.4.9 Send DTMF Tones

9.6 Security

- 9.5.1 Auto Kev Lock
- 9.5.2 PIN Code Request
- 9.5.3 Fixed Dial Number (FDN)
- 9.5.4 Change Codes
- 9.7 Power Save
- 9.8 Connectivity
- 9.9 Flight Mode
- 9.0 Memory Status
- 9.* Handset Information
- 9.# Reset Settings

Prepaid

With prepaid service, you buy wireless network services in advance. Your phone works the same way it did before, with some additional features. You can check your prepaid balance, and money to your account. and call customer service.

Prepaid service may not be available from your wireless service provider. Contact your service provider for availability and more information.

In the Prepaid menu, you can activate and deactivate prepaid service, replenish your prepaid credits, and provide other information requested by the prepaid service provider.

Add Airtime Menu 1.1

Add Airtime allows you to start an overthe-air request for additional airtime.

Buy Airtime Menu 1.2

Buy Airtime allows you to start an overthe-air request for purchase additional airtime

My Phone Number Menu 1.3

Phone Number displays the SIM's own number.

Airtime Info. Menu 1.4

Airtime Info displays the amount of airtime by the unit and due date information.

Airtime Display Menu 1.5

Airtime Display allows you to disable/enable the display of idle screen, prepaid-related information.

Serial Number Menu 1.6

Serial Number displays the Phone's Serial Number.

Prepaid

SIM Serial Number

Menu 1.7

SIM Serial Number displays the SIM Card's Serial Number.

Add Airtime Menu 1.8

Code Entry Mode will allow the phone to accept Service Provider-Related codes in order to add units, modify specific data and troubleshoot the phone. In using the Code Entry Mode, you can't receive incoming calls or use events alert.

Messaging

New Message Menu 2.1

You can write and edit text messages of up to 913 characters.

- Type in a message using key presses.
 For details on how to enter text, refer to page 22 (Entering Text).
- After completing the message select the required option by pressing the right soft key [Options].

The following options are available.

- ➤ Send: Enter the phone number or select the number from the address book
- Insert
 - Symbol: You can insert symbols ranging from sentence notes to emoticons. Select the one you want by navigating the left/soft keys.
 - Picture: You can select a graphic image by using the left/right navigation keys. You can preview the selected picture by pressing the center key [View]. If you press [Cancel] on the right key, it allows you to go back to the previous screen.

(There is no picture on the phone that is pre-installed)

- Animation: You can attach an animation in a message can be done through EMS(Enhanced Messaging Service)
- Audio: You can insert various ringtones.
- **Text Template:** You can easily insert the frequently used sentences in the text message.
- Contact: You can browse one of your contacts and insert it.
- Business Card: Input your own business card created in (Menu 2.7.2).
 For further details, see page 35.
- ➤ Save to Drafts: Saves the selected slide to draft.
- ➤ **Set T9:** You can set on and off for the T9 input mode.
- ➤ Clear Text: Deletes the written message.
- ► Cancel: Exit the text editor.

Inbox

Menu 2.2

You will be alerted when you receive a message. They will be stored in the Inbox.

In the Inbox, you can identify each message by icons.

The following [Options] are available in the Inbox list.

- ➤ View: You can view the received messages.
- ▶ Delete: Deletes the selected message from the Inbox.
- ➤ **Reply:** Allows you to reply to the sender of the selected message.
- Forward: Forwards a received message to other recipients. After recipients are entered, the message can be forwarded.
- ▶ Return Call: Call back the sender.
- Delete All Read: Deletes all messages that you have read in the list.
- Delete All
 - **-Text Messages:** Deletes only text messages in the list.

- **Download Messages:** Deletes only downloaded messages in the list.
- **All Messages:** Deletes all messages in the list.

Drafts

Menu 2.3

You can view the messages saved as a draft. The draft messages are listed with the date and time of when the messages were saved

The following [Options] are available.

- Edit: Modifies the message you choose.
- ▶ Delete: Deletes the message you choose.
- ➤ **Delete All:** Deletes all messages in the folder

Outbox

Menu 2.4

If the message transmission fails, you can save the message in the Outbox.

The following [Options] are available in the Outbox list.

- ▶ View: View the message you choose.
- Delete: Deletes the message you choose.
- ▶ Edit: Allows you to edit the selected message.
- Delete All: Deletes all messages in the folder.

Sent

Menu 2.5

This menu allows you to save the sent successfully messages. For sent messages you can see the delivery status.

The following [Options] are available in the Sent list.

- ➤ View: View the selected message from the Sent list.
- ▶ Delete: Deletes the selected message from the Sent list.

- Forward: Forwards the current message to other recipients.
- ▶ Delete All: Deletes all messages in the folder

Voicemail

Menu 2.6

This menu provides you with a quick way of accessing your voice mailbox (if provided by your network).

Before using this feature, you must enter the voice server number obtained from your service provider.

This may already be available; to check the voicemail, press and hold the le key.

When new voicemail is received, the symbol •• will be displayed on the screen.

Note

Please check with your network service provider for details of their service in order to configure the handset accordingly.

Templates

Menu 2.7

There are 6 predefined messages in the list. You can view and edit the template messages or create new messages.

Text Templates (Menu 2.7.1)

- · Please call me back
- · I'm late. I will be there at
- · Where are you now?
- · I'm on the way.
- Urgent! Please contact.
- I love you

The following [Options] are available.

- ▶ View: Allows you to view the selected template message.
- Edit: Allows you to write a new message or edit the selected template message.
- Send Via Text Message: Allows you to send the selected template message via SMS.
- Delete: Allows you to delete the selected template message.
- New Template: Use this to create new template.

Delete All: Deletes all messages in the folder

Multimedia (Menu 2.7.2)

My Business Card (Menu 2.7.3)

This feature allows you to create your own name card. You can key in the Name, Mobile number, Office number, Fax number and F-mail address.

- Edit: Allows you to write a new message or edit the selected name card.
- Send Via Text Message: Sends the selected name card by SMS.
- ▶ **Delete:** Allows you to delete the selected name card

Message Settings Menu 2.8

Text Message (Menu 2.8.1)

- Message Center Number: If you want to send a text message, you can receive the address of the SMS center through this menu.
- Email Gateway: You can send the text message to an Email Address via this gateway.

Multimedia (Menu 2.8.2)

Allows you to change the voicemail server number, if necessary.

Note

Voice Mail is a network feature. Please contact your service provider for further details.

Voicemail (Menu 283)

Allows you to change the voicemail server number, if necessary.

Note

Voice Mail is a network feature. Please contact your service provider for further details

Service Messages (Menu 2.8.4)

Recent Calls

You can check the record of missed, received, and dialed calls only if the network supports the Calling Line Identification (CLI) within the service area.

The number and name (if available) are displayed together with the date and time of the call. You can also view call times.

Missed Calls Menu 3.1

- View the number, if available, and call it or save it in the Address Book
- Enter a new name for the number and save both in the Address Book
- Send a message by this number
- Delete the call from the list

Dia led Calls

Menu 3.2

- View the number, if available, and call it or save it in the Address Book
 Enter new name for the number and
- Enter new name for the number and save both in the Address Book
- · Send a message by this number
- · Delete the call from the list

Received Calls

Menu 3.3

- View the number, if available, and call it or save it in the Address Book
- Enter a new name for the number and save both in the Address Book
- Send a message by this number
- Delete the call from the list

All Calls

Menu 3.4

Allows you to view all of missed, received, and dialed call records.

Call Duration

Menu 3.5

This allows you to view the duration of the incoming and outgoing calls. You can also reset the call times. The following timers are available:

Last Call (Menu 3.5.1)

Duration of the last call.

Dialed Calls (Menu 3.5.2)

Duration of the outgoing calls.

Received Calls (Menu 3.5.3)

Duration of the incoming calls.

All Calls (Menu 3.5.4)

Total Duration of all calls made and incoming calls since the timer was last reset.

Call Costs Menu 3.6

Allows you to check the cost of your last call, all calls, remaining and reset the cost. To reset the cost, you need to PIN2 code.

Data Information Menu 3.7

You can check the amount of data transferred over the network through the GPRS information option. In addition, you can also view how much time you are online.

Data time (Menu 3.7.1)

You can check the data time of the last session or all sessions.

Data volume (Menu 3.7.2)

You can check the **Sent**, **Received** or All data volumes and **Reset all**.

Games & Apps

Games & Apps Menu 4.1

Java settings Menu 4.2



Home

Menu 5.1

Connects to a homepage. The homepage will be the site which is defined in the activated profile. It will be defined by the service provider if you have not defined it in the activated profile

- ▶ Edit: You can edit the URL and/or the title of the selected bookmark
- New hookmark: Select this to create a new bookmark
- Send IIRI via: Sends the selected bookmark via Text/Multimedia message and Fmail

Bookmarks

Menu 5.2

This menu allows you to store the URL of favourite web pages for easy access at a later time

To create a bookmark

1. Press the left soft key [Options].



- 2. Select New bookmark and press the OK kev.
- 3. After entering the desired URL and title, press the OK key.

After selecting a desired bookmark, the following options are available.

- ▶ Connect: Connects to the selected bookmark
- ▶ View: You can see the selected bookmark

Saved page

Enter address Menu 5.4

History

Menu 5.5

Menu 5.3

This menu will shows the recent browsing pages.

Settings

Menu 5.6

You can set the profile, cache and security related to internet service.

Network profiles (Menu 5.6.1)

A profile is the network information used to connect to the Internet.

There are default profiles for some operators, stored in phone memory. It's impossible to rename default profiles.

Each profile has submenus as follows:

- Activate: Activates the selected profile.
- View: You can see the selected profile.
- ▶ Edit: You can edit the selected profile.
- New profile: You can add a new profile.
- ▶ Delete: Deletes the selected profile from the list.
- Delete all: Deletes all profile from the list.
- Reset all: Allows you to reset all profiles.

Cache (Menu 5.6.2)

The information or services you have accessed are saved in the cache memory of the phone.

Note

A cache is a buffer memory, which is used to save data temporarily.

Cookies (Menu 5.6.3)

Check whether a cookie is used or not

Security Certificates

(Menu 5.6.4)

You can see the list of personal. Certificates that have been stored in your phone.

Show image (Menu 5.6.5)

Allows you to enable or disable the image display during browsing.

Tools

Alarm Clock

Menu 6.1

Menu 6.2

For further details, see page 31.

Calendar

When you enter this menu a calendar will be displayed. The square cursor is used to locate a particular day. The orange colored date indicates schedule(s) on for that day. This function helps to remind you of the schedule. The phone will sound an alarm tone if it has been set for a specific schedule item.

For changing the day, month, and year.

Key	Description
up/down navigation key	Weekly
left/right navigation key	Daily
1 ∞ key / 3 der key	Yearly
7 page * ·· x key/ 9 mage # *** key	Monthly
5 ⋈ key	Today

- ➤ View: Allows you to view the selected schedule.
- ▶ Delete: Allows you to delete the selected schedule.

- New Schedule: You can edit a maximum of 30 characters and create up to 30 notes.
- ▶ Edit: Allows you to edit the selected schedule.
- ➤ Calendar: Allows you to consult the calendar.
- Scheduler Tone: The phone can sound an alarm tone when the scheduled date for an event has been reached with this option.
- All Schedules: Shows the notes that are set for all days. Use the up/down navigation keys to browse through the note lists. You can use the menu by press the right soft key [Options].
- ▶ Go to Date: Allows you to jump to a specific date.
- Delete Old: Delete the past schedule event that has already been notified.
- Delete All: Delete all schedules. You are asked to confirm your action.

Notepad

Menu 6.3

You can create up to a maximum of 20 memos.

- 1. Select a memo pad to edit.
- Press the right soft key [New] to create a new memo.
- **3.** Input the memo and press the right soft key [Options] [Save] to save.

Calculator

Menu 6.4

Using this feature, you can use the phone as a calculator. The calculator provides the basic arithmetic functions: addition, subtraction, multiplication and division.

Using the Calculator

- **1.** Enter the first number using the numeric keys.
- **2.** Use the navigation keys to select a sign for calculation.

Note

To input a decimal point, press the we key.

3. To calculate the result, press the key.

Tip Ca Iculator

Menu 6.5

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.

World Clock

Menu 6.6

Allows you to check the current Greenwich Mean Time(GMT) and major cities around the world, using the left/right navigation keys.

The screen shows the city name, current date and time.

To select the time zone in which you are located, proceed as follows:

- Select the city corresponding to your time zone by pressing the left/right navigation keys one or more times.
 The local date and time are displayed.
- **2.** If you want to set, press the right soft key [Options].
- **3.** If you want to set Daylight Savings, press the right soft key [Options].

The time zone setting of each city in World time menu may be affected by network condition

To do Menu 6.7

You can view, edit and add lists to do. To do lists are displayed in time order. To do lists that have been in progress or completed are displayed. And you can send via text or picture message.

Stop Watch

Menu 6.8

- **1.** Press[Start] to take time and record the lap time by pressing[Lap].
- **2.** Press[Stop] to ascertain the record of lap time.
- 3. Press[Reset] to default condition.

Unit Converter

Menu 6.9

This function converts any measurement into the unit you want.

There are 4 types that can be converted into units: **Length, Surface, Weight,** and **Volume.**

- **1.** You can select one of four unit types by pressing the right soft key [**Unit**].
- **2.** Select the standard value by using the left/right navigation keys.
- Select the unit you want to convert by pressing the up/down navigation keys.
- **4.** You can check the converted value for the unit you want. Also, you can input a decimal number by pressing the key.

My Stuff

Game&Apps

Menu 7.1

You can play the game that is pre-installed on the phone.

Audio & Ringtones Menu 7.2

The right soft key [**Options**] will bring up the following options.

➤ Set as Ringtone: You can set as the Ringtone with the selected audio file.

Note

Sounds supplied as default can only be used under the Set as Ringtone mode.

Graphics

Menu 7.3

The right soft key [**Options**] will bring up the following options.

- View: You can see the currently selected picture.
- Set as Wallpaper: Currently selected picture can be set as a Wallpaper.
- ➤ **List/Icon View:** You can configure the graphic files to List style or Icon style.

Note

Pictures supplied as default can only be used under the Set as Wallpaper mode.

Camera & Recordings

Menu 7.4

Other Files

Menu 7.5

Address Book

Contact List

Menu 8.1

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

New Contact Menu 2.2

This menu allows you to add a new contact address. You can input contact address information including name, phone numbers, email addresses, group information items. and memos.

Caller Groups

Menu 8.3

Caller Groups Menu 8.4

- Every Group list will be displayed: Family, VIP, Friends, Colleague, Group 1, Group 2, No Group.
- Select the Group name that you want to manage by pressing the right soft key [Options].
- **3.** You will see the following submenus under the predefined groups except

for the No Group group.

- Members List: Allows you to see the member list in the group.
- Group Ringtone: Allows you to select the ringtone to be used when you receive a voice phone call from a person in the group.
- Group Icon: Allows you to select the graphic icon to be displayed on the group of Group List.
- Add Member: Allows you to add the member to the group.
- Remove Member: Allows you to delete the member in the group.
- Rename: Allows you to assign a name to the group.

Speed Dial List Menu 8.5

This menu allows you to configure the speed dial numbers. You can select a number as a speed dial from 2 to 9. You can configure speed dial numbers for any of the 8 numbers for a specific contact address.

Copy All Contacts Menu 8.6

This menu allows you to copy all of the information from your SmartChip, e.g. name, handset number, etc., to your handset vice versa. If a name is duplicated during the copying operation, the information is also duplicated.

- SmartChip to Handset: You can copy the entry from the SmartChip card to the handset memory.
- Handset to SmartChip: You can copy the entry from the handset memory to the SmartChip card (not all the data will be copied).

Delete All Contacts Menu 8.7

You can delete all entries in the **SmartChip** and the **Handset**.

Press the [END] key to return to standby mode.

My Business Card Menu 8.8

This feature allows you to create your own name card. You can key in the Name, Mobile number, Office number, Eax number and E-mail address

- Edit: Allows you to write a new message or edit the selected name card.
- Send Via Text Message: Sends the selected name card by SMS.
- Delete: Allows you to delete the selected name card.

My Numbers

Menu 8.9

Allows you to display your phone number in the SmartChip card.

Settings

Audio & Ringtones Menu 9.1

Pressing and holding the Mey on idle screen mode can swap Normal and Vibrate mode. Ear Mic is available when respective instruments are attached.

Ringtones (Menu 9.1.1)

Shows and plays ringtones. These can be downloaded ringtones from Ringtone shops.

Volume (Menu 9.1.2)

This menu controls Ringtone, Key Tone, Earpiece and Headset volume. It is available on Ringtone volume level 1~5.

Message Alert Tones (Menu 9.1.3)

Allows you to select an alert tone which is played when a message is received.

Alert Type (Menu 9.1.4)

Supports 3 ring alert types. Ring, Ring and Vibrate, and Vibrate then Ring.

Increasing Ringtone (Menu 9.1.5)

Allows you to select an Increasing Ringtone type which is played when a incoming call. You can set the On or Off.

Power On/Off Tones (Menu 9.1.6)

Allows you to select an Power On/Off tone. You can set the On or Off.

Display

Menu 9.2

Wallpapers (Menu 9.2.1)

This option allows you to change the background image (wallpaper) to be displayed in idle mode.

1. Scroll through the list by pressing the left or right navigation key.

You have various preset images available. You can also select any images downloaded from the Internet.

- **2.** Press the right soft key [**View**] when the required image is highlighted.
- Press the right soft key [Set], then the selected image will be displayed in standby mode.

Backlight Timer (Menu 9.2.2)

You can select whether or not the phone uses the backlight.

Brightness (Menu 9.2.3)

Languages (Menu 9.2.4)

You can change the language for the the display text in your phone. This feature also change the Language Input mode.

Bluetooth Menu 9.3

Bluetooth enables compatible mobile devices, peripherals and computers that are in close proximity to communicate directly with each other without wires. This handset supports built-in Bluetooth connectivity, which makes it possible to connect them with compatible Bluetooth headsets, computer applications and so on.

Note

- If you use LG PC Sync via Bluetooth, you can exchange data only within the phonebook.
- When you receive data from another Bluetooth device, the phone requests confirmation. After confirming the transfer, the file will be copied on to your phone.

Note

- Depending on the file type, it will be stored in the following folders:
- MP3 (.mp3, mp4, aac, m4a, wma): Music folder.
- Video (.3GP, MP4): video folder.
- Phonebook contacts (.VCF): Phonebook.
- Text (.txt): Text folder.
- Other files (.*.*): File storage folder.
- ▶ The handset normally operates with WIDCOMM driver(version 1.4.3.4) or WIDCOMM driver(version 1.4.2.10). And it does not support the LG Contents Bank with Bluetooth.

- Bluetooth on/off: You can activate or cancel the Bluetooth function.
- Device list: You can view all devices which your KG280 is already paired to.

If you have entered Paired devices or Handsfree devices, you will see the following options in both those menus

- Connect/Disconnect: Allows you to connect to your paired Bluetooth devices.
- Add new: Allows you to search for new Bluetooth devices and add them to your phone's list of paired devices. When you select Add new your handset will start to search for Bluetooth devices within range. Once the device you wish to pair appears on the list press the right soft key [Stop]. Scroll to the desired device and press the left soft key [Pair]. You will then be asked to enter a passcode.

The passcode can be any code you wish to use (the same passcode must be used by both devices) or is one that is predetermined by the manufacturer of the device you are trying to pair with. Please check the User Manual of the device you are initiating the pair with to see if it already has a predetermined passcode in place.

- Assign name: Allows you to change the name of the paired Bluetooth device and how it is displayed on the handset.
- Set as authorised/Set as unauthorised: Allows you to set an authorised connection between each Bluetooth device. For example if you regularly use a Bluetooth headset with your phone then setting the connection as authorised will mean the headset will automatically connect to the handset each time the headset is powered on.

Settings

- All services: Allows you to view all services which are supported by a Bluetooth device.
- Delete: Allows you to delete a paired Bluetooth device.
- Delete all: Allows you to delete all paired Bluetooth devices.
- Bluetooth settings
 - · My visibility

This indicates whether or not your handset will be visible to other Bluetooth devices.

My name

You can set the name of your Bluetooth device. The default name is LG KG280.

My address

You can view the Bluetooth address of your phone.

Supported services

Displays a list of Bluetooth services the handset supports.

- Headset
- Handsfree kit
- File transfer
- Image printing
- Dial-up networking
- Business card transfer
- Browsing other device
- Serial Port Profile

Date & Time

Menu 9.4

Set Date (Menu 9.4.1)

This allows you to enter the day, month and year. You can change the date format via the **Date Format** menu option.

Date Format (Menu 9.4.2)

YYYY/MM/DD(year/month/day)
DD/MM/YYYY(day/month/year)

MM/DD/YYYY(month/day/year)

Set Time (Menu 9.4.3)

This allows you to enter the current time. You can choose the time format via the Time Format menu option.

Time Format (Menu 9.4.4)

24 Hours/12 Hours

Auto Update (Menu 9.4.5)

Select On to set the phone to automatically update the time and date according to the current time zone.

Call

Menu 9.5

Call Forwarding (Menu 9.5.1)

When this network service is activated, you can direct your incoming calls to another number, for example, to your voice mailbox number. For details, contact your service provider. Select one of the divert options, for example, select If Busy to divert voice calls when your number is busy or when you reject incoming calls.

The following options are available:

- All Voice Calls: Diverts voice calls unconditionally.
- If Busy: Diverts voice calls when the phone is in use.
- If No Reply: Diverts voice calls which you do not answer.
- If Out Of Reach: Diverts voice calls when the phone is switched off or out of coverage.
- All Data Calls: Diverts to a number with a PC connection unconditionally.
- All Fax Calls: Diverts to a number with a fax connection unconditionally.
- Cancel All: Cancels all call divert service.

Answer Mode (Menu 9.5.2)

This allows you to determine when to answer the phone.

- ➤ Send Key Only: You can answer an incoming call by only pressing the [SEND] key.
- Any Key: You can answer an incoming call by pressing any key, except the
 [END] key.

Send My Number (Menu 9.5.3)

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

Call Waiting (Menu 9.5.4)

The network will notify you of a new incoming call while you have a call in progress. Select **Activate** to request the network to activate call waiting, **Cancel** to request the network to deactivate call waiting, or **View Status**, to check if the function is active or not.

Minute Minder (Menu 9.5.5)

This option allows you to specify whether the phone must beep every minute during an outgoing call to keep you informed of the length of the call.

Auto Redial (Menu 9.5.6)

Select On, your phone redials the number you're trying to call up to 10 times after you hear a quick, busy signal. Press [END] key to stop the call attempts.

This feature attempts to redial numbers that are busy due to the wireless network. It does not redial numbers to a busy party.

TTY (Menu 9.5.7)

Allows you to attach a TTY device enabling you to communicate with parties also using a TTY device.

A phone with TTY support is able to translate typed characters to voice. Voice can also be translated into characters and then displayed on the TTY.

Send DTMF Tones (Menu 9.5.8)

You can send the DTMF (dual tone multifrequency) tones of the number on the display during a call.

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

Security

Menu 9.6

Various codes and passwords are used to protect the features of your phone. They are described in the following sections (see pages 18)

Auto Key Lock (Menu 9.6.1)

This menu allows to set the time of Auto Keypad Lock.

Note

You cannot make emergency calls under the key lock.

PIN Code Request (Menu 9.6.2)

When the PIN code request feature is set to 'Enable', you must enter your PIN each time you switch the phone on.

Consequently, any person who does not have your PIN cannot use your phone without your approval.

Note

Before disabling the PIN code request feature, you must enter your PIN.

The following options are available:

- ► Ena ble: You must enter the PIN each time the phone is switched on.
- ▶ Disa ble: The phone connects directly to the network when you switch it on.

Fixed Dial Number (FDN)

(Menu 9.6.3)

This allows you to restrict your outgoing calls to selected phone numbers, if this function is supported by your SmartChip. The PIN2 code is required.

The following options are available:

- Enable: You can make a call by only phone numbers stored in the Number List. You must enter your PIN2.
- ▶ Disable: You can call any number.
- Number List: You can view the number list saved as fixed dial number.

Note

Not all SmartChip cards have a PIN2. If your SmartChip card does not, this menu option is not displayed.

Change Codes (Menu 9.6.4)

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.

You can change the access codes for: Security Code, PIN1 Code, PIN2 Code

Note

PIN: Personal Identification Number.

Power Save

Menu 9.7

Connectivity

Menu 9.8

- Automatic: This function automatically searches for the network and registers the handset to the network.
- Manual: This function enables you to search the network list and specify which network to attempt registration with.

Flight Mode

Menu 9.9

This allows you to use only the phone's features that do not require the use of the wireless network when you are in an airplane or in places where the wireless network is prevented.

If you set the flight mode on, the kicon will be displayed on the screen instead of the network signal icon.

- On: You cannot make (or receive) any calls, including emergency calls, or use other features that require network coverage
- Off: You can deactivate the flight mode and restart your handset to access the network.

Memory Status Menu 9.0

You can check the current memory status of each memory for Text.

Handset Information Menu 9.*

This menu is used to view My Numbers, Manufacturer and Model Name information etc

Reset Settings Menu 9.#

You can easily reset your phone to its default configuration. To do so, proceed, as follows

- 1. Select the Reset Settings menu option.
- 2. Enter the 8-digit phone password.
- Note The password is preset to 00000000.

Q&A

Please check to see if any problems you have encountered with the phone are described in this section before taking the phone in for a service or calling a service engineer.

- Q How do I view the list of outgoing calls, incoming calls and missed calls?
- A Press the [SEND] key.
- Q How do I view all numbers stored in memory?
- A Press the down navigation key.
- Q Why is the connection inconsistent or not audible in certain areas?
- A When frequency environment is unstable in a certain area, connection may be inconsistent and not audible. Relocate to another area and try again.

- Q Why is the connection not consistent abruptly disconnects even when established?
- A When frequency is unstable or weak or if there are too many users, connection may be cut off even after it was established. Please try again later or attempt after relocating to other areas.
- Q Why does the LCD not turn on?
- A Remove the battery and turn on the power after placing it back on. If there is no change, fully charge the battery and try again.
- Q Why is there an echo when a connection is made with certain telephones in a certain area?
- A This is called the 'Echo Phenomenon', where it occurs if connection volume is too high or caused by special properties (semi electronic telephone exchange) of the equipment on the other end.

- Q Why does the phone heat up?
- A The phone may get hot when there is a very long call duration or when games are played or even when surfing the Internet for a long time. This has no effect upon the life of the product or performance.
- Q Why does the battery life get shorter in standby mode?
- A The battery is worn out. As time passes, the battery life gradually becomes shorter. If the battery lasts about half the amount of time as when first purchased, it's time to purchase a new battery.
- Why does the battery run out so quickly during normal use?
- A It is due to the user environment or a large number of calls or weak signal.
- Q Why is no number dialed when you recall a Address Book entry?
- A Check that the number has been stored correctly by using the Address book Search feature. Re-store them, if necessary.

- Q I cannot find the lock, PIN, or PUK code. What is my password?
- A The default lock code is '0000'. If you forget or lose the lock code, contact your phone dealer. If you forget or lose a PIN or PUK code, or if you have not received such a code, contact your network service provider.

Accessories

There are a variety of accessories available for your mobile phone. 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. It supports standard U.S. 120 Volt 60Hz outlets.

It takes under 4 hours to charge a completely discharged battery.



Battery

Standard battery is available.



Headset

Connects to your phone, allowing hands-free operation. Includes earpiece, microphone, and integrated call answer/termination button.



TIA Safety Information

Provided herein is the complete TIA Safety Information for Wireless Handheld phones. Inclusion of the text covering Pacemakers, Hearing Aids, and Other Medical Devices is required in the owner's manual for CTIA Certification. Use of the remaining TIA language is encouraged when appropriate.

Exposure to Radio Frequency Signal

Your wireless handheld portable telephone is a lowpower 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)

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).

* American National Standards Institute;National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection

The design of your phone complies with the FCC guidelines (and those standards).

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized 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.

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. Always obey them. Also, if using your phone while driving, please:

- Give full attention to driving driving safely is your first responsibility;
- ▶ Use hands-free operation, if available;
- Pull off the road and park before making or answering a call if driving conditions so require.

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.

Pacema kers

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.

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

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.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if they are 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 regulations prohibit using your phone while in the air. Turn your phone OFF before boarding an aircraft.

Blasting Areas

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

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.

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 guide in an accessible place at all the times after reading it.

Charger and Adapter Safety

The charger and adapter are intended for indoor use only.

Battery Information and Care

- Please dispose of your battery properly or take it to your local wireless carrier for recycling.
- 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 impact the battery as it may cause electric shock, short-circuit, and fire. Store the battery in a place out of reach of children.
- 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, MEdia Net Browsing, and data connectivity kits affect battery life and talk/standby times.
- ▶ The self-protection function of the battery cuts the power of the phone when its operation is in an abnormal state. In this case, remove the battery from the phone, reinstall it, and turn the phone on.

Explosion, Shock, and Fire Hazards

- 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.
- When using the power plug, ensure that it is firmly connected. If it is not, it may cause excessive heat 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.

General Notice

- 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.

- 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.
- 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 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.
- Do not paint your phone.
- ➤ The data saved in your phone might be deleted due to careless use, repair of

the phone, or upgrade of the software. Please backup your important phone numbers. (Ring tones, text messages, voice messages, pictures, and videos could also be deleted.) The manufacturer is not liable for damage due to the loss of data.

- When you use the phone in public places, set the ring tone to vibration so as not to disturb others.
- Do not turn your phone on or off when putting it in your ear.

FDA Consumer Update

The U.S. Food and Drug Administration 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 standby 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.

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

Under the law, the FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless

phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, 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 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 (Administración de la seguridad y salud laborales)
- 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 a lready?

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 vears.

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 exposure studies could be completed in a few vears. 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 cancercausing 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 a bout 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 radiofrequency 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 (IFFF) 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

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

exposure level in the online listing.

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. The test method uses a tissuesimulating 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 radiofrequency energy from my wireless phone?

If there is a risk from these products and at this point we do not know that there is - it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives. reducing the amount of time spent using a wireless phone will reduce RF exposure. If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these

products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

10. What a bout children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones. including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was

strictly precautionary; it was not based on scientific evidence that any health hazard exists

11. What a bout 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 Flectrical and Flectronic 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.

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/cdrh/phones/inde x.html)

Federal Communications Commission (FCC) RF Safety Program (http://www.fcc.gov/oet/rfsafety) International Commission on Nonlonizing Radiation Protection (http://www.icnirp.de)

World Health Organization (WHO) International EMF Project (http://www.who.int/emf)

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

10 Driver Safety Tips

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

When operating 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:

 Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of

- valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.
- 2. When available, use a hands-free device. A number of hands-free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
- 3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can reach it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voicemail answer it for you.
- 4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather

- conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
- 5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to-do" list while driving a car, you are not watching where you are going. It is common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
- 6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip— dial only a few numbers, check the road and your mirrors, then continue.
- 7. Do not engage in stressful or emotional conversations that may be

- distracting. Stressful or emotional conversations and driving do not mix; they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
- 8. Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations with your phone at your side, help is only three numbers away. Dial 911 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
- 9. Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 911 or other local

- emergency number, as you would want others to do for you.
- 10. Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you can still use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle, you know to be stolen, call roadside assistance or other special non-emergency wireless number.

For more information, please call to 888-901-SAFE, or visit our website www.wow-com.com

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 (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on 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 is 1.6W/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 1.17 W/kg and when

worn on the body, as described in this user's manual, is 1.09 W/kg. (Body-worn measurements differ among phones models, depending upon available accessories and FCC 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/fccid after searching on FCC ID BEJLG300G.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) website at http://www.wow-com.com

* 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

Glossary

To help you understand the main technical terms and abbreviations used in this booklet and take full advantage of the feature on your mobile phone, here are a few definitions

Call Barring

Ability to restrict outgoing and incoming calls.

Call Divert

Ability to reroute calls to another number.

Call waiting

Ability to inform users that they have an incoming call when engaged on another call

GPRS (General Packet Radio Service)

GPRS guaranties continuous connection to the Internet for mobile phone and computer users. It is based on the Global System for Mobile Communication (GSM) circuit-switched cellular phone connections and the Short Message Service (SMS).

GSM (Global System for Mobile Communication)

International standard for cellular communication, guaranteeing compatibility between the various network operators. GSM covers most European countries and many other parts of the world.

Line Identification Services (Caller ID)

Service allowing subscribers to view or block the telephone numbers of callers.

Multiparty Calls

Ability to establish a conference call involving up to five additional parties.

Phone Password

Security code used to unlock the phone when you have selected the option to lock it automatically each time it switches on.

Glossary

Roaming

Use of your phone when you are outside your home area (when traveling for example).

SDN (Service Dial Number)

Telephone numbers supplied by your network provider and giving access to special services, such as voicemail, directory inquiries, customer support and emergency services.

SmartChip (Subscriber Identification Module)

Card containing a chip with all the information required to operate the phone (network and memory information, as well as the subscriber's personal data). The SmartChip card fits into a small slot on the back of the phone and is protected by the battery.

SMS (Short Message Service)

Network service sending and receiving messages to and from another subscriber without having to speak to the correspondent. The message created or received (up to 160 characters long) can be displayed, received, edited or sent.

Patent Information

This product was manufactured under one or more of the following U.S. patents: 5276765 5749067 6061647

Hearing Aid Compatibility with Mobile Phones

When some mobile phones are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and phones also vary in the amount of interference they generate.

The wireless telephone industry has developed ratings for some of their mobile phones, to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Phones that are rated have the rating on their box or a label on the box.

The ratings are not guarantees. Results will vary depending on the user's hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated phone successfully. Trying out the phone with your hearing device is the best way to evaluate it for your personal needs.

M-Ratings: Phones rated M3 or M4 meet FCC requirements and are likely to generate less

interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

T-Ratings: Phones rated T3 or T4 meet FCC requirements and are likely to be more usable with a hearing device's telecoil ("T Switch" or "Telephone Switch") than unrated phones. T4 is the better/higher of the two ratings. (Note that not all hearing devices have telecoils in them.)

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.