

# USER MANUAL

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# 1 Phone Layout



1 Receiver

2 Camera

3 Speaker

4 Micro-USB







5 Earphone jack

Note: Picture is for reference purposes only.










## 1.1 Keys



- ☎ Switch on/Switch off the telephone (long keypress)
- End call
- Return to the main screen

-  Pick up
  - Send a call
  - Access call memory (Redial) (short keypress)
-  Left softkey
  - Right softkey
-  Navigation key
  - Confirm an option (press the middle of the key)
  - Access main menu(short keypress)
-  From main screen
  - Short keypress: \*
  - Long keypress: lock/unlock the phone
  - In Edit mode:
    - Short keypress: access the Symbols table
-  From main screen
  - Short keypress: #
  - Long keypress: activate/deactivate the vibrator
  - In Edit mode:
    - Short keypress: change input methods
-  From main screen
  - Short keypress: 0 + P
  - In Edit mode:
    - space or zero

## 1.2 Main screen icons

-  Signal strength received by the antenna
-  Alarm clock
-  There is (are) unread message(s).
-  Vibrate icon
-  Battery level indicator (This icon indicates full battery).
-  Ring icon
-  Vibrate first then ring
-  Mute Icon
-  Keypad locked

## 2 Specifications List

Phone Type Specification	CDM2030
Dimensions	105×43.5×14mm
Weight	71g
Screen Display Resolution	1.77" TFT, 128 ( RGB ) X160
Card Type	No UIM Card
Applicable System	CDMA 800MHz/1900MHz
Contact Capacity	500 sets in the phone
SMS Capacity	100 pieces for inbox and 100 pieces for outbox in mobile phone
Call Records	20 each for missed, answered and dialed calls
Receiving Call Vibration	Support
Preset Ringing Tone Type	5 ringing tones
Preset SMS Tone Type	5 tones
Call Time	Support
Speed Dial	Support
MP3	Support
Camera	Support
Input Methods	Support
Date and Time Display	Support
Alarm/Calculator	Support
Games	Support

Caller Number Display	Support
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### 3 Essential Topics

#### ★ Communication Control Keys

The 'Calling' key is used for making a call (after a number has been entered); or for viewing recent call records.

The 'End' key is used for ending a call (during dialing and communication state), or for exiting menu under menu state to return to standby menu. Pressing and holding this key switch on or off the phone.

#### Functional Keys and Soft Keys

Direction keys of up, down, left and right direction are used for browsing menus, lists, options or content compiled.

Under standby state, the up-direction key is used as shortcut key for Camera; the down-direction key is used as shortcut key for Settings; the left-direction key is used as shortcut key for write text message; the right-direction key is used as shortcut key for Contacts. Under standby state, the left soft key is a shortcut key for accessing main menu and the right soft key is a shortcut key for Contacts. The functions of the two soft keys under other states are closely related to the phone's current state.

Under standby state, you can press and hold the key '#' to switch between silent and general mode; press center & '\*' key in a row to lock keypad.

#### Standard keypad

Keys from '0' to '9', and key '\*' and '#' are used for dialing, inputting password, English letters, symbols etca and inputting Spanish.

■ **Note:** After the phone's standby interface maintains for period of time (time length is set by the user), the phone will turn off the backlight of the screen for the purpose of power saving. If the backlight of the screen goes out, you can press any key on the phone's keypad to turn on the backlight immediately.

### **Language and input methods**

Languages supported by this phone are listed under the path [Settings]- [Phone Setup] - [Language].

This handset provides input methods as Spanish ,English,Numbers and accustomed symbols input. Under editing status, you can press the key '#' to switch between input methods and press the key '\*' to switch to symbol. For detailed operations please refer to relevant chapters of "Operation of Input Methods".

### **Short message alert modes**

You should choose refer to the path: [Profiles]-[choose one mode]-[Personalize]-[Message alert tone].

#### **\* Call alert modes**

This handset has five alert modes of Ring, Ascending, Ring once,Beep once,off. You should choose refer to the path: [Profiles]-[choose one mode]-[Personalize]

#### **\* Find contacts**

This handset provides a way to search for phone number by first letter of a name. Under the contact name list (press the right soft key under standby state or press the key under main menu to get in), after

inputting the first letter of a name to be searched for correctly, the screen will display all the fit records.

## **4 Getting started**

### **★ Charging your battery**

The battery used in the phone is rechargeable. New battery must be fully charged before it is used for the first time. Only after several times of charging and discharging can the battery's efficiency made the best of.

To ensure the battery in optimal state, we recommend you discharge the battery fully at least once every month by consuming the power until the phone is switched off automatically.

During the course of charging, it is normal to find the battery and the phone slightly heat-up. The phone will automatically protect itself when battery temperature rises so as to control temperature variation.

The handset will give off alert as the battery is running out. When the power has run out the handset will be switched off automatically.

**Note:** Actual time of usage of the battery varies according to different operation modes and settings of network base station. If you use the phone when battery is rather low, the phone may switch off automatically. Please recharge in time.

### **★ Procedure for battery charging**

Connect the charger to a main socket, and insert the charging plug into the USB of the phone.

At this time phone starts charging. The battery symbol will be

gradually lengthened from right to left.

You may choose to charge the battery under power-off or standby state.

When the battery is fully charged, charging operation stops automatically. The battery symbol on the screen will maintain full-grid. At this time please unplug the charging plug.

**Note:** i. For safety, neither change the parts and fitments of the battery by yourself nor take off the battery outer case.

ii. Please use charger of original make. Using charger of your choice may cause your phone to damage.

## **5 Basic operations**

### **★ Switching on**

Pressing and holding the 'power on/off' key in the standby state may switch on the phone. It will automatically search the network if the phone has no password protection. Your phone remains in a searching state if it fails to find the available network system.

If a password for the phone is required after it is switched on, please input the correct one

### **★ Switching off**

To switch off the phone, please press and hold the 'on/off' key for 3 seconds and more in the standby state.

**Note:** If you switch off the phone directly by taking off the battery, some information to be stored in the phone may possibly get lost, which may cause inconvenience.



### ★ Making a call

Under standby state, input number directly via the keypad. Then press the 'Calling' key to make the call.

### ★ Adjusting the volume of earpiece

During a conversation, you may press the up and down-direction key to adjust the volume of earpiece.

### ★ Answering a call

When a call is incoming, the phone will prompt you according to the incoming call prompt mode you have set. To answer a call, press the 'Call control' key to answer the call directly or any key (If 'Any Key Answer' is set on) to answer. To reject a call, press the 'on/off' key and the other party will hear a busy tone.

## 6 Using the menu

### ★ Enter the menu

Under the standby state, press the left soft key to access the main menu of the phone. Under the main menu interface, press the key '1—9' to access the corresponding 'Menu option list'.

The main menu have total 9 options, all menus of the phone have the function of text prompt for corresponding function. Each set of menu is further divided into multi-item sub-menu. Menu functions may let you set, check or change the phone's various functional settings to meet your personal requirements. Please refer to the following 'Menu option list' for selection of the functions you require.

Press the direction keys to select from the menu. Press OK key or left

soft key to confirm or to enter the sub-menu list of the selected menu. Then press up and down-direction key to select and press the left soft key to confirm or enter into the lower-level menu.


Press the right soft key to return to higher-level menu. Press the 'on/off' key to exit the menu directly and return to the standby screen.

In editing state, the right soft key has deleting function. Press it once to delete one character and hold it to delete all the input characters.

In options, 'On' or 'Activate' is to enable corresponding function and 'Off' or 'Cancel' is to disable corresponding function.

## **6.1 Messages**

From the main menu select "**Messages**" to create text/multimedia message. You can type a message and you can also modify a predefined message in **Templates** or customize your message by adding pictures, photos, sounds, titles, etc (only available while editing a MMS). While writing a message, select "**Options**" to access all the messaging options.

You can save your messages that you send often to **Drafts** or **Templates**. When the phone receives a new short message, you will be prompted according to setting and the icon  will appear at the top of the main screen to indicate unread short message. Press the up and down-direction key in the message list interface to browse then press OK key. Press the up and down-direction key to scroll over pages.

## **6.2 Call History**

### **Missed calls**

If there are missed calls, you can view the detailed information of the missed calls in the 'recent calls /missed calls' menu. Each record contains the number or the contact name if number is already in the phonebook, date, time etc. Press the 'Call control' key to dial this number and press the right soft key to return to higher-level menu.

### **Received calls**

The phone saves the 20 most recently received calls automatically. Functional operation and display mode is the same as those of missed calls.

### **Dialed calls**

The phone saves the 20 most recently dialed calls automatically. Functional operation and display mode is the same as those of missed calls.

### **Delete log**

Delete Missed Calls: Delete records of recent calls.

### **Call time**

Record calls time of the phone.

## **6.3 Contacts**

Under the standby state, press the right soft key to access the phonebook. After accessing the phonebook, press up and down-direction key to browse records. When the cursor stops at a certain record, press the left soft key to access the menu of various operations for this record.

(1).Contact List

This submenu displays such detail of this record as name, number etc. You can select each item and then edit it.

#### (2).Search

This handset provides a way to search for phone number by name. After correctly inputting the name to be searched, press the left soft key and the screen will display the record you are searching for.

#### (3).Create New Contact

After accessing the Add menu, you may select to add a record to your phone .

#### (4).Group

You can view the records in the phonebook by group (Friends, Family,Personal,Colleagues, Others)

#### (5). Set Speed Dial

Once:You can use “1” to “9” as the speed dial number to dial a number with 1 number key and the call key.

#### (6).Delete ALL

Delete all the records in the phonebook.

(7).Memory Info: Display the memory status of the number stored in Phone.

### **6.4 Audio Player**

Audio Player can play various types music files saved in your phone or T-flash.It supports the file format: MP3,MIDI,WAV,AMR,AAC,OCP.

### **6.5 Camera**

You can use it to take photo and make photo album as you like.

## **6.6 WAP**

This function allows you to use various kinds of services on the Internet including Homepage, Search, Enter URL, History, Bookmarks, Push Box, Page List, , Advanced options, About and Exit Browser. This function can not be used without the support of Network Carrier. More information please contacts the Network Carrier.

## **6.7 Tools**

### **Alarm**

Your cellphone has a built-in alarm clock with a snooze feature.

### **Calculator**

Calculator can perform four fundamental operations (plus, minus, multiply, divide). Use 0-9 keys to input a value.

### **Stopwatch**

This unit provides a simple stopwatch function.

### **Gallery**

you can easily manage directories and files of various types saved in the phone and T-Flash .

### **World Time**

To view the time in different locations of the world, scroll right/left across the map.

### **Calendar**

Calendar: You can view the current date or scroll the calendar to view other monthly calendars.

### **Schedule**

You may schedule an event into the calendar, with date, time and an

alarm to notify you of that event.

## **6.8 Games**

This handset provides two fully-graphic games: Russia Block and Snake. Select Games from the main menu to access the game list. Press the left soft key to confirm. When the game interface and description of the selected game appears, press the left soft key again to start the game.

Both games allow turning the audio On/Off and provide Help and High Scores. Please see the menu for each game for Rules and Help.

## **6.9 Settings**

### **Profiles**

Here you can set different profiles according to your requirements. You have six choices: General, Silent, Meeting, Outdoor, Headset, In car.

### **Phone Setup**

Here you can set Language, Greeting, Speed Dial, Clock Format, Date Format.

### **Display Setup**

Here you can set Wallpaper, LCD Backlight, Brightness.

### **Call Setup**

Here you can set Call Duration, Call Connect Notification, Blacklist, Anykey answer.

### **Security setup**

You must input correct phone password before accessing Security

setup menu. The initial password is 1234.

### Airplane

Here you can set airplane mode on/off.

### Phone Info

Show the phone information: Software Version, Hardware Version, Phone Number, MEID, PRL Version, SID.

## **7 Safety and Warranty**

This chapter addresses the safety guidelines and precautions to follow when operating your phone. Before operating your phone, please be aware of all the safety details. This chapter contains the terms and conditions of services and the warranty for your phone. Please review them thoroughly.

### **7.1 SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES**

#### **READ THIS INFORMATION BEFORE USING YOUR HANDHELDPORTABLE CELLULAR TELEPHONE**

#### **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 handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

ANSI C95.1 (1992) \*

NCRP Report 86 (1986) \*

ICNIRP (1996) \*

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1).

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

1\* : American National Standards Institute.

2\* : National Council on Radiation protection and measurements.

3\* : International Commission on Nonionizing Radiation Protection.

## **ANTENNA SAFETY**

Use only the supplied or an approved replacement antenna.

Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations. Please contact your local dealer for replacement antenna. 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.

## **DRIVING SAFETY**

Talking on the phone while driving is extremely dangerous and is illegal in some states. Remember, safety comes first. Check the laws



and regulations on the use of phones in the areas where you drive. Always obey them. Also, if using your phone while driving, please:

Give full attention to driving. Driving safely is your first responsibility.

Use hands-free operation, if available.

Pull off the road and park before making or answering a call, if driving conditions so require.

If you must use the phone while driving, please use one-touch, speed dialing, and auto answer modes. An airbag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the airbag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

**WARNING:** Failure to follow these instructions may lead to serious personal injury and possible property damage.

## **ELECTRONIC DEVICES**

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. Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Therefore, use of your phone must be restricted in certain situations.

## **PACEMAKERS**

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

ALWAYS keep the phone more than six inches from your pacemaker when the phone is turned on.

Do not carry the phone in a breast pocket.

Use the ear opposite the pacemaker to minimize the potential for interference.

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

## **HEARING AIDS**

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

alternatives).

## **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 healthcare facilities when any regulations posted in these areas instruct you to do so. Hospitals or healthcare 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 where posted notices so require.

## **OTHER SAFETY GUIDELINES**

### **AIRCRAFT**

FCC regulations prohibit using your phone while in the air. Turn your phone OFF before boarding an aircraft. Always request and obtain prior consent and approval of an authorized airline representative before using your phone aboard an aircraft. Always follow the instructions of the airline representative whenever using your phone aboard an aircraft, to prevent any possible interference with airborne electronic equipment.

### **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 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 gas 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’s engine.

## **PRECAUTIONS**

Your Handheld Portable Telephone is a high quality piece of equipment. Before operating, read all instructions and cautionary markings on (1) AC/DC Travel Adaptor (2) Battery and (3) Product Using Battery.

Failure to follow the directions below could result in serious bodily injury and/or property damage due to battery liquid leakage, fire or rupture.

DO NOT use this equipment in an extreme environment where high temperature or high humidity exists.

DO NOT abuse the equipment. Avoid striking, shaking or shocking. When not using, lay down the unit to avoid possible damage due to instability.

DO NOT expose this equipment to rain or spilled beverages.

DO NOT use unauthorized accessories.

DO NOT disassemble the phone or its accessories. If service or repair is required, return unit to an authorized PCD cellular service center. If unit is disassembled, the risk of electric shock or fire may result.

DO NOT short-circuit the battery terminals with metal items etc.

## **7.2 SAFETY INFORMATION FOR FCC RF EXPOSURE**

**WARNING! READ THIS INFORMATION BEFORE USING  
CAUTIONS**

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.

## **7.5 FDA CONSUMER UPDATE**

### **U.S. FOOD AND DRUG ADMINISTRATION    CENTER FOR DEVICES AND RADIOLOGICAL HEALTH CONSUMER UPDATE ON WIRELESS 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, 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, 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

Federal Communications Commission

Occupational Safety and Health Administration

National Telecommunications and Information Administration

The National Institutes of Health participates in some inter-agency working group activities, as well. 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 predisposed 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 animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years' follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is

hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

## **6. What is 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 the 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 and engineers. The standard, “Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques,” sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a 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. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance.

For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

## **10. What 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 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 the following resources:

FDA web page on wireless phones  
(<http://www.fda.gov/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/emf> )

Health Protection Agency (UK) (<http://www.hpa.org.uk/radiation/>)

## **7.6 AVOID POTENTIAL HEARING LOSS**

Prolonged exposure to loud sounds (including music) is the most common cause of preventable hearing loss. Some scientific research suggests that using portable audio devices, such as portable music players and cellular telephones, at high volume settings for long durations may lead to permanent noise-induced hearing loss. This includes the use of headphones (including headsets, earbuds and Bluetooth® or other wireless devices). Exposure to very loud sound has also been associated in some studies with tinnitus (a ringing in the ear), hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies.

The amount of sound produced by a portable audio device varies depending on the nature of the sound, the device, the device settings and the headphones. You should follow some commonsense recommendations when using any portable audio device:



Set the volume in a quiet environment and select the lowest volume at which you can hear adequately.

When using headphones, turn the volume down if you cannot hear the people speaking near you or if the person sitting next to you can hear what you are listening to.

Do not turn the volume up to block out noisy surroundings. If you choose to listen to your portable device in a noisy environment, use noise-cancelling headphones to block out background environmental noise.

Limit the amount of time you listen. As the volume increases, less time is required before your hearing could be affected.

Avoid using headphones after exposure to extremely loud noises, such as rock concerts, that might cause temporary hearing loss. Temporary hearing loss might cause unsafe volumes to sound normal.

Do not listen at any volume that causes you discomfort. If you experience ringing in your ears, hear muffled speech or experience any temporary hearing difficulty after listening to your portable audio device, discontinue use and consult your doctor.

## **YOU CAN OBTAIN ADDITIONAL INFORMATION ON THIS SUBJECT FROM THE FOLLOWING SOURCES:**

**American Academy of Audiology**

11730 Plaza American Drive, Suite 300

Reston, VA 20190

Voice: 800-AAA-2336

Email: [info@audiology.org](mailto:info@audiology.org)

Internet: [www.audiology.org](http://www.audiology.org)

**National Institute on Deafness and Other Communication Disorders**

**National Institutes of Health**

31 Center Drive, MSC 2320

Bethesda, MD USA 20892-2320

Voice: (301) 496-7243

Email: [nidcdinfo@nidcd.nih.gov](mailto:nidcdinfo@nidcd.nih.gov)

Internet: <http://www.nidcd.nih.gov/health/hearing>

**National Institute for Occupational Safety and Health**

Hubert H. Humphrey Bldg.

200 Independence Ave., SW

Washington, DC 20201

Voice: 1-800-CDC-INFO (1-800-232-4636)

Internet: <http://www.cdc.gov/niosh/topics/noise/default.html>

CAUTION: Changes or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables.

## **7.8 12 MONTH LIMITED WARRANTY**

Personal Communications Devices, LLC. (the "Company") warrants to the original retail purchaser of this handheld portable cellular telephone, that should this product or any part thereof during normal consumer usage and conditions, be proven defective in material or workmanship that results in product failure within the first twelve (12) month period from the date of purchase, such defect(s) will be repaired or replaced (with new or rebuilt parts) at the Company's option, without charge for parts or labor directly related to the defect(s).

The antenna, keypad, display, rechargeable battery and battery charger, if included, are similarly warranted for twelve (12) months from date of purchase. This Warranty extends only to consumers who purchase the product in the United States or Canada and it is not transferable or assignable. This Warranty does not apply to:

- (a) Product subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;

- (b) Product whose mechanical serial number or electronic serial number has been removed, altered or defaced.

- (c) Damage from exposure to moisture, humidity, excessive temperatures or extreme environmental conditions;

- (d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;

- (e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts;

- (f ) Product damaged from external causes such as fire, flooding, dirt, sand, weather conditions, battery leakage, blown fuse, theft or improper usage of any electrical source.

The Company disclaims liability for removal or reinstallation of the product, for geographic coverage, for inadequate signal reception by the antenna or for communications range or operation of the cellular system as a whole.

When sending your wireless device to Personal Communications

Devices for repair or service, please note that any personal data or software stored on the device may be inadvertently erased or altered. Therefore, we strongly recommend you make a back up copy of all data and software contained on your device before submitting it for repair or service. This includes all contact lists, downloads (i.e. third-party software applications, ringtones, games and graphics) and any other data added to your device. In addition, if your wireless device utilizes a SIM or Multimedia card, please remove the card before submitting the device and store for later use when your device is returned, Personal Communications Devices is not responsible for and does not guarantee restoration of any third-party software, personal information or memory data contained in, stored on, or integrated with any wireless device, whether under warranty or not, returned to Personal Communications Devices for repair or service.

To obtain repairs or replacement within the terms of this Warranty, the product should be delivered with proof of Warranty coverage (e.g. dated bill of sale), the consumer's return address, daytime phone number and/or fax number and complete description of the problem, transportation prepaid, to the Company at the address shown below or to the place of purchase for repair or replacement processing. In addition, for reference to an authorized Warranty station in your area, you may telephone in the United States (800) 229-1235, and in Canada (800) 465-9672 (in Ontario call 416-695-3060).

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS

LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR AN SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS

OR IMPLIED, WHATSOEVER. THE COMPANY SHALL NOT BE LIABLE FOR THE DELAY IN RENDERING SERVICE UNDER THIS WARRANTY OR LOSS OF USE DURING THE TIME THE PRODUCT IS BEING REPAIRED OR REPLACED.

No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states or provinces do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitation 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 or province to province.

In USA:        Personal Communications Devies, LLC.  
                    555 Wireless Blvd.  
                    Hauppauge, New York 11788  
                    1-800-229-1235

IN CANADA:   Personal Communications Canada Ltd  
                    5535 Eglinton Avenue West, Suite 234  
                    Toronto, Ontario  
                    M9C 5K5

1-800-465-9672

## **FCC Regulations:**

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

●This mobile phone has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

●The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The operating temperature is between -15~50°C.

## **► RF Exposure Information (SAR)**

This mobile phone meets the government's requirements for exposure to radio waves.

This phone 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.

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 accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the 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. 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.

The highest SAR value for the model phone as reported to the FCC when tested for use at the ear is 1.42

W/kg and when worn on the body, as described in this user guide, is **0.737** W/kg (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements.)

While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of [www.fcc.gov/oet/ea/fccid](http://www.fcc.gov/oet/ea/fccid) after searching on FCC ID: **U46-CDM2030**.

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and the positions the handset a minimum of **1.5 cm** from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines. If you do not use a body-worn accessory and are not holding the phone at the ear, position the handset a minimum of **1.5 cm** from your body when the phone is switched on.



