

Lucent Technologies
Bell Labs Innovations



**DEFINITY[®] Wireless Business
System**

9601 Pocket Phone User's Guide

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- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user
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 - A call is unanswered
 - A busy tone is received
 - A reorder tone is received

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About This Book

The DEFINITY® *Wireless Business System Pocket Phone User's Guide* contains information needed to ensure successful telecommunications using your DEFINITY 9601 Pocket Phone.

Audience

Anyone using the DEFINITY ECS 9601 Pocket Phone.

Electromagnetic Compatibility Warning

Important Safety Guidelines for Users

For safe and efficient operation of your DEFINITY Wireless Business System (DWBS) Pocket Phone (wireless telephone), observe these guidelines.

Your wireless telephone is a radio transmitter and receiver. When the battery is installed, the phone is on and it receives and also sends out radio frequency (RF) energy. The phone operates in the frequency range of 1920-1930 MHz. Your handheld wireless telephone uses the digital TDMA mode; the power is transmitted in bursts at a 100 Hz pulsed repetition rate. The peak envelope transmit power is 100 mW or less.

Exposure to Radio Frequency Energy

The design of your wireless telephone complies with the latest Institute of Electrical and Electronic Engineers (IEEE) and the American Standards Institute (ANSI) safety levels with respect to human exposure to RF energy. Of course, if you would like to limit RF exposure even further, you may choose to control the duration of your calls.

Cardiac Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation distance of six inches be maintained between a hand-held wireless telephone and a pacemaker to avoid potential interference with a pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research.

- Always keep the pocket phone more than six inches from the pacemaker whenever the battery is in the pocket phone.
- Do not carry the pocket phone in a breast pocket.
- Use the ear opposite the pacemaker to minimize the potential for interference.

If you have any reason to suspect that interference is taking place, take the battery out of your phone immediately.

Hearing Aid Compatibility

Most electronic equipment, such as equipment in hospitals, is shielded from RF energy. However, RF energy from wireless telephones may affect some electronic equipment.

Although the DWBS pocket telephone is compatible with inductively coupled hearing aids, you should consult your physician or hearing aid manufacturer to determine if your hearing aid is adequately shielded from external RF energy. The operation of inadequately shielded medical devices may be adversely affected when a portable wireless telephone is operating in close proximity.

Organization

This book is organized as follows:

- **Chapter 1, "Overview"** — Provides an overview of the DWBS, the 9601 Pocket Phone, and the battery charger.
- **Chapter 2, "General Care"** — Provides battery charger and general care instructions to ensure dependable and uninterrupted service.
- **Chapter 3, "Features and Operations"** — Provides information and diagrams needed to make full use of the DWBS 9601 Pocket Phone.
- **Chapter 4, "Audible Information Tones"** — Identifies and describes the DWBS 9601 Pocket Phone incoming call ring patterns, error beeps, error tone, confirmation tone, and warning tones.
- **Appendix A, "Safety Instructions"** — Discusses the appropriate safety instructions for the Pocket Phone and the charger.
- **Appendix B, "Specifications"** — Provides various specifications for the DWBS.

A glossary and index are also included.

Related Information


This book serves as the DEFINITY 9601 Pocket Phone user's guide for the DWBS. Other books in the DWBS series are:

- *DEFINITY ECS Interface for the DEFINITY Wireless Business System Guide, 555-232-108*
- *DEFINITY Wireless Business System Installation and Test Guide, 555-232-102*
- *DEFINITY Wireless Business System Maintenance Guide, 555-232-103*
- *DEFINITY Wireless Business System Site Planning, 555-232-601*
- *DEFINITY Wireless Business System 9601 Pocket Phone Quick Reference Card, 555-232-104*

Typographic Conventions

The following typographic conventions are used in this book to convey information consistently and quickly.

- *This typeface* is used for references to titles of other information and for emphasis within other typefaces.
- **This typeface** emphasizes keywords to help clarify meaning in a sentence or to call attention to a distinction.
- The following note icon identifies additional information pertinent to the text preceding it.

 **NOTE:**

Overview

1

Although the emphasis of this guide is on the DEFINITY Wireless Business System (DWBS) 9601 Pocket Phone and its battery charger, this chapter also gives a short overview of the entire product. A detailed product description is provided in the DEFINITY *Wireless Business System Site Planning and Installation Process*. The following topics are covered in this chapter:

- "DEFINITY Wireless Business System Overview"
- "9601 Pocket Phone Overview"
- "Battery Charger Overview"

DEFINITY Wireless Business System Overview

The DWBS is a wireless telecommunications system that offers mobility around the workplace. It integrates wireless capabilities into the DEFINITY Enterprise Communications Server (ECS). The DWBS radio components operate in the unlicensed part of the Emerging Technologies band (1920 MHz to 1930 MHz), negating the need to obtain a license to use this product.

The Model 9601 is a pocket-size, portable telephone that offers you the following benefits:

- Full Business Feature Access
- Wireless Mobility
- DEFINITY ECS Features

9601 Pocket Phone Overview

The 9601 Pocket Phone is a pocket-size portable phone. It provides two call appearances, a 3-line by 16-character liquid crystal display (LCD) that supports your business communication needs, an array of keys designed to help you use the many features of the DEFINITY ECS, and a 12-button dial pad. To provide the user with the freedom of mobility, the Pocket Phone is not physically connected by a cord to the DEFINITY ECS or any other DWBS component. Instead, the Pocket Phone is wireless and communicates by way of a radio link to a network of Wireless Fixed Bases, which in turn, connect it to the DEFINITY ECS.

 **NOTE:**

See Figure 1-1 on the next page to view a diagram of the 9601 Pocket Phone. Chapter 3 of this guide describes the 9601 Pocket Phone in detail and contains instructions on how to use the phone.

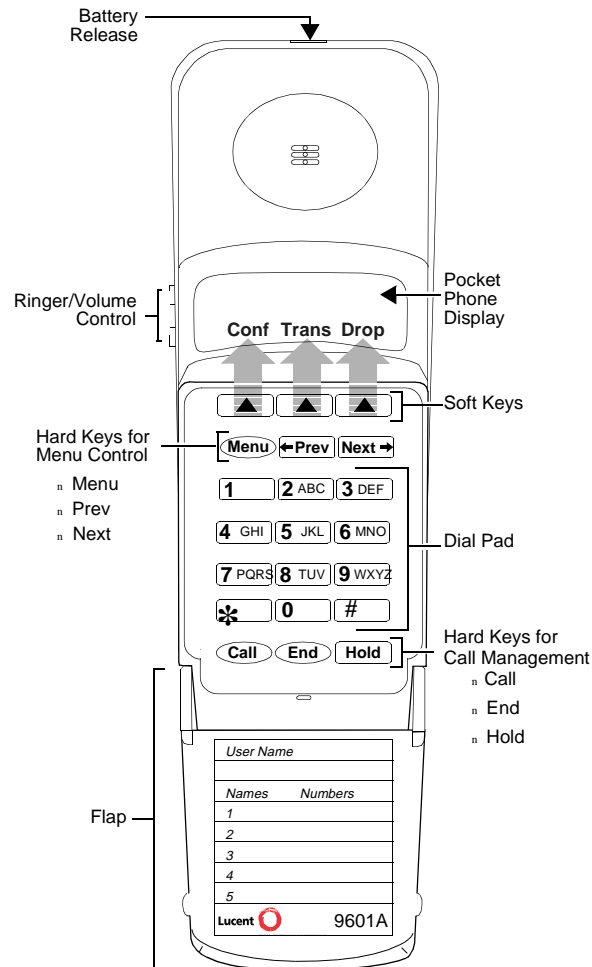


Figure 1-1. 9601 Pocket Phone

NOTE:
The soft key labels may change based on the pocket phone functions.

9601 Pocket Phone Features

The Wireless Business System 9601 Pocket Phone includes these essential business features and benefits.

Table 1-1. 9601 Pocket Phone Features

Feature	Benefit
Small, lightweight	Easily fits in pocket, easy to carry
Built-in antenna	No external antenna to handle
Display screen	Shows caller's name, allowing user to control all calls
Two call appearance	Flexibility to handle two calls at once
Business features including conference, transfer, hold, drop	Convenience of features normally found only on a wired desk phone
Soft key user interface	Easy-to-use menus to access features
Talk and standby time	Provides uninterrupted communications
Rapid battery recharge time	No lengthy wait for battery to recharge in order to be mobile
Warning tones and indicators	Audible and visual alerts notify users of status such as moving out of range, low battery, message waiting
Remote firmware update	Easy to update features using download from radio controller to the pocket phone
Bridging	No missed calls; allows both the pocket phone and desk phone to ring at the same time
Hot battery swap	Change the battery while a call is in progress

Battery Charger Overview

The Wireless Business System Battery Charger, which is provided with each 9601 Pocket Phone, is a desktop charger. The charger is equipped for either wall or desktop mounting.

The charger charges:

- Fully discharged battery in less than 1.5 hours
- Pocket phone with battery and a spare battery pack

Your 9601 Pocket Phone must be charged before using it for the first time. All instructions and a diagram for this process are provided in Chapter 2, "General Care".

This chapter describes the battery charger and explains how to use the battery pack properly. It includes general care instructions to ensure that your 9601 Pocket Phone provides dependable and uninterrupted service. The following topics are covered in this chapter:

- "Charging the 9601 Pocket Phone for the First Time"
- "Low Battery Indicator"
- "Using the 9601 Pocket Phone Battery Charger"
- "Inserting a Spare Battery Pack into the Charger"
- "Removing a Spare Battery Pack from the Charger"

Charging the 9601 Pocket Phone for the First Time


The 9601 Pocket Phone is powered by a rechargeable battery. Before using the phone for the first time, you must place the battery pack into the charger for approximately 1.5 hours or until the green light appears.

⇒ NOTE:

The pocket phone can ring while it is in the charger. It can also display and update information.

Charging the Phone with a Battery

1. Place the phone in the Battery charger. Ensure that the charger is plugged into a properly grounded three-prong wall outlet.
2. Ensure that the **Phone** indicator is yellow (refer to Figure 2-1).

 **NOTE:**

If the **Phone** indicator is red, the handset is not seated in the charger properly.

 **NOTE:**

If the Phone Charge indicator is flashing green, the charger is evaluating the state of the battery before going into the appropriate charging mode.

Using the Phone

The pocket phone is fully charged once the **Phone** indicator turns green. When this happens, the phone is ready for use.

 **NOTE:**

The phone can be removed when the light is yellow, but the talk time and standby time are both reduced.

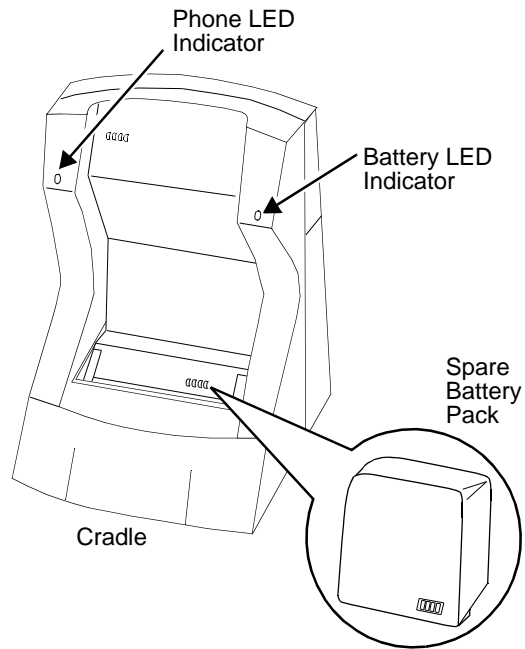
When the pocket phone is removed from the charger, it begins to consume power during both talk time and standby time. A fully charged battery pack provides about four hours of talk time and 48 hours of standby time. However, after 48 hours of standby time there is no talk time available.

 **WARNING:**

The rechargeable battery packs contain nickel and cadmium. Do not burn or puncture these batteries. Like other batteries of this type, if they are burned or punctured, they could release toxic material, which could cause injury. Do not dispose of them with ordinary trash. For information about recycling or proper disposal, consult your local solid waste (trash) collection or disposal organization.

Low Battery Indicator

When the battery power is low, the pocket phone will emit a warning tone and the **LOW BATT** message will appear on the phone display. When this occurs, you have approximately 20 minutes of talk time left.



Charger Status Indicator:

LED Indicators	Charge Status
Yellow	Rapid Charge
Green	Slow Charge
Blinking Green	Evaluation and Standby Mode
Red	Battery Fault

Figure 2-1. 9601 Pocket Phone Battery Charger

Using the 9601 Pocket Phone Battery Charger

The Pocket Phone Battery Charger has two LED indicators that can display yellow, green, flashing green, or red. The left indicator is labeled **Phone** and the right indicator is labeled **Battery**.

NOTE:

Refer to Figure 2-1 for the location of these indicators on the 9601 Pocket Phone Battery Charger.

The Phone LED Indicator

When the phone with battery is placed in its proper position in the charger, the color of the **Phone** indicator reflects the following conditions:

- **Yellow**—Pocket Phone is fast charging (the phone can be used at this time but it will not be fully charged).
- **Steady green**—Pocket Phone is fully charged.
- **Flashing green**—Pocket Phone is in evaluation and standby mode.
- **Red**—Pocket Phone is not properly seated in the charger or there is some other problem.

The Battery LED Indicator

The optional spare battery pack should be stored in the charger's spare battery compartment to ensure that a fully charged battery pack is always available for use. The charger will charge both the handset (with battery) and the spare battery pack when they are in their proper receptacles. When the spare battery pack is placed in its proper position in the charger, the color of the **Battery** indicator reflects the following conditions:

- **Yellow**—Spare battery is charging (the battery pack can be used at this time, but it will not be fully charged).
- **Steady Green**—Spare battery is fully charged.
- **Flashing Green**—Spare battery is getting ready to fast charge. The indicator will turn yellow when it begins to fast charge.
- **Red/Flashing Red**—Spare battery is not properly placed in the charger or there is a problem with the battery pack.

Inserting a Spare Battery Pack into the Charger

1. Place the spare battery pack into the Spare Battery Pack cradle.



NOTE:

The battery pack must be placed behind the lip of the cradle.

2. Ensure that the **Battery** indicator is yellow.



NOTE:

When the **Battery** indicator changes from yellow to steady green, the spare battery pack is fully charged. It can remain in the charger until needed.

Removing a Spare Battery Pack from the Charger

1. Ensure the **Battery** indicator is steady green.



NOTE:

The spare battery can be removed from the Spare Battery Pack cradle if the light is yellow, but the battery will not be fully charged.

2. Remove the spare battery pack from the Spare Battery Pack cradle.

Inserting the 9601 Pocket Phone into the Charger

1. Slide the pocket phone into the pocket phone cradle.
2. Ensure that the **Phone** indicator is yellow.



NOTE:

When the **Phone** indicator changes from yellow to steady green, the pocket phone is fully charged. It can remain in the charger until needed.

Removing the 9601 Pocket Phone from the Charger

1. Ensure the **Phone** indicator is steady green.



NOTE:

When the phone is placed in the charger, it is initially yellow for a few seconds. You can answer a phone call during this time if the battery is not fully drained.

2. Remove the pocket phone from the cradle.

Inserting a Spare Battery Pack into the Charger

1. The message LOW BATT appears on the phone display window when it is time to insert a charged spare battery.
2. Remove the battery pack from the pocket phone by moving the latch on top of the phone forward until it releases the battery pack. Slide the battery pack off the pocket phone.
3. Place the spare charged battery pack into the Battery Compartment of the pocket phone.



NOTE:

When the **Battery** indicator changes from yellow to steady green, the spare battery is fully charged. It can remain in the charger until needed. See the following figure.

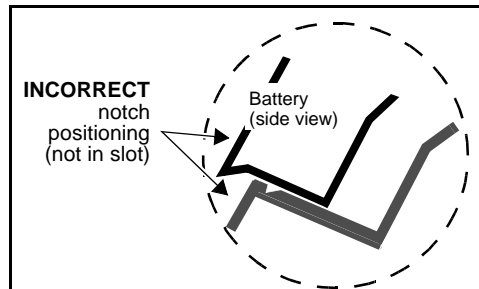
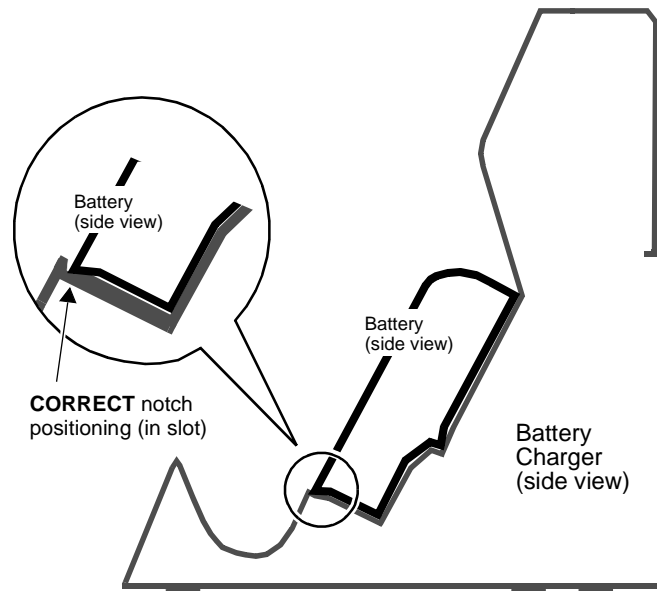


Figure 2-2. Inserting the Spare Battery Pack into the Charger

This chapter provides information needed to make full use of your 9601 Pocket Phone. The first portion of this chapter provides a detailed description and diagram of the pocket phone. The second section is presented in a "how to" format and focuses on feature identification and access.

DEFINITY 9601 Pocket Phone Features

The DEFINITY 9601 Pocket Phone is a portable 2-call appearance wireless voice terminal with display. It is a small (6 in x 2.5 in x 1.1 in), lightweight (approximately 7.5 oz.) pocket phone that requires no external antenna. As shown on the next page in Figure 3-1, the Pocket Phone 9601 has a 3-line by 16-character display, three soft keys for menu item interface, three hard keys for display control, and three hard keys for call management. Each of these features is explained in the following pages.

Among its many benefits, the 9601 Pocket Phone includes the following essential business features normally found only on a wired desk phone. The "Operating the 9601 Pocket Phone" section in this chapter gives specific instructions for these and other functions.

- **Conference**—enables you to add additional people to your telephone call
- **Transfer**—enables you to transfer a call to another phone number
- **Drop**—enables you to disconnect the last person added to a conference call
- **Hold**—enables you to place a call on hold

See Figure 3-1 on the next page to view the 9601 Pocket Phone.

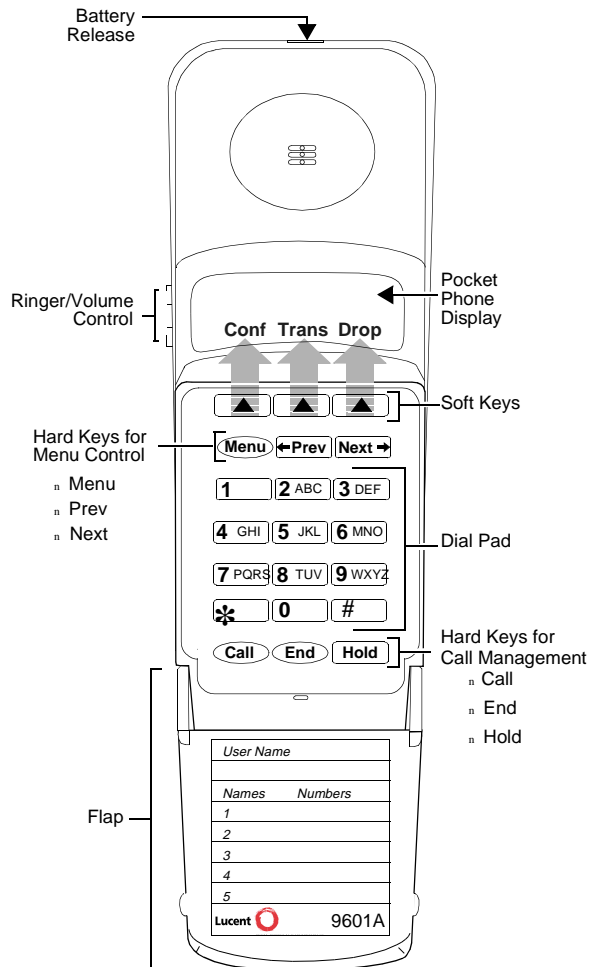


Figure 3-1. 9601 Pocket Phone

Features of the 9601 Pocket Phone

The 9601 Pocket Phone has the following features:

- Soft Key Interface
- Hard Key Interface
- Ringer/Volume Control Buttons
- Battery Charging Contacts
- Display
- Dial Pad
- Low Battery Indicator

Soft Key Interface

The Pocket Phone 9601 has a row of three soft keys located immediately below the Display. Soft keys are buttons with preprogrammed labels and functions that can change dynamically as you perform functions and make selections. Soft keys are intended to provide a user-friendly interface to additional functionality.

For the purpose of distinguishing these keys from others on the pocket phone, the soft keys are marked as follows:



⇒ NOTE:

Because each soft key can have multiple functions, the third line (bottom row) on the Display is used for displaying associated soft key function labels. You can access Conference and Transfer with your soft keys (see the previous figure and also the "Operating the 9601 Pocket Phone" section in this chapter).

Hard Key Interface

The Pocket Phone has several hard keys. Hard keys are buttons with labels and functions that do not change. The Pocket Phone has the following hard keys.

Hard Keys for Menu Control

The hard keys for menu control are:

- **Menu**—to access soft key mode
- **Prev** (Previous)—to access soft key features and calling screens
- **Next**—to access soft key features and calling screens

Hard Keys for Call Management

- **Call**—to place and receive calls
- **End**—to disconnect (end) calls
- **Hold**—to place calls on hold

Volume Control Buttons

The Pocket Phone is equipped with two **Volume Control** buttons. These buttons are located on the left side of the pocket phone. Each button is used for adjusting the receiver volume in the earpiece as well as the ringer volume. Specifically, these buttons enable you to adjust the receiver volume (higher or lower) after **Call** is pressed and to adjust the ringer volume (higher or lower) before **Call** is pressed.

Battery Charging Contacts

The Pocket Phone is equipped with a removable and rechargeable battery pack. Battery Charging Contacts, which are located on the removable battery pack, enable the phone to charge when contact is made with the Wireless Business System Battery Charger.

Display

The Pocket Phone Display is a 3-line by 16-character alphanumeric display that enables you to view various pocket phone screens. These screens display the following:

- DEFINITY ECS display messages (including Automatic Numbering Identification [ANI] numbers, if provided from the network)
- Message waiting indicator
- Menu driven feature operations
- Low battery message
- Personalized extension of the pocket phone
- Unique serial number and software version number
- Soft key labels

- Radio link/connection status Information
- Dialed digits displayed
- Visual dial tone indicator
- Service messages (described in Chapter 4)

Dial Pad

The Pocket Phone Dial Pad consists of the standard 12 buttons for dialing telephone numbers and accessing the DEFINITY ECS call features.

Low Battery Indicator

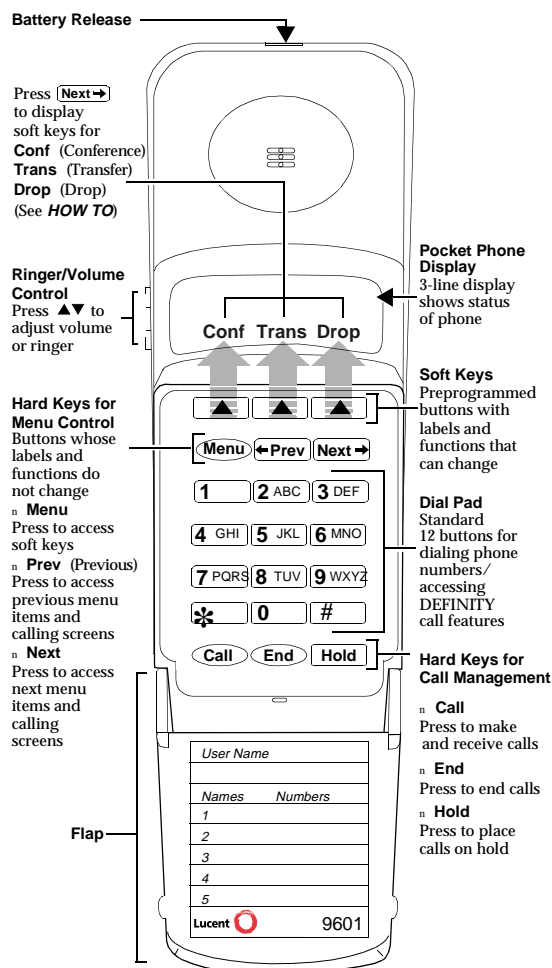
When the battery power is low, the pocket phone emits a warning tone and the **LOW BATT** message appears on the Pocket Phone Display.

Low Power Mode

This feature conserves battery power. If the Pocket Phone is within a coverage area, and if no local activity has taken place for three minutes, the Pocket Phone powers down and the display is blank. Any unfinished soft key input is lost when the Pocket Phone powers down.

If the Pocket Phone becomes linked to a System after power down, the normal display screen is activated.

Wireless Business System 9601 Pocket Phone



Operating the 9601 Pocket Phone

HOW TO:

- **Adjust Ringer and Warning/ Notification Tones**
— Press and hold **▲▼** (higher or lower).
- **Adjust Receiver Volume**
— Press **(Call)**.
— Press **▲▼** (higher or lower) to adjust volume of earpiece.
- **Answer a Call**
— Press **(Call)** when the handset rings.
- **Conference a Call**
— Press **(Next→)** to display the **Conf** soft key.
— Press the **Conf** soft key.
— Dial the telephone number of the next party.
— Press **(Next→)** to display the **Conf** soft key.
— Press the **Conf** soft key to conference the two calls together on one call appearance.
- **Drop a Call**
— Press **(Next→)** to display the **Drop** soft key.
— Press the **Drop** soft key.
- **End a Call**
— Press **(End)**.
- **Hold a Call**
— Press **(Hold)**.
— Press the soft key below the flashing indicator to return to the call.
- **Make a Call**
— Press **(Call)**.
— Dial the telephone number of the party.
- **Transfer a Call**
— Advise the caller that you are transferring the call.
— Press **(Next→)**.
— Press the associated **Trans** soft key.
— Dial the transfer number.
— Press **(Next→)** to display the **Trans** soft key.
— Press the **Trans** soft key to complete the transfer process.

Figure 3-2. 9601 Pocket Phone Quick Reference

Operating the 9601 Pocket Phone

This section provides information needed to make full use of your 9601 Pocket Phone. The information presented focuses on feature identification and access.

⇒ NOTE:

If you are using your 9601 Pocket Phone for the first time and cannot perform the operations described in the following “how to” section, call your administrator. A Pocket Phone must be administered before you can use it to access any switch service.

The following “how to” information is arranged in a logical order. See the diagram on the previous page for button and key locations. If you are experiencing difficulty, press **[Menu]** twice; this should allow you to begin your operation again.

Adjusting the Receiver Volume

The **Volume Control** buttons enable you to adjust the receiver volume. To do so, you must be in the coverage area and either on a call or listening to dial tone.

To adjust the receiver volume:

1. Press **[Call]**.
2. Press and hold the **Up Volume Control** button until the appropriate volume level is reached, or
3. Press and hold the **Down Volume Control** button until the appropriate volume level is reached.
4. Press **[End]** to end the call.

The receiver volume remains at the level set until you press a Volume Control button while you are on a call.

Adjusting Ringer and Warning/Notification Tones

The **Volume Control** buttons enable you to adjust the ringer and warning/notification tones (higher or lower).

To adjust the ringer and warning/notification tones:

1. Press and hold the **Up Volume Control** button until the appropriate volume level is reached, or
2. Press and hold the **Down Volume Control** button until the appropriate volume level is reached.



NOTE:

The **Call** button is not used during this procedure. Pressing this button before Steps 1 and 2 will cause an adjustment in the receiver volume.

Making Calls

To make a call:

1. Press **Call**.
2. Dial the telephone number of the party.



NOTE:

If you prefer, you can also make a call by pressing one of the two leftmost soft key flashing line appearances instead of the call button. A warning tone is generated if the pocket phone detects any of the following conditions:

- Out of Range
- No Channel Available
- Service Denied

These conditions are discussed in Chapter 4.

Answering Calls

To answer an incoming call:

1. Press **Call** when the handset rings.



NOTE:

The call will be answered and conversation can begin.



NOTE:

If you prefer, you can also answer a call by pressing the soft key flashing line appearance instead of the call button.

Transferring Calls

The 9601 Pocket Phone enables you to transfer a call from one extension to another.

To transfer a call:

1. Advise the caller that you are transferring the call.
2. Press **Next**.
3. Press the associated **Trans** soft key. Another call appearance appears on the display.

4. Dial the transfer number.
5. Press **Next** to display the **Trans** soft key.
6. Press the **Trans** soft key to complete the transfer process.



NOTE:

When both **Call Appearance** indicators are in use, you cannot transfer additional parties or receive and make other calls.

Conferencing Calls

The Conference Call feature enables you to conference up to six parties.

To activate a conference call:

1. Inform the active party that he/she will be placed on hold in order to call the third party.
2. Press **Next** to display the **Conf** soft key.
3. Press the **Conf** soft key.



NOTE:

The active call is placed on hold and the second **Call Appearance** indicator is activated.

4. Dial the telephone number of the next party.
5. When the party answers the call, press **Next** to display the **Conf** soft key.
6. Press the **Conf** soft key to conference the two calls together on one call appearance.



NOTE:

When both **Call Appearance** indicators are in use, you cannot conference additional parties or receive and make other calls.

Holding Calls

To place a call on hold:

1. Press **Hold**.



NOTE:

The call is placed on hold and the **Call Appearance** indicator will flash.

2. Press the soft key below the flashing indicator to return to the call.

Ending Calls

To end a call:

1. Press **End**.

Dropping Calls

This feature enables you to drop the last person you added to the conference call.

To drop a call:

1. Press **Next** to display the **Drop** soft key.
2. Press the **Drop** soft key.

Audible Information Tones

4

The DWBS is provisioned with a single audible information tone. This tone can serve as any one of the following:

- Incoming call ring patterns
- Error beep
- Error tone
- Confirmation tone
- Warning tone

Incoming Call Ring Patterns

Incoming calls are subject to the following ring patterns:

- **1 ring** = A call from another extension.
- **2 rings** = A call from outside or from the attendant.
- **3 rings** = A priority call from another extension, or from an Automatic Callback call you placed.
- **ring-ping (half ring)** = A call redirected from your telephone to another because the Call Forwarding or Send All Calls (SAC) feature is active.

Error Beep

An error beep occurs whenever a hard key (Menu, Prev or Next) or any of the soft keys are pressed but are not applicable at the moment.

Warning Tone

A warning tone will sound and a message will appear on the Display under any one of the conditions discussed in the following sections.


Out-of-Range

The warning tone sounds for either of the following scenarios:

- **Call** button is pressed and an Out-of-Range condition exists
- Pocket Phone enters a Going Out of Range condition during a call. This means that the pocket phone is still in a coverage area but is moving out of the coverage area and, therefore, the speech quality may be degraded

No Channel Available


The warning tone will sound when the **Call** button is pressed and no radio channels are available for calls. In such a case, wait a few seconds and try again.

 **NOTE:**

If this happens frequently, contact your system administrator for corrective action.

No Access Rights

The warning tone will sound when the **Call** button is pressed and your pocket phone does not have permission to use the current system.

 **NOTE:**

Contact your system administrator for corrective action.

Location Registration Failure

The warning tone will sound when the **Call** button is pressed and your pocket phone no longer has permission to use the system.

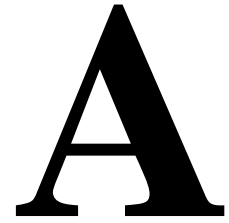
 **NOTE:**

Contact your system administrator for corrective action.

Service Denied

Contact your system administrator.

Safety Instructions



Using the Product

This section contains instructions related to safety labels on the product:

 **WARNING:**

indicates the presence of a hazard that can cause severe or fatal personal injury if the hazard is not avoided.

 **CAUTION:**

indicates the presence of a hazard that will or can cause minor personal injury or property damage if not avoided.

Always follow these basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

 **WARNING:**

Failure to ground charger properly results in a risk of electrical shock, which can cause serious personal injury. This product requires a 3-prong AC power receptacle for safe operation. You should have your receptacle checked by a qualified electrician before connecting this equipment.

 **WARNING:**

The rechargeable battery contains nickel and cadmium. Do not burn or puncture the battery. Like other batteries of this type, if it is burned or punctured, it could release toxic material, which could cause injury. Do not dispose of it in household garbage. For information about recycling or proper disposal, consult your local solid waste (garbage) collection or disposal organization.

- Read and understand all instructions in this booklet before using this product.
- Observe all warnings and instructions marked on the product.
- Do not use the product near water or when you are wet. If product comes in contact with any liquids, unplug the power cord immediately. Do not plug the product back in until it has dried thoroughly.
- Never push objects of any kind into this product through housing slots because the objects may touch hazardous voltage points or short out parts that could result in a risk of electric shock. Never spill liquid of any kind on the pocket phone.
- Never place this product near or over a radiator or heat register.
- Slots and openings in the housing and the back or bottom are provided for ventilation. To protect the housing from overheating, these openings must not be blocked or covered. Therefore, do not place the product on a bed, sofa, rug, or other similar surface. Also, do not place this product in an enclosed area unless proper ventilation is provided.
- Use only the correct power source. If you are not sure of the power supply to your location, consult your local power company.
- This product uses a 3-prong plus in continental US locations. Such plugs are designed for your safety. Do not attempt to defeat this purpose. If your wall outlet does not accept the plug, the outlet should be replaced by an electrician.
- Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it. Do not overload wall outlets as this can result in the risk of fire or electric shock. Do not staple or otherwise attach the power cord to building surfaces.
- Use only the type of battery pack shipped with this product.
- If you suspect a gas leak, report it immediately, but use a telephone away from the area in question. The telephone's electrical contacts could generate a tiny spark. While unlikely, it is possible that this spark could ignite a heavy concentration of gas. This product is not approved for use in areas labeled by the Occupational Safety and Health Administration (OSHA) as "explosive environments." Only "Explosive Atmosphere Telephones" may be used in such hazardous environments.

- Unplug this product from wall outlets and telephone jacks before cleaning. Clean exposed parts with a soft, damp cloth. Do not use liquid or aerosol cleaners.
- Unplug this product from the wall outlet, remove the telephone line cord from the modular wall jack or communications systems switch/control unit, and refer servicing to qualified service personnel under the following conditions:
 - Power cord or plug is damaged or frayed
 - Product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - Product has been dropped and the housing has been damaged.
- This product should be serviced by (or taken to) a qualified service center when service or repair work is required. Do not open the product; there are no user serviceable components inside.

Maintaining the Pocket Phone

NOTE:

The cautions and warnings in the previous section are also applicable to this section, as are the safety instructions.

This telephone is designed to provide trouble-free performance without any special maintenance procedures. To reduce the risk of accidental damage, do the following.

- Keep the telephone in an area free of dust, smoke, and moisture.
- Do not place the telephone near a heating duct, radiator, or other heat source, and do not drop or expose it to excessive shock or vibration.
- Unplug the battery charger if its power cord is damaged, if liquid is spilled into it, or if its housing becomes cracked or otherwise damaged.
- To clean the telephone, wipe the outside housing with a soft, dust-free cloth. If absolutely necessary, you may use a cloth slightly dampened with a mild soap and water solution. Dry the phone quickly with a soft cloth.

CAUTION:

Your telephone contains sensitive electronic parts. Never submerge it in any kind of liquid, and never use detergents, alcohols, solvents, abrasive cleaners, or an excessive amount of water when cleaning the housing and faceplate. To do so could result in irreparable damage.

Also, battery contacts should be covered to prevent their possible exposure to loose metal bits (for example, coins or chains in a pocket).

Specifications

B

This appendix provides various specifications for the DWBS.

System Capacity and Coverage

The following support is provided.

- Maximum of:
 - 260 pocket phones
 - 10 Radio Controllers
 - 20 Wireless Fixed Bases
 - 80 Cell Antenna Units
- Coverage of 800,000 square feet.
- Radio capacity of 12 channels (calls) per band and eight bands of 1.25 MHz

Base Stations

The following support is provided.

- Two base station options providing maximum coverage for your business premises, including:
 - Wireless Fixed Bases, which are the main base station components in the system antenna infrastructure
 - Cell Antenna Units, which are used to extend the effective coverage area of the Wireless Fixed Bases

- Wireless Fixed Bases interface to the integrated DEFINITY ECS Radio Controller port card
- Maximum distance of 5000 ft from the DEFINITY ECS to the WFB
- Out-of-band signaling
- PWT-based architecture (that is, the evolving US wireless standard)
- Time Division Multiple Access (TDMA)
- Operation within the isochronous (1.920 MHz — 1.930 MHz) part of the emerging technology band (Unlicensed PCS)
- 32 Kbps ADPCM encoding for voice

Operating Temperatures

The pocket phone should be used within the 55° F to 95° F temperature range.

Glossary

A

access rights

Air interface procedure that assigns to the pocket phone a Temporary Portable User Identifier (TPUI) and its extension number. The pocket phone initiates this procedure each time it enters a system. A successful completion of the procedure includes an implicit Location Registration.

Auto-Reconnect

Feature that enables a calling party to reconnect to a called party if the latter walks out of the coverage area and then back into the coverage area within 60 seconds.

B

Bridging

Feature that allows both the pocket phone and the wired phone to ring at the same time.

C

CAU. See **Cell Antenna Unit.**

cell

Radio coverage area of a CAU or WFB with an internal antenna cluster. Also, cells supported by all the WFBs connected to one RC.

Cell Antenna Unit (CAU)

Optional remote antenna that connects to a Wireless Fixed Base. It contains a transmit power amplifier, transmit/receive switch, low-noise receive amplifier, and antenna.

D

Deep Sleep Mode

Mode assumed by the pocket phone whenever the phone repeatedly tries to access the system and fails to do so due to out-of-range conditions. This mode allows the pocket phone to conserve battery power.

DEFINITY Management Terminal

Data terminal used for the administration and maintenance of the DEFINITY system.

E

Emerging Technologies Band

20 MHz of unlicensed spectrum for Personal Communication Service (PCS) in North America. The band is isochronous (1920-1930 MHz) with eight channels of 1.25 MHz bandwidth per channel primarily for voice, and asynchronous (1910-1930 MHz) primarily for data.

Estimator

Tool within the WiSE Expert Design System that is used to gather information about the customer site. This tool is used to provide an initial price quote and to configure the DWBS.

F

FCC. See **Federal Communication Commission**

FDMA. See **Frequency Division Multiple Access**

Federal Communication Commission (FCC)

Government agency within the US that is responsible for assigning and regulating the radio spectrum so that it can be shared by many users without unacceptable interference.

fixed part

Part of the DWBS radio infrastructure that is not portable. This includes the Radio Controllers, Wireless Fixed Bases, and Cell Antenna Units.

Frequency Division Multiple Access (FDMA)

Radio access method for which each call uses a different carrier frequency. FDMA allows one conversation per radio.

H

hard keys

Dedicated buttons on the pocket phone that are labeled for particular functions (for example, making calls).

hardware vintage

Numbering scheme for identifying the components and physical design of a DWBS part, such as a circuit pack.

I

I2

Interface between a Radio Controller and a Wireless Fixed Base.

I3

Interface between a Wireless Fixed Base and a Cell Antenna Unit.

Initialization and Administration System

Services support system for PBX administration and maintenance.

International Portable Equipment Identity

Unique number used to identify a pocket phone for administration and through-the-air communication. This number is sent by the pocket phone to the fixed part during the access rights procedure.

International Portable User Identity

Number sent by the fixed part to a pocket phone during the access rights procedure. Also, this number is sent by the pocket phone to the fixed part during the location registration procedure.

IPEI. See **International Portable Equipment Identity**

IPUI. See **International Portable User Identity**

L

local features

Features that are supported by the pocket phone (for example, the directory).

local tones

Tones produced locally in the pocket phone. Includes the following tones: ringer, warning, error, error beep, confirmation, key click.

Location Registration

Through-the-air procedure used by the pocket phone to inform the fixed part that it has moved to a new cluster. If the pocket phone is active on a call, Location Registration is implied whenever there is an inter-RC or connection handover.

M

Mobility Manager (MM)

Software added to the DEFINITY system to control and track pocket phones as they change location within the DWBS coverage area. The Mobility Manager directs all control and voice information to the appropriate Radio Controller for each pocket phone. It is also responsible for the maintenance and administration of the DWBS and pocket phones.

P

pre-origination dialing

Dialing that occurs before dial tone is granted.

portable part

Part of the DWBS radio infrastructure that is portable (most notably, the pocket phones).

post-origination dialing

Dialing that occurs after dial tone is granted.

Predictor

Tool within the WiSE Expert Design System that uses site information as input to determine the optimal placement of the antennas within the DWBS.

R

Radio Controller (RC)

Circuit pack that provides the interface between the DEFINITY system and the radio subsystem. It controls one or more Wireless Fixed Bases.

Radio Propagation Measurement Tool (RPMT)

Tool within the WiSE Expert Design System that is used to provide basic radio measurements. The RPMT looks like a pocket phone and, once it is administered, it can also initiate and receive phone calls. The RPMT can supplement the Predictor, serve as a troubleshooting device, and be used at site surveys.

RC. See **Radio Controller**

RPMT. See **Radio Propagation Measurement Tool**

S

soft keys

Buttons whose labels appear on an associated display and whose labels and functions can change dynamically as the user performs functions and makes selections.

T

TDMA. See **Time Division Multiple Access**

Terminal Portable User Identifier (TPUI)

Number returned by the fixed part to the pocket phone during the Location Registration procedure.

Time Division Multiple Access (TDMA)

Radio access method for which each call uses a different time slot. TDMA permits multiple conversations per radio.

TPUI. See **Terminal Portable User Identifier**

U

UTAM

Group charged by the Federal Communications Commission to coordinate the relocation of microwave incumbents out of the unlicensed spectrum (1910 to 1930 MHz) and to coordinate the deployment of unlicensed devices and systems in that spectrum.

W

Wireless Fixed Base (WFB)

Component that houses the fixed radio hardware. It provides the radio functions to transmit digitally to the pocket phones and to receive digital signals from the pocket phones. A WFB can support a maximum of four external Cell Antenna Units.

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