

SONY



*Portable Cellular Telephone
with accessories*

Operating Instructions

CM-H333

Portable Cellular Telephone with accessories

CM-H333

How to Make a Call

Getting Ready to Use



- 1 Charge the battery pack
- 2 Pull up the Antenna
- 3 Slide the earpiece up
- 4 Press **POWER** for 1 second

Making a Call

- 1 Slide the earpiece up.
- 2 Dial the number (There is no dial tone).
- 3 Press **SEND**.

Receiving a Call

Slide up the earpiece, if it is down or press any button on the keypad, except **POWER**, if the earpiece is up.

Ending a Call / Turning Power off.

Ending a call	Slide down the earpiece or press END .
Turning off	Press POWER for more than 1 second when earpiece is up.

FCC CAUTION STATEMENT

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's Record

The model number, regulatory number and serial number are located on nameplate inside the battery compartment. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your dealer regarding this product.

Model No.: CM-H333 Serial No.: _____

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Features

The CM-H333 is designed to meet your personal communication needs using the cellular radio telephone system, and provides many features that make it convenient and easy to use.

- **90 MINUTES CONTINUOUS TALK TIME** or 24 hours of standby time thanks to a standard size nicad battery.
- **SLIDE-UP EARPIECE** for sleek, compact portability; earpiece functions as SEND/END keys to receive and hang up phone calls.
- **2 ONE-TOUCH DIALING KEYS** allow you to call either of 2 stored numbers at the touch of a single button.
- **9 NUMBER MEMORY** allows you to store and automatically dial 9 of your most important telephone numbers.
- **RETRACTABLE ANTENNA**
- **10-DIGIT LIQUID CRYSTAL DISPLAY** shows telephone numbers and status messages.
- **OWN PHONE NUMBER RECALL**
- **MUTE FUNCTION** turns off the microphone so that the other party can't hear your side conversations.
- **4-LEVEL BATTERY STRENGTH INDICATOR** with a low battery alarm, assures you that your calls are not interrupted by a drained battery.
- **CONSTANT DISPLAY RSSI (Received Signal Strength) meter.**
- **LAST NUMBER REDIAL** conveniently redials busy numbers.
- **SCRATCHPAD MEMORY** allows you to temporarily store a number during conversation and redial it later.
- **END-TO-END SIGNALING** enables beep tone operation of answering machines, voice mail and other services using DTMF signaling.
- **CALL TIMERS** display the duration of your current call, last call, and total cumulative talk time.
- **ILLUMINATED KEYPAD** and display for clear visibility day or night.
- **ANY-KEY ANSWER** allows you to receive an incoming call by pressing any button on the keypad (except [POWER]) while the earpiece is up.
- **VOX (VOICE OPERATED TRANSMISSION)** prolongs battery life by activating the transmission power only while you are speaking.
- **NOISE CANCELING MICROPHONE** enhances sound quality by reducing background noise.
- **CALL-IN-ABSENCE** indicator displays CALLED when a phone call has been received but not answered.
- **AUTOMATIC ANSWER** picks up the phone after two rings when used with the optional Hands-Free Kit (QN-333HFK).
- **A/B SYSTEM MODE SELECTION** allows you to select the system and search the system; standard, A only, B only, or Home only.
- **DUAL NAM** enables you to register on two cellular systems.
- **ADJUSTABLE VOLUME** with independent controls for the earpiece and ringer/key tone.

Unpacking Your Phone

Carefully unpack your portable cellular telephone and check the contents with this list. If you have any questions, please contact your nearest SONY Cellular Telephone dealer. (Or in the USA dial the Sony Cellular Hotline on 1-800-578-7669.)

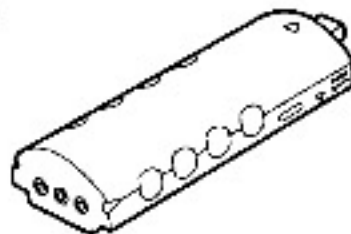
Handset CM-H333

(without pack)



Rechargeable battery pack

QN-333BP (1)



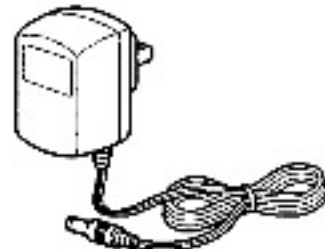
Battery charger

QN-333BC (1)



AC Adaptor QN-324AC, QN-322 AC or QN-321AC (1)

(for battery charger)



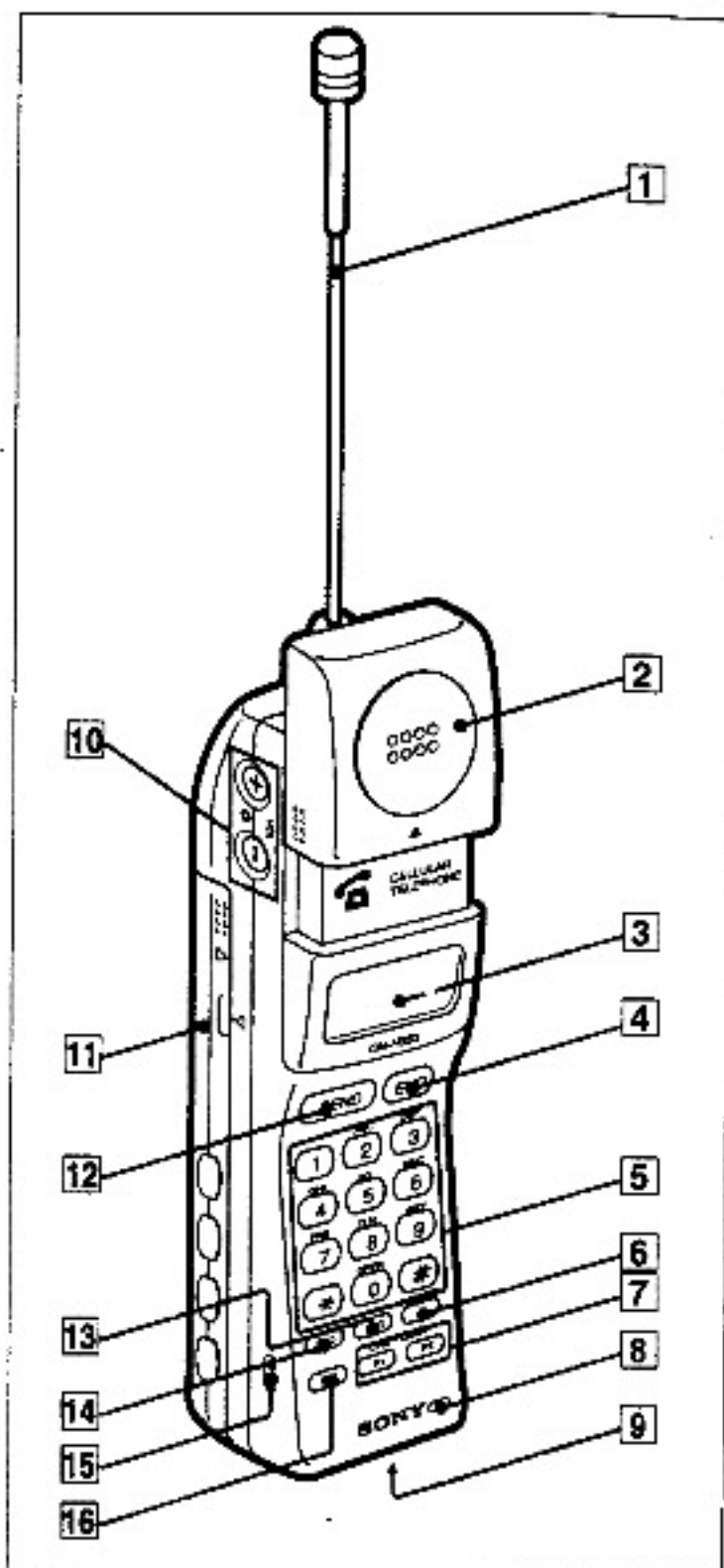
Operating Instructions

Quick Reference Card

Warranty Card (USA and Canada only)

Your Phone (What's What)

Phone



- 1 Antenna**
- 2 Earpiece**
Slide up when phone is used. All buttons are locked when it is down. To receive a call, slide up. To end a call, slide down.
- 3 Display**
- 4 END button**
Ends calls.
- 5 Number, * and # buttons**
- 6 POWER button**
Turns the telephone on/off. Press it for more than 1 second when the earpiece is up.
- 7 One-touch dialing buttons (P1/P2)**
Dials stored numbers with one touch. Press it for more than 1 second.
- 8 Microphone**
- 9 Connector**
Connects cigarette lighter cable or hands-free kit.
- 10 Volume + / - buttons (up/down)**
Adjusts ring/key tone and earphone volumes.
- 11 Battery pack**
- 12 SEND button**
Dials the number on the display. Also, activates flash hook signal for call waiting, three party conference, etc.
- 13 CLR (clear) button**
Clears the last/all digits on the display, or exits the current mode.
- 14 STO (store) button**
Stores numbers (up to 32 digits) in the memory or selected function mode.
- 15 Ringer**
- 16 RCL (recall) button**
Recalls the last dialed number and stored numbers. You can also select a function with this button.

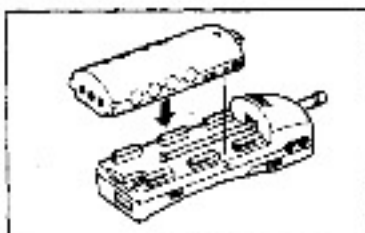
Battery Pack Charging

Charge the battery pack before using your phone.

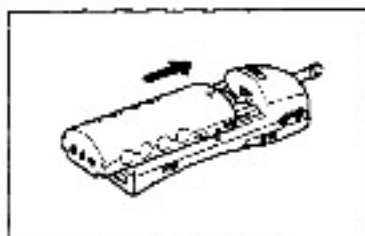
Attaching / Removing the Battery Pack

To attach the battery pack

1 Align the ∇ marks.

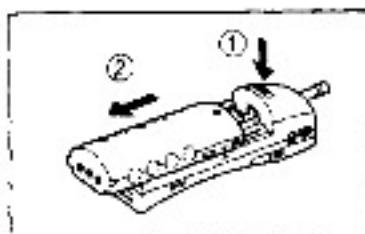


2 Slide on the battery pack.

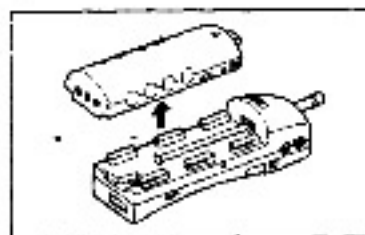


To remove the battery pack

1 While holding down the battery release button (1), slide off the battery pack (2).



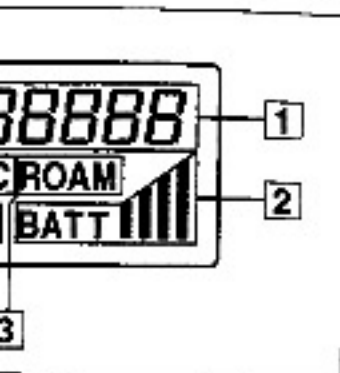
2 Remove the battery pack.



Note

If you leave your phone without the battery pack, or leave the battery pack discharged completely, for more than 5 days the memory for the following functions will be cleared:

- one-touch dialing (page 20)
- speed dialing (page 23)
- accumulated total talk time (page 31)



(up to 10 digits), call timers,

Strength indicator

(in BATT is displayed) and
(is not displayed).

outside of your home system,
the alternate system.

and the keypad is locked.
operation while the phone is

icator

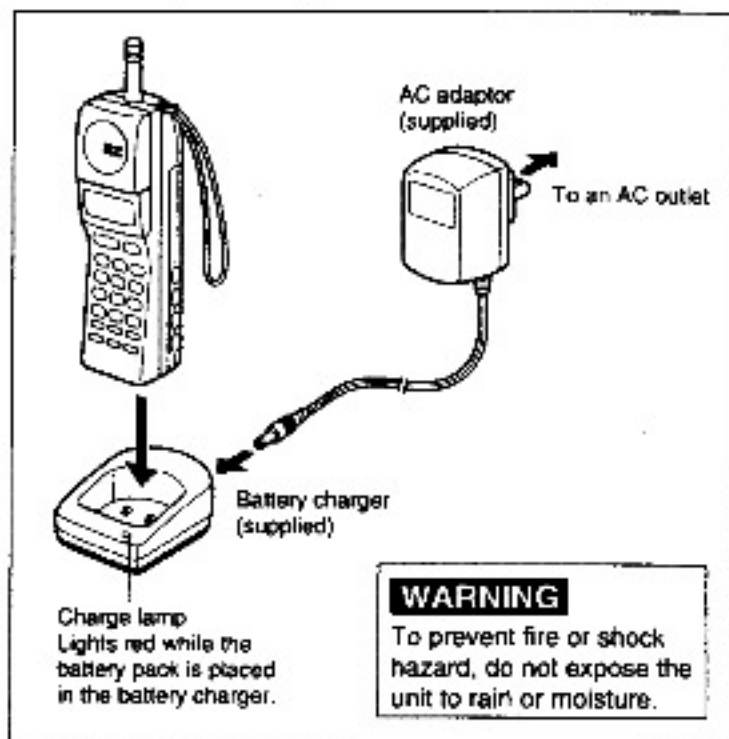
out of a service area. Move to
does not appear.

mutated. Press the \oplus volume
audible.

Charging the Battery Pack

Charging time is approx. 10 hours. The Charge lamp remains red during charging.

You can charge the battery pack with or without the phone.



To prolong battery life

To prolong the life of the battery, only recharge the battery when the battery alarm sounds.

Notes on charging

- Recharge the battery only when the battery alarm sounds.
- When you charge the battery pack, avoid:
 - charging for more than 24 hours (reduces battery life).
 - removing the battery from the charger or turning the charger off during recharging (adversely affects recharging cycle).
 - charging with the ambient temperature below 0 °C (32 °F) or over 45 °C (113 °F).
 - charging the battery pack in direct sunlight, or in places with high humidity such as a bathroom.
- Do not use any other battery or charger other than those specified in these instructions.
- It is normal for the battery to become warm during charging or after use.
- The supplied AC adaptor is not intended to be serviced, and in the event of a malfunction, should be replaced.

Notes on the battery pack

- Do not dispose of the battery pack in a fire or short-circuit it (the battery pack may leak, get hot, and/or cause personal injury).
- Do not try to disassemble the battery pack.

Checking the Battery

Battery duration

Continuous talk : Approx. 90 minutes
In standby mode : Approx. 24 hours

Battery status

Press (FCL) for more than 1 second to display the BATT indicator.

The BATT indicator displays the status of battery power as follows:

BATT	Fully charged.
BATT	Over half charged.
BATT	Under half charged (conversation still possible).
BATT	Your call may be cut off suddenly. You will need to replace or recharge the battery soon.
BATT	The battery is dead and you can hear the battery alarm. Replace or recharge the battery pack immediately.

For customers in the USA and Canada

RECYCLING NICKEL-CADMIUM BATTERIES

NICKEL-CADMIUM BATTERY. MUST BE DISPOSED OF PROPERLY



Ni-Cd

Nickel-Cadmium batteries are recyclable. You can help preserve our environment by returning your unwanted batteries to your nearest Sony Service Center for collection, recycling or proper disposal.

Note:

In some areas the disposal of nickel-cadmium batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (USA only).

For the Factory Service Center nearest you call 416-499-SONY (Canada only).

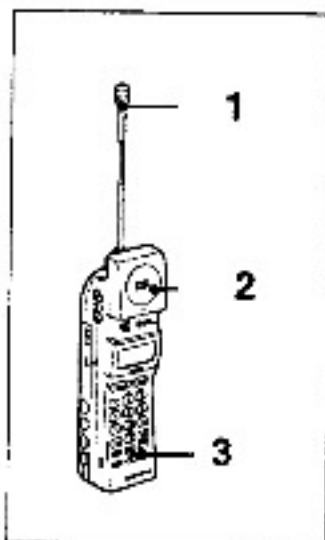
Caution:

Do not handle damaged or leaking nickel-cadmium batteries.

On/Off Control

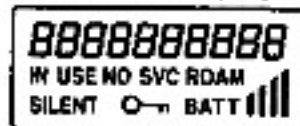
Turning the Power On

- 1 Pull up the antenna until it stops.
- 2 Slide up the earpiece until it clicks.
- 3 Press **(POWER)** for more than 1 second.

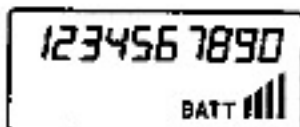


When you turn the power on, the phone beeps (wake-up) and the following appear on the display:

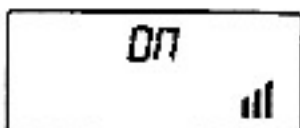
- 1) All the indicators and figure 8s appear momentarily.



- 2) Your own phone number and the battery power's status appear for 3 seconds.



- 3) You can now operate your phone. The signal strength is displayed and, after pressing any of the buttons except **(POWER)**, the display and keypad light up for 10 seconds



Signal strength

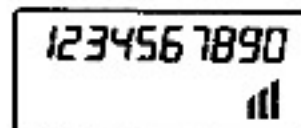
- ▬▬▬ Strong signal
- ▬▬ Good signal
- ▬ Fair signal
- ▬ Weak signal

Turning the Power On

Press **(POWER)** for more than 1 second when the earpiece is up.

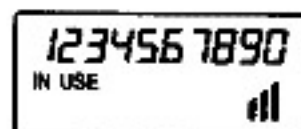
Making Calls

- 1 Make sure the power is on and the earpiece is up.
- 2 Enter the number.
(e.g. 1234567890)
The number you entered appears on the display. Please note that cellular phones do not have a dial tone.

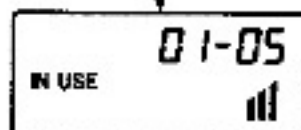


If you entered the wrong number, press **(CLR)** briefly to clear the last digit. To clear all digits, hold **(CLR)** for more than 1 second or press **(END)**. Then re-enter the correct number.

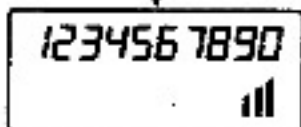
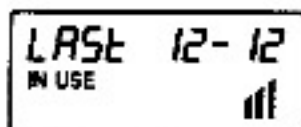
- 3 Press **(SEND)**.
The IN USE indicator appears. The dialed number on the display changes to the elapsed call timer.



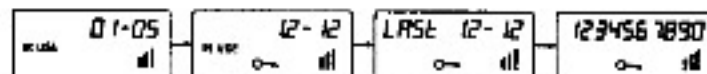
When your call connects, you will hear the ring back tone.



- 4 Press **(END)** (or slide down the earpiece*) to hang up.
The duration of your call (e.g. 12 minutes 12 seconds) appears for 3 seconds then the number you dialed (e.g. 1234567890) reappears.



- * Slide down the earpiece to hang up, the display changes as follows:



When the earpiece is down, appears.

If you slide down the earpiece by mistake, the call can be resumed by sliding it up within 3 seconds.

Unsuccessful Calls

If one of the following problems arise, your attempt to call was unsuccessful.

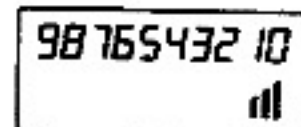
Problem	Cause
None or only one signal strength indicator bar appears.	Area of poor reception. Press (END) and move to where you can receive a stronger signal. In a building, move closer to a window.
Fast busy tone	The system did not process your call. Press (END) then retry by pressing (SEND) .
Alerting high-low tone	Out of service area. Press (END) and redial when you are in the service area.
Busy tone	Your connection was successful, but the number you called is engaged. Press (END) to disconnect the line and redial later.

Own Phone Number Recall

You can recall your own phone number in standby mode or during a call.

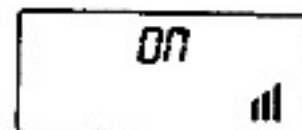
To recall your own phone number

- 1 Press **(RCL)**, **(#)**.
Your own phone number appears on the display.
(e.g. 9876543210)



To clear your own phone number

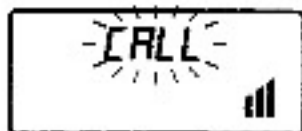
- 1 Press **(CLR)**.
Your own phone number disappears then "ON" appears.



Receiving Calls

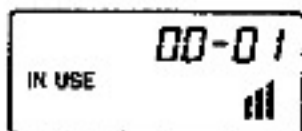
When the Earpiece is Up

- 1 The ring tone sounds.**
CALL flashes.
The display and keypad light up.

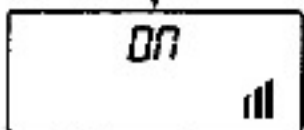
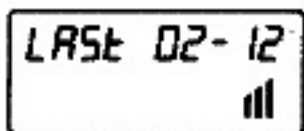


- 2 Pull up the antenna.**

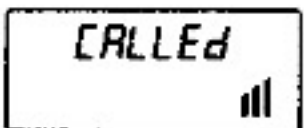
- 3 Press any button except (POWER) to answer the call.**
The elapsed call timer starts.
The display and keypad lights go off after 10 seconds.



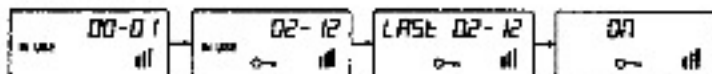
- 4 Press (END) (or slide down the earpiece*) to hang up.**
The duration of your call appears for 3 seconds then the display clears.



- When you do not answer a call, CALLED remains on the display to inform you that there was a call.



- * Slide down the earpiece to hang up, the display changes as follows:



When the earpiece is down,
☎ appears.

If you slide down the earpiece by mistake,
the call can be resumed by sliding it up within 3 seconds.

When the Earpiece is Down

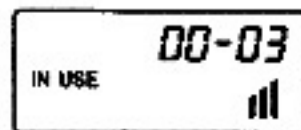
If the ring tone sounds, you will need to slide up the earpiece to answer the call.

- 1 The ring tone sounds.**
CALL flashes.
The display and keypad light up.

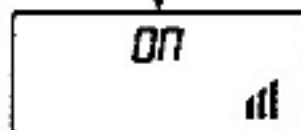
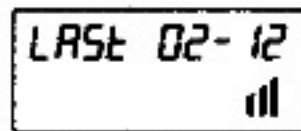


- 2 Pull up the antenna.**

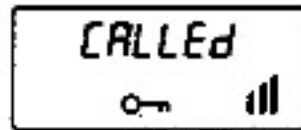
- 3 Slide up the earpiece until it clicks to answer the call.**
The elapsed call timer starts.
The display and keypad lights go off after 10 seconds.



- 4 Press (END) or slide down the earpiece (see page 16) to hang up.**
The duration of your call appears for 3 seconds then the display clears.



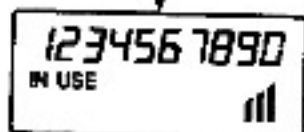
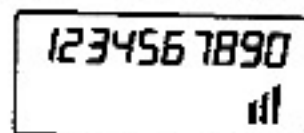
- When you do not answer a call, CALLED remains on the display to inform you that there was a call.



Last Number Redial

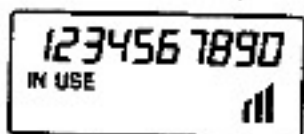
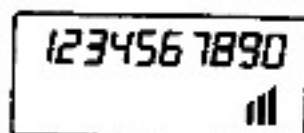
When a Number Remains in the Display

- 1 Press **SEND** to redial.



When No Number Remains in the Display

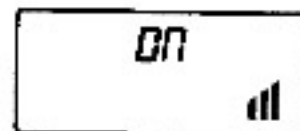
- 1 Press **RCL**, **0**.
The last number dialed appears.
(e.g. 1234567890)
- 2 Press **SEND** to redial the number.



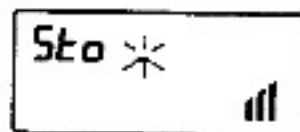
Deleting the Last Number Dialed

If you want to keep the last number dialed private, you can delete it.

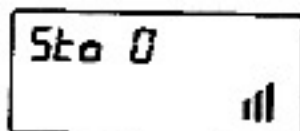
- 1 Press **CLR** for more than 1 second or **END**.
The display clears.



- 2 Press **STO**.
The cursor flashes.



- 3 Press **0**.
If the phone beeps, you have successfully deleted the number.
If it beeps intermittently, your key operation was incorrect.
Try again from step 2.

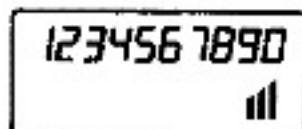


One-touch Dialing

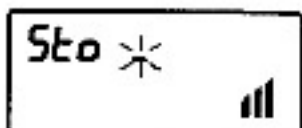
You can dial up to 2 frequently used numbers with one touch if you have stored the numbers in memory (P1) and/or (P2).

Storing a Number in Memory

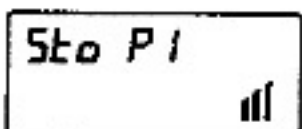
- 1 Enter the number you wish to store.



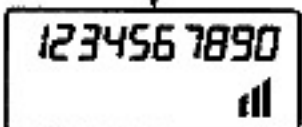
- 2 Press (STO).
The cursor flashes.



- 3 Press (P1) or (P2) (one-touch dialing buttons).
(e.g. (P1))

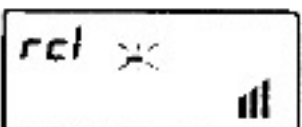


You will hear a beep when the number is stored in memory. If it beeps intermittently, your key operation was incorrect. Try again from step 2. If you enter a new number, the new number replaces the old one.

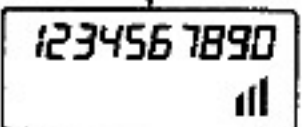
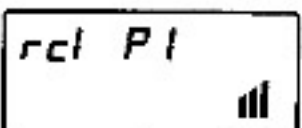


To review a stored number

- 1 Press (RCL).
The cursor flashes.



- 2 Press (P1) or (P2) (one-touch dialing buttons).
(e.g. (P1))
The number stored in (P1) appears on the display.



To change a stored number

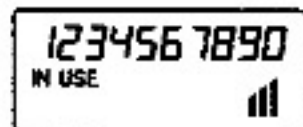
Follow the same procedure in "Storing a Number in Memory" (see above).

The new number will replace the old one.

Dialing with One Touch

- 1 Press (P1) or (P2) (one-touch dialing buttons) for more than 1 second.

The display clears, then the number stored in P1 or P2 appears and is dialed automatically.



- 2 Press (END) or slide down the earpiece (see page 13) to hang up.

Note

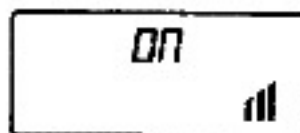
When you press a one-touch dialing button, your phone will beep intermittently if:

- you do not press the button for long enough.
- you have not stored a phone number in memory (P1) or (P2).

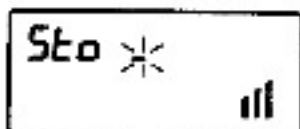
Deleting a Stored Number

You can delete a stored number if you no longer need it.

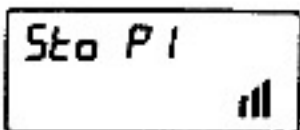
- 1 Press **(CLR)** for more than 1 second or press **(END)**.
The display clears.



- 2 Press **(STO)**.
The cursor flashes.

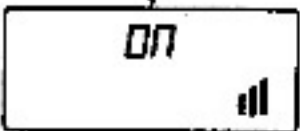


- 3 Press **(P1)** or **(P2)** (one-touch dialing buttons).
(e.g. **(P1)**)



You will hear a beep when the number in **(P1)** or **(P2)** is deleted.

If it beeps intermittently, your key operation was incorrect. Try again from step 2.

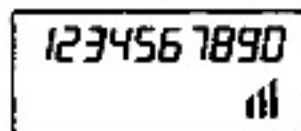


Speed Dialing

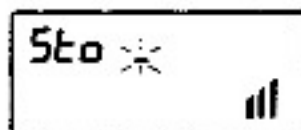
You can dial up to 9 frequently used numbers using speed dialing if you have stored numbers in the speed dialing buttons 1 to 9.

Storing a Number in Memory

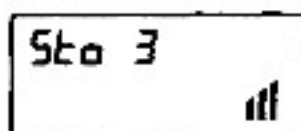
- 1 Enter the number you wish to store.
(e.g. 1234567890)



- 2 Press **(STO)**.
The cursor flashes.



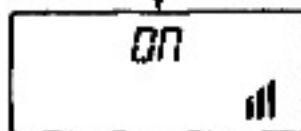
- 3 Press a speed dialing button (**1** to **9**).
(e.g. **3**)



You will hear a beep when the number has been stored in memory.

If it beeps intermittently, your key operation was incorrect. Try again from step 2.

If you enter a new number, the new number replaces the old one.



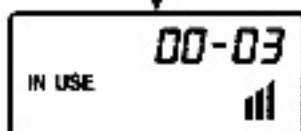
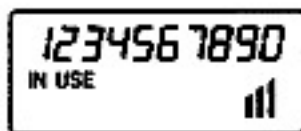
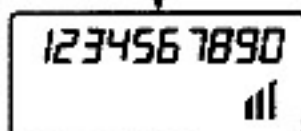
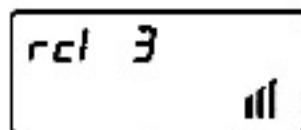
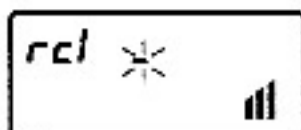
To change a stored number

Follow the same procedure as in "Storing a Number in Memory" (see above).

The new number will replace the old one.

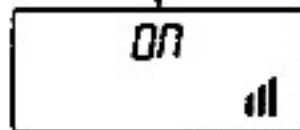
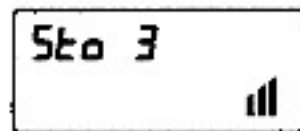
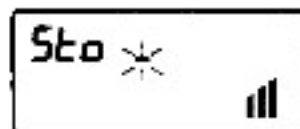
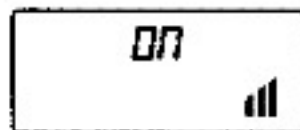
Dialing Using Speed Dialing

- 1 Press **(RCL)**.
The cursor flashes.
- 2 Press a speed dialing button (**1** to **9**).
(e.g. **3**)
The phone number stored in speed dialing button (3) appears for your confirmation.
- 3 Press **(SEND)**.
The IN USE indicator lights up.
The elapsed call timer starts.
- 4 Press **(END)** or slide down the earpiece (see page 13) to hang up.



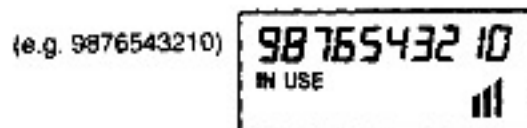
Deleting a Stored Number

- 1 Press **(CLR)** for more than 1 second or **(END)**.
The display clears.
 - 2 Press **(STO)**.
The cursor flashes.
 - 3 Press a speed dialing button (**1** to **9**) for more than 1 second.
- You will hear a beep when the number is deleted.
If it beeps intermittently, your key operation was incorrect.
Try again from step 2.



Scratchpad Memory

You can use the scratchpad memory to memorize a phone number during a call.
Enter the number you wish to remember during your call. After you hang up, the number you entered remains on the display.



To change the last digit (while entering)

Press **(CLR)** then re-enter a new last digit.

If you hold **(CLR)** for more than one second, the elapsed call timer appears.

Notes

- To dial the number in the scratchpad press **(SEND)**.
- To dial the last number you dialed press **(RCL)**, **(Q)**, **(SEND)**.

To store a scratchpad number into one-touch or speed dialing memory

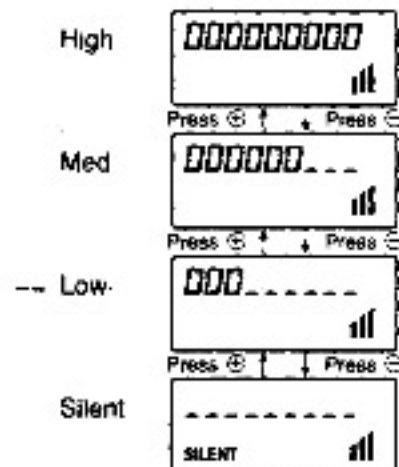
See "Storing a Number in Memory" in "One-touch Dialing" (page 20) or "Speed Dialing" (page 23) and follow the procedure from step 2.

Volumes Adjustment

Adjusting the Ring Tone, Key Tone and Wake-up Tone Volumes (in standby mode)

There are 3 volume levels plus a silent level for the ring tone, key tone and wake-up tone.

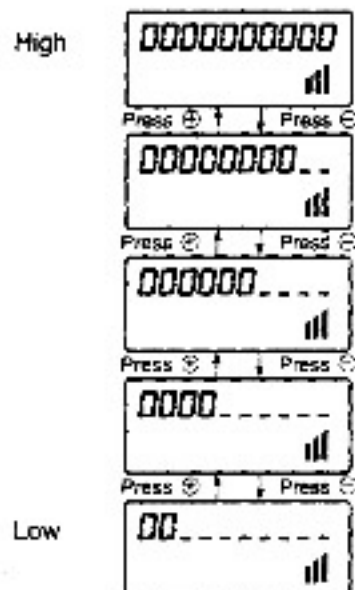
Press **(+)** or **(-)** to scroll the volume levels as follows:



Adjusting the Earphone Volume (during a call)

There are 5 levels for the earphone volume.

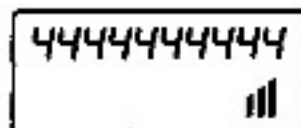
Press **(+)** or **(-)** to scroll the volume levels as follows:



Reviewing Overflowed Digits

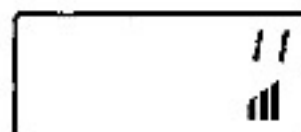
When you dial a phone number of more than 10 digits (up to 32 digits), only the last 10 digits appear on the display. You can review the overflowed digits.

(e.g. number: 1122222222233333333334444444444)



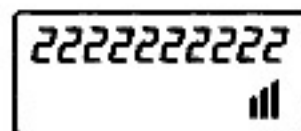
- 1 Press **(RCL)**, **(RCL)**.

The 1st and 2nd digits (11) appear for 2 second.

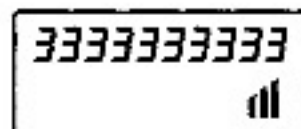


The display then changes as follows:

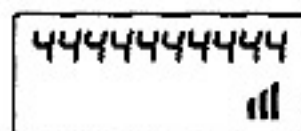
- The next 10 digits (2222222222) appear for 3 seconds.



- The next 10 digits (3333333333) appear for 3 seconds.



- The last 10 digits (4444444444) appear and remain on the display.



DTMF Signals Transmission

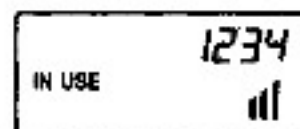
The DTMF (Dual Tone Multiple Frequencies) signals are often required for many services, such as telephone answering machines, telephone banking, etc. You can transmit DTMF signals from the keypad or memory (providing you have stored DTMF numbers).

Transmitting DTMF Signals From the Keypad

- 1 Enter a DTMF number during a call.

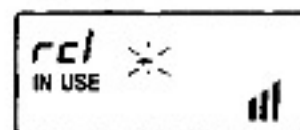
(e.g. 1234)

The DTMF number appears on the display and is transmitted as DTMF signals.



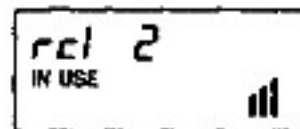
Transmitting DTMF Signal Using Speed Dialing (during a call)

- 1 Press **(RCL)**.

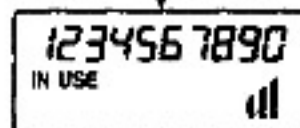


- 2 Press a speed dialing button (① to ⑨) where a DTMF number is stored.

The DTMF number is transmitted as DTMF signals.



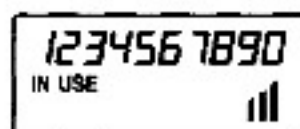
If the DTMF number contains more than 10 digits, only the last 10 digits are displayed.



Transmitting DTMF Signals Using One-touch Dialing (during a call)

- 1 Press **(P1)** or **(P2)** where a DTMF number is stored for more than 1 second.

The DTMF number is transmitted as DTMF signals.



If the DTMF number contains more than 10 digits, only the last 10 digits are displayed.

Note

When making 3 party conference calls:

Manual: Press DTMF No., **(SEND)**.

Speed dialing: Press **(RCL)**, ①-⑨, **(SEND)**.

One-touch: Press **(P1)** (or **(P2)**) for more than 1 second, **(SEND)**.

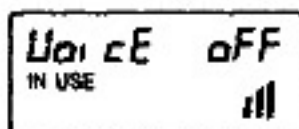
Muting Your Voice

If you do not wish your side conversations to be heard by the other party during a call, you can mute your voice.

Turning Mute On (during a call)

- 1 Press **(FCL)**, **(*)**, **(0)**.
The mute function turns on.

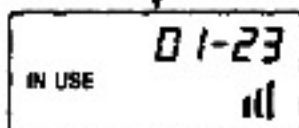
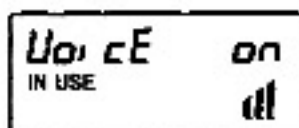
Your voice cannot be heard by the other party, however you can still hear the other party through the speaker.



Turning Mute Off

- 1 Press **(CLR)**.
The mute function turns off.

You can be heard by the other party.

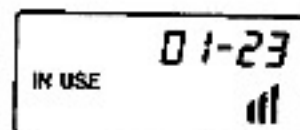


Call Timers

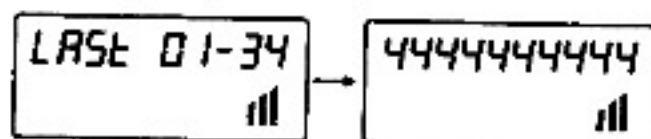
You can review the duration of your call.

Reviewing the Call Timer (during a call)

You can review the elapsed time during your call.

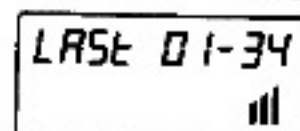


When you hang up, the duration of your call remains on the display for 3 seconds, then the last 10 digits of the number you have just called appear on the display.

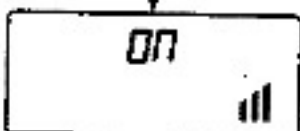
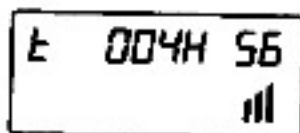


Displaying the Last Call and Total Call Timer (in standby mode)

- 1 Press **(FCL)**, **(*)**, **(1)**.
The duration of the last call you made appears for 3 seconds.
(e.g. 1 minute 34 seconds)



Then the accumulated total talk time appears for 3 seconds and your phone returns to standby mode.
(e.g. 4 hours 58 minutes)



Notes

- The total call time is counted separately for each NAM.
- The total call time is counted in 1 minute intervals, rounded up to the next highest minute (60 seconds increment).
- You cannot reset the total call time.
- You should only use the total call time as a rough reference.

A/B System Mode Selection

Each cellular service area has two service providers (carriers). One is the A carrier ("Non-wireline" carrier) and the other is the B carrier ("Wireline" carrier). When your subscribed carrier does not provide coverage in the area which you are in, your phone will search for another cellular service carrier. You can control the order in which your phone searches for a system by using the A/B system selection feature.

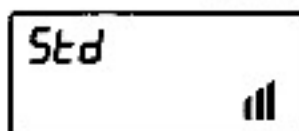
When you have gone out of your "home" service area, the ROAM indicator appears. If ROAM is steady, you are operating the phone outside of your home area, but you are in the same type of system as your home system (A or B). If ROAM is blinking, you are operating the phone in the opposite system as your home system. Airtime charges are normally higher when roaming. (Placing a local call while roaming usually requires dialing the area code as well as the 7-digit number.)

You can select one of 4 modes:

Std (standard)	When the A system is the service you subscribe to, your phone will first seek service in the A system (when either in your home area or roaming), then search service in the B system. When the B system is the service you subscribe to, your phone will first seek service in the B system (when either in your home area or roaming), then search service in the A system.
A-only	Only searches the A system for service.
B-only	Only searches the B system for service.
H-only (home only)	Only searches your home system for service. This mode does not allow roaming.

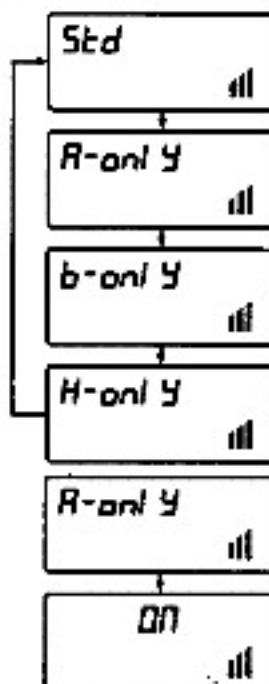
Reviewing the Current Mode

- 1 Press **RCL**, *****, **2**.
The current mode is displayed.
(e.g. Std mode)



Switching Modes

- 1 Press **RCL**, *****, **2**.
The current mode is displayed.
- 2 Press ***** to select a mode.
Press ***** to scroll modes as follows:



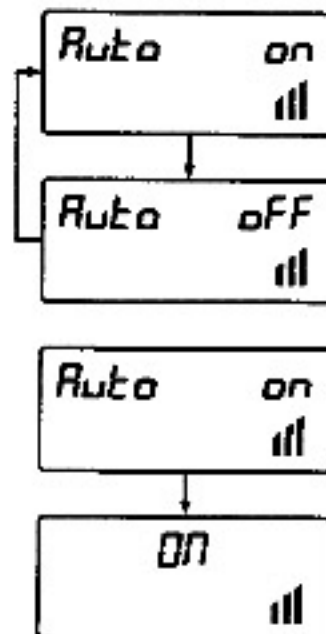
- 3 Press **STO** to confirm your selection.
The mode switches to your selection and your phone returns to standby mode.

Automatic Answer Selection

The automatic answer function is only available with the optional Hands-Free Kit (QN-333HFK). If you receive a call with this function on, your phone sounds two alert tones and enters conversation mode automatically.

Turning Automatic Answer On/Off

- 1 Press **RCL**, *****, **3**.
The current on/off status is displayed.
Press ***** to toggle the function on/off.
The display changes as follows:



- 2 Press **STO** when "Auto on" appears to turn on the function.
The selected status is displayed for 3 seconds then your phone returns to standby mode.
(e.g. Auto on)

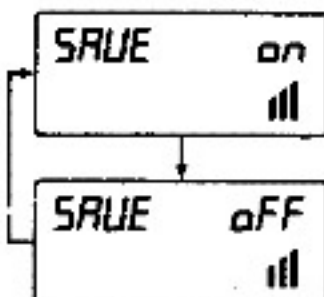
Press **STO** when "Auto off" appears to turn off the function.

Saving Battery Power (VOX)

Your phone is equipped with a VOX (Voice Operated Transmission) function which prolongs battery life by activating transmission power only when you are speaking. When you are listening, transmission power is cut thus reducing the overall power consumption during your conversation. This function is only available when operating your phone using a carrier that provides the VOX service.

Turning VOX On/Off (during standby mode)

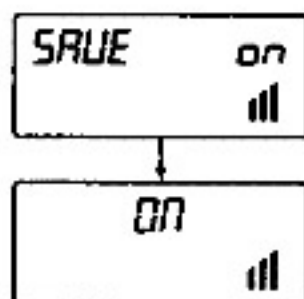
- 1 Press **RCL**, *****, **4**.
The current on/off status is displayed.
Press ***** to toggle the function on/off. The display changes as follows:



- 2 Press **STO** when "SAVE on" appears to turn on the function.

The selected status is displayed for 3 seconds then your phone returns to standby mode.

Press **STO** when "SAVE off" appears to turn off the function.

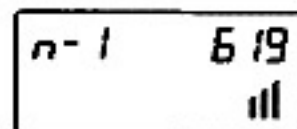


NAM Selection

Your phone has two NAMs (Number Assignment Modules). You can switch between the two NAMs by registering on two different cellular systems.

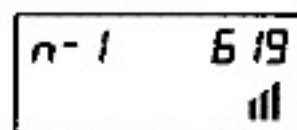
Reviewing the Current NAM (during standby mode)

- 1 Press **RCL**, *****, **5**.
The current NAM with a 3-digit area code is displayed. (e.g. NAM 1)

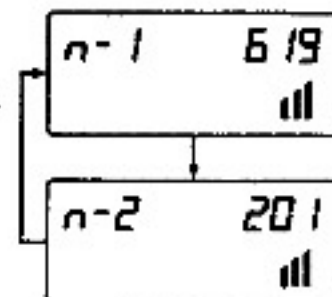


Switching the NAM

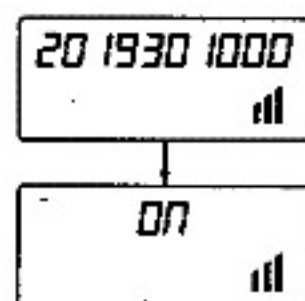
- 1 Press **RCL**, *****, **5**.
The current NAM is displayed.



- 2 Press ***** to select the NAM.
Press ***** to switch the NAM. The display changes as follows:



- 3 Press **STO** to confirm your selection.
The 10-digit NAM telephone number is displayed for 3 seconds then "on" appears.



Rules and Regulations

The U.S. Federal Communications Commission and the Canadian Department of Communications regulate cellular radiotelephone service in their respective countries. It is important for you, the cellular radiotelephone user, to observe the applicable regulations when operating your cellular phone in either country. In addition to these U.S. and Canadian federal regulations, you may also be bound by certain state, provincial, territorial, and local rules and regulations, as well as by your cellular carrier's tariff (the rates, terms, and conditions of its service). If you wish to use your cellular radiotelephone in both the U.S. and Canada, please consult with your system operator.

Furthermore, you should remember that your cellular phone is a *radiotelephone*, — i.e., it combines both wireline technology, as used in your home or office telephone system, and radio technology — and that the scope of regulations and precautions is therefore broader than the scope of regulations and precautions relating to wireline-only telephone usage.

Some of the major points of consideration are set out below. Please note, however, that this "Rules, Regulations, and Precautions" section does not constitute legal advice; and is intended merely for general information purposes. If you have any specific questions, please contact your Cellular Carrier (System Operator).

License — If your home system is in the U.S., you do not require a separate license to operate your cellular radiotelephone; obtaining a cellular telephone access number is sufficient to register you as a user. If your home system is in Canada, a separate license is required; your carrier will assist you in the licensing process. (If you wish to use your cellular phone on both sides of the border, please contact your Cellular Carrier (System Operator).

Denial of Service — A cellular carrier may deny service temporarily or terminate service for violation of any government regulations or of its tariff.

Privacy — As a telephone user, you have come to assume a certain standard of privacy when you place or receive a telephone call via the traditional wireline systems. However, because cellular radiotelephones utilize radio transmissions to effect calls, the same standard cannot always be assured. While it is unlawful for any unauthorized person to divulge or use any information obtained from intercepting or "listening in on" conversations intended for others, you should not assume that your conversation is completely secure. Commercially available scanning equipment can permit a third party to monitor the radio channels used for cellular telephone calls.

Interference — No person shall interfere with or cause interference to any radio communication or signal.

Equipment Modifications — Both the U.S. Federal Communications Commission and the Canadian Department of Communications have type-approved the model of cellular radiotelephone which you have purchased, and both have allocated a specific frequency range for cellular service. No changes or adjustments are to be made to your cellular phone.

The radio equipment shall be made available for inspection upon request by representatives of the FCC or licenses.

Safety Precautions

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 and receives. 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) adopted a Standard for safety levels with respect to human exposure to RF energy. Over 120 scientists, engineers, and physicians from universities, government, and industry, after reviewing the available body of research, developed this Standard. In March, 1993, the Federal Communications Commission (FCC) proposed the adoption of this Standard.

Your phone is designed to comply with this Standard. If you want to limit RF exposure even further, 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 quality, you should:

Extend the antenna fully. Some models allow you to place calls with antenna retracted. However, your phone operates more efficiently with the antenna 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. Electricity from a damaged antenna may cause a minor burn. 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. Unauthorized antennas, modification or attachments could damage the phone and may violate FCC regulations.

Use While Driving

Some states prohibit the use of a cellular telephone while 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,
- use hands-free operation, if available,
- pull off the road and park before making or answering a call if driving conditions so require.

Use around Electronic Devices

Most modern electronic equipment—for example, equipment in hospitals and cars—is shielded from RF energy. However, RF energy from cellular telephones may affect some electronic equipment.

Turn your phone OFF in health care facilities when any regulations posted in the area instruct you to do so. Always request permission before using your phone near medical equipment.

RF energy may affect some electronic systems in motor vehicles. Check with your manufacturer's representative to be sure your phone will not affect the electronics systems of your vehicles.

Use on Aircraft

Turn your phone OFF before boarding any aircraft.

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

To prevent interference with critical aircraft systems, Federal Aviation Administration (FAA) regulations require you to ask for permission from a crew member to use your phone. To prevent interference with cellular systems, FCC regulations prohibit using your phone while you are in the air.

Use by Children

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

Use Around 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.

Use Around 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 area such as gas stations, below deck on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles, such that grain, dust, or metal powders.

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

Vehicles powered by 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: Publications Sales Division.

Specifications/Accessories

Specifications

Signaling format	Complies with EIA specifications
Frequency range	Transmit: 824.040 to 848.970 MHz Receive: 869.040 to 893.970 MHz
Channel spacing	30 kHz
Number of channels	832
Frequency stability	±2.5 ppm at -30 °C to +60 °C (-22°F to 140°F)
RF output power	0.6 W
Power control	4 dB stepdown from 0.6 W
Power requirement	4.8 V DC
Battery life	Approx. 90 minutes (continuous talk) Approx. 24 hours (continuous standby)
Operating temperature	-30 °C to +60 °C (-22°F to 140°F) (excluding battery pack and display)
Battery pack charging temperature	+10 °C to +40 °C (50°F to 104°F)
Dimensions	40 x 150 x 33.5 mm (W/H/D) (not including antenna) (5 7/8 x 1 9/16 x 1 5/16 inches) (including battery, projecting parts not included)
Weight (Mass)	Approx. 235 g (8.2 oz) (including battery)

Accessories

Supplied accessories

Battery pack	QN-333BP (1)
Battery charger	QN-333BC (1)
AC adapter	QN-324AC (Canada, Mexico, Taiwan, USA, Venezuela, etc.) QN-321AC (Argentina, Indonesia, Paraguay, Philippines, Uruguay, etc.) QN-322AC (Australia, etc.)

Optional Accessories

Battery pack	QN-333BP
Rapid battery charger	QN-331BC
Cigarette lighter cable	QN-333CC
Leather carrying case	QN-334LC
Hands-free kit	QN-333HFK

Design and specifications are subject to change without notice.

If You Have a Problem

Should you have any problems with your portable cellular telephone, use the following simple checklist to determine whether servicing is required. If the problem persists after you have made these checks, consult your nearest SONY Cellular Telephone dealer.

Problem	Cause/Solution
Nothing happens when you press any buttons.	<ul style="list-style-type: none">• The earpiece is down.
The unit does not operate.	<ul style="list-style-type: none">• Battery is not charged enough.• Battery is not attached correctly.• The earpiece is down.
The NO SVC indicator is lit.	<ul style="list-style-type: none">• The phone is outside the cellular coverage area or in a location where signal reception is weak e.g. in a tunnel, underground parking lot, building, elevator, etc.• The antenna is not fully extended.
You hear the fast busy tone.	The cellular system is busy. The "busy" status may be caused by very high cellular traffic depending on your location and/or time of day. Wait for a few minutes then retry.
The unit beeps at 30 second intervals and BATT flashes.	<ul style="list-style-type: none">• The battery is discharged. Press END or slide down the earpiece to hang up. Replace or recharge the battery pack immediately.

Sony Cellular Hotline Number (USA only)

If you have any questions or comments, please call:
SONY CELLULAR HOTLINE
1-800-578-SONY (7669)

Cellular Operation Glossary

A Carrier	A company providing cellular service, usually referred to as a non-wire line carrier.
A/B Switching	A cellular phone feature that permits the user to switch from one carrier or service to the other.
B Carrier	A company providing both conventional telephone and cellular services, usually referred to as a wire line carrier.
Carrier	A company providing cellular service, classified as either A or B.
Cell	The area in which a cellular call can be made. Cells contain a cell site at their center and usually have a radius of one to eight miles.
Cell Site	The center of a cell housing the necessary equipment used for cellular calls.
Dropout	A momentary loss of signal caused by a failed handoff, poor cellular coverage or other similar circumstances. A brief dropout can be annoying while a longer one may result in a disconnection.
Dead Spot	An area where cellular service cannot be used due to signals being blocked by adverse weather or terrain etc.
ESN	Electronic Serial Number. Each cellular phone has this unique number which is transmitted when a call is made.
Handoff	The transfer of the cellular signal for a phone call from one cell site to the next.
Home Carrier	The carrier with which the cellular user originally registered.
MTSO	Mobile Telephone Switching Office. Computers which control the cell sites are located here.

- NAM** Number Assignment Module. A location which contains information such as a phone number and ESN that is specific to your cellular phone.
- Non-wire line** A cellular carrier that provides only cellular telephone services. These carriers are also known as A carriers.
- Off-Peak Time** The period of the day when the system is used least. Cellular carriers usually define off-peak time as being between 7:00 PM and 7:00 AM, as well as weekends and holidays. Rates are usually lowest during this period. These times may vary from carrier to carrier.
- Peak Time** The period of the day when the system is used most. Cellular carriers usually define peak time as being between 7:00 AM and 7:00 PM, Monday through Friday. Rates are usually higher during these periods. These times may vary from carrier to carrier.
- Roaming** Initiating or receiving a call outside of your service area (home system). Roaming usually entails additional fees from the carrier.
- Roam Indicator** A feature on a cellular phone that alerts you when you have gone beyond your service area (home system). The light is steady if you enter an area which uses the same carrier as your home system, but flashes for areas using the other carrier.
- Service Area** The region covered by the cellular service to which you subscribe.
- Wire line** A cellular carrier that provides both conventional telephone and cellular service. These carriers are also known as B carriers.

Quick Reference

Placing and Receiving a Call

X: 1-9

Keypad dialing	Phone number + SEND
One-touch dialing	P1 or P2 + SEND
Speed dialing	RCL + X + SEND
Redialing the last number	RCL + 0 + SEND
Receiving a call	Any key except POWER or slide up the earpiece
Ending a call	END or slide down the earpiece

Recalling a Number

Recalling own phone number	RCL + #
Recalling a memory location	RCL + X
Reviewing last No. dialed	RCL + 0
Reviewing overflowed digits	RCL + RCL

Storing a Number in One-touch/Speed dialing Memory

One-touch dialing	Phone number + STO + P1 or P2
Speed dialing	Phone number + STO + X

Clearing a Memory Location

One-Touch dialing	CLR (hold for 1 sec) + STO + P1 or P2
Speed dialing	CLR (hold for 1 sec) + STO + X
Last No. dialed	CLR (hold for 1 sec) + STO + 0

DTMF Transmission from Memory

One-touch dialing	P1 or P2 (during a call)
Speed dialing	RCL + X (during a call)

Volumes Adjustment

Earpiece	+ or - (during a call)
Ringer/key tone	+ or - (in standby mode)
Mute ringer/key tone	- (hold until SILENT appears in display)
Mute microphone	RCL + * + 0
Cancel mute microphone	CLR

Call Timers

Elapsed call timer	Automatic. Or RCL + * + 1 (during a call)
Last call/Total call (can't reset)	RCL + * + 1

General Functions

Cleaning the last digit	CLR
Cleaning all digits	CLR (hold for 1 sec)
Battery level	RCL (hold for 1 sec)
Reviewing A/B system mode	RCL + * + 2
Changing A/B system mode	RCL + * + 2 + * + **** + STO
Reviewing VOX setting	RCL + * + 4
Changing VOX setting	RCL + * + 4 + * + STO
Reviewing Auto Answer setting	RCL + * + 3
Changing Auto Answer setting	RCL + * + 3 + * + STO
Reviewing selected NAM	RCL + * + 5
Changing NAM	RCL + * + 5 + * + STO