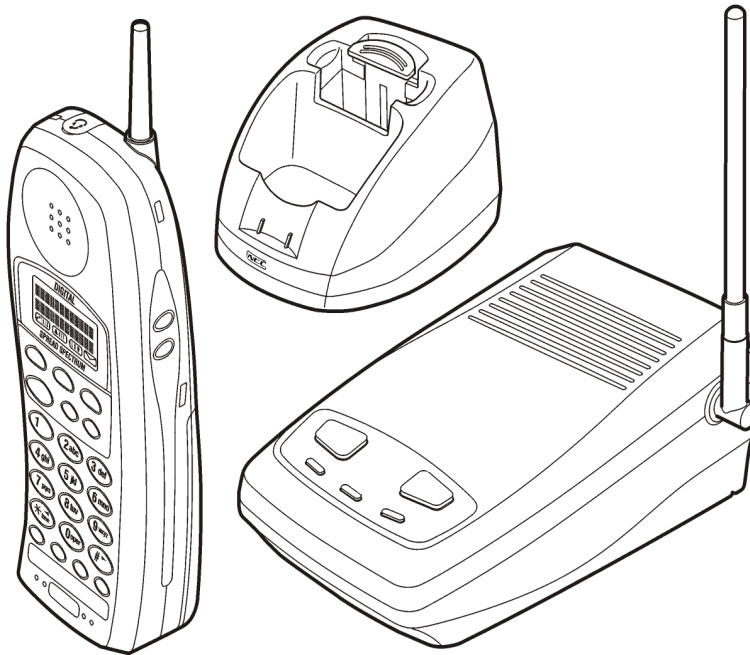


# NEC

# Dterm<sup>®</sup> Cordless II

## DTR-4R-( ) (BK)



## OWNER'S GUIDE

INT-1017

(DTERM)

Document Revision 3

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**6535 N. State Highway 161**  
**Irving, TX 75039-2402**

**Technology Development**

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### SECTION 1 SPECIFICATIONS

The D<sup>term</sup> Cordless II complies with FCC and IC parts 15 and 68.

#### General

Frequency Control	Phase Lock Loop
Modulation	Spread Spectrum
Operating Temperature	0° ~ +50° C (+32° F to +122° F)
Output Power	63 mW
Occupied Bandwidth	1,600 kHz
Data Transmission Speed	688 bps

#### Base Unit

Receive/Transmit Frequency	902 MHz ~ 928 MHz
Power Requirements	10 Vdc from supplied AC adapter
Size	4-1/4 in. W x 7-1/2 in. D x 2-1/4 in. H
Weight	Approximately 15.4 oz.

#### Handset

Receive/Transmit Frequency	902 MHz ~ 928 MHz
Power Requirements	Nickel-Cadmium Battery Pack

Size	2-1/5 in. W x 1-2/3 in. D x 8-2/3 in. H (with antenna)
Weight	Approximately 8.8 oz with battery
Battery	Capacity 800 mAh, 3.6V
Talk Mode	6 hours (typical)
Standby Mode	4 days (typical)

Specifications shown are typical and subject to change without notice.

### Battery Charger

Power Requirements	9V DC from supplied AC adapter
Size	2-1/5 in. W x 1-2/3 in. D x 8-2/3 in. H (with antenna)

## SECTION 2 BATTERY SAFETY



***To reduce the risk of fire or injury to persons by the battery, read and follow these instructions.***

- This equipment contains a rechargeable nickel-cadmium battery.
- Do not** short-circuit the battery.
- Do not** charge the rechargeable nickel-cadmium battery used in this equipment in any charger other than the one designed to charge this battery as specified in this manual. Using another charger can damage the battery or cause the battery to explode.
- Use only the appropriate type and size battery pack specified in this manual.
- Do not** open or mutilate the battery pack. Released electrolyte is corrosive and can cause damage to the eyes or skin. It may be toxic if swallowed.
- Exercise care in handling the battery in order not to short the battery with conducting materials such as rings, bracelets, and buttons. The battery or conductor can overheat and cause burns.

- Charge the battery pack provided with or identified for use with this product only in accordance with the instructions and limitations specified in the instruction manual provided for this product.
- Observe proper polarity orientation between the battery pack and battery charger.
- Do not** dispose of the battery pack in a fire, the cell may explode.
- Do not** place the batteries in your regular trash. Nickel-cadmium batteries must be collected, recycled, or disposed of in an environmentally sound manner. Contact your local waste management officials for other information regarding the environmentally sound collection, recycling and disposal of the battery contained in this product.

### SECTION 3      **IMPORTANT SAFETY INSTRUCTIONS**

When using the telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons, including the following:

- Read and understand all instructions.
- Follow all warnings and instructions marked on the product.
- Unplug this product from the wall outlet before cleaning. **Do not** use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning.
- Do not** use this product near water; for example, near a sink or in a wet area.
- Do not** place this product on an unstable cart, stand, or table. The telephone can fall, causing serious damage to the unit.
- To protect the product from overheating, do not block or cover any slots or openings in the base unit. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless the proper ventilation is provided.
- This product should be operated only from the type of power source indicated on the marking label.
- Do not** allow anything to rest on the power cord. Do not locate this product where the cord will be damaged by people walking on it.
- Do not** overload wall outlets and extension cords, as this can result in the risk of fire or electrical shock.

- Never push objects of any kind into this product through the base unit slots, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock. Never spill liquid of any kind on the product.
- To reduce the risk of electric shock, do not disassemble this product. Contact qualified service personnel when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power supply cord is damaged or frayed.
  - If liquid has been spilled onto the product.
  - If the product has been exposed to water or rain.
  - If the product does not operate normally when following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls can result in damage, and will often require extensive work by a qualified technician to restore the product to normal operation.
  - If the product has been dropped, or the cabinet has been damaged.
- If the product exhibits a distinct change in performance.
- Do not** use the telephone to report a gas leak in the vicinity or the leak.
- To reduce the risk of fire or injury to persons by the battery, read and follow these instructions.
  - Use only the appropriate type and size battery pack specified in the manual.
  - Exercise care in handling the battery in order not to short the battery with conducting materials such as rings, bracelets, and buttons. The battery or conductor can overheat and cause burns.

## Privacy

Cordless telephones are radio devices. Communications between the handset and base of the cordless telephone are accomplished by means of radio waves which are broadcast over the open airways. Because of the inherent physical properties of radio waves, communication can be received by radio receiving devices other than your own telephone unit, consequently, any communications using the cordless telephone may not be private.

## SECTION 4      IMPORTANT ELECTRICAL CONSIDERATIONS



*Do not attempt to unplug any appliance during an electrical storm.*

Unplug all electrical appliances when you know an electrical storm is approaching. Lightning can pass through your household wiring and damage any device connected to it. This telephone is no exception.

### **Caution:**

*Changes or modifications to this product not expressly approved by NEC America, Inc., or operation of this product in any way other than as detailed by this manual, could void your authority to operate this product.*

### **Range**

The new telephone is designed to achieve a maximum range of up to 350 feet (depending upon the environment) by transmitting and receiving according to the highest specifications set forth by the FCC. We have rated this phone to operate at a maximum distance with the qualification that the range depends upon the environment in which the telephone is used. Many factors limit range, and it would be impossible to include all of the variables in our rating. The maximum range rating of this telephone is meant to be used as a means of comparison against other range claims.

### **Telephone Line Problems**

The FCC has granted the telephone company the right to disconnect service in the event that your telephone causes problems on the telephone line. Also, the telephone company may make changes in facilities and services which can affect the operation of your unit. However, your telephone company must give adequate notice in writing prior to such actions to allow you time for making necessary arrangements to continue uninterrupted service.

If you are having trouble with your telephone service, you must first disconnect your telephone to determine if it is the cause of your problem. If you determine that it is the cause, you must leave it disconnected until the trouble has been corrected.

## **Radio Interference**

Radio interference may occasionally cause buzzing and humming in your cordless handset, or clicking noises in the base unit. This interference is caused by external sources such as TV, fluorescent lighting, or electrical storm. Your unit is NOT DEFECTIVE. If these noises continue and are too distracting, check around your office to see what appliances may be causing the problem. In addition, we recommend that the base not be plugged into a circuit that also powers a major appliance because of the potential of interference. For best performance, ensure that the antenna on the base unit is fully extended.

In the unlikely event that you consistently hear other voices or distracting transmissions on your telephone, you may be receiving radio signals for another cordless telephone or other source of interference. If you cannot eliminate this type of interference, you need to change to a different channel.

Finally, it should be noted that some cordless telephones operate at frequencies that may cause interference to nearby TVs and VCRs. To minimize or prevent such interference, the base of the cordless telephone should not be placed near or on top of a TV or VCR. If interference is experienced, moving the cordless telephone farther away from the TV or VCR will often reduce or eliminate the interference.

## **More than One Cordless Telephone**

If you want to use more than one cordless telephone in your office, they must operate on different channels and more than 20 feet apart. Press the channel key to select a channel that provides the clearest communication.

Depending on your environment, the maximum number of cordless devices used without interference varies.

Multiple base and handset units should not be closer than 20 feet at any time.

Radio interference causes interruptions in conversation. When this happens, your unit is not defective. When noise continues, move to a different location while you talk. (You might even need to move the base unit.) When the situation persists, contact National Technical Assistance Center.

### SECTION 1 ITEMS INCLUDED WITH THE D<sup>term</sup> CORDLESS II

Congratulations on your purchase of the D<sup>term</sup> Cordless II. This telephone is designed and engineered to exacting standards for reliability, long life, and outstanding performance. To become familiar with the features of the cordless telephone, read this manual thoroughly.

The D<sup>term</sup> Cordless II includes the following items:

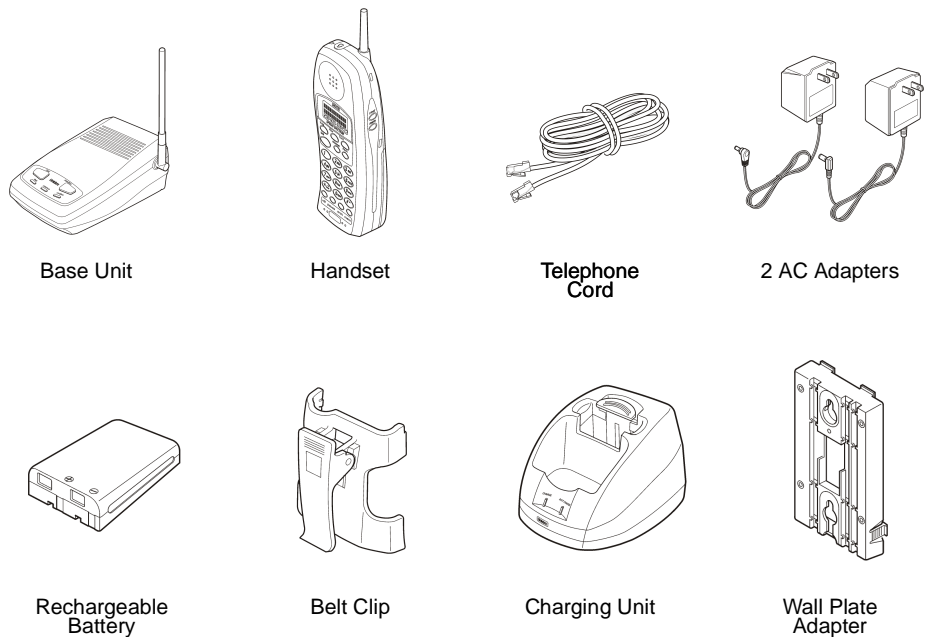



Figure 2-1 Items Included with the D<sup>term</sup> Cordless II

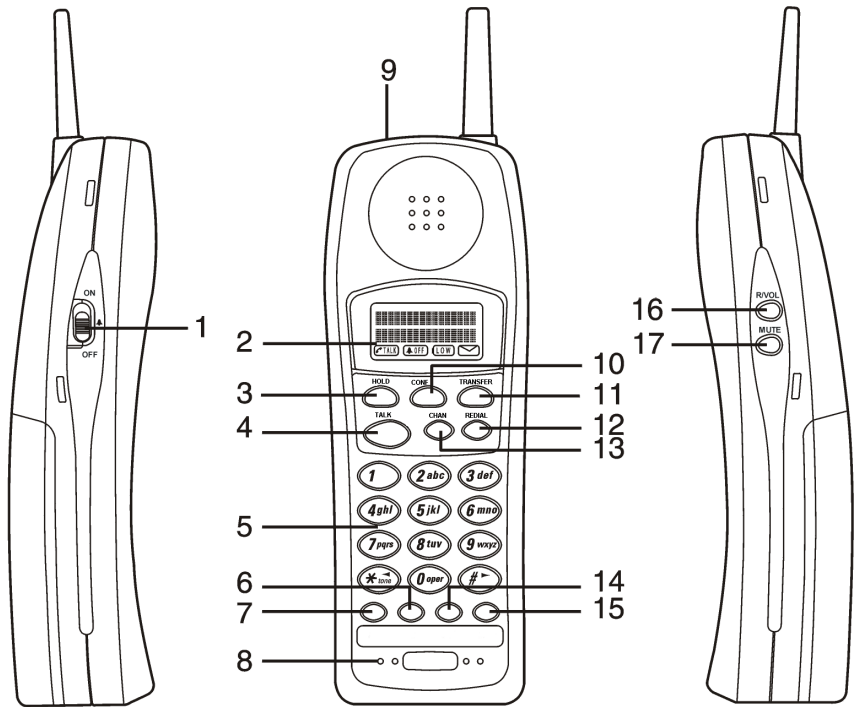
## SECTION 2 FEATURES OF THE CORDLESS TELEPHONE

The D<sup>term</sup> telephone provides a variety of features. These features are listed below.

- 900 MHz Digital Spread Spectrum
  - 2-line, 16-digit LCD Display
  - 10 Channels
  - Headset Jack
  - Channel Selection Control
  - Ringer Volume Control
  - Handset Volume Control
  - Mute Control
  - Single Key Access to: Conference, Hold, Transfer, Channel and Redial features
  - Four Programmable Keys: F1~F4
  - Separate Charging Stand with Spare Battery Charging Capability
  - AutoStandby<sup>®</sup>
  - Silent Alarm
  - Out of Range Protection
  - Low Battery Protection System
  - Wall Mountable Separate Base Unit
  - Wall Mountable Separate Charging Unit
  - Easy Installation
  - Compact Handset Design
  - Use with an NEC Digital Multiline Telephone
  - Desk/Cordless Softkey Switch
-  The D<sup>term</sup> Cordless II can be used in conjunction with the, Electra Elite<sup>®</sup>, and D<sup>term</sup><sup>®</sup> Series E Digital Multiline Telephones.

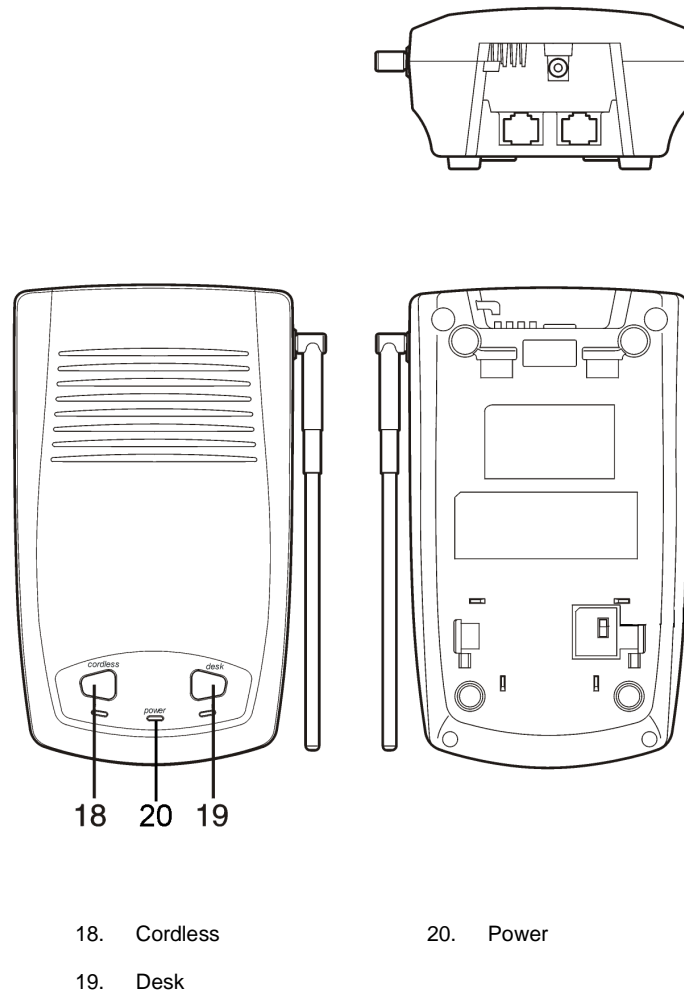
### SECTION 3 D<sup>term</sup> CORDLESS II CONTROLS AND FUNCTIONS

The primary components of the D<sup>term</sup> Cordless II consist of the handset and the base unit. Before using the telephone for the first time, you should become familiar with the controls and functions of the handset and base unit.



- |                             |  |
|-----------------------------|--|
| 1. Ringer ON/OFF Switch     | 10. Conference ( <b>CONF</b> ) Key                               |
| 2. Message Display          | 11. Transfer ( <b>TRANSFER</b> ) Key                             |
| 3. Hold ( <b>HOLD</b> ) Key | 12. Redial ( <b>REDIAL</b> ) or Desk/Cordless Softkey Switch Key |
| 4. Talk ( <b>TALK</b> ) Key | 13. Channel ( <b>CHAN</b> ) Key                                  |
| 5. Numeric Keypad           | 14. F3   |
| 6. F2                       | 15. F4   |
| 7. F1                       | 16. Ringer/Volume ( <b>R/VOL</b> ) Key                           |
| 8. Microphone               | 17. Mute ( <b>MUTE</b> ) Key                                     |
| 9. Headset Jack             |  |

**Figure 2-2 Handset Controls and Functions**



**Figure 2-3 Base Unit Controls and Functions**

### **SECTION 1     SELECTING A LOCATION**

Select a location for the D<sup>term</sup> Cordless II to avoid excessive heat or humidity. The base unit of the D<sup>term</sup> Cordless II can be placed on a desk or tabletop near a standard 120 Vac outlet and telephone line jack. The base unit can also be mounted on a standard wall plate using the wall mount adapter. Keep the base unit and handset away from sources of electrical noise (motors, fluorescent lighting, computers, PC monitor). Refer to *Chapter 1 Specifications and Safety Information* for a complete discussion of safety precautions.

### **SECTION 2     INSTALLATION PRECAUTIONS**

To ensure optimum performance follow these guidelines.

- Each base unit must be placed at least five feet apart.
- The base antenna should be raised to the vertical position.
- Always place the base unit on top of a desk or on higher shelves. Avoid locations surrounded by metal surfaces.
- Place the base away from any electrical component such as a PC, monitor and other telephone.

### **SECTION 3     CONNECTING THE TELEPHONE CORDS**

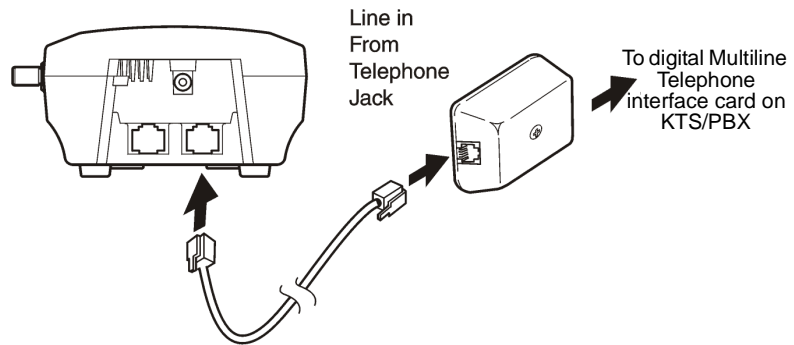
When connecting the telephone cords, observe the following precautions.

- Never install telephone wiring during a lightning storm.

- ❑ Never touch bare telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- ❑ Use caution when installing or modifying telephone lines.

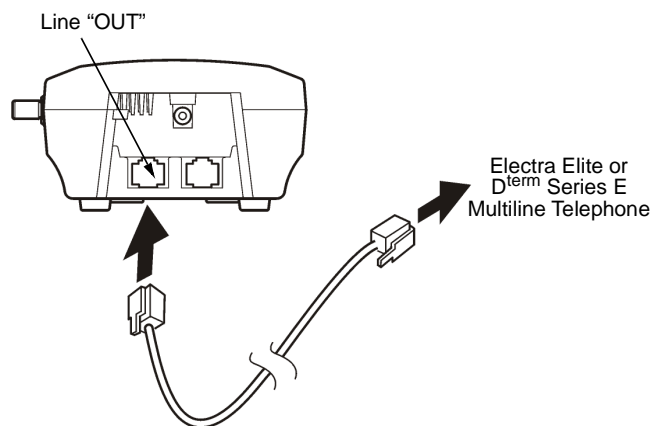
To connect the telephone cords:

1. Connect the cord from the telephone jack to the Line In on the D<sup>term</sup> Cordless II.



**Figure 3-1 Connecting Telephone Cords to the Telephone Jack**

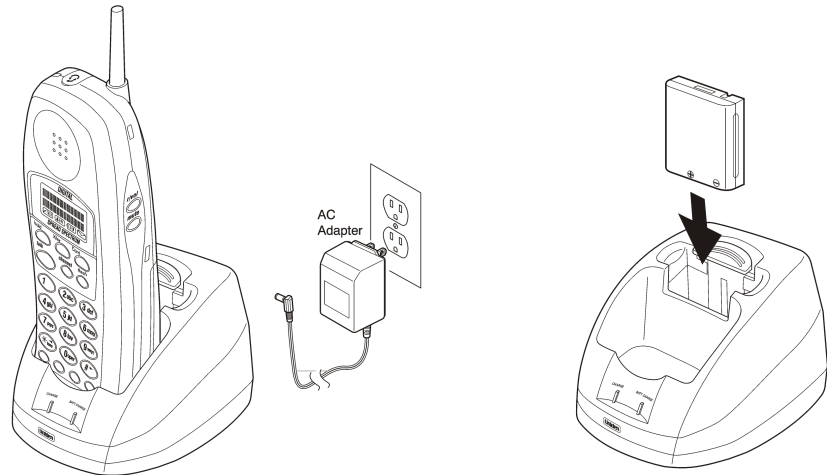
2. Connect a qualified NEC digital Multiline Terminal to the D<sup>term</sup> Cordless II.



**Figure 3-2 Connecting the D<sup>term</sup> Cordless II to the Multiline Terminal**

## SECTION 4      APPLYING POWER TO THE CHARGING UNIT

The unique design of the telephone allows the user to place the handset in the charging unit with or without the belt clip attached. The charging unit can charge a second battery with or without the handset being charged. The battery packs can automatically be recharged either in or out of the handset.



**Figure 3-3 Applying Power to the Charging Unit**



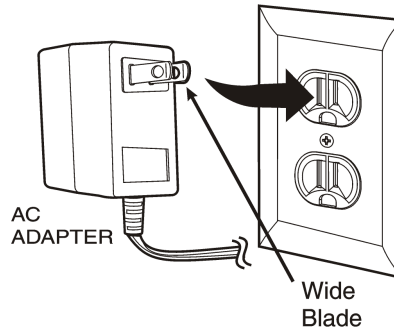
***Use only the supplied AC adapter for the charging unit.***

The AC adapter furnished with this telephone may be equipped with a polarized line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. Refer to *Figure 3-4 Polarized Plug*.

If you cannot plug the AC adapter into the outlet, the outlet may need to be replaced.



***Route the power cord where it will not create a trip hazard, or where it could become chafed and create a fire or other electrical hazards.***



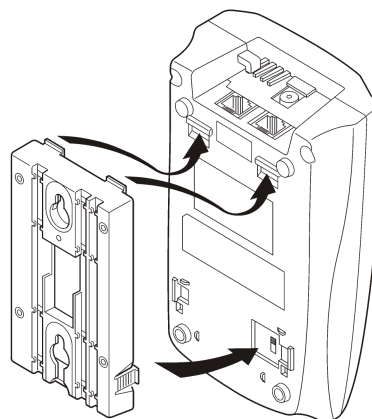
**Figure 3-4 Polarized Plug**

## **SECTION 5 WALL INSTALLATION**

### **Standard Wall Plate Mounting**

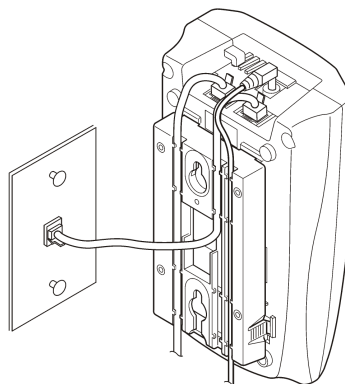
The base unit is designed to be mounted on standard wall plate. To attach the wall mount stand to the base unit:

1. Slide the wall mount stand into the notches at the top of the base unit. Rotate the wall mount stand down and snap it into place.



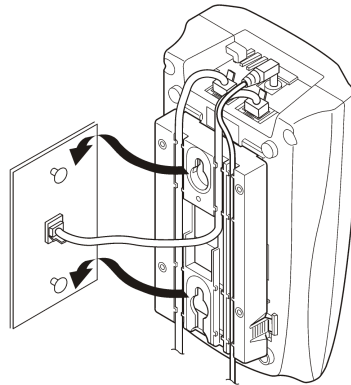
**Figure 3-5 Attaching the Wall Mount Stand to the Base Unit**

2. Plug the AC adapter into the base unit.
3. Place the AC adapter cord inside the molded channel of the wall mount stand.



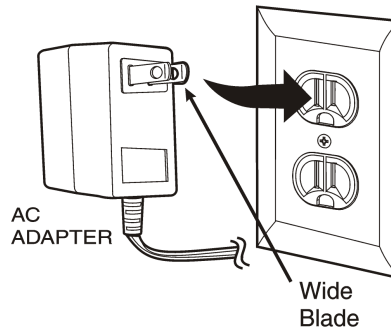
**Figure 3-6 Placing the AC Adapter Cord Inside the Wall Mount Stand**

4. Plug one end of the short telephone cord (locally supplied) in the **LINE** jack on the base unit. Plug one end of the NEC digital multiline telephone into the **PHONE** jack. Place the telephone cords inside the molded channels on the bottom of the wall mount stand.
5. Plug the other end of the short telephone cord into the modular wall jack in the center of the wall plate.
6. Place the base unit on the posts of the wall plate and push down until it is firmly seated.



**Figure 3-7 Placing the Base Unit on the Posts of the Wall Plate**

7. Plug the AC adapter into a standard 120 Vac wall outlet.
  - ⚠ Do not use an outlet controlled by a wall switch.



**Figure 3-8 Plugging the AC Adapter into the AC Wall Outlet**

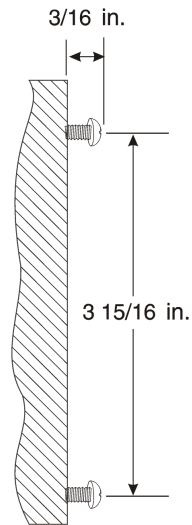
### Direct Wall Mounting

If a standard wall plate is not available, mount the telephone directly on the wall. Before mounting the telephone, consider the following:

- Select a location away from electrical cables, pipes, or other items behind the mounting location that could cause a hazard when inserting screws into the wall.
- Make sure the wall material is capable of supporting the weight of the base unit.
- Use #10 screws with anchoring devices suitable for the wall material where the base unit will be placed.

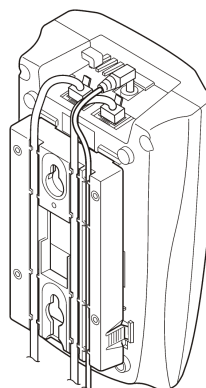
To mount the telephone:

1. Insert two mounting screws 3-15/16 inches apart. Allow about 3/16 of an inch between the wall and screw heads for mounting the telephone.



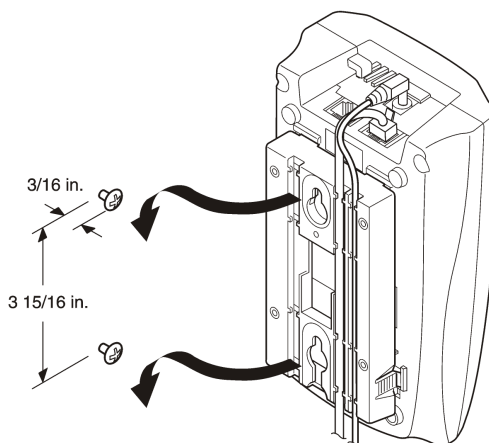
**Figure 3-9 Inserting Screws into the Wall for Wall Mounting the Telephone**

2. Plug in and secure the AC adapter.
3. Plug the AC adapter into the base unit.
4. Plug one end of the short telephone cord into the **LINE** jack on the base unit. Then plug one end of an Electra Professional or Electra Elite multiline telephone into the **PHONE** jack. Place the telephone cords inside the molded channels on the bottom of the wall mount stand.



**Figure 3-10 Placing the Telephone Cords into Inside the Wall Mount Stand**

5. Place the base unit on the posts of the wall screws and push down until it is firmly seated.



**Figure 3-11 Attaching the Wall Mount Unit to the Wall**

6. Plug the other end of the short telephone cord into a telephone wall jack.

7. Plug the AC adapter into a standard 120 Vac wall outlet. Refer to *Figure 3-8 Plugging the AC Adapter into the AC Wall Outlet on page 3-7.*
  - ☞ Do not use an outlet controlled by a wall switch.

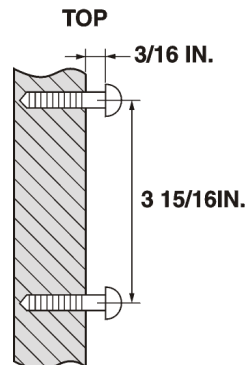
## Charging Unit Wall Mounting

The charging unit is also designed to be wall mounted. Before mounting the charging unit, consider the following:

- Select a location away from electrical cables, pipes, or other items behind the mounting location that could cause a hazard when inserting screws into the wall.
- Make sure the wall material is capable of supporting the weight of the charging unit.
- Use #10 screws with anchoring devices suitable for the wall material where the charging unit will be placed.

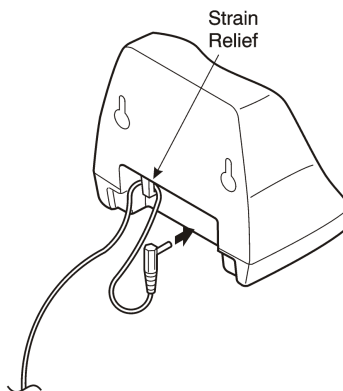
To mount the charging unit:

1. Insert two mounting screws one inch apart. Allow about  $3/16$  of an inch between the wall and screw heads for mounting the telephone.



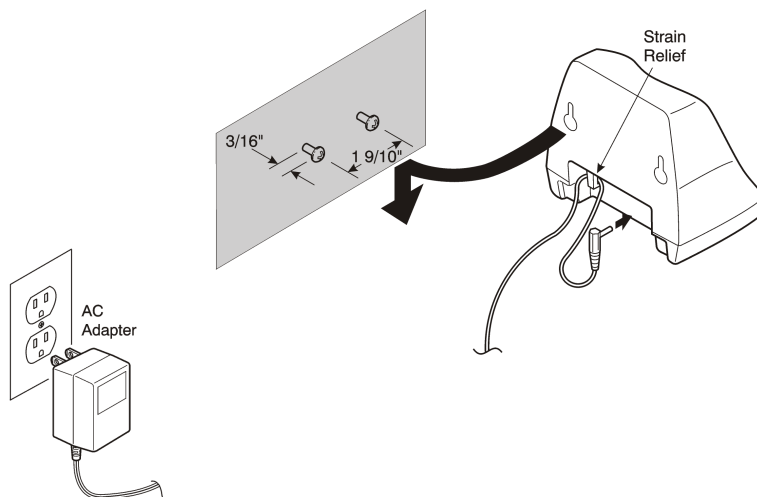
**Figure 3-12 Inserting Screws for Wall Mounting**

2. Plug the AC adapter into the charging unit. Wrap the AC adapter cord around the strain relief.



**Figure 3-13 Wrapping the AC Adapter Cord Around the Strain Relief**

3. Place the charging unit on the posts of the wall screws and push down until it is firmly seated.



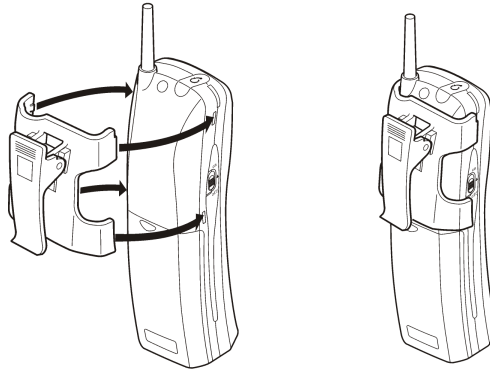
**Figure 3-14 Placing the Charging Unit on the Wall**

4. Plug the AC adapter into a standard 120 Vac wall outlet. Refer to *Figure 3-14 Placing the Charging Unit on the Wall*.

## SECTION 6 ATTACHING AND REMOVING THE BELT CLIP

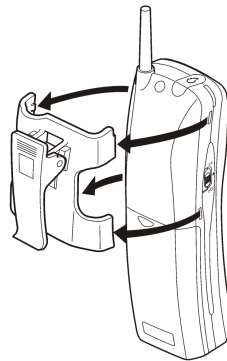
A belt clip can be used to attach the handset to a belt or pocket for convenient portability.

1. Slide the clip into the tab slots. Press firmly until it snaps into place. The belt clip is designed to fit snugly onto the handset.



**Figure 3-15 Attaching the Belt Clip to the Handset**

2. To remove the clip, press the retaining clip in toward the belt clip blade and slide the clip up at the same time.

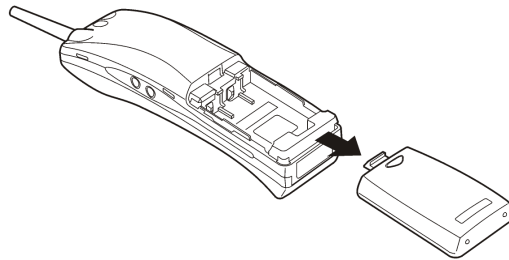


**Figure 3-16 Removing the Belt Clip**

## SECTION 7      INSTALLING THE HANDSET BATTERY PACK

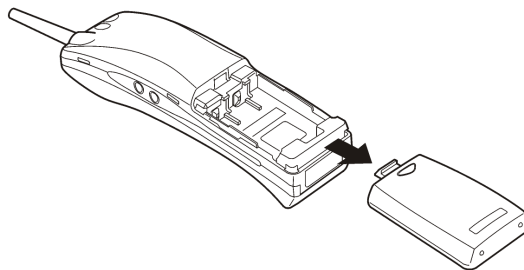
Before installing batteries, refer to *Chapter 1 Specifications and Safety Information, Section 2 Battery Safety on page 1-2*. It is important to follow safety regulations when handling batteries.

1. Remove the battery cover by pressing the latch and sliding the cover down and off of the handset.



**Figure 3-17 Removing the Battery Cover**

2. Slide the battery pack down into the handset.
  - ☞ It may be necessary to remove the old battery at this time.



**Figure 3-18 Replacing the Battery Pack**

3. Replace the cover and slide it up until it latches onto the handset.

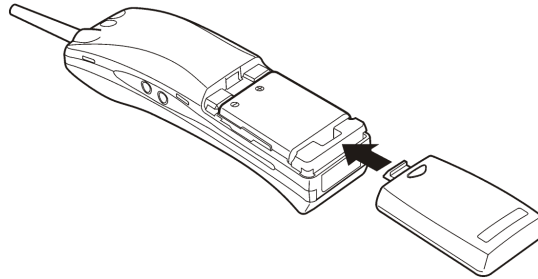


Figure 3-19 Replacing the Battery Cover

## SECTION 8 CHARGING BATTERIES

### Charging the Handset Battery Pack

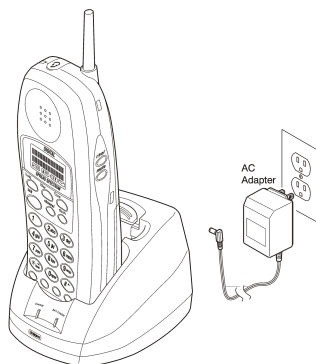
The rechargeable battery pack must be fully charged before using the D<sup>term</sup> for the first time.

- ☞ Charge the battery pack without interruption for five to eight hours.
1. Place the handset in the front slot of the charging unit.
  2. Make sure the **CHARGE 1** indicator lights. If the **CHARGE 1** LED does not come on, check to see if the AC adapter is plugged in and that the handset is making good contact with the charging contacts on the charging unit.
    - ☞ The **CHARGE 1** LED turns red during and after charging the handset with the battery.

### Battery Hot Swap

The battery can be hot swapped while a conversation is taking place. The battery must be changed within 30 seconds otherwise, connection will be lost.

Refer to *Section 7 Installing the Handset Battery Pack* on page 3-13 for instructions for changing batteries.



**Figure 3-20 Charging Unit**

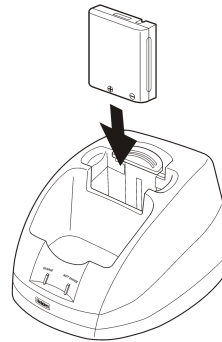
### Charging Spare Battery Packs

The D<sup>term</sup> Cordless II is equipped with a battery charger for charging the spare battery pack.

1. Slide the spare battery pack into the second slot in the charging unit until the retaining clip snaps over the top of the pack.
2. Make sure the **CHARGE 2** LED lights. If it does not light, check that the AC adapter is plugged in and that the battery pack is making contact with the charging contacts on the charging unit.

Charging is complete when the **CHARGE 2** LED goes off.

- ☞ Charge the battery pack without interruption for five to eight hours.



**Figure 3-21 Charging the Battery Pack**

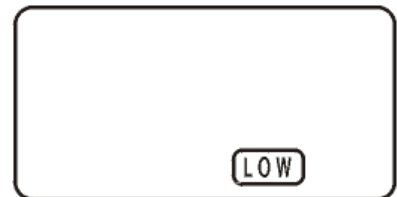
3. When charging is complete, press on the latch and remove the battery pack. If the battery pack is not needed immediately, leave it in the charging compartment (it will not overcharge).

## **SECTION 9 LOW BATTERY INDICATOR**

The handset has visual and audible indicators to warn of a low battery condition. The indicators are different for standby mode and talk mode.

### **Standby Mode**

The handset display turns on the battery low icon. All LEDs are turned off and LCD messages are cleared. All keys are disabled. A battery low alert tone will be emitted every 15 seconds and lasts for three minutes.



### Talk Mode

The handset display turns on the battery low icon. All keys and functions are available. The battery low alert tone will be emitted every three seconds as long as conversation continues. After conversation is completed, the handset returns to the battery low condition in standby mode.



When you receive the low battery indication, return the handset to the base unit for charging or replace the handset battery pack with another charged battery pack. Refer to *Section 8 Charging Batteries on page 3-14* or *Section 7 Installing the Handset Battery Pack on page 3-13*.

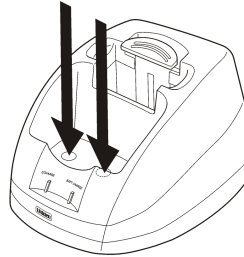
The following table indicates what occurs and the action to be taken during a call or in standby mode when low battery indication is displayed.

**Table 3-1 Low Battery**

On a Call	In Standby Mode
What occurs when <b>batt low</b> is displayed:	
Only the <b>TALK</b> key operates	None of the keys operate
Handset beeps once every three seconds	Handset beeps every 15 seconds for 15 minutes
Action:	
Complete the call as quickly as possible	Cannot make a call
Replace the battery pack within 30 seconds to continue a call	Replace the battery pack before making another call

## SECTION 10 CLEANING THE BATTERY CHARGE CONTACTS

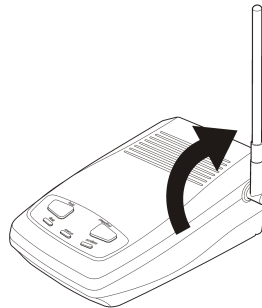
To maintain a good charge, it is important to clean all charging contacts on the handset and charging unit about once a month. Use a pencil eraser or other contact cleaner. Do not use liquids or solvents.



**Figure 3-22 Cleaning Battery Charge Contacts**

## SECTION 11 ANTENNA

Before using the D<sup>term</sup> Cordless II, raise the antenna to the vertical position as illustrated in *Figure 3-23 Raising the Base Unit Antenna*.

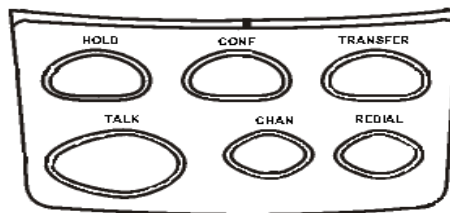


**Figure 3-23 Raising the Base Unit Antenna**

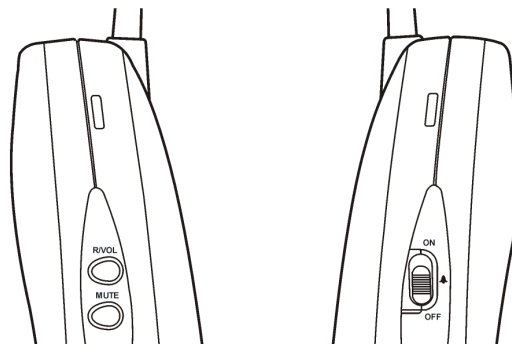
### SECTION 1 HANDSET CONTROLS

The operations of the D<sup>term</sup> Cordless II are performed using the handset. The **HOLD**, **CONF** (conference), **TRANSFER**, **TALK**, **CHAN** (channel), and **REDIAL** keys are used to control various functions. Volume, ringer, and mute are controlled by the keys on the side of the handset.

Refer to *Table 4-1 Handset Control Functions* for an explanation of the handset controls.










Handset Controls







Volume Controls

**Figure 4-1 Handset Controls**

Table 4-1 Handset Control Functions

Condition	Action
Hold Key <b>HOLD</b> 	Press <b>HOLD</b> on the front of the handset to place an existing call on hold.
Transfer Key <b>TRANSFER</b> 	Press <b>TRANSFER</b> on the front of the handset to transfer a call.
Conference Key <b>CONF</b> 	Press <b>CONF</b> on the front of the handset to add a call to a conference.
Talk Key (Standby Mode) <b>TALK</b> 	Press <b>TALK</b> on the front of the handset to make a call. The telephone first acquires a line to the base.
Channel Key (during a call) <b>CHAN</b> 	Press <b>CHAN</b> , the talk indicator flashes twice as the base unit switches to a different channel.
Redial Key or Desk/Cordless Softkey Switch <b>REDIAL</b> 	Press <b>REDIAL</b> to dial the number that was previously dialed or to perform desk/cordless softkey switching.   Desk/Cordless softkey switching must be programmed on the <b>REDIAL</b> key. At system default, the redial function is available.

**Table 4-1 Handset Control Functions (Continued)**

Condition	Action
<p>Ringer Select (Standby Mode)</p> <p>R/VOL</p> 	<p>Press <b>r/vol</b> on the side of the handset to select one of the following ringer type settings:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ring Type A (High)</li> <li><input type="checkbox"/> Ring Type A (Low)</li> <li><input type="checkbox"/> Ring Type B (High)</li> <li><input type="checkbox"/> Ring Type B (Low)</li> <li><input type="checkbox"/> Ring Type C (High)</li> <li><input type="checkbox"/> Ring Type C (Low)</li> <li><input type="checkbox"/> Ring Off (Silent Alarm)</li> </ul>
<p>Volume Control (Talk Mode)</p> <p>R/VOL</p> 	<p>Press <b>r/vol</b> on the side of the handset to select one of the following volume level settings:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Volume Low</li> <li><input type="checkbox"/> Volume Medium</li> <li><input type="checkbox"/> Volume High</li> <li><input type="checkbox"/> Volume Maximum</li> </ul>
<p>Mute Key</p> <p>MUTE</p> 	<p>Press <b>mute</b> on the side of the handset to mute a conversation.</p>
<p>Volume/Ringer On/Off Key</p> <p>ON</p>  <p>OFF</p>	<p>Slide the lever upward to turn the volume/ringer on, slide the lever downward to turn the volume/ringer off.</p>

## SECTION 2      SETTING UP AND PROGRAMMING THE DTR-4R-1

### Programming Mode

1. Press and hold down **\*** and **#**, then press the **TALK** key. The **F1** LED flashes red.
2. Press the **R/VOL** key repeatedly to scroll through the line key (LK) and feature options for function key **F1**.
3. Press the **MUTE** key to select the displayed line key or feature.
4. Press the **R/VOL** key to toggle between 'TALK' for On or 'NO TALK' for Off.
  - ☞ 'TALK' is selected when the **F1~F4** function keys are programmed for CO or Call Appearance Keys. 'NO TALK' is selected when **F1~F4** function keys are programmed for functions not requiring an off-hook state (e.g., Log On/Off or DND).
5. Press the **MUTE** key to advance to the next function key (**F2 ~ F4**).
6. After programming **F4**, press the **MUTE** key to advance to global off-hook ringing assignment.
7. Press **R/VOL** to turn global off-hook ringing on or off (LCD indicates ON or OFF as appropriate).
8. Press the **TALK** key to exit.
  - ☞ Function keys (**F1 ~ F4**) can be programmed as line keys 1~16 for redial (LNR/SPD), answer (ANS), feature (FNC), or recall. When assigned, these keys operate the same as on an NEC multiline telephone.
  - ☞ When initially installed, function keys (**F1~F4**) default to line keys 1~4 respectively and off-hook ringing defaults to ON.
  - ☞ Global off-hook ringing must be set to ON (default) if any function key is to operate with off-hook ringing.

## Switching Between the Desktop Multiline Telephone and the Cordless Telephone Using the Base Unit

When the D<sup>term</sup> Cordless II is associated with a multiline telephone the following is applicable:

- ❑ Switching between *cordless* and *desk* mode must be done while **both** telephones are idle.
- ❑ A call in progress **cannot** be switched between the D<sup>term</sup> Cordless II and the associated multiline telephone.
- ❑ Switching held calls between the D<sup>term</sup> Cordless II and the associated multiline telephone is not recommended since line key LED indications will not be provided.

Use the base unit on the D<sup>term</sup> Cordless II to switch between the D<sup>term</sup> Cordless II and the multiline telephone.

To perform switching:

Press **Cordless** to select the D<sup>term</sup> Cordless II.

- OR -

Press **Desk** to select the Multiline Telephone. (Refer to *Figure 4-2 Cordless and Desk Buttons*.)

- ☞ The D<sup>term</sup> display indicates DESK TEL when the multiline telephone is connected.

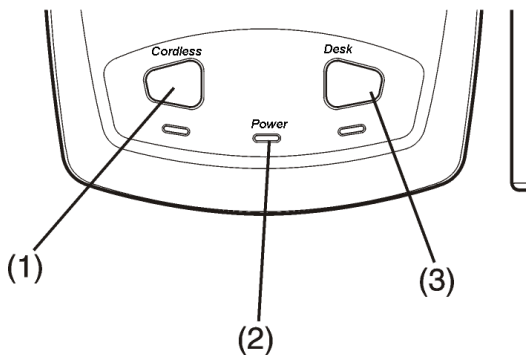


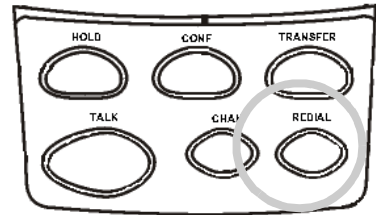
Figure 4-2 Cordless and Desk Buttons

## Switching from Desk to Cordless Using a Softkey

At system default, the **REDIAL** key can only be used for the redial function. However, the **REDIAL** key can be programmed to perform desk to cordless switching. If the handset is in desk mode, the **REDIAL** key can be pressed to automatically switch the handset from desk mode to cordless mode.

To program the **REDIAL** key for desk/cordless softkey switching:

1. Ensure the base unit is in desk mode.
2. Remove the battery pack. Refer to *Chapter 3 Installing the D<sup>term</sup> Cordless II, Section 7 Installing the Handset Battery Pack on page 3-13.*
3. Simultaneously press and hold the \* and # keys on the handset.
4. While continuing to hold the \* and # keys, install the battery.
5. After the handset beeps one time, release the keys. The handset is now in setup mode.
6. Press the **HOLD** key to display the current mode. Digital (Redial) is displayed in the LCD.
7. Press the **F2** key and then the **HOLD** key. Digital (F8) is displayed in the LCD. Desk/cordless softkey switching mode is now set.
8. Press the **TALK** key once to restore the handset to standby mode.
  - ☞ To verify that the desk/cordless softkey switching mode has been properly set, press the **REDIAL** key once. If properly set, the base unit LED automatically changes from desk to cordless. The LEDs will only change the first time the **REDIAL** key is pressed.
  - ☞ **F1~F4** keys can be programmed for the redial function. Refer to *Programming Mode on page 4-4.*



To restore the **REDIAL** key to the redial function:

1. Enter setup mode (refer to steps 1~5 *Switching from Desk to Cordless Using a Softkey on page 4-6*).
2. Press the **F3** key and then the **HOLD** key. Digital (Redial) is displayed in the LCD indicating that the redial function has been restored to the **REDIAL** key.
3. Press the **TALK** key once to restore the handset to standby mode.

### SECTION 3 USING THE HANDSET

When using the handset, different status indications are displayed in the handset LCD.

#### Acquiring Link

When the **TALK** key on the handset is pressed, the handset attempts to connect to the base unit. The ACQUIRING LINK message blinks on the handset display (300 msec ON/300 msec OFF) to indicate that connection is in progress.



After the connection is made between the handset and base unit, a message is displayed in the LCD to indicate the condition of the handset. Refer to *Table 4-2 LCD Display Indicators* for a list of possible conditions.

**Table 4-2 LCD Display Indicators**

Condition	Indicator	LCD Display
Line OK	TALK Icon	N/A
No Connection to Base Unit	Error Tone	NO SERVICE
Channel Busy	Error Tone	SYSTEM BUSY
Line in Use	Error Tone	LINE IN USE
No Line Selected	TALK Icon	NO LINE SELECTED

### Volume Low

When connection is established, the TALK icon is turned on and displays the current volume settings for two seconds. If the host system sends any messages at this time, the volume display is canceled.



### Dialing

When the handset displays this message, it is prompting the user to enter the numbers to be dialed.



### No Service

When the handset cannot connect to the base unit, an error tone is emitted and NO SERVICE is displayed for two seconds on the handset LCD. The handset then goes into standby mode. When the NO SERVICE indication is received, take one the following actions described in *Table 4-3 No Service Conditions* to resolve the NO SERVICE condition.



**Table 4-3 No Service Conditions**

	During a Call	In Standby Mode
Condition	Warning Tone	Cannot make or answer calls (telephone may ring intermittently).
Action	Move back in range within 20 seconds.  Check power to the base unit.	Move back within range.  Check power to the base unit.

## SECTION 4 ANSWERING A CALL

To answer a call when the handset is in the charging unit:

1. When a call is received, the handset rings and the LED on one of the function keys (assigned to a line key) flashes.
2. Pick up the handset. The *AutoTalk* feature allows the call to be answered immediately.
3. When the call is finished, place the handset back in the charging unit. *AutoStandby* automatically hangs up the phone.

**-OR-**

If the handset is away from the charging unit, press **TALK** to hang up the telephone.

To answer a call if the handset is not in the charging unit:

1. When a call is received, the handset rings and the red LED on one of the function keys flashes.
2. Press the function key with the flashing LED to answer the call.

**-OR-**

Press **TALK** to answer the incoming call.

- ⓘ The Ringing Line Preference feature must be enabled in order to answer calls with the **TALK** key. Contact an authorized NEC Dealer for programming this feature.
  - ⓘ If two or more calls come in at the same time, pressing the **TALK** key answers the prime line.
3. When the call is finished, place the handset back on the charging unit. *AutoStandby* automatically hangs up the telephone.

**-OR-**

If the handset is away from the base unit, press **TALK** to hang up the telephone.

## SECTION 5 MAKING A CALL USING THE D<sup>term</sup> CORDLESS II

Several advanced features for making calls are available depending on how the deskset is programmed. Refer to *Section 6 Dedicated Feature Operations*. This section describes normal call handling.

1. Remove the handset from the charging unit.
2. Press the **TALK** key. The talk icon appears after the handset and base unit are connected.

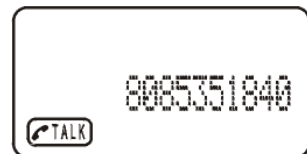
**-OR-**

Press the designated function key (programmed as a line key). When dial tone is heard, enter the number to be called. The display shows the dialed telephone number.

3. When the call is finished, place the handset back in the charging unit. The *AutoStandby* automatically hangs up the telephone.

**-OR-**

If the handset is away from the charging unit, press **TALK** to hang up the telephone.



## SECTION 6 DEDICATED FEATURE OPERATIONS

Calls can be placed on hold, transferred to another extension, or two or more parties can be conferenced. These operations depend upon how they are set up in the key system.



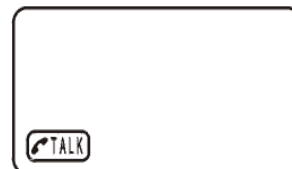
*The handset must be within range of the base for the special operations to function properly.*

## Placing a Call on Hold

1. Press **HOLD** on the handset during the call. The LED associated with the line key being used flashes.
2. To return to the holding call, press the associated line key.

## Muting a Call

1. Press the **MUTE** key on the handset during a call. The 'TALK' icon blinks on the display.
2. To turn mute off, press the **MUTE** key again and the call is restored.



## Transferring Calls

Calls can be forwarded to another extension. To transfer a call:

1. Press the **TRANSFER** key and the telephone number of the transfer destination.
2. Wait for the party to answer, then press the **TALK** key to hang up. The two parties can now converse.

## Setting up a Conference Call

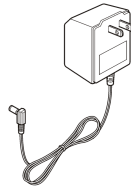
This feature allows the user to set up a 3-party conference (the user and two other parties).

To set up the conference:

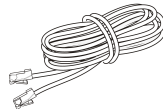
1. Dial the first number for the first party.
2. When the first party answers, press the **CONF** key.
3. Dial the second number for the second party.
4. Press the **CONF** key again. A 3-party conference is now established. If any party hangs up, the conference only includes the remaining parties.

## SECTION 1 OPTIONAL ACCESSORIES AND REPLACEMENT PARTS

Optional accessories and replacement parts can be obtained by contacting your NEC representative.



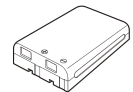
Adapter for Base Unit



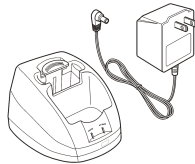
Telephone Cord



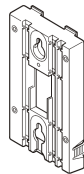
Belt Clip



800 mAh Battery



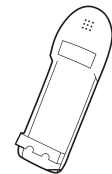
Charger and AC Adapter



Base Unit Wall Mount



Headset



Leather Case

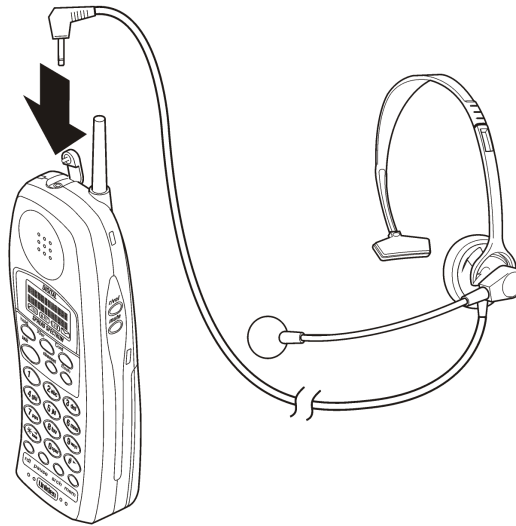
**Figure 5-1 Optional Accessories and Replacement Parts**

## SECTION 2     INSTALLING THE OPTIONAL HEADSET

The optional headset provides a handsfree option for the D<sup>term</sup> Cordless II. With the headset installed, the user can use the belt clip to carry the handset and conduct a conversation using the headset.

To install the headset:

Open the cover over the headset jack and plug the headset into the receptacle.



**Figure 5-2 Installing the Headset**

No other settings are needed. Operation of the headset is the same as the handset. However, the user hears through the headset earphone and talks through the headset microphone. The handset earphone and microphone (mouthpiece) are disconnected.

If the D<sup>term</sup> Cordless II is not performing to your expectations, try these simple steps. If this does not resolve the problems, contact the NEC representative.

☞ Do not attempt to service this unit yourself. All service must be done by qualified service personnel.

**Table 6-1 Troubleshooting**

<b>Problem</b>	<b>Suggestion</b>
<b>CHARGE 1</b> light will not come on when the handset is placed in the charging unit.	<ul style="list-style-type: none"><li>• Make sure the AC adapter is plugged into the charging unit and wall outlet.</li><li>• Make sure the handset is properly seated in the charging unit.</li><li>• Make sure the nickel-cadmium battery pack is properly installed in the handset.</li><li>• Make sure that the charging contacts on the handset and charging unit are clean.</li></ul>
<b>CHARGE 2</b> light will not come on when the spare battery is placed in the charging unit (low battery only).	<ul style="list-style-type: none"><li>• Make sure the AC adapter is plugged into the charging unit and wall outlet.</li><li>• Make sure the spare battery is properly seated in the base unit.</li><li>• Make sure the charging contacts on the handset and charging unit are clean.</li></ul>

**Table 6-1 Troubleshooting (Continued)**

<b>Problem</b>	<b>Suggestion</b>
Conversation is interrupted frequently.	<ul style="list-style-type: none"><li>• Make sure the base unit antenna is fully vertical.</li><li>• Move closer to the base unit.</li><li>• Check for <b>low batt</b> warning.</li></ul>
Warning tone and NO SERVICE message	<ul style="list-style-type: none"><li>• Move closer to the base unit.</li></ul>
Handset does not ring	<ul style="list-style-type: none"><li>• The nickel-cadmium battery may be weak. Charge the battery pack for eight hours.</li><li>• Make sure the base unit antenna is fully vertical.</li><li>• The handset may be too far from the base unit.</li><li>• Make sure the ringer on/off switch is in the ON position.</li></ul>

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# NEC

## **D<sup>term</sup>™ Cordless II**

### **DTR-4R-( ) (BK)**

### **OWNER'S GUIDE**

NEC Unified Solutions, Inc.

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