A TTACH M EN T M - USER'S MANUAL

## 7 LG-TM220 Operating Manual (USER Manual)

(Ver. 1.0)

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## Version Notice

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| :--- | :--- | :--- | :--- | :--- |

## CHAPTER 1. THE NAME AND FUNCTIONS

Soft Icon


| Yilll | Signal Strength (RSSI) |
| :--- | :--- |
| In Use |  |
| R | No Service |
| Short Message (Voice) |  |
| Short Message (Text) |  |
| Digital Service is available |  |
| Roaming | Vibrator Enabled |
| Battery Level |  |
| Alarm Enable |  |

## CHAPTER 2. BASIC FUNCTIONS

## Turning the Phone On and Off

## <Turning the Terminal On>

1.Connect the terminal to the charged battery or the external power supply.
2.Press the [END/PWR] key for about 0.5 seconds until a red light appears on the upper side of the terminal.
< Turning the Terminal Off >
1.Press the [END/PWR] key until the ending animation appears on the LCD, and then stop pressing the key.
2.If an antenna is stretched, push it in for safety.

## Making a Call

<Methodl> Entering the Entire Phone Number
1.If the terminal is turned off, turn it on.

2 .Enter the phone number.
(Enter the area code, if necessary.)
3. Press the [SEND] key.


- If the terminal is locked on, enter the password to unlock the terminal. Then, attempt the call again.
- If the call is not connected, "Call Failed" signal will be indicated on the LCD.

4. Press the [END] key.
<Method2> Using Phone Book Entry
5. Enter the phone entry number, and press the [SEND]
 key or press the related phone entry number for some time. Then, the call will be attempted.
e.g.) Press the [2] key for some time, then call will be
6. If you are not sure of the phone entry number, select the Soft Key(BOOK) with the Right Mouse Button.
7. Place the cursor on the Phone Book, and press the Soft Key(SEL) with the Left Mouse Button.
8. Search the Phone Book Entry number or name requested in the Phone Book to attempt a call to the phone number stored in it.

| D (四 | 1:Call History | Entry 1002 |
| :---: | :---: | :---: |
| EzCommunication | 2:Phone Book | Mr. John |
| Dec 02, Sat | 3:URL Book | ? 2192712403 |
| 3:43 pm | 4:Scheduler |  |
| MENU D BOOK | SEL L BACK | OPT B BACK |

<Method3> Using the Recent Call History

1. Select the Soft Key(BOOK) with the Right Mouse Button..
2. If the screen changes, place the cursor on the Call History. Then, press the Soft Key(SEL) with the Left Mouse Button.
3. If the "Outgoing", "Incoming", "Missed" and "Added" are indicated on the screen, select the menu requested. Ten phone numbers of the recent calls are stored in each menu. Place the cursor on the menu requested, and press the Soft Key(SEL) with the Left Mouse Button.

| EzCommunication |
| :---: |
|  |  |
|  |
| 3:43 pm |
| NU\|- Bo |


4. The phone number list appears on the screen. Then, search and place the cursor on the phone number or name requested, and press the [SEND] key.


## Correcting Dialing Mistakes

1.Press the Soft Key(CLR) with the Right Mouse Button of the screen to erase the number or character of the last entry.
2.Press the Soft Key(CLR) with the Right Mouse Button for one second, then all the number or character requested will be erased.

## Receiving Calls

1.Press any key except for the [END/PWR] key to receive a call.

Press the Side key \{UP/DOWN\} Key once to stop the bell or vibration.
Press the END Key to end the incoming call and the incoming call was
forwarded
2. When the call completes, press the [END/PWR] key.
3. Or close the flip. But if using earjack, you can converse.

## Mute

1.Press the Soft Key(MENU) with the Left Mouse Button during the call.
2. If a menu appears on the screen, place the cursor on the Mute menu and press the Soft Key(SEL) with the Left Mouse Button to select the Mute state. (The message"Mute" will be indicated on the screen.)
3. Press the Soft Key(MENU) with the Left Mouse Button to clear the function. The popup menu will appear. Select the Mute menu. (The message "Mute" will be disappear on the screen


## Redialing Last Outgoing Number

<Method l>

1. Just press [SEND] key to redial the last outgoing number. Then, the call will be attempted.
In voice dial Auto or Manual set state, First [SEND] key is voice dial, Second [SEND] Key is redial
<Method 2> using the Call History
2. Press the Soft Key(BOOK) with the Right Mouse Button.
3. Place the cursor on the Call history menu on the screen, and press the Soft Key(SEL) with the Left Mouse Button.

| T.ull D 凶 四 | 1:Call History |
| :---: | :---: |
| EzCommunication | 2:Phone Book |
| Dec 02, Sat | 3: URL Book |
| 3:43 pm | 4:Scheduler |
| MENU BOOK | SEL |

3. Then, four menus will appear.

- "Outgoing": Ten last outgoing calls are stored in this menu.
- "Incoming": Ten last incoming calls are stored in this menu.
- "Missed": Ten last missed calls are stored in this menu.
- "Added": The numbers that input at "Inuse Menu" are store in thi s menu

4. Place the cursor on the menu requested, and press the Soft Key(SEL) with the Left Mouse Button.
e.g.) Place the cursor on the "Outgoing" menu and press the Soft Key (SEL) with the Left Mouse Button.
5. The phone number list will appear. Place the cursor on the phone number or name requested, and press the [SEND] key. Then, the call will be attempted.

| 1: Outgoing |
| :--- |
| 2: Incoming |
| 3: Missed |
| 4: Added |
| SEL $\quad$ BACK |

01:021234564
$02: 0192712403$
VIEW _ BACK

## Adjusting the Volume

It is possible to adjust the speaker volume, ring volume, and the Ring Type with the volume buttons on the upper left side of the terminal.

- It is possible to adjust the speaker volume during the call.
- It is possible to adjust the key tone volume in a idle state.
- In ringing state, If you up/down key press, the phone will be changed ringer off.
Change Conversation mode
- It is possible to adjust the ring volume from the Sound item on the Menu screen.
( ${ }^{-}$[MENU] [Sound][Ring Vol] or [MENU]-1-3)


If you turn the ring volume down to the minimum, the message "-Ringer Off" will be indicated on the LCD and no ringing sound will be sent out.

- Adjust the Ring Type on the Sound item on the Menu screen.
( ${ }^{\circ}$ [MENU] [Sound][Ring Type] or [MENU]-1-2)


## CHAPTER 3. PHONE BOOK FEATURES

## Two types of Phone Books

This service enables easier use of the outgoing or incoming phone numbers because it is possible to store up to 990 (198x5) phone numbers in the memory. It is possible to store the phone numbers either in the Personal Phone Book memory or in the Recent Call History List

## Personal Phone Book Memory

It is possible to store up to 5 phone numbers of 30 digits including name up to 15 characters and a email address up to 45 digits in each entry of the Phone Book.

4. Enter the name up to 15 characters. (Verify the number of characters and press the soft key [OPT] and place the cursor on the [Save] item on the Menu and press Soft key [SEL]) If you do not want to enter the name, press the soft key [OPT] and pace the

| Input Name | me |
| :---: | :---: |
| Joh |  |
| Save -987 | 887-6543 |
| SEL l | BACK |

5. Designate the Entry number. Then, an empty Entry number will be designated automatically. If you do not want this Entry number, designate another Entry number. If an existing phone number occupies the

Allocate \# Joh
Location ???
auto $=003$
OK BACK memory of the designated Entry number, a message will appear to verify if you want to overlap the existing one with a new one. If you select the [ok] Soft key, the existing phone number will be erased in the entry, and a new one will be stored. If you want to maintain the existing phone number, designate another entry number.
6. Messages will appear to set the Secret function in turn. If you set the Secret function to the memory address, you will be unable to see the phone number or to correct it.

## Entering Characters

You will be provided with types of modes (English Lower, English Upper, Digit, Symbol, T9 Lower, T9 Upper, T9 Shift) to enter the characters. Use the upside $(\boldsymbol{\uparrow})$ key to change among the modes while entering the characters. The present mode is indicated on the lower center of the screen. Whenever you press the upside ( $\boldsymbol{\uparrow}$ ) key, the modes will change in the order of "abc" -"ABC" - "wrd" "WRD" - "Wrd"-"HLP"-"SYM"-"123"... . Select the mode before you enter the characters, and enter the characters.
1 . When the mode is ready for entry, the cursor ("■") will be indicated on the space for entry.
(If you enter one character, the cursor will move to the following space automatically and wait for entry.)

2. Use the right side ( $\boldsymbol{\rightarrow}$ ) key or the " 0 " key in the "ABC" - "abc" state to place a space among the characters.
3. Verify if the cursor is placed where the character is to be entered, and change the mode by using the upside/downside key.
4. Verify if the mode requested is indicated on the lower center of the screen, and enter the character.
5. Use 9 keys of [1]~[9] to enter the character in the "abc" and "ABC" mode. One key is designated with three or more than three characters. Therefore, press each key repeatedly for a short period of time until the

## Enter Name

OPT ABC $\mid$ CLR character requested appears. For example, if you want to enter a character " K ", set the "ABC" mode with the upside/downside keys and then press [5] key twice for short time continuously.
6. When the mode is ready for entry, Repeatedly press " 1 " key will be changed symbol character in the "ABC"-"abc" state. You don't need changed "SYM" mode
7. Enter the numbers of $0 \sim 9$ with ten keys from [0] to [9] in a " 123 " mode.
(Reference: The "ABC", "abc" and " 123 " modes remain in the same state even after you enter a character, while the "SYM" mode automatically change into an "ENG" mode after you enter one character.)
8. When you press [1]~[9] keypad, "WRD"-"wrd"-"Wrd" Enter Name mode automatically change to word. "WRD" mode change all upper character word. "wrd" mode change all lower character word. "Wrd" mode change word that first character is upper character .
9. Enter a special code in the "SYM" mode. An special code set is indicated in the order of 9 keypads. Press the key corresponding to the symbol to be entered in reference of them, and then the symbol will be entered

Enter Name
1.. 2.@ 3./
4.15.? 6.,
7.' 8.\& 9.-

《<<|SYM|>>> on the space where the cursor is placed. Press the Left or Right Key Button when the symbol set is indicated on the screen, and then another set of symbols will be indicated on the screen. The symbol set is composed of three types of sets. Press Button repeatedly in a preset "SYM" mode to change one type of symbol set into another one. If the symbol set requested is indicated, use the keypad to enter the symbol .
10. Use the Soft Key(CLR) with the Right Mouse Button to erase the input character. Press it for a short period of time to erase the last input character, and press it for some time to erase all the input characters.
11. If you complete entry of the characters, use the Soft Key with the Left Mouse Button to move to other items.

## Recent Call History List

This service enables easy and fast redialing with its function to store ten last outgoing calls, incoming calls, missed calls and added phone numbers (numbers stored by the scratch pad function).
<Retrieving Recent Call History>

1. Press the Soft $\operatorname{Key}(\mathrm{BOOK})$ with the Right Mouse
 Button of the screen.
2. Place the cursor on the Call history of the screen, and press the Soft Key(SEL) key with the Left Mouse Button.
3. Then, four menus will appear on the screen.

- "Outgoing": Ten last outgoing calls are stored in this service.
- "Incoming": Ten last incoming calls are stored in it.
- "Missed": Ten last missed calls are stored in it.
- "Added" Ten last Added numbers are stored in it. Select one of the three menus.

4. Then the corresponding phone number list will appear. Place the cursor on the number requested and press the [OK] key to attempt a call.
5. Then the time, duration, date will appear. Press the Key(SEL) with the Left Mouse Button of the screen.

## Retrieving Numbers

<Retrieving One Phone Numbers by Memory Location Number>

1. Enter the Phone Entry number (up to three digits) to be retrieved in an initial state.
2. Press the Soft Key(OPT) with the Left Mouse Button, and then a popup menu will appear.

3. Place the cursor on the "Entry" item on the popup menu and press the Soft Key(SEL) with the Left Mouse Button. And then, the information stored in the input entry number will appear. Press the [SEND]

Entry 1001
00112453212
OPT BACK key to attempt a call to that number.
4. In another method, press the Soft $\operatorname{Key}(\mathrm{BOOK})$ with the Right Mouse Button in an initial state and select the items in the order of [Phone Book] and [Find Entry] on the menu. And then, a message will appear to request the entry number. Enter the number to be retrieved.
Enter a specific number in an initial state to retrieve a phone number with a specific number, and press the Soft Key(OPT) with the Left Mouse Button. If you select the "Find" item on the popup menu, a Phone Numbers List with the number requested will be indicated. Select the phone number to be retrieved, and then the information related to the entry all will appear.

<Retrieving by Name Search>

1. Press the Soft Key(BOOK) with the Right Mouse Button in an initial state.
2. Select the [Phone Book] item.
3. If you select the [Find Name] item, a message will appear to request the name.
4. Then, a name list with the input characters will appear.
5. Place the cursor on the name to be searched and select the Soft Key(SEL) with the Left Mouse Button. And then, the related information will appear.


## Dialing Numbers from Your Phone Book

This function enables fast dialing with the entry number stored with the phone number requested.
<One-Touch Dialing>
One-Touch Dialing enables the call with the touch of just one key by its function to store the phone numbers requested in the Phone Book. This service is available only for the phone number stored in the entry numbers 01~09.

1. Press the Phone Book Entry number for some time to connect a call.
2. The Entry 9 is designated for the number ' 911 '.

<Two-Touch Dialing (Speed Dialing)>
Two-Touch Dialing function is available only for the phone numbers stored in the Entry numbers 10~99.
3. Press the first number of the two digit Entry numbers for a short period of time.
4. Press the second number for some time to attempt dialing.
<Three-Touch Dialing (Speed Dialing)>
The Three-Touch Dialing function is available only for phone numbers stored in the Entry numbers 100~199.
5. Press the first two digit numbers among the three digit entry numbers for a short period of time.
6. Press the last digit number for some time to attempt dialing.
<Dialing from a Memory list>
7. Press the Soft Key(BOOK) with the Right Mouse Button.
8. Select the "Phone Book" menu.
9. Select the "Find Entry" item.
10. Use the upside and downside key instead of the Entry number, and then the contents of the Phone Book 002 :Mr. John Memory will appear in the order of the Entry numbers.
11. Place the cursor on the number requested, and press the [SEND] key.
<Dialing from a Memory Location>
12. Press the Soft Key(BOOK) with the Right Mouse Button of the screen.

Entry $\# 002$
2. Select the "Phone Book" menu.
3. Enter the entry number requested and press the Soft Key(SEL) with the Left Mouse Button.
4. Place the cursor on the number requested in the Entry, and press the [SEND] key.

## Advanced Phone Book Feature

## Pause Feature

When you call the automated system such as sending the voice message, you have to press a few numbers. This service enables storing the numbers by a specific symbol of the Pauses to save instead of pressing the numbers by hand. Pauses are two types as follows.
1.Hard Pause (H) - Press the Soft Key [OPT] with Left Mouse Button to send the following numbers.
2.Time Pause (T) - Pause for about 2 seconds to send the following numbers. Use the Time Pause in case longer Pause time is necessary.
3.Hyphen -Use the hyphen just to indicate the number, as the pause is not available between two numbers.

## Storing a Number with Pauses

1. Enter the number.
2. Press the Soft Key(OPT) on the left to use the Pause function.
3. Select the [Hard Pause] item on the popup menu, and then a character " H " will be indicated on the screen.
4. Select the [Time Pause] item, and then the 2 Sec Pause will be indicated as the character " T ".


## CHAPTER 4. MENU FEATURE

## Main Menu

It is possible to verify or change various functions or $\mathrm{T}_{\text {.ull }} \mathrm{D}$. setup the terminal status on the main menu.

EzCommunication
Dec 02, Sat
3:43 pm
MENU BOOK

## General Guidelines to MENU Access and Settings

1. Press the Soft Key(MENU) on the left and the menu items will appear.
2. Use the upside and downside keys ( $\uparrow \downarrow$ ) to move to the menu items not indicated on the screen.

| 1:Sound |
| :--- |
| 2:Voice Serv. |
| 3:Data Service |
| 4:Call Info. |
| SEL |

3. Place the cursor on the menu item requested with SEL $\sqrt{\text { BACK }}$ the direction keys to select a menu item, and press the Soft Key(SEL) on the left. And then, press the number corresponding to the menu item to be selected.
4. Use the upside and downside keys ( $\uparrow \downarrow$ ) to change the setup values in the menu items.
5. Press the Soft Key(SEL) on the left to store the setup values changed in the menu item, or press the Soft $\mathrm{Key}(\mathrm{BACK})$ on the right to leave the setup values not stored.
6. Press the Soft $\operatorname{Key}(B A C K)$ on the right to move up to the upper level during the value setup in the menu items.

## Menu Item Descriptions

Menu 1. <Sound>

1. Ring Sound ( [MENU]-1-1)

| Ring Sound | ect one of five bell Sound and fifteen melodies with |
| :---: | :---: |
| Bell 1 | the direction keys. |
| Bell 2 |  |
| Melody 1 |  |
| OK BACK |  |

2. Ring Type ( [MENU]-1-2)
Ring Type

| Ring |
| :--- |
| Vibrate |
| VIB+Ring |

Sibrator+Ring , and LED) with the direction keys.
OK $\quad$ BACK
3. Ringer Vol (MENU]-1-3)

## Speaker Ring - Ring type: Adjust the ring volume in 5 (High > Medium + > Medium - > Low > Off) with the direction keys. The ring volume is also adjustable with the side Mid+ keys while the bell is ringing or in a call waiting state.

4. Key Beep ( ${ }^{(M E N U}$-1-4)

5. Key Volume ( ${ }^{\infty}$ [MENU]-1-5)

| Key Beep | Adjust the beep in five levels (High > Medium + > |
| :---: | :---: |
| + | Medium - > Low > Silent ) with the direction keys. |
| High |  |
| OK BACK |  |

6.Ear Volume ( [MENU]-1-6)

7. Alerts Sound ( [MENU]-1-7 )


An alert signal is activated according to each situation by five submenus under the Alert menus.

- Call Connection : It is activated to notify that the call is connected. (Sond On, Vib On, Off)
- Fade: It is activated if the call is disconnected in a busy line state. (On / Off)
- Minute : This signal is activated when lminute elapses from the call connection. (On / Off)
- Service : This signal notifies whether a call is available or not between the service and the no service areas. (On / Off)

Menu 4. <Call Info>
1.Last Call (MENU]-4-1)

2. Home Calls ( ${ }^{\text {[ }}$ [MENU]-4-2 )


Total call time at the Home system (not roaming) from initial setup to the present.
Total: @ Calls
Time: 00:00:00
OK $\qquad$ ZERO
3. Roam Calls ( [MENU]-4-3)

Roam Calls
Total: Calls
Time: 00:00:00
OKZERO

Shows the call time at the roaming system from initial setup to the present

## 4.All Calls ( [MENU]-4-4 )

## All Calls

Total: Calls
Time: 00:00:00
ок

It shows the total call time to the present either at the Home system or the roaming system or both.

Menu 5. <Display>
1.Backlight ( [MENU]-5-1 )

## Backlight

 10 Seconds 30 Seconds PFlip Open OK $\quad$ BACK On)
## 2.Banner ( [MENU]-5-2 )

## Banner

EzConmunication
It is possible to store the characters to appear on the standby state of the terminal.

OK EDIT
3. Show Time ( [MENU]-5-3 )

## Show Time\&Date

It is possible to display digital time on the standby
No state of the terminal (No/Yes)
OK $\quad$ Mes
4.Display CLI ( ${ }^{\text {D }}$ [MENU]-5-4 )

Display CLI It is possible to display caller ID on Incoming call state of the terminal.(On/Off)
Off
OK $\quad$ BOn

## Auto Hyphen

It is possible to set the function to enter the Hyphen to On the input number automatically to an "On" or "Off" Off state.
OK $\qquad$ BACK

Menu 6. <Features>

1. Calculator ( [MENU]-6-1)

## Calculator


2.Auto Receive ( [MENU]-6-2 )
Auto Receive -0ff
1 Ring 3 Rings
OK $\qquad$ BACK

Auto receive service is one of the most useful functions while driving a vehicle, and it enables automatic answering to the incoming call after the bell rings for designated times.
(Off, 1 ring, 3 ring, 5 ring)
3.Auto Retry ( ${ }^{\text {( }}$ [MENU]-6-3 )


If the called user is in a busy line state, this service automatically attempts a call to that number in a certain interval. It is possible to set the interval in four selections. (Off, 10sec, 30sec, 60sec)
4.Voice Secur ( [MENU]-6-4 )

5.Audio AGC ( [MENU]-6-5)


Menu 7. <Security>

Select the Soft Key(MENU) on the left in an initial call waiting state, and select [7. Security]. Then a message will appear on the LCD to request the Lock Code. If you fail to enter the correct Lock Code of four characters, the process will not proceed to the following low level menu. And if the

QUIT $\qquad$ CLR Lock Code is not correct, the process will return to the Main Menu.
1.Lock Mode ( [MENU]-7-1)

2. Restrict ( [MENU]-7-2 )

Restrict Phone
Yes No BACK

This service enables restriction on the call service. Select either "Yes" or "No" with the direction key. The call service will be restricted only to the emergency phone numbers. However, call termination is available.
3.Emergency \# ( [MENU]-7-3 )

## Emerqencu \#1

 <empty) (empty) <empty)OPT BACK

This service enables entering of the emergency phone numbers up to three.
It has two items of "Edit", and "Quit" as the Submenu.
Select "Edit" to view the emergency phone numbers and input mode. If the memory address is empty, the message "Empty" will be
indicated., Enter the phone number requested and then select the Soft Key(OPT) on the left and Popup Menu displayed. Press Soft Key [SEL] at "Edit", and then emergency phone number stored, to edit the emergency phone numbers.
4.New Code ( (MENU]-7-4 )

Enter New Code This service enables replacing of the present terminal Lock Code in four digits with a new Lock Code. A message will appear to confirm the command to change the lock code.

## Menu 8. <System>

1.Set NAM( [MENU]-8-1 )

SELECT NAM
DNAM \# 1
NAM \#2 Empty
OKNEXT

Select one NAM in the two NAM (Number Assignment Module) services. Select either "NAM \# 1" or "NAM \# 2" with the direction key. Both "NAM \# 1" and "NAM \# 2" have different NAM parameters, respectively. Therefore, if you select the NAM identified with the subscribed number, the service is not available.
2.Auto NAM ( (MENU]-8-2 )


This service enables setting of the NAM to the identified subscribed number for one or more than one NAMs. Use the direction keys to set the service to either "On" or "Off" state.

## 3.Force Mode ( [MENU]-8-3 )

## Force Mode

 Autonatic. Cell Only CDMA OnlyOK $\qquad$ BACK

This service enables setting of the preferred system mode to select mode service. Use direction keys to set the

4.System Sel (MENU]-8-4)

## Select System

-Standard Hone Only
OK $\qquad$ BACK

This service enables setting of the system. Use direction keys to set the service to either "standard" or "Home Only" state.
5. Version ( [MENU]-8-5 )

Version
EZ SW Vero. 1
Nov 062000
20:14:33 OK $\qquad$ BACK

This service informs on the present terminal $\mathrm{S} / \mathrm{W}$ version. It has two items of "S/W" and "PRL" as the submenu.
Use the
6. Serving System ( [MENU]-8-6 )

Servinq System Show the last Channel \& SID in current system

$$
\text { Channel: } 0691
$$

SID : 0222
OK BACK
7.TTY Mode ( [MENU]-8-7)

## ITY Mode


8. Contrast ( [MENU]-8-8)


## CHAPTER 5. Massage

## Massage Service

This service supports reception of the text message, the voice mailbox. It is possible to access the above

$\square$alerting, and functions with the text message key Call back
service is also available with the call key [SEND] key), if the calling number is indicated on the message received.

| Tull |  |
| :---: | :---: |
| 12/3 | 5:02pm |
| Mr. John |  |
| VIEW | BACK |

Call Back \#
Mr. John
019-271-2403
SAVE BACK

| Tull CD |
| :--- |
| Calling... |
| Mr. John |
| $019-271-2403$ |

It is possible to store up to 23 messages and to receive up to 120 characters per message. It is recommended to check the number of character receivable because the capacity depends on the system service provider.

```
<Initial Message Service Image >
```

1:Text(3/5)
2:Voice(5) 3:Browser MSG 4:Erase All SEL BACK

- 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.
- ( / ): The number in the parenthesis indicates the number of messages.
<Type of Menu>
- Text : Previous number is a new incoming text message. Next number is the verified but not erased text messages
- Voice : Menu to check the number of voice messages in the voice mailbox
- Erase All : Menu to erase all the stored messages
- Setting : Menu to select the alerting tone to report arrival of a message

1. Text

- Menu to check the message received but not checked by the user
-     * In the parenthesis indicates that message is protected by the user.
- Protect : The message protected doesn't erased.


Erase Messaqe
ERASE
this message?
OK $\quad$ BACK
2. Voice

VOICE MAIL 031-384-6974
5 New
Messages
OPT
BACK


[Next]: It indicates that there is another message received. (If no more new message has been received, the old text list will be indicated.)

- [Erase]: It erases the message.
- [Call back]: It calls back to the calling number.
- It indicates the number of the voice messages in the voice mailbox.
- Press the voice mailbox identification number or the [Call] menu key. Then, the voice mailbox will connect.
- Select the [Erase] menu item. Then, the messages will be erased, as many as indicated on the LCD, without need to verify the number of messages

3. Erase All

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

| Erase Message |
| :--- |
| Erase |
| All Message? |
| OK $\quad \sqrt{\text { BACK }}$ |

4. Setting

1:Alert 2:2Min Alert 3: Default CB\# 4: Auto Save SEL $\qquad$ BACK

```
Messaqe Alert
```

            * Alerts
    ```
            * Alerts
            4 Alerts
            4 Alerts
            Lamp
            Lamp
OK
OK
                BACK
```

                BACK
    ```
\(\square\)
\begin{tabular}{c}
\begin{tabular}{c} 
2 Alerts \\
4 \\
Alerts \\
Lamp
\end{tabular} \\
\hline OK \(\quad\) BACK
\end{tabular}
```

It is possible for the user to set the alarm to report arrival of a message.

Alert: Select one of 2 alerts, 4 alerts, LAMP and Vibrator services

- 2 Min Alert: It is possible for the user to select the re-alerting service to report arrival of a new message, when 2 minutes elapse after the user does not check a new message.

OK $\quad$ BACK


- Default DB \# : It enables setting the own phone number to Call Back Number message when send



## TIA Safety Language

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

Give full attention to driving -- driving safely is your first responsibility;
OUse 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:
OShould ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;

- Should not carry the phone in a breast pocket;

Ohould use the ear opposite the pacemaker to minimize the potential for interference.

Olf 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 of 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<br>FDA has been receiving inquiries about the safety of mobile phones, including cellular phones and PCS phones.<br>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.<br>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 being used.
They also emit very low levels of radiofrequency energy (RF), considered nonsignificant, 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 continuouslyup 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 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, neuroepithelliomatous 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 $915-\mathrm{Mhz}$ 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 the 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 case 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 weather any individual's cancer arose because of the phone, or whether it would have happened anyway. A key question in 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 pones 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 casecontrol study of brain cancers by the National Cancer Institute, as well as the Followup 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 manufactures 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;
$\square$ 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 know 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.wowcom.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 radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phone employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is $1.6 \mathrm{~W} / \mathrm{kg}$. *Tests for SAR are conducted using standard operating positions specified by the FCC with the phone transmitting 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.

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 $1.2896 \mathrm{~mW} / \mathrm{g}$ and when worn on the body, as described in this user guide, is $1.1094 \mathrm{~mW} / \mathrm{g}$, (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 requirements 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 Display Grant section of http://www.fcc.govoet/fccid after searching on FCC ID: BEJTM220.

## ACAUTION

## Body-worn Operation

This device was tested for typical body-worn operationswith the back of the phone kept 2.0 cm . from the body. To maintain compliance with FCC RFexposure requirements, use only belt-clips, holsters or similar accessories that maintain a 2.0 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 donot satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided

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

[^0]
[^0]:    * In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts $/ \mathrm{kg}$ (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.

