

**Digital Talk 2000  
Owner's Manual**

## ATTENTION

### Before Using the Phone:

It is necessary that you fully **CHARGE** the phone battery before attempting to make or receive a call.

### Battery Disposal:

DO NOT PLACE USED BATTERIES IN YOUR REGULAR TRASH. THIS NICKEL-CADMIUM (Ni-Cd) BATTERY MUST BE COLLECTED, RECYCLED OR DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER.



### Battery Recommendations:

The NEC Digital Talk 2000 Series IS-136 TDMA cellular phone you have purchased is designed to deliver quality performance and provide you with years of use. To maintain optimum performance, NEC recommends only using NEC Authentic Accessories with all NEC cellular phones.

The incineration, landfilling, or mixing of nickel-cadmium (Ni-Cd) batteries with any municipal solid waste stream is **PROHIBITED BY LAW** in most areas.

Return this battery to a federal or state approved nickel-cadmium (or "sealed lead") battery recycler. This may be where you purchased the battery or a local seller of automotive batteries. In all states, call 1-800-637-5917, except Minnesota, if further disposal information is required. In Minnesota, call 1-800-225-PRBA.

Contact local waste management officials for other information regarding the environmentally sound collection, recycling and disposal of this battery.

### Hands-Free Adapter:

**NEC does not recommend using a hands-free adapter with the Digital Talk 2000 Series portable cellular telephone.**

**IMPORTANT**  
**READ THIS INFORMATION BEFORE**  
**USING YOUR HAND-HELD PORTABLE**  
**CELLULAR TELEPHONE**

First introduced in 1984, the hand-held portable cellular telephone is one of the most exciting and innovative electronic products ever developed. With it you can stay in contact with your office, your home, emergency services, and others.

**For the safe and efficient operation of your phone, observe these guidelines.**

Your cellular telephone is a radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) energy. The phone operates in the frequency range of 824 MHz to 894 MHz and employs commonly used frequency modulation (FM) techniques. When you use your phone, the cellular system handling your call controls the power level at which your phone transmits. The power level can range from 0.006 of a watt to 0.6 of a watt.

### **Exposure to Radio Frequency Energy**

In 1991 the Institute of Electrical and Electronics Engineers (IEEE), and in 1992 the American National Standards Institute (ANSI) updated the 1982 ANSI Standard for safety levels with respect to human exposure to RF energy. Approximately 120 scientists, engineers, and physicians from universities, government health agencies, and industry, after reviewing the available body of research, developed this updated Standard. In March, 1993, the Federal Communications Commission (FCC) proposed the adoption of this updated Standard.

**The design of your phone complies with this updated Standard.** Of course, if you want to limit RF exposure even further than the updated ANSI Standard, you may choose to control the duration of your calls and operate your phone in the most power efficient manner.

### **Efficient Phone Operation**

For your phone to operate at the lowest power level, consistent with satisfactory call quality, please observe the following guidelines:

If your phone has an extendable antenna, extend it fully. Some models allow you to place a call with the antenna retracted. However, your phone operates more efficiently with the antenna fully extended.

Hold the phone as you would any other telephone. While speaking directly into the mouthpiece, position the antenna up and over your shoulder. Do not hold the antenna when the phone is "IN USE". Holding the antenna affects call quality and may cause the phone to operate at a higher power level than needed.

## **Antenna Care and Replacement**

Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Replace a damaged antenna immediately. Consult your manual to see if you may change the antenna yourself. If so, use only a manufacturer-approved antenna. Otherwise, take your phone to a qualified service center for repair.

Use only the supplied or approved antenna. Non-approved antennas, modifications, or attachments could impair call quality, damage the phone, and violate FCC regulations.

## **Driving**

Check the laws and regulations on the use of cellular telephones in the areas where you drive. Always obey them. When using your phone while driving, please:

- \* give full attention to driving, and
- \* pull off the road and park before making or answering a call if driving conditions so require.

## **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.]

## **Electronic Devices**

Most modern electronic equipment is shielded from RF energy. However, RF energy from cellular telephones may affect inadequately shielded electronic equipment.

RF energy may affect improperly installed or inadequately shielded electronic operating and entertainment systems in motor vehicles. Check with the manufacturer or its representative to determine if these systems are adequately shielded from external RF energy. You should also check with the manufacturer of any equipment that has been added to your vehicle. Consult the manufacturer of any personal medical devices (such as pacemakers, hearing aids, etc.) to determine if they are adequately shielded from external RF energy. Turn your phone OFF in health care facilities when any regulations posted in the areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

## **Aircraft**

Turn your phone OFF before boarding any aircraft.

- \* Use it on the ground only with crew permission.
- \* Do not use it in the air.

To prevent possible interference with aircraft systems, Federal Aviation Administration (FAA) regulations require you to have permission from a crew member to use your phone while the plane is on the ground. To prevent interference with cellular systems, FCC regulations prohibit using your phone while the plane is in the air.

## **Children**

Do not allow children to play with your phone. It is not a toy. Children could hurt themselves or others (by poking themselves or others in the eye with the antenna, for example). Children also could damage the phone, or make calls that increase your telephone bills.

## **Blasting Areas**

To avoid interfering with blasting operations, turn your unit OFF when in a "blasting area" or in areas posted: "Turn off two-way radio."

Construction crews often use remote control RF devices to set off explosives.

## **Air Bags**

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 bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

## **Potentially Explosive Atmospheres**

Turn your phone OFF when in any area with a potentially explosive atmosphere. It is rare, but your phone or its accessories could generate sparks. 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; 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.

Do not transport or store flammable gas, liquid, or explosives in the compartment of your vehicle which contains your phone or accessories.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

## **PACEMAKER/ICDs**

Research sponsored by the Wireless Technology Research, LLC ("WTR"), indicates that some wireless telephones cause interference with pacemakers. Accordingly, NEC America endorses the following recommendations issued by the WTR:

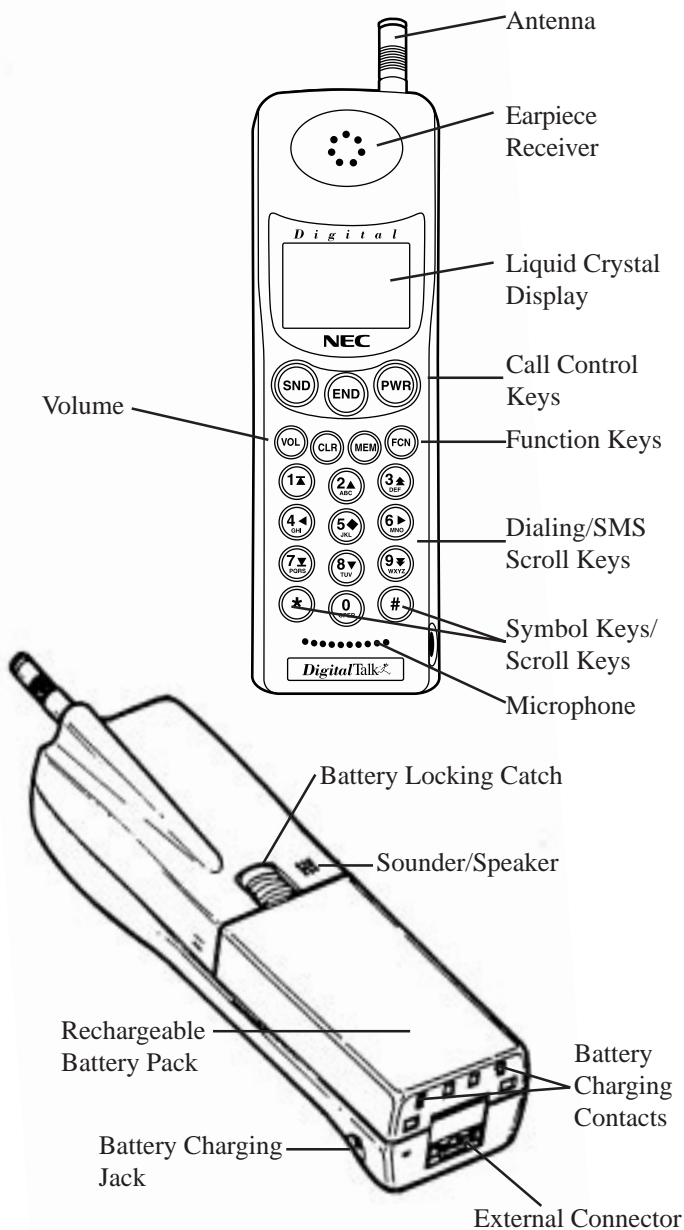
Wireless phones should be kept at a safe distance from a pacemaker. Existing data indicate that the greater the distance between a pacemaker and a wireless phone, the less risk of interference. These data further indicate that six inches is the proper separation distance for minimal risk.

Practical steps to achieve this separation distance include:

- o The wireless telephone should not be placed over the pacemaker, such as in a breast pocket, when it is in the "ON" position. (A phone is "ON" when power is being supplied to the telephone by the battery).
- o The phone should be used at the ear opposite the pacemaker.

**Note:** There is nothing in the comprehensive data to suggest that bystanders with pacemakers would be at risk of interference from others who are using wireless phones.

# CONTROLS AND FEATURES



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## SMS KEYS

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## GETTING STARTED

Your phone is powered by a rechargeable battery.

## **A new battery must be fully charged before being used for the first time.**

If left unused, a fully charged battery will discharge itself in about a month. Store batteries uncharged in a cool, dark, and dry place.

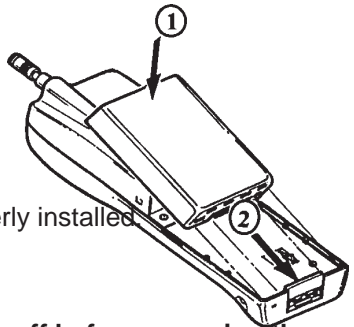
The battery pack is a sealed unit with no serviceable parts inside. Do not attempt to open the case.

**WARNING: Use only NEC approved batteries, antennas, and chargers. The use of any other types will invalidate any approval or warranty applying to the telephone.**

## **INSTALLING AND REMOVING THE BATTERY**

### **To Install the Battery:**

1. Insert the bottom of the battery into the base of the phone.
2. Fasten it to the phone by pressing slightly downward on the battery until the locking catch snaps into place.
3. Make sure the battery is properly installed.

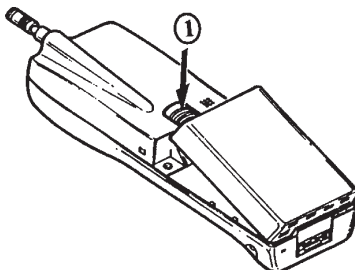


### **To Remove the Battery:**

**Remember to switch the power off before removing the battery.**

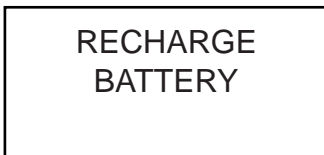
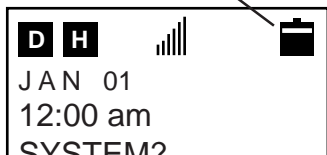
1. Slide the locking latch located at the top of the battery upward and gently pull the battery away from the phone.

## **THE BATTERY CHARGE INDICATOR**



The Battery Charge Indicator is visible on the upper right corner of the display. When the battery charge falls to a preset level, the phone displays a warning message, **RECHARGE BATTERY**, and an audible double beep sounds six times at 10-second intervals. The phone then automatically powers off.

Battery Charge Indicator



**CHARGING AND RECHARGING THE BATTERY**

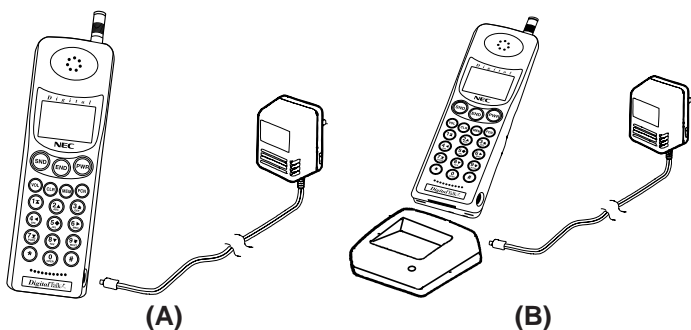
Charging the battery can be accomplished two ways.  
**(A)** By direct connect of the AC Adapter to the charging jack if you purchased the NiCd Battery configuration, or  
**(B)** By placing the phone into the charging stand.

**(A)**

1. Plug the AC Adapter into a standard 110V AC outlet.
2. Insert the DC plug into the phone battery jack.

**(B)**

1. Plug the AC Adapter into a standard 110V AC outlet.
2. Insert the DC plug into the charging stand jack.
3. Place the phone in the charging stand.



**NiCd and NiMH Battery Charging/Recharging Times**  
**With Standard Charger    With Rapid Charger**

NiCd ~8 hours  
 NiMH ~10 hours  
 NiCd ~1.5 hours  
 NiMH ~2.5 hours

**A new battery must be fully charged before being used for the first time.**

Batteries last longer and perform better if allowed to discharge fully at least once a week. You can do this by leaving the phone switched on overnight, or until the message **RECHARGE BATTERY** is displayed and the phone shuts itself off.

**NOTE: If the battery is too hot or cold, charging will be interrupted until the battery reaches a normal temperature.**

## CLOCK ALARM

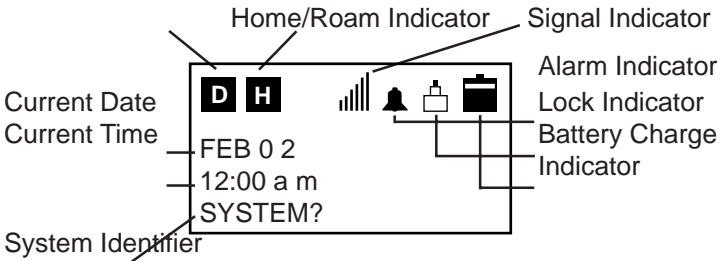
Shows cellular signal strength.



Indicates clock alarm is on.



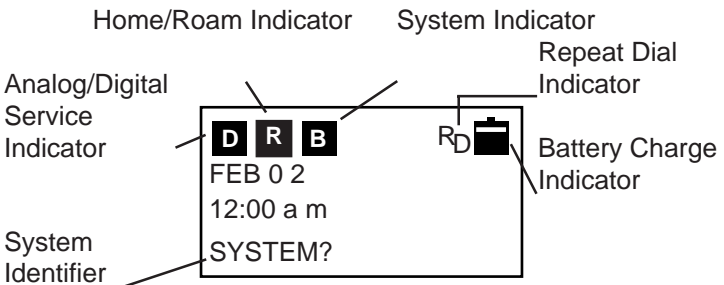
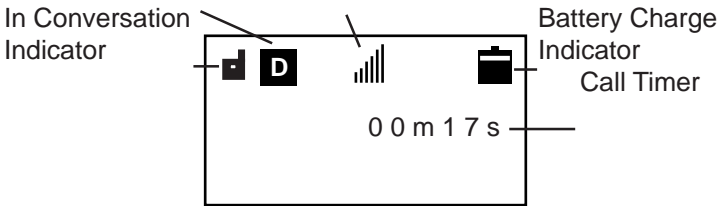
Analog/Digital Service Indicator



**NOTE:** If system identifier alphanumeric name exceeds 10 digits, the system identifier name is not displayed.

Analog/Digital Conversation Indicator

Signal Indicator



## QUICK REFERENCE GUIDE

Turn on/off	Press and hold <b>PWR.</b>
Make call	Key in number, press <b>SND.</b>
End call	Press <b>END.</b>
Answer call	Press <b>SND.</b> (Any key if Any Key Answer is, <b>ON</b> [See FCN 53]).
Clear digit	Press <b>CLR</b> briefly.
Clear display	Press <b>CLR</b> and hold.
Last number redial	Press <b>SND.</b>
Adjust earpiece volume	Press <b>VOL</b> (In conversation)
Adjust ringer volume	Press <b>FCN + 4 + 5</b>
Adjust keytone volume	Press <b>VOL</b> (In Standby)
Retrieve Text Msgs	Press <b>MEM+MEM</b>
Retrieve Voice Mail	Press <b>MEM+SND</b>
Call Lists	Press <b>MEM (Hold)</b>

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### The Memory

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Store a phone number automatically in next available location	Key in number and/or (name [using <b>FCN 3</b> ]). Press <b>FCN + MEM (Hold)</b> . The number is automatically stored in the first empty memory location.
Speed Dialing	Key in the number of the memory location. Press <b>SND.</b>
Store in a Location	Press <b>FCN+MEM+X+Y</b>
Recall a Location	Press <b>MEM+X+Y</b>
Scan through Memory	Press <b>MEM + 0 + 1+ # or ★ ....</b>
Scan alphabetically for a name	Press <b>MEM + # or ★ ....</b>

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### The Menu

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Enter menu	Press <b>FCN (Hold) or FCN+FCN</b>
Scroll	Press <b># or ★ ,....</b>
Select function	Press flashing menu number <b>(1)(2)....</b>
Scroll	Press <b># or ★ ,....</b>
Select status	Press <b>MEM.</b>
Short Msg Memory	Press <b>MEM + MEM.</b>
Shortcut facility	Press <b>FCN.</b> Press the number of the function. (Example <b>FCN+4+1</b> )

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### List of Menu Functions

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<b>TOTAL TIME</b> Home, Roam	FCN + 1
<b>ALARM CLOCK</b> On, Off, Alm	FCN + 2
<b>ALPHA TAG</b> Names	FCN + 3
<b>-tone FUNCTION</b> Alert, Escalating, DTMF, Call Tone, Ring Volume	FCN + 4
<b>CALL PROCESSING</b> Auto ans, Any key answer, Sys Sel, Multi NAM, One touch, Language, Backlight	FCN + 5
<b>LOCK PHONE</b> Call lists, Auto lock, Fixed dial, End to End, Memo lock, Temp Code, Initialize, Total Time, Wake up msg	FCN + 6
<b>DATE AND TIME</b> Time, Date, Year	FCN + 7
<b>SPECIAL FUNCTION</b> Call Type, Ext Cont, VM Number, Roll Off, Word Wrap, Erase SMS Msgs, SID Mgt	FCN + 8
<b>MIC MUTE CONTROL</b>	FCN + 9
<b>FULL MUTE CONTROL</b>	FCN + 9 (Hold)
<b>PAUSE DIAL</b>	FCN + 0 + 0
<b>AUTO PAUSE</b>	FCN + 0 + 1
<b>MEMORY LINK</b>	FCN + 0 + 2
<b>FULL LOCK</b>	FCN + #
<b>PARTIAL LOCK</b>	FCN + ★
<b>AUTOMATIC REPEAT DIAL</b>	FCN + SND
<b>HIDDEN DIGITS</b>	FCN (Hold)

## OPERATION OF THE PHONE

1) Press the **PWR** key and hold it for at least 2 seconds.

The phone will carry out a short self-test sequence, then briefly display a default wake-up message or your wake-up message if you have programmed one into the phone.

2) When the **Signal Strength Indicator, Date and Time Home or Roam indicator** appears on the display, the phone is ready for use.

If "**No Service**" appears it means that you are outside the cellular service area and the network cannot serve you.

**A cellular phone can only send and receive calls when it is switched on, and has service (as indicated in 2 above)**

3) Press the **PWR** key and hold it for at least 2 seconds to switch the phone off.

## PLACING A CALL

Fully extend the antenna before sending or receiving a call.

**Note: Push in the antenna when you are not using the phone.**

You can use the phone without extending the antenna in a good coverage area.

1) Key in the number (**include 1 + area code if you're making a long distance call**).

**Note: If you make a mistake, press the CLR key briefly to delete the last keystroke; or press and hold the CLR key to clear the whole display.**



2) The number will appear on the display as it is keyed in.

3) Press **SND**.

4) The **IN USE** indicator will appear, and the number will disappear from the display. The call timer will appear and start counting upward.

5) Lift the phone to your ear, and wait until your call is answered.

6) When you have finished the call, press **END**.

If the No Service Bars appear, ■■■■■ , you are outside your cellular service area. If the lock indicators,   , appear on the display, your phone has been electronically **LOCKED** (see **Locking/Unlocking the Phone**). You can still make emergency calls when the phone is locked.

## RECEIVING A CALL

1) When there is an incoming call, the phone rings, and the **CALL** message flashes on the display. If Caller ID is available in your area, the number and/or name may also be displayed. If the ringing tone has been switched off the flashing of the display and keypad will alert you of an incoming call.

2) Press **SND** (Any Key if Any Key Answer has been turned on) and lift the phone to your ear.

3) When you have finished your conversation, press **END**. If you do not answer the call, the "**Missed Call Indicator**" remains on the display (indicating someone attempted to phone you). Press **MEM** to view the missed calls (use # or ★ to scroll the list) or press **CLR** to clear the display. (See page 31, Call Lists.)

1 Missed calls. Press MEM to view
--


12:00a Mon 01] 8171234567
---------------------------------

## SIGNAL STRENGTH

The quality of your call depends on the strength of the cellular signal in your area. The phone displays current signal strength as a series of bars running up and down the display screen. The more bars, the better the signal. If the signal is poor, try moving the phone slightly to improve reception. If you are using the phone in a building, it may be necessary to move near a window, or outdoors for better reception.

## VOLUME KEY

The volume key controls the volume of the earpiece during conversation mode and the keypad tones during standby mode.

VOL 
Jan 01
12:00am
SYSTEM?

## LAST NUMBER REDIAL

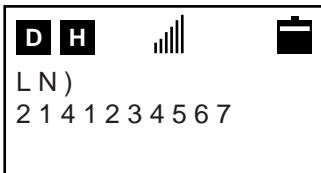
The last number dialed can be redialed automatically without re-entering it. (The **number can still be retrieved even if the phone has been switched off and back on.**)

- 1) With the display cleared, press **SND**.
- 2) The number you last called will appear on the display and is automatically redialed.



Last number redial can also be retrieved from the memory;

- 1) Press **MEM + 0 + 0**.



- 2) Press **SND** to make the call.

## SPEED DIALING

The phone dials quickly by recalling phone numbers from memory using the memory location number and the **SND** key.

- 1) Press **Memory Location Number** (Example 01)



- 2) Press **SND**.



**Note: Names associated with the memory location you have selected will not be shown.**

## MENU FACILITY

The menu allows you to operate or check the setting of certain features. Although the menu method can take longer than the alternative shortcut method, it is often easier to remember.



1) Press **FCN (Hold)**.

2) The display will read **FCN 1 Total Time** with the **1** flashing. Use **#** or **★** to step forward or backward through the list of function menus. Press the flashing number to access the desired displayed function menu. Use **#** or **★** to step forward or backward through the list of selections available within the function menu. Press **MEM** to change a setting within a displayed function menu selection.

3) Use the **CLR** key to save the selection and exit the function menu.

## MENU SHORTCUTS

Each Menu function can also be controlled by a shortcut. By using the shortcut you can get to the function you want to change or check without scrolling. To activate the shortcut function simply press **FCN** followed by the shortcut number, (Example **FCN 4 + 1** for Alert Set).

The menu functions available are:

<b>Menu Function/Description</b>	<b>Shortcut</b>
<b>Total Time</b>	<b>FCN + 1</b>
<b>Alarm Set</b>	<b>FCN + 2</b>
<b>Character Entering</b>	<b>FCN + 3</b>
<b>Tone Function</b>	<b>FCN + 4</b>
Alert Set	FCN + 4 + 1
Escalating Tone	FCN + 4 + 2
Long DTMF	FCN + 4 + 3
Call Tone	FCN + 4 + 4
Ring Volume	FCN + 4 + 5
<b>Call Processing</b>	<b>FCN + 5</b>
Auto Answer	FCN + 5 + 1
Any Key Answer	FCN + 5 + 3
System Select	FCN + 5 + 4
Mullti NAM	FCN + 5 + 5
One Touch	FCN + 5 + 7

<b>Menu Function/Description</b>	<b>Shortcut</b>
Language	FCN + 5 + 8
Backlight	FCN + 5 + 9
<b>Lock Code Function</b>	<b>FCN + 6</b>
Time Stamp Clear	FCN + 6 + 1
Auto Lock	FCN + 6 + 2
Fixed Dial	FCN + 6 + 3
End to End	FCN + 6 + 4
Memo Lock	FCN + 6 + 5
Temp Code	FCN + 6 + 6
Initialize	FCN + 6 + 7
Total Time Clear	FCN + 6 + 8
Wake Up Message	FCN + 6 + 9
<b>Clock Set</b>	<b>FCN + 7</b>
<b>Special Function</b>	<b>FCN + 8</b>
Call Type	FCN + 8 + 1
Voice Mail Number	FCN + 8 + 4
Roll Off Order	FCN + 8 + 5
Word Wrap	FCN + 8 + 6
SMS Initialize	FCN + 8 + 7
SID Management	FCN + 8 + 8
<b>Mute Function</b>	<b>FCN + 9</b> (Mic Mute)
	<b>FCN + 9</b> Hold (Full Mute)
<b>Pause Dial</b>	<b>FCN + 0 + 0</b>
<b>Auto Pause</b>	<b>FCN + 0 + 1</b>
<b>Memory Link</b>	<b>FCN + 0 + 2</b>
<b>Full Lock</b>	<b>FCN + #</b>
<b>Partial Lock</b>	<b>FCN + *</b>
<b>Automatic Repeat Dialing</b>	<b>FCN + SND</b>
<b>HF Audio Switch</b>	<b>FCN + VOL</b>
<b>Review Hidden Digits</b>	<b>FCN</b> (Hold)

For further information on menu functions see the **Additional Features** section.

## THE MEMORY

Your phone has 99 memory locations which allow you to store numbers (up to 32 digits) and names associated with the numbers (up to 10 letters). Your phone can also use memory locations 70 through 99 as permanent memory. Only authorized dealers, (using special adapters) can write the phone numbers into the permanent memory locations.

Your phone also keeps and displays the various information about the last 20 incoming, outgoing, and missed calls. The information shows actual talk time of the call, when the call was established (time and day of the week) and whether the call was received, or sent. These locations can only be accessed by pressing **MEM** (Hold).

## STORING INFORMATION

- 1) Key in the phone number.
- 2) Press **FCN + 3**.
- 3) Enter in the name (see **Keying in Names**, page 15).



- 4) If you want the information stored in the first available memory location, simply press **FCN+MEM (hold)**.
- 5) The message **Stored** will be shown on the display along with the first vacant memory location.



- 6) Press **CLR**.

Otherwise, press **FCN+MEM** followed by a memory location number (for example, 20).

**Note: If the memory location you have selected is already occupied, an alarm tone will sound, the display will flash and the contents of the memory location will be displayed.**

**Note: If all the memory locations are used, an alarm tone will sound, automatic store mode will be cancelled and the phone will go back to the manual store mode.**

- 7) If you wish to overwrite the contents in this memory location, simply press **MEM**.
- 8) If you do not want to overwrite the contents of the memory location, simply press **CLR**.

## GROUP STORING

Group storing allows you to store information in 10 dedicated memory area groups (for example, group 0 may be used for all persons whose names begin with the letter "A"). The phone searches for the vacant memory locations in that group and automatically stores the phone number and name in that group.

1) After entering phone number and/or name (or after recalling a phone number)



2) Press **FCN+MEM+ \***.



3) Press **group number** (Example 1).

The phone searches the vacant memory according to the entered number. The entered digits are stored in the first vacant location in that group.



The phone stores the number and names into the grouped vacant memory area as follows:

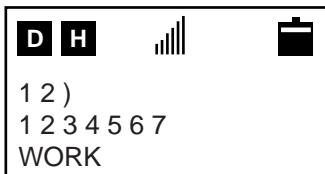
Input Key	Memory Area	Input Key	Memory Area
[0]	01 to 09	[5]	50 to 59
[1]	10 to 19	[6]	60 to 69
[2]	20 to 29	[7]	70 to 79
[3]	30 to 39	[8]	80 to 89
[4]	40 to 49	[9]	90 to 99

**NOTE: An alarm will sound if all memory locations are full.**

## RECALLING PHONE NUMBERS FROM MEMORY

Numbers stored in any of the 99 memory locations can be recalled for viewing and or changing as the user prefers, provided locations 70 through 99 have not been assigned as permanent memory.

1) Press **MEM + Memory Location Number** (for example, 12 if known). If not known use # or ★ to find the desired memory location.



## KEYING IN NAMES

1) Press **FCN + 3**. The **cursor** appears on the display to indicate that the phone is in the **name** or **character entry** mode. When you press a key, the letters listed on the key are displayed.

2) Select the key labeled with the letter you want to display. Press it once to enter the first letter listed on the key, twice to enter the second letter, three times to enter the third letter, four times to enter the key digit, and five or more times to enter lower case letters. If you miss the desired letter, continue to press the key until it is displayed again.



3) Select additional letters in the same way.

4) If you want to enter the same letter consecutively or enter another letter also on the key, press the # key to advance the cursor to the next position. You advance one space and can now press the same key again to select the desired letter.

5) **Note that you can enter up to 10 characters with any space or symbol counted as characters. Blank spaces can be inserted by pressing the # key; the "&", "-", "#", and "★" symbols can be inserted by pressing the ★ key.**

6) If you begin your memory store procedure in the **name** or **character entry** mode when you have finished keying in the name, you must store this information to a vacant memory location before you can key in the phone number. Press **MEM** to recall the memory location where you stored the name. You can then key in the phone number to store with the name.

## EDITING NAMES OR NUMBERS

If you make a mistake while keying in a name or a number, you can correct it as follows:

- 1) Press **CLR** to delete the last character or digit.
- 2) Press and hold **CLR** to clear the whole display. Note that this clears both the name and the number entered.

## DISPLAYING "HIDDEN" DIGITS

The phone can display up to 16 digits. If you key in more than this, the first digits will disappear off the side of the display.

If you want to check these hidden digits, press and hold **FCN**. The hidden digits and the letters "HD" appear on the display. When you release the **FCN** key, the original 16 digit display reappears.

Remember to clear the whole display (press **CLR** and hold) after having displayed a long number.

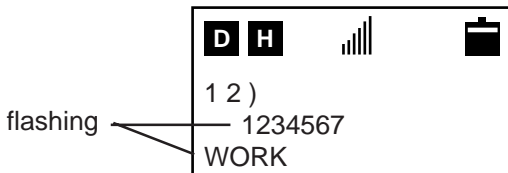
## DELETING PHONE NUMBERS FROM MEMORY

- 1) Press and hold **CLR** to clear display.
- 2) Press **FCN+MEM**.
- 3) The display will read.



- 4) Key in the number of the memory location you want to delete.

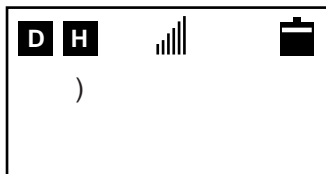
- 5) An alarm tone will sound, and the contents of the memory location will be displayed and flashing.



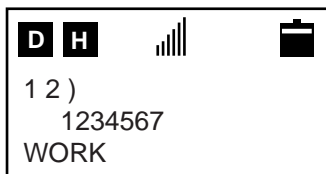
- 6) Press **MEM**. The contents of the memory location will be deleted.

## RECALLING A MEMORY LOCATION NUMBER

1) Press **MEM**. The display will show.



2) Key in memory location number (Example 12).



If the memory location is empty, the display will show.



3) Call the number by pressing **SND**.

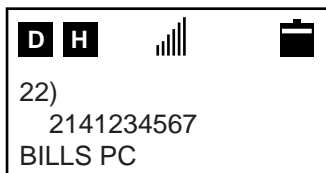
## SCANNING PHONE NUMBERS SEQUENTIALLY

1) To scan the entire memory, press **MEM + 0 + 1** to display the contents of the first memory location. Use **#** or **★** keys to display the next or previous memory location.

2) When you find the number you want, press **SND** to make the call.

## SCANNING PHONE NUMBERS ALPHABETICALLY

1) Press **MEM #** to display the name memory locations from A to Z. The memory locations are displayed in alphabetical order by the first character. Press **MEM ★** to display the name memory locations from Z to A (reverse alphabetical order).



2) Pressing # or ★ will allow you to scroll through the memory.

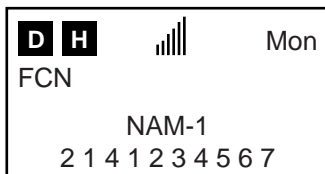
3) When you find the name you want, make the call by pressing **SND**.

## SCRATCHPAD

Digits can be entered during a conversation. These digits appear on the display and are also transmitted over the air (if the End-to-End setting has not been turned off). These digits remain on the screen when the called is ended. If you want to store these digits into a memory location, press **FCN + MEM + location number** or **FCN + MEM(hold)**. If you do not want to store these digits, press **CLR** to clear the digits from the display.

## DISPLAYING YOUR OWN PHONE NUMBER, DAY OF THE WEEK, AND NETWORK SELECTION

1) Press **FCN**.



**Note: If your phone is registered on two cellular networks, the number displayed indicates the network that is currently being used.**

## ADDITIONAL FEATURES

### LOCKING/UNLOCKING THE PHONE

Your phone has a simple security system. It can be locked by using a four-digit lock code to prevent unauthorized use.

**The lock code is supplied by the dealer. If you forget your lock code contact your dealer. The factory default lock code is 0000.**

The two lock settings are full lock and partial lock.

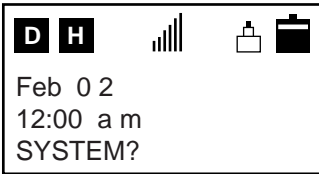
## FULL LOCK

When the phone is fully locked, only emergency calls (911) can be made, but any call can be received. Note that with the phone in full lock, emergency calls to 911 can be sent, but the dialed digits, 911, do not appear on the display. Storing to memory is also not available when the phone is fully locked.

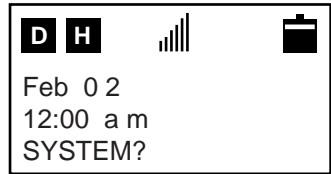
1) Press **FCN + #**. The display will read:



2) Enter the 4-digit lock code. If you key in the correct code, the full lock icon appears in the upper right corner of the display. If the entered code is not correct, the full lock icon is not displayed.



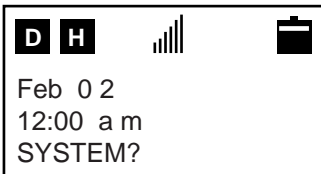
**FULLY LOCKED**



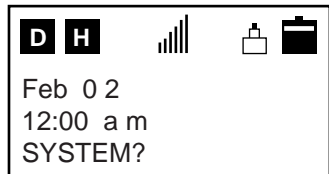
**NOT LOCKED**

**Note: For security the display will not show the 4-digit lock code.**

3) Unlocking is carried out in the same way. Press **FCN + #**, and enter in your four (4) digit code. If the code is entered correctly, the full lock icon is removed from the display. If the incorrect code is entered, the full lock icon is still displayed.



**UNLOCKED**



**STILL LOCKED**

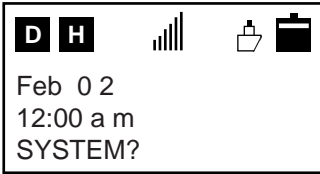
## PARTIAL LOCK

When the phone is partially locked, only emergency calls (911) and any numbers stored in memory locations 1 through 9 can be made, but any call can be received. Note that with the phone in partial lock, emergency calls to 911 can be sent, but the dialed digits, 911, do not appear on the display. Storing to memory is also not available when the phone is partially locked.

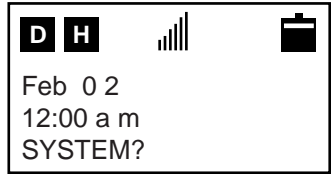
1) Press **FCN + ★** . The display will read:



2) Enter 4-digit lock code. If you enter the correct code, the partial lock icon appears in the upper right corner of the display. If you enter an incorrect code, the partial lock icon is not displayed.



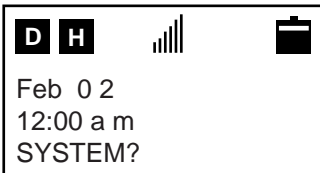
**PARTIALLY LOCKED**



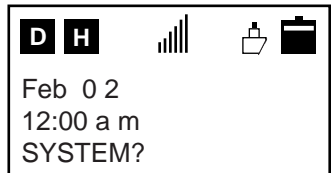
**NOT LOCKED**

**Note: For security the display will not show the 4-digit lock code.**

3) Unlocking is carried out in the same way. Press **FCN + ★** . When the correct code is entered, the partial lock icon is removed from the display. If the incorrect code is entered, the partial lock icon remains on the display.



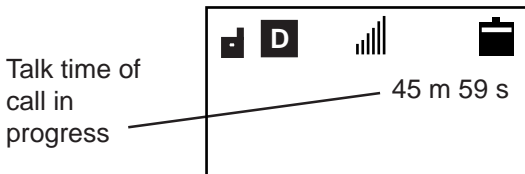
**UNLOCKED**



**STILL LOCKED**

## LENGTH OF YOUR CALLS

The phone allows you to check the duration of your current call. Upon making or receiving a call, the current call timer begins counting. This is shown on the display.



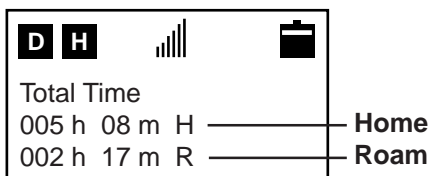
At the end of the call, the timer stops counting.

## TOTAL CALL TIME COUNTERS

The total call time counters are used to let you know how much air time you are using both in the home and roam modes. This will allow you to keep track of your air time. The total call time counters can be reset to zero at any time.

To view your total call time counters:

1) Press **FCN + 1**.



**Note: You must have your phone's lock code before you can reset your call time counters. The lock code is supplied by the dealer. If you forget your lock code contact your dealer. The factory default lock code is 0000.**

To reset the total call time counters:

1) Press **FCN + 6**.

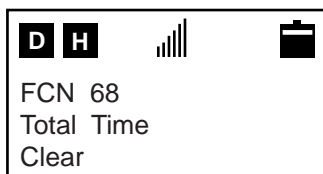


2) Enter your 4-digit lock code.

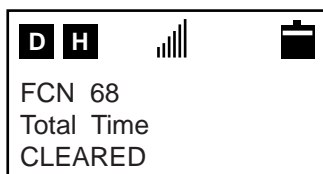


**Note: For security the display will not show the 4-digit lock code.**

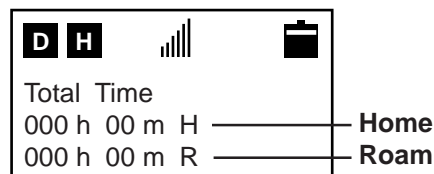
3) Press 8.



4) Press MEM.



Your total call time counters are now reset to zeros.



5) Press **CLR** (Hold) to return to standby mode.

## SETTING THE BACKLIGHT

When any key except **PWR** is pressed, the phone keypad and display backlight is illuminated for ease in viewing. The backlight remains displayed for **10** seconds after the last key is pressed. When a key is pressed again, the phone keypad and display backlight is again illuminated.

With the phone connected to a vehicle power adapter, the keypad and display backlight can be set to remain illuminated continuously.

To turn the backlight setting on or off with the phone connected to a vehicle power adapter:

1) Press **FCN + 5**.



2) Press **9**.

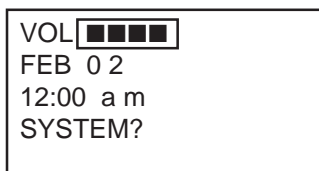


3) Press **MEM** to turn the backlight setting on or off; press **CLR** to save the selection and return to the standby mode.

## SETTING THE KEY TONE VOLUME LEVEL

These tones sound each time you press a key. You can turn the keypad tones on, off or adjust them using four levels of loudness.

1) Press **VOL** when not in conversation (in standby mode).



**Note:** When the key tones are switched off, DTMF tones can still be sent over the air.

## SETTING THE RINGING VOLUME

The ringing tone sounds when there's an incoming call, you can select the volume of the tone or switch it off (**SILENT MODE**).

1) Press **FCN + 4 + 5**.



2) Use **MEM** key to select **Off,Min,Low,Mid** or **Max**.

3) Press **1** to hear the ring tone.

4) Press **CLR** to exit and save selection

If you select **Off**, when a call is coming in, the display will flash, the **CALL** message will appear and flash.

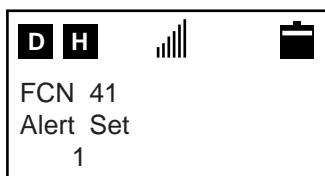
## SELECTING ALERT TONE TYPE

The Alert Tone on your phone can be selected from four different tone combinations.

1) Press **FCN + 4**.



2) Press **1**.



3) Press **MEM** to select between the four different tone combinations.

**Note: You can listen to each tone combination by pressing 1 again after the initial pressing of FCN + 4 + 1. Make sure your ringer volume is up.**

4) Press **CLR** to exit and save selection.

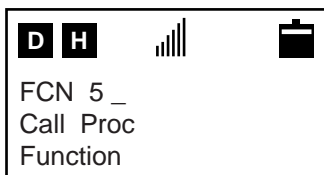
## USING THE PHONE ON TWO NETWORKS

The phone's two number capability feature lets you subscribe to both cellular services in your area or other areas, using a different Number Assignment Module, referred to as a NAM, for each network.

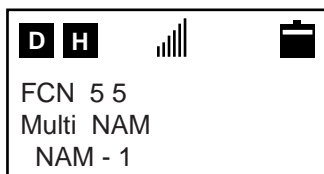
**Note: You cannot change from one network to the other during a call.**

## To Change the Network:

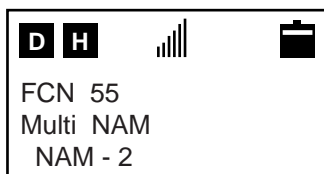
1) Press **FCN + 5**.



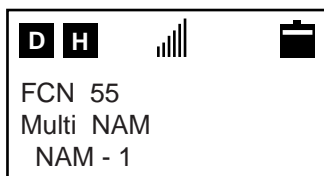
2) Press **5**.



3) Press **MEM** to select between **NAM 1** and **NAM 2**.



**Note:** If only one NAM has been programmed and you press the **MEM** key, an alarm tone will sound and the display will show **NAM-1**.



4) Press **CLR** to activate the **NAM**. Phone will power cycle.

## DTMF TONE TRANSMISSION

When end-to-end is "**ON**" you can transmit numerical information as a series of tones using the **DTMF tone** feature (for example, to check for messages in your answering machine). To set end-to-end "**ON**" or "**OFF**":

1) Press **FCN + 6**.



2) Enter in your lock code.



**Note:** The lock code is supplied by the dealer. If you forget your lock code contact your dealer. The factory default lock code is 0000.

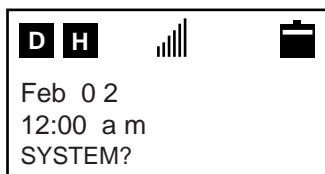
3) Press 4.



4) Press **MEM** to turn End to End **on** or **off**.

**Note:** End to End has to be in the ON state before DTMF Tones can be transmitted, or the PAUSE/MEM LINK feature is operational.

5) Press **CLR**.



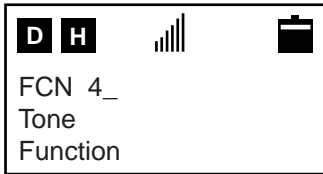
## TONE GENERATOR

There are two alternative ways to use the **DTMF** feature.

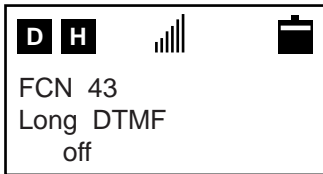
**First**, make a call in the usual way. Key in numbers onto the display. Each number is directly sent as a **DTMF** tone. The length of the tone depends on how you have the **DTMF** tone generator set.

**Note:** The Long DTMF Tone Generator has two settings, off and on. If the DTMF Tone Generator is set to off, the phone sends each Long DTMF signaling tone for 100 milli seconds. With the Long DTMF Tone Generator set to on, the phone sends each DTMF signaling tone as long as the key is pressed, up to 3 seconds max.

1) Press **FCN + 4**.



2) Press **3**.



3) Press **MEM** to turn **Long DTMF** on or off.

4) Press **CLR**. The phone returns to normal standby.

**Second**, recall a number from a memory location and send it as a **DTMF** tone. (**MEM**, and the memory location number).

Send the **DTMF** tones by pressing **SND**.

A series of tones, each representing a number, will be heard.

### Hints for Storing a DTMF Number in the Memory

If you need to place a manual pause between **DTMF** digits press **FCN + 0 + 0**. If you want to place a automatic pause between **DTMF** digits press **FCN + 0 + 1 (P = 3 Seconds)**. If you want to link memory locations for a long **DTMF** number press **FCN + 0 + 2**.



**PAUSES - (Manual) [FCN + 0 + 0]** This function creates pauses while sending out **DTMF** signaling tones during conversation mode. When a manual pause is encountered in the **DTMF** string, the phone will pause indefinitely, until the user presses the **SND** key.

More than one pause may be placed in a sequence, separating several groups of **DTMF** digits.

For example, this function may be used for calling a paging system and sending commands, ID numbers (PIN), and/or numeric messages:

(1) (2) (3) (4) (5)  
“123456789” + “P” + “123456789#” + **SND** + **SND**

- (1) This is the phone number to be called via the cellular system.
- (2) This character indicates a Manual Pause. The user will wait for the initial prompt from the paging system before pressing the **SND** key.
- (3) This a **DTMF** digit sequence which may represent the PIN of the called pager.
- (4) This is the initial send keypress which causes the phone to initiate a call using the number up to the first pause mark.
- (5) This is the second send keypress, while in conversation mode, which will end the manual pause and start the sending of **DTMF** digits.

**PAUSES - (Automatic) [FCN + 0 + 1]** This function creates pauses while sending out **DTMF** signalling tones during conversation mode. When an automatic pause is used, the phone will pause for three (3) seconds and then continue dialing the **DTMF** sequence.

Multiple pauses may be placed together to extend the duration of the pause - i.e. 6, 9, 12 seconds etc.

For example, this function may be used for calling a paging system and sending commands, ID numbers (PIN), and/or numeric messages:

(1) (2) (3) (4) (5) (6) (7)  
“123456789” + “,” + “,” + “123456789#” + “,” + “987654321#” + **SND**

- (1) This is the phone number to be called via the cellular system.
- (2) This is an Automatic Pause character which indicates a 3 second delay.
- (3) This is a second Automatic Pause character indicating a 3 second delay. The phone will wait a total of 6 seconds before continuing with the following **DTMF** digits.
- (4) This is a **DTMF** digit sequence which may represent the PIN of the called pager.
- (5) This is an additional Automatic Pause mark. The phone will wait 3 seconds before continuing with the following **DTMF** digits.
- (6) This is a continuation of the **DTMF** digit sequence which may represent the numeric message to be sent to the pager.
- (7) This is the Send keypress which causes the phone to initiate a call.

**MEMORY LINKING - [FCN + 0 + 2]** Memory Linking is a function that allows a phone number to be chained together with a memory recall number for the purpose of adding **DTMF** signalling digits after a number is to be sent.

For example, this function may be used to link individual long-distance recall numbers to a single recall number which holds credit card information. The primary recall number(s) would contain the link information:

**Recall #01**

(1) (2) (3) (4)  
"123456789" + "L" + "99" + SND

- (1) This is the phone number to be called via the cellular system.
- (2) This is a linking mark which indicates that the following two digits represent the recall number to be linked.
- (3) This is the number of the memory recall location to be linked, and therefore treated as **DTMF** signalling.
- (4) This is the Send keypress which causes the phone to initiate a call.

**Note: Once the call is placed a pause is automatically inserted and the user must press the SND key in order to output the linked DTMF sequence.**

### **System Selection (Including Roaming)**

Each cellular service area can have two cellular service suppliers called carriers. One carrier is called the 'A' system and the other carrier is called the 'B' system. Your phone is designed to work with either or both carriers. The system priority feature allows you to program your phone for optimum operation when in your home serving area or when away from your home area. This is called roaming. When you buy your phone, you may register (receive a phone number) with either or both of your local carriers. Contact the office of your home cellular phone company for information about the roaming agreements they have with other cellular phone companies. In some areas, roaming telephones are automatically recognized by the cellular system's computer. In other areas, you must contact the cellular phone operator before it can recognize your phone. The company needs to know your telephone number, your phone's **ESN** (electronic serial number), and how you plan to pay for your calls. There is usually an additional charge for roaming calls.

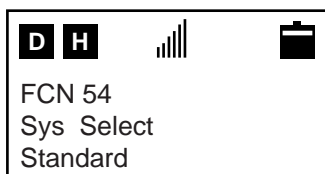
**Note: The ESN for your phone is located in the battery compartment of the phone, and comprises of the first 8 digits preceded by NEC's company code of 229.**

## To Change the System Selection:

1) Press **FCN + 5**.



2) Press **4**. The phone will display its current roaming mode.



3) Press **MEM** to advance through the system selections.

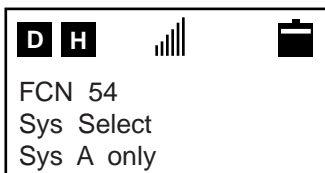
### **Home Only**

This service is limited to the Home Area. Will go to "No Svc" if home system is not detected.



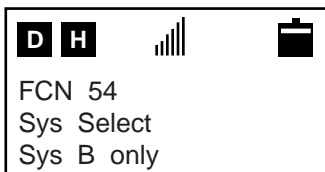
### **Sys A only**

This service is limited to the 'A' carrier only.



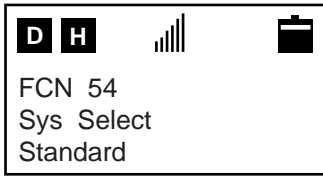
### **Sys B only**

This service is limited to the 'B' carrier only.



## Standard

Standard allows the phone to first search for a free channel in the Home system. If the phone cannot find a free channel, it searches the other system.



**Note: The home system depends on the current NAM selection.**

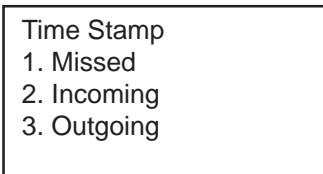
The **ROAM** indicator [A] or [B] will be displayed when you are using a system that is not your home system.



## CALL LISTS

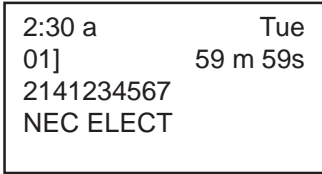
The phone keeps and displays the various information about the last 20 missed, incoming, and outgoing calls. The information shows the actual talk time of the call and when the call was established (time and day of the week).

1) Press **MEM**(Hold).

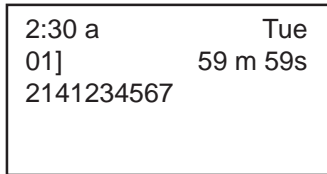


2) Press **1**, **2** or **3** keys to show Missed, Incoming or Outgoing calls.

3) Press # or ★ to scroll through calls.



**Outgoing**



**Incoming Call**



**Missed Call**

4) Press **SND** to call a displayed phone number; press **FCN + MEM + Memory Location** (for example, 12) or **FCN + MEM** (hold) to store a number; or press **CLR** to exit.

5) To clear all call lists in memory, press **FCN + 6**. Enter the four (4) digit lock code. Press **1**. Display shows Time Stamp Clear. Press **MEM**. Display shows Cleared. Press **CLR**. Display returns to standby.

## MUTING/UNMUTING

The Mute function operates only when the phone is in the conversation mode. There are two (2) Mute positions, **MIC MUTE** or **FULL MUTE**.

**MIC MUTE** - This function switches off the microphone while in the conversation mode.

**FULL MUTE** - In the portable configuration, this function switches off both the microphone and the earpiece while in the conversation mode.

### **MIC MUTE:**

1) Press **FCN + 9**. This switches off the microphone.



2) Press **FCN + 9**. This switches the microphone back on.



### **FULL MUTE:**

1) Press **FCN + 9 (Hold)** This switches off both the microphone and earpiece or speaker.

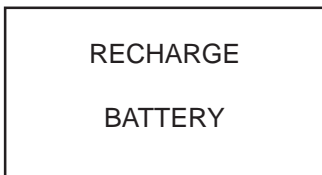


2) Press **FCN + 9**. This switches the microphone, earpiece and speaker back on.



## **LOW BATTERY ALARM**

The Low Battery Alarm warns the user when the battery power is getting low, by emitting a short double tone. The double tone will sound 6 times at 10 second intervals and the display will show **RECHARGE BATTERY**. After the sixth consecutive alarm tone, the phone shuts itself off.



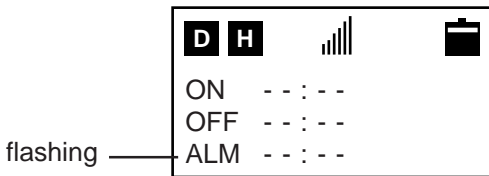
If you have a call in progress, the phone terminates the call and turns off the phone automatically. The phone may sense the battery low right after power on. In this case, it will turn off the phone immediately.

# ALARM CLOCK, AUTO POWER ON, AND AUTO POWER OFF FUNCTION

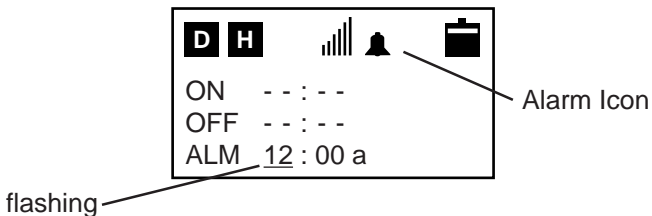
The alarm clock function allows the user to set the time at which the phone alarm sounds with the phone alarm being used as an alarm clock. The phone powers on automatically if the power is off at the alarm set time. The clock alarm operates only once; therefore, it is necessary to reset the phone alarm clock for the next necessary alarm time. The clock alarm sounds for **20 seconds** unless the [CLR] key is pressed. If the phone is powered on at the alarm set time, the alarm still sounds. If any key except [CLR] is pressed, the alarm continues for 20 seconds and phone remains powered on.

## Setting the Alarm:

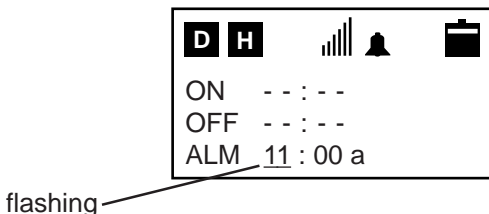
1) Press **FCN + 2**.



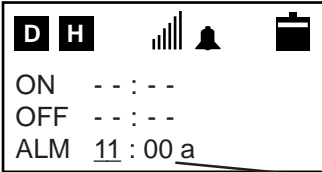
2) Press **VOL**. The Alarm Icon appears on the screen and the flashing indicator moves to the hour field. (01 to 12 are valid entries for hours.)



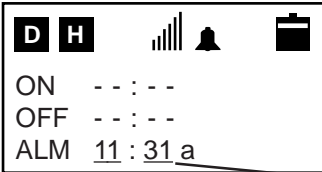
3) Enter Alarm Time (i.e., 11). Press **MEM** anytime the hour or minute fields are flashing to change to either **am** or **pm**.



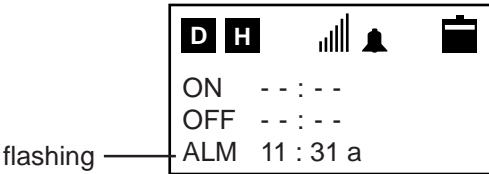
4) Press **VOL**. The flashing moves to the minutes field.



5) Enter Alarm Time (i.e., 31). (00 to 59 are valid entries for Minutes.)



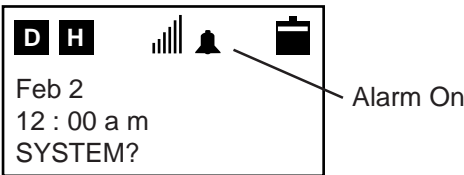
6) Press **VOL**. The phone alarm is set at **11:31 AM** and the flashing minute field stops flashing. The setting mode ends and the display shows:



7) Pressing **MEM** turns the Alarm Indicator on or off.



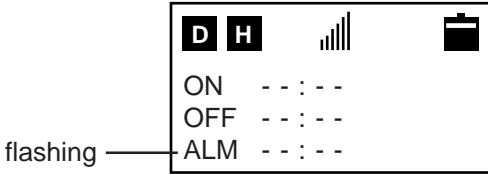
8) Press **CLR**. The phone returns to normal standby with the Alarm Indicator either **On** or **Off**.



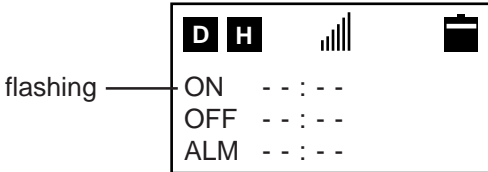
## Setting Automatic Power On:

The phone user can set a specified time that the phone automatically powers on each day. Once the selection is set, the phone automatically powers on every day at the same time. This function can be set and reset by pressing **MEM**.

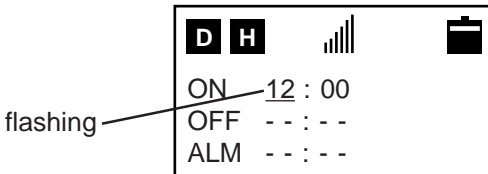
1) Press **FCN + 2**.



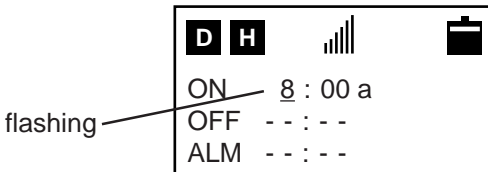
2) Press **#** or **★**. Place the flashing indicator to the **ON** position.



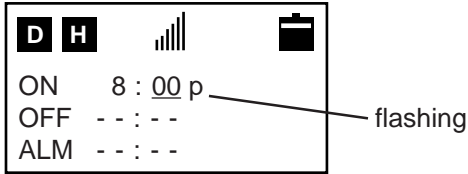
3) Press **VOL**. The flashing indicator moves to the hour field.



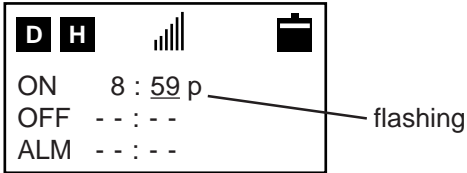
4) Enter Automatic On Time (i.e., 8). (01 to 12 are valid entries for hour.) Press **MEM** anytime the hour or minute fields are flashing to change to either **am** or **pm**.



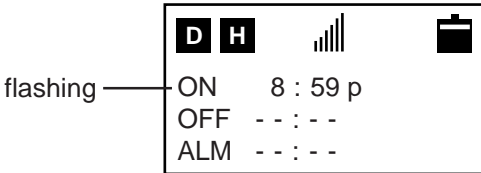
5) Press **VOL**. The flashing moves to the minutes field.



6) Enter Automatic On Time (Example 59) (00 to 59 are valid entries for Minutes.)

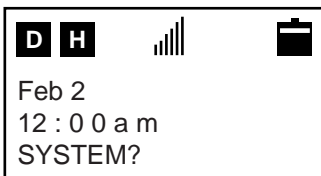


7) Press **VOL**. The phone sets at **8:59PM** and the flashing minute stops flashing. The setting mode ends and the display shows:



8) Pressing **MEM** turns the automatic power on feature on or off by displaying the power on time when it is on and all dashes when the feature is off.

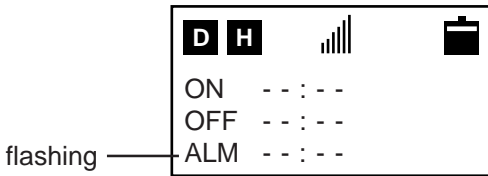
9) Press **CLR**. The phone returns to normal standby.



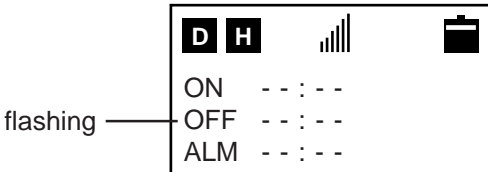
### Setting Automatic Power Off:

The phone user can set a specified time that the phone automatically powers off each day. Once the selection is set, the phone automatically powers off every day at the same time. This function can be set and reset by pressing **MEM**.

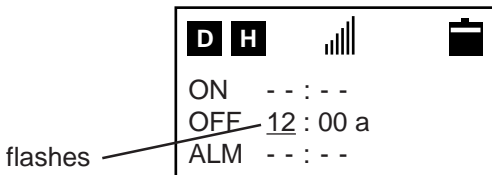
1) Press **FCN + 2**.



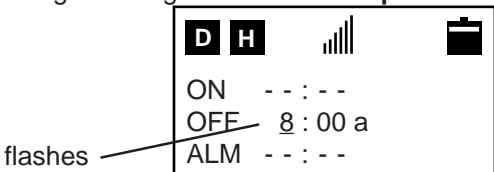
2) Press **#** or **★**. Place the flashing indicator to the **OFF** position.



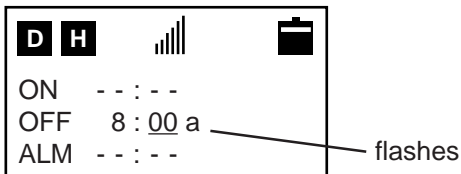
3) Press **VOL**. The flashing indicator moves to the hour field.



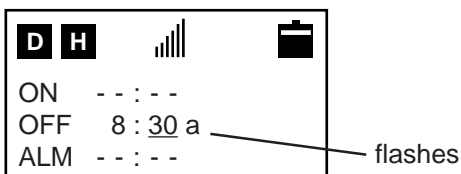
4) Enter Automatic Off Time (i.e., 8). (01 to 12 are valid entries for hour.) Press **MEM** anytime the hour or minute field is flashing to change to either **am** or **pm**.



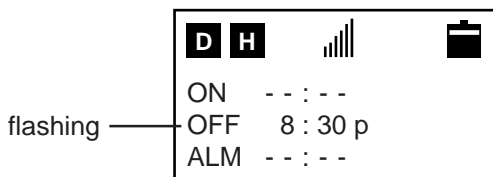
5) Press **VOL**. The flashing moves to the minutes field.



6) Enter Automatic Off Time (Example 30) (00 to 59 are valid entries for Minutes)

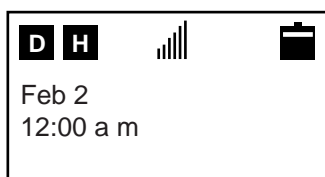


7) Press **VOL**. The phone sets at **8:30PM** and the flashing minute stops flashing. The setting mode ends and the display shows:



8) Pressing **MEM** turns the automatic power off feature on or off by displaying the power off time when its on and all dashes when the feature is off.

9) Press **CLR**. The phone returns to normal standby.



## ESCALATING ALERT

If this function is set to **ON**, at the incoming call, Alert tones get louder and louder. The volume will automatically increase from **Min, Low, Mid, to Max** every six (6) seconds at each level. The starting volume will always be **Min**, regardless of the ringer volume setting, unless the volume setting is off.

1) Press **FCN + 4**.



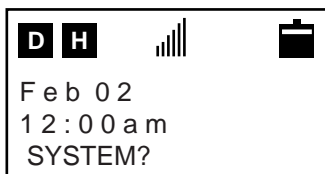
2) Press **2**.



3) Press **MEM**. This turns the function on or off.



4) Press **CLR**. The phone returns to normal standby.



## AUTOMATIC LOCKING

With this function activated, the phone places itself into **Full Lock** condition automatically upon power on. The four (4) digit lock code or the three (3) digit Temporary Lock Code must be used to unlock the phone.

1) Press **FCN + 6**.



2) Enter four (4) digit lock code.

**Note: The lock code is supplied by the dealer. If you forget your lock code, contact your dealer. The factory default lock code is 0000.**



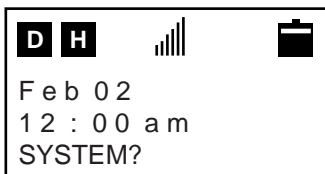
3) Press **2**.



4) Press **MEM**. To turn Auto Lock on or off.



5) Press **CLR**. The phone returns to normal standby.



## FIXED DIGIT DIALING

The phone allows you to restrict the number of digits on outgoing overseas calls or other long distance phone numbers.

The phone will verify the number's digit count after the **SND** key is pressed. The range of entry digits is from '0' through '31'. Entering '0' resets the function to normal, unrestricted dialing.

1) Press **FCN + 6**.



2) Enter four (4) digit lock code.

**Note: The lock code is supplied by the dealer. If you forget your lock code, contact your dealer. The factory default lock code is 0000.**

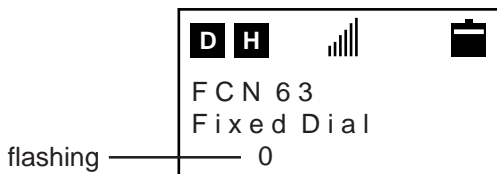


3) Press 3.

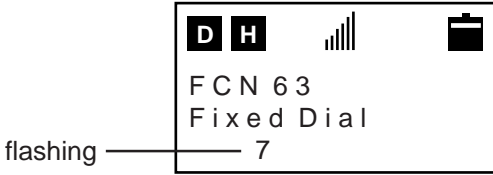


4) Press the digit key as follows:

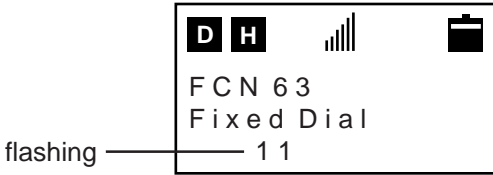
For No Restriction (Normal), Press **0 + 0**.



For 7-Digit Restriction, Press **0 + 7**.



For 11-Digit Restriction, Press **1 + 1**.



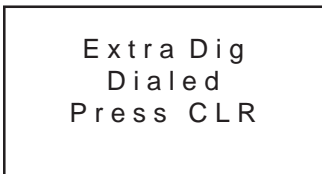
5) Press **MEM**. The entered number stops flashing and the data is stored to memory. If a '0' was entered, the display changes to indicate normal which is no dialing restriction.



6) Press **CLR**. The phone returns to normal standby.

**Note:** If the incorrect lock code is entered, the phone will return to the normal standby display.

**Note:** If the phone is in the 7-digit or 11-digit restriction mode and the user tries to make a call with a phone number containing more than 7 or 11 digits, or beginning with zero (0), when the SND key is pressed the alarm tone is heard and the phone displays Extra Dig Dialed Press CLR.



# SPEED DIAL MEMORY LOCKING

This function prevents, either partially or completely, unauthorized access to the speed dial numbers stored in the memory. This function also prohibits memory access, scrollpad memory access, last number dialed access, and call lists.

There are three separate setting for the Speed Dial Memory Lock.

- off** ..... No restriction.
- read only** ..... Reading allowed, Deleting and Rewriting prohibited, **FCN + MEM** keys ignored, Automatic Store Ignored.
- on** ..... **DTMF** Reading, Deleting and Rewriting prohibited, **FCN + MEM** keys ignored, **MEM** key ignored.

1) Press **FCN + 6**.



2) Enter four (4) digit lock code.

**Note: The lock code is supplied by the dealer. If you forget your lock code, contact your dealer. The factory default lock code is 0000.**



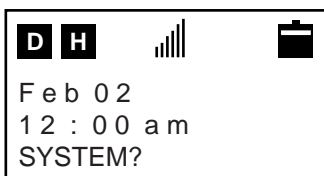
3) Press **5**.



4) Press **MEM**. To Select Level of Speed Dial Memory Lock.



5) Press **CLR**. The phone returns to normal standby.



## TEMPORARY LOCK CODE SET

This function allows the user to program any three (3) digit temporary lock code to lock or unlock the phone without revealing your personal four (4) digit lock code. If the phone is set to full or partial lock using the temporary lock code, the phone can still be unlocked by using the primary 4-digit lock code. If the phone is set to full or partial lock using the primary 4-digit lock code, the phone cannot be unlocked by using the temporary lock code; the primary lock code must be used.

**Note: The three (3) digit temporary code cannot be the same as the first three digits of your personal lock code.**

1) Press **FCN + 6**.



2) Enter four (4) digit lock code.

**Note: The lock code is supplied by the dealer. If you forget your lock code, contact your dealer. The factory default lock code is 0000.**

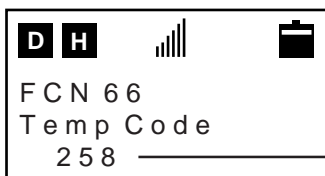


3) Press 6. The phone shows current three (3) digit code. **Factory default code is 000.**

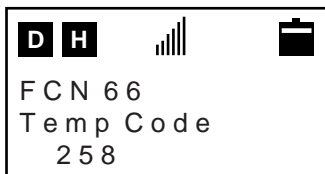


(xxx = current code)

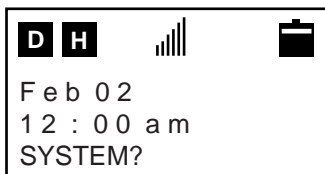
4) Enter three (3) digits. **Example 2 + 5 + 8.**



5) Press **MEM**. The flashing stops and the new code is set.



6) Press **CLR**. The phone returns to normal standby.



## RESET USER SETTINGS (DEFAULT)

This function initializes all the phone's user settings to their default state.

1) Press **FCN + 6** and Enter your 4-digit Lock Code.



2) Enter your four (4) digit Lock Code.



3) Press 7.



4) Press **MEM**.



### The Phone Resets to the Defaults listed below:

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| (1) Total Talk Time: [000h00m]    | (13) Escalating Alert: [Off]       |
| (2) Call Lists: [00m00s]          | (14) Alert Type Select: [1]        |
| (3) Clock Alarm: [Off,12:00am]    | (15) Last Number Memory: [Clear]   |
| (4) Auto Power On: [Off,12:00am]  | (16) Reserved                      |
| (5) Auto Power Off: [Off,12:00am] | (17) Long DTMF: [Off]              |
| (6) Minutes Reminder: [Off]       | (18) One Touch Dialing: [Off]      |
| (7) Reserved                      | (19) Multiple Language: [English]  |
| (8) Auto-Lock: [Off]              | (20) Any Key Answer: [On]          |
| (9) Fixed Digit Dial: [Normal]    | (21) Backlight: [On]               |
| (10) Memory Lock: [Off]           | (22) SMS Sort Order: [Urgency]     |
| (11) End to End Switch: [On]      | (23) SMS Roll Off [Arrival]        |
| (12) Temporary Lock Code: [000]   | (24) Clock: [12:00am Jan 01, 1996] |

## WAKE-UP MESSAGE PROGRAMMING

This function allows the user to enter a Wake-Up Message. This message appears for 4.5 seconds each time the phone is turned on.

1) Press **FCN + 6**.



2) Enter four (4) digit lock code.

**Note: The lock code is supplied by the dealer. If you forget your lock code, contact your dealer. The factory default lock code is 0000.**



3) Press **9**.



4) Press **MEM**.



5) Enter your wake-up message using the same process as as described on page 15, Keying in Names, Steps 2 through 5.

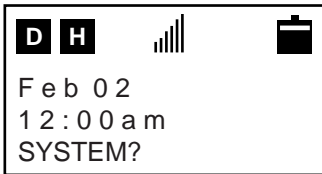
You can enter up to 30 characters with blank spaces and symbols also counted as characters. Pressing the CLR key allows you to clear the digits one at a time to correct any mistakes made.



6) Press **MEM**. The wake-up message will be stored into memory.



7) The phone returns to normal standby.



## CALL TYPE

This function is used in conjunction with the type of call required. Note that in a digital service area, the call type can still be either digital or analog.

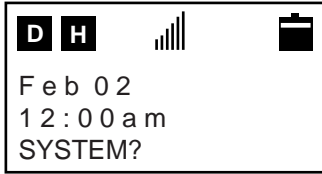
1) Press **FCN + 8 + 1**.



2) Press **MEM** to set call type to dual mode, analog, or digital.



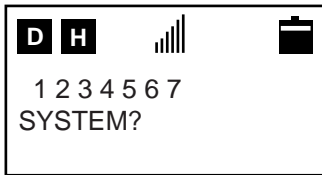
3) Press **CLR**. The phone returns to normal standby.



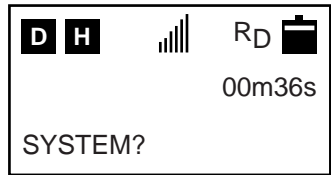
## AUTOMATIC REPEAT DIALING

The phone is capable of automatically redialing the same phone number up to three times with a 60-second interval between each try. After the third try, the phone will automatically cancel the repeat dial mode and go back to normal standby.

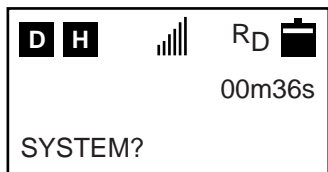
1) Enter a number (or Press **MEM** for a memory location)



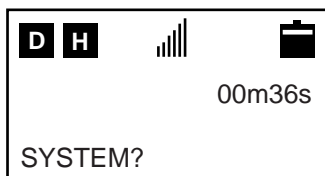
2) Press **FCN + SND**. The phone will show the “**RD**” indicator, sound a ringing tone, dial the number selected and place the phone into Mic Mute. After thirty-five (35) seconds, the phone automatically terminates the call if not answered and the display shows:



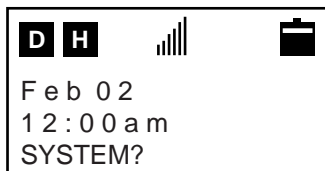
After sixty (60) seconds, the phone will try to dial the same number again. The phone will sound a ringing tone and redial the number selected. After thirty-five (35) seconds, the phone automatically terminates the call again if the call is not answered and the display again will show:



This process is repeated three (3) times. If after the third time the call is not answered the repeat dial mode ends and the “RD” indicator disappears from the display. If the calling number answers, Press **CLR + FCN + 9** to talk.



3) Press **CLR**. The phone returns to normal standby.



## ONE-TOUCH DIALING

When One-Touch Dialing is enabled, the user will have up to nine (9) one-touch keys available. Each one-touch key corresponds to one of the first nine (9) memory locations (**Example one-touch 1 = MEM 01**). When turned on this function will allow the user to press a single digit (**1 through 9 Hold**) and have the phone automatically display and dial (**SND**) the number residing in that memory location.

1) Press **FCN + 5**.



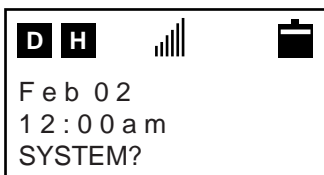
2) Press **7**.



3) Press **MEM**. This turns One-Touch on or off.



4) Press **CLR**. The phone returns to normal standby.



## MULTIPLE LANGUAGE SELECTION

Your phone has the capability of displaying three (3) different languages on the display. The user can select which language (**English, French, Spanish**) they feel most comfortable with, and the phone will remain in that language until changed. The default language is English.

1) Press **FCN + 5**.



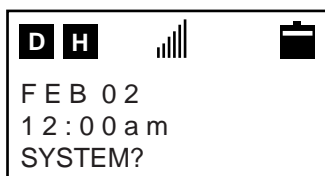
2) Press **8**.



3) Press **MEM**. This changes the language function from English, French or Spanish.



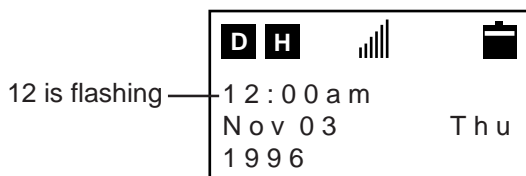
4) Press **CLR**. The phone returns to normal standby in a different language.



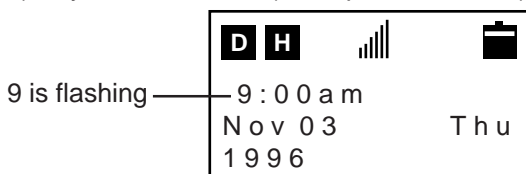
## CLOCK/CALENDAR SETTING

This function sets the year, month, day and time. The phone automatically sets the day of the week every time when the year, month and the day are set. The Year range is from 1996 to 2095. The display of "AM", "PM" is set in 24 hours.

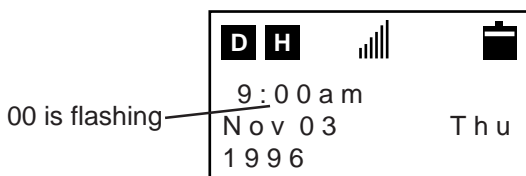
1) Press **FCN + 7**. The display shows the date set screen:



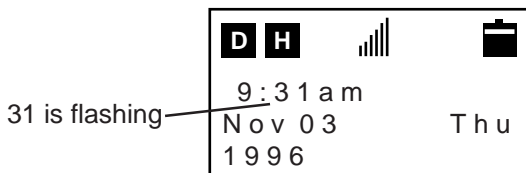
2) Key in correct hour (Example 9,11,4, etc.).



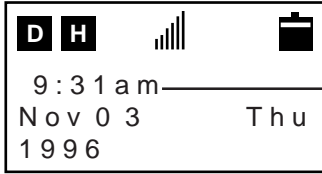
3) Press **#**. The hour is set and the display moves to minutes.



4) Key in correct minutes (Example 15,31,59, etc.).

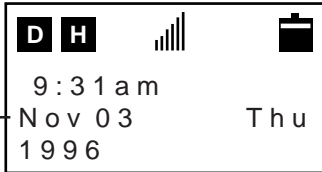


5) Press **MEM** to select either **am** or **pm**.



'am/pm'

6) Press **#**. The minutes are now set and display moves to month.



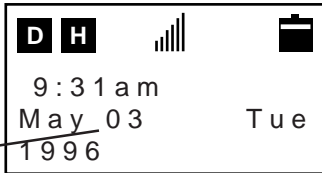
Nov is flashing

7) Enter Month Number (Example Jan=1, Feb=2, Mar=3 etc.).



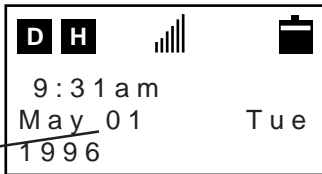
5 is flashing

8) Press **#**. Month is now set and display shows day.



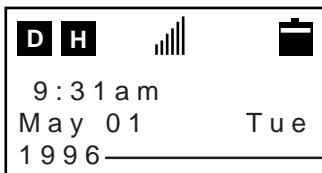
3 is flashing

9) Enter correct date (Example 1,10,21,30 etc.).



1 is flashing

10) Press **#**. Date is now set and phone automatically enters in the day of the week (Example Mon, Tue, Wed, Thur, etc.).



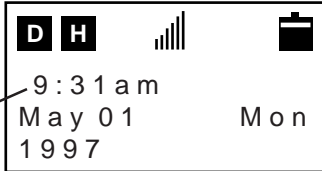
1996 is flashing

11) Enter in correct year (Example 1996,1997,1998,etc.).



1997 is flashing

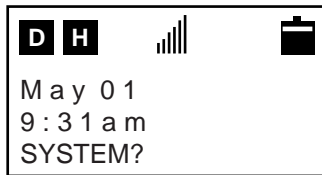
12) Press #. Year is now set and display goes back to hour and flashes.



9 is flashing

**Note: If correct year is already displayed press #.**

13) Press CLR. The phone returns to normal standby with the correct date and time.



## MINUTES REMINDER TONE

During conversation on the phone, the phone will make short tones every minute to remind you that one minute of air time has been used. The Minutes Reminder can be set on or off as you desire.

1) Press **FCN + 4**. The display will show the Tone Function menu:



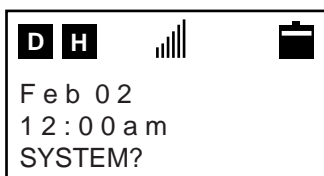
2) Press **4**. The display shows the currently selected Call Tone mode.



3) Press **MEM** to select the setting on or off.



4) Press **CLR** The phone returns to normal standby.



While in the conversation mode, a "Double Beep" will sound at the end of each minute. A "Single Beep" will sound ten seconds before the end of each minute.

## SID MANAGEMENT

The SID Management feature lets the phone operate only within specifically identified (Preferred) systems. The Service Provider can enter up to thirty (30) preferred System ID numbers that identify the systems that you want your phone to access.

Programming of your System ID numbers is accomplished by your service provider and is **only** associated with NAM1.

## SHORT MESSAGING SERVICE

Short Messaging Service (SMS) provides the user with the ability to receive and respond to alphanumeric messages. If your cellular service provider offers Short Messaging Services, you can use this feature of the phone to view your messages like a pager. Callback numbers and short text messages can be stored for your review.

The number of messages that can be stored is determined by the number of text characters in the stored messages. For example, the phone can store up to one hundred and sixty 37-character messages, eighty 80-character messages, and 30 240-character messages. Your phone replaces messages, based on message priority or arrival time, with new messages as new messages are received.

When you access these features, you can view messages you have received, or immediately place calls if a number is included. To access these features from the standby mode, press the MEM key twice.

## **SHORT MESSAGE ALERTS**

Your DT2000 cellular phone receives and sounds a series of tones to notify you of the type of message received. The alert tones could vary depending on the cellular service provider.

### **EMERGENCY MESSAGE ALERT**

When an Emergency Message is received, a dual tone alert will sound and will repeat three times.

### **URGENT MESSAGE ALERT**

When an Urgent Message is received, a dual tone alert will sound and will repeat two times.

### **NORMAL MESSAGE ALERT**

When a Normal Message is received, a dual tone alert will sound and will repeat one time.

### **BULK MESSAGE ALERT**

When Bulk Messages are received, a dual tone alert will sound and will repeat one time.

### **VOICE MESSAGE ALERT**

When a Voice Message is received, a dual tone alert will sound and will repeat one time.

When the user is alerted to an incoming message the following screens can appear depending on the type of message being received.

## **EMERGENCY MESSAGE**

XXX New  
EMERGENCY  
Messages  
Press MEM

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

## **URGENT MESSAGE**

XXX New  
URGENT  
Messages  
Press MEM

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

## **NORMAL MESSAGE**

XXX New  
Messages  
Press MEM  
to read

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

## **BULK MESSAGES**

XXX Bulk  
Messages  
Press MEM  
to read

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

## VOICE MAIL MESSAGES

You Have  
Voice Mail  
Press SND  
to Access

**NOTE:** By pressing the **SND** key, the phone will call the voice mail number programmed into your phone. If the voice mail number is not programmed into your phone an alarm tone will sound and the screen below will be displayed. Press **CLR** to clear the message. To program your voice mail number, see page 66, Voice Mail Feature.

No Voice  
Mail  
Number  
Available

## **MESSAGE MEMORY**

When the incoming message memory is full, an alert message will be displayed every ten minutes and an alarm tone will sound.

RCV MSG  
MEMORY  
FULL

**NOTE:** To clear this screen, press the **CLR** key.

Anytime a message is rejected by the phone due to the lack of memory, an alarm tone will sound and the below screen will appear:

RCV MSG  
REJECTED -  
MEMORY  
FULL

**NOTE:** To clear this screen, press the **CLR** key.

## PERIODIC MESSAGE NOTIFICATION

Your DT2000 cellular phone continually monitors for any unread messages you may have received and will provide user notification as follows:

### EMERGENCY MESSAGES

Your cellular phone scans for any unread emergency messages every 30 seconds and if any are found the following screen will be displayed:

xxx Unread  
EMERGENCY  
Messages  
Press MEM

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

### URGENT MESSAGES

Your cellular phone scans for any unread urgent messages every 10 minutes and if any are found the following screen will be displayed:

xxx Unread  
URGENT  
Messages  
Press MEM

**NOTE: Pressing MEM key allows you to go to the message view mode and the incoming message will be displayed on the screen.**

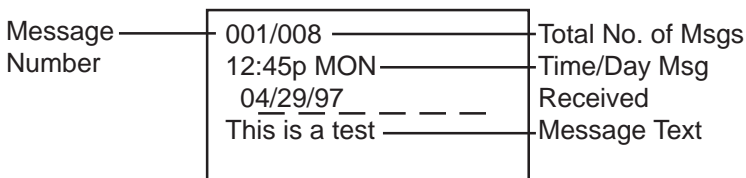
**NOTE: There will be no periodic message notification for normal, bulk or voice mail messages.**

## MESSAGE VIEW MODE

The Message View Mode allows you to view the incoming messages. When this mode is entered, the display will show the first message received in the order received.

Entering  
Message  
View  
Mode

1) Press: the UP [▲] or DOWN [▼] keys to advance through the message screens.



**NOTE: A line of six dashes separates the header from the message text.**

## MESSAGE VIEW MODE KEYPAD SUMMARY

When in the Message View Mode, the following keypad summary applies:

- o **UP** [▲] - Scroll up one line. When a message is being displayed, the **UP** key scrolls up one line at a time.
- o **DOWN** [▼] - Scroll down one line. When a message is being displayed the **DOWN** key scrolls down one line at a time.
- o **PAGEUP** [▲] - Moves to the top of the previous msg.
- o **PAGEDOWN** [▼] - Moves to the top of the next msg.
- o **TOP** [▲] - Move to first message.
- o **BOTTOM** [▼] - Move to last message.
- o **ENTER** [◆] - Send manual acknowledge with current choice.
- o **CLR** - Delete current message.
- o **MEM** - Lock current message.
- o **SND** - Call back.
- o **"0"** - Sort Order Message
- o **END** - Quit Message View.
- o **PWR** - Power OFF.
- o **VOL** - Toggles between the digits and the scroll keys.
- o **FCN** - Scrollable Menu appears.
- o **"#"** - Toggles between normal and expanded headers.

2) Pressing the UP [▲] or DOWN [▼] keys allows you to scroll through the messages.

3) After entering the Message View Mode and no messages exist, the phone will sound an alarm tone and the following display will be shown:

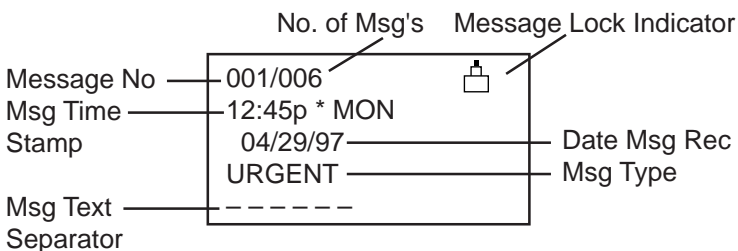


## MESSAGE HEADERS

Two types of message headers are available in your phone, Normal or Expanded. Press [ # ] to toggle between normal and expanded headers.

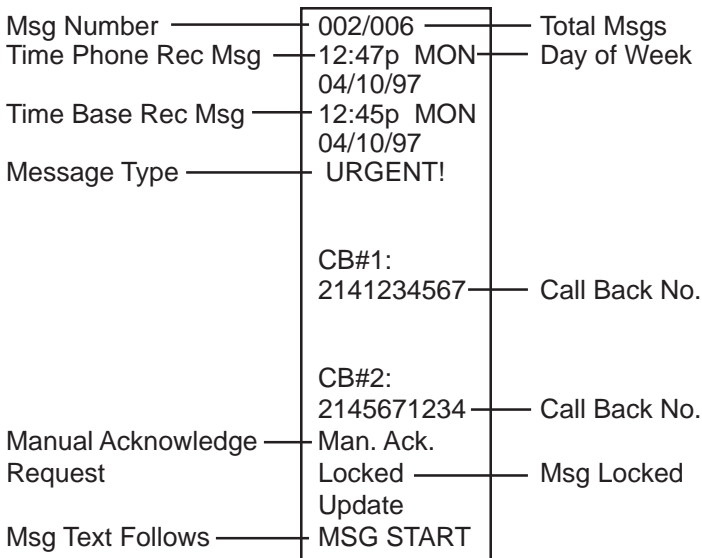
### **NORMAL HEADER**

The normal message header uses the following format and content: (NOTE: Message lock can be turned on or off by pressing **MEM.**)



### **EXPANDED HEADER**

The expanded message header uses the following format and content:



## MESSAGE SEPARATORS

Messages will be divided by message separators **MSGEND**. This will allow the user to scroll up or down through the message memory. (Example)

```

Love,
Ted
*****
* MSGEND *
*****
002/004
12:45p          MON
-----
Meeting
canceled!
*****
* MSGEND *
*****
003/004

```

# DELETING MESSAGES

## UNLOCKED MESSAGES

When you want to delete an unlocked message from the Short Messaging System, you must first be in the Message View Mode. After entering the Message View Mode, select the message you wish to delete. Press the **CLR** key. The display will indicate:

DELETE  
MESSAGE?  
1. yes  
2. no

If yes is selected the message will be deleted from memory. If you select no the message deleting sequence will be aborted.

## LOCKED MESSAGES

If the message you want to delete is locked, an alarm tone will sound and the display will indicate:

CAN'T  
DELETE,  
MESSAGE  
LOCKED

# CALLBACK FEATURE

If a received message being viewed on the screen has only one callback number attached to the message, a callback to that number can be initiated by pressing the **SND** key. When the **SND** key is pressed, the message view mode is exited and a call origination occurs to that callback number listed in the message.

2141234567  
Home

If the **SND** key is pressed when no callback number is attached to a message an alarm tone will sound and the following message will be displayed on the screen for approximately two seconds.

NO  
Callback  
Number  
Given!

If the **SND** key is pressed and there is more than one callback number for the message, a menu that lists all the callback numbers will be shown. Using the **UP** [▲], **DOWN** [▼] keys allows you to scroll the list and choose the callback number you wish to use.

Pressing the **SND** key or the **ENTER** [◆] key on the selected callback number will initiate the callback sequence to that number.

## EXITING MESSAGE REVIEW MODE

To exit the Message Review Mode Press **END** key. Upon pressing the **END** key the following informational screen will be displayed:

RCVD MSGS	
Unread XXX	No. of unread msgs
Locked YYY	No. of locked msgs
Free XX%	Amount of free memory left

## SORT ORDER FEATURE

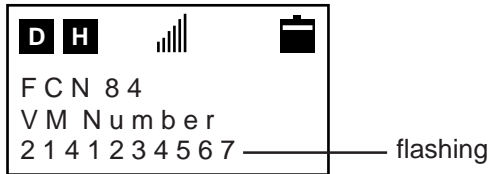
The Sort Order menu allows the user to select the messages they wish to review. Upon selection the screen will display the first message under that category.

SORT ORDER  
1. urgent  
2. oldest  
3. newest

## VOICE MAIL FEATURE

The Voice Mail Number feature allows you to enter your voice mailbox number and send it automatically. Press **FCN + 8 + 4**.

1) Enter in your voice mail number. Press **MEM** to store.



2) Press **MEM + SND** from standby mode to send your Voice Mail Number.

**NOTE:** If more than 10 digits are desired for your voice mail box number, enter a 1 or 2 digit memory location into the VM Number screen. Go to that memory location and enter in your voice mail box number. When **SND** is pressed upon notification of voice mail, the voice mail will automatically go to that location and send your voice mail box number.

## ROLL OFF FEATURE

The Roll Off Feature allows you to select how you want to replace messages in your Short Message Service Register either by priority or arrival time. Press **FCN + 8 + 5**. Press **MEM** to change.



## WORD WRAP FEATURE

The Word Wrap feature allows you to automatically or manually select whether your message text lines return after so many characters have been entered automatically or you manually go from the end of one line to the beginning of another.

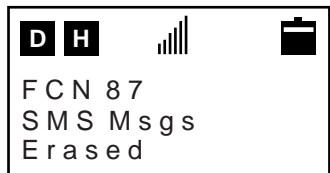
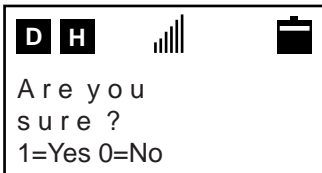
1) Press **FCN + 8 + 6**. Press **MEM** to select Enabled or Disabled.



## SMS INITIALIZE FEATURE

This feature will remove all messages that have been stored in the phone.

1) Press **FCN + 8 + 7**. Press **MEM** to complete initialization.



2) Press **CLR**. The phone returns to normal standby.

## SID MANAGEMENT (SYSTEM IDENTIFIER)

The **SID** is a 5 digit code that identifies each system area. This feature allows the user to temporarily override the **SID** feature of the telephone. Upon the next power on, the feature goes back to active.

1) Press **FCN + 8 + 8**. Press **MEM** to make the SID Feature Active or Overridden.

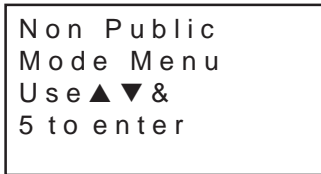


## NON-PUBLIC MODE

Non-Public Mode of operation allows the user to access the services of a private base station if the user has authorization.

To access the Non-Public menu from the standby screen:

1) Press **MEM + VOL** keys



This screen will stay until you press any key, at which point a menu with a list of options will appear.

Once the menu appears, the green arrow keys (digit keys) are used to scroll through the menu.

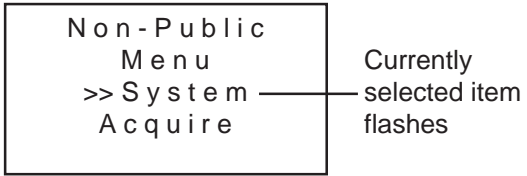
## ARROW KEYS SUMMARY

- |    |              |  |
|----|--------------|--|
| ▲  | UP .....     | Scrolls up to the previous option.   |
| ▼  | DOWN .....   | Scrolls down to the next option.   |
| ▲▲ | PAGEUP ..... | Moves up one screen of information and highlights the option lowest on the screen. |
| ▼▼ | PAGEDOWN ... | Moves down one screen and highlights option highest on the screen.                 |
| ▲▲ | TOP .....    | Moves to the top of the list.  |
| ▼▼ | BOTTOM ..... | Moves to the bottom of the list.   |
| ◆  | ENTER .....  | (5 or MEM) Enter or Accept key.  |
|    | CLR .....    | Exit to standby screen.  |
|    | END .....    | Exit to standby screen.  |
|    | PWR .....    | Power Off.   |

If the menu reaches the end or the beginning, an alarm tone will sound. Otherwise, a keypress acknowledge tone will sound.

## NON-PUBLIC MENU

The available options from the Non-Public menu are, System Acquire, System Search, and View Database.

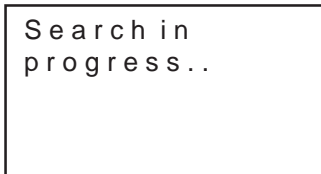


## SYSTEM ACQUIRE

System Acquire allows the user to find a Private or Residential system that might be available for service if the user has rights to the base station. Once acquired, the system will be stored in the phone's memory and the new system will be available for use.

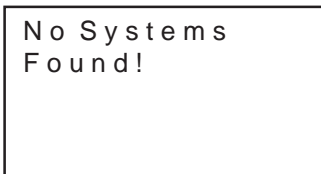
From the Non-Public menu with "System Acquire" flashing:

- 1) Press **ENTER** (digit 5) key.

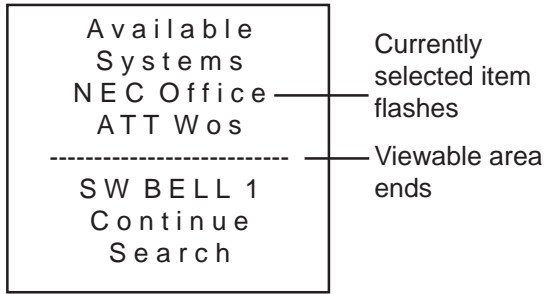


This menu will stay until the search is completed or the user presses the **CLR** key.

Search in progress scans all of the channels associated with the system that it is currently registered on (System A or System B) and determines if the Private or Residential systems are available for use. If there are not any Non-Public systems available or the user is not allowed to use them, the screen will display No Systems Found!

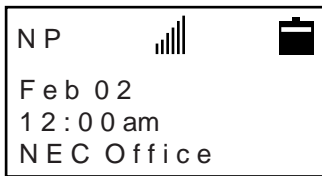


If there are systems available, they are presented to the user in the same menu format as the Non-Public menu.



If the Continue Search option is selected, Non-Public systems on the next strongest system are displayed if they are available. If none are available, the "**No Systems Available**" message is displayed.

If a system is flashing and the **ENTER** (digit 5) key is pressed, the standby screen returns and the letters "**NP**" (Non-Public) are displayed in the upper left corner of the screen. The alpha tag for the system is displayed on the bottom.



The private system is now in the database and the phone will automatically select it when it determines that the Non-Public system is available. The user can use System Search to manually select a different system (either Public or another Non-Public system) that is stored in the phone.

## SYSTEM SEARCH

System Search allows the user to manually select an available system that the phone is not currently on. Example, the user is on a Non-Public system but plans to leave the area where he/she would lose service from the Non-Public system. The user would manually select the Public system so the call would not be dropped. This "**Manual**" selection should stay in effect until the user did a search for another system, or until the power is cycled on the phone.

From the Non-Public menu, if the "**System Search**" is flashing and the **MEM** key is pressed the following screen appears and the **MEM** key is pressed the following screen appears:

Search in  
progress..

The display will remain until the user presses the **CLR** key to end the search or until available systems are found and the display will then show those available systems.

Available  
Systems  
Public  
NEC Office

Currently  
selected item  
flashes

Once a system is selected, the display will return to the standby screen and the alpha tag for that system and the system type will be displayed.

If no systems are found, the following screen is displayed and will remain until the **CLR** key is pressed.

No Systems  
Found!

## VIEW DATABASE

Once a series of private systems have been found, the user may wish to see which ones are stored in the phone.

From the Non-Public menu, and the "**View Database**" option flashing, Press **MEM** key. If there are no systems stored in the phone, the following display will appear:

Database  
Empty  
Press CLR

If there are systems stored, they will be displayed as in the menu below. The Non-Public mode menu keypad keys can be used to scroll this menu. This menu is for viewing purposes only, therefore the **ENTER** key (digit 5) will generate an alarm tone.

N A M D a t a b a s e N E C O f f i c e S Y S T E M ?
--

## NAM PROGRAMMING

Consult your Service Carrier for NAM Programming information.

## CARE AND MAINTENANCE

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you enjoy this product for many years.

Keep it dry. (Water contains minerals that will corrode electronic circuits.) Avoid all liquid spills. Any form of liquid will cause permanent damage to your phone.

Do not store in a hot area. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.

Do not drop it. This might cause permanent damage. The internal circuit boards can be broken.

Do not use or store in dusty, dirty areas. This will cause permanent damage to moving parts.

Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it. Wipe it with a soft cloth **slightly dampened** in a mild soap-and-water solution. If the unit is not working properly, take it to your nearest authorized dealer. The personnel there will assist you, and, if necessary, arrange for service.

## TROUBLESHOOTING

### **If the power does not come on or stay on:**

Make sure the battery is installed in the phone properly.

Be sure the contacts are clean on the battery and the charger.

Battery charge may be too low for operation. Listen for the low battery alarm or check battery level by pressing **FCN**.

### **If the power comes on, but the phone does not work:**

Check the NO Service message, you might be out of the cellular service area.

Make sure that the antenna is extended to its full length.

# LIMITED WARRANTY

## **1. What Products May Be Covered By This Limited Warranty?**

The following products (the "Products" or the "Product") purchased through an NEC America, Inc. (NECAM), Wireless Communications Division Authorized Dealer (the "Dealer") in the United States on or after January 1, 1997, may be covered by this warranty:

[DT2000 TDMA SERIES CELLULAR TELEPHONE AND AUTHENTIC ACCESSORIES]

## **2. What Does This Warranty Cover?**

NECAM warrants to the original end-user Product purchaser ("You") that the Products will conform to the applicable published specifications in effect at the time of shipment from NECAM to the Dealer, and that the Products will be free from defects in materials or workmanship under normal use and service during the warranty period described in Paragraph 4.

## **3. When Does Your Warranty Begin?**

The warranty period will begin on the date You purchase the Product. Dated proof of purchase is necessary to accompany any Product returned for warranty service consideration. Valid proof of purchase must identify the point of purchase, date of purchase, Product model or trade name, and Electronic Serial Number or Mechanical Serial Number for transceivers and boosters.

## **4. How Long Does The Coverage Last?**

The warranty period for the Product is:

[ONE (1) YEAR]

Any Products repaired or replaced under the terms of this warranty are covered under the warranty for the remainder of the original warranty period or ninety (90) days from the date of service return shipping, whichever is longer.

## **5. What Will The Manufacturer Do If The Product Becomes Defective In Materials Or Workmanship During The Warranty Period?**

If any Product covered under this warranty becomes defective in materials or workmanship during the applicable warranty period, NECAM will, at its option, either repair the defective Product without charge for parts and labor, or provide a replacement in exchange for the defective Product.

## 6. What Is Not Covered By This Warranty?

- (a) This warranty does not extend to:
  - (i) Products which have been subjected to misuse, accident, physical damage, improper installation, abnormal operation or handling, neglect, inundation, fire, water, or other liquid intrusion, or;
  - (ii) Products which have been damaged due to repair, altered, or modified by anyone other than an authorized service warranty component-level representative of NECAM, or;
  - (iii) Defects caused by components, parts, or accessories not compatible with the warranted Product, or;
  - (iv) Products whose warranty/quality labels, product serial number plates or electronic serial numbers have been removed, altered, or rendered illegible, or;
  - (v) Accessory items such as antenna, cables, curl cords, cases, etc., or;
  - (vi) Products shipped to NECAM for repair from outside the United States.
  
- (b) Any other warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, shall be limited to the duration of this warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.
  
- (c) NECAM's total liability for damages for any cause related to or arising out of the use or inability to use the product, whether in contract, negligence, strict tort, or based on any other legal theory, shall not exceed the original price paid for the product.
  
- (d) In no case shall NECAM be liable for any indirect, special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of savings or revenues, inability to use the products or any associated equipment, cost of capital, cost of any substitute equipment, facilities or services, claims by third parties other than you, and injury to property. These limitations do not apply to claims for personal injury. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

## **7. How Do You Get Warranty Service?**

If Your Product requires warranty service, it must be returned to an NEC Authorized Service Center along with a description of the Product malfunction or difficulty. You are required to substantiate warranty status with a dated proof of purchase (as explained in item #3), inclusive of Product's serial number (if applicable). The address of the nearest NECAM Authorized Service Center may be obtained by calling (800) 637-5917 or (972) 751-750, or by writing to: NEC America, Inc., Attention: Service Support & Administration, 1621 Walnut Hill Lane, Irving, Texas, 75038. NECAM assumes no risk for damage or loss in transit.

If, in NECAM's sole opinion, the Product failure is not covered under this warranty, or proof of purchase does not meet the terms of this warranty, You will be notified and Your authorization will be requested for any further repair activity. Products repaired under warranty will be returned to You, transportation prepaid.

## **8. How Does State Law Apply To This Warranty?**

This warranty gives You specific legal rights, and You may also have other rights which vary from state to state.

## **9. This Warranty Is The Entire Agreement.**

Unless modified in writing, signed by both You and NECAM, this warranty is understood to be the complete and exclusive agreement.

REV: LW012097

## TECHNICAL INFORMATION

Dimensions	160x50x30mm* (6.3"x2.0"x1.2")
Weight	10.0 ounces
Transmitting Power	0.6 W max. ERP
Operating Voltage	4.8V(int. battery)
Frequency Band	824.040 - 848.970 MHz (TX) 869.040 - 893.970 MHz (RX)
Standard Battery Capacity	1200 mAh
Number of Channels	832
Memory Locations	99
Memory Capacity	Numeric 32 digits per location Alpha: 10 letters per location

### LICENSED UNDER ONE OR MORE OF THE FOLLOWOING U.S. PATENTS

4,954,951	4,942,516	4,896,260	4,829,419	4,825,364	4,686,622	4,531,182
4,396,976	4,371,923	4,121,284	4,120,583	4,435,732	4,471,385	4,672,457
4,739,396	4,675,863	4,817,089	4,912,705	5,022,024	5,121,391	

## NEC SERVICE SUPPORT

NEC's Service Support group is ready to assist you with any additional information that you may need in the operation and integration of your NEC Cellular Telephone and NEC Authentic Accessories. Service Support can be obtained by contacting NEC at:

Telephone:

1-800-637-5917 \*

1-972-751-7500

Writing:

NEC America, Inc.

Service Support

1621 Walnut Hill Lane

Irving, Texas 75038

\* The 800 number listed above also provides access to the NEC Repair Service and Parts Sales groups.

### **NEC Marketing & Sales**

Marketing:

NEC America Inc.

Wireless Voice Terminals Div.

1555 Walnut Hill Lane

Irving, Texas 75038

1-800-421-2141

Sales Agency:

NMI Corporation

14110 N. Dallas Parkway

Suite 300

Dallas, Texas 75240

1-800-CALL-NMI (225-5664)

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All specifications and conditions subject to change without notice.

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**OPERATION SUMMARY** **Page**

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**NOTES:**

- o [X][X] = Memory Address 01 to 99.
- [X] = Memory Address 1 to 9.

**KEY OPERATION TERMS:**

- o **Press** = Press Key firmly.
  - o **Press (Hold)** = Press and hold down key.
  - o **Turn** = Change Mode
  - o **Key-In** = Enter a series of digits
- 

**BASIC OPERATION:**

**Power On/Off:**

- o Press(Hold): [PWR]. For On or Off. 8

**Place A Call:**

- o Key-in [Number]. Dial Number 8

**Send A Number:**

- o Press [SND] 8

**Receive A Call:**

- o Press [SND] 9

**End A Call:**

- o Press [END] 8,9
- 

**CONVENIENCE FUNCTIONS:**

**Edit Display:**

- o Press [CLR]. Erase Digit. 16
- Press [CLR Hold]. Erase display. 16

**Backlight:**

- o Press [Any Key] Except [PWR]  
  For 10-second backlight. 22

**View Hidden Digits:**

- o Press [FCN Hold].  
  With Number Displayed. 16

**Earpiece Volume Control:**

- o Press VOL during call. 9

**Keypad Volume Control:**

- o Press VOL during standby. 23

**View Own Number:**

- o Press [FCN] 18

**MEMORY STORING AND RECALL:****Store Number to Vacant Address:**

- o Key-in Number. Press [**FCN+MEM Hold**].  
(1st Vacant Location)  
Key-in Number. Press [**FCN+MEM**] +  
[**Memory Location**]. 13

**Store Number to Occupied Address:**

- o Key-in Number. Press [**FCN+MEM**] +  
[**Memory Location**]. Press [**MEM**]  
again to overwrite. 13

**Store Number From Scratchpad:**

- o Key-in Number During Conversation.  
Press [**FCN+MEM Hold**]. (1st Vacant Location)  
Key-in Number During Conversation.  
Press [**FCN+MEM**] + [**Mem Location**]. 13

**Recall Stored Numbers:**

- o Press [**MEM**] + [**Memory Location**]. 14  
For Direct Recall.  
Press [**MEM**] + [**01**]. Press # or ★.  
For Scrolling All Locations. 17  
Press [**MEM**] # or ★ .  
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**FCN KEY OPERATIONS:**

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