User Manual

AX585

Ver. 1.1 2008. 04. 28

Part 15.21 statement

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

Part 15.105 statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. if this equipment does cause harmful interference or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

LIMITED WARRANTY STATEMENT

1. WHAT THIS WARRANTY COVERS:

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

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

2. WHAT THIS WARRANTY DOES NOT COVER:

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

3. STATE LAW RIGHTS:

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

4. HOW TO GET WARRANTY SERVICE:

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

For Your Safety

Important Information

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

Before You Start

Safety Instructions

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

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

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

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

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

Safety Information

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

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

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

- Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause fire or electric shock.
- Do not handle the phone with wet hands while it is being charged. It may cause an electric shock or seriously damage your phone.
- Do not disassemble the phone.
- Do not place or answer calls while charging the phone as it may short-circuit the phone and/or cause electric shock or fire
- Only use the batteries, antennas, and chargers provided by LG. The warranty will not be applied to products provided by other suppliers.
- Only authorized personnel should service the phone and its accessories. Faulty installation or service may result in accidents and consequently invalidate the warranty.
- Do not hold or let the antenna come in contact with your body during a call.
- An emergency call can be made only within a service area. For an emergency call, make sure that you are within a service area and that the phone is turned on.

For Your Safety

FCC RF Exposure Information

WARNING! Read this information before operating the phone.

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

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

CAUTION

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

Body-worn Operation

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

Vehicle Mounted External Antenna (optional, if available)

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

FCC Part 15 Class B Compliance

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

Cautions for Battery

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

Battery Disposal

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

Adapter (Charger) Cautions

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

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

Getting Started

Unlocking Your Phone

If you received your AX585 in the mail, you may need to unlock it before making calls.

- 1. Press the END/PWR Switch for 2~3 seconds.
- 2. Press soft key Unlock
- 3. Enter your four-digit lock code. For security purposes, the code will not be visible as you type.

Note: If you can't recall your lock code, try using the last four digits of your Social Security number, the last four digits of your Phone Number or 0000.

View of Phone

- 1. **END/PWR** Switch: Lets you power the phone on or off.
- 2. **Antenna**: Internal antenna provides optimum reception for 800 MHz, 1900 MHz & 1575MHz frequencies.
- 3. Wheel navigation key: designed for better convenience to control menus especially for music control.
- 4. **Headset Jack**: Provides connection for an optional headset.
- 5. **Volume Control Keys**: Adjust the Ring Volume in the Main Menu or the Voice Volume during a call. The keys also scroll through mouths in the Calendar or pages in the MiniBrowser.
- 6. **TALK**: Lets you place a call, receive a call, end a call.
- 7. **C**: Lets you clear an entry or back-up in the menu.
- 8. **Slide up/down**: Lets you answer or end calls.

Installing and Removing the Battery

To install the battery, remove battery cover first and insert the top of the battery into the back of the phone. Then, push the bottom of the battery and assemble the battery cover.

To remove the battery, pull up the bottom of the battery with the nail of the thumb.

Turning Your Phone On and Off

To turn your phone on, lift the slide up and press END key for 2~3 seconds.

If your phone does not turn on, make sure the battery is installed correctly and is adequately charged or has external power (via the AC Adapter, Cigarette Lighter Adapter or Hands-Free Car Kit).

To turn your phone off, press END key for 2~3 seconds.

Main Menu

When your phone acquires Service, the Greeting (a banner of text), the current time and date and the Main Menu are displayed. If you are in authorized cellular provider's service area, you are ready to Talk and receive calls.

Power Save Mode

When the phone is in an area without service for 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.

Menu Navigation

The Wheel Key lets you scroll circularly through menus quickly and easily.

As you navigate through a menu, the options are highlighted (Highlighted Test Example). Select an option by highlighting it and pressing OK. The scroll bar at the right of the menu keeps track of your position in the menu at all times.

For example, if you want to view your last incoming call:

- 1. From the Main Menu, select **RECENT CALLS** and press 2. (It may already be highlighted.)
- 2. Press the Mouse Key down to highlight and press



If you have received any calls, they are displayed on the solncoming

Entering Characters Using the Keypad(T9)

To enter a letter, punctuation or number when creating Phone Book or Scheduler entries, press the corresponding key until the desired character appears. By default, the first letter of a word is capitalized and following letters are lowercase. Characters in the following order:

Key 1: 1. ?, '& - @ ()/ \sim Key 7: PQRS7pqrs

Key 4 : G H I 4 g h i 4 Key 0 : Next 0 Key 5 : J K L 5 j k l 5 Key * : Shift

Key 6: M N O 6 m n o 6 Key #: Space

After a character is entered, the cursor automatically advances to the next space after two seconds. You can also advance the cursor by pressing Key "#" or entering a character not on the same key.

If you make a mistake, "C" to erase a character. To clear the entire entry, press and hold "C" for two seconds.

Display Icons

Display icons are the symbols your phone uses to communicate important information. They are as follows:

<u>ICON</u>	<u>DESCRIPTION</u>
Ö	Alarm
(Battery
7 41	Antenna
<u>&</u>	In use
™	No service
0	Location On
8	E911 Only
<u> </u>	Voice
P	Voice Privacy
	Digital
es.	Vibrate
R	Roaming
IIII	TTY
T	SSI
₽.	Ringer
5 0	Ringer off
ē ē	Text + voice
\$	1x Active Data
4	1x Dormant Data

Antenna

The antenna in your AX585 was designed internally for the best performance and design.

!!! WARNING - CHOKING HAZARD - ANTENNA MAY BECOME DISLODGED

Attempting to remove or repeated twisting of the antenna will loosen the materials securing it into antenna. Once the antenna is loosened or removed, only an authorized service provider Representative can restore the antenna's original integrity. Do not attempt to remove or twist the antenna.

Signal Strength

The quality of each call you make or receive depends on the signal strength on your area. The number of bars in the Signal Strength icon informs you of the current strength. The more bars, the stronger the signal.

Battery Capacity

Your AX585 is equipped with a Lithium Ion battery. It allows you to recharge your battery before it is fully drained. The battery provides approximately 180 minuets of continuous digital talk time or approximately 110 hours of continuous digital standby time.

Note: Long backlight settings affect the battery's talk and standby times.

When the battery reaches 5% of its capacity, the battery icon blinks. When there is about one minute of talk time left, the phone sounds an audible alert every 30 seconds and then powers down.

If the battery's charge is completely run down, it takes 2 to 3 hours to fully recharge. It is not necessary to let the battery completely run down before recharging.

To charge your batteries, use only approved charging accessories.

Using the AC Adapter

To charge the battery, plug the AC Adapter into a standard wall outlet and connect it to the phone via the I/O Connector on the bottom of the phone. Alternatively, you can place the phone in the charging cradle provided with your phone and connect the AC Adapter to the back of the cradle.

The battery Charge Status icon flashes during charging. When the battery is fully charged, the battery icon stops flashing.

Using Your Phone Placing a Call

When the phone is turned on, check the Signal Strength icon to see of you are in a Service Area or authorized PCS CDMA provider's service area.

- 1. Lift the slide up.
- 2. Enter the phone number and press [Talk].
 - **Tip!** When dialing long distance, it is not necessary to dial a "1" before the area code.
- 3. When you are finished with your call and press [END]. If the phone is in Active Flip Mode, closing the Flip will also end the call.

Roaming With Your Phone

Your Phone is you can use it to make and receive calls in many places.

Setting Your Phone's Mode

Your Phone allows you to control your ability to roam. (See "Set Mode")

Calling Experience

When you use your phone on other PCS CDMA networks, your calling experience and call quality will be quite similar to what you experience when making calls within the Network. Although certain calling features may not be available, your phone calls are still private and secure.

Correcting Dialing Mistakes

To delete one digit at a time, press []. To delete all digits, press and hole []

Redialing Last Outgoing Number

Press and hold [TALK] for 2 seconds.

Dialing Options (phone book – Not Functioning)

When you enter numbers in the Main Menu, dialing options are displayed. To display a Phone Book entry, enter its entry number. To use the 4- Digit Dial option, enter the last four digits of a phone number in your Phone Book.

To select an option, highlight it and press [TALK] .(Menu display only, _phone book - Not Functioning)

- Call Dials the phone number.
- Roam Confirm Reminds you that you are making a call on an. (See "Disabling Roam Confirm")
- Roam Call Dials the phone number using the current PCS CDMA or analog cellular network.
- Save Saves the phone number in your Phone Book. (See "Saving a Phone Number" on the following page.)
- Find Displays phone numbers in your Phone Book that contain the entered numbers. (See "Finding a Phone Number")
- Hard Pause Inserts a Hard Pause. (See "Dialing and Saving Phone Numbers With Pauses")
- 2- Second pause Inserts a two-second pause. (See "Dialing and Saving Phone Numbers With Pauses")

- Exit Returns to the Main Menu.
- A Phone Book Entry Displays the Phone Book entry. To dial the entry's speed-dealing number, press and hold [TALK]. To dial an alternate number, highlight it and press and hold [TALK].
 - Tip! To speed dial a Phone Book entry from the Main Menu, press and hold the entry's number. If the entry number is two digits, enter the first digit, then press and hole the second digit. (This feature will not work when the Roam Confirm option is enabled.)
- 4-Digit Dial Dials the phone number in your Phone Book that ends with the four digits you enter. (See "4-digit Dialing")

In Call Options

During a call, your phone displays menu options in addition to the Main Menu.

To select an option, Highlight it and press [OK]. (functions 'Talk' and 'End' only)

- End Call Ends the call
- Talk Tones Talks the next set of numbers after a Hard Pause. (See "Dialing and Saving Phone Numbers With Pauses" on the previous page.)
- Mute or Unmute Select Mute to mute your phone's microphone. Select Unmute to reactivate the microphone.
- Dial 3-Way Call Lets you dial another phone number.
- Flash Answers an incoming Call Waiting call or connects the third party for Three-Way Calling.

Incoming Call Notification

Depending on your settings, your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates
- The LED flashes green
- The backlight illuminates
- The screen displays an incoming call message
- The phone number of the caller is displayed of the phone number is available
- The caller's name is displayed if the phone number is in your Phone Book

The following options are also displayed. To select an option, highlight it and press [TALK].

- Answer answers the call.
- Silent Ringer Mutes the ringer.

Note: You can also mute the ringer by pressing the up or down Volume Control key or [BACK].

Answering Calls

To answer incoming calls, open the Flip (in Active Flip Mode) or press [TALK].

Note: If you open the Flip (in Active Flip Mode) and then press [TALK], you will hang up on the caller.

To answer incoming roam calls, highlight Answer and press [TALK].

Displaying Your Phone Number(phone book - not functioning)

To display your phone number:

- 1. From the Main Menu, select SETTING & TOOLS.
- 2. And press 4-2-1. (System Device Info My Phone Number)

Setting the Ring Volume to Vibrate

To set the phone to Vibrate Mode, press the down Volume Control key until Ring Volume Vibrate is displayed. The phone will vibrate and – Vibrate On- is displayed above the Main Menu.

To set the phone to Vibrate Mode using the Main Menu, see "Adjusting the Volume".

Getting the Most From Service

Retrieving Page/Text Messages

To retrieve page/text messages:	
1. From the Messaging	
2. Highlight Inbox and press [OK].	
Highlight the message you want to display and press [OK].	
To select an option, highlight it and press [OK].	
Text Message options:	
• Forward	
Save Quick-Text.	
Add To Contacts	
• Lock	
Message Info.	
Erasing All Page/Text Messages	
1. From the Messages Menu, Press the Options Menu	

Page/Text Message Storage

Highlight Erase All and press [OK].
 Highlight Yes and press [OK].

Your AX585 can store up to 50 page/text messages. When the message memory is 100% full, a warning

message prompts you to erase messages to obtain more memory space.

Roaming on to Other Service Providers

Roaming occurs when you are in an area serviced by another authorized service provider. When this situation occurs, the icon and Digital Roam of Analog Roam are displayed. If there is no service available, the icon is displayed.

(Call History- not functioning)

Page/Text Messages

For information on page/text messages, see "Retrieving Page/Text Messages".

Sounds

Adjusting the Volume

- 1. From the Main Menu, highlight Sounds and press [OK].
- 2. Highlight Volume and press [OK].
- 3. Highlight Ringer or Key Beep and press [OK].
 - Tip! You can use the Volume Control keys to adjust the Ring Volume in the Main Menu or the Voice Volume during a call.
- $4. \quad \text{Highlight $\stackrel{\square}{\text{High}}$, $\stackrel{\square}{\text{Medium}}$, $\stackrel{\square}{\text{Low}}$, $\stackrel{\square}{\text{Off}}$ or $\text{Vibrate (for Ringer only) and press }[OK]$.}$

Note: When the phone is in Vibrate Mode and attached to and accessory (Desktop Charger, Hands-

Free Car Kit, etc.), it uses the Standard Ring Type to alert you of incoming calls, alarms or messages.

Selecting Ring Types for Voice Calls

it.

To Select a Ring Type for Voice Calls:	
1.	From the Main Menu, highlight Sounds and press [OK].
2.	Highlight Ring Type and press [OK].
3.	Highlight Voice Calls and press [OK].
4.	Highlight With Caller ID, No Caller ID or Roaming and press [OK].
	Note: If you select Roaming, the Ring Type is used for all incoming roaming calls.
5.	Highlight a Ring Type and press [OK]. You will hear a preview of the Ring Type when you highlight it.
	Tip! You can also assign different Ring Types to individual Phone Book entries. (See "Selecting an ID Finger" on page 46.)
Selecting Ring Types for Messages	
То	select a Ring Type for Messages:
1.	From the Main Menu, highlight Sounds and press [OK].
2.	Highlight Ring Type and press [OK].
3.	Highlight Messages and press [OK].
4.	Highlight Voicemail, Page/Text of MiniBrowser and press [OK].
5.	Highlight a Ring Type and press [OK]. You will hear a preview of the Ring Type when you highlight

Tone Length

Longer tone lengths may be better for tone recognition when dialing voicemail or other automated systems.

To select a tone length:

- 1. From the Main Menu, highlight Sounds and press [OK].
- 2. Highlight Tone Length and press [OK].
- 3. Highlight Short of Long and press [OK].

Alert Notification

To enable of disable alert sounds:

- 1. From the Main Menu, highlight Sounds and press [OK].
- 2. Highlight Alerts and press [OK].
- 3. Select an alert by highlighting it and pressing [OK].
- Services An alert sounds when you exit or enter PCS CDMA or cellular coverage.
- Messages An alert sounds when you receive a voicemail or page/text message.
- Minute Minder Your phone beeps once a minute when you are on a call. (The beep is not audible to the other party.)
- 4. Highlight ON or Off and press [OK].

Display

For information on changing Backlight, Greeting or Contrast settings, see Handy Tips.

Display Menu

Security

Accessing the Security Menu

You must enter your lock code to view the Security menu. If you forget your lock code, try using the last four digits of your Social Security number, the last four digits of your Phone Number or 0000.

Security Menu

To access the Security menu:

- 1. From the Main Menu, select SETTING and press 3 (Security menu)
- 2. Enter your lock code.

Locking Your Phone

When your phone is locked, you can only make calls to 911, Customer Care and Special Numbers or receive incoming calls.

To lock your phone:

- 1. From the Security menu, highlight Lock Phone and press [OK].
- 2. Highlight Lock Now or On Power up and press [OK]. If you select On Power Up, the phone will be locked each time it power up.

Unlocking Your Phone

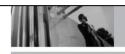
- 1. Highlight Unlock and press [OK].
- 2. Enter your lock code.

Changing the Lock Code

3. Highlight On and press [OK].

To disable an option, follow steps 1 and 2 and select Off.

To change your lock code:
1. From the Security menu, highlight Change Lock and press [OK].
2. Enter your new lock code.
3. Reenter your new lock code.
Answering Your Phone with the Hands-Free Car Kit
You can select different answering options when your phone is connected to the Hands-Free Car Kit.
To answer calls automatically or by pressing any key:
1. From the Main Menu, highlight Setup and press [OK].
2. Highlight Car Use and press [OK].
To select and option, highlight it and press [OK].
 Any Key Answer - You can answer calls by pressing any key (not including the [BACK] key, Mouse Key or Volume Control keys).
Auto Answer - Your phone answers incoming calls automatically after five seconds



Safety

FCC Hearing-Aid Compatibility (HAC) Regulations for Wireless Devices

On July 10, 2003, the U.S. Federal Communications
Commission (FCC) Report and Order in WT Docket 01-309
modified the exception of wireless phones under the
Hearing Aid Compatibility Act of 1988 (HAC Act) to require
digital wireless phones be compatible with hearing-aids.
The intent of the HAC Act is to ensure reasonable access
to telecommunications services for persons with hearing
disabilities.

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

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

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

M-Ratings: Phones rated M3 or M4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

T-Ratings: Phones rated T3 or T4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. T4 is the better/higher of the two ratings.

Hearing devices may also be rated. Your hearing device manufacturer or hearing health professional may help you find this rating. Higher ratings mean that the hearing device is relatively immune to interference noise. The hearing aid and wireless phone rating values are then added together. A sum of 5 is considered acceptable for normal use. A sum of 6 is considered for best use.



In the above example, if a hearing aid meets the M2 level rating and the wireless phone meets the M3 level rating, the sum of the two values equal M5. This is synonymous for T ratings. This should provide the hearing aid user with "normal usage" while using their hearing aid with the particular wireless phone. "Normal usage" in this context is defined as a signal quality that is acceptable for normal operation.

The M mark is intended to be synonymous with the U mark. The T mark is intended to be synonymous with the UT mark. The M and T marks are recommended by the Alliance for Telecommunications Industries Solutions (ATIS). The U and UT marks are referenced in Section 20.19 of the FCC Rules. The HAC rating and measurement procedure are described in the American National Standards Institute (ANSI) C63.19 standard.

To ensure that the Hearing Aid Compatibility rating for your phone is maintained, secondary transmitters such as Bluetooth

and WLAN components must be disabled during a call.

For information about hearing aids and digital wireless phones

FCC Hearing Aid Compatibility and Volume Control

http://www.fcc.gov/cgb/dro/hearing.html

Gallaudet University, RERC

http://tap.Gallaudet.edu/DigWireless.KS/DigWireless.htm

Hearing Loss Association of America [HLAA]

http://www.hearingloss.org/learn/cellphonetech.asp

The Hearing Aid Compatibility FCC Order

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-168A1.pdf