

OPERATING INSTRUCTIONS

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## 1. GENERAL

### 1-1 GENERAL DESCRIPTION

This Cellular Handheld Portable Telephone is specifically designed for the Public Cellular Mobile Communication Network System.

This Operating Instruction describes the Features and the Operating Method of the Cellular Handheld Portable Telephone.

### 1-2 BASIC SPECIFICATIONS

This Cellular Handheld Portable Telephone's Basic Specifications are as follows.

Radio Frequency	Transmitter	824 - 849MHz
	Receiver	869 - 894MHz
Number of Channels		832
Duplex Spacing		45MHz
Operating Temperature		-20 to +60degrees Celsius
Power Source		Li-Ion Battery 3.7Vx1, 950mAh (Neg. GND)

#### AMPS

Channel Spacing		30kHz
Frequency Stability		+/-2.5ppm
RF Output Power		0.6W ERP (with Power Control)
Receiver Sensitivity		-116dBm (12dB SINAD)
Modulation/Demodulation	Voice	: PM (with Compandor)
	Data	: FM

#### CDMA

Channel Spacing		1.25MHz
Frequency Stability		+/-300Hz
RF Output Power		0.3W ERP (with Power Control)
Receiver Sensitivity		-104dBm
Modulation/Demodulation		OQPSK / QPSK

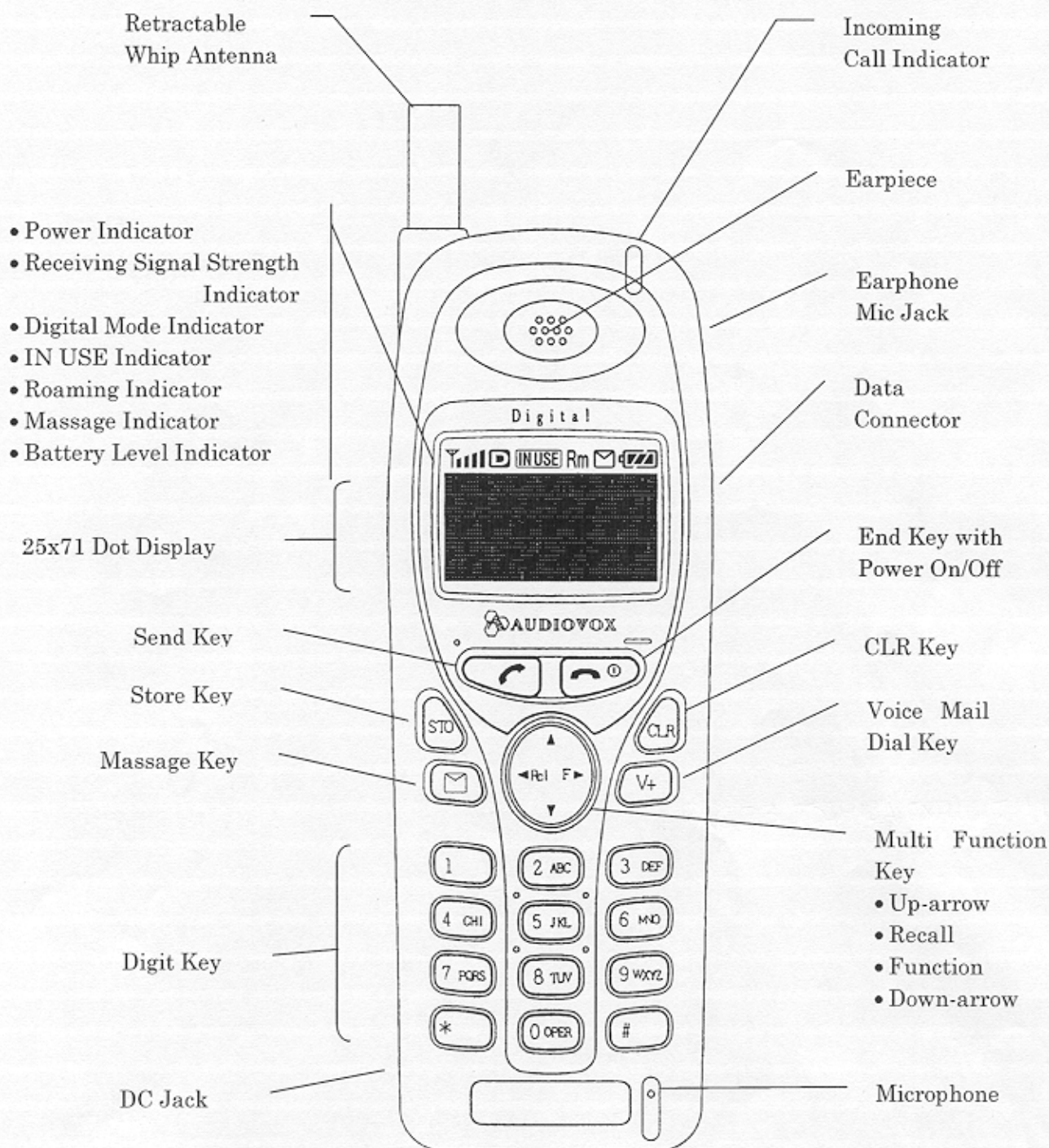
1-3 LIST OF FEATURES

Items	Description	Note
Basic Features	Push Button Dialing.	
	25x71 Dot LCD Display. <ul style="list-style-type: none"> <li>• Power Indicator</li> <li>• Receiving Signal Strength Indicator</li> <li>• Digital Mode Indicator</li> <li>• IN USE Indicator</li> <li>• Roaming Indicator</li> <li>• Massage Indicator</li> <li>• Battery Level Indicator</li> </ul>	
Repertory Dialing	Frequently called Numbers can be stored in Memory up to 99 Memories.	
Repertory Memory Scroll	Memory Scrolling is available for easy Number Search.	
Automatic Number Entry	A Number can be stored automatically into the vacant Repertory Memory Address.	
Placing Call History	Last 10 dialed Number can be redialed	
Automatic Redial	Dialed Number can automatically be redialed for four times (5-sec. intervals) in case of Reorder requirement.	
Last Digit Clear	Only Last Digit entered can be cleared as well as whole Digits.	
End-to-End Signaling	Numbers can be dialed utilizing DTMF (Touch Tone <sup>TM</sup> ) even while in a Telephone Conversation.	
Transmit Audio Mute	Transmit Audio can be muted for private Conversation.	
Display Own Telephone Number	You can always recall and confirm your Own Telephone Number.	
Functional Call Timer	To display the Talk Time of the Last Call.	
	To display the Cumulative Talk Time.	
	To clear the Timer.	
Electronic Lock	To prevent Unauthorized use of your Telephone.	

Note: Touch Tone <sup>TM</sup> is the register Trade Mark of AT&T.

## 2. FUNCTIONS

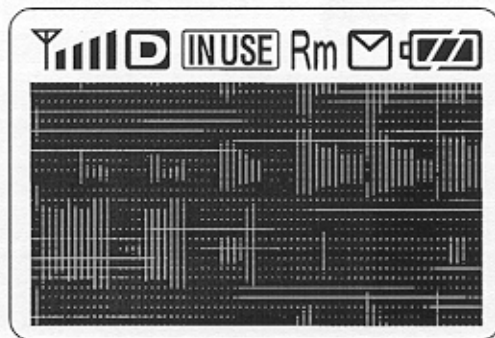
### 2-1 EXTERNAL VIEW OF THE UNIT







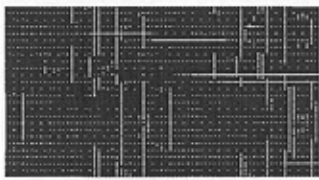


2-2 FUNCTION OF KEYS AND CONTROLS

Key-Board Arrangement	Digit Keys		To enter a Telephone Numbers, Names or special characters (* or #)  is also used for One Touch Emergency feature.																			
	Function Keys		<table border="1"> <tr> <td></td> <td>To originate or receive a Call.</td> </tr> <tr> <td></td> <td>To terminate a Call and to turn the Unit ON/OFF.</td> </tr> <tr> <td></td> <td>To readout Text Message or Voice Mail Notification from memory.</td> </tr> <tr> <td><b>◀Rcl</b></td> <td>To recall phone numbers from memory.</td> </tr> <tr> <td><b>F▶</b></td> <td>To be used with other Keys to activate several special Features.</td> </tr> <tr> <td><b>▲</b></td> <td>To control Earpiece audio level, Alert Tone and key Tone.</td> </tr> <tr> <td><b>▼</b></td> <td>Also used as Up/Down-arrow keys</td> </tr> <tr> <td></td> <td>To dial most frequently called Number from specially assigned Memory Address only by One Key stroke.</td> </tr> <tr> <td></td> <td>To store phone numbers in memory.</td> </tr> <tr> <td></td> <td>To clear the Digit from memory and Display.</td> </tr> </table>		To originate or receive a Call.		To terminate a Call and to turn the Unit ON/OFF.		To readout Text Message or Voice Mail Notification from memory.	<b>◀Rcl</b>	To recall phone numbers from memory.	<b>F▶</b>	To be used with other Keys to activate several special Features.	<b>▲</b>	To control Earpiece audio level, Alert Tone and key Tone.	<b>▼</b>	Also used as Up/Down-arrow keys		To dial most frequently called Number from specially assigned Memory Address only by One Key stroke.		To store phone numbers in memory.	
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2-3 LCD READOUT INDICATION ITEMS




Item	Description
	Receiving Signal Strength Indicator. The number of lines indicates the received Signal Strength, and $\Upsilon$ is also used as a POWER ON Indicator.
	Digital Mode Indicator. To indicate the phone is operating in digital mode.
	A Call is in process.
	The phone is out of the Home-Area.
	Message indicator. To indicate that Text Message are stored in memory or Voice Messages are in your Voice Mailbox.
	Battery Level Indicator. Monitor the current battery voltage level.
	Graphic full-dot matrix display with flexible font size in 2 to 4 line.

### 3. OPERATION

#### 3-1 BASIC OPERATION

##### Turning the Unit On

Press the  switch. The  $\Upsilon$  indicator will light (all indicators will light momentarily and then shows your Telephone Number, and a Tone will be heard).




Note: To turn the Unit OFF, press  again for about one second.

##### \* Signal Strength Indicator

This enables you to know the Signal Strength in your Area.

The number of the shaded blocks indicates it, and four blocks is the maximum level. The display will vary as your car moves. If the signal is not strong enough to originate a call, "no service" will appear on the Dot display.

##### To Store a Number in Memory

1. Press  then enter a Telephone Number.
2. Press ,  then enter the Memory Address (01 through 99).

##### To Recall a Number from Memory

Press  $\blacktriangleleft$ Rcl, the display shows "Phone Book" then enter the Memory Address (01 through 99).




##### Phone Book Scroll

This feature will be useful in finding a certain Telephone Number by scrolling the Repertory Memory Addresses

1. Press  $\blacktriangleleft$ Rcl, then enter the memory address (01 through 99)
2. Press  $\blacktriangle$  or  $\blacktriangledown$   
 $\blacktriangle$  : Previous Address  
 $\blacktriangledown$  : Next Address

##### Automatic Number Entry

This feature allows an automatic Number Entry into the vacant Repertory Memory Address.

1. Enter a Telephone Number.
2. Press , , .

If there is no vacant Address in the assigned Area, Telephone Number will remain not entered in the Memory.

##### To Lock the Unit

Press  $\mathbf{F}\blacktriangleright$ , , .

"LOCK" will appear on the Dot Display. The Unit will remain locked until unlocked, even if the power is turned off.

##### To Unlock the Unit

Enter the 4 digit unlock Code. The "LOCK" will go out when the Unit is unlocked.

### Volume Control




An Audio Level of the Loudspeaker, Earpiece and the Alert Tone can be adjusted by the Volume Control Buttons.

Earpiece: Keep pressing ▲ or ▼ Button until the moderate Sound Level is got.


Sound Level will be displayed on the Readout digitally during the level adjustment and the Sample Tone will help you to know the Sound Level when not engaged in a Telephone Conversation.


## 3-2 PLACING TELEPHONE CALLS

### To Place a Call

1. Enter a Telephone Number. The last 32 digits of the dialed number are displayed on the digital Readout.
2. If a dialing error is made, press  then enter the telephone number again. By pressing  momentarily (less than approx. 0.5 sec.), only last digit can be cleared. (Last Digit clear)
3. Press . The **INUSE** indicator will light.

### If a Call Fails to go Through


If you hear the Reorder signal, press  and try again.

Redial: If the Intercept signal is heard, press  and dial the Correct Number.

### To Terminate a Call


Press . The **INUSE** indicator will go out.

### To Receive Calls

When the Telephone rings, press  to answer.

The **INUSE** indicator will light.

### To Place a Call to a Number in Memory

1. Keep Pressing **◀Rcl** until the display shows "Memory Repertory", then enter the Memory Address (01 through 99). The last 24 digits of the Number will appear on the Readout.  
If the number is longer than 24 digits, press **◀Rcl** (after pressing **◀Rcl** then enter the Memory Address) to see the prefix.
2. Press . The **INUSE** indicator will light as the Call is placed.

## 3-3 END TO END SIGNALLING

This feature permits you to utilize some attractive ways of phone, such as Accessing Discounted Long Distance Network, Signal Pager, or Banking by Phone etc.

For these purposes, the signaling should be in DTMF. ( Touch Tone TM ) The following two features will make it more easier to place a Call in DTMF.

## 3-4 CALL TIME DISPLAY

This Feature automatically counts the Time while the Conversation is being made through your Phone.

Both the Talk Time of the Last Call and Cumulative Talk Time, can be shown on the Readout.

The Memory for Timer can also be cleared if necessary, and you can notice the Talk Time roughly by Tones on the Phone.

### To Display the Talk Time of the Last Call

1. Press **F▶**, then  , .

The Talk Time of the Last Call will be displayed on the Readout.



The display format is as follows.

31min. 25sec... 31 min and 25 sec

To Display the cumulative Talk Time

Press **F▶**, then **4** CH, **3** DES.

The Cumulative Talk Time will be displayed on the Readout in Minute Format.

18min... 18 min

4. IMPORTANT SAFETY INFORMATION

Please read and follow these Cautions carefully:

TURN OFF your Unit in an explosive atmosphere (near a fuel pump, blasting area, etc.).

DO NOT dial when your vehicle is moving in those states where this action is illegal (this is not a prudent practice, even where it is legal).

DO NOT permit untrained personnel to operate the Unit.

5. WARNING

The following offenses can be punished by fine, imprisonment, or both:

- Using obscene, indecent, or profane language.
- Using the unit to give off false distress calls.
- Wiretapping or otherwise intercepting a Telephone Call, unless that person has first obtained the consent of the parties participating in the Call.
- Making anonymous Calls to annoy, harass, or molest other people.
- Charging to an account without authorization to avoid payment for service.
- Refusing to yield a party line when informed that it is needed for an emergency Call. (It is also unlawful to take over a party line by stating falsely that it is needed for an emergency).