Lucent Technologies
Bell Labs Innovations

DEFINITY® Wireless Business System
9630 Series Wireless Terminal User's Guide

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About This Book

Introduction

The DEFINITY® *Wireless Business System 9630 Series Wireless Terminal User's Guide* explains how to use, maintain, and troubleshoot your DEFINITY Wireless Business System (DWBS) 9630 Series Wireless Terminal (WT).

Audience

This guide is intended for anyone using the DWBS 9630 Series WT.

Electromagnetic Compatability Warning

Important Safety Guidelines for Users

For safe and efficient operation of your DWBS 9630 Series WT, observe these guidelines.

Your WT is a radio transmitter and receiver. When the battery is installed, the WT is on and it receives and also sends out radio frequency (RF) energy. The WT operates in the frequency range of 1920-1930 MHz. Your handheld WT uses the digital Time Division Multiple Access (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 WT complies with the latest safety levels from the Institute of Electrical and Electronic Engineers (IEEE) and the American National Standards Institute (ANSI) 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.

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

Cardiac Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation distance of six inches be maintained between a handheld WT and a pacemaker to avoid potential interference with the pacemaker. Also, the following guidelines are recommended.

⚠ WARNING:
Always keep the WT more than six inches from the pacemaker whenever the battery is in the WT.

S'il y a une pile dans le SF, toujours le garder à plus de six pouces du pacemaker.

⚠ WARNING:
Do not carry the WT in a breast pocket.

Ne pas porter le SF dans une poche-poitrine.

WARNING:

Use the ear opposite the pacemaker to minimize the potential for interference.

Utiliser l'oreille du côté opposé de celui où se trouve le pacemaker pour minimiser les risques de parasites.

If you suspect that interference is taking place, take the battery out of your WT immediately.

Hearing Aid Compatibility

Although the DWBS WT 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 WT is operating in close proximity.

Organization

This rest of the document is organized as follows:

- **Chapter 1, "Overview,"** provides an overview of the DWBS, the 9630 Series WT, and the battery charger.
- **Chapter 2, "Battery Charger,"** 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 9630 Series WT.
- **Chapter 4, "Audible Information Tones and Error Messages,"** identifies and describes the DWBS 9630 Series WT incoming call ring patterns, error beeps, error tone, confirmation tone, and warning tones. The chapter also identifies and describes in-line errors and user-level error messages for the WT.
- **Appendix A, "Safety Instructions,"** discusses the appropriate safety instructions for the 9630 Series WT and the charger.
- **Appendix B, "Specifications,"** provides various specifications for the DWBS.

A glossary and index are also included.

Related Information

Other books in the DWBS series are as follows:

- *DEFINITY ECS Interface for the DEFINITY Wireless Business System Guide, 555-232-108*
- *DEFINITY Wireless Business System Installation and Test, 555-232-102*
- *DEFINITY Wireless Business System Maintenance, 555-232-103*
- *DEFINITY Wireless Business System Site Planning, 555-232-601*
- *DEFINITY Wireless Business System 9630 Series Wireless Terminal Quick Reference Card, 555-232-702*

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 key words 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

Introduction

This chapter provides an overview of the following:

- DEFINITY Wireless Business System (DWBS)
- 9630 Series Multiline Wireless Terminal (WT), including its features and benefits
- Battery charger for the WT
- DWBS capacity and coverage

DEFINITY Wireless Business System

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 Personal Communications System (PCS) band (1920 MHz-1930 MHz); this negates the need to obtain a license to use the DWBS.

9630 Series Wireless Terminal

The 9630 Wireless Terminal (WT) is a pocket-size, portable phone that provides wireless mobility as well as access to full business features and many DEFINITY ECS features.

The 9630 Series WT provides either two or three call appearances and a four-line by 16-character liquid crystal display (LCD) plus a row of icons indicating the

status of the following: message waiting, signal strength, lock, vibrator, battery, silent, mute, and next.

The 9630 Series WT contains the following hard keys (buttons) on the keypad: On/Off, Redial, Menu, Next, Silent, Conf, Trans, and Hold; it also contains a Mute button and two volume control buttons on the side. In addition, the WT contains a dial pad and four soft key buttons.

The 9630 Series WT is not physically connected by a cord to the DEFINITY ECS or any other DWBS component. Instead, the WT is wireless and communicates via a radio link to a network of Wireless Fixed Bases (WFBs), which in turn connect the WT to the DEFINITY ECS. The 9630 Series WT is designed to be compatible with existing and future releases of the DWBS.

NOTE:
The following figure shows the 9630 Series WT. Chapter 3 of this guide describes the 9630 Series WT in detail and contains instructions on how to use the WT.

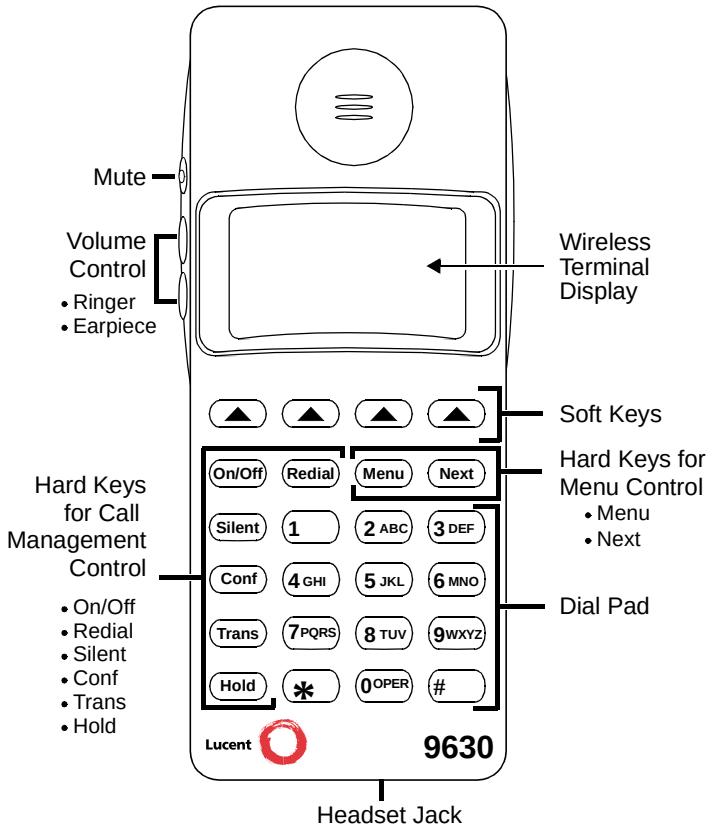

Figure 1-1. 9630 Series Wireless Terminal

Features and Benefits

The DWBS 9630 Series WT provides features and benefits that take the following into account:

- Noisy and relatively inhospitable environments
- Durability and reliability

Table 1-1. 9630 Series WT Features and Benefits

Features	Benefits/Descriptions
Fixed feature buttons	Provides one-button access to frequently-used functions, including conference, transfer, redial, mute, silent, and hold.
Three call appearances	Provides the ability to place and receive multiple calls.
Louder ringer and receiver volume	For use in noisy environments.
Noise-Canceling Microphone	Minimizes background noise and therefore provides a quieter call for the listener in noisy environments.
Vibrator (Silent Alert)	Provides a vibrating, silent alert for incoming calls that can be turned on and off from the menu.
Built-in attachments for belt clip and lanyard; carrying case included with the set	Provides carrying options. Secures the WT in environments where the WT may be dropped from a height greater than for a standing position.
Extended battery life	Provides more than eight hours of talk time and more than 100 hours of idle time.
Standard headset adapter	Provides hands-free operation.
Backlit display	Allows using the WT in poorly lit conditions.
Personalized Ringer	Valuable in environments where WT users are in close proximity to each other because it allows individual users to program a “specified” ring to allow them to know that an incoming call is being received on their line.
Impact resistant	Designed to withstand multiple drops from a standing position.
Headset	May be used for hands-free operation.

Supplementary WT Equipment

A DWBS battery charger, a battery, and additional battery packs are available with each WT.

The DWBS battery charger is a desktop charger; however, the charger can be mounted on either a wall or desktop. The charger charges a fully discharged battery in less than one and one-half hours.

Your 9630 Series WT must be charged before you use it for the first time. All instructions and a diagram for this process are provided in Chapter 2, “Battery Charger.”

DWBS Capacity and Coverage

The DWBS 9630 Series WT is designed to provide the highest quality of mobility service that wireless technology permits. Your system is designed for full functionality and excellent voice quality throughout the areas where service is provided as defined by your company’s communications director.

Since this system uses RF signals for the communications channel to your WT, there are situations when you may notice a difference in service from your wired voice terminal. These situations may exist because it is difficult, if not economically unreasonable, to provide flawless coverage in all areas (for example, behind large metal storage or file cabinets, in a vault, or in a cold storage locker). In many of these cases, your company decided, at the time your system was designed, that perfect service in areas such as these is not warranted.

While the DWBS features the highest capacity possible within the Federal Communications Commission (FCC) regulations and Personal Wireless Telecommunications (PWT) standards, the number of radio channels available is limited and dependent on the amount of radio equipment installed. To put this in perspective by relating it to your private branch exchange (PBX), a central office (CO) trunk (dial 9) is not provided for every user; in fact, a ratio of one CO trunk per 10 users is common. Likewise, with DWBS, a radio channel is not available for each user throughout your defined coverage area. Therefore, if a large number of users attempts to use the system by either making or receiving calls at the same time and in the same area, a radio channel may not be available; this results in a “No Channel Available” condition. An example of this would be if a large number of users were to attend a training course on the DWBS and, after the pocket phones were distributed at the end of the class, more users attempted to call each other than is allowed by the number of radio channels available in the area.

As you move about your premises, the system may not be able to find an idle radio channel to allow you to continue an active call because the area you are entering is very busy. This may result in a degraded connection, even when you are in an area that usually provides good coverage. Most likely, the difficulty is

capacity-related; however, an intermittent system malfunction could occur. If the problem is transient, it is a capacity issue and does not require any action on your part. If the area usually has good coverage and the problem persists, a portion of your system may not be functioning correctly. **In either case, we recommend reporting the problem to your telecommunications group or system administrator**.

Your understanding and consideration of this information will help us and your telecommunications group satisfy your mobility communications requirements.

Battery Charger

2

Introduction

The battery quick charger charges battery packs in both the spare battery compartment and in the WT when it is placed into the WT cradle. If both are present at the same time, charging in the spare battery compartment is suspended until the battery pack in the WT is fully charged. New batteries sometimes take up to three charge/refresh cycles to reach their maximum performance. Charge/Refresh cycling is described in the “Extending Battery Life” section in this chapter.

The battery for the 9630 Series WT generally provides 12 hours of talk time and 120 hours of standby time. To extend WT usage beyond this capability, you can purchase an extra battery pack and store it in the charger so that you always have a charged battery pack to switch to, if necessary.

This chapter describes the battery charger and explains how to use battery packs properly.

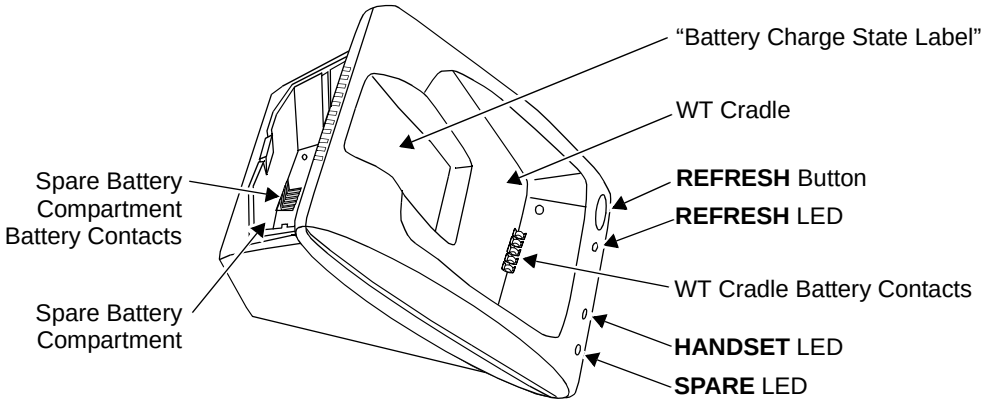

Figure 2-1. Battery Charger for the 9630 Series WT

Battery Charger Features

The battery charger offers these features:

- Spare battery compartment refreshes the battery pack automatically by fully discharging the pack before recharging it. This process reduces or eliminates the potential for "memory" effect. Memory effect reduces a battery's capacity, and it occurs over time when you repeatedly recharge a battery before it is fully discharged.
- WT cradle charges a battery pack in the WT.
- REFRESH button, when pressed, refreshes the WT battery pack in the WT cradle by fully discharging the battery pack before recharging it.

  NOTE:
  The REFRESH button is disabled if the WT has already undergone a discharge cycle. This prevents accidentally charging or discharging a charged battery pack.

- REFRESH LED and the HANDSET LED light up when the REFRESH button is pressed, and they stay lit until the battery pack finishes discharging.
- HANDSET LED, when lit, indicates that the WT battery pack is installed in the WT and that the WT is in the WT cradle.
- Spare compartment recognizes a charged battery pack and, therefore, it does not discharge a spare pack if power is interrupted.
- SPARE LED, when lit, indicates that a battery pack is in the spare battery compartment.

- Color of the battery charger's LEDs indicates the state of the corresponding battery pack, as shown in the following table:

NOTE:
Before you use the 9630 Series WT for the first time, the battery pack must be charged. New batteries sometimes take up to three charge/refresh cycles to reach their maximum performance. Refer to the "Extending Battery Life" section for details.

Table 2-1. LED Indicators

Battery charger LED shows...	If, for the SPARE LED, the battery pack in the spare battery compartment...	If, for the HANDSET LED, the battery pack in the WT...	If, for the REFRESH LED, the Refresh button was pressed, and the WT battery pack...
Steady orange*	Is charging	Is charging	N/A
Steady green	Has completed a fast charge	Has completed a fast charge	N/A
Flashing green (see the troubleshooting section later in this chapter)	Temperature is slightly outside of the normal changing temperature range, or voltage is too low in battery pack	Temperature is out of range, or voltage is too low in battery pack	N/A
Flashing red (see the troubleshooting section later in this chapter)	Has one of the following problems: --- Is not seated properly in the charger --- Has dirty contacts --- Temperature exceeds normal changing temperature range --- Is defective	Has one of the following problems: --- Is not seated properly in the charger --- Has dirty contacts --- Temperature exceeds normal changing temperature range --- Is defective	N/A
Steady red	Is discharging	Is discharging	Is discharging

* If steady orange for more than eight hours, replace the battery.

Extending Battery Life

The battery charger charges a battery pack in the WT if you simply insert the WT into the battery charger's WT cradle; however, the refresh process fully discharges the battery pack before recharging it, thereby ensuring the best possible charge and the longest talk time.

“Memory effect” reduces a battery's capacity. This condition can occur if you repeatedly recharge a battery pack before it is fully discharged. Nickel metal hydride batteries also experience “memory;” therefore, **it is recommended that you refresh your battery pack at least once a week**.

The following table shows how long battery refreshing takes; this depends on how much charge is left in the battery pack when you insert it into the charger and press the REFRESH button:

Table 2-2. Battery Pack Refresh Cycle

Battery Pack Charge State	Discharge Time	Recharge Time	Total Time
Low charge (Battery icon is lit)	0.5 hours	1.5 hours	2 hours
Full charge	2.5 hours	1.5 hours	4 hours

Note that your WT consumes power both during talk time (when the WT is on a call) and during standby time (when the WT is not on a call). At full charge, the WT battery provides approximately 8 hours of talk time and from 60 to 80 hours of standby time. As a guideline, you can expect a one hour reduction in talk time for every eight hours of standby time. Similarly, you can expect an eight hour reduction in standby time for every hour of talk time.

It is highly recommended that you purchase a second battery pack to use as a spare. With the spare battery pack in the spare battery compartment of the battery charger, you are assured of always having a fresh, usable battery pack.

Follow these steps to ensure an uninterrupted supply of power to your 9630 Series WT:

- If you have only one battery pack, be sure to refresh it at least once a week. You can refresh the pack by doing the following:
  - — Placing it into the spare battery compartment of the battery charger.
  - — Leaving it in the WT, placing the WT into the WT cradle of the battery charger, and pressing the REFRESH button.
- If you have two battery packs, exchange the packs between the WT and the spare battery compartment at least once a week so that each battery pack is automatically refreshed. (Alternate the battery packs even if the WT battery never flashes the Battery icon in the WT display to indicate a low battery condition.)
- The average life for the battery pack is approximately one year; this assumes that the battery is discharged and charged once a day, and not used or abused outside the appropriate temperature range. If the battery packs are discharged and charged twice a day, the life expectancy is approximately six months.

NOTE:
Depending on the level of memory effect for the battery pack, it is sometimes necessary to refresh the battery pack two or three times, as follows. (This also applies to new batteries and to batteries that have not been used for a long time.)

Insert the battery pack into the spare battery compartment of the battery charger and leave it there until the SPARE LED is steady green. Thereafter, remove the battery pack from the charger; then, reinsert it and leave it until the SPARE LED is steady green for a second time.

Or, with the battery pack in the WT, insert the WT into the WT cradle, press REFRESH, and leave it there until the HANDSET LED is steady green. Remove the WT from the WT cradle; then, reinsert it, press REFRESH again, and leave it until the LED is steady green a second time. If necessary, repeat this process a third time.

Battery Charger Operations

This section explains how to choose a location for the battery charger, how to install it, and how to insert and remove a battery pack.

Positioning the Battery Charger

You can place the battery charger on a desk or you can mount it on a wall. Before you install the battery charger, do the following:

- Locate the battery charger within 5 ft (1.6 m) of a properly grounded two-prong electrical outlet that is not controlled by an ON/OFF switch.
- If your communications system uses an uninterruptable power supply, such as a backup generator, you may want to connect the battery charger to that power supply.
- Do not locate the battery charger where it would be exposed to direct sunlight or water.

WARNING:

Do not short-circuit or break the battery housing. (This may cause the battery to overheat or smoke.) Do not burn or puncture the battery. Like other batteries of this type, if it is burned or punctured, the battery cell contents could spill onto the skin and cause irritation. Do not dispose of the pack in household garbage. For information about recycling or proper disposal, consult your local solid waste (garbage) collection or disposal organization.

Installing the Battery Charger

NOTE:

If you are wall-mounting the battery charger, follow Steps 1 through 7. If you are desk-mounting the battery charger, follow only Steps 1, 5, and 7.

1. Check to make sure the battery charger's AC adapter is unplugged from the wall outlet before continuing. If you are desk-mounting, skip to Step 5.
2. To wall-mount, place the battery charger's wall-mounting template (presented later in this chapter) against the wall. Choose a location backed by a wooden stud (if unavailable, use toggle bolts instead of the supplied wood screws). Hold the template straight; use a level if needed. If the charger is not level, the battery pack may not make proper contact with the charger.
3. Mark the locations for the two wall-mounting screws, and then remove the template from the wall. Lightly tap a nail into the wall to start the holes.

4. Place the screw through the wall spacers so that the screw head nests in the indentation on the spacer. Start the screws; screw them in until the wall spacers rest against the wall.
5. Insert the AC adapter power cord into the battery charger. See the following figure. If you are desk-mounting the battery charger, skip to Step 7.

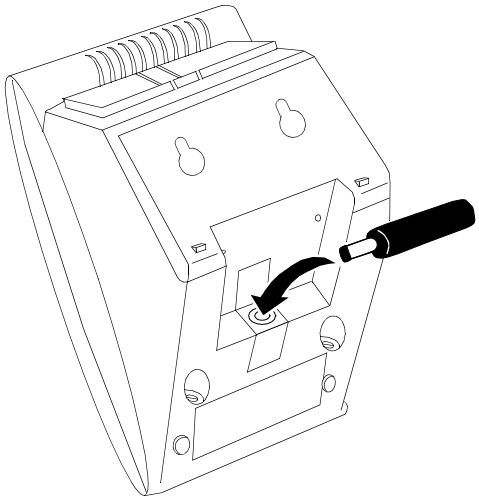

Figure 2-2. Inserting Power Cord into the Battery Charger

6. Place the keyhole-shaped openings in the back of the battery charger over the screw heads and wall spacers; then, slide the battery charger downward to lock it into place. See the following figure.

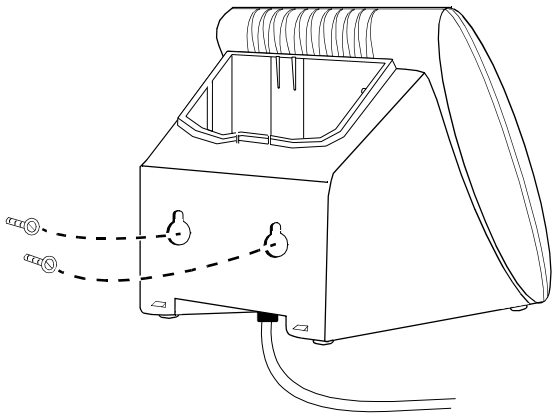

Figure 2-3. Sliding Battery Charger into Place

7. **Plug the AC adapter into a properly grounded two-prong wall outlet that is not controlled by an ON/OFF switch. See the following figure.**

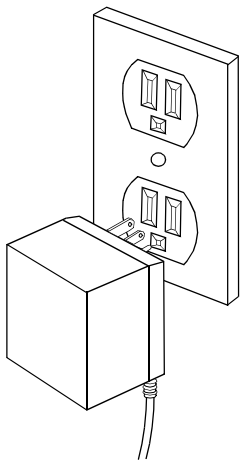

Figure 2-4. Plugging in AC Adapter

Inserting a Battery Pack Into the Spare Battery Compartment

Slide the battery pack into the spare battery compartment until it is firmly seated with the back of the battery pack against the back of the spare battery compartment. Do not force the battery pack down. The battery pack should slide easily into the slot.

Correct positioning of the battery pack in the charger is important to ensure proper charging. The bottom end of the battery pack has two small round holes that align with two guide pins on the bottom of the spare battery compartment. Whenever a battery pack is positioned correctly in the spare battery compartment, the SPARE LED on the front of the battery charger lights.

The spare battery compartment has a vertical ridge on each side that serves as a “guide rail” for positioning the battery pack.

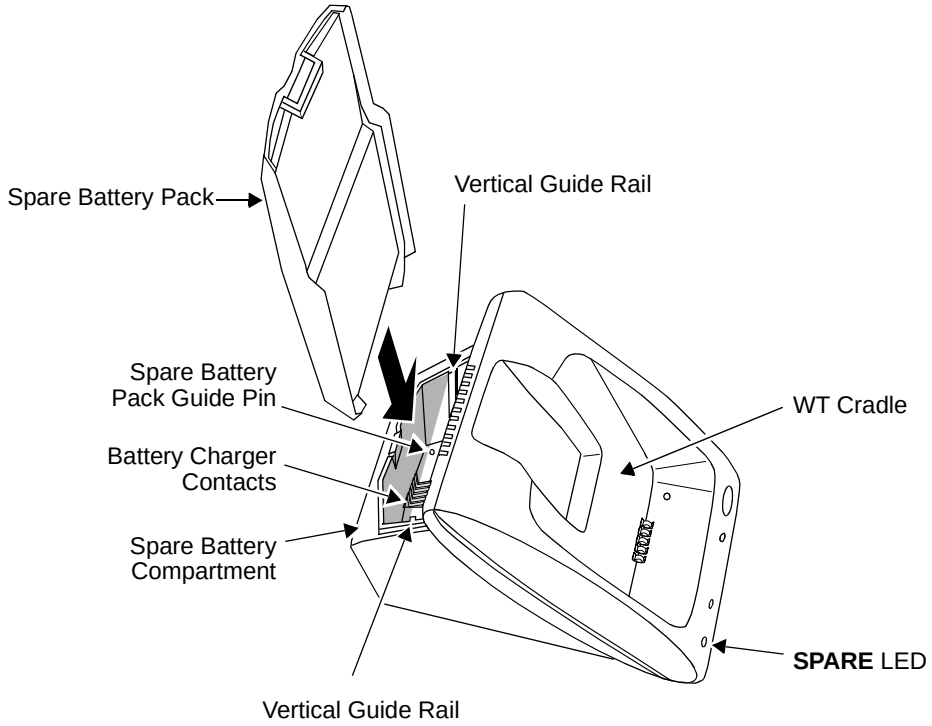

Figure 2-5. Inserting Battery Pack Into Spare Battery Compartment

Removing a Battery Pack from the Spare Battery Compartment

To remove a battery pack from the spare battery compartment of the charger, lift the battery pack up and out.

Inserting the WT into the Battery Charger's WT Cradle

Correct positioning of the WT in the charger is important to ensure proper charging.

1. Position the WT (with the battery pack attached) so that the two small round holes in the bottom of the WT fit over the two guide pins on the bottom of the WT cradle.
2. Rock the WT back into the cradle until it is firmly seated with the back of the WT battery pack against the back of the WT cradle.

Whenever the WT has been inserted correctly, the HANDSET LED lights.

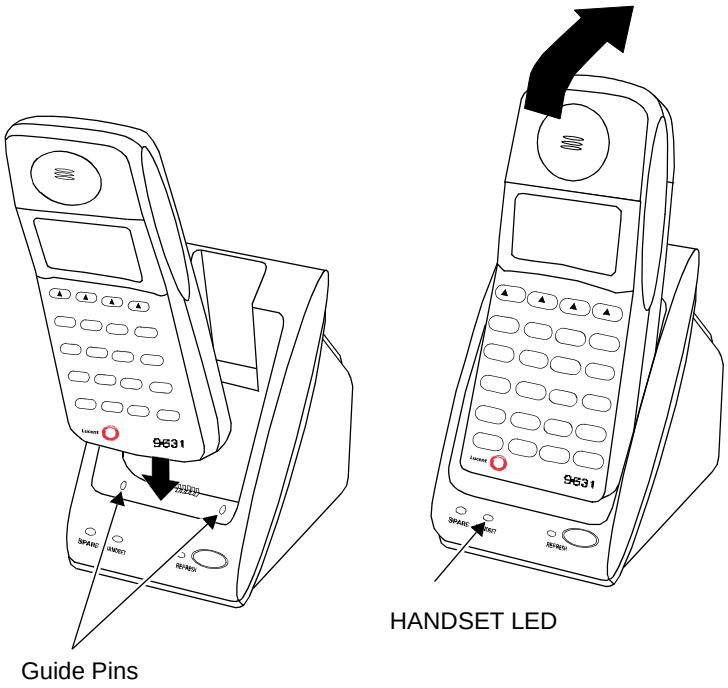

Figure 2-6. Inserting WT Into the Cradle

Removing the WT From the WT Cradle

To remove the WT from the WT cradle, lift it out.

Troubleshooting the Battery Charger

The following table identifies possible battery charger problems and proposed solutions.

Table 2-3. Battery Charger Problems and Possible Solutions

Symptom	Possible Causes	Possible Solutions
No LEDs on the battery charger light.	Battery charger is plugged into an electrical outlet controlled by a switch and the switch is turned off.	Plug the battery charger into an outlet not controlled by a switch.
HANDSET LED on the battery charger does not light when WT is placed into battery charger.	WT is not seated properly in the battery charger's WT cradle.	Reseat the WT in the battery charger's WT cradle.
	Charger AC adapter is not plugged in.	Check that the charger power cord is plugged into the charger and into an electrical outlet that is not controlled by a wall switch.
	Contacts in the WT cradle or on the battery pack are dirty.	1. Verify that there are no obstructions on the WT or battery charger contacts. 2. Unplug the charger and clean the contacts with a soft eraser. 3. Clean the WT contacts with a soft eraser.
	The battery pack is defective.	If you have a fully charged spare battery pack, use it to replace the battery pack in the WT. 1. Place the questionable battery pack into the battery charger's spare battery compartment. 2. Wait one minute. If the SPARE LED flashes red, order a new battery pack, or replace it through maintenance.

Table 2-3. Battery Charger Problems and Possible Solutions — *Continued*

Symptom	Possible Causes	Possible Solutions
SPARE LED on WT flashes green.	Temperature is either too hot or too cold. The battery has been drained below operating levels.	1. If the battery pack is too cold, allow the pack to warm to room temperature. 2. If the battery pack is too hot, allow the pack to cool to room temperature. 3. Allow the charger to bring the voltage up. When the appropriate level of voltage is reached, the SPARE LED turns orange; this indicates that the charger is fast charging.
HANDSET LED flashed red.	The contacts in the WT cradle or on the battery pack are dirty.	1. Verify that there are no obstructions on the WT or battery charger contacts. 2. Unplug the charger and clean the contacts with a soft eraser. 3. Clean the battery pack contacts with a soft eraser.
	WT is not seated properly in the battery charger's WT cradle.	Reseat the WT in the battery charger's WT cradle.
	Battery pack temperature exceeds normal operating temperature range.	Remove and allow the battery pack to either warm or cool to the normal operating temperature. If the LED flashes red during repeated change cyles, the battery pack may be defective.
	Battery pack is defective.	1. Place the battery pack into the battery charger's spare battery compartment. 2. Wait one minute. If the SPARE LED flashes red, order a new battery pack, or replace it through maintenance.

Table 2-3. Battery Charger Problems and Possible Solutions — *Continued*

Symptom	Possible Causes	Possible Solutions
SPARE LED on battery charger does not light when the battery pack is placed into the spare battery compartment.	Battery pack is not seated properly in the spare battery compartment.	Reseat the battery pack in the battery charger's spare battery compartment.
	The contacts on the battery pack or in the spare battery compartment are dirty.	1. Verify that there are no obstructions on the battery pack or battery charger contacts. 2. Unplug the charger and clean the contacts with a soft eraser. 3. Clean the battery pack contacts with a soft eraser.
	Battery pack is defective.	1. Insert the questionable battery pack into the WT and place the WT into the WT cradle. 2. Wait one minute. If the LED flashes red, order a new battery pack, or replace the pack through maintenance.

Table 2-3. Battery Charger Problems and Possible Solutions — *Continued*

Symptom	Possible Causes	Possible Solutions
SPARE LED on the battery charger flashes red.	Contacts on the battery pack or in the battery charger's spare battery compartment are dirty.	1. Verify that there are no obstructions on the battery pack or battery charger contacts. 2. Unplug the charger and clean the contacts with a soft eraser. 3. Clean the battery pack contacts with a soft eraser.
	Battery pack is not seated properly in the spare battery compartment.	Reseat the battery pack in the battery charger's spare battery compartment.
	Battery pack temperature exceeds normal operating temperature range.	Remove and allow the battery pack to either warm or cool to the normal operating temperature. If the LED flashes red during repeated change cyles, the battery pack may be defective.
	Battery pack is defective.	1. Insert the battery pack into the WT and place the WT into the battery charger's WT cradle. 2. Wait one minute. If the HANDSET LED flashes red, order a new battery pack, or replace the pack through maintenance.

Battery Charger Wall-Mounting Template

Use the following template to position the screws for mounting your 9630 Series WT battery charger:

1. Cut out the template.
2. Using tape and level, lightly affix the template to the wall where you want to attach the battery charger. If possible, choose a location that positions at least one of the screw holes over a wall stud.
3. Mark the wall.
4. Position a wall spacer on each of the two wood screws provided, and insert the screws into the wall as far as they will go at the places you marked.

NOTE:
If you cannot locate a wall stud for one of the screws, use toggle bolts or another type of hollow-wall fastener. Be sure to place the wall spacers on the screws before inserting them permanently.

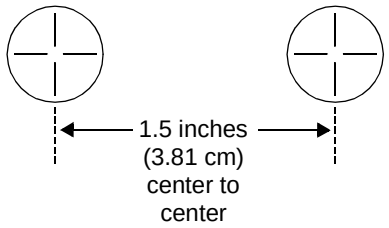

Figure 2-7. Battery Charger Wall-Mounting Template

Features and Operations

3

Introduction

This chapter provides information needed to make full use of your 9630 Series Wireless Terminal (WT). The first portion of this chapter provides a detailed description and diagram of the WT. The second section is presented in a “how to” format and focuses on feature identification and access.

9630 Series WT Features

The DEFINITY ECS 9630 Series WT is a portable multiple call appearance wireless voice terminal with a display. It is a small (6 in x 2.4 in x 1.2 in), lightweight (approximately 0.55 lbs with the battery) WT that requires no external antenna. As shown on the next page in Figure 3-1, the 9630 Series WT has a four-line by 16-character display plus one row of icons, four soft keys for menu item interface, two hard keys for display control, and six hard keys for call management. Each of these features is explained in the following pages.

Among its many benefits, the 9630 Series WT includes the following essential business features normally found only on a wired desk phone. The “Operating the 9630 Series WT” section in this chapter gives specific instructions for these features.

- **Conference** — allows you to add additional people to your telephone call.
- **Transfer** — allows you to transfer a call to another phone number.
- **Drop** — allows you to disconnect the last person added to a conference call.
- **Hold** — allows you to place a call on hold.
- **Redial** — allows you to dial the previous number dialed from the key pad.

- **Silent** — allows you to turn off audible ringing signals and tones.
- **Mute** — allows you to turn off a terminal's microphone.

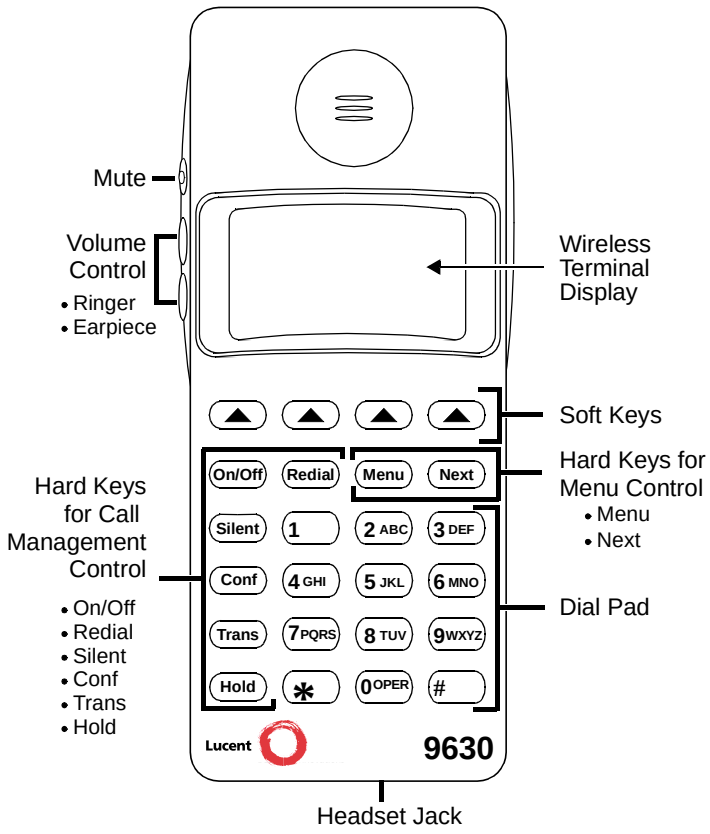

Figure 3-1. 9630 Series WT

In general, the 9630 Series WT has the following features:

- Hard key interface
- Soft key interface
- Ringer/volume control buttons
- Display
- Dial pad
- Low battery indicator
- Vibrator

- Headset connector
- Mute

Hard Key Interface

The 9630 Series WT has several hard keys. Hard keys are buttons with labels and functions that do not change. The WT has the following hard keys.

Hard Keys for Menu Control

The hard keys for menu control include the following:

- **Menu** — to access local control functions and soft key mode (see the “Soft Key Interface” section).
- **Next** — to access soft key features and calling screens

Menu and Next provide access to the following features: Vibrator, Lock, Backlight (of the display), Personalized Ringing, and Service Information.

Hard Keys for Call Management

The hard keys for call management include the following:

- **On/Off** — to start and end calls

  NOTE:
  This hard key does not turn the power on and off.

- **Redial** — to dial the previous number dialed from the key pad
- **Hold** — to place calls on hold
- **Silent** — to turn off audible ringing signals and tones
- **Conf** (Conference) — to create a conference call
- **Trans** (Transfer) — to transfer a call to another extension

Soft Key Interface

The 9630 Series WT has a row of four 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 provide access to calling and local functions, and they are intended to provide a user-friendly interface to additional functionality. Available menu functions include Vibrator, Lock, Backlight (of the display), Personalized Ringing, and Service Information.

The soft keys are marked as follows:

Because each soft key can have multiple functions, the bottom row on the display is used for displaying associated soft key function labels. You can access several features by pressing Menu and Next. (See the previous figure and also the "Operating the 9630 Series WT" section in this chapter.)

NOTE:
Whenever the 9630 Series WT is in menu mode, DEFINITY ECS messages associated with an incoming alerting call override the current display state of the WT. If the incoming call is ignored, the original soft key display state returns.

Muting and Unmuting the WT

NOTE:
You must be on a call to mute or unmute a WT.

You can turn off (or mute) a WT's microphone by pressing press Mute on the side of the terminal. Whenever a WT is muted, the mute icon appears in the display.

To unmute a WT (that is, turn on the terminal's microphone), first ensure that the mute icon is displayed. Then press Mute .

Mute is deactivated automatically whenever a call is ended. Also, mute can be used with the headset.

Volume Control Buttons

The WT has two volume control buttons. These buttons are located on the left side of the WT, and they are labeled with up- and down-arrows. Each button is used for adjusting the receiver volume in the WT earpiece as well as the volume of the alerter and local tones. The buttons control the earpiece volume in the on-hook active state; they control the alerter volume (including key clicks and warning/notification tones) in the off-hook and ringing states.

To adjust the volume level up or down in a "smooth" fashion, press and continue to hold the appropriate button until you get the desired volume.

Display

The WT has a four-line by 16-character alphanumeric display plus a row of icons that enable you to view various WT screens. These screens display the following:

- DEFINITY ECS display messages (including Automatic Number Identification [ANI] numbers, if provided from the network)
- Message waiting indicator
- Menu-driven feature operations
- Battery status

- Extension number of the WT
- Unique serial number and firmware and hardware version numbers
- Radio link/connection status information
- Dialed digits
- Visual dial tone indicator
- Service messages (described in Chapter 4)
- Icons (discussed in the next section)

Icons

The top line of the WT display is used to show icons. The icons provide information about the status of the WT and the DWBS. The following figure identifies the icons.

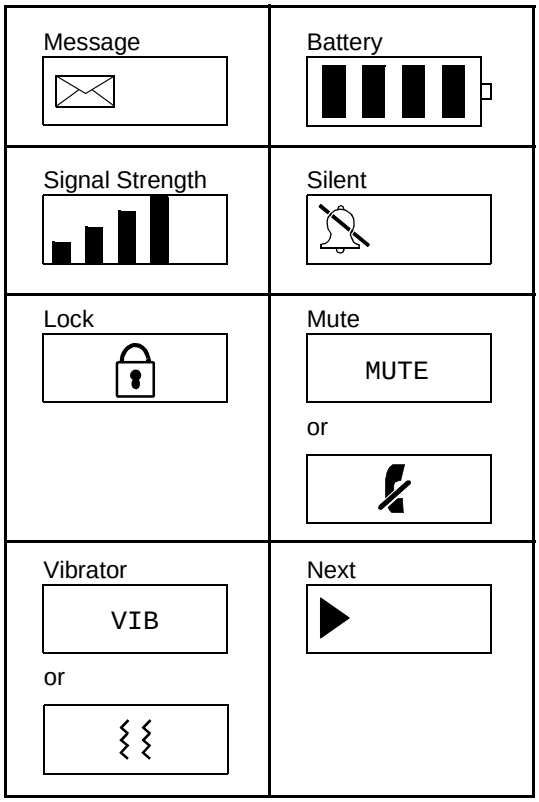

Figure 3-2. Icons for the 9630 Series WT

The icons on the top line of the display are in a fixed location and in the following order from left to right: message (envelope), signal strength (four bars), lock (padlock), vibrator, battery, silent (slashed bell), mute, and next (arrow).

The following list discusses the icons.

- **Message**. The envelope icon is on whenever a message has been left in voice mail. The envelope icon is off whenever the WT is not linked to a DWBS or there are no new messages.
- **Signal strength**. Signal strength is indicated by turning on and off the bars that make up the icon. The bars indicate the signal level in the area where the WT is located. All four bars are off whenever the WT is not within the coverage area of a system.
- **Lock**. The padlock icon is on whenever the WT is locked. This is true whether or not the WT is linked to a DWBS.
- **Vibrator**. The vibrator icon is on whenever the vibrator is on. This is true whether or not the WT is linked to a DWBS.
- **Battery**. The talk/standby time that is available on the terminal is indicated by the battery icon, as follows:
  - — The outline of the icon is on whenever the battery has approximately 10 minutes of talk time remaining. This is true whether or not the WT is linked to a DWBS. The outline of the battery flashes whenever there are less than 10 minutes of talk time remaining.
  - — Only the leftmost fill icon is lit whenever the battery has between 10 minutes of talk time and approximately 25 percent of its total talk and standby time remaining.
  - — Two or more fill icons are lit whenever more than 25% of the battery capacity is available.
- **Silent**. The slashed bell icon is on whenever Silent Mode is activated for the WT. This is true whether or not the WT is linked to a DWBS.
- **Mute**. The mute icon is on whenever the WT's microphone is muted while on an active call. This icon is off whenever the WT is not on an active call.
- **Next**. The arrow icon is on whenever there are additional features on the next screen. You can access these features by pressing Next.

Dial Pad

The WT dial pad includes the standard 12 buttons for dialing telephone numbers and accessing the DEFINITY ECS call features.

Operating the 9630 Series WT

This section provides the information you need to make full use of your 9630 Series WT. The information presented focuses on feature identification and access.

NOTE:
If you are using your 9630 Series WT for the first time and cannot perform the operations described in the following “how to” section, call your system administrator. A WT must be administered before you can access any switch service.

The following “how to” information is arranged in a logical order. See Figure 3-1 for button and key locations.

Administering Personalized Ringing

Personalized Ringing allows you to select one of nine ringing patterns for incoming calls. This feature is useful in environments where multiple WTs are in use. By assigning a specific ringing pattern to their terminal, WT users can distinguish their own ringing WT from other ringing WTs in their area.

To administer Personalized Ringing, do the following:

1. From the calling screen, press Menu.
2. Press Next three times**.** This brings you to the Personal Ring screen. The “Personal Ring #N” message, where “N” represents a number from 1 to 9, appears on the display. This message indicates the number of the currently administered ringing pattern.
3. If necessary, press keys 1 through 9 in order or at random to hear the available ringing patterns.
4. Once you decide what ringing pattern you would like to activate, press the corresponding number key followed by the **Select** soft key. This displays a screen indicating the number of the Personalized Ring pattern that you have selected.
5. Press either Menu or the **Exit** soft key to return to the calling screen.

Adjusting the Earpiece Volume

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

To adjust the earpiece volume:

1. Press On/Off .
2. Press and hold either the up-volume control button or down-volume control button when on a call until the appropriate volume level for the earpiece is reached.
3. Press On/Off 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 also enable you to adjust the ringer and warning/notification tones (higher or lower).

To adjust the ringer and warning/notification tones, press and hold either the up-volume control button or the down-volume control button until the appropriate volume level is reached.

NOTE:
The On/Off button is not used during this procedure. Pressing this button before performing this procedure causes an adjustment in the earpiece volume.

Activating and Deactivating the Backlight

The WT has a backlight to help you see the display in poorly-lit environments. The backlight illuminates the display via light-emitting diodes (LEDs). These LEDs are lit whenever backlighting is activated and either you press any button on the terminal or the terminal receives an incoming call. The LEDs remain lit for 15 seconds; also, if you press another button, the LEDs remain lit for an additional 15 seconds.

To activate the backlight, do the following:

1. From the calling screen, press Menu.
2. Press Next.
3. Press Next again. The display should indicate that the backlight is off.
4. Press the **On** soft key.

5. Press either Menu or the **Exit** soft key to return to the calling screen.

To deactivate the backlight, do the following:

1. From the calling screen, press Menu.
2. Press Next.
3. Press Next again. The display should indicate that the backlight is on.
4. Press the **Off** soft key.
5. Press either Menu or the **Exit** soft key to return to the calling screen.

Making Calls

You can make calls with the WT whenever the terminal is not off-hook active on a call and has an idle call appearance. You can use post-origination dialing or pre-origination dialing to make calls. Post-origination dialing requires that you get dial tone before you dial a call, similar to a wired phone; pre-origination dialing allows you to dial digits before you receive dial tone, similar to a cellular phone.

Using Post-Origination Dialing

To make a call using post-origination dialing, do the following:

1. Press a call appearance soft key or On/Off .
2. Wait for the dial tone.
3. Once you receive dial tone, enter the telephone number of the party you are calling.

Using Pre-Origination Dialing

To make a call using pre-origination dialing, do the following:

1. Enter the telephone number of the party you are calling on the key pad.
2. Press a call appearance soft key or On/Off .

The digits you dial for pre-origination dialing are displayed.

NOTE:
If a call is active on a WT, you cannot use pre-origination dialing to dial a new number from that terminal. This is true because dial pad key presses are sent as tones in such a case.

Also, whenever a WT has an alerting call or no idle call appearances, you cannot use pre-origination dialing to dial a new number from that terminal.

Erasing Digits in Pre-Origination Dialing

Whenever a WT is collecting digits that you have entered via pre-origination dialing, the **Bksp** soft key appears on the display.

To erase the most recent pre-origination dialing digit you have entered, press the **Bksp** soft key. To erase all of the pre-origination digits you have entered for the current call, press and hold the **Bksp** soft key for two seconds.

Answering Calls

You can answer an incoming call whenever the WT is not off-hook active on a call and is alerting. To answer an incoming call, simply press either On/Off or an alerting call appearance soft key when the terminal rings or when a call appearance soft key is alerting.

If you are active on a call and another call alerts, you can place the active call on hold by pressing Hold and then answer the alerting call pressing either On/Off or the alerting call appearance. Also, if you are active on a call and another call alerts, you will hear a short tone. (This is true even in Silent Mode.)

Activating and Deactivating the Vibrator

The WT has a vibrator that provides tactile alerting for incoming calls. The vibrator is useful in quiet situations where an audible ring would disturb others or in noisy situations where the alerter might not ring loudly enough. The WT vibrates for several seconds each time it is signaled to ring from the DEFINITY ECS. The vibrator is also useful with Silent Mode enabled. (See the next section.)

The WT does not vibrate for a second or third call if you are already on a call. Instead, you hear a short tone in the earpiece even if Silent Mode is active.

NOTE:
The vibrator is activated for all types of ringing patterns. Vibrator activation is independent of Silent Mode.

If the vibrator icon is not showing on the WT display, the vibrator is off. To activate the vibrator, do the following:

1. From the calling screen, press Menu . The display should indicate that the vibrator is turned off.
2. Press the **On** soft key. The vibrator is now turned on, and the vibrator icon appears on the display.
3. Press either Menu or the **Exit** soft key to return to the calling screen.

If the vibrator icon is showing on the WT display, the vibrator is on. To turn off the vibrator, do the following:

1. From the calling screen, press Menu . The display should indicate that the vibrator is turned on.
2. Press the **Off** soft key. The vibrator is now turned off, and the vibrator icon disappears from the display.
3. Press either Menu or the **Exit** soft key to return to the calling screen.

Activating and Deactivating Silent Mode

You can turn on or off most audible ringing signals, error beeps, and warning tones by pressing Silent for one second. Whenever you turn off audible signals, the slashed bell icon appears in the display.

Whenever you enable Silent Mode, only priority ringing, intercom ringing, or manual signaling is sounded at the WT. A low battery tone is generated in Silent Mode whenever the user goes off hook and a low battery condition exists. All other tones, including key clicks, are disabled whenever Silent Mode is activated.

Although there is not audible ringing when Silent Mode is activated, the WT displays a message indicating that it is being rung, and it also displays the appropriate flashing icon-like character indicating the call appearance status.

NOTE:
Silent Mode is independent of the vibrator setting.

Transferring Calls

To transfer a call from one extension to another, do the following:

1. Inform the active party that you are transferring the call and to hold on.
2. Press Trans.

   NOTE:
   The active call is automatically placed on hold, and the idle call appearance is activated.

3. Dial the telephone number of the next party.
4. Press Trans again to transfer the call.

NOTE:
Whenever all call appearances are in use, you cannot transfer a call or receive and make other calls.

Conferencing Calls

You can conference a maximum of six parties onto a call.

To activate a conference call:

1. Inform the active party that you are initiating a conference call and to hold on.
2. Press Conf .

   NOTE:
   The active call is automatically placed on hold, and the idle call appearance is activated.

3. Dial the telephone number of the next party.
4. Press Conf again to conference the two calls together on one call appearance. The screen displays “CONFERENCE N,” where “N” is the number of other parties on the conference call.

   NOTE:
   Whenever all call appearances 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 flashes.

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

Ending Calls

To end a call, press On/Off.

Dropping Calls

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

To drop a call, press the **Drop** soft key. This drops the last caller who was added to the conference. Whenever this feature is used with only one other party on the call, the call is dropped and dial tone is received.

Locking and Unlocking the WT

The lock function prevents the user from accessing soft key mode as well as from placing and answering calls. Whenever the WT is in the “locked state,” the lock icon is displayed. Also, all functions, except for the WT ringing on incoming calls, are inactive. The display message associated with ringing is displayed. You *cannot* lock a WT whenever the terminal is off-hook on a call or has a call on either “traditional” hold or conference/transfer (“soft”) hold.

The lock and unlock operations require creating (if necessary) and using a user-generated lock password. You can create, enter, change, or delete a lock password via soft key screens. Also, you can create a password while the WT is on a call. However, you *cannot* change or delete a password whenever the terminal is off-hook on a call or has a call on either “traditional” hold or conference/transfer (“soft”) hold.

You can unlock a WT during an incoming call. To unlock the WT, you must enter the appropriate four-digit password. In case of an error, you can reenter or clear the password by pressing the **Clear** soft key.

Creating a Password

To create a password to lock the terminal initially, do the following:

1. From the calling screen, press Menu .
2. Press Next. A screen indicating that no lock password currently exists is displayed. The screen also asks you if you want to create a password.

   NOTE:
   If the create screen does not appear, a password already exists for the terminal. See your system administrator to clear the password if you do not know it.

3. Press the **Yes** soft key to create a password. A screen that allows you to create a lock password is displayed.
4. From the dial pad, enter a four-digit lock password. Enter any combination of digits in the range of 0 through 9 (for example, **6829**). For each valid digit that you enter, an asterisk (*) appears in the display. If necessary, to erase up to the first three digits you enter, press the **Clear** soft key and start again. Once you enter your fourth valid digit, a screen that asks you to verify your password is displayed.
5. To verify your lock password, reenter it in the space provided. If the password you enter matches the one you created, a password confirmation screen is displayed. If the passwords do not match, a screen indicating this is displayed, and you are taken back to the password creation screen in Step 4.
6. Press either Menu or the **Exit** soft key to return to the calling screen.

Lock Operation

NOTE:
You cannot lock a WT whenever the WT is active on a call or has a call on hold.

If you have previously created a password, you can lock the terminal.

To lock the WT, do the following:

1. From the calling screen, press Menu.
2. Press Next. If the WT is not active on a call or does not have a call on hold, a screen for locking the terminal is displayed.
3. Enter the lock password in the space provided. For each digit that you enter, an asterisk (*) appears in the display. If necessary, to erase up to the first three digits you enter, press the **Clear** soft key and start again.
4. If the password you enter is correct, a screen indicating that the terminal is now locked and the lock icon are displayed. If the password is incorrect, a message to this effect is displayed and you are taken back to the lock password screen in Step 3.

Changing the Password

To change your lock password, do the following:

1. From the calling screen, press Menu.
2. Press Next.
3. Press the **Change** soft key to change the password. A screen that allows you to change your lock password is displayed.

   Enter your old lock password in the space provided. For each digit that you enter, an asterisk (*) appears in the display. If necessary, to erase up to the first three digits you enter, press the **Clear** soft key and start again.

   NOTE:
   If you do not enter the correct password, an error message is displayed, and you are returned to the screen discussed at the beginning of this step.

   Let's assume that you enter the correct password. A screen that allows you to enter your new lock password appears. Enter your new password in the space provided. For each digit that you enter, an asterisk (*) appears in the display. If necessary, to erase up to the first three digits you enter, press the **Clear** soft key and start again.

   Once you enter the password, a screen that requires you to reenter the password for verification is displayed.

4. Reenter the password for verification. If the passwords match, a screen indicating that your new lock password is now active is displayed. If the passwords do not match, you are taken back to the lock password creation screen in Step 4.
5. Press either Menu or the **Exit** soft key to return to the calling screen.

Deleting the Password

To delete your lock password, do the following:

1. From the calling screen, press Menu.
2. Press Next.
3. Press the **Del** soft key. A screen that allows you to delete your password is displayed.
4. Enter the password to be deleted in the space provided. If you enter a valid password, a screen indicating that the password has been deleted is displayed. If you do not enter a valid password, a message to this effect is displayed, and you are taken back to the screen with the **Del** soft key in Step 3.
5. Press either Menu or the **Exit** soft key to return to the calling screen.

Unlock Operation

If a WT is locked and linked to the system, a padlock icon appears in the display.

To unlock your WT, do the following:

1. From the calling screen, press any key.
2. Enter your (un)lock password in the space provided. If you enter the correct password, your terminal is unlocked and the lock icon disappears from the display. If you enter an incorrect password, a message to this effect is displayed, and you are taken back to the unlock screen.

NOTE:
If you cannot unlock the terminal, see your system administrator to reset the password.

Redialing Calls

Press Redial to redial the last number dialed from the keypad. The redial number is indicated on the display. You need not press On/Off. The WT stores up to the first 24 digits dialed. To redial a call, the WT must have an idle call appearance.

Displaying Service Information

The WT contains screens that allow you to view the following information about your terminal:

- Extension assigned via DWBS administration
- International Portable Equipment Identity (IPEI) number
- Received Signal Strength Indication (RSSI) in dB
- Current cell to which you are linked
- Frequency and timeslot of the current channel
- Hardware vintage and firmware version
- Firmware download screen

To display service information about your terminal, do the following:

1. From the calling screen, press Menu.
2. Press Next four times**.** This brings you to the first Service Information screen. If the WT is linked, this screen displays the WT extension and its IPEI number.
3. Press the **More** soft key to display the second Service Information screen. This screen displays the RSSI, cell ID, and channel frequency and timeslot.

   NOTE:
   This information is updated as various events occur (for example, whenever the WT changes cells).

4. Press the **More** soft key to display the third Service Information screen. This screen displays the terminal's hardware vintage and firmware version.
5. Press the first soft key to display the firmware download.

   NOTE:
   If you are on a call, you will not be able to access the firmware download screen.

6. Press either Menu or the **Exit** soft key to return to the calling screen.

Fastening the Belt Clip

To fasten the belt clip to the WT (or battery pack), refer to the following figure and set of instructions.

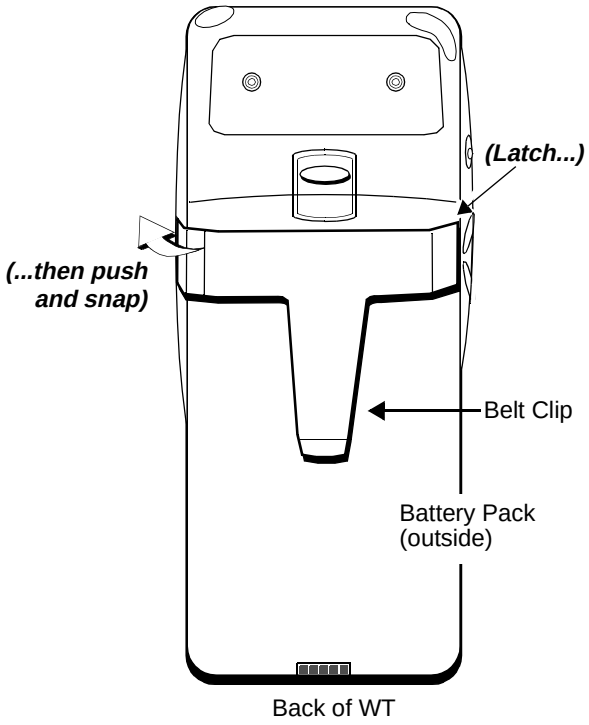

Figure 3-3. Fastening the Belt Clip

1. Hold the WT (or battery pack) so that the back of the WT (or battery pack) is facing you.
2. Hold the belt clip so that it looks like the letter “T.”
3. Latch the right edge of the belt clip into the corresponding groove on the inner side of the battery pack. (The groove is about 1/4 inch from the top of the battery pack.)
4. Push the left edge of the belt clip and snap it into the corresponding groove on the inner side of the battery pack.

Removing the Belt Clip

To remove the belt clip from the battery pack, refer to following figure and set of instructions.

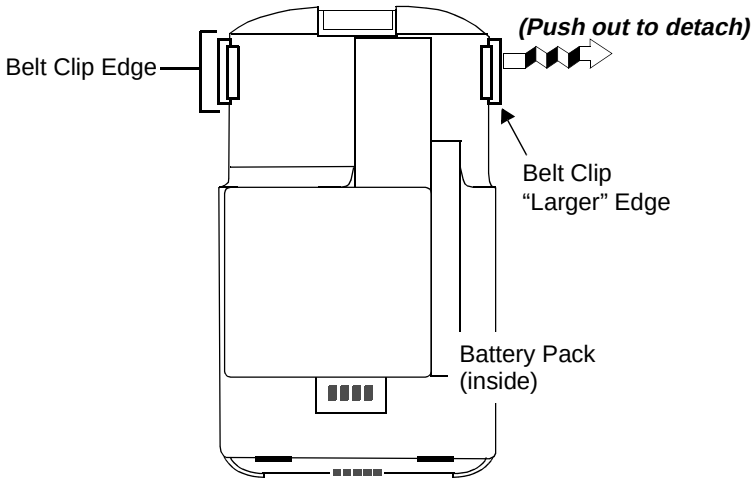

Figure 3-4. Removing the Belt Clip

1. Remove the battery pack from the WT.
2. Hold the battery pack so that the inside of the pack is facing you.
3. Find the “larger” edge of the belt clip that is fastened to the battery pack.
4. Push the “larger” edge of the belt clip out and away from the battery pack until you free the clip from the pack.

Audible Information Tones and Error Messages

4

Introduction

The DWBS is provisioned with a single audible information tone. This tone provides several services. The WT provides various ringing patterns along with error codes and messages.

Incoming Call Ring Patterns

Incoming calls are subject to the following ring patterns:

- **Distinctive ringing** — allows you to distinguish and administer three types of calls, as follows:
  - — **One ring** — call from another extension
  - — **Two rings** — call from outside or from the attendant
  - — **Three rings** — priority call from another extension or from an Automatic Callback call you placed
- **Ring-ping (half ring)** — call redirected from your WT to another extension because the Call Forwarding or Send All Calls (SAC) feature is active
- **Personalized Ringing** — ringing pattern that allows users to distinguish their own ringing WT from other ringing WTs in their area
- **Short tone in the ear** — alerts you when you are on a call even if Silent Mode or the vibrator is active

Error Beep

An error beep is generated whenever either of the following occurs:

- Hard key or any of the soft keys on the WT are pressed but are not applicable at the moment
- Error message screen appears on the WT display

NOTE:
An audible beep is not sounded if the WT is in Silent Mode.

Warning Tone

A warning tone sounds and the appropriate message appears on the WT display when any of the following are true:

- WT with an active call determines that a handover is needed but there is no channel available for a handover
- Approximately 10 minutes worth of talk time is available on the WT

  NOTE:
  For this condition, the tone automatically sounds if the user attempts to go off hook

- User attempts to go off hook but no talk time remains on the WT battery

  NOTE:
  Whenever the WT is in Silent Mode, the only audible warning tone provided is the tone for the low battery condition.

User-Level Error Messages

The following table presents the user-level error messages that may appear on the WT, along with corrective actions, if required.

Table 4-1. User-Level Error Messages and Corrective Actions for the WT

User-Level Error Messages	Corrective Actions
“PLEASE WAIT”	None required. The DWBS should automatically reset the WT within 10 seconds.
“NO SERVICE”	See the system administrator, as prompted by the subsequent message “SEE SYS ADMIN.”
“NO CHANNEL AVAILABLE”	Move to another area that has less wireless call activity; or, try calling again later.

Safety Instructions

A

Introduction

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

Using the Product

Take note of all the information in this section whenever you are using 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.

NOTE:
You should have your receptacle checked by a qualified electrician before connecting this equipment. A 117 VAC power supply is recommended.

WARNING:

Do not drop, short-circuit, or break the battery housing. (This may cause the battery to overheat or smoke.) Do not burn or puncture the battery. Like other batteries of this type, if it is burned or punctured, the battery contents could spill onto the skin and cause irritation. Do not dispose of the pack in household garbage. For information about recycling or proper disposal, consult your local solid waste (garbage) collection or disposal organization.

Ne pas court-circuiter ou casser le boîtier de la pile (ce qui pourrait faire surchauffer ou fumer la pile). Ne pas percer la pile, ni la brûler. Comme dans le cas des autres piles de ce type, si elle est brûlée ou percée, le contenu des cellules risque d'entrer en contact avec la peau et de l'irriter. Ne pas jeter la pile dans les ordures ménagères. Pour obtenir des renseignements complémentaires sur le recyclage ou la façon appropriée d'en disposer, communiquer avec le service de ramassage des déchets de votre région.

- 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 battery charger near water or when you are wet. If the battery charger 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 WT or battery charger.
- Never place this product near or over a radiator or heat register.
- Slots and openings in the housing 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.
- Do not allow anything to rest on the power cord of the battery charger. 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 WT away from the area in question. The WT’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 the battery charger from wall outlets before cleaning. Clean exposed parts with a soft, slighty damp cloth. Do not use liquid or aerosol cleaners.
- Unplug the battery charger from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
  - — Power cord or plug on the battery charger is damaged or frayed.
  - — 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. See your system administrator.

Maintaining the WT

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

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

- Keep the WT in an area free of dust, smoke, and moisture.
- Do not place the WT 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 WT, 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 WT quickly with a soft cloth.

CAUTION:
Your WT 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). The case provided for the WT provides a safeguard against such exposure.

Specifications

B

Introduction

This appendix provides various specifications for the DWBS.

Operating Temperatures

Use the WT and the charger within the 32° F to 122° F (0° C to 50° C) temperature range.

Storage Temperatures

Store the WT and the charger within the -22° F to 150° F (-30° C to 65° C) temperature range.

Glossary

A

Auto-Reconnect
Feature that enables a user to reconnect to a call if either of the following occurs: the WT is taken out of the coverage area while on a call and is then taken back into the coverage area within 60 seconds; or, the WT battery is removed, and a charged battery is inserted within 60 seconds.

C

cell
Radio coverage area of a CAU.

Cell Antenna Unit (CAU)
Remote antenna that connects to a Wireless Fixed Base. It contains a transmit power amplifier, transmit/receive switch, low-noise receive amplifier, and antenna.

E

Emerging Technologies Band
20 MHz of unlicensed spectrum for Personal Communication Service (PCS) in North America. The 1920-1930 MHz band uses eight channels of 1.25 MHz bandwidth per channel primarily for voice, and the 1910-1920 MHz band is used primarily for data.

F

FCC. See **Federal Communications Commission**

Federal Communications 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.

H

hard keys
Dedicated buttons on the WT 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

International Portable Equipment Identity
Unique number used to identify a WT for administration and through-the-air communication. This number is sent by the WT to the fixed part during the access rights procedure.

IPEI. See **International Portable Equipment Identity**

L

local features
Features that are supported by the WT.

local tones
Tones produced locally in the WT. Includes the following tones: ringer, warning, tone, error beep, confirmation, and key click.

P

pre-origination dialing
Dialing that occurs before dial tone is granted.

post-origination dialing
Dialing that occurs after dial tone is granted.

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.

S

soft keys
Buttons whose labels and functions can change dynamically as the user performs functions and makes selections.

T

TDMA. See **Time Division Multiple Access**

Time Division Multiple Access (TDMA)
Radio access method for which each call uses a different time slot. TDMA permits multiple conversations per radio.

U

UTAM
Group charged by the Federal Communications Commission to coordinate the relocation of microwave incumbents out of the unlicensed spectrum (1910-1930 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 WTs and to receive digital signals from the WTs. A WFB can support a maximum of four external Cell Antenna Units.

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