

LG-TM240
User Guide

CDMA/AMPS/PCS/GPS Quad-MODE PHONE

Contents

Introduction

Highlights
Important Information
Check Accessories

Before You Start

FCC RF EXPOSURE INFORMATION

Chapter 1. Getting Started

Cautions
Phone Overview
On screen Icons

Chapter 2. Basic Functions

Turning the Phone On and Off
Making a Call
Correcting Dialing Mistakes
Receiving Calls
Using Quick Mode
Call Waiting
Mute
Redialing Calls
Adjusting the Volume
Power Save Mode
Signal Strength
Emergency Dialing
Mini Display
Speed Dialing
Caller ID
Phone Book Features

Chapter 3. Menu Features

Sound
Display
Features
System
Security
Voice Service
Wireless Web

Chapter 4. Book Features

Call History
Phone Book
Function of Scheduler
General Guidelines to Scheduler Access and Settings
Scheduler Item Descriptions
Schedule
Wake Up
Game
Calculator

Chapter 5. Message Features

Voice
Send Msg
New Text

Old Text

Erase All

Setting

Chapter 6. Functions used during a call

Mute

Memo

Recording

Key Tone

Voice Privacy

Chapter 7. Accessories

Travel Charger

Battery (LGLi-AAEM)

Desktop Charger

Cigar Lighter Charger

Hands-Free Car Kit (Portable)

Hands-Free Car kit(Install)

Data Cable Kit

Headset

Chapter 8. CTIA Safty Guideline

Exposure to Radio Frequency Signals

Antenna Care

Phone Operation

Driving

Electronic Devices

Hearing Aids

Other Medical Devices

Posted Facilities

Aircraft

Blasting Areas

Potentially Explosive Atmospheres

For Vehicles Equipped with Air bag

FDA Consumer Update

FCC RF EXPOSURE INFORMATION

WARNING! *Read this information before using your phone*



In August 1996 the Federal Communications Commission (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 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.



Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, 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. Please contact your local dealer for replacement antenna.

Body-worn Operation

This device was tested for typical body-worn operations with the back of the phone kept 1.5 cm. from the body. To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm. separation distance between the user's body and the back of the phone, including the antenna, whether extended or retracted. The use of third-party belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

For more information about RF exposure, please visit the FCC website at www.fcc.gov

Chapter 1. Getting Started

Cautions



- Using the phone in proximity to receiving equipment (i.e., TV or radio) may cause interference.
- Keep your phone in a safe place when not in use.
- Only use the batteries, antennas, and chargers provided by LG. Using the wrong accessories could void your warranty.
- 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 the antenna while the phone is in use.
- Do not use the phone in designated “no cellular phone use” areas.
- Do not expose the phone to high temperature or humidity.
- Avoid getting your phone wet. If the phone gets wet, turn the power off immediately and remove the battery pack. If the phone is mal-functional, return it to the dealer for service.
- Avoid shock or impact on the phone.







Phone Overview

Function	Key Descriptions
Lamp	The red light goes on when you use the power key to turn on the phone and when there are incoming calls and messages.
LCD screen	Displays messages & indicator icons.
END/PWR	Used to turn power on/off. This key disconnects a call. Using this key, you can also exit out of a menu back to the phone's standby display without changing the setting.
SEND	Allows user to place or answer calls.
Mouse Key	This mouse key allows quick access to text and voice mail notification messages. calendar, outgoing call log, phonebook Find name.
Soft Keys	The current operation of a soft key is defined by the word at the bottom of the display. Soft Keys 2 : If you press this key once in a menu, you can go back one level and if you press and hold the key in a menu, you can go back to the standby display.
Scroll Keys	These keys are used to scroll through the memory locations and menu items. - In the standby status, set the manner mode by pressing the button. (for 2 seconds) - In the standby status, set the lock function by pressing the button. (for 2 seconds)
Alphanumeric Keypad	These keys enable you to enter numbers and characters and choose menu items.

On screen Icons

The phone screen displays several onscreen icons and onscreen icons appears when the phone is power on.

Icons	Descriptions
	Displays the strength of the signal received by the phone and current signal strength is indicated as 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.
	Analog indicator Analog service is available
	Indicates that a text message or voice mail has been received
	Roaming The phone is outside of its home service area.
	Charge level Indicates battery charge level.

Chapter 2. Basic Functions

Turning the Phone On and Off

Turning the Phone On

1. Install a charged battery pack or connect the phone to an external power source such as the cigarette lighter adapter or car kit.
2. Press [END/PWR] for a few seconds until the red light on the top of the phone flashes.
 - Fully extend the antenna for the best performance.

<Note> Like any other radio device, avoid any unnecessary contact with the antenna while your phone is on.

Turning the Phone Off

1. Press and hold until display screen will be turned off, and then release the key.
2. Protect the antenna by pushing it back into the phone, if extended.

Making a Call

When you make a call, follow these simple steps:

1. Make sure the phone is turned on.
 - If not, press [END/PWR].
2. Enter the phone number with area code, if needed.
3. Press [SEND].
 - If the phone is locked, enter the lock code.
 - "Call Failed" indicates that the call did not go through.
4. Press [END/PWR] to disconnect the call.

Correcting Dialing Mistakes

If you make mistakes in dialing a number, press soft key 2[CLR] once to erase the last entered

digit or hold down soft key 2[CLR] for at least two second to delete all digits.

Receiving Calls

1. When the phone rings, press any key (except [END/PWR], [◀ ▶]) to answer.
 - If you press the key [END/PWR] once when you receive a call, you can hold the present call and ring sound or vibration stops. If you press the [END/PWR] key twice, the present call is terminated.

2. Press [END/PWR] to disconnect the call.

In call waiting mode, the present call is on hold as you answer another incoming call.

This service is provided by your service provider.

When the call waiting function is activated, your phone will beep to let you know if you have an incoming call. Your phone may also display the incoming caller's identification.

Dialing a call from Phone Book

You can place a call from any memory location either by speed dialing or by pressing [SEND] while looking up the memory location.

One-Touch Dialing : One-touch dialing is a convenient feature which enables you to dial frequently used numbers in your personal phone book by pressing a key (for memory location 1 through 8).

- Entry 9 is designated to Emergency Call.
- For locations 1 to 8, you can use one-touch dialing (if enabled, see "One-Touch" on page 37.) by pressing and holding down the key corresponding to the memory location.

OR

- Press digit, then press [SEND].

Two-Touch Dialing (Speed Dialing) : This dialing feature enables you to dial numbers in your phone book through two keys (for locations 10 to 99).

- 1) Press the first digit.
- 2) Press and hold the key of the second digit.

OR

- 1) Press the first and second digits, then press [SEND].

Three-Touch Dialing (Speed Dialing) : This dialing feature enables you to dial numbers in your phone book through three keys (for location 100 to 199).

- 1) Press the first and second digits.
- 2) Press and hold the key of the third digit.

Dialing from a Memory List



- 1) From a memory list, press the scroll keys to go to the memory location you want.
- 2) Press [SEND].

Dialing from a Memory Location.

On viewing and checking the memory location to call, press [SEND].


Chapter 3. Menu Features

General Guidelines to MENU Access and Settings

1. Press Soft Key [Menu]. The three menu items will appear on the display screen.
2. Press[] to go through the list of menu features.
3. Press the corresponding number to the menu item that you want to select. Then the sub-menu list will appear on the screen.
4. Press the appropriate key to select the sub-menu you want to access.
5. Select preferred settings, using the [] keys. Press Soft Key 2 [Back] to go one step backward while accessing menu or selecting settings.
6. Press Soft Key 1 [Ok] to save the settings or Soft Key 2 [Back] to cancel without saving.

Sound ([Menu]+[1])


Ring Sound ([Menu]+[1]+ [1])

Select the ringer sound with [] key. The ring sound will notify that you have an incoming call.

Ring Type ([Menu] +[1]+[2])

Select one out of four ring types (Ring, Vibrate, Vib+Ring and Lamp) with [] key.

Ring & Vibrate Volume ([Menu] +[1]+[3])

Adjust the volume of the ringer using the [] key.

Key Tone ([Menu] +[1]+[4])

Set Key Tone length and touch tone playback speed.

- Normal : Sends out a tone for a fixed period of time only if you keep the key pressed.
- Long : Sends out a continuous tone for as long as you keep the key pressed.

Key Volume ([Menu] +[1]+[5])

Adjust the key beep volume (the volume of sound on key pressing).

Ear Volume ([Menu] +[1]+[6])

Adjust the earpiece volume during a call.

Escalating Volume ([Menu] +[1]+[7])

Set to escalate the volume of the ringer.

Alerts ([Menu]+[1]+[8])

1. Fade ([Menu]+[8]+[1])

Set an alert to inform you when you have lost a call or lose services.

2. Minute ([Menu]+[8]+[2])

Alerts you 10 seconds before the end of every minute during a call.

3. Service ([Menu]+[8]+[3])

If on, alerts you when service changes.

When you enter a service area, the phone displays “Entering Service Area” message.

When you leave a service area, the phone displays “Leaving Service Area” message.

4. Call Connect ([Menu]+[8]+[4])

Alert tones notify the user of the time when the call is connected.

Display ([Menu]+[2])**Backlight ([Menu]+ [2]+[1])**

Allows you to select how long or when the display screen and keypad are backlit. The backlight is turned off 10 seconds after the last key is pushed. the backlight is turned off 30 seconds after the last key is pushed. "Always on" means that the backlight is on. Choosing "Always on" significantly decreases talk time. "Always off" means that the backlight is never on.

Contrast([Menu] [2]+ [2])**Banner ([Menu]+ [2]+[3])****Theme ([Menu]+ [2]+[4])**

You can set up the screen displayed on the LCD screen in the standby mode.(Default, Star theme)

Language ([Menu]+ [2]+[5])**Version ([Menu]+ [2]+[6])**

View the software and PRL version.

My phone # ([Menu]+ [2]+[7])

View the my phone number.

Features ([Menu]+[3])**Data ([Menu]+ [3] +[1])****Data/Fax ([Menu]+ [3] +[1] +[1])**

In "Data/Fax" setting, data and fax can be transmitted. Wireless data communication services refer to utilization of subscriber terminals for access to internet with personal computer or laptops at 8Kbps or at maximum of 13Kbps.

- Data In : This setting enables the subscriber terminal to receive data calls.
- Fax In : This setting enables the subscriber terminal to receive fax transmittals.

Data Baud ([Menu]+ [3] +[1] +[2])

- 19,200
- 115,200
- 230,400

Auto Answer ([Menu]+ [3] +[2])

Select the ring type before the phone automatically answers a call. This feature is most commonly used with the car kit.

off

- after 1 ring(or melody 5 seconds)
- after 3 rings(or melody 10 seconds)
- Machine Enable

When you have incoming call, the phone automatically response with pre-recorded voice message and record caller's speech after 3 rings.

Auto Retry ([Menu]+ [3]+[3])

Set the length of time the phone waits before automatically redialing a number when the attempted call fails.

- off / every 10 seconds / every 30 seconds / every 60 seconds

One-Touch ([Menu]+ [3]+[4])

Enable/Disable one-touch dialing.

Voice Privacy ([Menu]+ [3]+[5])

Set the voice privacy feature for CDMA calls as “Enhanced” or “Standard” : CDMA offers inherent voice privacy. Check with your service provider for availability of the enhanced voice privacy mode.

Audio AGC ([Menu]+ [3]+[6])**System ([Menu]+ [4])****System Select ([Menu]+ [4]+[1])**

Choose setting to control which cellular company your phone uses. Leave this setting as default unless you want to alter the system selection. (As instructed by your service provider.)

- Home is B (Standard, Home only) is displayed.

Set NAM ([Menu]+ [4]+[2])

Select the phone's NAM (Number Assignment Module) if the phone is registered with multiple service providers.

Auto NAM ([Menu]+ [4]+[3])

Allows the phone to automatically switch to one of the programmed Telephone No. if it is operating in the corresponding service provider area.

Force Call ([Menu]+ [4]+[4])

Make next call in analog mode. You have 30 seconds to place an analog call. This feature is typically used for data applications.

TTY Mode ([Menu]+ [4]+[5])

To enable or disable TTY mode, select ‘ TTY Mode “Enable”/”Disable” ‘ using [↕] key. If TTY mode is enabled, TTY Features is activated during call.

Security ([Menu]+[5])

Lock code is commonly last 4 digit of your phone. (You must enter the lock code after pressing [Menu]). If you need to modify the password, you may modify it using the “New Lock Code” of Security.

Lock Mode ([Menu]+ [5]+[1])

Helps you to protect your phone from unauthorized use and once the phone is locked, the phone is restricted from making calls until the lock code is entered.

However you can still receive phone calls and make emergency calls while your phone is locked.

“Never” means that the phone is never locked (Lock mode can be used). When locked, you can only make emergency calls or receive incoming calls. “On power up” means that locked the phone when the phone is turned on. “Always” means that the phone is always locked.

Restrict ([Menu]+ [5]+[2])

Set call restrictions to “Yes” or “No”. If set to “Yes”, you can only make calls to emergency numbers and phone numbers in Phonebook Entry. You can still receive calls in restrict mode. Check with your service provider.

Clear Call ([Menu]+ [5]+[3])

Allows you to delete all the telephone number saved in the "Call History".

Clear Data ([Menu]+ [5]+[4])

Deletes all information saved in the memory location(001-199) (Entry 9 is designated to Emergency Call). Be careful since any deleted information is not recoverable.

Emergency # ([Menu]+ [5]+[5])

To enter 3 emergency numbers ([Edit] → enter → number → [Save] → [◆] →). You can call these numbers and 911 even when the phone is locked or restricted.

New Lock Code ([Menu]+[5]+[6])

New Lock Code allows you to enter a new four-digit lock code number. For confirmation, it will ask you to enter the new lock code twice. This is the same number as the pin code.

Voice Service ([Menu]+[6])

Allows you to make a call by simply saying the programmed word and when you are not available to answer the phone, the caller can leave the message into voice mail and you can playback the message later.

- Voice Dialing :

You can make a call by simply saying the programmed word.

- Voice Recording :

You can record conversation over the phone.

- Voice Memo :

When you are not available to answer the phone, the caller can leave the message into voice mail.

- Auto Answering Machine :

When you are not available to answer the incoming call, you may set your phone as auto answering machine and playback the recorded message later.

- To record the voice command, Press [CLR] key in Hands-Free Kit and record the voice command as per your preference.
- When you hear "Incoming call answer?" in Hands -Free Kit, if the user say "yes" the call is connected, say "no" the bell rings.

start VR ([Menu]+[6]+[1])**Voice Memo ([Menu]+[6]+[2])**

When you are not available to answer the phone, the caller can leave the message into your voice mail and you can playback the recorded message later.

There are 2 options, Playback or Record. In playback mode, you will have the list of the recorded message and you can hear all recorded messages by pressing [◆] key.

Call screen ([Menu]+[6]+[3])**Voice Setup ([Menu]+ [6]+[4])**

There are three options (Manual and Disable) for Voice Dialing. On manual mode, press Soft key 2[Clear] to start this feature. On Disable mode, Voice dialing is disabled when you press Soft key 2[Clear], Disabled message will be displayed on the screen.

Train cmds ([Menu]+ [6]+[5])

Allows you to practice the voice command(Yes/No)

Chapter 4. Book Features

Phone Book ([PIM]+[1])

Find Entry ([PIM]+[1]+[1])

1. Press Soft Key 2 [PIM]
2. Press [Phone Book] [Find Entry]
3. Your phone will prompt you to enter entry by displaying "Enter Entry #" on display screen.
4. Enter entry. If you select [OK] Key without entering any entry, you may view the entire list saved in your phone book.

Find Name ([PIM]+[1]+[2])

1. Press Soft Key 2 [PIM]
2. Press [Phone Book] [Find Name]
3. Enter the name you want to search for and press [Find] key. If the name is found, the name will be displayed and if the name is not found, "Not Found" message will appear.

Add Entry ([PIM]+[1]+[3])

You can save telephone numbers, pager number, and so on, up to 198 entries (Entry 9 is designated to Emergency Call.)

1. Press Soft Key 2 [PIM]
2. Press [Phone Book] [Add Entry]
3. Enter phone number, then press [Option]+[save]
4. Select the memory location number
5. Select the desired phone label using [◀ ▶]key.
6. Enter Name.
- 6-1. To enter Email address, select [Email] from label, press [▼] key to move to the available enter Email address.
7. You may select the desired ID ring type, secret, and voice recognition option using [◆] key.
8. Press [Save] key when you are done.
<Note> Phone Type
Home : Entry of Home Phone Number
Office : Entry of Office Phone Number
Mobile : Entry of Mobile Phone Number
Pager : Entry of Pager Number
Data/Fax : Entry of Data/Fax Number
E-Mail : Entry of E-mail Address

Find Email ([PIM]+[1]+[4])

1. Press Soft Key 2 [PIM]
2. Press [Phone Book] [Find Email]
 - Select the item you want to view using the [◆].
3. Enter the Email address you want to search for and press [Find] key. If the Email address is found, the Email address will be displayed and if the Email address is not found, "Not Found" message will appear.
4. After selecting the Email address to edit from Email list, if you press Soft Key [OK], phone book entry will be displayed.
5. After selecting Email label from level, press [▼] Key to move to the available entry where to edit or delete.
6. To save, press Soft Key [Save].
To delete Email address : Move to the Phone book from either Find Email or Find Entry and after

selecting the Email label, press [▼] Key to move to the memory location, press Soft Keys 2 [Clear] Key to delete and press [Save] for confirmation.

Call History ([PIM]+ [2])

Allows you to view the 30 most recently dialed phone numbers. Once you exceed the 30-number storage limit, the oldest call history record is overwritten. These calls are divided into 3 types of calls

Outgoing ([PIM]+ [2]+[1])

Allows you to view list of all outgoing calls you made and you may place a call by pressing the [Send].

Incoming ([PIM]+ [2]+[2])

Allows you to view list of all incoming calls and you may place a call by pressing [Send].

Missed ([PIM]+ [2]+[3])

Allows you to view list of all missed calls and you may place a call by pressing [Send].

Call Information ([PIM]+ [2]+[4])

1. Last Call ([PIM]+[2]+[4]+[1])

Displays the time of last call made.

2. Home Calls ([PIM]+ [2]+[4]+[2])

Allows you to keep a running count of the time you spend making calls in your service area since last reset. To reset the call timer, press Soft Key 1 [Option], and then select Soft Key 1 [Select] after selecting [Zero] using the [◆] key.

3. Roam Calls ([PIM]+ [2]+[4]+[3])

Allows you to keep a running count of the time you spend making calls in non-service area. To reset the call timer, press Soft Key 1 [Option], and then select Soft Key 1 [Select] after selecting [Zero] using the [◆] key.

4. All Calls ([PIM]+ [2]+[4]+[4])

Allows you to keep a running count of the time you spend making all calls either in your service area or in non-service area. To set the call timer is not available.

Recent Call History List

Allows you to view the 30 most recently dialed phone number and speed dialing for the phone number in Call History is available.

1. Press Soft Key 2 [PIM]
2. Press [Call History]
3. Example : Press [Outgoing]
4. Press [◆] to scroll through the last ten calls and scroll to the number you want to call.
5. Press [Send] to place a call or choose [View] of Soft Key 1 [Option] to see the details of the call. Press Soft Key 1 [Option] and select [Save] to save the number in memory location.(If you need further information, please refer to 29~31)

Scheduler ([PIM]+[3])

WakeUp ([PIM]+[4])

Game ([PIM]+[5])

Calculator ([PIM]+[6])


Chapter 5. Message Features

Text message, page and voice mailbox become available as soon as the power is on. You can access the above types of messages using the message key ([^]). In addition, you can make a call to the call back number by pressing the [Send] during a message check.

The phone can store up to 30 messages (Voice message : 1, Text messages 29) with 245 characters per message. However, you should check whether your carrier provides the above features.

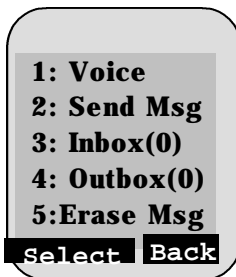
The information that is stored on the message is determined by phone mode and service capability. You can check types of messages by pressing the message key ([^]).

Message Service

This service supports reception of the text message, mailbox, alerting, and the voice  with the text message key

It is possible to store up to total 23(new+old) messages. It is recommended to check the number of character receivable because the capacity depends on the system service provider.

<Initial Message Service Image >



- Move the cursor with the upside and downside keys, and press Softkey(SEL) for the menu requested. Press Softkey(BACK) to return to the initial image on the terminal.

<Type of Menu>

- Voice : Menu to check the number of voice messages in the voice mailbox
- Send Msg: Menu to send message.
- NewMsgs : Menu to check a new incoming text message
- OldMsgs : Menu to check the verified but not erased text messages

- Erase All : Menu to erase all the stored messages

1. Voice



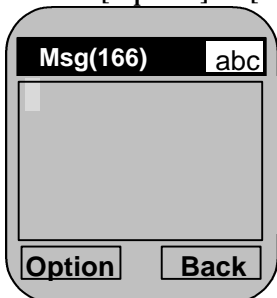
- It indicates the number of the voice messages in the voice mailbox.

2. Send Msg



<This field is to enter the destination address.>

Select [Option] + [Continue] menu item to input the message.



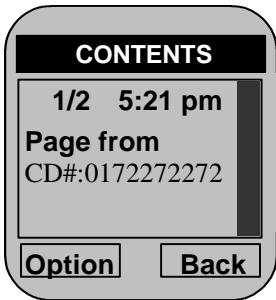
<This field is to enter the messages.>

Select [Option] + [Send] menu item to send the message.

3. Inbox

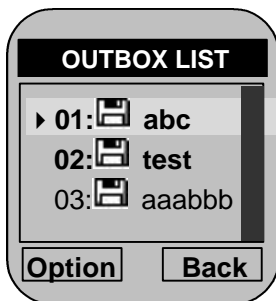
- Menu to check the message received.





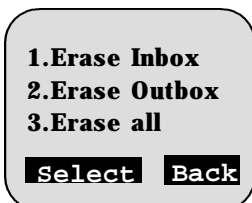
4. Outbox

- Menu to check the message sent.



5. Erase All

- This service enables erasing of all the messages stored by the message service.



6. Setting

- 1.Alert
- 2.Min Alert
- 3.Default CB#
- 4.Auto save
- 5.Auto Delete

<SMS SERVICE PROGRAM>

Enter $\text{MENU} \rightarrow 4 \text{ System} \rightarrow 0 \rightarrow 000000 \rightarrow 5 \text{ SMSMO}$
Enter 'MENU' -> '0' -> '000000' -> '5 SMSMO'

Select <SMS MO >

1. SO : Select 8K or 13K
2. L3ACK : Select ON/OFF
3. ERRORS : View error class & CauseCode

Chapter 6. Functions used during a call

Mute (During a call : [MENU]+[1])

- Sometimes it is necessary to mute a call so that caller does not hear you or certain background noise. To use this function during a call, Press Soft Key 1 [Menu] and [1].
- If you need to release mute press the Soft Key 1 [Menu] and [1] key again.

Memo (During a call : [MENU]+[2])

Key Tone (During a call : [MENU]+[3])

Set Key beep length and touch tone playback speed.

- Normal : Sends out a tone for the duration of time no matter how long you keep key pressed.
- Long : Sends out a continuous tone as long as you keep the key pressed.

Voice Privacy (During a call : [MENU]+[4])

Set the voice privacy feature for CDMA calls as "Enhanced" or "Standard" :

CDMA offers inherent voice privacy. Check with your service provider for availability of the

enhanced voice privacy mode.

New SVC CFG (During a call : [MENU]+[5])

Chapter 7. Accessories

There are a variety of accessories available for the phone. You can select these options according to your personal communication requirements. Consult your local dealer for availability.

Travel Charger

This charger, model TC-10W, allows you to charge the battery pack. It supports standard U.S. 120Volt 60Hz outlets. While 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.

Battery (LGLi-AAEM)

Standard battery and Extended battery are available.

Desktop Charger

The desktop charger, model DC-41W, allows you to place the phone for charging the stand. It can charge a completely discharged battery in 3 hours.

Cigar 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-11W. It takes 5 hours to charge a completely discharged battery.

Hands-Free Car Kit (Portable)

The hands-free car kit, model PHF-30W, 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.

Hands-Free Car kit(Install)

The installed hands-free car kit model IHF-51W is permanently installed in your car, and provides you with hands-free operation. It will also charge a completely discharged battery is shows.

Data Cable Kit

Connects your phone to your PC.(Model KW-a)

Headset

Connects to your phone, allowing hands free operation. Includes earpiece, microphone and mute key.

(Model Headset 1000)

Hand strap

AC Adaptor

Chapter 8. CTIA Safety Guideline

Provided herein is the TIA Safety Information for Wireless Handheld phones. Inclusion of this text in the terminal unit's owner's manual is required for CTIA Certification.

EXPOSURE TO RADIO FREQUENCY SIGNALS

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:

- ¡ Extend your antenna fully.
- ¡ 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 telephones in the areas where you live. 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.

Pacemaker

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:

- j Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;
- j Should not carry the phone in a breast pocket;
- j Should use the ear opposite the pacemaker to minimize the potential for interference.
- j 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 [or call the customer serviced 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 they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

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 be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

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 posted: "Turn off two-way radio". Obey all signs and instructions.

POTENTIALLY EXPLOSIVE ATMOSPHERES

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 clearly marked. They 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 both 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

FDA has been receiving inquiries about the safety of mobile phones, including cellular phones and PCS phones.

The following summarizes what is known –and what remains unknown –about whether these products can pose a hazard to health, and what can be done to minimize any potential risk.

This information may be used to respond to questions.

Why the concern?

Mobile phones emit low levels of radiofrequency energy (i.e., radiofrequency radiation) in the microwave range while being used.

They also emit very low levels of radiofrequency energy (RF), considered non-significant, when in the stand-by mode. It is well known that high levels of RF can produce biological damage through heating effects (this is how your microwave oven is able to cook food). However, It is not known whether, to what extent, or through what mechanism, lower levels of RF might cause adverse health effects as well.

Although some research has been done to address these questions, no clear picture of the biological effects of this type of radiation has emerged to date. Thus, the available science does not allow us to conclude that mobile phones are absolutely safe, or that they are unsafe. However, the available scientific evidence does not demonstrate any adverse health effects associated with the use of mobile phones.

What kinds of phones are in questions?

Questions have been raised about hand-held mobile phones, the kind that have a built-in antenna that is positioned close to the user's head during normal telephone conversation. These types of mobile phones are of concern because of the short distance between the phone's antenna –the primary source of the RF –and the person's head. The exposure to RF from mobile phones in which the antenna is located at greater distance from the user (on the out side of a car, for example) is drastically lower than that from hand-held phones.

Because a person's RF exposure decreases rapidly with distance from the source. The safety of so-called "cordless phones," which have a base unit connected to the telephone wiring in a house and which operate at far lower power levels and frequencies, has not been questioned.

How much evidence is there that hand-held mobile phones might be harmful?

Briefly, there is not enough evidence to know for sure, either way; however, research efforts are on-going. The existing scientific evidence is conflicting and many of the studies that have been done to date have suffered from flaws in their research methods. Animal experiments investigating the effects of RF exposures characteristic of mobile phones have yielded conflicting results. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. In one study, mice genetically altered to be predisposed to developing one type of cancer developed more than twice as many such cancers when they were exposed to RF energy compared to controls. There is much uncertainty among scientists about whether results obtained from animal studies apply to the use of mobile

phones. First, it is uncertain how to apply the results obtained in rats and mice to humans. Second, many of the studies that showed increased tumor development used animals that had already been treated with cancer-causing chemicals, and other studies exposed the animals to the RF virtually continuously –up to 22 hours per day.

For the past five years in the United States, the mobile phone industry has supported research into the safety of mobile phones. This research has resulted in two findings in particular that merit additional study:

1. In a hospital-based, case-control study, researchers looked for an association between mobile phone use and either glioma (a type of brain cancer) or acoustic neuroma (a benign tumor of the nerve sheath). No statistically significant association was found between mobile phone use and acoustic neuroma. There was also no association between mobile phone use and gliomas when all types of gliomas were considered together. It should be noted that the average length of mobile phone exposure in this study was less than three years.

When 20 types of glioma were considered separately, however, an association was found between mobile phone use and one rare type of glioma, neuroepitheliomatous tumors. It is possible with multiple comparisons of the same sample that this association occurred by chance. Moreover, the risk did not increase with how often the mobile phone was used, or the length of the calls. In fact, the risk actually decreased with cumulative hours of mobile phone use. Most cancer causing agents increase risk with increased exposure. An ongoing study of brain cancers by the National Cancer Institute is expected to bear on the accuracy and repeatability of these results.(1)

2. Researchers conducted a large battery of laboratory tests to assess the effects of exposure to mobile phone RF on genetic material. These included tests for several kinds of abnormalities, including mutations, chromosomal aberrations, DNA strand breaks, and structural changes in the genetic material of blood cells called lymphocytes. None of the tests showed any effect of the RF except for the micronucleus assay, which detects structural effects on the genetic material. The cells in this assay showed changes after exposure to simulated cell phone radiation, but only after 24 hours of exposure. It is possible that exposing the test cells to radiation for this long resulted in heating. Since this assay is known to be sensitive to heating, heat alone could have caused the abnormalities to occur. The data already in the literature on the response of the micronucleus assay to RF are conflicting. Thus, follow-up research is necessary.(2)

FDA is currently working with government, industry, and academic groups to ensure the proper follow-up to these industry-funded research findings. Collaboration with the Cellular Telecommunication Industry Association(CTIA) in particular is expected to lead to FDA providing research recommendations and scientific oversight of new CTIA-funded research based on such recommendations.

Two other studies of interest have been reported recently in the literature:

1. Two groups of 18 people were exposed to simulated mobile phone signals under laboratory conditions while they performed cognitive function tests. There were no changes in the subjects' ability to recall words, numbers, or pictures, or in their spatial memory, but they were able to make choices more quickly in one visual test when they were exposed to simulated mobile phone signals. This was the only change noted among more than 20 variables compared.(3)

2. In a study of 209 brain tumor cases and 425 matched controls, there was no increased risk of brain tumors associated with mobile phone use. When tumors did exist in certain locations, however, they were more likely to be on the side of the head where the mobile phone was used. Because this occurred in only a small number of cases, the increased likelihood was too small to be statistically significant.(4)

(1) Muscat et al. Epidemiological Study of Cellular Telephone Use and Malignant Brain Tumors. In: States

- of the Science Symposium; 1999 June 20; Long Beach, California.
- (2) Tice et al. Tests of mobile phone signals for activity in genotoxicity and other laboratory assays. In: Annual Meeting of the Environmental Mutagen Society; March 29, 1999, Washington, D.C.; and personal communication, unpublished results.
 - (3) Preece, AW, Iwi, G, Davies-Smith, A, Wesnes, k, Butler, s, Lim, E, and Varey, A. Effect of a 915-Mhz simulated mobile phone signal on cognitive function in man. *Int. J. Radiat. Biol.*, April 8, 1999.
 - (4) Hardell, L, Nasman, A, Pahlson, A, Hallquist, A and Mild, KH. Use of cellular telephones and the risk for brain tumors: a case-control study. *Int. J. Oncol.*, 15: 113-116, 1999

In summary, we do not have enough information at this point to assure the public that there are, or are not, any low incident health problems associated with use of mobile phones. FDA continues to work with all parties, including other federal agencies and industry, to assure that research is undertaken to provide the necessary answers to the outstanding questions about the safety of mobile phones.

What is known about cases of human cancer that have been reported in users of hand-held mobile phones?

Some people who have used mobile phones have been diagnosed with brain cancer. But it is important to understand that this type of cancer also occurs among people who have not used mobile phones. In fact, brain cancer occurs in the U.S. population at a rate of about 6 new cases per 100,000 people each year. At that rate, assuming 80 million users of mobile phones (a number increasing at a rate of about 1 million per month), about 4800 cases of brain cancer would be expected each year among those 80 million people, whether or not they used their phones. Thus it is not possible to tell whether any individual's cancer arose because of the phone, or whether it would have happened anyway. A key question is whether the risk of getting a particular form of cancer is greater among people who use mobile phones than among the population. One way to answer that question is to compare the usage of mobile phones among people with brain cancer with the use of mobile phones among appropriately matched people without brain cancer. This is called a case-control study. The current case-control study of brain cancers by the National Cancer Institute, as well as the Follow-up research to be sponsored by industry, will begin to generate this type of information.

What is FDA's role concerning the safety of mobile phones?

Under the law, FDA does not review the safety of radiation consumer products such as mobile phones before marketing, as it does with new drugs or medical devices. However, the agency has authority to take action if mobile phones are shown to emit radiation at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of mobile 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 at this time, FDA has urged the mobile phones industry to take a number of steps to assure public safety. The agency has recommended that the industry:

- support needed research into possible biological effects of RF of the type emitted by mobile phones;
- design mobile phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- cooperate in providing mobile phone users with the best possible information on what is known about possible effects of mobile phone use on human health.

At the same time, FDA belongs to an interagency working group of the federal agencies working group of the federal agencies that have responsibility for different aspects of mobile phone safety to ensure a coordinated effort at the federal level. These agencies are:

- ¡ National Institute for Occupational Safety and Health
- ¡ Environmental Protection Agency
- ¡ Federal Communications Commission
- ¡ Occupational Health and Safety Administration
- ¡ National Telecommunication and Information Administration

The National Institutes of Health also participates in this group.

In the absence of conclusive information about any possible risk, what can concerned individuals do?

If there is a risk these Products—and at this point we do not know that there is—it is probably very small. But if people are concerned about avoiding even potential risks there are simple steps they can take to do so. For example, time is a key factor in how much exposure a person receives. Those persons who spend long periods of time on their hands-held models for shorter conversations or for situation when other types of phones are not available.

People who must conduct extended conversations on their cars every day could switch to a type of mobile phone

That places more distance between their bodies and the source of the RF, since the exposure level drops off dramatically with distance. For example, they could switch

To :

- A mobile phone in which the antenna is located outside the vehicle,
- A hand-held phone with a built-in antenna connected to a different antenna mounted on the outside of the car or built into a separate package, or
- A headset with a remote antenna to a mobile phone carried at the waist.

Again the scientific data do not demonstrate that mobile phones are harmful. But if people are concerned about the radio frequency energy from these products, taking the simple precautions outlined above can reduce any possible risk.

Where can I find additional information?

For additional information, see the following web sites:

Federal Communications Commission(FCC) RF Safety Program (select “Information on Human Exposure to RF Fields from Cellular and PCS Radio Transmitters”) : <http://www.fcc.gov/oet/rfsafety>

World Health Organization (WHO) International Commission on Non-Ionizing Radiation Protection (select Qs & As) : <http://www.who.int/emf>

United Kingdom, National Radiological Protection Board: <http://www.nrpborg.uk>

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

U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health: <http://www.fda.gov/cdrh/consumer/>

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 radiofrequency (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, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a 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 1.45mW/g and when worn on the body, as described in this user guide, is 1.39mW/g, (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). [Labeling Committee note : if applicable, if body-worn SARs are required]. While there may be differences between the 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 Gant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID XXX XXXX.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site 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.