






**LG-NP3100**

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

 **Caution:** Use only LG-approved batteries and desktop chargers to avoid the damage to the phone. Using other batteries or chargers voids your warranty and may cause an explosion.

 **Caution:** Do not use batteries and desktop chargers for purposes other than their intended use.

 **Never store your phone in temperatures less than -20 °C or greater than 50 °C, such as outside during a snowstorm or in your car on a hot day. Exposure to excessive cold or heat may result in phone malfunction, damage and/or failure.**

 **Use caution when using your phone near other electronic devices. RF emissions from your mobile phone may affect nearby inadequately shielded electronic equipment. Consult 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.**

**IMPORTANT!** Please read the TIA safety information before using your phone.

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**Note** Contact with service provider for the service of Voicemail/SMS/Roaming.

## Introduction

Congratulations on your purchase of the advanced and compact LG-NP3100 cellular phone, designed to operate with the latest digital mobile communication technology, Code Division Multiple Access (CDMA). Along with the many advanced features of the CDMA system such as greatly enhanced voice clarity this phone offers:

- Large, easy-to-read, 6-line backlight LCD with status icons.
- Paging, messaging, Voicemail, and caller ID.
- 18-key keypad.
- Long battery stand-by and talk time.

**Note** According to the use of slot cycle index in network system, battery life span may be shortened.

- Menu-driven interface with prompts for easy operation and configuration.
- Anykey answer, Car Auto-Answer, auto retry, one-touch dialing and speed dialing with 200 memory locations.

### Important Information

This user's manual provides important information on the use and operation of your phone. Please read all the information carefully prior to using the phone for the best performance and to prevent any damage to or misuse of the phone. Any unapproved changes or modifications may void your warranty.

## Check Accessories

Your mobile phone comes with a one-slot desktop charger and a rechargeable battery. Please verify that these accessories are included.



### FCC RF Exposure Information

**WARNING! Read this information before operating the phone.**

In August 1996, the Federal Communications (FCC) of the 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 bodies.

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 the skin a minor burn may result. Contact your local dealer for a replacement antenna.

## Bodily Contact During Operation

This device was tested for typical usage with the back of the phone kept 3/4 in (2 cm) from the body. To comply with FCC RF exposure requirements, a minimum separation distance of 3/4 inches (2 cm) must be maintained between the user's body and the back of the phone, including the antenna whether extended or retracted. Third-party belt-clips, holsters, and similar accessories containing metallic components should not be used. Avoid the use of accessories that cannot maintain 3/4 in (2 cm) distance between the user's body and the back of the phone and have not been tested for compliance with FCC RF exposure limits.

## Vehicle-Mounted External Antenna

(Optional, if available.)

A minimum distance of 8 in (20 cm) 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](http://www.fcc.gov).

**LG-NP3100****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 cause undesired operation.

**Battery Safety**

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

**Battery Disposal**

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

### **Adapter (Charger) Safety**

- Using the wrong battery charger could damage your phone and void your warranty.
- 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.



## Chapter 1 Getting Started

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### Safety Information

Please read and observe the following information for the safe and proper use of your phone and to prevent any unanticipated damage. Also, keep the user's manual 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.
- Do not use your phone in high explosive areas as the phone may generate sparks.
- 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 an 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 item on the power cord. Do not allow the power cord to be crimped as it may cause fire or electric shock.
- Do not impact the phone with sharp items such as a nail and keep it away from pets.
- Do not disassemble the phone.
- Do not place or answer calls while charging the phone as it may cause short-circuit and cause electric shock or fire.

- Do not short-circuit the battery contacts. A short circuit can occur when a metallic object such as a coin, clip or pen contacts the metal terminals of the battery. A short circuit of the terminals may damage the battery, the phone, the object causing the short circuit and may result in heat, fire, or catastrophic failure such as an explosion.
- Always replace the rubber cap on the receptacle located at the base of your phone when the receptacle does not need to be accessed. Short-circuit may be caused by the contact with the metallic articles such as a coin and clip or pen and may result in heat, fire, or catastrophic failure such as an explosion.
- Do not disassemble the battery as it may cause electric shock, short-circuit, or fire.
- Do not expose the phone to excessive vibration or a sharp impact.
- Never place your phone in a microwave oven as it will cause the battery to explode.

### General Warnings and Cautions

- 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 a 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.

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- Talking on your phone for a long period of time may reduce the call quality due to heat generated during use.
- If you plan to not use the phone for a long period time, store it in a safe area with the power cord unplugged.
- Only use the batteries, antennas, and chargers provided by LG. The warranty will not be applied to products provided by other suppliers.
- Using the phone in proximity to receiving equipment (i.e., TV or radio) may cause interference in this phone.
- Only authorized personnel should service the phone and its accessories. Faulty installation or service may result in accidents and consequently invalidate the warranty.
- Use only the antenna provided or approved by LG. Unauthorized antennas, modifications or attachments may affect the quality of phone call, damage the phone or result in a violation of FCC regulations.
- Do not use the cellular phone if the antenna is damaged. If the damaged antenna contact the skin, it may cause a slight burn. Please contact LG Authorized Service Center to replace the damaged antenna.
- Do not use the cellular phone in areas where its use is prohibited. (For example: aircraft, hospitals).
- Do not expose the cellular phone to high temperatures or high humidity.
- Do not immerse your cellular 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.

## Phone components

The following shows key components of your mobile phone.











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## Phone Overview

- 1. Headset Jack** : Provides connection for an optional headset.
- 2. Volume Keys** : Adjust the ringer volume in Standby mode or voice volume during a call.
- 3. OK** : Lets you place a call and select menu options.
- 4. Display Screen** : Displays phone status icons and menu items.
- 5. Power On Indicator/LED** : Flashes when phone is powering up. Also flashes to alert you to incoming calls, messages, scheduler alarms and more.
- 6. 4-Way Navigator** : Scrolls through menus and displays the next or previous entry or message.
- 7. END/PWR** : Lets you power the phone on or off, end calls or return to the main menu.
- 8. CLR** : Lets you clear an entry or back up in a menu.

## Onscreen Icons

The phone screen displays several onscreen icons which appear when the phone is powered on.

Icons	Descriptions
	Displays the strength of the signal received by the phone and current signal strength is indicated by the number of bars displayed on the screen.
	No service The phone is not receiving a system signal.
	In use A call is in progress. * No icon indicates the phone is in standby mode.
	Digital indicator Digital service is available.
	Roaming The phone is outside of its home service area.
	In Vibration mode
	Indicates that a text message has been received.
	Charge level Indicates battery charge level.

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## Using the Battery Pack

**Note:** It is important to charge the battery fully before the initial use of the phone.

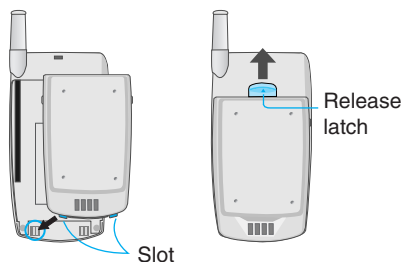
The phone comes with a rechargeable battery. Keep the battery charged while not in use in order to maximize talk and standby time when using the phone.

### *Installing the Battery*

To install the battery, insert the bottom of the battery into the opening on the back of the phone. Then push the top of the battery down until the latch clicks.

### *Removing the Battery*

Turn the power off. Lift the release latch to detach the battery.



### *Battery Charge Level*


The battery charge level is shown at the top right of the LCD screen.



When the battery charge level becomes low, the low battery sensor alerts you in three ways: sounding an audible tone, blinking the battery icon, and displaying **LOW BATTERY WARNING!** If the battery charge level becomes exceedingly low, the phone automatically switches off and any function in progress is not saved.

### *Using the Desktop Charger*


The desktop charger has a slot for recharging batteries that accommodates the phone and battery for charging.

 **Warning! Use only the desktop charger provided with the phone. Using an unauthorized charger may damage your phone or battery.**

1. Plug the charger into a wall outlet. The phone must be charged from a 120 Vac power source.
2. Insert the phone with an installed battery or the battery by itself into the slot of the charger. The red light indicates the battery is charging and the green light indicates the battery is fully charged.

The charge time varies depending upon the battery level. The maximum charge time for a fully discharged battery is 3 hours.

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 **WARNING! The desktop charger and the travel charger cannot be used at the same time because the battery may be altered or damaged.**

***Battery Information and Care***

1. Never use an unauthorized battery since this could damage the phone and / or battery and could cause the battery to explode.
2. You do not need to wait until the battery is empty before recharging the battery.
3. Use only LG chargers specific to your phone model since they are designed to maximize battery life.
4. Do not disassemble or short-circuit the battery.
5. Keep the battery's metal contacts clean.
6. Replace the battery when it no longer provides acceptable performance. The battery can be recharged several hundred times before requiring replacement.
7. Recharge the battery after long periods of non-use to maximize battery life.
8. Do not expose the battery charger to direct sunlight or use it in areas of high humidity such as a bathroom.
9. Do not leave the battery in hot or cold places as it may deteriorate battery performance.
10. Battery life varies due to factors such as location, usage patterns, etc.
11. Using features such as backlight settings, searching for service, the MiniBrowser, data connectivity, and synchronization affects the battery life and talk / standby times.



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## Chapter 2 Basic Functions

### Turning Your Phone On and Off


#### *Turning Your Phone ON*

- 1) Fully extend the antenna to receive the best reception.
- 2) Press **END PWR** for two seconds. The phone will display “Searching for Service” until it locates a signal, then it will automatically enter Standby mode – the phone’s idle state. At this point, you’re ready to begin making and receiving calls.

#### *Turning Your Phone OFF*

Press **END PWR** for two seconds until the screen displays its powering off message (for example, “LG Goodbye!”).

#### *Signal Strength*

Call quality is always best when the antenna is fully raised. If you’re 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.

#### *Power Save Mode*

When the phone is in an area without service for about 15 minutes, it stops searching for service and enters into the Power Save Mode. When your phone activates this feature, Power Save is displayed on your screen. The phone automatically checks for service periodically or you can check manually by pressing any key.

## Making and Answering Calls

### *Making Calls*

1. Make sure your phone is on.
2. Enter a phone number. If you make a mistake while dialing, press **CLR** to erase one digit at a time. Or, press and hold **CLR** to erase the entire number.
3. Press **OK** to dial the number..
4. When you're finished, close the phone, press **END PWR** or highlight **End Call** and press **OK** to end the call.

### *Correcting Dial Errors*

If you typed a wrong number, press the Key **CLR** once to delete the lastly typed digit, or Hold down the Key **CLR** for 2 seconds to delete all the typed digits at the same time.

### *Answering Calls*

1. Make sure your phone is on. If your phone is off, incoming calls go to voicemail.
2. When your phone rings or vibrates, answer the call by pressing **OK**.
3. To end the call, close the phone, press **END PWR** or highlight **End Call** and press **OK**.

## Internal Phone Book

### *Saving Phone Numbers*

1. From the main menu, enter a phone number.
2. Highlight **Save** and press **OK**.
3. Select a label by highlighting it and press **OK**.
4. Enter a name for entry or highlight an existing entry and press **OK**.
5. Press **OK** to save entry in first available memory location.

### *Finding Phone Numbers*

1. Enter one or more digits.
2. Highlight **Find** and press **OK**.
3. To display the Internal Phone Book entry that contains the phone number, highlight the entry and press **OK**.
4. To dial the number, press **OK** again.

### *Making a Call From Your Internal Phone Book*

1. Press the 4-way navigator left.
2. Highlight the entry you want to call and press **OK**.
3. Press **OK** again to dial the entry's default phone number, or highlight the number you want to call, press **OK** to display the number and press **OK** again to dial the number.



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## Chapter 3 Menu Features

### Changing Your Phone's Settings

#### *Changing the Greeting*

1. From the main menu, highlight **Settings** and press **OK**.
2. Highlight **Display** and press **OK**.
3. Highlight **Greeting** and press **OK**.
4. Highlight **Change** and press **OK**.
5. Enter a new name and press **OK**.

#### *Adjusting the Ringer, Key Beep and Earpiece Volume*

1. From the main menu, highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Audio Volume** and press **OK**.
4. Highlight **Ringer**, **Key Beep**, **Earpiece** or **PWR On/Off** and press **OK**.
5. Highlight a volume setting and press **OK**.

#### *Adjusting Volume During a Conversation*

Press the volume keys on the side of your phone during the call.

## Phone Book Features


You can store up to 200 entries in your phone book with easy access to your most frequently dialed phone numbers.

### *Personal Phone Book Memory*

The phone has 200 personal phone book memory locations where you can store up to 5 phone numbers with 32 digit capacity for each phone number.

### **Saving Numbers in Your Personal Phone Book**


Memory locations 1 through 99 should be used for one-touch dialing for your most frequently used phone numbers.


1. Input the phone number that you want to save (up to 32 digits).
2. Highlight **Save** and press **OK**.
3. Select your desired label types, such as **Home**, **Home2**, **Office**, **Office2**, **Mobile**, **Mobile2**, **Pager**, **Data**, **Fax**, **Fax2**, **No Label** using  and press **OK**.
4. Enter a name for entry or highlight an existing entry and press **OK**.
5. Press **OK** to save entry in first available memory location.

**LG-NP3100*****Find Name***

To search for a phone number by name.

1. From the main menu, highlight **Phone Book** and press **OK**.
2. Highlight **Find Name** and press **OK**.
3. Phone numbers saved in the **Phone Book** will appear in the order of alphabet regardless of type of character, capital or small.

To view the phone number you want, press **OK** after scrolling to the phone number you want using .


**Note** You may quickly select the **Find Name** feature by pressing  on the idle screen.

***Find Speed Dial***

To find phone numbers you have stored in the Phone Book.

1. From the main menu, highlight **Phone Book** and press **OK**.
2. Highlight **Find Speed Dial** and press **OK**.
3. The display prompts you to enter the entry number on the display screen.
4. If you press **OK** without entering an entry, you will view a list of all entries in your phone book.

### *Add New Entry*

1. From the main menu, highlight **Phone Book** and press **OK**.
2. Highlight **Add New Entry** and press **OK**.
3. Enter Name, then press **OK**.
4. Enter the phone number, then press **OK**.
5. Select your desired label types, such as **Home**, **Home2**, **Office**, **Office2**, **Mobile**, **Mobile2**, **Pager**, **Data**, **Fax**, **Fax2**, **No Label** using .
6. Press **OK**.

### *Services*

1. From the main menu, highlight **Phone Book** and press **OK**.
2. Highlight **Services** and press **OK**.
3. Select **Cust. Solutions** or **Account Info** and press **OK**.


### *My Phone Number*

View the my phone number.

1. From the main menu, highlight **Phone Book** and press **OK**.
2. Highlight **My Phone #** and press **OK**.

## Sending and Receiving Messages

### *Setting Up Voicemail*

1. Press and hold **1** .
2. Follow the system prompts to create your pass code and record your greeting.

### *Retrieving Voicemail Messages*

- ◆ Press and hold **1** . Follow the system prompts.

### *Accessing Voicemail From Another Phone*

1. Dial your Phone Number.
2. Press **3def** when voicemail answers.
3. Enter your pass code.

### *Displaying Wireless Web Messages*


1. From the main menu, highlight **Messages** and press **OK**.
2. Highlight **Page/Text** or a custom folder and press **OK**. An asterisk before a folder indicates an unread message.
3. Highlight the message you want to display and press **OK**. Press the 4-way navigator down to display additional text.

**Note** Contact with service provider for the service of Voicemail/SMS/Roaming.

## Settings

### Alert

Alert may be configured for receiving new messages.

1. From the main menu, highlight **Messages** and press **OK**.
2. Highlight **Settings** and press **OK**.
3. Select **Alert** and press **OK**.
4. Select **VoiceMail** or **Page/Text** and press **OK**.
5. Press  until you find the sound or ring type you desire.
6. press **OK**.

### VoiceMail


1. From the main menu, highlight **Messages** and press **OK**.
2. Highlight **Settings** and press **OK**.
3. Select **VoiceMail** and press **OK**.
4. Edit number and press **OK**.

**Note** Contact with service provider for the service of VoiceMail/SMS/Roaming.

## Scheduler Functions

### *Add Event*

Allows you to input your schedule.

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Add Event** and press **OK**.
4. Enter a title of the event using your keypad and press **OK**.
5. To toggle between AM and PM, select **AM/PM** and press **OK**.
6. Select **Ringer Type**, **Edit Alarm**, **Edit Repeat** and press **OK**.
7. Select option you want using  then press **OK**.
8. Select **Done** and press **OK**.

### *Erase Event*

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Erase Event** and press **OK**.
4. Select **Yes** and press **OK**.

### *Today*

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Today** and press **OK**.

### *Week View and Month View*

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Week View** or **Month View** and press **OK**.

### *Purge*

Erases only the past scheduler items.

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Purge** and press **OK**.
4. Select **Yes** and press **OK**.

**LG-NP3100*****Purge All***

Allows you to delete all items stored in the scheduler.

1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Purge All** and press **OK**.
4. Select **Yes** and press **OK**.


***Information***

View the free and used event memory.


1. From the main menu, highlight **Scheduler** and press **OK**.
2. Select the date using your keypad then press **OK**.
3. Select **Information** and press **OK**.

## Sound Settings


### *Audio Volume*

1. From the main menu, highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Audio Volume** and press **OK**.
4. Highlight **Ringer**, **Key Beep**, **Earpiece**, **PWR On/Off** and press **OK**.
5. Choose an option with  and press **OK**.

### *Ringer Type*


1. Highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Ringer Type** and press **OK**.
4. Highlight **Voice Calls**, **Messages** and press **OK**.
5. Choose an option with  and press **OK**.

### *Tone Length*


1. Highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Tone Length** and press **OK**.
4. Set **Short/Long** with  and press **OK**.

**LG-NP3100*****Alert***

In order to activate or to deactivate the alert sounds:

1. Highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Alert** and press **OK**.
4. Highlight **Service Change, Messages, Minute Beep, Call Connect** and press **OK**.
5. Set **On/Off** with  and press **OK**.

***Silent Mode***

1. Highlight **Settings** and press **OK**.
2. Highlight **Sounds** and press **OK**.
3. Highlight **Silent Mode** and press **OK**.
4. Set **On/Off** with  and press **OK**.

## Display Settings

### *Backlight*

Choose the settings of the LCD and keypad backlight.

1. Highlight **Settings** and press **OK**.
  2. Highlight **Display** and press **OK**.
  3. Highlight **Backlight** and press **OK**.
  4. Choose an option and press and press **OK**.
- **8 Seconds** turns the backlight off 8 seconds after the last key was pressed.
  - **15 Seconds** turns the backlight off 15 seconds after the last key was pressed.
  - **30 Seconds** turns the backlight off 30 seconds after the last key was pressed.
  - **Off** means that the backlight is never on.
  - **Always On** means that the backlight is always on.

### *Greeting*

Enter the string of characters you want to be displayed (up to 12 characters.).

1. Highlight **Settings** and press **OK**.
2. Highlight **Display** and press **OK**.
3. Highlight **Greeting** and press **OK**.
4. Highlight **Change** and press **OK**.
5. Enter a new name and press **OK**.

**LG-NP3100*****Screen Saver***


1. Highlight **Settings** and press **OK** .
2. Highlight **Display** and press **OK** .
3. Highlight **Screen Saver** and press **OK** .
4. Highlight **Images** and press **OK** .
5. Highlight **Item 1**, **Item 2** or **Item 3** and press **OK** .
6. Highlight **View** or **Assign** and press **OK** .

***Contrast***

1. Highlight **Settings** and press **OK** .
2. Highlight **Display** and press **OK** .
3. Highlight **Contrast** and press **OK** .
4. Highlight **High**, **Medium High**, **Medium Low** or **Low** and press **OK** .

### *Language*

Set the Bilingual feature according to your preference, choose between English and Indonesian.

1. Highlight **Settings** and press **OK**.
2. Highlight **Display** and press **OK**.
3. Highlight **Language** and press **OK**.
4. Set **English/Indonesian** with  and then press **OK**.

### *Version*

View the software and PRL version.

1. Highlight **Settings** and press **OK**.
2. Highlight **Display** and press **OK**.
3. Highlight **Version** and press **OK**.
4. Highlight **S/W** or **PRL** and press **OK**.

## Security Settings

### *Lock Phone*

Keeps your phone from unauthorized use. Once the phone is locked, it is in restricted mode, until the lock code is entered. This will allow you to receive phone calls and still make emergency calls. The Lock Code/Password on your phone is **0000** by default. If you need to modify the lock code, you may modify it using the New Lock code within the Security Set menu.

1. Highlight **Settings** and press **OK**.
2. Highlight **Security** and press **OK**.
3. Enter the four-digit Lock code.
4. Highlight **Lock Phone** and press **OK**.
5. Select an option and press **OK**.
  - ▶ **Unlocked/On Power Up/Lock Now**

### *Change Lock Code*

New Lock Code allows you to enter a new four-digit lock code number.

1. Highlight **Settings** and press **OK**.
2. Highlight **Security** and press **OK**.
3. Enter the four-digit Lock code.
4. Highlight **Change Lock Code** and press **OK**.
5. Enter the new lock code(four-digit).
6. For confirmation, it will ask you to enter the new lock code again.


### *Special #s*

You can call these numbers even when the phone is locked.

1. Highlight **Settings** and press **OK**.
2. Highlight **Security** and press **OK**.
3. Enter the four-digit Lock code.
4. Highlight **Special #s** and press **OK**.
5. Highlight an entrance position and press **OK**.
6. Enter an Emergency number and press **OK**.


### *Erase PhoneBook*

Allows you to delete all items stored in the PhoneBook.

1. Highlight **Settings** and press **OK**.
2. Highlight **Security** and press **OK**.
3. Enter the four-digit Lock code.
4. Highlight **Erase PhoneBook** and press **OK**.
5. Select **Yes** using  and press **OK**.


### *Reset Phone*

Preferences settings will be set to factory defaults.

1. Highlight **Settings** and press **OK**.
2. Highlight **Security** and press **OK**.
3. Enter the four-digit Lock code.
4. Highlight **Reset Phone** and press **OK**.
5. Select **Yes** using  and press **OK**.


### *Anykey Answer*

When your phone rings, press any key to answer.

1. Highlight **Settings** and press **OK**.
2. Highlight **Setup** and press **OK**.
3. Highlight **Anykey Answer** and press **OK**.
4. Select **On/Off** using  and press **OK**.


### *Car Auto-Answer*

Selects the time period after which the phone automatically answers the call.

1. Highlight **Settings** and press **OK**.
2. Highlight **Setup** and press **OK**.
3. Highlight **Car Auto-Answer** and press **OK**.
4. Select **Off/Car Kit** using  and press **OK**.

## Roaming

### *Set Mode*

1. Highlight **Settings** and press **OK**.
2. Highlight **Roaming** and press **OK**.
3. Highlight **Set Mode** and press **OK**.
4. Select an option using  and press **OK**.


### *Call Guard*

1. Highlight **Settings** and press **OK**.
2. Highlight **Roaming** and press **OK**.
3. Highlight **Call Guard** and press **OK**.
4. Highlight **On** or **Off** and press **OK**.

**Note** Contact with service provider for the service of Voicemail/SMS/Roaming.

## Calculator

Calculate simple mathematical computations.  
(Can enter numbers up to the second decimal place.)

1. From the main menu, highlight **Calculator** and press **OK**.
2. Press **2<sub>abc</sub>** and **5<sub>jkl</sub>** in order.
3. Select (multiplication) using  keys.
4. Press **1<sub>☑</sub>**, **0<sub>next</sub>** in order.
5. Press **OK**.

You will see the result of the calculation **250**.

## Games

You can get key information about playing a game if you press **3def** after selecting black jack game or Mobile Hawk in menu.

### *Mobile Hawk*

You control a Mobile Hawk helicopter. Your objective is to destroy the enemy's helicopters, tanks, and automobiles. If you attack ambulances, you lose 5 points for each. You clear each stage by destroying the building at the end of the stage.


1. From the main menu, highlight **Games** and press **OK**.
2. Highlight **Mobile Hawk** and press **OK**.
3. For a new game, press **1**.
4. To start the game, press **OK**.


#### 1. Keypad Configuration - Menu Screen


- 1** : New Game - Starts a new game.
- 2abc** : High Score - Displays the last three scores.
- 3def** : Key Info - Display keypad configuration.
- 4ghi** : Continue - To release pause and continue game.  
(4 is displayed only if the game is paused).
- CLR** : Moves to the Game Selection screen.
- END**  
PWR : Ends the game.

2. When you see the game's logo on the screen, you can select from stage 1 to stage 10 by using 0 to 9 on the keypad. After selecting a stage, you begin game-play by pressing **OK**.


### 3. Keypad Configuration - Game Screen


**1**  : Moves Mobile Hawk one tile up. If you push and hold the button, Mobile Hawk keeps moving upwards.

**4**  : Moves Mobile Hawk one tile to the left. If you push and hold the button, Mobile Hawk keeps moving to the left.

**5**  : Moves Mobile Hawk one tile to the right. If you push and hold the button, Mobile Hawk keeps moving to the right.

**6**  : Fires air-to-air missile.

**7**  : Moves Mobile Hawk one tile down. If you push and hold the button, Mobile Hawk keeps moving downward.

**9**  : Fires air-to-ground missile.

 : Moves Mobile Hawk one tile to the left.

 : Moves Mobile Hawk one tile to the right.







 : Moves Mobile Hawk one tile up.

 : Moves Mobile Hawk one tile down.

**CLR** : Pauses the game.

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## 4. Score input screen






**1**  : 1 .**2**  : 2 A B C**3**  : 3 D E F**4**  : 4 G H I**5**  : 5 J K L**6**  : 6 M N O**7**  : 7 P Q R S**8**  : 8 T U V**9**  : 9 W X Y Z**0**  : 0 @ , ! ? \* / # \$ % : Space**CLR** : Delete**END**  : Ends the game : Switches between lowercase and uppercase characters**OK** : Input name completed

## ***Black Jack 2***


Black Jack is a card game. The one whose cards add closest to 21 wins the hand. The player and the dealer get dealt two cards each. The player then chooses to receive another card (Hit) or play what he was dealt (Stay). You can get as many cards as you want, but the total value of the cards must not exceed 21. An (Ace) is valued at 1 or 11. J (Jack), Q (Queen) and K (King) are valued at 10. Two through Ten receive face value. If your first two cards are composed of an A and one of 10, J, Q, and K, gets a “Black Jack”. The dealer shouts out “Black Jack”. If you get Black Jack you win the hand, unless the dealer also has a Black Jack.

1. From the main menu, highlight **Games** and press **OK**.
2. Highlight **Black Jack 2** and press **OK**.
3. For a new game, press **1**.
4. To start the game, press **OK**.





**LG-NP3100****1. Keypad Configuration - Menu Screen**

- 1**  : Begins a new game.
- 2**  : Moves to Score screen.
- 3**  : Moves to key configurations screen.
- 4**  : Resumes the game if paused.
- CLR** : Moves to the game selection menu.
- END**  : Ends the game.


**2. Key Configurations - Game Logo Screen**

- CLR** : Pauses the game.
- END**  : Ends the game.

**3. Key Configurations - Betting Screen**

- 4**  : Decreases bet.
- 5**  : Increases bet.
- 8**  : Ends the game and moves to Input Name screen.
- CLR** : Pauses the game.
- END**  : Ends the game.

**4. Keypad Configurations - Dealing Screen**

- CLR** : Pauses the game.
- END**  : Ends the game.

## 5. Keypad Configurations - Game Screen

**3<sub>def</sub>** : HIT

**6<sub>mino</sub>** : STAY

**9<sub>nxyz</sub>** : DOUBLE (Appears only when you have two of the same card; such as 2 k's)

**CLR** : Pauses the game

**END<sub>PWR</sub>** : Ends the game

The rest are the same as the keypad configurations in Mobile Hawk.

### *Game Options*

You can set sound volume of the game and backlight to on or off.

To change your phone's setting when you play the game.

1. From the main menu, highlight **Games** and press **OK**.
2. Highlight **Game Options** and press **OK**.
3. Use to choose the setting between **Sound** and **Backlight**.

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## **Chapter 4 Accessories**

### *Travel Charger*

This charger, model TC-10W, allows you to charge the battery. It supports AC 100~240 Volt, 50~60 Hz outlets.

An orange light indicates that it is charging, a green light indicates charging is complete.

It takes 5 hours to charge a completely discharged battery.



### *Desktop Charger*

The desktop charger, model DC-97W, allows you to place the phone in the stand for charging. It can charge a completely discharged battery in 3 hours.



### *Cigarette Lighter Charger*

You can operate the phone and trickle charge the phone's battery from your vehicle by using the cigarette lighter charger, model CLC-30W. It takes 5 hours to charge a completely discharged battery.



### *Hands-Free Car Kit (Portable)*

The hands-free car kit, model PHF-32W, enables you to attach the phone to the car providing you with hands-free operation. It will also charge a completely discharged battery in 5 hours.



### *Headset*

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



### *Data Cable Kit*

Connect your phone to your PC.



### *Adaptor*





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## Chapter 5 Menu Tree

Call History	Phone Book	Messages
<ul style="list-style-type: none"> <li>Outgoing Calls</li> <li>Incoming Calls</li> <li>Missed Calls</li> <li>Call Time</li> <li>Erase Calls               <ul style="list-style-type: none"> <li>• Outgoing Calls</li> <li>• Incoming Calls</li> <li>• Missed Calls</li> <li>• All Calls</li> <li>• Call Time</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Find Name</li> <li>Find Speed Dial</li> <li>Add New Entry</li> <li>Services               <ul style="list-style-type: none"> <li>• Cust. Solutions</li> <li>• Account Info</li> </ul> </li> <li>My Phone #</li> </ul>	<ul style="list-style-type: none"> <li>Voicemail               <ul style="list-style-type: none"> <li>• Call Voicemail</li> <li>• Clear Count</li> </ul> </li> <li>Send Message               <ul style="list-style-type: none"> <li>• New Message</li> <li>• Outbox</li> <li>• Inbox</li> </ul> </li> <li>Page/Text</li> <li>Edit Folder</li> <li>Erase Message               <ul style="list-style-type: none"> <li>• Erase All Inbox</li> <li>• Erase All Outbox</li> <li>• Erase All Msgs</li> </ul> </li> <li>Settings               <ul style="list-style-type: none"> <li>• Alert</li> <li>• Voicemail</li> </ul> </li> </ul>

**Note** Contact with service provider for the service of Voicemail/SMS/Roaming.

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Scheduler	Settings	
Add Event	Sounds	Setup
Erase Event	<ul style="list-style-type: none"> <li>• Audio Volume</li> <li>• Ringer Type</li> <li>• Tone Length</li> </ul>	<ul style="list-style-type: none"> <li>• AnyKey Answer</li> <li>• Car Auto-Answer</li> </ul>
Today	<ul style="list-style-type: none"> <li>• Alert</li> <li>• Silent Mode</li> </ul>	Roaming
Week View	Display	<ul style="list-style-type: none"> <li>• Set Mode</li> <li>• Call Guard</li> </ul>
Month View	<ul style="list-style-type: none"> <li>• Backlight</li> <li>• Greeting</li> <li>• Screen Saver</li> </ul>	<b>Calculator</b>
Purge	<ul style="list-style-type: none"> <li>• Contrast</li> <li>• Language</li> <li>• Version</li> </ul>	<b>Games</b>
Purge All	Security	Mobile Hawk
Information	<ul style="list-style-type: none"> <li>• Lock Phone</li> <li>• Change Lock Code</li> <li>• Special #s</li> <li>• Erase PhoneBook</li> <li>• Reset Phone</li> </ul>	Black Jack 2
(Help)		Game Options
		<ul style="list-style-type: none"> <li>• Sound</li> <li>• BackLight</li> </ul>

Chapter 5  
Menu Tree

**Note** Contact with service provider for the service of Voicemail/SMS/Roaming.



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## Chapter 6 Safety Guidelines

### TIA Safety Information

The following is the complete TIA Safety Information for Wireless Handheld phones.

#### Exposure to Radio Frequency Signal

Your wireless handheld portable telephone 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 hand-held 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).

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.

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

### Driving

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

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- 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 or the law 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.

**Pacemakers**

The Health Industry Manufacturers Association recommends that a minimum separation of six 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.

**LG-NP3100****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. 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.

**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.

## **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 stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological

effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

## 2. What is 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, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;

- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- 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. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the 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 hand-held wireless phones with built-in antennas, often called “cell”, “mobile”, or “PCS” phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user’s head.

These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person’s RF exposure decreases rapidly with increasing distance from the source. The so-called “cordless

phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures 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 exposure studies could be completed in a few years. However, very large numbers of animal 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 FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues.

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

## **7. How can I find out how much radiofrequency 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 radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with 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 FDA done to measure radiofrequency energy coming from wireless phones ?

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists measuring the rate at which RF is deposited in the heads of wireless phone users. 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 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. 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 reduces RF exposure.

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- 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 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 about wireless phone interference with medical equipment?**

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI.

FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance

requirements for hearing aids and wireless phones so that no interference occurs when a person uses a “compatible” phone and a “compatible” hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

## 12. Where can I find additional information?

For additional information, please refer to:

- FDA web page on wireless phones  
(<http://www.fda.gov/cdrh/cellphones/>)
- 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.nrpb.org>)

## 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 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

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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 1.24 W/kg and when worn on the body, as described in this user guide, is 0.77 W/kg (Body-worn measurements differ among phone 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 BEJSP3100. 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.

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