

Welcome

Thank you for choosing Motorola—a global leader in communications technology.

All Motorola phones are designed and manufactured to meet Motorola's exacting specifications and world-class quality standards. During development, our laboratory testing team took the durable digital V. Series™ phone through its paces. They cooked it, steamed it, shook it, shocked it, dusted it, and dropped it—and the phone still worked! We are confident that the one you purchased can meet your own exacting standards.

Thank you for choosing Motorola, and we hope you enjoy your Digital V8160 wireless phone!

Guide Overview

Okay, you've got a brand new phone with a bunch of nifty features.

Now what?

Afraid you'll press the wrong key?

Or forget a feature or two?

Don't sweat it!

We've designed this guide to take you step-by-step through each feature of your new digital V. Series™ phone.

We'll show you what key to press and what happens when you press it. Follow along, chapter-by-chapter, and you'll find it's as easy as 1-2-3.

Here's an idea of what you'll learn in each chapter:

Getting Started

First things first. Once the box is open, this section will show you where to begin. We will explain what came with your new phone and show you how to use the battery. Turn to page 10 to get started.

The Basics

What do all those buttons and lights mean? How do I make my first phone call? In this section, we'll answer those questions and teach you everything necessary to start using your new phone. Begin learning "The Basics" on page 22.

Using Memory

Read "Using Memory," beginning on page 36, and we will explain how to make the most of your new phone's internal Phone Book. You'll learn how to save time with dialing shortcuts and memory features that make it easy to place quick calls.



Guide Overview

Using Messaging *

This digital V. Series™ phone supports optional messaging services, like Caller ID, which allows you to see who is calling before you answer. It can even receive alphanumeric messages just like a pager and tell you when you have Voicemail. Turn to page 52 to begin “Using Messaging.”

Using the Minibrowser and Data Features *

With a service subscription, your phone can access up to the minute information with the Minibrowser! You can use the phone to retrieve on demand weather reports, sports scores, stock reports, and much more. See page 108.

With the addition of the Motorola Data Connectivity Kit, you can hook your phone up to a compatible computer and send and receive faxes and data. See page 116.

The Works

When you are ready to learn the advanced features of your new phone, turn to page 60 for “The Works.” We will explain everything from navigating the menu system to electronically locking your phone.

So relax!

Let us show you what your Digital V Series phone can do!



* Network and service dependent feature. Not available in all areas.

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Exposure to Radio Frequency Signals



Antenna Care

Phone Operation

Safety Information

Important: Read this information before using your wireless handheld phone.

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with safety standards previously set by both U.S. and international standards bodies:

- American National Standards Institute. C95.1 (1992).
- National Council on Radiation Protection and Measurements. Report 86 (1986).
- International Commission on Non-Ionizing Radiation Protection. (1996).
- Ministry of Health (Canada). Safety Code 6.

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

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

Important: To maintain compliance with FCC RF exposure guidelines, if you wear a handset on your body use the Motorola supplied or approved carrying case, holster, or other body-worn accessory. If you do not use a body-worn accessory, ensure the antenna is at least one inch (2.5 centimeters) from your body when transmitting. Use of non-Motorola accessories may violate FCC RF exposure guidelines.

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

Normal Operation:

Hold the phone as you would any other telephone, with the antenna pointed up and over your shoulder.

Safety Information

Tips on Efficient Operation:

Observe the following guidelines to operate your phone most efficiently:

- Extend your antenna fully.
- Do not touch the antenna unnecessarily when the phone is in use. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

Caution: All batteries can cause property damage, injury or burns if a conductive material, such as jewelry, keys or beaded chains, touches exposed terminals. The material may complete an electrical circuit and become quite hot. To protect against such unwanted current drain, exercise care in handling any charged battery, particularly when placing it inside your pocket, purse or other container with metal objects. When the battery is detached from the phone: your battery is packed with a protective cover; please use this cover for storing your battery when not in use.

Check the laws and regulations on the use of wireless telephones in the areas where you drive. Always obey them. Observe the following guidelines when using your phone while driving:

- Give full attention to driving—driving safely is your first responsibility;
- Use hands-free operation, if available;
- Pull off the road and park before making or answering a call if driving conditions so require.

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

Pacemakers

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

Batteries



Driving



Electronic Devices



Safety Information

Persons with pacemakers:

- Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;
- Should not carry the phone in a breast pocket;
- Should use the ear opposite the pacemaker to minimize the potential for interference.
- Should turn the phone OFF immediately if you have any reason to suspect that interference is taking place.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your phone OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles



RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Turn your phone OFF in any facility where posted notices so require.

Aircraft

FCC regulations prohibit using your phone while in the air. Switch OFF your phone before boarding an aircraft.

Blasting Areas

To avoid interfering with blasting operations, turn your phone OFF when in a “blasting area” or in areas posted: “Turn off two-way radio.” Obey all signs and instructions.

Safety Information

Turn your phone OFF and do not remove the battery when in any area with a potentially explosive atmosphere, and obey all signs and instructions. Sparks from your battery in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gasoline stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where fuel odors are present (for example, if a gas/propane leak occurs in a car or home); 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.

An air bag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

Your wireless radiotelephone is designed for excellent durability under normal use conditions. Protect your wireless telephone from water damage that could result from spills or excessive exposure to rain. Never submerge your wireless phone.

Cleaning of this product should only be done with a damp cloth. The use of chemical cleaners may harm the finish and integrity of the radio housing and is not recommended.

Potentially Explosive Atmospheres



Vehicles Equipped with Air Bags

Equipment Care

Cleaning the Phone

Getting Started

The digital V. Series™ phone comes equipped with a standard battery and an AC adapter to get you up and running. An exciting line of accessory options can customize your wireless package for maximum performance and portability. This chapter will show you how to get started with your new wireless package.

In this chapter we will explain how to:

- Attach and charge batteries.
- Use chargers.

Package Content Options



Digital V8160 Phone

Package Content Options



Slim LiIon Battery



Slim Battery Cover



Holster



AC Adapter

Your phone and accessories may not look exactly as pictured.

Introduction to Batteries

Each battery is shipped in an uncharged state with a protective clip on it. Before you can use your phone, you will need to remove the clip from the battery and charge it.

Battery Clips

It is a good idea to save the protective clip to store and carry the battery when not in use. The clip prevents objects from touching the battery terminals, thereby reducing the risk of injury or damage from a short circuit.

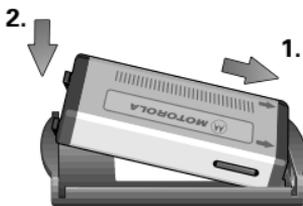
Removing the Main Battery Clip

- 1. Press Tab** Hold one end of the battery/clip in one hand. Press down on the tab at the opposite end of the clip with your other hand.
- 2. Remove Clip** Rotate the clip away from the battery.



Attaching the Main Battery Clip

- 1. Insert Side** Insert one end of the battery into the clip, so that the battery fits the notches on the clip.
- 2. Click Latch** Click the other side of the battery into place.



Installing Batteries

Battery Installation

To install a battery:

- 1. Remove Cover** Slide the release latch toward the top of the phone. With your other hand, rotate the cover away from the phone.



- 2. Insert Battery** Insert the battery, printed arrows first, into the top edge of the battery compartment. Continue to push the arrows forward gently. Then push the bottom edge down until it snaps into place.



- 3. Replace Cover** Insert the tabs of the battery cover into the notches on the bottom edge of the battery compartment. Rotate the cover down until it snaps into place.



Installing Batteries

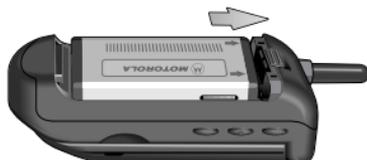
Battery Removal

To remove a battery:

- 1. Remove Cover** Slide the release latch toward the top of the phone. With your other hand, rotate the cover away from the phone.



- 2. Remove Battery** Push the battery toward the top of the phone until the bottom edge comes clear. Rotate the bottom edge of the battery up and lift the battery from the phone.



- 3. Replace Cover** Insert the tabs of the battery cover into the notches on the bottom edge of the battery compartment. Rotate the cover down until it snaps into place.



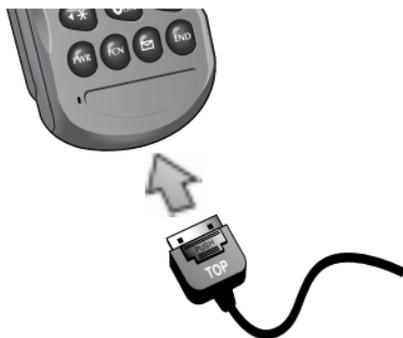
Charging Batteries

Using the Internal Rapid Charger

Believe it or not, there is a battery charger built right into your phone! To make use of the internal charger, you will need either an AC adapter or a vehicle power adapter.*

Keep in mind: When the internal charger is in use and the phone is ON, you can still place and receive calls. However, talking on the phone requires energy, so your phone may not charge while the call is in progress.

- 1. Attach Adapter to Phone** Plug the AC or vehicle power adapter into the accessory connector on the bottom of your phone as shown, with the release tab facing up.
- 2. Plug In Adapter** Plug the adapter into the appropriate power source. Your phone will beep to let you know the AC adapter is connected on both ends.



Keep in mind: In some cars, the ignition must be ON to use the vehicle's accessory power.

* Check with your retailer for availability of the adapters.

Charging Batteries

The Battery Indicator

In the upper right corner of your phone's display, there is a battery indicator filled with three segments. The more segments you see, the greater the charge.

- The border of the battery icon will flash during charging.
- When the battery is fully charged, the battery icon will stop flashing and become solid.



High



Low

Battery Storage and Disposal

To prolong the life of batteries, avoid exposing them to temperatures below -10°C (14°F) or above 45°C (113°F). It is a good idea to take your phone with you when you leave your car. Never dispose of batteries in fire.

Caution: To prevent injuries or burns, do not allow metal objects to contact or short circuit the battery terminals.

Charging Batteries

Expert Performance (E•P®) Charging System

The E•P system enables your phone's built-in charger to communicate with installed batteries and tailor its charging cycle to optimize performance. If you see *Invalid Battery* when you power up the phone, the built-in charger is not able to communicate with the battery and cannot charge it. There are several possible reasons for this message. The most likely one is that the battery is not a Motorola original and it does not have the appropriate E•P technology. We recommend that you use only Motorola original batteries and accessories and that you store your batteries in their protective clips when not in use.

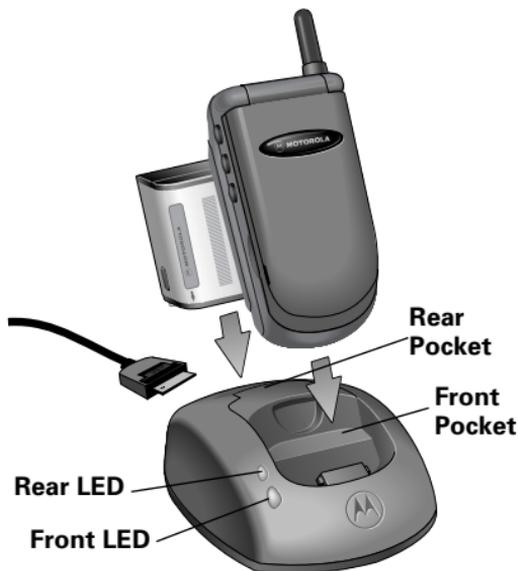
Charging Batteries

Using the Desktop Charger

The Desktop Charger's front pocket can charge batteries while they are attached to your phone, and the rear pocket can charge batteries separately.

If you have a Desktop Charger:

- 1. Attach Adapter** Plug the AC adapter into the back of the charger, with the release tab facing up.
- 2. Plug In Adapter** Plug the other end of the AC adapter into a wall socket.
- 3. Insert Phone** Insert the phone into the front pocket with a battery attached.
- & Insert Battery** If you like, insert a battery into the rear pocket.



Note: If two batteries are loaded in the charger, the batteries will charge one at a time.

Charging Batteries

Desktop Charger Indicators

The LED indicators on the left front of the Desktop Charger let you know the current state of any charging batteries.

The Front Pocket LED Indicator:

- Yellow means the phone with a battery is securely installed.
- Open the phone to see the charge status for the front pocket.

The Rear Pocket LED Indicator:

- Red means the battery is charging.
- Flashing yellow means the battery is waiting to be charged.
- Green means the battery is charged to 90% of its capacity. Another hour of charging will bring it up to 100% capacity.
- Flashing red means the battery is damaged and cannot be charged.

Desktop Charger Charging Times

The time it takes for your battery to obtain a full charge is affected by a variety of factors, including:

- **Temperature** Batteries should be at or near room temperature when charging. To prolong battery life and charge capacity, avoid exposing your batteries to temperatures below -10°C (14°F) or above 45°C (113°F). It is a good idea to take your phone with you when you leave your car.
- **Inactivity** New batteries, or batteries that have been stored for long periods of time, may not rapid charge properly. In these instances, the battery requires an overnight charge.
- **Extended Usage** Over extended periods of time, batteries gradually wear down and require longer charging times. This is normal. If you charge your battery regularly and notice a decrease in talk-time or an increase in charging time, then it is probably time to purchase a new battery.

Tip:

See pages 26-27 to learn how to read the display.

Phone Overview

Function Keys

-  Turns the phone ON and OFF.
-  Opens messaging menus.
-  Acts as a “shift” key to access the secondary functions of other keys.
-  Recalls phone numbers from memory and acts as the left soft key for Minibrowser navigation.
-  Stores phone numbers into memory and acts as the right soft key for Minibrowser navigation.
-  Clears characters from the screen.
-  Ends phone calls and exits the menu.
-  Places or answers calls.
-  Can be used to scroll through memory entries
-  and menu features.

Alphanumeric Display Displays your input from the keypad, information recalled from memory, and other messages.

Microphone Positioned for convenient conversation.

Retractable Antenna Extend for best performance.

Earpiece Ultra-compact phone speaker.

Headset Jack Connects an optional headset.

Accessory Connector Provides the connection for an external power supply.

Volume Keys Located left of the display and represented in the manual by  and , these keys adjust the volume and scroll up and down through memory locations and menu features.

Using the Smart Button

Easily recognized in this User's Guide by  and in your phone's display by * – the handy Smart Button puts a variety of functions at your fingertip.

The Smart Button



Use the Smart Button's fingertip convenience for:

Opening the Quick Menu

Press  when your phone is idle to display a menu containing shortcuts to your phone's most popular features. See page 34.

Opening Your Phone Book

Press  twice to open the Phone Book with your names and numbers. Turn to page 40 in "Using Memory" to learn more.

Entering the Menu System

Press  then press  to enter your phone's menu system. See page 60 for information on navigating the menu system.

Selecting Items in the Menu

The primary use of the Smart Button is to select. Whenever the phone offers you a choice, such as setting a ringer style (pg. 79), press  to select. You will see: Press * to Select.

Turning Features ON and OFF

Press  to toggle ON and OFF many menu features, like the call timers (pg. 70). You will see: Press * to Toggle.

Placing and Ending Calls

Press and hold  to place a call when the number you want to call is on the display. Press and hold  again to end a call. See page 28 for information on placing and ending calls.

The Basics

The next few pages will introduce you to the basic features of your phone. In the chapters that follow, we will explain every one of your phone's features, including storing names and numbers, using the call timers, locking the phone, and more.

In this chapter we will explain how to:

- turn your phone ON.
- read the indicators.
- place, receive and end calls.
- adjust ringer and keypad volume, use shortcuts, and more.

Turning Your Phone On

Follow these steps to turn your phone ON:

- 1. Extend Antenna** Extend the antenna completely for best performance.
- 2. Open Phone** Open the phone to expose the keypad.
- 3. Turn ON Phone** Press **PWR** once to turn the phone ON.
- 4. Turn OFF Phone** When finished, press **PWR** again to turn the phone OFF.

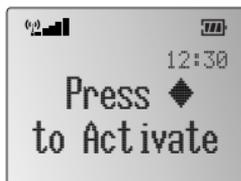
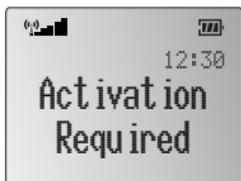
Press **PWR** to turn the phone ON or OFF



Turning Your Phone On

Activating Your Phone

The first time you turn your phone ON, you may see a message on the display:



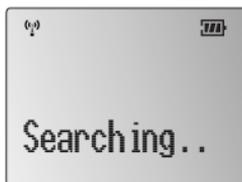
If you see these messages on the display, your service activation can be completed with just a couple simple steps:

- 1. Place Call** Press **SND** to place the call.
or
Press and hold **0** until you hear a high tone.
- 2. Follow Steps** Once the connection is made, your phone will begin activation. Contact your Service Provider for further assistance.

If you do not see *Activation Required*, your phone was activated at the time of purchase and there is no need to follow the steps above.

Power Up Display

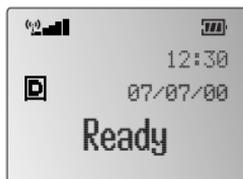
Once activated, each time you turn your phone ON, your phone performs a short self-test to make sure it is operational and then it scans for service. While the phone scans, the display reads:



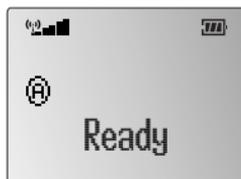
Turn the page to learn more about turning your phone ON.

Turning Your Phone On

To make the best use of available signals, your phone can operate on both CDMA digital and analog systems. If your phone finds a CDMA digital system, you will see the time and date and the  icon. If your phone finds an analog system, you will see the  icon.



Digital



Analog

Quad Number

Your phone can be activated with up to four unique phone numbers. If more than one number is programmed, you will see the currently active number whenever you turn ON the phone. Turn to Changing Your Number on page 94 if you want to change the active number.

Roaming

If your home network is not available when you turn your phone ON, your phone will briefly display: *Roaming*.

Power Save Mode

If you travel outside the range of available networks, your phone continues to search for a signal. To save power, it stops searching every couple of minutes. When this is the case, you will see: *Power Save*. Your phone will automatically begin searching again in a minute or two — if you would like it to start searching immediately, just press any key.

Standby Mode

To conserve energy, your phone enters standby mode and turns OFF the backlight when you have not touched a key for a few seconds. The backlight will come back ON as soon you press a key or open the phone.

Tip:
Look for ▲ on the top line to know if you are roaming. See page 26 for more info.

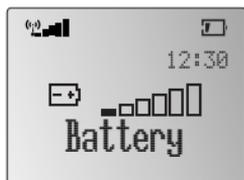
Tip:
You can choose how long the backlight remains ON. See page 101.

Reading the Indicators

Detailed Battery Level Reading

Press **FCN** then press **BATT CHG**.

The bar graph in the display represents the battery level. The higher the graph, the closer the battery is to full charge.



Low Charge



Full Charge

Note: When plugged in, the battery level is rounded to the lowest bar for increased accuracy. When you first attach the AC adapter, the level may fall.

Important: If the phone is being powered externally—from the vehicle power adapter for example—you will see: *Charging*.

Service Light

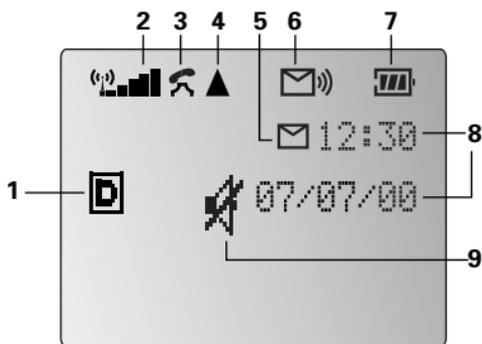
The Service Light is on top of your phone and lights up when your phone is ON. The color it flashes depends on your phone's current state of service.

Red & Green, alternating	Incoming call or message
Green, flashing	In Service: home type system
Red, flashing	No Service
Yellow, flashing slow	Roaming: home type system
Yellow, flashing fast	Roaming: non-home type system



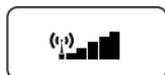
Tip: To increase your phone's standby-time, you can turn the Service Light OFF. See page 103.

Reading the Indicators



Digital (1)

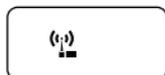
Indicates you are receiving a digital signal.



Strong

Signal Strength (2)

Displays the strength of the connection between your phone and the wireless network.



Weak

In Use (3)

Appears when a call is in progress.

Roam (4)

Lights up when your phone accesses a wireless service outside of your home system. When you leave your wireless Service Area, your phone roams (seeks another wireless system).

Reading the Indicators

Message (5)

Appears when you receive an alphanumeric message.* It will disappear after you have viewed the message.

Voicemail (6)

Indicates that you have received a Voicemail* message in your Voicemailbox. It will disappear after you have checked your Voicemail.

Battery Level (7)

The three bar segments on the phone's Battery Level Indicator show the amount of charge remaining in your battery at a glance. The more bar segments you see, the higher the charge.

12:30 Clock (8)

When your phone is on a CDMA digital network, the display shows the current time and date. Wherever you are, you will have the correct local time. You can set your clock for 12- or 24-hour format. See page 102 for more information.

When you select one of the VibraCall® alert combinations (see page 78), the following indicators appear in the display:

VibraCall® Alert On (9)

Indicates that your phone's ringer is turned OFF and the VibraCall alert is ON.

Silent Mode (9)

Indicates that all of your phone's tones are silenced and the VibraCall alert is ON.

Vibrate Then Ring (9)

Indicates that both the ringer and VibraCall® alert are ON.

* Network and service dependent feature. Not available in all areas.



High



Low

Placing and Ending Calls

Placing a Call

- 1. Extend Antenna** Extend the antenna completely for best performance.
- 2. Open Phone** Open the phone to expose the keypad.
If necessary, press **PWR** to turn the phone ON.
- 3. Enter Number** Enter the number you want to call, for example: 555-1212.
Correct Errors Press **CLR** to erase one digit at a time if you make a mistake. Press and hold **CLR** to erase the entire entry and start again.
- 4. Place Call** Press **SND** to place the call.
or Press and hold **☒** until you hear a high tone.
You will see: *Calling 555-1212.*

You can dial phone numbers with up to 32 digits, but only the last twenty-four digits will appear in the display.

Press **RCL** to see the rest of the number.

Your phone will display the first 24 digits, then a second screen will show the digits remaining in the phone number.

Ending a Call

There are three ways to end a call:

- Close** Close the phone to end a call.
- or Press Key** Press **END**.
- or Hold Smart Button** Press and hold **☒** until you hear a high tone.
You will see: *Press * to End Call.*
Press **☒** again to end the call.

Tip:

If you press **SND** without entering a number, your phone will dial the last number entered.

Redialing Numbers

Automatic Redial

The wireless system may at times be too busy to handle your call. If this is the case, you may hear a fast busy signal and see *Call Failed and Press SND to Redial*. With Automatic Redial, your phone will repeat the call attempt over the next four minutes. When the call succeeds, your phone will ring or vibrate until the person you are calling answers.

Auto Redial Press **SND** or press and hold **⬇** until you hear a high tone. You will see: *Redialing*.

To make this feature even easier, turn Instant Redial ON. Your phone will instantly redial after a fast busy signal, and you will not have to push a button. To find out more, see page 99.

Redial

If you hear an ordinary busy signal:

- 1. Hang Up** Press **END** to hang up.
- 2. Redial** Press **SND** to redial or press and hold **⬇**. You will see: *Calling*.

Display Last Ten Numbers Dialed

Your phone keeps track of the last ten numbers you have dialed.

- 1. Enter List** Press **RECL** then press **OPR**, **OPR**. The display will show the last number you dialed.
- 2. Review List** Press **⬆** or **⬇** to scroll through the last calls made, including the time, date, and number.
- 3. Call Number** Press **SND** or press and hold **⬇** to call the number in your display. You will see: *Calling*.

Tip:

Your phone's Scratchpad automatically remembers the last number entered. See page 47 to learn more.

Tip:

This feature is also available through the Quick Menu. See page 34 to learn more.

Tip:*

Press **CLR** then **RECL** to delete the displayed entry.

* Feature may not be available on some phones.

Receiving Calls

Your phone must be ON to receive calls.

When a call is incoming:

- an alert will sound and/or vibrate.
- the Service Light (pg. 25) will flash red and green.

You can choose your phone's alert, selecting from nine ringer styles or silent vibration mode. See page 79.

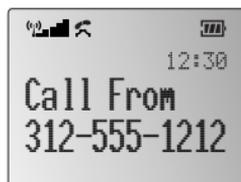
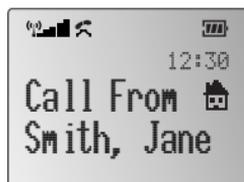
Answering a Call

To answer a call:

- 1. Extend Antenna** Extend the antenna completely for best performance.
- 2. Open Phone** Open the phone to expose the keypad.
or
Press **END** if the phone is already open.

Caller ID

If Caller ID* is active on your phone, you will be able to see who is calling before you answer. The display will show your caller's name if it is in your Phone Book. If not, the display will show your caller's number. If you prefer to always see your caller's number, see page 67 to turn Number Preference ON.



The Caller IDs for your last 16 callers will be saved. See page 54 to learn how to view your stored Caller IDs.

* Network and service dependent feature. Not available in all areas.

Receiving Calls

Ringer/Vibrating Alert Suppress

If an incoming call catches you by surprise, you can silence the alert using the upper or lower volume key. Your phone's ringer or vibrating alert will remain OFF while the current call lasts. The caller will still hear ringing and you can still answer the call by pressing **SND**.

Suppress Alert When the phone rings or vibrates, press the upper or lower volume key.

Note: This feature works the same with a headset. To answer the call with a headset after you have turned the alert OFF, press either volume key again or the Smart Button.

Unanswered Call Indicator

Even with the latest wireless technology, sometimes you are unavailable to answer calls. If your phone is ON, it keeps a count of unanswered calls. For example, if you miss two calls, your display will show: 2 Calls Unanswered.

Clear Display Press **CLR** or press **END** to clear the display, and you can begin placing calls again.

Tip:

If you subscribe to Caller ID service, you can easily return the calls that you missed. See page 54 to learn how.

Call Waiting

If you subscribe to Call Waiting through your Service Provider, you may hear a tone while on a call, indicating that you are receiving a second call.

Answer Call Press **SND** to answer the call and automatically place the current call on hold.

or End Current Call Press **END** to end the current call. Your phone will then ring and/or vibrate as usual. Press **SND** to answer the call.

Basic Tone Controls

Vibration Mode

In situations where ringing may not be appropriate, or in noisy places where you may not hear your phone, select the VibraCall® alert. Ringing will be replaced by gentle vibrations.



VibraCall
Alert ON

Toggle Alert

Press **FCN** then press **8 VIB YUV** to switch between the ringer and vibrating alert.

Silent Mode

For complete discretion, turn Silent Mode ON. All tones will be silenced. You can dial silently, and the ringer will be replaced by gentle vibrations.



Silent
Mode ON

Activate Silent Mode

Press **FCN** then press and hold **8 VIB YUV** until you see: Silent Mode On.

Turn OFF

Press **FCN** then press **8 VIB YUV** to turn Silent Mode OFF. Your phone will return to Ring Only mode.

Tip:

See page 78 for the Silent Mode menu option.

Muting the Microphone

If you would like privacy while a call is in progress, you may mute the microphone—you will be able to hear the party on the other end, but they will not hear you.

Mute Phone

Press **FCN** then press **6 MUTE MND** during a call to mute the microphone. You will see: Muted.

Unmute Phone

Press **FCN** then press **6 MUTE MND** again to resume your conversation.

Basic Tone Controls

The upper and lower volume keys are left of the display and can be used to adjust the earpiece, keypad, and ringer volume. As you press these keys, the phone's speaker will demonstrate the new volume level.

Adjusting Earpiece and Keypad Volume

The audio feedback your phone gives you when you press a key is called keypad tones. When your phone is idle, pressing the volume keys adjusts the volume of these tones. To adjust the volume of your conversation (the earpiece volume) use the volume keys during a call.

Raise Volume Press  to raise the volume.

Lower Volume Press  to lower the volume.

The bar graph in the display represents the volume level. The higher the graph, the louder the volume is.



High Volume



Low Volume

Adjusting Ringer Volume

To adjust ringer volume:

Raise Volume Press  then press  to raise the ringer volume.

Lower Volume Press  then press  to lower the ringer volume.

Tip:
See page 81 if you would like to silence the keypad tones.

Your Phone & Its Shortcuts

Throughout this guide you will see shortcuts that point out simple ways to reach some of your phone's features. If you have owned a Motorola phone before, some of these shortcuts will already be familiar to you.

The Quick Menu

Press the Smart Button and the Quick Menu opens on the display! The Quick Menu contains shortcuts to your phone's most popular features. Press the volume keys to scroll through the options shown below and the Smart Button to choose one.

Press  to scroll up

Press  to open the menu and select

Press  to scroll down



Phone Book The Phone Book is the place to find all your personal names and numbers. See page 40.

Messaging* If you subscribe to messaging, you can use this shortcut or the one on page 52.

Launch Browser* If you subscribe to MiniBrowser service, use this feature to launch it. See page 108.

Last 10 Dialed Your phone remembers the last ten numbers you dialed. Turn to page 29 to learn more.

Set System Mode Allows you to choose the type of system your phone will access. See page 106.

Main Menu Select this option to access your phone's menu system. See page 60 to find out more.

Exit Select this option or press  to exit the Quick Menu at any time.

* Network and service dependent feature. Not available in all areas.

Your Phone & Its Shortcuts

The Usual Shortcuts

The words “menu,” “batt,” “lock,” “mute,” and “vib” appear on the **1**^{MENU}, **4**<sup>BATT
GHI</sup>, **5**<sup>LOCK
JKL</sup>, **6**<sup>MUTE
MNO</sup>, and **8**<sup>VIB
TUV</sup> buttons. Press the **FCN** key first, then any one of these buttons, and your phone will perform that function.



Enter Menu

Press **FCN** then press **1**^{MENU} to enter the menu system.

Toggle Analog

Press **FCN** then press **2**^{ABC} to toggle Analog ON or OFF.

Display Meter

Press **FCN** then press **4**<sup>BATT
GHI</sup> to display the battery meter.

Lock Phone

Press **FCN** then press **5**<sup>LOCK
JKL</sup>.
You will see: Lock? Press **STO** to lock.

Mute Phone

Press **FCN** then press **6**<sup>MUTE
MNO</sup> to toggle mute ON and OFF during a conversation.

Silence Ringer

Press **FCN** then press **8**<sup>VIB
TUV</sup> to toggle your phone's VibraCall[®] alert ON and OFF.

Silence All Tones

Press **FCN** then press and hold **8**<sup>VIB
TUV</sup> to turn ON Silent Mode.

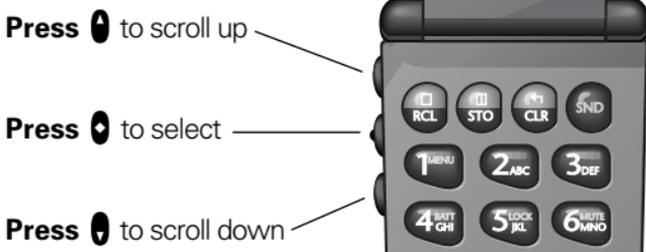
Using Memory

Do you have places to go and people to see? Too many phone numbers to remember? Let your phone remember them for you. The internal Phone Book has 99 locations and each allows you to store up to four numbers per location. That way you can store hundreds of phone numbers for easy access on the go!

In this chapter we will explain how to:

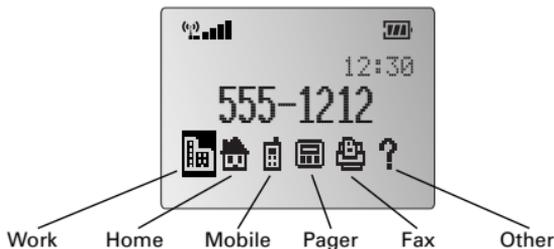
- store names and numbers into the Phone Book.
- recall phone numbers from memory.
- dial in a flash with the Super Speed Dial and Turbo Dial® functions.
- simplify automated calling systems and credit card calls.

Follow these symbols as a guide for using the keys on the side of your phone.

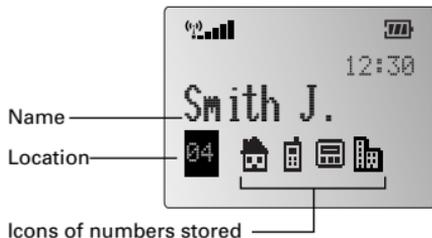


Making the Most of Memory

Numbered 01-99, each memory location allows you to store a name and as many as four phone numbers. In one location, you can store the home, mobile, work and fax numbers of a single contact. To help you find the right number, when you store the number you assign it an icon:



Once stored, when you view memory locations, you will see the name, location and one icon for each number stored.



To organize your Phone Book for convenient recall, try storing related contacts in groups of ten. For example, store your ten most frequently called numbers in locations 01-09, then you can use the Turbo Dial® keys to call them with the push of a key. You could store business contacts in locations 10-19, family in 20-29, friends in 30-39, and so on.

When you feel ready for more, try the advanced storing features at the end of the chapter. For instance, pages 48-49 describe how the Phone Book can help you access automated calling systems with only a few keystrokes.

Tip:

If you purchase a Motorola Data Connectivity Kit, you can easily transfer contacts between your phone and computer. See page 116. Contact your Service Provider for more information.

Storing Names and Numbers

Each memory location can store up to four numbers. For a single contact, you can store every number you need, like home, mobile, fax, and more.

Keep in mind: When you recall entries by name, your phone displays entries alphabetically. If you store an entry without a name, it will be placed at the back of the Phone Book.

Tip:
'XX' is the number of the lowest available location.

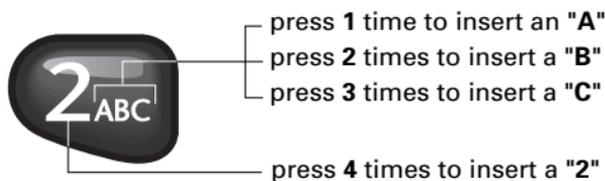
Tip:
Always store your Voicemail number in location 98.

Tip:
The "☎" symbol in your display represents the Smart Button .

- 1. Enter Number** Enter the phone number you want to store.
- 2. Begin Storing** Press  to begin storing.
You will see: Location XX?
- 3. Accept Location** Press  or  to store the sequence in the displayed location.
- or Enter New** Press  to erase the location number and enter a new two-digit location number.
- or Select Range of Ten** Enter a digit and press  to store the sequence in the first available location beginning with that digit.
- 4. Choose Label** Press  or  to scroll through the icons. From left to right: Work, Home, Mobile, Pager, Fax, or Other. Press  to select the highlighted icon.
- 5. Store More** You will see: Enter Next Number. Enter up to four numbers per location. Press  when finished entering numbers. You will see: Alpha or Press .
- 6. Enter Name** Enter a name to identify the phone number. (See the next page for help.) Press  or  when finished. Your phone will confirm by displaying the information stored.

Entering Names

When the display shows **Alpha** or **Press ***, you can use the keypad to produce any letter in the alphabet. Use the letters printed on the key as a guide. For example, press **2_{ABC}** to enter the letters "A," "B," or "C" as shown:



To enter a name into the Phone Book:

- 1. Enter Letter** Press a key as many times as necessary to enter a letter. The next letter on the key will appear with each press.
Toggle Case Press **▲** or **▼** to switch between upper and lowercase.
- 2. Advance Cursor** After each character, press **#▶** to advance the cursor to the next space.
Clear Letter Press **⏪ CLR** to erase a letter if you make a mistake.
Back Space Press **⏪*** to move the cursor backward if you would like to insert a letter earlier in the sequence.
- 3. Enter Marks** Press **1 MENU** to scroll through the available punctuation marks: <space> **1** . @ / : ' , ? ! - _ # * " \$ % & + ; = \ () < > [] .
- 4. Finish Storing** Enter up to 24 letters, including spaces. Press **⏩** when you are finished. Your phone will confirm the entry by displaying the information stored.

Recalling from Memory

Recalling by Name

Once you have stored entries, you can recall them alphabetically and immediately place calls.

1. Enter Press  twice to enter your name directory.

2. Scroll to Name Press  or  to scroll to the name you are looking for.

or Search for Name Enter the first letter of the name.
The display will show the name and location of the first entry beginning with that letter, and an icon for each number stored in the entry (up to four).



3. Select Entry Press  to select the entry for the displayed name. You will see the first number stored in the location.

4. Choose Number Press  or  to scroll through the numbers stored in that location. The selected icon will be highlighted.

5. Place Call Press and hold  or press  to call the number. You will see: *Calling.*

6. End Call Press  or close the phone.
or
Press and hold  until you hear a high tone. You will see: *Press * to End Call.*
then
Press  again.

Tip:

See page 39 for details on entering letters.

Recalling from Memory

Recalling by Memory Location

Each entry you store is placed in a memory location numbered 01-99. Once you have stored entries, you can recall them by memory location.

- 1. Begin** Press  to begin recalling.
- 2. Enter Location** Enter the two-digit memory location of the entry you are looking for.
- 3. Select Entry** Press  to select the displayed entry. You will see the first number stored in the location.
- 4. Choose Number** Press  or  to scroll through the numbers stored in that location. The icon of the current number will be highlighted.
- 5. Place Call** Press and hold  or press  to call the number. You will see: *Calling.*
- 6. End Call** Press  or close the phone.
or
Press and hold  until you hear a high tone. You will see: *Press * to End Call.*
then
Press  again.

Editing Memory

Editing a Number

If you would like to change a number that you have already stored, follow these steps.

- 1. Enter** Press  twice to enter your name directory.
 - 2. Scroll to Name** Press  or  to scroll to the name you are looking for and press  to select.
 - 3. Select Number** Press  or  to scroll to the number you would like to change and press . You will see: Edit Number? Press  to begin editing.
 - 4. Edit Phone Number** Enter digits with the keypad. Press  to erase one digit at a time, or press and hold  to erase the entire number.
 - 5. Finish Number** Press  or  when you finish the phone number.
 - 6. Select Icon** If you would like to change the icon, press  or  to scroll through the icons. Press  to select the highlighted icon. The display will show the current location.
 - 7. Keep Location** If you would like to keep the location number, press  or . You will see the name associated with the entry.
- or Change Location** If you would like to change the location number, press and hold  to erase the location number and enter a new two-digit number. You will see the name associated with the entry.

- 8. Edit Name** Press  to erase one letter at a time, or press and hold  to erase the entire name. Press  to move the cursor backward. (See page 39 for details on entering names.) Skip this step to leave the name unchanged.
- 9. Confirm Changes** Press  or  when you finish editing the name. You will see: N Numbers Saved At XX. (N is the total of numbers stored in the location and XX is the location number).

Adding a Number to an Entry

If you would like to add a number to an entry, select the empty cursor while viewing the entry.

- 1. Enter** Press  twice to enter your name directory.
- 2. Scroll to Name** Press  or  to scroll to the name you are looking for.
- 3. Select Empty** Press  or  to scroll to the empty cursor. Press  and continue with step 4 on the previous page.

Erasing Memory Entries

Clearing an Entire Entry

Erasing a memory entry will clear the name and all the numbers from the location. To erase a memory entry:

- 1. Enter** Press  twice to enter your name directory.
- 2. Scroll to Name** Press  or  to scroll to the name you are looking for.
- 3. Clear Entry** Press  to clear the entry.
You will see: To Delete Press STO.
- 4. Confirm Erase** Press  to confirm that you want to erase the entry.

Clearing a Single Number

If you would like to keep the entry but delete one number from the entry, follow these steps:

- 1. Enter** Press  twice to enter your name directory.
- 2. Scroll to Name** Press  or  to scroll to the name you are looking for.
- 3. Choose Number** Press  to select the entry, then press  or  to scroll to the icon of the number you would like to delete.
- 4. Clear Entry** Press  to clear the number.
You will see: To Delete Press STO.
- 5. Confirm Erase** Press  to confirm that you want to erase the number.

Recall Shortcuts

Super Speed Dial

If you know the memory location of the number you wish to call, you can use the Super Speed Dial function.

Keep in mind: If more than one number is stored in the location, your phone will dial the first. To change which number is dialed with Super Speed Dial, see Changing Dialing Shortcuts on the next page.

- 1. Enter Location** Enter the two-digit memory location, 01-99.
- 2. Place Call** Press and hold  or press  to call the number you selected. The first number stored in the memory location you entered will be dialed.
You will see: *Calling.*

Turbo Dial

The Turbo Dial® keys let you dial numbers stored in locations 01-09 with the push of a button.

Keep in mind: If more than one number is stored in the location, your phone will dial the first. To change which number is dialed with Turbo Dial, see Changing Dialing Shortcuts on the next page.

- Turbo Dial** Press and hold the memory location number of the entry you want to call,  through , and your call is placed.
You will see: *Calling.*

Your phone's Priority Call feature gives you unrestricted access to any number stored in location 01, even if your phone is locked. To learn how to activate this feature, see page 87.

Changing Dialing Shortcuts

When you use the Super Speed Dial feature or the Turbo Dial® keys, your phone uses the first phone number stored in the entry. This feature allows you to change which number is used for these dialing shortcuts.

- 1. Enter** Press  twice to enter your name directory.
- 2. Scroll to Name** Press  or  to scroll to the name you are looking for and press  to select.
- 3. Select Number** Press  or  to scroll to the number you want to make the dialing shortcut for that location and press  to select. You will see: Edit Number.
- 4. Set Number** Press . You will see: Set Speed Dial. Press  to set that number as the dialing shortcut. You will see: Set.

Scratchpad

If you need to take a quick note, but you do not want to save the number, use the Scratchpad. The Scratchpad is helpful if you are on the phone and your party gives you another number to call.

- 1. Enter Number** Enter the number with the keypad. (The person on the line will hear tones as you dial.)
- 2. Store Number** Press  and continue with step 3 on page 38.
- or End Call** Press  to end your current call if necessary.
- & Place Call** Press  to call the number in the Scratchpad.

Tip:
Press  at any time to see what is on the Scratchpad.

Tip:
Press and hold  to clear the Scratchpad.

Pause Dialing

When you call automated systems like Voicemail* or bank-by-phone,* a recorded message prompts you for PIN numbers, account numbers, etc. Pause Dialing can make using automated systems easy by allowing you to store these numbers in the same memory location as the automated system's access number. Separate each set of numbers with a “pause”—a special character that tells your phone to wait before sending additional numbers.

Storing a Number with Pause Dialing

The pause occupies a one-digit space in your phone's memory. Once you have entered a string of numbers and pauses, store the string in the same way you store other entries.

Tip:
You can store up to 32 digits, including pauses.

- 1. Enter Number** Enter the phone number you use to access the automated system.
- 2. Insert Pause** Press  and press . You will see: Insert Pause . Press . You will see a pause circle  inserted into the number entry.
- 3. Enter PIN** Enter the next group of numbers, for example, your PIN number. If the automated system requires a * or #, enter those symbols, too.
- 4. Repeat** Repeat steps 2 and 3 as many times as necessary.
- 5. Store Sequence** Press . Enter a two-digit location, select an icon, press , enter a name if you like, and press  or  when finished. Your phone will confirm the entry by displaying the information you stored.

Tip:
Store up to 24 characters for a name (including spaces).

* Network and service dependent feature. Not available in all areas.

Using Pause Dialing

Once stored, you may recall the entry and place the call. All of the digits you have stored will be recalled, but your phone will only send the tones for the set of numbers before the first pause.

- 1. Place Call** Enter the two-digit memory location of the Pause Dialing number and press and hold  or press . Your phone will dial the access number and wait for your input when it reaches the first pause.
- 2. Send More Numbers** When the automated system prompts you for information, press  or  to send the next group of numbers. Repeat this step to send each group of numbers that you have stored.
- 3. End Call** Press , close the phone, or press & hold  until you hear a high tone and press  again.

Using Memory Linking

Each memory location holds up to 32 digits, including pauses. Some automated systems, however, may require you to enter more than 32 digits. If this is required, split the numbers into two memory locations and recall the second set of digits as you need them.

- 1. Recall 2nd Location** Once you have sent the tones from the 1st location, press  and the two-digit memory location where you stored the second set of digits.
- 2. Send Tones** Press  and  to send the tones in the 2nd location. If you have stored a pause in the 2nd location, your phone will pause as usual when it reaches the pause character.

Using Calling Cards

Storing Calling Card Numbers

Number Characters are another way your phone can save you time in dialing. The Number Character saves a place in the memory sequence for the number you will be calling when you use your calling card. For best results, you may use the Number Character along with Pause Dialing.

- 1. Enter Access Number** Enter the phone number you use to access the calling card system, usually a 1-800 phone number. Skip this step if you only dial 0.
- 2. Insert Pause** Press  then press . You will see: Insert Pause 0. Press .
- 3. Insert Number Character** Press  then press . Press  or  to scroll to Insert Number 'N'. Press . You will see the number character 'N' inserted into the sequence. This special character saves a place for the number you will be calling when you use your calling card.
- 4. Insert Pause** Press  then  then  as in step 2.
- 5. Enter Code** When you use your calling card, the system prompts you for an access code, usually a PIN code. Enter this number.
- 6. Repeat** Repeat steps 4 and 5 if your card requires more access codes.
- 7. Store Sequence** Press . Enter a two-digit location, select an icon, press , enter a name if you like, and press  or  when finished. Your phone will confirm the entry by displaying the information you stored.

Tip:

You can protect your calling card information with your phone's call restriction features. See page 90 for details.

Placing a Calling Card Call

Once you have stored your calling card information, recall the information and place the call whenever you want to use your calling card. Before your phone begins dialing, it will prompt you for the number you want to call. Once you have entered the number, your phone will automatically insert the number in place of the Number Character you stored.

- 1. Recall Entry** Press  then enter the location number where your calling card sequence is stored.
- 2. Enter Number** Press . You will see: Enter Number. Enter the phone number you are calling. You may enter the number manually or recall it by location.
- 3. Place Call** Press and hold  to place the call. Your phone will dial the number to access your calling card service provider, then wait for your input when it reaches the first pause.
- 4. Send More Numbers** Press  or press  to send the next group of numbers when the recording prompts you. The phone will automatically insert the number to call at the appropriate spot in the sequence. Press  to send each set of numbers until finished.
- 5. End Call** Press , close the phone, or press and hold  until you hear a high tone, and press  again to end the call.

Using Messaging*



The dedicated Message Key provides access to your phone's easy-to-use Messaging Menu. Through this menu, you can check your Voicemail, read your pager-like alphanumeric Messages, access Minibrowser* Alerts, and view the Caller IDs of your most recent callers.

In this chapter we will explain how to:

- view your Caller IDs.
- check your Voicemail.
- read your Messages.
- explore your options with the Function Menus.

Follow these symbols as a guide for using the keys on your phone.

Press  to scroll up

Press  to select

Press  to scroll down

Press  to open messaging menus



* Network and service dependent feature. Not available in all areas.

Receiving Messages

If your phone is ON and you receive a Voicemail,* Minibrowser* Alert, or alphanumeric message:

- **An alert sounds or vibrates:**

Your phone will beep or vibrate three times.

See Ringer / Vibrating Alert on page 78 to set your phone's alert. See page 81 to learn about Reminder Tones.

- **An indicator appears on the display:**

✉ Appears on the second line of the display when you receive an alphanumeric message. It will stay on the display until you have read the message.

Msg Mem Low Appears when your phone's message memory is almost full (at approximately 85% capacity).

Msg Mem Full Appears in the main display when the message memory is completely full and your phone is in idle mode.

✉) Appears on the top line of the display when you receive a Voicemail message. It will stay on the display until you have listened to the message. Your Service Provider will then signal your phone to turn the indicator OFF.

- **Press  to open the Messaging Menu:**

When you open the Messaging Menu, the icon of the message type you received will be flashing.



* Network and service dependent feature. Not available in all areas.

Tip:

See page 30 for information on receiving Caller IDs.

Tip:

For more information on Minibrowser* Alerts, see page 108.

Tip:

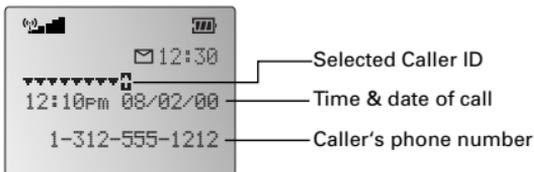
Your Service Provider holds your messages and will forward them after you have made room. See page 59 to learn how to delete messages.

Viewing Your Caller IDs*

Your phone supports Caller ID service, which lets you see who is calling before you answer. The Caller IDs for the last 16 different callers are stored so they can be viewed at any time.

- 1. Enter Messaging** Press  to open the Messaging Menu.
- 2. Select Caller ID** Press  or  to scroll to Caller ID and press  to select.

You will see a Caller ID icon  for each stored Caller ID. Flashing icons represent Caller IDs that have not been viewed. Below the icons you will see information for the latest Caller ID:



- 3. Select Caller** Press  or  to highlight a Caller ID to view and press  to view complete information for that call:



Keep in mind: You will see the caller's name only if it is stored in your Phone Book.

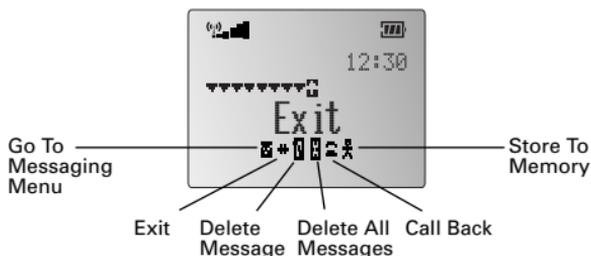
 A check mark will appear in the corner if you have answered or returned the call. Press  to return the call of the displayed caller. Press  to store the information.

* Network and service dependent feature. Not available in all areas.

Caller ID Options

When viewing Caller IDs, press the Message Key to see the options available for the highlighted Caller ID.

- 4. Access Options** Press  to open the Caller ID Function Menu.



- 5. Choose Function** Press  or  to scroll to one of the following:

-  **To Msg Menu** Press  to return your phone to the Messaging Menu.
-  **Exit** Press  to exit Messaging to idle mode.
-  **Delete Message** Press  to delete the currently selected Caller ID. Press  again to confirm.
-  **Delete All Msgs** Press  to delete all your Caller IDs. Press  again to confirm.
-  **Call Back** Press  to return the call.
-  **Store To Mem** Press  to begin storing the number. Enter a two-digit location, select a label, enter a name, and press .

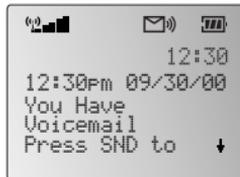
Tip:
See page 38 for step-by-step instructions on storing.

Checking Your Voicemail*

When you receive Voicemail, your Service Provider sends a notification to your phone and your phone displays an indicator. That way, you will be able to check for new Voicemail simply by glancing at your phone's display.

- 1. Enter Messaging** Press  to open the Messaging Menu.
- 2. Select Voicemail** Press  or  to scroll to Voice Mail and press  to select.

If you have one or more Voicemail messages, you will see:

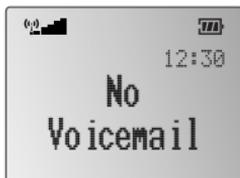


To listen to your messages, dial your access number. Your phone will do this automatically with one keypress.

- Dial Number** When viewing notifications, press  or press & hold  to call your Voicemailbox.

Keep in mind: Some Service Providers send the Voicemailbox number to your phone automatically. If the number has not been sent, then store it in location 98 of your Phone Book. To learn how, see Pause Dialing on page 48.

If you have no new messages, you will see:

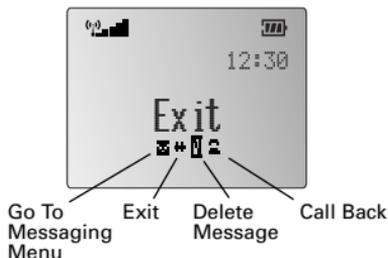


* Network and service dependent feature. Not available in all areas.

Voicemail Options

When checking Voicemail, press the Message Key to see options for the highlighted Voicemail notification.

- 3. Access Options** Press  to open the Voicemail Function Menu.



- 4. Choose Function** Press  or  to scroll to one of the following:

-  To Msg Menu Press  to return your phone to the Messaging Menu.
-  Exit Press  to exit Messaging to idle mode.
-  Delete Message Press  to delete the currently selected Voicemail notification. Press  to confirm.
-  Call Back Press  to dial your Voicemailbox number.

Reading Your Messages*

Your phone can receive alphanumeric messages like a pager. The message memory stores up to 60 messages, depending on the size of each.

- 1. Enter** Press to open the Messaging Menu.
- 2. Select Messages** Press or to scroll to Messages and press to select.

Tip:
Flashing icons represent messages that have not been viewed.



- 3. Select a Message** Press or to highlight a message to read and press to select the message.

Once a message is selected, the following keys will help you read through your messages:

- 4. Scroll** Press or to scroll through the selected message. When you reach the end of the message, you will automatically go to the next message.

Previous Press to go to the previous message.

Next Msg Press to go to the next message.

If the message includes a Call Back number, you can use the following shortcuts:

Call Back Press to dial the Call Back number.

Store Press to store it in your Phone Book.

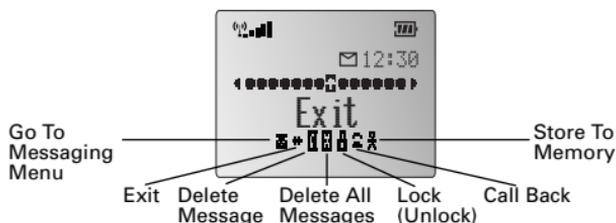
Tip:
If the Call Back number matches one in your Phone Book, you will see the name of the caller when you view the message.

* Network and service dependent feature. Not available in all areas.

Message Options

When reading your messages, press the Message Key to see the options available for the highlighted message.

- 5. Access Options** Press  to open the Message Function Menu.



- 6. Choose Function** Press  or  to scroll to one of the following:

-  **To Msg Menu** Press  to return your phone to the Messaging Menu.
-  **Exit** Press  to exit Messaging to idle mode.
-  **Delete Message** Press  to delete the currently selected message. Press  again to confirm.
-  **Delete All Msgs** Press  to delete all messages. Press  again to confirm.
-  **Lock Message** Press  to lock the message. Lock important messages to protect them from accidental deletion.
-  **Unlock Message** Messages must be unlocked before they can be deleted.

If the message contains a Call Back number, you will also see these options:

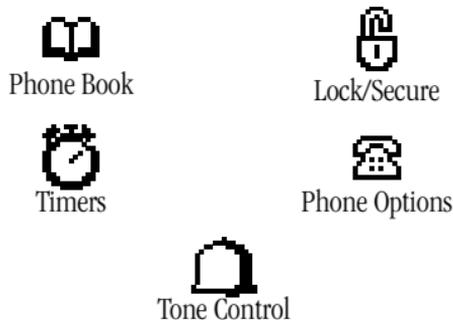
-  **Call Back** Press  to dial the sender's number.
-  **Store To Mem** Press  to begin storing the number. Enter a two-digit location, select a label, enter a name, and press .

Tip:
See page 38 for step-by-step instructions on storing.

The Works

Introducing the Menu Features

The digital V. Series™ phone is loaded with features that can help make life easier and more productive. The phone's user-friendly menu will help you find what you need quickly and easily. You will see the following icons as you scroll through the menu and each represents a menu.



Navigating the Menu

You can navigate through the menu system using the three keys located on the left side of the phone. Use the volume keys to scroll up and down through the options available on one level, and the Smart Button, in the middle, to select.

This manual uses these symbols to instruct you to use the navigation keys.

Press  to scroll up

Press  to select

Press  to scroll down

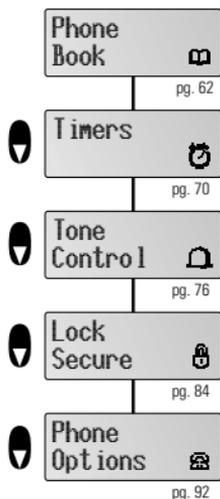


Road Maps

To help you navigate through the phone's menu system, chapters begin with an easy-to-follow visual “road map”—a quick overview of what you will find in the chapter that follows.

To use the menu system:

- 1. Enter Menu** Press **FCN** then press .
- 2. Scroll through Menu** Press  or  to scroll through the menu's top level, shown on the right.
- 3. Exit Menu** Press **END** to exit the menu.



Previous User Compatibility

If you are already familiar with previous Motorola phones, you may prefer to use your phone's  and  keys to scroll through the menu system.

In the Works

In the chapters that follow, detailed instructions describe the operation of each feature. We will explain everything you need to know about your new phone, including how to access and use a feature and what happens when you do.

Phone Book



In “Using Memory” you learned how to store and recall phone numbers with the internal Phone Book. You can access the same features, along with some other interesting features, using your phone’s convenient menu system.

In this chapter we will explain how to:

- recall and store phone numbers using the menu system.
- edit your memory information.
- add numbers to existing entries.
- view your own phone number.

Follow these symbols as a guide for using the keys on the side of your phone.

Press  to scroll up

Press  to select

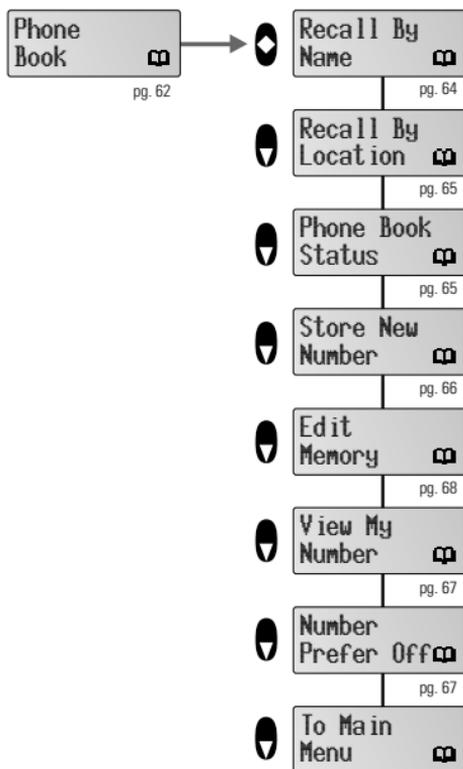
Press  to scroll down



Road Map

Press **FCN** then press **⬇** to enter the menu system.

Start:



Getting to Phone Book...

- 1. Enter Menu** Press **FCN** then press **↩**.
- 2. Enter Phone Book** Press **↩** to select to Phone Book.

Recall By
Name



Recalling By Name

Once you have stored entries, you can recall them alphabetically with the Phone Book menu. Find the name, choose the number, and instantly place a call.

- 3. Begin Recalling** Press **↩** to select Recall By Name.
You will see: Enter 1st Letter.
- 4. Enter First Letter** Press the appropriate digit key as many times as necessary to enter the first letter of the name. (See page 39 for help entering letters.)
You will see the first entry with that letter.
- & Find Name** If necessary, press **⬅** or **➡** to scroll to the name you are looking for.
- 5. Select Number** Press **↩** to select the entry, then press **⬅** or **➡** to scroll through the numbers stored in that location.
- 6. Place Call** Press and hold **↩** or press **END** to call the number. You will see: Calling.
- 7. End Call** Press **END** or close the phone.
or
Press and hold **↩** until you hear a high tone.
You will see: Press * to End Call.
then
Press **↩** again.

Tip:
Press **↩** while scrolling through the icons to go to another entry.

Recalling By Location

Each entry you store is placed in a memory location numbered 01-99. Once you have stored the entry, you can use this feature to recall it by the number of the location.

- 3. Begin Recalling** Press or to scroll to *Recall By Location* and press to select. You will see *Location_____*.
- 4. Enter Location** Enter the two-digit memory location of the number you are looking for. You will see the name, location number, and an icon for each number stored in the entry.
- 5. Select Number** Press to select the entry, then press or to scroll through the numbers stored in that location.
- 6. Place Call** Press and hold or press to call the number. You will see: *Calling*.
- 7. End Call** Press or close the phone.
or
Press and hold until you hear a high tone. You will see: *Press * to End Call*.
then
Press again.

Phone Book Status

You can use this feature to see how many of your Phone Book's 99 locations have been used.

- 3. Select Feature** Press or to scroll to *Phone Book Status* and press to select. You will see: *XX In Use XX Empty*.
- 4. Exit Menu** Press to exit menu, or you may scroll to other features.

Recall By
Location

Tip:

To place a quick call just enter the two-digit location and press .

Tip:

Press while scrolling through the icons to go to another entry.

Phone Book
Status

Getting to Phone Book...

- 1. Enter Menu** Press then press .
- 2. Enter Phone Book** Press to select to Phone Book.

Store New
Number

Storing a New Number

This feature allows you to create a new entry in the internal Phone Book. To add a number to an existing entry, turn to Editing a Memory Location on page 68.

Tip:
'XX' is the number of the lowest available location.

Tip:
Always store your Voicemail number in location 98.

Tip:
If the name or number is already in your Phone Book, you will see: Duplicate Name or Number.

- 3. Begin Storing** Press or to scroll to Store New Number and press to select.
You will see: Enter Number.
- 4. Enter Number** Enter the number you want to store and press . You will see: Location XX?
- 5. Enter Location** Press or to store the number in the displayed location or enter a new two-digit location.
- or Select Range of Ten** Enter the first digit of the memory location and press to store it in the first available location beginning with that digit.
- 6. Choose Label** Press or to scroll through the icons. From left to right: Work, Home, Mobile, Pager, Fax, or Other. Press or to select the highlighted icon.
- 7. Store More** You will see: Enter Next Number. Enter up to four numbers per location. Press when finished.
- 8. Enter Name** Enter a name to identify the phone number(s) or continue with step 9. See page 39 for details on entering names.

9. Store Number Press  or . Your phone will confirm by displaying: N Numbers Saved At XX.

10. Exit Press  to exit menu.

Viewing Your Number

Use this feature to view your phone's currently active number. If you have more than one phone number, you can change the active number with Changing Your Number on page 94.

3. View Number Press  or  to scroll to View My Number and press  to select. The display will show the currently active number.

4. Exit Press  to exit menu.

Number Preference

When Placing Calls:

If you prefer to see the number (Calling 555-1212) instead of the name (Calling Jane Smith) when you place a call from the internal Phone Book, turn Number Preference ON.

When Receiving Calls:

If you subscribe to Caller ID, your phone automatically looks up callers in your Phone Book and displays the name stored in the entry. If you prefer to see the caller's number (555-1212), then turn Number Preference ON.

3. Find Feature Press  or  to scroll to Number Prefer.

4. Toggle Feature Press  to toggle the feature On or Off.

5. Exit Press  to exit menu, or you may scroll to other features.

View My
Number 

Shortcut:
Press  # >

Number
Prefer Off 

Getting to Phone Book...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Phone Book** Press **↓** to select to Phone Book.

Edit
Memory



Editing a Memory Location

You can use this feature to add a number to an entry or change an old number in a snap.

3. Begin Editing Press **↑** or **↓** to scroll to **Edit Memory** and press **↓** to select.

4. Find by Location Press **↑** or **↓** to scroll to **Edit By Location** and press **↓** to select. You will see: **Location**____. Enter the two-digit memory location of the phone number you want to edit. Press **↓** or **STO** and continue with Step 5.

or Find by Name Press **↑** or **↓** to scroll to **Edit By Name** and press **↓** to select. You will see: **Enter 1st Letter**. Enter the first letter of the name you want to edit. (See page 39 for information on entering letters.) You will see the first entry beginning with that letter. Press **↑** or **↓** to scroll to the name you are looking for. Press **↓** or **STO** and continue with Step 5.

5. Select Number Press **↑** or **↓** to scroll to the icon of the number to be edited (if more than one stored). Press **STO** to select. You will see the number.

or Add Number Press **↑** or **↓** to scroll to the empty cursor and press **STO** to select. You will see: **Enter Number**.

Tip:

Store up to four numbers per entry. If four are already stored, you will not see the empty cursor.

- 6. Edit/Add Phone Number** Enter digits. Press  to erase a digit at a time, or press and hold  to erase the entire number.
- 7. Finish Number** Press  or  when you finish the phone number.
- 8. Select Icon** Press  or  to scroll through the icons and press  to select the highlighted icon. The display will show the current location.
- 9. Keep Location** If you would like to keep the location number, press  or . You will see the name associated with the entry.
- or Change Location** If you would like to change the location number, press and hold  to erase the location number and enter a new two-digit number. You will see the name associated with the entry.
- 10. Edit Name** Press  to erase one letter at a time, or press and hold  to erase the entire name. Press  to move the cursor backward. (See page 39 for details on entering names.) Skip this step to leave the name unchanged.
- 11. Confirm Changes** Press  or  when you finish editing the name. You will see: N Numbers Saved At XX. (N is the total of numbers stored in the location and XX is the location number).
- 12. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Call Timers

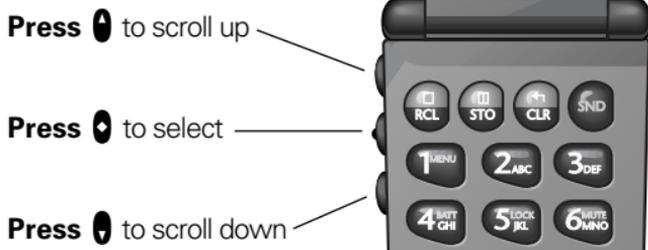


Your phone is equipped with three visual and three audible call timers. You can monitor or record the length of individual calls, set a timer to track monthly usage, or have the phone alert you at intervals that you specify.

In this chapter we will explain how to:

- monitor the length of your calls.
- set and view the resettable timer for long-term monitoring.
- program audible timers for your individual needs.

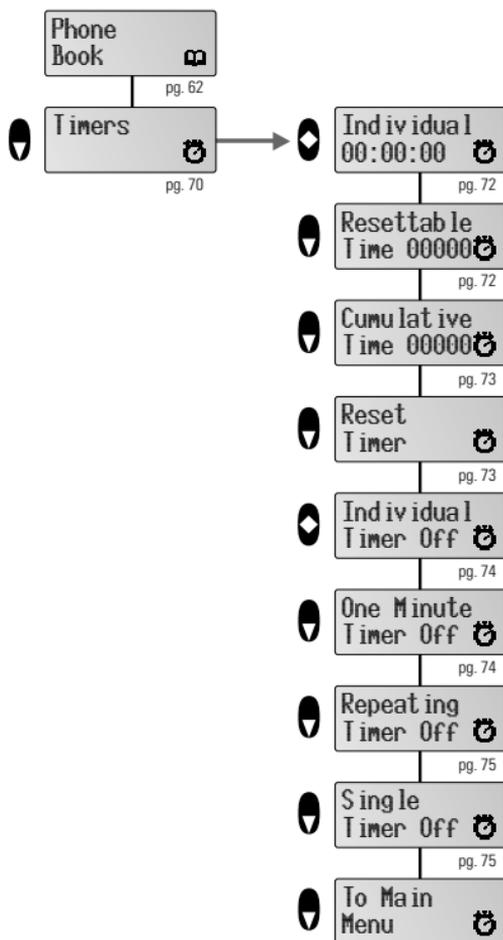
Follow these symbols as a guide for using the keys on the side of your phone.



Road Map

Press **FCN** then press **◀** to enter the menu system.

Start:



Getting to Call Timers...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Call Timers** Press **▲** or **▼** to scroll to **Timers** and press **↓** to select.

Individual
00:00:00 

Shortcut:

Press **FCN** then
#> twice.

Shortcut:

Press **FCN**, **↓**
then **4** **END**, **5** **TIME**.

Resettable
Time 00000 

Shortcut:

Press **FCN** then
#> three times.

Shortcut:

Press **FCN**, **↓** then
4 **END**, **6** **TIME**.

Viewing the Individual Timer

The individual timer records the air-time of your most recent call in hours, minutes, and seconds. It resets before you place the next call. You can have the timer display automatically while calls are in progress. See Auto Display Individual Timer on page 74.

- 3. View Timer** When you enter the Call Timers menu, you will see: Individual **XX:XX:XX**.
- 4. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Viewing the Resettable Timer

You can track how much air-time you have accumulated during any time period you choose. For example, reset this timer at the beginning of each billing period to know where you stand at any given moment. Use this feature to view the time elapsed, and follow the instructions on page 73 to reset the timer.

- 3. View Timer** Press **▲** or **▼** to scroll to **Resettable Time**. You will see the air-time in minutes since you last reset the timer.
- 4. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Viewing the Cumulative Timer

This is a non-resettable timer that keeps track of your phone's total air-time (in minutes) since your phone was activated.

- 3. View Timer** Press or to scroll to Cumulative Time. You will see the total air-time in minutes.
- 4. Exit Menu** Press to exit the menu, or you may scroll to other features.

Resetting the Timer

This feature allows you to monitor elapsed air-time over a period of time that you choose. After you reset the timer, it will continue to keep track of your air-time (in minutes) until you reset it again.

- 3. Find Feature** Press or to scroll to Reset Timer.
- 4. Reset Timer** Press to reset. You will see: Resettable Time 00000.
- 5. Exit Menu** Press to exit the menu, or you may scroll to other features.

Cumulative
Time 00000

Shortcut:

Press then four times.

Shortcut:

Press then .

Reset
Timer

Shortcut:

Press then and continue with step 4.

Shortcut:

Press then to reset the timer.

Getting to Call Timers...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Call Timers** Press **▲** or **▼** to scroll to **Timers** and press **↓** to select.

Individual Timer Off

Shortcut:

Press **FCN** **↓**
then **4** **CALL** **8** **TIM**
and continue
with step 4.

One Minute Timer Off

Shortcut:

Press **FCN** **↓**
then **4** **CALL** **4** **CALL**
and continue
with step 4.

Auto Display Individual Timer

When you turn this feature ON, your phone will automatically display your air-time in minutes and seconds during and after each call.

Note: Activating the Auto Display Timer may reduce standby-time and talk-time.

- 3. Find Feature** Press **▲** or **▼** to scroll to **Individual Timer**.
- 4. Toggle Display** Press **↓** to toggle **On** or **Off** the automatic display of the individual timer.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

One Minute Audible Timer

Turn this feature ON to hear an audible beep 10 seconds before the end of every minute during a call. The party on the other end will not hear the beeps.

- 3. Find Feature** Press **▲** or **▼** to scroll to **One Minute Timer**.
- 4. Toggle Timer** Press **↓** to toggle the timer **On** or **Off**.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Repeating Audible Timer

You can set this timer to beep during your calls at an interval that you select—from 11-999 seconds. Like the One Minute Timer, you will hear the beep 10 seconds before the end of each interval, and the party on the other end will not hear the beeps.

- 3. Find Feature** Press or to scroll to *Repeating Timer*.
- 4. Toggle Timer** Press to toggle the timer *On* or *Off*.
- 5. Enter Seconds** If you toggle the timer *ON*, you will see: *Enter Seconds*. Enter the number of seconds you would like between beeps and press to set the timer. You will see: *Set At XXX Secs*.
- 6. Exit Menu** Press to exit the menu, or you may scroll to other features.

Single Audible Timer

You can set the Single Timer to beep during your calls at a time that you select—from 11-999 seconds. It will beep once during each call, 10 seconds before the end of the preset time. The party on the other end will not hear the beeps.

- 3. Find Feature** Press or to scroll to *Single Timer*.
- 4. Toggle Timer** Press to toggle the timer *On* or *Off*.
- 5. Enter Seconds** If you toggle the timer *ON*, you will see: *Enter Seconds*. Enter the number of seconds you would like before the beep and press to set the timer. You will see: *Set At XXX Secs*.
- 6. Exit Menu** Press to exit the menu, or you may scroll to other features.

Repeating
Timer Off

Shortcut:

Press ,
then
and continue
with step 4.

Single
Timer Off

Shortcut:

Press ,
then
and continue
with step 4.

Tone Controls



If you've been reading along diligently, this may be a good time for a break—put your feet up and have some fun with these features. Use the Tone Control features to select Silent Mode, personalize your phone's ringer styles, or set the phone to remind you of new messages.

In this chapter we will explain how to:

- choose from nine different ringer styles.
- activate and deactivate the VibraCall® alert.
- silence the keypad.
- silence all your phone's tones with one convenient feature.
- set the Message Reminder.

Follow these symbols as a guide for using the keys on the side of your phone.

Press  to scroll up

Press  to select

Press  to scroll down



Road Map

Press **FCN** then press **↓** to enter the menu system.

Start:



* Network and service dependent feature. Not available in all areas.

Getting to Tone Control...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Tone Control** Press **▲** or **▼** to scroll to **Tone Control** and press **↓** to select.

Silent
Mode Off 

Shortcut:

Press **FCN** then
press & hold **8 VIB**.

Ring/Vib
Select 

Shortcut:

Press **FCN**
then press **8 VIB** to
toggle the
VibraCall® alert
ON and OFF.

Shortcut:

Press **FCN**, **▲** and
3 ENT, **1 MENU**, **▲** and
continue with
step 4.

Silent Mode

When you need to be discreet, just turn Silent Mode ON. All tones will be silenced. The ringer and incoming message tones will be replaced by vibrations.

- 3. Find Feature** Press **▲** or **▼** to scroll to **Silent Mode**.
- 4. Toggle Feature** Press **↓** to toggle the feature **On** or **Off**.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Ringer / Vibrating Alert

Motorola's VibraCall® alert is ideal for situations where ringing may not be appropriate, or in noisy places where you might not hear the ringer. When both the ringer and vibrating alert are ON, the phone alerts you by vibrating for three ring cycles then ringing.

- 3. Enter Feature** Press **▲** or **▼** to scroll to **Ring/Vib Select** and press **↓** to select.
- 4. Select Ringer/Vibe** Press **▲** or **▼** to scroll to **Vibrate Only**, **Ring Only**, or **Vibrate Then Ring** and press **↓** to select the displayed option.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Roaming Ringer*

For an easy way to know if you are on your home network before you answer calls, use this feature. When roaming with this feature ON, you will hear a distinct ringer for incoming calls.

- 3. Find Feature** Press  or  to scroll to **Roam Ringer**.
- 4. Toggle Feature** Press  to toggle the feature **On** or **Off**.
- 5. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Selecting a Ringer Style

Your new phone offers nine different ringer styles. After you choose a style, the phone will give you a brief sample of your new alert sound, or vibrate if you have the VibraCall® alert selected.

- 3. Enter Feature** Press  or  to scroll to **Ringer Style** and press  to select.
- 4. Select Ringer** Press  or  to scroll through the ringer styles. As you scroll, your phone will give an audible sample of the currently displayed style. Press  to select the displayed option.
- 5. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Roam
Ringer On 

Ringer
Style 1 

* Network and service dependent feature. Not available in all areas.

Getting to Tone Control...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Tone Control** Press **▲** or **▼** to scroll to Tone Control and press **↓** to select.

Setup Msg Tones



Tip:

To make new messages easy to recognize, try making the number of beeps unique to each message type.

Setup Message Tones

When you receive a new Voicemail or alphanumeric message, your phone beeps three times. To change the number of beeps or to turn them OFF, use this feature.

- 3. Enter Feature** Press **▲** or **▼** to scroll to Setup Msg Tones and press **↓** to select.
- 4. Select Msg Type** Press **▲** or **▼** to scroll to Text Msg Tone or Voicemail Tone.
- 5. Toggle Tone** Press **↓** to toggle between 3Beep, 1Beep, or Off.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Reminder Tones Setup

If you subscribe to messaging services, this feature can help you remember to check your messages. Turn Message Reminder Tones ON and your phone will remind you of unread messages by beeping and /or vibrating every two minutes. This feature is especially helpful if you are busy or away from your phone.

- 3. Find Feature** Press or to scroll to `ReminderTonesSetup` and press to select.
- 4. Select Call or Msg Tone** Press or to scroll to `Call Remind Tone` or `Msg Remind Tone` and press to select.
- 5. Toggle Feature** Press to toggle the feature `On` or `Off`.
- 6. Exit Menu** Press to exit the menu, or you may scroll to other features.

Keypad Tones

Keypad Tones are the sounds you hear when you press any key on the phone. If you want to be discreet, use this feature to silence the audio feedback from the keypad.

Keep in mind: Turning Keypad Tones OFF does not silence the tones your phone sends across the line. See Transmit Tones on page 82 for more information.

- 3. Find Feature** Press or to scroll to `Keypad Tones`.
- 4. Toggle Feature** Press to toggle the feature `On` or `Off`.
- 5. Exit Menu** Press to exit the menu, or you may scroll to other features.

Reminder
TonesSetup

Keypad
Tones On

Shortcut:
Press and and continue with step 4.

Getting to Tone Control...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Tone Control** Press **▲** or **▼** to scroll to **Tone Control** and press **↓** to select.

DTMF
Select



Shortcut:

Press **FCN**,
then **3 OFF**, **3 OFF**,
and continue
with step 4.

Transmit Tones

Your phone transmits tones to communicate with automated calling systems like Voicemail* or bank-by-phone.* These tones are called DTMF tones (Dual Tone Multi-Frequency tones), and this feature allows you to control the length of the tone your phone sends. For most systems, you should use the default setting of short tones, which sends the tones for a preset length of time. If you choose long tones, your phone will transmit the tones for as long as you press and hold the key. To silence the tones during conversations, turn the tones OFF.

- 3. Enter Feature** Press **▲** or **▼** to scroll to **DTMF Select** and press **↓** to select.
- 4. Select Setting** Press **▲** or **▼** to scroll to **Transmit DTMF Long**, **Transmit DTMF Short**, or **Transmit DTMF Off** and press **↓** to select.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Note: If you turned the DTMF tones OFF, but you want to access a tone-activated system like Voicemail, place your call, enter the numbers you need to transmit and:

- Send Tones** Press **FCN** then press **SND** to send the tones if DTMF tones are OFF.

* Network and service dependent feature. Not available in all areas.

Service Tones

When Service Tones are ON, you will be instantly alerted to any change in your wireless service. You will hear two short beeps when your phone (1) starts to roam, (2) returns to a home system after roaming, (3) loses service, (4) finds service, or (5) moves from digital  to analog  service (or vice versa). Check the display to find out what changed (see page 26).

- 3. Find Feature** Press  or  to scroll to *Service Tones*.
- 4. Toggle Feature** Press  to toggle the feature *On* or *Off*.
- 5. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Keep in mind: Your phone will always beep if a call is dropped.

Service
Tones Off 

Lock/Security



While you probably would not want to leave your phone unattended, your phone has a number of built-in security features to prevent unauthorized use.

In this chapter we will explain how to:

- lock and unlock your phone.
- place priority calls.
- view and change your lock code.
- restrict call placement and memory access.
- reset or clear your phone's settings.

Follow these symbols as a guide for using the keys on the side of your phone.

Press  to scroll up

Press  to select

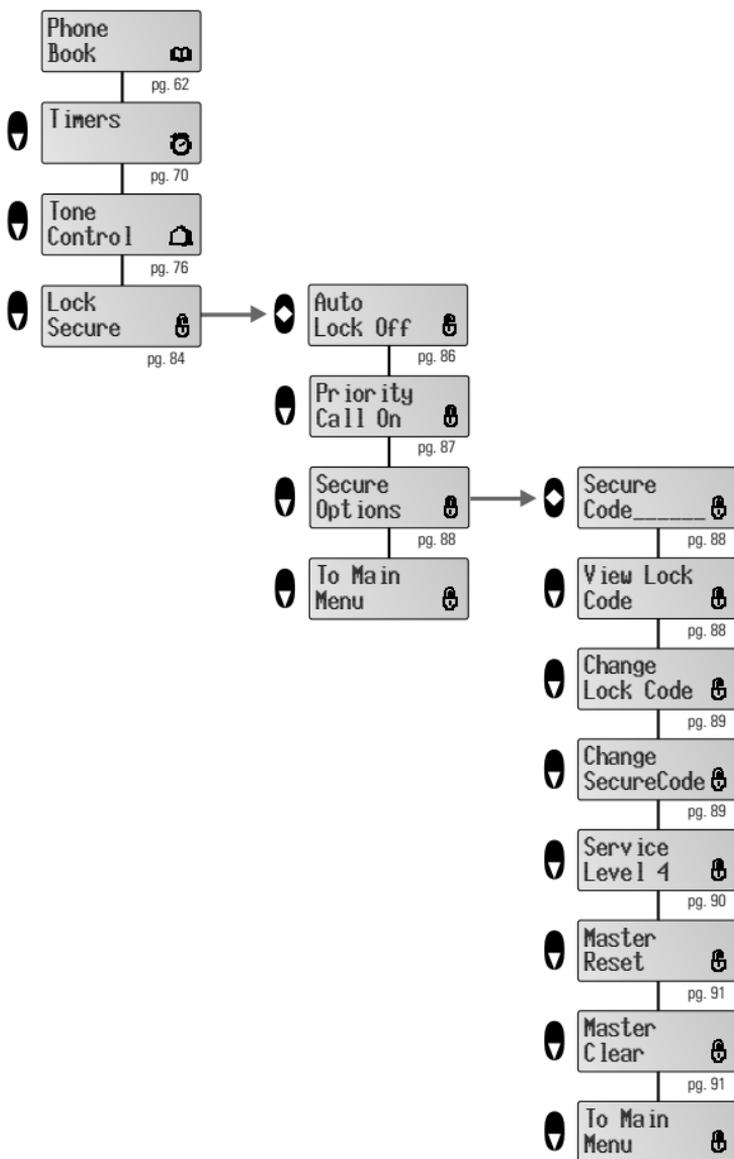
Press  to scroll down



Road Map

Press **FCN** then press **◀** to enter the menu system.

Start:



Getting to Lock Secure...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Lock Secure** Press **▲** or **▼** to scroll to **Lock Secure** and press **◆** to select.

Auto
Lock Off 

Auto Lock

Turn this feature ON and your phone will automatically lock itself each time the phone is turned OFF.

- 3. Find Feature** Press **▲** or **▼** to scroll to **Auto Lock**.
- 4. Toggle Lock** Press **◆** to toggle the feature On or Off.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Locking the Phone

You can lock your phone manually at any time to help prevent unwanted use. Once locked, you can leave the phone ON or turn it OFF and the phone will remain locked.

- 1. Lock Phone** Press **FCN** then press **S^{LOCK}JRL**.
You will see: **Lock?**
- 2. Confirm** Press **◆** or **III STO**. You will see: **Locked**.

Unlocking the Phone

Unlocking your phone is quick and easy. Once your phone is ON, just enter your three-digit code. Your factory programmed lock code is 123. If you have changed this code and cannot remember what it is, see **Viewing the Lock Code** on page 88.

Keep in mind: You can still receive calls when the phone is locked. Follow these steps to answer an incoming call:

- Unlock & Answer** Enter your three-digit code and press **◆** or **END** to answer.

Priority Call

Your phone's priority call feature allows you to instantly place a call from location 01 – even when your phone is locked.

- 3. Find Feature** Press or to scroll to Priority Call.
- 4. Toggle** Press to toggle the feature On or Off.
- 5. Exit Menu** Press to exit the menu, or you may scroll to other features.

Keep in mind: Some wireless systems only allow access to their own emergency numbers. Check with your Service Provider for more information.

Storing a Priority Call Number

You should reserve memory location 01 for an emergency number or the number of a family member or close friend. To store your priority number, follow these steps:

- 1. Enter Number** Enter your priority number.
- 2. Save Number** Press and , to choose location 01.
- 3. Enter Name** Select a label, press , enter a name if you like, and press when finished. Your phone will confirm the entry by displaying the stored information.

Placing a Priority Call

- Place Call** When Priority Call is ON, press and hold at any time.

Keep in mind: If call restriction Service Level 1 is enabled, the Turbo Dial® keys will not be active. To override the restriction and place a priority call, press , , . See page 90 for information on your phone's service levels.

Priority
Call On



Shortcut:
Press , ,
then , ,
and continue
with step 4.

Tip:
If you store more than one number in location 01, the first will be dialed. See page 46 for more information.

Getting to Secure Options...

- 1. Enter Menu** Press **FCN** then press **↕**.
- 2. Enter Lock/Secure** Press **▲** or **▼** to scroll to **Lock Secure** and press **↕** to select.
- 3. Access Secure Options** Press **▲** or **▼** to scroll to **Secure Options** and press **↕**. You will see: **Secure Code _____**
Enter your six-digit secure code.

Secure
Options 

View
Lock Code 

Shortcut:

Press **FCN**, **0**, **0**, **0**,
enter six-digit
security code,
then **END**.

Secure Options Submenu

For your protection, you must enter a six-digit secure code in order to access the features in the Secure Options submenu. The factory programmed secure code is 000000.

Viewing the Lock Code

To view the three-digit lock code:

- 4. View Code** Press **↕** to select **View Lock Code**.
You will see: **Lock Code XXX**.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Changing the Lock Code

To change the three-digit lock code:

- 4. Begin Change** Press **▲** or **▼** to scroll to **Change Lock Code** and press **▶** to select.
You will see: **Enter New Code_____**
- 5. Enter New Code** Enter a new three-digit lock code.
You will see: **New Lock Code XXX.**
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Changing the Secure Code

The Secure Code is a six-digit number factory set to 000000. You will probably want to change it to something unique and easy to remember.

- 4. Select Feature** Press **▲** or **▼** to scroll to **Change Secure Code** and press **▶** to select. You will see: **New Code _____**
- 5. Enter New Code** Enter a new six-digit Secure Code. Your phone will briefly display the new code.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Change
Lock Code 

Shortcut:
Press **FCN**,
0ans, enter
your six-digit
secure code,
enter a new lock
code, then **END**.

Change
SecureCode 

Getting to Secure Options...

- 1. Enter Menu** Press **FCN** then press **↵**.
- 2. Enter Lock/Secure** Press **▲** or **▼** to scroll to **Lock Secure** and press **↵** to select.
- 3. Access Secure Options** Press **▲** or **▼** to scroll to **Secure Options** and press **↵**. You will see: **Secure Code _____**
Enter your six-digit secure code.

Secure Options Submenu

Service Level

When loaning your phone to others, you may want to restrict call placement or protect memory information. Your phone has two service levels that allow you to control the types of outgoing calls that can be made from your phone.

- 4. Select Feature** Press **▲** or **▼** to scroll to **Service Level** and press **↵** to select.
- 5. Choose Level** Press **▲** or **▼** to scroll through service level settings and press **↵** to select the setting. (See the chart below for descriptions.)
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Your phone has two service levels:

<p>Level 1: Calls can be placed from memory locations 1-10 only.</p> <ul style="list-style-type: none">• No dialing from keypad.• No memory edit or storage.• No access to name directory.	<p>1 Memory 1-10 Only </p>
<p>Level 4: This is the default setting.</p> <ul style="list-style-type: none">• No restrictions.	<p>4 Standard Setting </p>

Service
Level 4 

Master Reset

Use this feature to reset all user-selectable options back to their original factory settings.

Keep in mind: Once you select this feature, the reset process cannot be canceled or reversed.

- 4. Reset Features** Press  or  to scroll to *Master Reset* and press  to select. You will see: *Reset?*
- 5. Confirm Reset** Press  to confirm. You will see: *Standard Setting.*
- or Exit** Press  to exit without resetting.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Master Clear

Use Master Clear to clear all user-selectable options, the resettable timer, the Phone Book, and the Messaging memory.

Keep in mind: Once you select this feature, the process cannot be canceled or reversed.

- 4. Clear Settings** Press  or  to scroll to *Master Clear* and press  to select. You will see: *Clear?*
- 5. Confirm Clear** Press  to confirm. You will see: *Busy.* It will take a few seconds to reset all of your phone's options back to their factory settings.
- or Exit** Press  to exit without resetting.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Master
Reset



Master
Clear



Phone Options

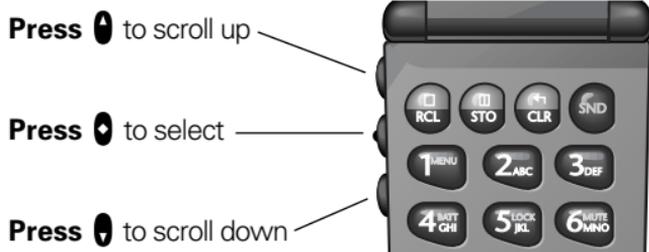


The Phone Options menu is your “command center” for adjusting the way your phone sends and receives calls. You can fine tune your phone for optimal performance, view information about your phone’s settings, and much more.

In this chapter we will explain how to:

- switch between your active phone numbers.
- review your phone’s settings.
- select a variety of system specific settings.

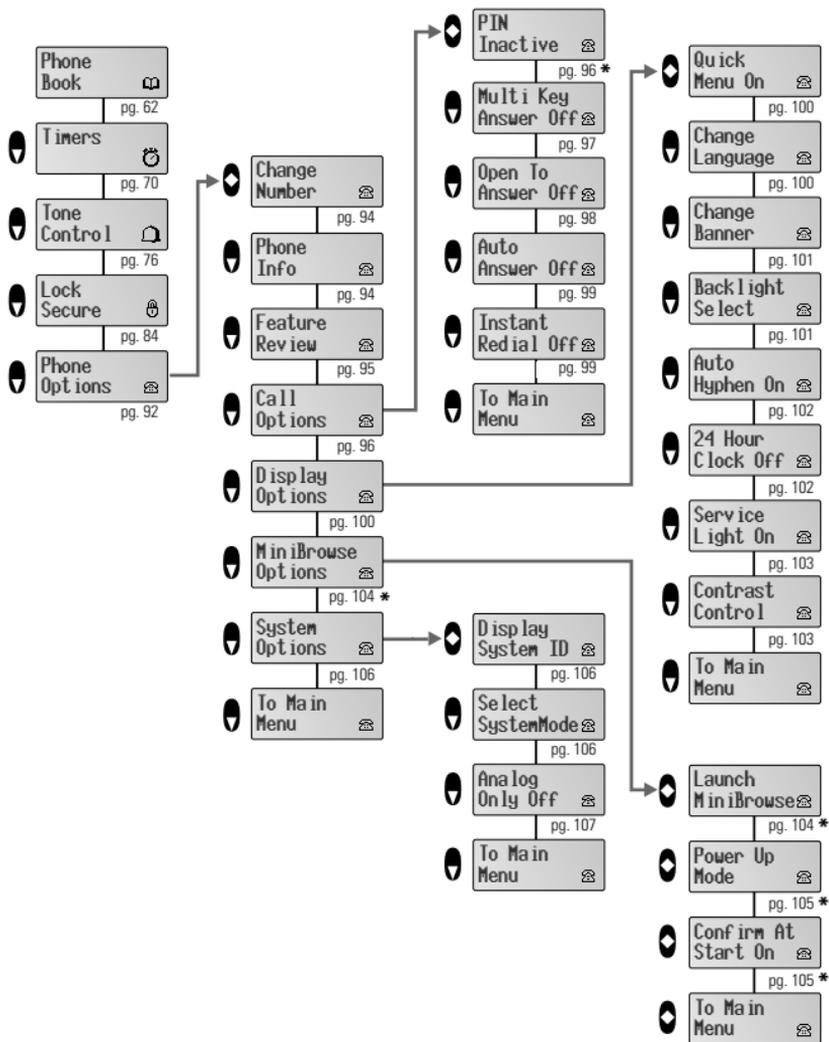
Follow these symbols as a guide for using the keys on the side of your phone.



Road Map

Press **FCN** then press **⬇** to enter the menu system.

Start:



* Network and service dependent feature. Not available in all areas.

Getting to Phone Options...

- 1. Enter Menu** Press **FCN** then press **↩**.
- 2. Enter Phone Options** Press **▲** or **▼** to scroll to **Phone Options** and press **↩** to select.

Change
Number



Changing Your Number

Your phone can be activated with up to four unique phone numbers. You could use one number for home and others for cities you travel to frequently. This feature allows you to select an appropriate number.

Keep in mind: Only one number can be active on your phone at a time.

- 3. Begin Change** Press **↩** to enter **Change Number**. The display will show your phone's currently active number.
- 4. Choose Number** Press **▲** or **▼** to scroll through the phone numbers programmed into your phone. Press **↩** to select the desired number. You will see: **Set**.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Displaying Phone Information

This feature allows you to view information about your phone. If you require technical assistance, you may be asked to check here.

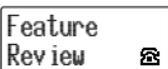
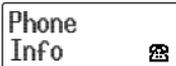
- 3. Find Feature** Press  or  to scroll to Phone Info then press  to select.
- 4. Scroll through Info** Press  or  to scroll through the information. Options vary by phone, but the list may include: Serial Number, Software Version, Roam List Version, and information regarding Network, Minibrowser and Data capabilities.
- 5. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Feature Review

After you have spent some time adjusting your phone's settings, use this feature to review the changes you have made. When you enter Feature Review, your phone will display any features that you have changed from their default factory settings.

Keep in mind: Feature Review is simply an opportunity to review – but not change – your current settings.

- 3. Begin Review** Press  or  to scroll to Feature Review and press  to enter.
- 4. Browse Features** Press  or  to scroll through any features you have changed from their default settings. If all features are set to their default factory settings, the display will show: Standard Setting.
- 5. Exit Menu** Press  to exit the menu, or you may scroll to other features.



Getting to Call Options...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Phone Options** Press **▲** or **▼** to scroll to **Phone Options** and press **↓** to select.
- 3. Enter Call Options** Press **▲** or **▼** to scroll to **Call Options** and press **↓** to select.

Call Options 

Call Options Submenu

This submenu allows you to control the way your phone places and receives calls.

PIN Inactive 

Activating PIN Code*

Your Service Provider may require a Personal Identification Number (PIN) when placing calls. If so, you will probably want to activate this feature, which allows you to send your PIN Code with one touch of a button.

Keep in mind: If you enter a service area that does not require a PIN Code, make sure PIN Inactive is set.

- 4. Toggle PIN** Press **▲** or **▼** to scroll to **PIN Inactive** or **Active** and press **↓** to toggle.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Storing PIN Code in Memory Location 07

When PIN Code is active, your phone automatically uses the number stored in location 07 as your PIN Code. Once you have activated the PIN, you should store the PIN Code in location 07.

- 1. Enter PIN** Enter your PIN Code.
- 2. Store PIN** Press **STO**, **0 OPS**, **7 POS**, select a label and press **↓**, press **CLR**, then press **↓** again.

* Network and service dependent feature. Not available in all areas.

Placing a Call with PIN Code Active

When you place a call with PIN Code active, your phone will queue the number stored in location 07 and then send it when you press the Smart Button.

- 1. Place Call** Enter the number to be called, or recall it from memory and press **END** or press and hold **◀**.
- 2. Send PIN** After the call is placed, the system will prompt you for your PIN Code. Press **END** or press and hold **◀** to send the PIN Code.

Note: If you see *Invalid PIN*, the menu feature may be active but your PIN Code is not stored in location 07. The PIN Code must be less than seven digits.

Multiple Key Answer

With Multiple Key Answer ON, you can answer calls by pressing **◀** or any key in the center of the keypad, **1 MENU** through **# ▶**.

- 4. Find Feature** Press **◀** or **▶** to scroll to *Multi Key Answer*.
- 5. Toggle** Press **◀** to toggle the feature *On* or *Off*.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Keep in mind: If there are any digits in your Scratchpad or if your phone is locked, this feature will not work.

Multi Key
Answer Off 

Getting to Call Options...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Phone Options** Press **↑** or **↓** to scroll to **Phone Options** and press **↓** to select.
- 3. Enter Call Options** Press **↑** or **↓** to scroll to **Call Options** and press **↓** to select.

Call Options Submenu

Open to Answer

This feature allows you to set whether or not your phone automatically answers when opened. If you subscribe to Caller ID, you will probably want to set this feature OFF so you can open the phone and check who is calling before you answer.

- 4. Find Feature** Press **↑** or **↓** to scroll to **Open to Answer**.
- 5. Toggle** Press **↓** to toggle the feature **On** or **Off**.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Note: To answer calls with Open to Answer OFF, press **SND**.

Open To
Answer Off 

Automatic Answer

Turn Auto Answer ON to have your phone automatically answer incoming calls after two ring cycles.

- 4. Find Feature** Press or to scroll to Auto Answer.
- 5. Toggle** Press to toggle the feature On or Off.
- 6. Exit Menu** Press to exit the menu, or you may scroll to other features.

Note: We recommend you use this feature only with vehicle accessories and with your phone's ringer active. See page 78. Otherwise, your phone may answer a call in your absence.

Instant Redial

When placing calls, you may hear a fast busy signal and see Press to Redial. This probably means the network is temporarily busy. If you turn Instant Redial ON, your phone will redial for the next four minutes or until the call goes through.

- 4. Find Feature** Press or to scroll to Instant Redial.
- 5. Toggle** Press to toggle the feature On or Off.
- 6. Exit Menu** Press to exit the menu, or you may scroll to other features.

Keep in mind: This feature redials only if the network is busy. If you hear a normal busy signal, this feature will not work.

Auto
Answer Off

Shortcut:

Press ,
then
and continue
with step 5.

Instant
Redial Off

Getting to Display Options...

- 1. Enter Menu** Press **FCN** then press **⏵**.
- 2. Enter Phone Options** Press **▲** or **▼** to scroll to **Phone Options** and press **⏵** to select.
- 3. Enter Display Options** Press **▲** or **▼** to scroll to **Display Options** and press **⏵** to select.

Display Options 

Quick Menu On 

Change Language 

Display Options Submenu

This submenu allows you to customize your phone's display.

Activating the Quick Menu

Press the Smart Button once and the Quick Menu appears on the display, offering shortcuts to the most popular features. This feature turns the Quick Menu OFF if you would rather use the Smart Button to go straight into the internal Phone Book. See page 34 for more information.

- 4. Toggle Feature** When you enter Display Options, you will see: **Quick Menu**. Press **⏵** to toggle the feature **On** or **Off**.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Changing the Language

This feature allows you to select the language used in the display.

- 4. Begin Selection** Press **▲** or **▼** to scroll to **Change Language** and press **⏵** to select.
- 5. Choose Option** Press **▲** or **▼** to scroll through the available languages and press **⏵** to select.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Changing the Banner

You can create your own message banner for the phone to display when it is idle. Your banner can be up to 12 characters long.

4. **Enter Feature** Press  or  to scroll to `Change Banner` and press  to select. You will see the current banner or `Alpha or Press *`.
5. **Enter Message** Enter your message using the alphanumeric keypad. Press  when your message is complete.
6. **Exit Menu** Press  to exit the menu, or you may scroll to other features.

Customizing the Backlight

Your phone's backlight illuminates when you open the phone, press a key, or your phone receives an incoming call signal. This feature allows you to choose how long it remains ON.

4. **Find Feature** Press  or  to scroll to `Backlight Select` and press  to select.
5. **Toggle Feature** Press  or  to scroll to `Backlight 15 Seconds`, `Backlight 30 Seconds`, or `Backlight Always On` and press  to select the displayed option.
6. **Exit Menu** Press  to exit the menu, or you may scroll to other features.

Keep in mind: The backlight will always be illuminated when your phone is connected to an external power supply, like a charger or vehicle accessory.

Change
Banner



Backlight
Select



Getting to Display Options...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Phone Options** Press **▲** or **▼** to scroll to **Phone Options** and press **↓** to select.
- 3. Enter Display Options** Press **▲** or **▼** to scroll to **Display Options** and press **↓** to select.

Display Options Submenu

Auto
Hyphen On 

Auto Hyphen

Just turn Auto Hyphen ON to have all phone numbers automatically hyphenated on the display. This allows you to easily distinguish between area codes, call prefixes, and other numbers.

- 4. Find Feature** Press **▲** or **▼** to scroll to **Auto Hyphen**.
- 5. Toggle Feature** Press **↓** to toggle the feature **On** or **Off**.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

24 Hour
Clock Off 

Displaying the 24-Hour Clock

Your phone can display the current time in 12-hour or 24-hour format. Use this feature to turn the 24-hour clock ON or OFF.

- 4. Find Feature** Press **▲** or **▼** to scroll to **24 Hour Clock**.
- 5. Toggle Feature** Press **↓** to toggle the feature **On** or **Off**.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Service Light

The Service Light can be useful to quickly check the current state of your phone's service. If you prefer to conserve standby-time, you can turn the Service Light OFF with this feature.

- 4. Find Feature** Press  or  to scroll to `Service Light`.
- 5. Toggle Feature** Press  to toggle the feature `On` or `Off`.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Contrast Control

To make the display easier to read, this feature allows you to adjust the display contrast.

- 4. Select Feature** Press  or  to scroll to `Contrast Control` and press  select. You will see a bar graph labeled `Contrast`.
- 5. Adjust Contrast** Press  to increase the contrast or press  to decrease it. Press  when finished.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Service
Light On 

Tip:

To learn more about the Service Light, see page 25.

Contrast
Control 

Getting to Minibrowser Options...

- 1. Enter Menu** Press **FCN** then press **⬇**.
- 2. Enter Phone Options** Press **⬆** or **⬇** to scroll to Phone Options and press **⬇** to select.
- 3. Enter Minibrowser Options** Press **⬆** or **⬇** to scroll to MiniBrowse Options and press **⬇** to select.

MiniBrowse
Options 

Launch
MiniBrowse 

Tip:

You can also launch the Minibrowser with the Quick Menu. See page 34.

Minibrowser Options*

This submenu offers several options for customizing the way your phone accesses information with the Minibrowser.

Launching the Minibrowser*

Select this feature to launch the Minibrowser and access sports scores, stock reports, weather reports, and more.

- 4. Find Feature** Press **⬆** or **⬇** to scroll to Launch MiniBrowser.
- 5. Select** Press and hold **⬇** to select.
- 6. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

* Network and service dependent feature. Not available in all areas.

Power Up Mode*

When you turn ON your phone, you can begin with the Minibrowser or the regular phone features.

- 4. Find Feature** Press  or  to scroll to Power Up Mode. and press  to select.
- 5. Select Option** Press  or  to scroll to Power Up Phone or Power Up MiniBrowse and press  to select.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Confirm at Start-up*

Your phone can display reminders when you launch the Minibrowser to indicate that your time browsing may be charged. This feature toggles the reminder ON or OFF.

- 4. Find Feature** Press  or  to scroll to Confirm At Start.
- 5. Toggle** Press  to toggle between On and Off.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Power Up
Mode 

Confirm At
Start On 

* Network and service dependent feature. Not available in all areas.

Getting to System Options...

- 1. Enter Menu** Press **FCN** then press **↓**.
- 2. Enter Phone Options** Press **▲** or **▼** to scroll to **Phone Options** and press **↓** to select.
- 3. Enter System Options** Press **▲** or **▼** to scroll to **System Options** and press **↓** to select.

System Options 

System Options Submenu

The System Options submenu offers a couple features that will help you use your phone and wireless network.

Display System ID 

Displaying the System ID*

Use this feature to determine the unique System ID for your wireless phone.

- 4. View SID** Press **↓** to select **Display System ID**. You will see the System ID for your phone.
- 5. Exit Menu** Press **END** to exit the menu, or you may scroll to other features.

Select System Mode 

Selecting a System Mode

Your Service Provider configures Select System Mode when you receive your phone. This feature allows you to select the type of system your phone will attempt to access. See below for a chart of available settings.

- 4. Begin Selection** Press **▲** or **▼** to scroll to **Select System Mode** and press **↓** to enter. The display will show your phone's current setting.
- 5. Choose Mode** Press **▲** or **▼** to scroll through the System Mode settings (see chart below). Press **↓** to select the displayed setting.

Shortcut:

Press **FCN** then **←*** and continue with step 5.

* Network and service dependent feature. Not available in all areas.

System Mode Settings

Standard Mode: Your phone first seeks a home type system, then a non-home type system.	Standard Scan 
Home Only Mode: Phone will not operate outside its home system.	Home On ly 
Scan A Mode*: Phone will operate only within non-wireline (A) systems.	Scan A 
Scan B Mode*: Phone will operate only within wireline (B) systems.	Scan B 
Analog Only Mode*: Phone will only operate on analog networks. Some peripheral devices require analog signals.	Ana log On ly 

Analog Only*

Turning Analog Only ON tells your phone to seek an analog channel  for the next call. If you do not place a call, your phone will revert to service after a few minutes.

Note: Some peripheral devices, like fax machines and modems, require analog operation.

- 4. Find Feature** Press  or  to scroll to Analog Only.
- 5. Toggle Feature** Press  to toggle the feature ON or OFF.
- 6. Exit Menu** Press  to exit the menu, or you may scroll to other features.

Ana log On ly Off 

Shortcut:*

Press  then  any time to seek an analog network for one call.

* Network and service dependent feature. Not available in all areas.

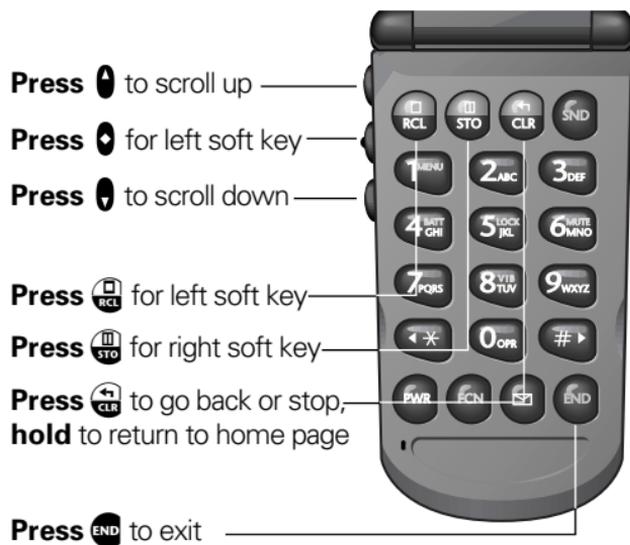
Using the Minibrowser*

Need information now? Your phone can give you instant access to valuable resources on the go! With a subscription and wireless service, you can retrieve sports scores, weather and traffic reports, stock prices, and more.

In this chapter we will explain how to:

- launch the Minibrowser.
- navigate using your phone.
- bookmark your favorite sites.

Follow these symbols as a guide for using the Minibrowser.



Turn to page 110 for a detailed explanation of all the keys.

* Network and service dependent feature. Not available in all areas.

Getting Started Browsing

To get started with you Minibrowser, you will need an IP address for your phone. The IP address is the location of a server provided by your Service Provider, and it will be loaded into your phone by your Service Provider when you subscribe to this service. Contact your Service Provider for more information.

Launching the Minibrowser

If the IP address is already set, then you are ready to go. Just follow these simple steps:

1. Open Quick Menu

Press  to open the Quick Menu.



2. Select Browser

Press  or  to scroll to Launch Browser and press  to select.

When you launch the Minibrowser, you will see the last page you accessed with the Minibrowser. If this is your first time, the phone will attempt to connect with the gateway and load your home page.

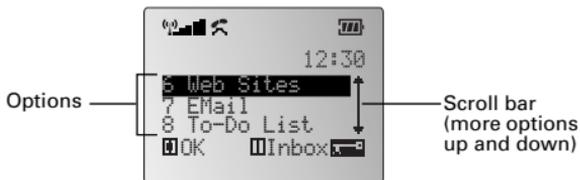
Turn the page to learn how to navigate with the Minibrowser.

Tip:
For more setup options and another way to launch the Minibrowser, turn to page 104.

Minibrowser Navigation

Scrolling and Selecting

When browsing, you will see a list of options on the phone's display. Each of the items on the list is assigned a number. Just press the matching numeric key to select that item. Or you can scroll to the item with the volume keys and use the Smart Button to select.



Select Item Press the key matching the number of the list item. In the above example, press **7** for Email.

Scroll Press **▲** or **▼** to scroll up and down the page. You can also use **⌘*** or **#**. Above, press **▼** once to scroll to Email, twice to scroll to To-Do List.

Select Press **◀** or the left soft key (see the next page) to select the highlighted item. Above, press **◀** to select Web Sites.

Go Back One Page While navigating, press **↶ CLR** to return to the previous page.

Stop When sending and receiving information, press **↶ CLR** to interrupt transmission.

Return to Home Press and hold **↶ CLR** to return to your home page.

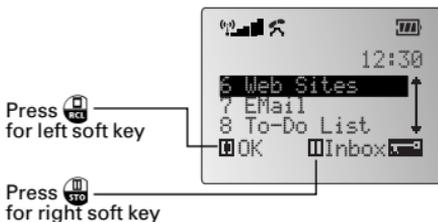
Tip: While editing text, pressing **↶ CLR** will delete a character at a time instead of returning to the previous page.

Minibrowser Navigation

Soft Keys

In addition to the familiar keys for scrolling and selecting, the Minibrowser makes use of “soft keys.” Soft keys change their function according to the screen. Read the lower line of the display to find out what the soft keys can do on that screen.

You will see two functions, one on the left and one on the right, each with an icon:



Left Soft Key

Press  to choose the option on the left. In the above example, press  to select OK and accept the highlighted option: Web Sites.

Right Soft Key

Press  to choose the option on the right. In the above example, press  to select Inbox.

Display Messages

While you navigate, the lower line of the display will show you messages to let you know what your phone is doing. You will see: Sending, Receiving, or Waiting...

Tip: You can also press  to select the left option.

Using Bookmarks

Bookmarks make it easy to quickly jump to the sites you use most often. You can assign up to nine bookmarks, one for each of the numeric keys on the keypad.

To bookmark a Minibrowser site:

- 1. Open Menu** Press  then press .
- 2. Select Feature** Press  or  to scroll to **Mark Site** and press  to select. You will see the name of the site.
- 3. Edit Name** See page 39 for details on entering and editing names. Press  when finished. You will see a message confirming the new bookmark.

Once you bookmark the site, you can jump directly to the site or scroll to it through a list of all sites you have marked.

To jump directly to the site:

- Jump to Site** Press and hold the number of the bookmark. For instance, for the first site you marked, press and hold .

To scroll through your bookmarks:

- 1. Open Menu** Press  then press .
- 2. Select Feature** Press  or  to scroll to **Bookmarks** and press  to select.
- 3. Scroll** Press  or  to scroll through your bookmarks and press  to select and go to the highlighted bookmark.

Keep in mind: Bookmarks are only available while browsing.

Minibrowser Alerts

To stay current with changing information, like stock prices or sports scores, you can subscribe to Minibrowser Alerts through your Service Provider.

If your phone is ON and you receive a Minibrowser Alert:

• **An alert sounds or vibrates:**

Your phone will beep or vibrate three times.

• **An indicator appears on the display:**

✉ Appears on the second line of the display. It will stay on the display until you have checked the alert.

- 1. Check Message** Press  to open the messaging menu. If you received a Minibrowser alert, the Minibrowser icon will be flashing.
- 2. Select Alert** Press  or  to scroll to MiniBrowse Alert and press  to select.

Receiving Calls

Most of the time, while browsing you will not be able to receive calls (depending on your service, callers will probably get your Voicemail).

Occasionally, when you access a page that you have recently visited and the information on the page has not changed, your phone may use a version of the page stored in its memory. When this is the case and you receive a call, your phone's alerts will sound/vibrate as usual and the display will show the Caller ID (if available).

- Answer Call** Press  to answer the call. Your browsing session will be put on hold while the call lasts. Once the call is complete, your phone will return to the last site.

Tip:

See Ringer / Vibrating Alert on page 78 to set your phone's alert. See page 81 to learn about Reminder Tones.

Tip:

Look for the  indicator on the top line of the display. If you see it, your phone is online and you will not be able to receive calls.

Entering Words

At times you may need to enter information while browsing, like a keyword for searching or a message. If you see a “|” symbol, you can use the keypad to enter letters and punctuation in the same way you do for the internal Phone Book. See page 39 for more information.

Security

To find out if the information you are sending is secure, just look at the lower line of the display. A key icon denotes a secure transmission. If the key has a slash through it, then the transmission is not secure.



Secure



Non-Secure

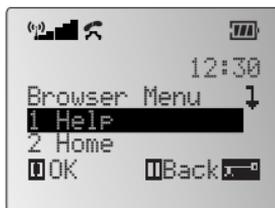
The Minibrowser Menu

At any time while you are browsing, you can open the Minibrowser Menu for a list of options. Through this menu, you can set bookmarks, get help on selected pages, and more.

Keep in mind: This menu is only available while browsing.

To open the Minibrowser Menu while browsing:

- 1. Open Menu** Press **FCN** then press **1 MENU**.
You will see:



- 2. Scroll** Press **▲** or **▼** to scroll through the options.

- 3. Select Option** Press  or  to select the highlighted option, or press the numeric key matching the option.*
- Help If you need assistance while browsing, select this option.
- Note:** Some sites do not have help available.
- Home Select this option to return to the home page set up by your Service Provider.
- Mark Site To add a page to your bookmark list, choose this feature.
- Once bookmarked, press and hold the corresponding key when in a Minibrowser session to jump to the bookmarked page.
- Show URL To see the address of the current page, choose this option.
- Restart Select to relaunch the Minibrowser.
- Phone.com This feature offers information on the company that helps to provide the web browsing service.
- Advanced This submenu contains a couple features for advanced users, like security and technical settings.
- 4. Return** Press  or  to return to the page you were browsing before you opened the menu.

* Options may vary depending on your Service Provider.

Using Data Features*

Add the Motorola Data Connectivity Kit to your wireless package and transform your digital V. Series™ phone into a convenient and portable fax modem. Use the data cable to connect your CDMA phone to a compatible computer, and you can send faxes, access the Internet, send and check e-mail – transmit and receive data wherever there is a wireless signal.

In this chapter we will explain how to:

- Place, end, and receive data calls.
- Read the data display.
- Set up Pre-arrangement.

Checking for Data Capability

To use the cable that came with your Data Connectivity Kit, first make sure that your CDMA phone is data capable. To do so, just use your phone to perform the following simple test:

1. Select Feature Press **FCN** then **1** **MENU**, **2** **ABC**, **5** **LOCK** **REL**.
You will see: Phone Info.
Press **◀** to select.

2. Scroll Press **▲** or **▼** to scroll through the submenu.
If you see: TrueSync Capable and Modem/
Fax Capable, your CDMA phone is data capable.

If you do not see the above as you scroll, contact your Service Provider for more information.

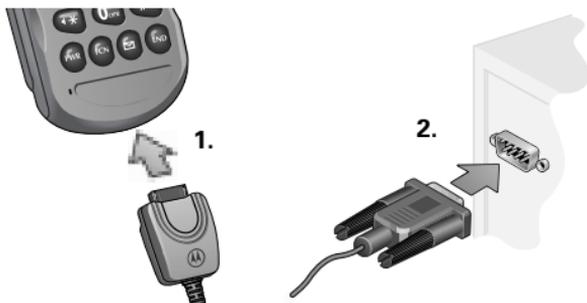
* Network and service dependent feature. Not available in all areas.

Getting Started with the Data Connectivity Kit

Attaching the Data Cable

Before you install the fax/modem software on your computer, it is a good idea to attach the cable to the computer and phone.

- 1. Plug into Phone** Plug the smaller end of the data cable, with the release tab facing up, into the accessory connector on your phone.
- 2. Plug into Computer** The other end of the data cable is a 9-pin plug. Find the matching serial port on the back of your computer and insert the 9-pin plug, then tighten the screws by hand.



To indicate the cable is attached on both ends, your phone will beep once.

Keep in mind: To save power, some laptops deactivate unused serial ports. If this happens, open an application that uses the serial port, like a fax or dial-up application, and your computer will automatically activate the port.

Installing the Software

To begin making wireless data calls, you will need to install the software from the CD-ROM that came with the Data Connectivity Kit. The software is designed to take you through the installation process step by step.

Placing a Data Call

Keep in mind: You will not be able to place a data or fax call through your phone's keypad, using last ten dialed, or with Caller ID. All data and fax calls must be placed through your computer.

- 1. Connect** Make sure the cable is connected properly.
- 2. Place Call** Open the application on your computer, like a fax or dial-up application, and place the call through the application on your computer.

The phone will display the number your computer is calling (or the name if in the internal Phone Book). You will see: *Connecting*.

If the call is not connected, your phone will return to the idle display.

During the Call

Reading the Display

Once the call is successfully connected, your phone's display will show transmission information.



Ending a Data Call

Always end a data call by closing the connection through the application on your computer. See the User's Guide that came with the software for more information.

Keep in mind: If you set pre-arrangement before the call, your phone will remain in the pre-arranged state when the data call is ended. You will see either *Fax Ready* or *Data Ready*. See page 120 for more information.

Important: The normal ways to end calls, like pressing **END** or the Smart Button, will end a data call but may disrupt your computer. Likewise, disconnecting the cable or turning OFF your phone will also end a data call, but may affect the application on your computer. We recommend always closing the data connection through the software application.

Setting up Pre-arrangement

Some networks require you to change a setting on your phone before you can receive an incoming fax or data call. This is called pre-arrangement. There is no need to worry about placing data or fax calls – the pre-arrangement setting only applies to receiving calls.

Keep in mind: In pre-arrangement mode, you will not be able to receive incoming voice calls.

- 1. Enter Menu** Press **FCN** then **↵** to enter the menu.
- 2. Select Submenu** Press **⬅** or **➡** to scroll to Phone Options and press **↵** to select.
- 3. Select Feature** Press **⬅** or **➡** to scroll to Data Setup and press **↵** to select.
- 4. Select Setting** Press **⬅** or **➡** to scroll to Voice Only, Incoming Fax, Incoming Data or To Main Menu and press **↵** to select.
If you select a fax or data setting, you will see: NoIncoming VoiceCalls.
- 5. Exit Menu** Press **END** to exit the menu. You will see: Data Ready or Fax Ready.

Your phone will automatically return to Voice Only mode if you remove the cable or turn OFF the phone.

Keep in mind: Data Setup is only available if your Service Provider requires pre-arrangement and **the data cable is connected to your phone.**

Receiving a Data Call

When you have an incoming data or fax call, your phone's display will show what kind of call you are receiving, along with the number of the caller. (If the number matches an entry in your Phone Book, you will see the name stored in the entry.)

If you select Auto Answer mode on the software application installed on your computer, your phone will automatically answer data or fax calls when the data cable is connected.

- 1. Turn ON** Your phone and computer must be turned ON and the data cable connected.
 - 2. Select Mode** Select the pre-arrangement mode if needed.
 - 3. Auto Answer** When the call comes in, your phone will automatically answer.
- or Select Option** If necessary, select the menu option in the application.

While the connection is being made, your phone will display: `Connecting . . .`

Keep in mind: All data and fax calls should be answered through the software installed on your computer. If you press  you will probably lose the incoming call.

Starfish TrueSync® Software

Wireless data calls are only the beginning. With Starfish TrueSync® software, your phone can exchange select information with a compatible computer.

You can use TrueSync software to transfer and synchronize contact information from your phone to your compatible desktop, laptop or handheld computer, and vice versa.

That way, you only enter contact information once and you can have the information everywhere you want it!

Keep in mind: TrueSync software is designed to synchronize certain basic features of the initial releases of many popular Personal Information Managers (PIM) hardware and software products.

Using TrueSync® Software

Here are just a few ways TrueSync software helps make communication easier than ever:

- Add a contact to your phone on the go. Update your contact file at home or the office later.
- Transfer contacts into your phone's internal Phone Book for easy access and quick memory dialing.
- Customize many of your phone's features, like ringer styles, TurboDial® keys, and security settings, through TrueSync's simple interface.
- Synchronize with select Personal Information Managers (PIMs). TrueSync software helps provide one-step, multi-point synchronization with most popular PIM managers, devices and services.

Visit <http://www.starfish.com/> for more information on TrueSync and software product updates.

Accessory Options

An exciting line of accessories can enhance and personalize your digital wireless experience.

Lithium Ion Batteries

Motorola's Lithium Ion (LiIon) batteries are high energy-density batteries that offer increased capacity and are lighter in weight than similar sized Nickel Cadmium and Nickel Metal Hydride batteries.



Nickel Metal Hydride Batteries

Nickel Metal Hydride batteries (NiMH) are high-capacity batteries that offer up to 30% more talk-time than comparable Nickel Cadmium batteries. To help achieve maximum life and capacity for your NiMH battery, do not leave the battery in the charger for more than 24 hours, and use only Motorola-approved chargers.

Vehicle Power Adapter

Lets you plug into a reliable power source on the road. Uses your car's battery to power your phone and rapid charge the phone's battery at the same time. The vehicle power adapter will not overcharge your battery and contains circuitry to protect against overvoltage and power surges in the vehicle. In some cars, the engine must be running in order for the vehicle's accessory power to operate.*



* The use of wireless devices and their accessories ("devices") may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these devices.

Accessory Options

Desktop Charger (AC Adapter Required)



This charger can be loaded with two batteries at once. Equipped with one LED charging status indicator for each battery, the charger's front pocket can charge a battery attached to a phone, and the rear pocket can charge a battery by itself. For use with Lithium Ion and Nickel Metal Hydride batteries.

Holster

Your digital V. Series™ phone is so small and light, it is positively wearable. Slip it into a compatible holster and clip the holster on— for the ultimate in high-tech fashion.*



Headset



The convenient headset provides both an earphone and microphone in one small piece for simple hands-free and private telephone conversations. The headset plugs directly into the jack on the top of your phone, so that you can wear your phone and move freely. See pages 96-99 for Call Options that make using a headset with your phone even more convenient.

* This holster has been designed for your convenience and is not meant to secure your phone under all circumstances.

Accessory Options

Data Connectivity Kit



This exciting new accessory transforms your digital V. Series™ phone into a convenient and portable fax modem. Use the data cable to connect your CDMA phone to a compatible computer, and you can fax,* access the Internet,* send and check e-mail* – transmit and receive data wherever there's a wireless signal.

Wireless data calls are only the beginning. With the Starfish TrueSync® software found in the Connectivity Kit, your phone can exchange select information with a compatible computer. You can use TrueSync to transfer and synchronize contact information from your phone to your compatible desktop, laptop or handheld computer, and vice versa.

Hands-Free Vehicle Kit

Optional Hands-Free Kits give you the convenience of hands-free, speakerphone operation while in your car.** Full duplex operation lets you simultaneously talk and listen, so both parties can interrupt each other for a normal sounding conversation.

The Hands-Free Kit powers the phone and charges its battery whenever your car's engine is running.

Keep in mind: Motorola offers a 3-Watt Vehicular Kit, which includes a 3-watt booster for analog signals. Since the digital V. Series™ phone is a digital phone, it is not compatible with the 3-Watt Kit.

* Network and service dependent feature. Not available in all areas.

**The use of wireless devices and their accessories ("devices") may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these devices.

Accessory Options

Easy Install Hands-Free Car Kit

For the quickest and easiest mobile solution, use the Easy Install Hands-Free Car Kit. Just plug it in and you are ready to go!*



Accessory Limited Warranty

We recommend you use genuine Motorola batteries and accessories. Under its wireless telephone limited warranty, Motorola specifically disclaims any responsibility for damage caused by the use of portable wireless telephone accessories not manufactured by Motorola.

For details on the complete line of Motorola wireless accessories, see your dealer or visit the Motorola web site at <http://www.motorola.com/>.

* The use of wireless devices and their accessories ("devices") may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these devices.

Troubleshooting

Q. I pressed the power button, but nothing happened. What's wrong with my phone?

- A.** Check that you have installed a battery and that the battery is charged. See page 12 for information about installing your battery.

Q. The display says *Locked*. How do I unlock my phone?

- A.** Try entering the last three digits of your wireless number. If that does not work, try using the factory preset lock code: 123. If this fails, call your Service Provider (the company that sends you your monthly wireless bill) for assistance. For more information on your phone's security features, see the Lock/Security chapter, page 84.

Q. My battery did not last as long as I expected. What can I do to extend battery life?

- A.** To get the most from your battery, make sure it is fully charged. To charge the battery to 100% of its capacity, leave it in the charger for an extra hour after the charger's light turns green.

Exposing your battery to extreme temperatures—below -10°C (14°F) or above 45°C (113°F)—can shorten battery life. Batteries are especially sensitive to high temperature extremes. It is a good idea to always take your phone with you when you leave your car.

Q. I tried to place a call and received a fast busy signal.

- A.** This sound means that your call was not processed. For example, the network may be temporarily busy. To redial the number, press the Smart Button or press **END** before ending your call attempt, or press **END** and try the call again later. See page 99 for more information on redialing.

Troubleshooting

Q. I tried to place a call but received an alternating high/low tone. What does this mean?

- A.** This sound means your call did not connect to the network. Most likely, you dialed the number too soon after turning the phone ON. Wait until you see your phone's idle display (in the main display either *Ready*, the name of your Service Provider, or your programmable banner) before placing a call.

An alternating tone may also indicate that your phone's signal is blocked. Make sure the antenna is fully extended and move clear of any obstructions, like bridges, parking garages, tall buildings, etc.

Q. Whenever I turn the phone ON, the display says: Invalid Battery. What does this mean and why am I not able to charge the battery?

- A.** Your wireless phone uses the Motorola Expert Performance (E•P) Charging System. The E•P system enables the built-in charger to communicate with attached batteries and tailor its charging cycle to optimize performance.

If you see *Invalid Battery* when you power up the phone, the built-in charger is not able to communicate with the battery and cannot charge it. You could see this message for several reasons. The most likely one is that the battery is not a Motorola original and it does not have the appropriate E•P technology. We recommend that you use only Motorola original batteries and accessories and that you store your batteries in their protective covers when not in use.

Q. My phone started beeping, and the display says: 1 Call Unanswered. What happened?

- A.** Someone tried to call you while you were in an area where the signal was weak. Press  to clear your display, extend your phone's antenna, and avoid obstructions like tunnels, parking garages and tall buildings whenever possible.

Troubleshooting

Q. My phone was stolen. What should I report and to whom?

- A.** Report a stolen phone to the police and to your Service Provider (the company that sends you your monthly wireless service bills).

Q. I plugged the data cable* into my phone but my phone did not beep. How do I know if the data cable is ready to go?

- A.** The beep is a sure sign that you are setup correctly. If you did not hear the beep, the first thing to check is that your phone is data capable. To do so, see page 116.

Next make sure that both ends of the data cable are connected, the smaller end to your phone and larger to your computer. Also check the model number of the cable to be sure you have the right one. Look for SYN7464 printed on the cable.

If all of the above checks out, your computer may have deactivated the port to save power. Try opening an application that uses the port, like a fax or dial-up application, and your computer will automatically activate the port.

Q. My phone beeped when I attached the data cable* but my fax and data applications don't work at all. What's wrong?

- A.** Keep in mind that you must be in an area with digital coverage. Check your phone's display for  (the Digital Indicator) to be sure you're in a digital coverage area.

Some wireless networks may not support data or fax transmission. If you see the digital indicator but you are roaming on an unfamiliar network, this may be the case.

Also remember that data and fax transmission usually requires a subscription. Call your Service Provider for more information.

Q. When sending data* with the data cable, why does the computer show a connection rate of 19200 Kbps?

- A.** 19200 is the rate of the connection between your computer and the phone. The rate of the connection between your phone and the network is displayed on your phone and will be either 14400 or 9600.

* Network and service dependent feature. Not available in all areas.

Troubleshooting

Q. I can't end my data call* by closing the application on my computer. What can I do?

- A. If necessary, try pressing **END** on the phone. You might also disconnect the cable or turn OFF the phone. Remember, if possible always close the connection through your computer. These alternative methods may disrupt the application on your computer.

Q. I launched the Minibrowser* but the display says: Service Not Available. What is wrong?

- A. You are in an area without service. If you have wireless service, look To see if you have digital service, you can always in the display for  (the Digital Indicator).

If you don't see it you may have only analog service or no service at all. If you see the Digital Indicator and still cannot use the Minibrowser, you may be connected to a digital network that does not support wireless Internet access.

Q. I launched the Minibrowser* but the display says: Data Server Unavailable. What is wrong?

- A. Try again in a few minutes. The servers may be temporarily busy.

* Network and service dependent feature. Not available in all areas.

Glossary

A

AC Adapter An accessory device that allows you to power and/or charge your phone from a wall outlet. See page 15.

accessory connector A socket on the bottom of the phone where you can attach accessories such as an AC adapter or vehicle power adapter. To learn more, see page 15.

alkaline A battery technology used in personal wireless telephones.

analog The traditional method of wireless transmission. In addition to analog capability, your phone is equipped to handle digital transmission. See also CDMA.

antenna The device on your phone that sends and receives wireless signals.

Auto Answer When you activate this feature, your phone automatically answers after two rings. See page 99.

Automatic Redial When your wireless network cannot handle your call, this feature enables your phone to automatically redial with one button push. See page 29.

C

Call Back number A phone number in a text message, provided by the sender. See page 58.

Caller ID A network/subscription dependent service that allows you to view information on incoming calls before answering. See page 54.

CDMA (Code Division Multiple Access) CDMA takes digitized voice and encodes it in a unique scheme that is sent out over the air. CDMA digital reduces the probability of dropped calls. Your phone is equipped to handle CDMA digital voice transmission.

D

dedicated Message Key See Message Key.

default A feature's original setting as programmed in the factory.

digital See CDMA.

DTMF Dual Tone Multi-Frequency are the tones that your phone transmits to communicate with tone activated phone systems like Voicemail or bank-by-phone. See page 82. Keep in mind: "DTMF Tones" does not refer to the sounds produced by your phone's speaker. See Keypad Tones for information on the sounds produced by your phone's speaker.

F

function keys The non-numeric keys on your phone used to access and navigate menu features, as well as perform memory functions. See page 20.

Glossary

H

Home Only Mode When your phone is active in this System Mode setting and you are beyond the range of your home Service Provider, your phone will not operate. See page 107.

I

icon One of the variety of symbols used to designate menu features and messages.

indicator A symbol on your phone that gives you information about your phone's status.
See pages 25-27.

Instant Redial This feature enables your phone to redial when your wireless network is temporarily unable to handle your call. Your phone will automatically attempt the call for four minutes or until it is picked up by the network. See page 99.

internal charger A charger built into your phone for use with an AC adapter or vehicle power adapter. See page 15.

K

Keypad Tones The sounds produced through your phone's speaker when you press the keys. See page 81. Keep in mind: "Keypad Tones" does not refer to the tones sent by your phone to communicate with automated phone systems. See Transmit Tones for information on the tones used to access automated phone systems.

L

landline The telephone system used for conventional office and home phones.

Lithium Ion (LiIon) A battery technology used in personal wireless telephones. Lithium Ion batteries generally provide more energy capacity than Nickel Metal Hydride batteries of the same weight.

lock To prevent unauthorized access to the wireless telephone. See page 86.

lock code A three-digit code used to access your phone once it has been locked. The factory programmed lock code is 123. To view or change your lock code, see page 89.

M

memory location A space in the Phone Book where you can store a telephone number and a name. Each of the Phone Book's 99 memory locations (numbered 01-99) can hold 24 letters and up to four numbers, each with as many as 32 digits.

menu This system contains five features: Phone Book, Timers, Tone Control, Lock/Secure, and Phone Options.

Glossary

menu feature Any feature that can be accessed through the menu system.

Message Key Located on the bottom row of the keypad, the dedicated Message Key offers one-touch access to messages and messaging functions. See page 52. See also Caller ID, Messages, and Voicemail.

Messages A network/subscription dependent service that enables your phone to receive text messages and numeric pages just like a pager. See page 58.

Messaging Function Menus While viewing your Caller IDs, reading your Messages, or checking your Voicemail, you can use these menus to manage your messages: lock or unlock a text message, delete one or all of your Caller ID or text messages and numeric pages, or select a different message type. See pages 55, 57 and 59.

Minibrowser Software built into your phone that allows you to access information like stock prices and sports scores with only your wireless phone. See page 108.

N

Nickel Cadmium (NiCd) A battery technology used in personal wireless telephone batteries.

Nickel Metal Hydride (NiMH) A battery technology used in personal wireless telephone batteries.

P

pause A special character that tells your phone to wait before sending the next set of numbers stored in one memory location. See Pause Dialing.

Pause Dialing A method of storing Phone Book entries that allows you to store multiple strings of numbers in one memory location; useful, for instance, in accessing automated phone systems. See page 48.

Personal Identification Number (PIN Code) A private numeric password which protects personal accounts such as bank-by-phone or Voicemail.

Phone Book An alphabetical list of the names and telephone numbers you have stored into your phone's internal memory.

Priority Call This feature allows you to place a call from memory location 01 even if the phone is locked. See page 87.

prompt A display message requesting input.

Q

Quad Number Your phone can be activated with up to four different phone numbers. See page 94 to learn how to change the number active on your phone.

Glossary

R

Reversed Preference Mode When your phone is active in this System Mode setting and you are beyond the range of your home Service Provider, your phone will seek a non-home type system, then a home type system. See page 106.

road map The visual representation of your phone's menu system provided in this manual.

roam To use a wireless system outside of your home system, usually when you travel beyond the range of your home system.

S

Scratchpad A memory feature that automatically remembers the most recent number entered into the keypad. See page 47.

Scratchpad tones See DTMF.

scroll To move backward or forward through a list; for example, to move backward or forward through the menu system or the Phone Book using either the volume keys or the  and  keys.

secure code A six-digit code used to access and change certain security features. The factory programmed secure code is 000000.

Service Tones Two short beeps used to alert you to changes in your wireless service. See page 83.

Silent Mode Select this feature and all your phone's tones will be silenced and the VibraCall® alert activated. See page 78.

Smart Button The middle key on the side of your phone used to access the Phone Book, place calls, end calls, select the Phone Book, enter the menu system, and toggle features ON and OFF.

Standard Mode When your phone is active in this System Mode setting and you are beyond the range of your home Service Provider, your phone will seek a home type system, then a non-home type system. See page 107.

standby-time The total time your phone is ON but not used for talking.

Super Speed Dial A dialing shortcut that allows you to quickly dial any number in the Phone Book. To use this feature, enter the two-digit location of the number, 01-99, then press and hold Smart Button or press  and the call is placed. See page 45.

Glossary

System ID Every wireless system has a unique number to identify itself. See page 106.

System Mode A setting that determines the system type that your wireless phone will access. See page 106 to select a System Mode.

T

talk-time The total time that you can talk on your phone before the battery is fully discharged.

toggle To switch between two possible options; for example: ON vs. OFF. Pressing the Smart Button toggles features ON or OFF.

Transmit Tones See DTMF.

Turbo Dial[®] keys To use this feature, press and hold a number on the keypad,  through , and your call is placed.

U

unlock code See lock code.

V

vehicle power adapter An accessory device that allows you to power and/or charge your phone from a vehicle's accessory power.

VibraCall[®] alert When activated, this feature alerts you silently of incoming calls by vibrating. It can be used alone or in conjunction with the ringer. See page 78.

Voicemail Contact your Service Provider for availability.

volume keys Located on the side of your phone, the upper and lower volume keys are used to adjust ringer and keypad volume. They also scroll within the menu system and the Phone Book.

W

wireless carrier One of multiple competing companies in a given geographic area that owns and operates a wireless system.

Wireless Service Provider A company affiliated with a wireless carrier that provides wireless service to its customers.

wireless signal The radio waves that carry information between your wireless phone and the wireless system.

wireless system The wireless equipment in a given geographic area that relays signals to and from individual wireless telephones and the landline telephone system.

The U.S. Food and Drug Administration's Center for Devices and Radiological Health

Consumer Update on Mobile Phones

FDA has been receiving inquiries about the safety of mobile phones, including cellular phones and PCS phones. The following summarizes what is known—and what remains unknown—about whether these products can pose a hazard to health, and what can be done to minimize any potential risk. This information may be used to respond to questions.

Why the concern?

Mobile phones emit low levels of radiofrequency energy (i.e., radiofrequency radiation) in the microwave range while being used. They also emit very low levels of radiofrequency energy (RF), considered non-significant, when in the stand-by mode. It is well known that high levels of RF can produce biological damage through heating effects (this is how your microwave oven is able to cook food). However, it is not known whether, to what extent, or through what mechanism, lower levels of RF might cause adverse health effects as well. Although some research has been done to address these questions, no clear picture of the biological effects of this type of radiation has emerged to date. Thus, the available science does not allow us to conclude that mobile phones are absolutely safe, or that they are unsafe. However, the available scientific evidence does not demonstrate any adverse health effects associated with the use of mobile phones.

What kinds of phones are in question?

Questions have been raised about hand-held mobile phones, the kind that have a built-in antenna that is positioned close to the user's head during normal telephone conversation. These types of mobile phones are of concern because of the short distance between the phone's antenna—the primary source of the RF—and the person's head. The exposure to RF from mobile phones in which the antenna is located at greater distances from the user (on the outside of a car, for example) is drastically lower than that from hand-held phones, because a person's RF exposure decreases rapidly with distance from the source. The safety of so-called “cordless phones,” which have a base unit connected to the telephone wiring in a house and which operate at far lower power levels and frequencies, has not been questioned.

How much evidence is there that hand-held mobile phones might be harmful?

Briefly, there is not enough evidence to know for sure, either way; however, research efforts are on-going. The existing scientific evidence is conflicting and many of the studies that have been done to date have suffered from flaws in their research methods. Animal experiments investigating the effects of RF exposures characteristic of mobile phones have yielded conflicting results. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. In one study, mice genetically altered to be predisposed to developing one type of cancer developed more than twice as many such cancers when they were exposed to RF energy compared to controls. There is much uncertainty among scientists about whether results obtained from animal studies apply to the use of mobile phones. First, it is uncertain how to apply the results obtained in rats and mice to humans. Second, many of the studies that showed increased tumor development used animals that had already been treated with cancer-causing chemicals, and other studies exposed the animals to the RF virtually continuously—up to 22 hours per day.

For the past five years in the United States, the mobile phone industry has supported research into the safety of mobile phones. This research has resulted in two findings in particular that merit additional study:

- 1.** In a hospital-based, case-control study, researchers looked for an association between mobile phone use and either glioma (a type of brain cancer) or acoustic neuroma (a benign tumor of the nerve sheath). No statistically significant association was found between mobile phone use and acoustic neuroma. There was also no association between mobile phone use and gliomas when all types of types of gliomas were considered together. It should be noted that the average length of mobile phone exposure in this study was less than three years.

When 20 types of glioma were considered separately, however, an association was found between mobile phone use and one rare type of glioma, neuroepitheliomatous tumors. It is possible with multiple comparisons of the same sample that this association occurred by chance. Moreover, the risk did not increase with how often the mobile phone was used, or the length of the calls. In fact, the risk actually decreased with cumulative hours of mobile phone use. Most cancer

causing agents increase risk with increased exposure. An ongoing study of brain cancers by the National Cancer Institute is expected to bear on the accuracy and repeatability of these results.

2. Researchers conducted a large battery of laboratory tests to assess the effects of exposure to mobile phone RF on genetic material. These included tests for several kinds of abnormalities, including mutations, chromosomal aberrations, DNA strand breaks, and structural changes in the genetic material of blood cells called lymphocytes. None of the tests showed any effect of the RF except for the micronucleus assay, which detects structural effects on the genetic material. The cells in this assay showed changes after exposure to simulated cell phone radiation, but only after 24 hours of exposure. It is possible that exposing the test cells to radiation for this long resulted in heating. Since this assay is known to be sensitive to heating, heat alone could have caused the abnormalities to occur. The data already in the literature on the response of the micronucleus assay to RF are conflicting. Thus, follow-up research is necessary.

FDA is currently working with government, industry, and academic groups to ensure the proper follow-up to these industry-funded research findings. Collaboration with the Cellular Telecommunications Industry Association (CTIA) in particular is expected to lead to FDA providing research recommendations and scientific oversight of new CTIA-funded research based on such recommendations.

Two other studies of interest have been reported recently in the literature:

1. Two groups of 18 people were exposed to simulated mobile phone signals under laboratory conditions while they performed cognitive function tests. There were no changes in the subjects' ability to recall words, numbers, or pictures, or in their spatial memory; but they were able to make choices more quickly in one visual test when they were exposed to simulated mobile phone signals. This was the only change noted among more than 20 variables compared.
2. In a study of 209 brain tumor cases and 425 matched controls, there was no increased risk of brain tumors associated with mobile phone use. When tumors did exist in certain locations, however, they were more likely to be on the side of the head where the mobile phone was used. Because this occurred in only a small number of cases, the

increased likelihood was too small to be statistically significant.

In summary, we do not have enough information at this point to assure the public that there are, or are not, any low incident health problems associated with use of mobile phones. FDA continues to work with all parties, including other federal agencies and industry, to assure that research is undertaken to provide the necessary answers to the outstanding questions about the safety of mobile phones.

What is known about cases of human cancer that have been reported in users of hand-held mobile phones?

Some people who have used mobile phones have been diagnosed with brain cancer. But it is important to understand that this type of cancer also occurs among people who have not used mobile phones. In fact, brain cancer occurs in the U.S. population at a rate of about 6 new cases per 100,000 people each year. At that rate, assuming 80 million users of mobile phones (a number increasing at a rate of about 1 million per month), about 4800 cases of brain cancer would be expected each year among those 80 million people, whether or not they used their phones. Thus it is not possible to tell whether any individual's cancer arose because of the phone, or whether it would have happened anyway. A key question is whether the risk of getting a particular form of cancer is greater among people who use mobile phones than among the rest of the population. One way to answer that question is to compare the usage of mobile phones among people with brain cancer with the use of mobile phones among appropriately matched people without brain cancer. This is called a case-control study. The current case-control study of brain cancers by the National Cancer Institute, as well as the follow-up research to be sponsored by industry, will begin to generate this type of information.

What is FDA's role concerning the safety of mobile phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as mobile phones before marketing, as it does with new drugs or medical devices. However, the agency has authority to take action if mobile phones are shown to emit radiation at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of mobile phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions

at this time, FDA has urged the mobile phone industry to take a number of steps to assure public safety. The agency has recommended that the industry:

- support needed research into possible biological effects of RF of the type emitted by mobile phones;
- design mobile phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- cooperate in providing mobile phone users with the best possible information on what is known about possible effects of mobile phone use on human health.

At the same time, FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of mobile phone safety to ensure a coordinated effort at the federal level. These agencies are:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Health and Safety Administration
- National Telecommunications and Information Administration

The National Institutes of Health also participates in this group.

In the absence of conclusive information about any possible risk, what can concerned individuals do?

If there is a risk from these products—and at this point we do not know that there is—it is probably very small. But if people are concerned about avoiding even potential risks, there are simple steps they can take to do so. For example, time is a key factor in how much exposure a person receives. Those persons who spend long periods of time on their hand-held mobile phones could consider holding lengthy conversations on conventional phones and reserving the hand-held models for shorter conversations or for situations when other types of phones are not available.

People who must conduct extended conversations in their cars every day could switch to a type of mobile phone that places more distance between their bodies and the source of the RF, since the exposure level drops off dramatically with distance. For example, they could switch to

- a mobile phone in which the antenna is located outside the vehicle,

- a hand-held phone with a built-in antenna connected to a different antenna mounted on the outside of the car or built into a separate package, or
- a headset with a remote antenna to a mobile phone carried at the waist.

Again, the scientific data do not demonstrate that mobile phones are harmful. But if people are concerned about the radiofrequency energy from these products, taking the simple precautions outlined above can reduce any possible risk.

Where can I find additional information?

For additional information, see the following websites:

- Federal Communications Commission (FCC) RF Safety Program (select “Information on Human Exposure to RF Fields from Cellular and PCS Radio Transmitters”): <http://www.fcc.gov/oet/rfsafety>
- World Health Organization (WHO) International Commission on Non-Ionizing Radiation Protection (select Qs & As): <http://www.who.int/emf>
- United Kingdom, National Radiological Protection Board: <http://www.nrpb.org.uk>
- Cellular Telecommunications Industry Association (CTIA): <http://www.wow-com.com>
- U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health: <http://www.fda.gov/cdrh/consumer/>

Patent Information

Manufactured under one or more of the following U.S. patents:

4327319	4716391	0306594	5122480	0343173	5486843	5621763	5703909
4369516	4723305	4912602	5122722	5280637	5487184	5621763	5706019
4369522	0294257	4918732	0327061	0344087	5488335	5621766	5706313
4378603	4727306	4922178	5128834	5287553	5488649	5625316	5708445
4390963	4727583	4945570	0328302	5287555	0366872	5625683	5710862
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5844943	5889737	5940452	6008636	60385873	D394423	D407685	

Other patents pending.

Important Export Information

Because of federal export regulations applicable to this Motorola phone, it cannot be sold for export from the U.S.A. or Canada. Please read the following important notice:

EXPORT LAW ASSURANCES: This product is controlled under the export regulations of the United States of America and Canada. This product cannot be exported from the United States or Canada without an export license issued by the U.S. Department of Commerce. In addition to the U.S. license, if this product is to be exported from Canada, an Export Permit issued by the Canada Department of Foreign Affairs and International Trade must be obtained before export.

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