

A1228c User's Guide

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9/00 PBM

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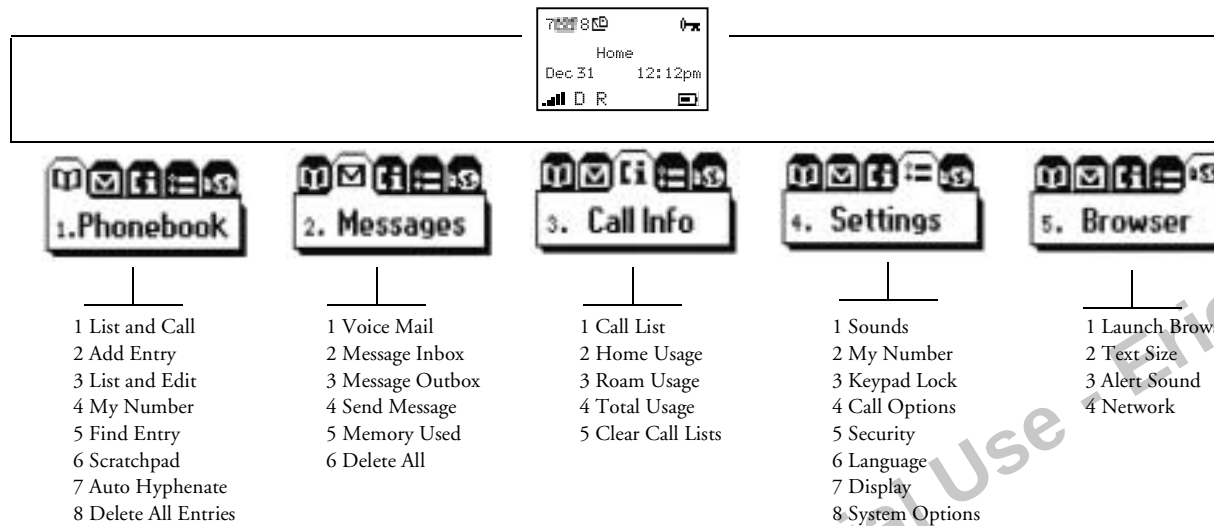
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You can quickly access the menus by pressing the **MENU** key. The menus are arranged in a continuous loop. Quickly access menus and settings using the numbers that appear next to each menu and setting. For example, access **Call List** submenu by pressing **MENU** and then **3 1**. Press **YES** to select a menu, submenu, or setting. Press **NO** to exit the menu or submenu.

Some menus/features are operator dependent.

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The Basics

Document Conventions

- Menu names are shown in the following typeface: **MENUS**.
- Submenu names are shown in the following typeface: **Submenu Names**.
- Key names are shown in the following typeface: **BACK**.
- Text that is seen in the phone's display is shown in the following typeface: **Displays**.
- When this guide instructs you to press a key, press and release the key.
- When this guide instructs you to press and hold a key, press and hold the key for one to two seconds.
- When this guide instructs you to press two keys, press one then press the other. For example, press **MENU 1** means press **MENU** then press **1**.
- Press the down arrow on the rocker key when you see this symbol (⏮).
- Press the up arrow on the rocker key when you see this symbol (⏭).

Highlights of Your Phone

Your Ericsson mobile phone features dual-mode technology. For Voice Operation, it operates in two modes - Digital (D) mode (800 MHz frequency band) and Analog (A) mode (800 MHz band). Some features and services described in this user's guide are content provider specific. Refer to your content provider for more information.

Banner

You can customize the banner to display one line of text. See "Change Banner" on page 14.

Caller Identification Service

The Caller ID service identifies, by name or number, who is calling you. See "Caller Identification" on page 17.

Call List

The Call List identifies the last 45 received, missed, sent calls, or numbers entered in the scratchpad. See "Call List" on page 11.

Call Forwarding

Call Forwarding lets you forward your voice, fax, and data calls, provided your subscription supports fax and data calls. See "Call Forwarding" on page 17.

Call Waiting

Call Waiting allows you to receive a second incoming call while you are already engaged on one call. See “Call Waiting” on page 17.

EZ-Read™ Menus

Makes menu navigation and changing settings simple. The tabbed menus clearly show the way. Use the rocker keys to scroll through the menus and menu settings. See “Main Menu” on page 9.

Keypad Lock

Helps you to avoid accidental dialing, which can happen if you keep your phone in your pocket or pocketbook. You can quickly access keypad lock by pressing MENU * from Standby mode. See “Keypad Lock” on page 12.

Online Services

Your network operator's way of offering customized services, independently of mobile phones and mobile phone manufacturers.

Phonebook

Allows 200 entries in the phone, as well as secure entry for credit card or calling card numbers. The first position is reserved for your voice mail access number. See “Phonebook Menu” on page 9.

Ring Sounds

You have a choice of 25 ring types with musical melody ring options. See “Ring Sound” on page 12.

Security

Protects your phone and subscription from unauthorized use with security features such as Phone Lock, and Restrict Calls. See “Security” on page 13.

Short Message Service (SMS)

Sends and receives short text messages. You also have the option to use the predefined canned messages for quick and easy SMS sending. See “Messages Menu” on page 10.

Speed Dial

Dial a phone number stored in a phonebook position by entering a 1-, or 2- digit position number and pressing YES. You can store numbers in positions 2-99 (position 1 is reserved for accessing your voice mail account).

Super Speed Dial

Dial a phone number stored in phonebook positions 1 through 99 by pressing and holding the numeric key corresponding to the phonebook position. Press and hold the 2nd digit for 2-digit positions. Position 1 is reserved for accessing your voice mail account. See “Super Dial” on page 13.

Tegic® T9® Text Entry

Predictive Text Input is available in browser mode. This smart input method makes entering web addresses easier. See “Text Entry” on page 24.

Three-Way Calling

Allows you to initiate two calls and conference all them together. See “Three-Way Calling” on page 3.

Time and Date

The current time and date is automatically updated by your network, when available. See “Time Format” on page 14.

Voice Mail

Allows callers to leave a voice message when you cannot answer your calls. See “Messages Menu” on page 10.

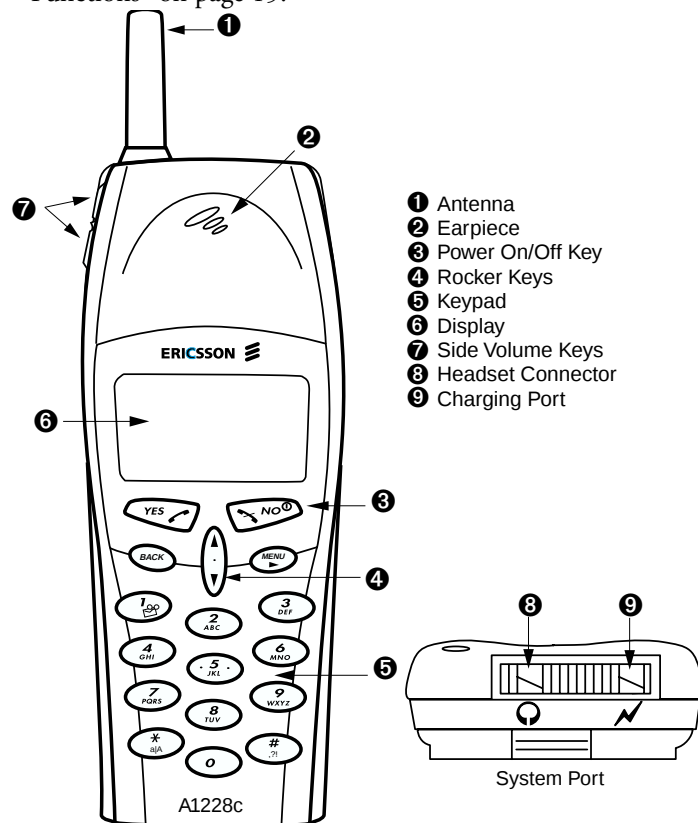
Wireless Application Protocol (WAP)

An open, global specification that makes it possible for mobile users with wireless devices to connect to the Internet and access specially designed interactive services and view WAP pages. See “Browser Operation” on page 22.

Getting Started

Parts of Your Phone

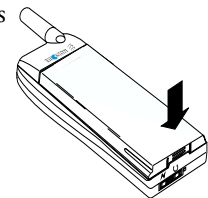
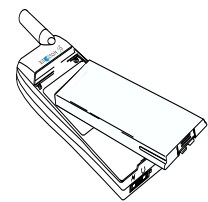
For information on the key functionality, see “Voice Operation Key Functions” on page 15.



Connecting and Removing Your Battery

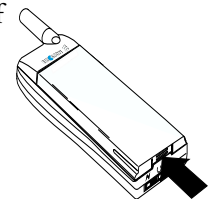
Connecting Your Battery

- 1 Place the battery over the back of the phone. The label on the battery should face down. Insert the top portion of the battery into the phone. The tab on the bottom of the battery should be pointing toward the bottom of the phone.
- 2 Press down until you hear a click. The battery is now connected.

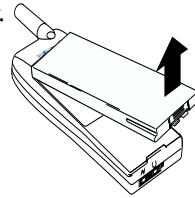


Removing Your Battery

- 1 Remove the battery by pushing in on the tab of the battery with your thumb.



- 2 Lift the battery up and out of the battery cavity.



Charging Your Battery

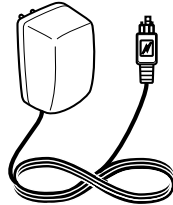
Your Charger

Your phone was packaged with either a rapid or travel charger. It is important that you fully charge your battery before you use your phone. Both chargers supply power to charge your battery while the battery is attached to your phone. If your phone is On, it can receive calls while using either charger.

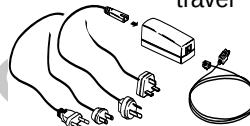
Note! NEVER attach the charger to a phone that does not have a battery installed.

- 1 If you have a rapid charger, plug the charger into a standard wall electrical outlet. If you have a travel charger, connect the appropriate AC power cord and phone charging cord to the travel charger.
- 2 Hold the phone with the display and keypad facing up.
- 3 Hold the small plug on the charger cord so the lightning bolt symbol (⚡) is up.

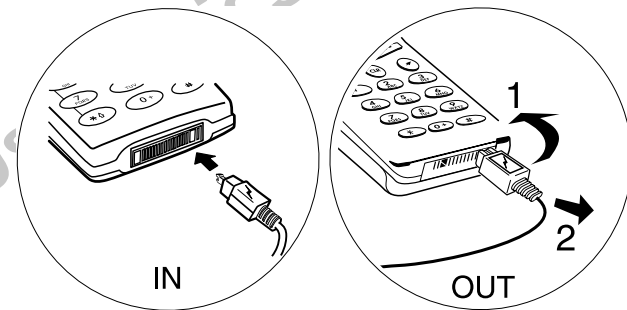
rapid



travel



- 4 Align the small plug on the charger cord with the connector on the bottom of your phone. The connector on the phone is above the lightning bolt symbol.
- 5 Press the plug into the connector until the plug “snaps” into place. The  icon, which continuously fills and empties, is alternated with the  icon when the phone is powered on and is charging.



Note! Do not twist while inserting or removing the small plug on the charger cord!

- 6 Continue charging the phone until the battery is fully charged. When your phone is fully charged, the plug icon will remain stable.
- 7 To disconnect the charger, lift the plug connected to the phone upwards and pull it out.

Charge-Only Mode

If your phone is off, attaching the charger will cause the phone to activate in charge-only mode. When this mode is activated, an animated icon appears in the display. Your phone is now fast (rapid)

charging the battery. When your phone is fully charged, the plug icon will remain stable.

Note! You cannot make or receive calls when your phone is in charge-only mode.

Slow Charging a Deeply Discharged Battery

The battery could become deeply discharged (for example, when the battery is stored for a long period). As a result, the phone may not immediately activate charge-only mode when the charger is connected.

- 1 Attach the charger to the phone for several hours to slowly charge (trickle charge) the battery.
- 2 After trickle charging the battery for several hours the phone should activate the charge-only mode automatically.
- 3 Continue charging the phone until the battery is fully charged.

Turning Your Phone On and Off

Turn your phone On by pressing and holding **NO** until your phone turns on. The phone will beep (unless silent mode is activated). Turn your phone Off by pressing and holding **NO** until your phone turns off. You must return to Standby mode to turn off your phone.

Making and Receiving Calls

See “Voice Calls” on page 16 for more information about making and receiving calls.

Making Calls

- 1 Press the numeric keys to enter the phone number you want to call. The number is shown in the display.

Note! You can press **BACK** to erase one or more digits in the display, or press and hold **BACK** to erase all digits.

- 2 Press **YES. Calling**, along with the number you are dialing, is shown in the display while your phone accesses the wireless network.
- 3 When the call is connected, a call timer is shown in your display. The phone number that you dialed will remain on your screen.
- 4 To end the call, press **NO**.

Receiving Calls

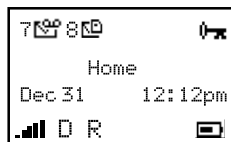
When your phone receives a call, the ringer sounds, **Incoming Call** appears in the display, and the display and keypad backlight illuminate. You can temporarily silence the ringer by pressing **NO** or the upper or lower side keys, and still answer the call by pressing **YES**. If you have Caller Number Identification (Caller ID) service from your service provider, the caller's phone number is shown in the display. The caller's name will also appear if the phone number is found in your phonebook.

Answer the phone by pressing any key. For information on adjusting your answering preferences, see “Auto Answer” on page 13. **Incoming Call** is replaced by the call timer display once the call is answered. End the call by pressing **NO**.

Operating Your Phone

You can use your Ericsson mobile phone in Voice, Browser, and Wireless Modem Operation.

Voice Operation offers you all of the benefits of a traditional mobile telephone, including placing and answering calls, and receiving voice and text messages. When you see a screen similar to the one shown below, your phone is ready to make and receive voice calls.



For more information, see “Voice Operation” on page 8.

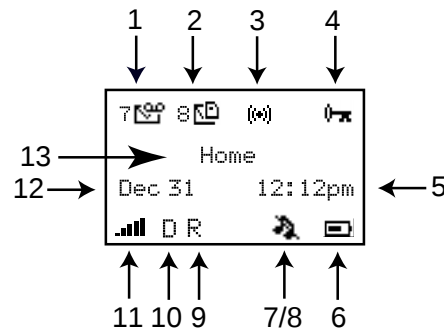
Browser Operation allows you to browse the Internet and view web content on your Ericsson mobile phone. See “Browser Operation” on page 22. You can not receive voice calls while in Browser Mode.

Wireless Modem Operation allows you to use your phone as a modem with your laptop or desktop computer to browse the Internet, displaying web content on your computer screen. See “Wireless Modem Operation” on page 30.

Voice Operation

In Voice Operation, you can make and receive telephone calls; work with your voice mail and messages; change your phone's voice settings; add, edit, or delete entries from your phonebook; and send and receive text messages.

Your Display in Voice Operation



- 1 **New Voice Mail Icon** () indicates the number of voice mail messages that have not been heard. The icon appears only when you have voice mail messages waiting. The number (7 shown above) indicates how many voice mail messages you have.
- 2 **New Text Mail Icon** () indicates the number of text messages that have not been read. The icon appears only when you have text messages waiting. The number (8 shown above) indicates how many text messages you have.

- 3 **Browser Alert** () indicates that there is new content in your Inbox (for example, email or stock quotes).
- 4 **Keypad Lock Icon** () or **Phone Lock** () indicates that pressing the keys has no effect. The keypad is locked to prevent inadvertent key presses. Press **MENU *** to toggle **Keypad Lock** on and off. Phone Lock restricts you from making calls, except emergency calls. You must enter your PIN to enter the Phone Lock submenu where you can turn Phone Lock off.
- 5 **Current Time** is displayed (if provided by the system).
- 6 **Battery Icon** () shows the relative strength of your battery. A full icon indicates a fully-charged battery. If the phone is connected to external power and the battery is charging, the display alternates between the battery icon, which will continuously fill and empty, and the charging icon ().
- 7 **Ringer Off** () Icon indicates that your phone will not make ring sounds.
- 8 **Phone Silent** () Icon indicates that your phone will not make any sounds. Press **MENU #** to access **Phone Silent**.
- 9 **Roaming Preferred** icon indicates if you are roaming in a preferred network. If a preferred network is found, an **R** will appear. If the roaming network is not preferred, a lowercase **r** will appear.
- 10 **Analog/Digital Channel Indicator** shows whether the phone is operating in analog (**A**) or digital (**D**) mode. The **No Service** icon

() will appear in this location if an analog or digital channel is not found.

11 Signal Strength Icon () shows the relative signal strength from the wireless system. More bars indicate a stronger signal (maximum of five bars).

12 Current Date is displayed if provided by the system.

13 Banner indicates that the phone is in standby mode and is ready for use. Your personal banner, or the network provided information is displayed here.

Main Menu

EZ-Read™ Menus make menu navigation and changing settings simple. The tabbed menus clearly show the way. Use the rocker keys to scroll through the menus and menu settings.

The main menu has five icons that display the top-level menu options. The corresponding title of the selected option is displayed below the menu tabs when highlighted. Each menu is represented by an icon.



Option 1 is the **PHONEBOOK** menu (see “Phonebook Menu” on page 9).

Option 2 is the **MESSAGES** menu (see “Messages Menu” on page 10).

Option 3 is the **CALL INFORMATION** menu (see “Call Info Menu” on page 11).

Option 4 is the **SETTINGS** menu (see “Settings Menu” on page 12).

Option 5 is the **BROWSER** menu (see “Browser Menu” on page 14).

Accessing Menus

Press **MENU** to access the main menu:

- 1 Press ,  to scroll through menu, functions in menus, and settings in a function.
- 2 Press **YES** to choose the menu, function, or setting that is selected.
- 3 Press **NO** to go back one level in the menu structure.
- 4 Press **BACK** to exit the menus completely.

Note! You can quickly access a menu by pressing **MENU** and the menu number. For instance, to quickly access the **SETTINGS** menu, press **MENU 4**.

Phonebook Menu

The **PHONEBOOK** menu contains the following choices for storing, organizing, and recalling phone list information.

List and Call

The **List and Call** submenu displays phonebook entries in their location order. Select an entry or type in the position number and press **YES** to call.

Add Entry

The **Add Entry** submenu allows you to store a phone number and an accompanying name in your phonebook.

List and Edit

The **List and Edit** submenu allows you to change your phonebook entries. These entries are also listed in their location order.

My Number

This submenu displays your phone number or phone numbers (if your subscription includes Dual NAMs).

Find Entry

The **Find Entry** submenu allows you to search for an entry number, name, or location.

Scratchpad

If you need to make note of a phone number during a call, you can use the Scratchpad. Once you end the call, you can call the number from the Call List.

Auto Hyphenate

Auto-hyphen will automatically input dashes between phone number segments. For instance, if you enter 9194727908, the phone will display 919-472-7908. You can turn Auto-hyphen On or Off.

Delete All Entries

The **Delete All Entries** submenu allows you to erase every phonebook entry. You will be prompted to enter your phone security PIN to allow deletion. For more information, see “Security” on page 13.

Messages Menu

The **MESSAGES** menu contains choices for specifying and accessing message services that may be available from your service provider (for example, text messages and voice mail).

Voice Mail

The **Voice Mail** submenu allows you to enter and access your voice mail access number if you have voice mail service from your service provider. A number and the voice message icon () appear in the Standby screen to indicate the number of new unread voice messages. The maximum number of new voice mail messages that can be displayed is 99. The submenus are **Call Voice Mail** and **Store VM No.**

Message Inbox

The **Inbox** submenu allows you to read your new text messages. A number and the text message icon () appear in the Standby Screen to indicate the number of unread text messages. The maximum number of new text messages that your phone can store is 30. You have the options to reply, or delete the message.

Message Outbox

The **Sent Box** submenu stores successfully sent and unsuccessfully sent SMS messages. You can delete, resend, and forward the messages.

Send Message

The **Send Message** submenu is used to create new text messages or send canned (predefined) messages. An example of a canned message is "Okay I got it". The submenus available are: Create New, Use Canned Msg, and Send a Page.

Memory Used

The **Memory Used** submenu displays the percentage of the phone's memory that is occupied and the percentage that is available for storage.

Delete All

The **Delete All** submenu allows you to erase all of your unread and read text messages. Submenus include: Message Inbox and Message Outbox.

Call Info Menu

The **CALL INFO** menu allows you to view information and establish dialing and answering preferences for your phone (some selections available in this menu are dependent on your service provider). It also enables you to view and edit system options and call statistics.

Call List

Press **YES** from the **Call List** submenu to view the last 45 received, missed, sent calls, or numbers entered in the scratchpad.

From this list you may view details, call, add the number to your phonebook, or delete the number

- **View Details or Call:** Press **YES**. Press **YES** again to call the number.
- **Add to Phonebook:** Press, and briefly hold, **YES**.
- **Delete:** Press **BACK**.

Icons

One of following icons will appear next to each number in the Call List.



Missed Call



Answered Call



Outgoing Call

Note! Entries without an icon are scratchpad entries.

Home Usage

The **Home Usage** displays the number of home calls made and received and the accumulated time since last resetting the home call counters. Press **YES** to reset home usage.

Roam Usage

The **Roam Usage** displays the number of roaming calls made and received and the accumulated time since last resetting the roam call counters. Press **YES** to reset roam usage.

Total Usage

The **Total Usage** submenu shows you the total number of calls and the total hours and minutes that have been used for the lifetime of the phone.

Clear Call Lists

The **Clear Call Lists** submenu allows you to erase all call list entries.

Settings Menu

Sounds

Ring Volume

The **Ring Volume** submenu allows you to set the level of the ring volume. The volumes range from Off to High. You can make your selection by pressing $\uparrow$ or $\downarrow$. Then press **YES** to confirm your selection.

Ear Volume

The **Ear Volume** submenu allows you to adjust the volume of the earpiece using the menu setting. You can also adjust the volume dur-

ing a call by using the side volume keys. The volumes range from Very Low to High. You can make your selection by pressing $\uparrow$ or $\downarrow$. Then press **YES** to confirm your selection.

Ring Sound

The **Ring Sound** submenu allows you to choose the type of sound or melody for the ringer. Each sound or melody is demonstrated as you scroll through the selections. There are 25 ring sounds.

Key Beep Volume

The **Key Beep** submenu allows you to choose the sound made when you press keys. The four options for **Key Beep** are Off, Low, Medium, or High.

Phone Silent

You can set all of your phone's sounds to be silent. Options include On and Off.

Minute Minder

Minute Minder notifies you when each minute passes while you are engaged in a call. Settings are On and Off.

My Number

This submenu displays your phone number or phone numbers (if your subscription includes Dual NAMs).

Keypad Lock

The Keypad Lock submenu is used to protect your keypad from unintended key presses (for instance, if you keep your phone in your pocket or pocketbook). Press **MENU** * to lock the keypad. The key-

pad lock icon () will appear in the display. To unlock the keypad, press two-key combination to unlock.

If a call is received while keypad lock is on, the keypad lock will be temporarily disabled and the user can answer the call. When the call ends, the keypad lock will automatically be enabled.

Call Options

Auto Answer

The **Auto Answer** submenu options are On and Off. When set to On, auto answer will answer six seconds after a call is received.

AutoRetry

The **Auto Retry** submenu will prompt the phone to redial a number if the system was busy or no network is found on the initial attempt. The phone will redial up to five times. Options include On and Off.

Super Dial

The **Super Dial** submenu allows you to dial a phone number stored in phonebook positions 1 through 99 by pressing and holding the numeric key corresponding to the phonebook position (you must press and hold the 2nd digit for 2-digit positions). The two options for **Super Dial** are On and Off. Position 1 is reserved for voice mail.

Data/Fax

The **Data/Fax** submenu allows you to set your phone to send and receive only data or only fax calls. Settings include: Off, Next Call Fax, Fax On, Next Call Data, and Data On.

Note! The Off setting is active until you choose a different setting. Fax On and Data On apply until you power off your phone.

Security

Note! You must enter your PIN to access the **Security** submenu.

Change PIN

Your phone has a PIN that you must enter to gain access to certain functions, such as call restrictions and calling card numbers. The factory-programmed code is **0000**. You can change this code to provide maximum security for your phone by using the **Phone Security** submenu. If you forget your PIN, contact your service provider for assistance.

Phone Lock

Phone Lock restricts you from making calls (except emergency calls), entering menus, and making super dial calls (including voice mail), each time you turn the phone on. To unlock the phone, enter your PIN. You will be prompted to enter your PIN to enter the **Phone Lock** submenu. Options include Phone Lock Off, Power On, and Phone Lock On.

Restrict Calls

This feature will restrict outgoing calls to phone numbers that are stored in phonebook locations 1-200. Options include **PhB Entries Only** and **No Restrictions**. When this feature is set to Phonebook only (PhB Entries Only), the phone will not allow new entries to be saved to, or erased from, the phonebook.

Language

The **Language** submenu allows you to select the language used in the phone display. The languages vary between markets. Your mobile phone supports English, French, Spanish, and Portuguese.

Display

The **Display** submenu is used to change the Backlight, Banner, and Time display of your phone.

Backlight

Use the **Backlight** submenu to set the display and keypad backlighting to stay Off or to automatically turn On for 20 seconds when a call is received or a key is pressed. The two settings for **Backlight** are Auto and Always Off.

Change Banner

Use the **Change Banner** submenu to alter the information that is displayed when your phone is in standby. You can enter whatever message you would like to see (up to one line of text).

Time Format

The time in your phone's display will always be current because it is updated by your network. You have the option to set the time to am/pm or 24-hour format.

System Options

The **System Options** submenu allows you to select what system you wish to use. There are three options in the **System Options** submenu: Auto System, System Select, and Next Call Analog.

Auto System

Auto System options include On and Off.

System Select

If you select System Select, you can choose from Standard, A Only, B Only, or Home Only.

Next Call Analog

Next Call Analog options are No and Yes.

Browser Menu

See "Browser Operation" on page 22 for more information.

Launch Browser

This submenu allows you to activate Browser mode.

Text Size

You can choose how large the text appears in your display. Options include Normal (7 point) and Large (8 point).

Note! This setting only affects the text size in Browser mode.

Alert Sound

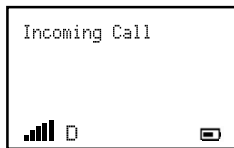
The phone will sound when you receive new content in your Inbox (for example, stock quotes or email). Options include On and Off.

Network

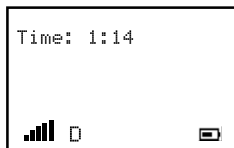
This submenu allows you to view and modify networks settings. You will be prompted to enter your PIN to make any modifications. This is typically not necessary so you should contact your service provider before making any network changes.

Voice Operation Display Messages

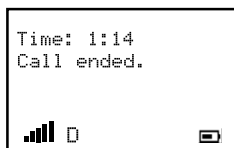
The following are common display messages on your mobile phone:



Your phone is receiving a call.



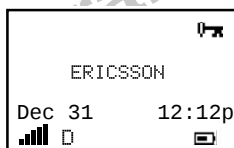
You have an active call.



Your call has ended.



The phone is searching for the optimal wireless system.



The keypad is locked to prevent inadvertent key presses.

Note! Icons appearing on your phone's display differ in Voice, Browser, and Wireless Modem Operation.

Voice Operation Key Functions



NO

- Press and hold to turn phone ON and OFF.
- Press to end a call.
- Press to go back one level.
- Press during an incoming call to temporarily mute ringer.
- Press to clear current display.



YES

- Press to answer incoming call
- Press to place a call after entering a phone number.
- Press to dial last number dialed.
- Select a setting or menu.



BACK

- Delete a digit.
- Press and briefly hold to delete all digits from screen.
- Press and briefly hold during a call to mute microphone.
- Exit menu to standby mode.
- Delete a character in text entry. Press and briefly hold to delete all characters.



MENU

- Press to enter menus.
- Press from the main menu to tab through the menus.
- Press **MENU** anywhere in the menu system to return to the main menu.



1/VOICE MAIL

- Press and hold to call voice mail.



#/POUND

- Press and hold to create a Stop character in a dial string
- Press **MENU** # for Silent Mode.
- Press to easily access punctuation characters in text entry.



*/STAR

- Press and hold to create a Pause in a dial string.
- Press **MENU** * for Keypad Lock.
- Press to toggle lowercase and uppercase in text entry.



SIDE VOLUME KEYS

- Press up or down to adjust earpiece volume during a call.
- Press to illuminate the backlight.
- Press either key to temporarily mute the ring signal of the incoming call.



ROCKER KEYS

- Press to move throughout menus and submenus.
- Press to scroll through phonebook entries and text messages.

Voice Calls

For information on making and receiving calls, see “Making and Receiving Calls” on page 6.

Redialing the Last Number You Called

Your telephone stores the last number you dialed. Press **YES** to dial this number.

Adjusting Ear Volume During a Call

To increase the ear volume during a call, press the upper key on the side of your phone.

To decrease the ear volume during a call, press the lower key on the side of your phone.

Low Battery Power Alert

The low battery alert sounds when your battery is reaching its lowest operational power level. The words **Low Battery!** will appear in the display. When this happens, connect your phone to your Ericsson charger to recharge your battery or replace it with a fully charged battery. If you leave your phone turned on, the phone discharges the battery and then automatically turns off. Charge the battery within 24 hours after a complete discharge so that the battery can charge to full capacity.

Temporarily Muting the Ring Tone

To temporarily mute the ring tone without answering the call, press **NO** or the up or down side volume keys. **Ring silenced for this call only** briefly appears in the display, followed by **Incoming Call**.

You can still answer the call by pressing **YES**. For information on adjusting your answering preferences, see “Auto Answer” on page 13.

Muting the Microphone During a Call

To mute the microphone during a call, press and briefly hold the **BACK** key. **Muted 0:03** appears in the display when the call is muted. Use the **BACK** key to toggle mute.

Note! You cannot mute the microphone during an emergency call.

Stop and Pause Dialing

Stop and pause dialing lets you enter individual numbers or groups of numbers with stops and pauses between each group of numbers. This feature is useful when you need to dial a phone number and then another number, such as an access number for an answering machine or voice mail system or to enter a calling card number and verification code.

A stop causes the phone to stop transmitting numbers until you press **YES**. You can enter a stop in a series of digits by pressing and holding # until ■ is shown in the display.

A pause temporarily suspends transmitting numbers for approximately two seconds before sending the next series. You can enter a pause in a series of digits by pressing and holding * until ■ is shown in the display. For example, if your office has a voice mail system that requires you to dial a phone number, followed by your extension, followed by an access code.

For example, you could enter the following:
555-1111■2222■33333.

When you press **YES**, your phone dials the number and then stops transmitting tones. When your voice mail system asks for your extension you would press **YES** to transmit your extension. The access code is sent after the pause. If the timing in your voice mail system does not allow for pauses, you can enter a stop instead of the pause, or use multiple pauses.

You can also store groups of numbers which can include stops and pauses in a phonebook location. You can then dial the numbers by entering the phonebook location and pressing **YES**.

Caller Identification

If your service provider has Caller Number Identification (Caller ID) service, your phone shows the phone number of an incoming call in the display. If the number is one that you have stored in your phonebook with a name, the name is shown when your phone rings. If the Caller ID information is not available, a message such as **Unavailable** or **Restricted** may be shown in the display. The word **Anonymous** may be shown if the Caller ID is restricted by the service provider or by the caller.

Call Waiting

If you have call waiting service from your service provider, press **YES** to answer a call when you receive the call waiting signal. You can switch between the two calls by pressing **YES**.

Note! Do not press **NO** until you are ready to end both calls.

Call Forwarding

Note! Call Forwarding may be offered by your service provider. To forward a call, press *, plus a numerical code (provided by your service provider), then enter the forwarding number, and press **YES**. The

phone will beep and display a confirmation message that you have forwarded your calls. Refer to your service provider for more details.

Three-Way Calling

Three-way calling is offered by some service providers and allows three parties to participate in the same phone conversation. To set up a three-way call:

- 1 Dial the first person.
- 2 Press **YES** to put the first call on hold.
- 3 Dial the second person and press **YES**.
- 4 When the second person picks up, press **YES** again to join all three calls.

Note! If one of the other people hangs up, you will remain connected with the other person. The three-way call will be disconnected when you hang up.

International Calls

Note! If allowed by your service provider, you can place international calls with your phone just as you would from any other phone. If you have difficulty completing international calls, check with your service provider for information.

Using Your Phonebook

Creating Phonebook Entries

You can add entries to your phonebook by doing the following:

- 1 Press **MENU** from the Standby screen to access the main menu.

- 2 Press **1** to display the **PHONEBOOK** menu.
- 3 Press **2** to select **Add Entry**.
- 4 Enter the phone number and press **YES**.
- 5 Enter the person's name and press **YES**.
- 6 Press **YES** to select the first available position or enter another position number. Press and hold **YES** to securely store the number (this will prevent you from accidentally overwriting the number with another).

Entering Letters and Symbols

Press the appropriate key, **0-9**, **#**, or ***** repeatedly, in quick succession, until the desired letter, character, or digit appears in the display. For example, to enter an **A**, press the numeric key **2** once. To enter a **B**, press the numeric key **2** twice.

Press this...	For...
1	Space 1
2	A B C 2 À Á Â Ã Ç
3	D E F 3 È É Ê Ë
4	G H I 4 Í Î Ï
5	J K L 5
6	M N O 6 Ñ Ó Ô Õ
7	P Q R S 7

Press this...	For...
8	T U V 8 Û Ú Û Ü
9	W X Y Z 9
0	0
*	Toggles between upper and lowercase letters (a/A).
#	, . ? - () ' \ " ! ; : # @ & \$ % + - * / = < > _

Short Message Service (SMS)

Sending Text Messages

New Messages

This feature allows you to enter a text message up to 239 characters. For more information on entering text messages, see “Entering Letters and Symbols” on page 18.

- 1 Select **Send Message** from the MESSAGES menu.
- 2 Select **Create New**.
- 3 Select **Phonebook** or **Enter Phone No.**
- 4 Enter the recipient's phone number and press **YES**.
- 5 **Enter Call Back Number** will appear. Press **NO** to proceed or press **YES** to enter a call back number. Enter a new number or press **YES** to send your phone number (your phone number will be the default).

6 Enter the text message.

7 Press **YES** to the **Send Now?** prompt. Press **YES** to send.

Canned Messages

Canned messages are predefined messages that are already stored in your phone. These are some examples of canned messages:

- OK I got it.
- Please call me back.
- See you later.

- 1 Select **Send Message** from the MESSAGES menu.
- 2 Select **Use Canned Msg.**
- 3 Select **Phonebook** or **Enter Phone No.**
- 4 Enter the recipient's phone number and press **YES**.
- 5 **Enter Call Back Number** will appear. Press **NO** to proceed or press **YES** to enter a call back number. Enter a new number or press **YES** to send your phone number (your phone number will be the default).
- 6 Select the canned message that you wish to use.
- 7 Press **YES** to the **Send Now?** prompt. Press **YES** to send.

Pages

You can send a numeric page without entering any text.

- 1 Select **Send Message** from the MESSAGES menu.
- 2 Select **Send a Page**.
- 3 Select **Enter Phone No.**
- 4 Enter the recipient's phone number.

5 Press **YES** to the **Send Now?** prompt. Press **YES** to send.

Forwarding or Resending Messages

If your message is not successfully sent, you can resend it. Unsuccessfully sent messages are stored in the **Outbox**. You can also forward text messages that you originated. To forward or resend, select the message. Select **Forward**. You will be prompted to reenter the recipient's phone number (or you can enter a new number). Press **YES** to send the message.

Reading Text Messages

When you receive a text message, you will hear a beep (unless Silent Mode is activated) and the text **New Message, Read Now?** will appear. The message will be stored in your **Message Inbox** if you do not read it when it arrives. An icon present on the standby screen () indicates new text messages. The number of new messages will be presented next to the icon. The phone will hold up to 30 new messages.

- 1 Press **YES** when you see **New Message, Read Now?** or select the **Inbox** from the MESSAGES menu.
- 2 Select a message to read.

Note! Messages are listed first by priority and then by time. The sender's name will appear if the sender's name is found in your phone book. If available, the phone number will appear. If not, the first few lines of the message will appear.

- 3 After reading the message, you have the option to view the Call List, Erase, or Reply. The message will remain in your Inbox until your mailbox becomes full. Messages in the Inbox will be overwritten beginning with the oldest.

Note! When the mailbox is full, messages that have been read or sent will be overwritten. Unread and unsent messages will not be overwritten. If the mailbox is filled with unread or unsent messages, **No memory. Delete messages** will appear, when a new message arrives, prompting you to clean the mailbox so a new message can be stored.

Replying

After reading an SMS message, you have the option to reply to the sender. A cursor will appear allowing you to modify the message before sending it. Select **SMS Orig Address** to reply to the original sender.

SMS Call List

The **SMS Call List** stores phone numbers obtained from incoming SMS messages. These numbers may include the sender's phone number or a number written into the text message (embedded numbers). You have the option to edit the phone number from the **Call List** prior to initiating a call.

If you receive a message such as, "Hello John. Sorry I missed you. Please call me at 919-472-7908 or 1-800-374-2776." The two numbers listed in the message, as well as the sender's number, will appear in the **Call List**. After you have read the message, the **Call List** will appear giving you the option to call the sender or one of the numbers written in the message.

In the sample message above, 919-472-7908 and 1-800-374-2776 are embedded numbers. If you send text messages with embedded numbers, you should use one of these formats:

- 9194727908
- "9194727908"

- 919-472-7908
- 1-800-ERICSSON

Deleting Messages

You may wish to delete all messages from your phone. This option is available in the MESSAGES menu. You will be prompted to enter your PIN and then select whether to delete the **Message Inbox** or **Message Outbox**.

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Browser Operation

Browser Operation

Your phone includes a built-in browser that allows you to access Internet content designed especially for mobile phones. This content typically includes Email, Calendar, and Contacts.

While in Browser Operation, your phone displays information (content) retrieved from the Internet via the digital network. The content available to your phone is determined by your content provider.



Email

Your content provider can enable email as an application for use with your browser. If this feature is enabled, you can send to and receive email from anyone with an Internet email address.

Calendar

Your content provider can enable the calendar application for use with your browser. If this feature is enabled, you can set meeting reminders as Alerts and also set future appointments.

Contact List

Your content provider can enable the contact list for use with your browser. If this feature is enabled, you can look up addresses to call, view, or email.

Using the Phonebook

You can download a phonebook using the browser and store it in your phone. If you download a phonebook using the browser, it will overwrite your existing phonebook entries.

Making Calls

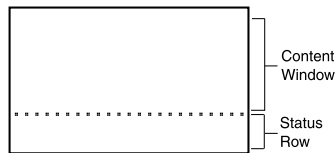
This submenu allows you to place calls from within the browser (the browser session will be suspended). After completing the call, the phone will resume the browser session and return to the page that was active before making the call.

The World

You have access to the world from your Ericsson mobile phone in Browser Operation. This includes maps, games, stock quotes, weather, and a host of other applications.

Your Phone's Display in Browser Operation

The display in Browser Operation is separated into two areas, the content window and the status row. The content window is the area of the screen above the dotted line and the status row is the area below the dotted line.



Accessing the Browser Menu

The Browser Menu can be accessed through the menu key. The following submenus will appear once you have entered the Browser menu.

Launch Browser

By selecting **Launch Browser**, you can access the home page that is set by your service provider.

Each time you launch the browser, the last accessed page will appear. The next time you power on and launch the browser, your service provider's home page will appear. Press **MENU** to access the **BROWSER** menu, then choose **Exit** to return to standby.

Text Size

You can choose between two different text sizes. The Normal Size (7-point type) will display five lines of text, including the status rows.

The Large Size (8-point type) will display four lines, including the status row.

Alert Sound

You can specify if you want sound associated with your browser alert mechanism. The two options for **Alert Sound** are On and Off.

Network

You can view or modify your Wireless Application Protocol (WAP) gateway settings. You should not alter your gateway settings unless you are instructed to do so by your service provider. You will be prompted to enter your PIN. Contact your service provider for your PIN.

Setting Linger Time

You can set the amount of time allowed to access a network to one of three options: 30 seconds, 1 minute, 90 seconds, or 2 minutes. Longer linger time will increase airtime during periods of inactivity.

Working within the Browser

The Browser Alert

While Browsing

When you have new content in your inbox, your phone will notify you of its priority.

No and Low Priority - Backlight will come on and the browser alert icon (✳) will appear.

Medium Priority - The backlight and icon will appear, and an alert will sound (if set to on).

High Priority - The backlight and icon will appear, an alert will sound, and a pop-up message will indicate that an alert has been received.

While in Voice Mode

An alert received in voice mode is similar to receiving an SMS or voice mail alert. The browser alert icon will be displayed in the standby screen and will remain until you acknowledge the alert.

Gateway Settings

The Gateway address is the IP address of the gateway server to which your phone will connect. The server stores web content for your phone to access, including your Home Page. Your phone can store three independent Gateway Addresses, allowing you to easily switch between gateways.

Setting Gateway Addresses

- 1 Select the **BROWSER** menu.
- 2 Choose **Network**.
- 3 Choose **Modify**. You will be required to enter your PIN.
- 4 Choose **Gateway**.
- 5 Enter the IP Address. The dots are automatically added. Leading zeroes are necessary where appropriate.

Selecting an Active Gateway

- 1 Select the **BROWSER** menu.
- 2 Choose **Network**.

- 3 Choose **Modify**. You will be required to enter your PIN.

- 4 Select **Active Gateway**.

- 5 Select the Gateway you wish to activate.

Text Entry

You can enter characters in four different modes. The active format is displayed in the right soft key position. You can change the format in which characters are entered by pressing the right soft key.

- 1  mode allows you to enter alphabetic text.

Press the appropriate key, 0-9, or # repeatedly until the desired letter, character, or digit appears in the display. For example, to enter an **a**, press the numeric key 2 once. To enter a **b**, press the numeric key 2 twice.

Press this...	For...
1	(space)
2	a b c 2
3	d e f 3
4	g h i 4
5	j k l 5
6	m n o 6
7	p q r s 7
8	t u v 8

Press this...	For...
1	(space)
9	w x y z 9
0	0
#	, ? ! . ; : @ \ ' " + - * / = ~ # \$ % ^ & _ < > { } [] ()
*	To turn capitalization on and off.

- 2  mode allows you to select symbols and punctuation from a list. You can switch to symbol entry by pressing the right soft key until **SYM** is in the right soft key position. There are four screens of symbols. Press the left soft key to switch between each screen.

SYM 1 . ? ! . ; : ' " + - * / = ~ # \$
 SYM 2 . @ \ / | _ ~ \$ ^
 SYM 3 + - * / < > = % #
 SYM 4 { } [] () < > &

Press the digit key corresponding to the symbol that you want to enter.

Your phone automatically switches back to the previously-used method of text entry after you enter one symbol.

- 3  mode allows you to enter numbers by pressing the digit key corresponding to the number that you want to enter.

- 4  mode allows you to use Tegic T9 text input. Tegic T9 text entry software allows you to quickly and easily enter words or entire sentences with just one key press per letter. Tegic T9 text entry software uses the phone's internal dictionary to quickly scan possible variations to determine the correct word.

Note! T9 will not recognize names, slang terms, or acronyms. You may wish to add them to your phone's dictionary.

If you enter all your letters and the word that you want does not appear, press **0** to view other matches in your phone's dictionary. Keep pressing **0** until your word appears.

For example, to enter the word "ball", press **2, 2, 5, 5**. After the first 2, your screen displays "c". After the second 2, your screen displays "ca". After the first 5, your screen displays "cal". After the second 5, your screen displays "call". Press the **0** key until the word "ball" is displayed.

Note! It may be helpful not to look at the screen until you are finished entering the characters of the word you are trying to type as a new word match may occur with each new character entered.

Note! You will know that there is no word match in the T9 dictionary when your key presses are no longer recognized by T9 text entry mode. When this happens, backspace, switch to **a . . z** mode, and continue text entry.

If your word does not appear, you can add it into your phone's dictionary by doing the following:

- Type the text that you want to enter into your phone's dictionary by using any of the non-T9 text entry modes.
- With the cursor to the right of the last character (without pressing a space) reselect T9 mode by pressing the right soft key until T9 appears in the right soft key position.
- Press **␣** to enter a space. Your word is added to your phone's dictionary when your phone is properly powered down.

Exiting the Browser

- Press **MENU**, then select **Exit** from the **BROWSER** menu.

Note! You can also access the Phone's menu directly from the browser by pressing, and briefly holding, **MENU**. From this menu, press **BACK** to return to standby.

Note! If there are no pages in cache, the browser will exit and return to standby when you press **BACK** from your content provider's homepage.

Tools in the Browser

Once you have launched the browser, you can press **MENU** to see the following submenus:

Reload

Select **Reload** to refresh or reload a page.

Home

Selecting **Home** will return you to your homepage.

Bookmarks

The **Bookmarks** submenu will show you the list of bookmarks that you have set.

Mark Site

Use the **Mark Site** submenu to set your bookmarks.

About Phone.com

The **About Phone.com** submenu will display version information about Phone.com.

Advanced...

Show URL - Displays the URL address of the current page.

Homepage - Gives you the option to change your homepage.

Offline Services - Allows WAP content to be stored in the cache, but not subject to the normal cache reclaiming mechanism.

Outbox - Allows standard WAP transaction requests (such as fetch new mail, send an instant message, add an appointment) to be queued and handled as one batch when service is available.

Restart Browser - Clears the cache and restarts the browser.

Encryption - A security code computed by your browser for authentication. You can verify your encryption with the **Verify Key** submenu. You can also select a new encryption key by selecting **New Key**. You should contact your content provider prior to making any encryption changes.

Exit Browser

Select **Exit Browser** to return to standby.

Browser Status

The bottom row on the browser screen displays animation indicating what is currently happening between the phone and the network.

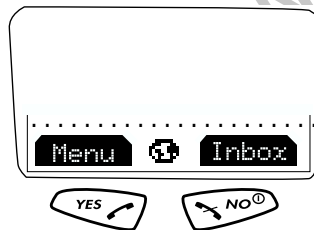
Text

The following are texts that could possibly appear and their explanations:

- **Connecting** means that your phone is trying to make a connection with your content provider.
- **Sending** means that information is being transmitted from your handheld browser to your content provider.
- **Receiving** means that you are receiving information from your content provider.
- **Working** means the browser is performing a processor-intensive operation.
- **Waiting** means the browser is loading.

Soft Keys

You can use soft keys for action on the current page. They are displayed in reverse video on the status bar of your display.



To use the soft key functions, press the left (**YES**) or right (**NO**) key that is under the text label on the screen. The soft keys on your phone's screen override the key names. For example, press **YES** to select **Menu** or press **NO** to select the **Inbox**.

Note! When using the soft keys, be sure to press and release the **YES** and **NO** keys. Pressing and holding **YES** sets a bookmark.

Icons

Critical icons are alternated in the center of the soft keys. Other icons can be viewed by pressing and holding *.



- **Signal Strength** icon () shows the relative signal strength from the wireless system. More bars indicate a stronger signal.
- The **Globe** icon () indicates that you have established a connection with the WAP network. The Secure Connection icon () will replace the globe when a secure connection is established.
- The **Browser Alert** icon () indicates that there is new content in your Inbox (for example, email or stock quotes).
- **Ringer Off** icon () indicates that your phone will not sound an alert. The Ringer Off icon will be replaced by the **Silent Mode** icon () when Silent Mode has been activated.
- The **Battery Strength** icon () appears, partially full, between the soft keys when your battery is low. The icon will always appear when you press and hold *. If the phone is connected to external

power and the battery is charging, the display alternates between the battery icon and the charging icon ().

- The SMS icon () appears when you receive a text mail message.
- The Voice Mail icon () appears when you receive a voice mail message.

Navigation



NO

- Press to select the soft key in the lower right of the screen.



YES

- Press to select the soft key in the lower left of the screen.
- Press and hold to add to the favorites list.



BACK

- When entering text, press to erase 1 character to the left.
- When entering text, press and hold to erase the entire entry.
- When not entering text, press to go back one card at a time.
- When not entering text, press and hold to return to the Home Page.



MENU

- Press to go to the Browser menu.
- Press and hold to switch to the Voice menu.



1/VOICE MAIL

- When entering text, press to add a space in 0...9 mode.



#/POUND

- Press to enter symbol characters.
- Press and briefly hold to view the time and date.



*/STAR

- When entering text, press to toggle capitalization.
- Press and briefly hold to show icons such as battery and signal strength.
- Press and briefly hold to see icon display.

SIDE VOLUME KEYS

- Press to scroll one screen/page at a time.
- Press and briefly hold to autorepeat.



ROCKER KEYS

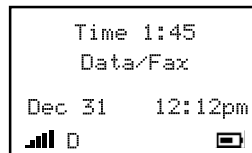
- When entering text, press to move the cursor left or right.
- Press to move up and down within menus.
- Press and hold to autorepeat.
- When entering text, press  to add a space to the end of a word.
- When entering text, press  to scroll non-destructively through the text entered.

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Wireless Modem Operation

Wireless Modem Operation

You can use your phone in Wireless Modem Operation when it is powered on with the proper cable attached from your phone to your computer. An Ericsson accessory kit may be required to use your phone in Wireless Modem Operation. Your phone is in Wireless Modem Operation when you see the following standby screen.



Your Ericsson mobile phone contains a modem similar to the modems you use to connect your computer to your home or office telephone service. Rather than connecting to standard telephone lines, however, the modem in your mobile phone allows you to connect your computer to the mobile telephone system. In places where mobile network operators provide the necessary support, you can use your mobile phone to send or receive faxes, upload or download data files, or access the Internet.

This chapter will assist you with setting up your computer and phone to handle data, fax, and Internet calls on the mobile network.

Note! If digital data/fax/Internet service is not available, you can purchase an analog modem card that is compatible with your Ericsson mobile phone and use data/fax functions on the available analog system.

Differences Between Data, Fax, and Internet Calls

Your Ericsson mobile phone can handle data, fax, and Internet calls, but each type of call requires corresponding software that must be running on your computer.

Data Calls

Data calls are placed to exchange computer files between two computers. While the data connection is in place, files can be transferred between the connected computers, according to the capabilities of the software in use. When a data call is made, the connection will remain in place until it is closed by one of the computers involved. To make or receive data calls with your Ericsson mobile phone, you must have a properly configured communications program running on your computer.

Fax Calls

Fax calls are placed to send fax messages. When a fax message has been sent, your fax software or the originating fax machine will terminate the call. To make or receive fax calls with your Ericsson mobile phone, you must have a properly configured fax program running on your computer.

Internet Calls

Internet calls are placed to Internet Service Providers (ISP) when you want to use e-mail or access websites on the World Wide Web. To make Internet calls, you must have an account with an ISP and a properly configured Internet access program (browser) running on your computer. When your software is installed and set up to dial your ISP, calls can be made using the normal dialing procedure. Once a connection to your ISP is established, it will remain in place until you disconnect or until it is automatically disconnected due to the degradation of signal quality or due to inactivity.

Note! Throughout this chapter, references to data/fax/internet will be referred to as simply data.

Quick Net Connect

Quick Net Connect establishes an Internet connection quickly, easily, and economically. The digital connection bypasses the typically-used analog modems and connects to the Internet in a matter of seconds.

Before You Start

Before setting up your phone for data operation, do the following:

- Make sure that you have the required hardware and software components.

Note! You must have an Ericsson DA 18 Phone Book Manager Accessory Kit, which includes a serial interface cable, to connect your Ericsson mobile phone to your computer. The kit also includes a compact

disc with the software required to install your phone as a modem on your computer.

- Confirm that your mobile service provider supports digital data services in your planned usage area. If digital data service is not available, you can purchase an analog modem card that is compatible with your Ericsson mobile phone and use data functions on the available analog system.
- Verify that you have the necessary subscription.

Note! The availability of digital mobile voice service does not necessarily imply that your mobile service operator supports digital data operation.

Setting Up Your Computer

To operate properly with the modem in your Ericsson mobile phone, make sure that your computer has the following hardware and software:

- A functional serial port
- An operating system that supports data access software, such as Windows 95 or Windows 98
- Appropriate fax (class 2.0), Internet access, or file transfer software

Note! Class “2.0” is different from Class “2”.

Initial Setup

Successful first-time setup of your phone and computer for data operation involves the following steps:

1 Connect Your Computer to Your Phone

Your Ericsson DA 18 Phone Book Manager Accessory Kit contains a serial interface cable. The cable has a plug on one end that matches the receptacle on the bottom of your Ericsson mobile phone. The other end of the cable has a 9-pin female connector that matches the standard 9-pin serial interface port connector. Connect one end of the cable to your Ericsson mobile phone and the other end to the serial port on your computer.



Note! If you are trying to connect to a 25-pin serial interface port on your computer, you will need an adapter. You can purchase a 25-pin serial interface port adapter at most computer supply stores.

2 Install Your Modem Control Software (driver)

The modem control software (driver) that you need to use your Ericsson mobile phone is available on the compact disc included in your DA 18 Phone Book Manager Accessory Kit. Refer to the Installing Your Modem Driver From Your Compact Disc section at the end of this chapter for help with installing drivers for some operating systems. When the appropriate driver is loaded, refer to the sections on making and receiving data and fax calls later in this chapter.

3 Set up your data access software according to the instructions supplied with it.

Operation

Receiving Data and Fax Calls

Review the instructions from your mobile service provider that describe the procedures and rules for making and receiving data calls in your area. If you are having trouble receiving a data call, you may need to configure your phone manually to receive a data call. To configure your phone manually, do the following:

- 1 Set up your phone and computer as described above.
- 2 Press **MENU** from the Standby screen to access the main menu.
- 3 Choose **Call Options** from the **SETTINGS** menu.
- 4 Press $\uparrow$ or $\downarrow$ until the **Data/Fax** is highlighted.
- 5 Press **YES** to open the **Data/Fax**. The current selection is indicated by a filled radio button.
- 6 Press $\uparrow$ or $\downarrow$ until the call type for the next call you will receive is highlighted. Call Types are: Off, Next Call Fax, Fax On, Next Call Data, and Data On.

Note! The Off setting is active until you choose a different setting. Fax On and Data On apply until you power off your phone.

- 7 Press **YES** to select the highlighted call type.
- 8 **Data/Fax Setting:xx** appears in the display. Your phone is now configured to a specific type for your next incoming call.

Making Data and Fax Calls

When your phone and computer are properly set up, you can send a fax, or initiate data calls, as with any other modem.

Review the instructions from your mobile service provider that describe the procedures and rules for making and receiving data calls in your area.

Note! To avoid unnecessary airtime charges, terminate your data calls as soon as you have finished transferring files by pressing the **NO** key. Some software can be set to do this automatically.

Making Voice Calls While Connected to Your Computer

You can originate voice calls when you are not on a data call. You can receive voice calls if **Data/Fax** is set to **Off**.

Your Ericsson mobile phone enables you to initiate voice calls from Windows applications when connected to the Ericsson Voice Call Dialer. This is particularly useful if you have contact cards with phone numbers in a contact management application. You can open a contact card, click on the phone icon, and originate a call using your Ericsson mobile phone. Then you simply pick up your mobile phone and continue the call. The Ericsson Voice Call Dialer is compatible with most contact manager software packages. Refer to the “Manual Installation of Your Modem Driver” or “Voice Call Dialer” section at the end of this chapter for help with installing this driver for some operating systems.

Disconnecting

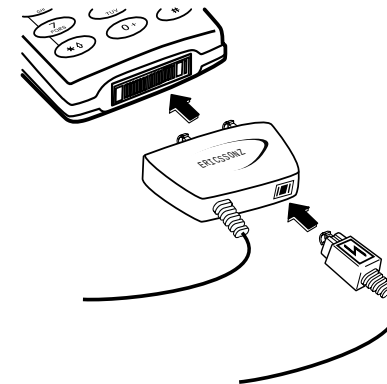
Disconnect your Ericsson mobile phone from your computer by disconnecting the cable from your phone and the serial port from your computer.

Use With Other Ericsson Accessories

Rapid or Travel Charger

To charge your phone's battery with an Ericsson rapid or travel charger during data operation, do the following:

- 1 Plug one end of the cable from your DA 18 Phone Book Manager Accessory Kit into your phone.
- 2 Plug the other end of the cable from your DA 18 Phone Book Manager Accessory Kit into the serial port on your computer.
- 3 Plug the charger cable into the bottom of the connector from your DA 18 Phone Book Manager Accessory Kit cable.
- 4 Plug the charger cable into the wall outlet.



Desktop Charger

To charge your phone's battery with an Ericsson desktop charger during data operation, do the following:

- 1 Plug one end of the cable from your DA 18 Phone Book Manager Accessory Kit into the back of your desktop charger.

- 2 Plug the other end of the cable from your DA 18 Phone Book Manager Accessory Kit into the serial port on your computer.
- 3 Plug the charger cable into the bottom of the connector from your DA 18 Phone Book Manager Accessory Kit cable.
- 4 Plug your charger cable into the wall outlet.
- 5 Insert the phone into the front compartment of your desktop charger.

Achieving Best Performance

Charging your Battery

Both your Ericsson mobile phone and your laptop computer batteries should be well-charged before starting data operation. This will help you avoid interruptions due to loss of power.

You may charge your phone's battery with an Ericsson charger during data/fax operation as mentioned above.

Signal Strength

It is important to maintain a good signal path between the phone and the mobile telephone system when making data calls. Signals will generally be stronger when the phone is in an upright position. If you are indoors, your signal will generally be stronger when the phone is near a window.

In a Vehicle

It is possible to receive data calls from your vehicle. Operation from a moving vehicle may not be satisfactory because data may be lost when your call is transferred from one mobile base station to

another. Be sure to give full attention to driving and pull off the road and park before making or receiving calls, if driving conditions so require.

Transmission Disturbances

Brief interruptions of mobile telephone signals that would not be bothersome during a voice call may cause problems during data operation, depending upon the error correction capabilities of the software being used. Such interruptions are uncommon during stationary operation, but can be caused by vehicles or people passing nearby, especially in areas of low signal strength. You can use the signal strength indicator on your phone to verify that you have a good signal path.

Installing Your Modem Driver From Your Compact Disc

Windows 95

Complete the following steps to install the appropriate modem driver (INF file) on your computer if you are running Windows 95:

- 1 Turn On your Ericsson mobile phone.
- 2 Connect one end of your serial cable to your Ericsson mobile phone and the other end to your computer's serial port.
- 3 Restart your computer. Windows will autodetect your Ericsson mobile phone. When your desktop returns, insert the compact disc from your DA 18 Phone Book Manager Accessory Kit. One of the following screens will appear:

- **New Hardware Found**

When the New Hardware Found screen appears, choose **Driver** from disk provided by your hardware manufacturer and click **OK**. At the **Install from Disk** screen, type **D:** in the box then click **OK** (if your CD-ROM drive is not drive D, type the correct CD-ROM drive designation).

- **Update Device Driver Wizard**

When the **Update Device Driver Wizard** appears, click **Next**. Once Windows has found the driver, click **Finish**.

Note! If neither the **New Hardware Found** nor the **Update Device Driver Wizard** screens appear, refer to the Manual Installation Instructions at the end of this chapter.

- 4 When your desktop returns, verify that your modem is properly installed. From the **Start** menu on your Windows desktop, click on **Settings**, then **Control Panel**. Double-click the **Modems** icon.
- 5 When the **Modem Properties** screen appears, click on the description of your modem and click the **Diagnostics** tab. Note the COM port to which your modem is assigned.
- 6 Click **OK** to proceed.

Windows 98

Complete the following steps to install the INF file on your computer if you are running Windows 98:

- 1 Turn On your Ericsson mobile phone.
- 2 Connect one end of your serial cable to your Ericsson mobile phone and the other end to your computer's serial port.
- 3 Restart your computer. Windows will autodetect your Ericsson mobile phone. When your desktop returns, insert the compact disc from your DA 18 Phone Book Manager Accessory Kit.

- 4 When the **Add New Hardware Wizard** screen appears, click **Next**.

Note! If the **Add New Hardware Wizard** screen does not appear, refer to the Manual Installation Instructions at the end of this chapter.

- 5 Select **Search for the best driver for your device (recommended)** and click **Next**.
- 6 Select the appropriate CD-ROM drive and click **Next**.
- 7 When **Windows is now ready to install the best driver for this device** appears, click **Next**.
- 8 When **Windows has finished installing the software that your new hardware device requires** appears, click **Finish**.
- 9 When your desktop returns, verify that your modem is properly installed. From the **Start** menu on your Windows desktop, click on **Settings**, then **Control Panel**. Double-click the **Modems** icon.
- 10 When the **Modem Properties** screen appears, click on the description of your modem and click the **Diagnostics** tab. Note the COM port to which your modem is assigned.
- 11 Click **OK** to proceed.

Manual Installation of Your Modem Driver or Voice Call Dialer

Complete the following steps to manually install the INF file on your computer if you are running Windows 95/98

- 1 Turn On your Ericsson mobile phone.
- 2 Connect one end of your serial cable to your Ericsson mobile phone and the other end to your computer's serial port.

- 3 From the **Start** menu on your Windows desktop, click on **Settings**, then **Control Panel**. Double-click the **Modems** icon.
- 4 Click **Add**.
- 5 At the **Install New Modem** screen, select **Other**. Click **Next**.
- 6 At the next **Install New Modem** screen, select **Don't run Hardware Installation Wizard** then click **Next**.
- 7 At the next **Install New Modem** screen, select **Don't detect my modem, I will select it from a list** then click **Next**.
- 8 At the next **Install New Modem** screen, click on **Have Disk**.
- 9 At the **Install from Disk** screen, select **D:** at Copy from Manufacturer's Disk (if your CD-ROM drive is not drive D, type the correct CD-ROM drive designation).
- 10 At the **Install New Modem** screen, select **Ericsson Voice Call Dialer**, then click **Next**.
- 11 Select the COM port to which your Ericsson mobile phone is connected and click **Next**.
- 12 When **Your modem has been set up successfully** appears, click **Finish**.
- 13 When your desktop returns, verify that your modem is properly installed. From the **Start** menu, click on **Settings**, then **Control Panel**. Double-click the **Modems** icon.
- 14 When the **Modem Properties** screen appears, click on the description of your modem and click the **Diagnostics** tab. Note the COM port to which your modem is assigned.
- 15 Click **OK** to proceed.

Troubleshooting

1 You cannot set up or maintain a data/fax session.

This will occur if you are inadvertently originating a voice call when attempting a data/fax call. To correct the problem, do the following:

- a From the **Start** menu on your Windows desktop, click on **Settings**, then **Control Panel**.
- b Double-click the **Modems** icon.
- c Select the **General** tab.
- d Select **Ericsson CDMA Data/Fax Modem** from the pull-down list.
- e Click **Properties**.
- f Click **General**. Make sure that the maximum speed is set to 19200.
- g Select the **Connection** tab.
- h Click **Advanced**.
- i In the Extra settings box, type the following:
&C1+CRM=0;
- j Click **OK** to return to the **Connection** tab.
- k Click **OK** to return to **Modem Properties**.
- l Click **Close**.

Note! If you are using an application that supplies its own box for entering extra settings, then type the following command string into that box as well:
+COS=4,1,2,0; +ES=1,0,1; +DS=0,0,512,6;

2 You cannot originate a voice call.

- a From the **Start** menu on your Windows desktop, click on **Settings**, then **Control Panel**.
- b Double-click the **Modems** icon.
- c Select the **General** tab.

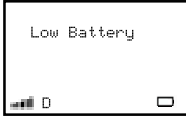
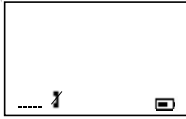
- d Select **Ericsson Voice Call Dialer** from the pull-down list.
- e Click **Properties**.
- f Select the **Connection** tab.
- g Click **Advanced**.
- h Type the following in the **Extra Settings** box of the the Advanced Connection Settings window:
*ERVNOK=1
- i Click **OK** to return to the **Connection** tab.
- j Click **OK** to return to **Modem Properties**.
- k Click **Close**.

- 3 You are having trouble initiating data/fax calls from your computer.
- Check to see if your COM ports are occupied. If so, you must temporarily disable the software applications that are using the COM ports.

Troubleshooting

Problem Solving

My phone does not turn On.	Recharge or replace the battery.
My phone does not ring when a call is received.	Check for Ringer Off (🔇) or Silent Mode (🔇) icons on the Standby screen.
My battery does not charge to full capacity.	Your battery is fully charged when the power indicator shows the power icon (🔋) continuously. If you still experience problems, condition your battery by fully discharging and charging it three times. Or, if your phone came with a desktop charger, use the conditioning function on the desktop charger to condition the battery.
My signal strength varies.	This is a common occurrence. Transmitters are set in geographic areas, and coverage is not 100% all of the time. Signal strength varies as you travel between cells.
	The signal is too weak to make a call. Try again when the signal strength is one bar or stronger.

	The battery power is low. When the phone shuts itself off, replace the battery with a fully charged one, or use an alternate power source, such as a travel charger.
	Your text message memory is full. Erase some stored messages before you can receive more messages.
	Your phone is out of range of service.
I cannot connect to the modem.	If you cannot connect to the modem in Wireless Modem Operation, make sure that your serial interface cable is connected to both your phone and your computer. If the problem still exists, consult your Ericsson CD or your computer's user's guide.

I am having problems downloading information.	If you are having problems downloading information from the Internet during a wireless modem session, make sure that your phone is still in Wireless Modem Operation by checking your phone's display. If you travel to a region with a weak signal, the connection can be dropped. If this happens, disconnect your phone or wait for the Globe Icon to reappear.
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Accessories, Accessibility, and Internet

Technical Assistance/Ordering Accessories

- North America - 1-800 ERICSSON (1-800-374-2776)
- Latin America - 305-755-6789
- Other countries - 919-472-7908

Accessible Solutions/Special Needs

For information on Accessible Solutions for individuals with special needs call the Ericsson Special Needs Center at 877-878-1996 (TTY) or 877-207-2056 (voice), or visit the Ericsson Special Needs Center at <http://www.ericsson-snc.com>

Internet

Visit Ericsson on the internet at: <http://mobile.ericsson.com>

Guidelines for Safe and Efficient Use

Since its introduction in the mid 1980s, the mobile phone has been one of the most exciting and innovative products ever developed. Your phone can help you to stay in touch with your office, your home, emergency services and others.

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

** American National Standards Institute: National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection.*

Safety

Exposure to Radio Frequency Signals

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals.

In August, 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both US and international standards bodies:

- ANSI C95.1 (1992)*
- NCRP Report 86 (1986)*
- ICNIRP (1996)*

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

Antenna Care

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

Phone Operation

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

TIPS ON EFFICIENT OPERATION: For your phone to operate most efficiently:

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

Driving

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

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

In addition, Ericsson suggests the following safe driving tips if you are using your phone while driving:

- Get to know your wireless phone and its features such as speed dial and redial.
- Position your wireless phone within easy reach.
- Suspend conversations during hazardous driving conditions or situations.
- Do not take notes or look up phone numbers while driving.
- Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic.
- Do not engage in stressful or emotional conversations that may be distracting.
- Use your wireless phone to call for help.
- Use your wireless phone to help others in emergencies.
- Call roadside assistance or a special wireless non-emergency assistance number when necessary.



Electronic Devices

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

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.
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives).

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is 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.

Potentially Explosive Atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include fueling areas such as gasoline

stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

For Vehicles Equipped with an Air Bag

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

Product Care and Operation

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

Ericsson suggests you read and observe the following for safe care and operation of your phone:

- Do not allow children to play with your phone. They could hurt themselves or others, or could accidentally damage the phone. Your phone may contain small parts that could be detached and create a choking hazard.
- Do not expose your mobile phone to moisture or extreme temperatures.

- Only Ericsson original accessories are recommended. Failure to use them may result in loss of performance or product damage, and will void the warranty.
- Do not attempt to disassemble the product. Doing so will void warranty. This product does not contain consumer serviceable components. Service should only be performed by Authorized Service Centers.
- Do not allow objects to fall on, or liquids to spill on products.
- Connect AC (power supply) only to designated power sources as marked on the product.
- To reduce risk of damage, remove the electrical cord from the outlet by pulling the AC adapter at the outlet rather than the cord.
- Make sure the electric cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- To reduce risk of electric shock, unplug the unit from the power source before attempting any cleaning. Once unplugged, use a soft cloth lightly dampened with water for cleaning.
- DANGER - Never alter the AC cord or plug. If the plug will not fit into the outlet, have a proper outlet installed by a qualified electrician. Improper connection can result in risk of electric shock.
- Don't twist the antenna. Excess twisting will damage the antenna.

Battery Information

New Batteries

The battery packaged with your phone is not fully charged. For maximum battery capacity, use your charger to condition the battery.

Recycling Your Battery

Your phone manufacturer is a member of the Rechargeable Battery Recycling Corporation (RBRC), a non-profit service organization designed to assist in the recycling of rechargeable batteries. Many areas require the recycling of rechargeable batteries. In the U.S., call 1-800-822-8837 to find out how to recycle your battery. Outside the U.S., contact your local retailer for recycling instructions.

Battery Use and Care

A rechargeable battery has a long service life if treated properly. A new battery, or one that has not been used for a long period of time, should be conditioned before using your phone. Avoid recharging a fully-charged or almost fully-charged battery. If your phone shuts off due to low battery power, you should charge the battery within 24 hours for the battery to reach full capacity.

- Do not leave your battery where it may be subjected to extremely hot or cold temperatures. This could reduce the battery's capacity.
- Do not let the metal contacts on the battery touch another metal object such as keys in your pocket. This could short-circuit and damage the battery.
- Do not attempt to take a battery apart.
- Do not expose a battery to open flame. This could cause the battery to explode.
- Turn your phone OFF before removing the battery.
- Use only the AC/DC adapter supplied with your battery charger. Using a different adapter could be dangerous and will void your phone warranty.
- Never charge a battery when the ambient room temperature is below 50° F (10°C) or above 105°F (40°C).

- Do not allow the battery to be placed into the mouth. Battery electrolytes may be toxic if swallowed.

FDA Consumer Update

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.¹

- 2 Researchers conducted a large battery of laboratory tests to assess the effects of exposure to mobile phone RF on genetic material.

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

FDA is currently working with government, industry, and academic groups to ensure the proper follow-up to these industry-funded research findings. Collaboration with the Cellular 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.³

2 In a study of 209 brain tumor cases and 425 matched controls, there was no increased risk of brain tumors associated with mobile phone use. When tumors did exist in certain locations, however, they were more likely to be on the side of the head where the mobile phone was used. Because this occurred in only a small number of cases, the increased likelihood was too small to be statistically significant.⁴

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 does 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/>

- 4 Hardell, L, Nasman, A, Pahlson, A, Hallquist, A and Mild, KH. Use of cellular telephones and the risk for brain tumors: a case-control study. *Int. J. Oncol.*, 15: 113-116, 1999.

Footnotes

- 1 Muscat et al. Epidemiological Study of Cellular Telephone Use and Malignant Brain Tumors. In: State of the Science Symposium; 1999 June 20; Long Beach, California.
- 2 Tice et al. Tests of mobile phone signals for activity in genotoxicity and other laboratory assays. In: Annual Meeting of the Environmental Mutagen Society; March 29, 1999, Washington, D.C.; and personal communication, unpublished results.
- 3 Preece, AW, Iwi, G, Davies-Smith, A, Wesnes, K, Butler, S, Lim, E, and Varey, A. Effect of a 915-MHz simulated mobile phone signal on cognitive function in man. *Int. J. Radiat. Biol.*, April 8, 1999.

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Glossary

Calling Line Identification (CLI)

CLI shows the number of the person calling you in your mobile phone display. You can then make an informed choice as to whether or not to take the call. Bear in mind that not all numbers can be displayed. To use this service, it must be supported by your network.

Content Provider

A company that provides web services to mobile phone subscribers. The Content Provider may be the same as the Service Provider.

DTMF or Touch Tone

Dual Tone Multi Frequency signal – codes sent as tone signals. Used for telephone banking, for accessing an answering machine, etc.

Encryption

A security code computed by your browser for authentication.

EZ-Read™ Menus

EZ-Read™ Menus make menu navigation and changing settings simple. The tabbed menus clearly show the way.

Fax Class

Standards for fax transmission are set as classes. Class I and II allow data transfer speeds of between 2400 up to 9600 bps.

Forward or Call Forward

Enables you to forward calls to another number, for example your voicemail or home phone.

Handsfree

An important safety feature for mobile phones that allows drivers to use their car phone without lifting or holding the handset to their ear.

Menu System

The easiest way to access all the phone's functions. The menus are arranged to be accessed and viewed when scrolling with the arrow keys.

Number Assignment Module (NAM)

Your NAM is the storage of your phone number or phone numbers and any network parameters. The NAM identifies your phone to your service provider.

Network

A mobile phone network or system consists of a network of cells. A radio base station serves each cell from where calls are forwarded to and received from your mobile phone by wireless radio signals.

Operator

To be able to use your phone, you need a subscription to a network. You get this subscription from a network operator.

Phone Book

A memory in your mobile phone where phone numbers can be stored and accessed by name (alpha memory search) or position.

Personal Identification Number (PIN)

Your PIN is a code used for all phones to establish authorization for access to certain functions or information. The PIN code comes with your subscription.

Preferred Roaming List (PRL)

The PRL is defined by your service provider so that your phone will automatically search for optional networks when your primary network is not available. These predefined networks typically offer better rates than non-preferred networks. Preferred networks are indicated with an **R**.

Restrict Calls

Enables you to restrict certain or all types of calls to and from your mobile phone, for example, outgoing calls, outgoing international calls, incoming calls. Restricting is activated with a personal code. To use this service, it must be supported by your network.

Roaming

You are outside of your home network.

Semi-Duplex

In handsfree equipment, full duplex means that the connection is open for both parties to talk simultaneously. Semi-duplex gives close to, but not complete, duplex functionality.

Service Provider

Like a Content Provider, your Service Provider provides network access to mobile phone users. The Service Provider and Content Provider may be the same.

Short Message Service (SMS)

SMS allows messages of up to 239 characters to be sent and received via the network operator's message center to your mobile phone. Messages are stored if the phone is off or out of reach ensuring that they reach you. To use this service, it must be supported by your network.

Scroll

Pressing  or  to move between the menus.

Select

Scrolling to a menu then pressing the **YES** key on the phone.

Soft Keys

Soft Keys are virtual keys that have varying functionality in Browser Mode. The soft keys are shown in the display above the **YES** and **NO** keys; however, you use the **YES** and **NO** keys to operate the soft key functions.

Standby

The mode where your phone has been cleared of all menu items and features.

Subscription

Is the contract that you have with the service/network provider. To use your phone, you need to have a subscription to a network. The services included in your subscription depend on your choice of operator and/or subscription. So some of the services and functions described in this manual may not be accessible to you. If you want a complete list of the services included in your subscription, please contact your network operator.

Voicemail

A computerized answering service that automatically answers your call, plays a greeting in your own voice and records a message.

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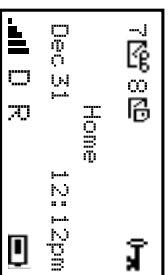
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- 1 Voice Mail
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- 5 Memory Used
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- 1 Call List
- 2 Home Usage
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- 4 Total Usage
- 5 Clear Call Lists

- 1 Sounds
- 2 My Number
- 3 Keypad Lock
- 4 Call Options
- 5 Security
- 6 Language
- 7 Display
- 8 System Options

- 1 Launch Browser
- 2 Text Size
- 3 Alert Sound
- 4 Network

Menus can be selecting from the menu button. A quicker way to access menus and submenus is to use the associated numbers. For instance, to access your **Message Inbox**, press **MENU 2 2**.

A1228c Quick Card

Emergency Calls:

Enter 911 (or 112) and press **YES** to call.

Back Up One Level in Menu Mode

Press **NO**

Scroll Through Menus

Press **⬅** OR **➡**

Select a Menu or Save a Setting

Press **YES**

Speed Dial

Enter position number (1-99) and press **YES**

Redial Last Dialed Number

Press **YES** from Standby

Website

<http://mobile.ericsson.com>

Technical Support

North America - 1-800 ERICSSON

Latin America - 305-755-6789

Other Countries - 919-472-7908

Turn Phone On/Off

Press and hold **NO**

Answer Call

Press **YES**

End Call

Press **NO**

Call Voicemail

Press and hold **1**

Call Number Shown in Display

Press **YES**

Change Ear Volume (During Call)

Press upper or lower side key

Microphone Mute (During Call):

Press and hold **BACK**

Keypad Lock:

Press **MENU ***

Silent Mode:

Press **MENU #**