



## Internet Phone User Guide

For Meridian SL-100 Integrated Gateway (IGW) Access

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Installing the ...	i2004 Internet Telephone	2
	i2050 Software Phone	23
Basic Functions of the...	i2004 Internet Telephone	12
	i2050 Software Phone	44
Using Network Services with an ...	i2004 or i2050 Phone	61

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## **Installing the i2004 Internet Telephone**

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<a href="#">The i2004 Internet Telephone – Emissions Class A Product</a>	4
<a href="#">The i2004 Internet Telephone – Introduction</a>	5
<a href="#">Installing the i2004 Internet Telephone</a>	7
<a href="#">Connecting the i2004 Internet Telephone</a>	7
<a href="#">Initializing the i2004 Internet Telephone</a>	8
<a href="#">Entering a DN Key</a>	11

## Installing the i2004 Internet Telephone

### ***The i2004 Internet Telephone – Emissions Class A Product***

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

NOTE: This equipment has been tested and found to comply with the limits for a digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Use only with a Nortel recommended, approved Limited Power Source; output rated: 16VAC, 500mA, 50/60Hz.

## ***The i2004 Internet Telephone - Introduction***

Internet Protocol (IP) telephony is the next generation of telecommunication services that integrates voice and data capabilities to enhance everyday communications and increase productivity. IP telephony takes advantage of new high-bandwidth central office technologies to provide any service, anywhere, at anytime – instantly.

Nortel Networks has developed the **i2004 Internet Telephone** to work on your corporate local area network (LAN) to deliver voice over IP (VoIP) services. The i2004 Internet Telephone works in concert with your existing Centrex- or PBX-based telephone system (see Figure 1).

**Figure 1**



The i2004 Internet Telephone and the Terminal Proxy Server (TPS) software are built on H.323 standards established by the International Telecommunications Union for multimedia communications over packet-based networks such as a corporate LAN. This means your phone will work in harmony with other IP-based software and hardware.

The design of the i2004 Internet Telephone includes one-button access to features like speakerphone and voicemail, and it supports the unique requirements of various users. Additional features and functionality of the i2004 Internet Telephone include its display screen, softkeys and multiple line appearances.

The i2004 Internet Telephone includes special keys that provide instant access to features of the set (see Figure 2). The use of these keys is discussed in more detail throughout this User Guide.

**Figure 2**



## ***Installing the i2004 Internet Telephone***

**Before installing your i2004 Internet Telephone, consult your system administrator to avoid serious damage to the set.**

Your system administrator must create a terminal profile and provide you with an IP address and other information required to initialize the set. Be sure you have this information before installation:

- You will need the primary Directory Number or DNKey
- You will need to know whether your system uses full, partial or no DHCP
- If your system does not use full DHCP, you will need the parameter information listed in Table 1 on page 10.

## **Connecting the i2004 Internet Telephone**

**CAUTION** – Severe damage will occur if this set is plugged into an ISDN connection. Consult your system administrator to assure that you are plugging your set into a 10/100 BaseT Ethernet jack.

To connect the i2004 Internet Telephone, follow these steps:

**Step 1:** Connect one end of the handset cord to the handset jack on the telephone base, and connect the other end of the handset cord to the handset.

**Step 2:** Connect one end of the line cord to the line cord jack on the telephone base and the other end of the line cord to an IP voice network, using a CAT-5 cable with an RJ45 connector.

**Step 3:** Plug the AC power adapter into the base of the telephone, and plug the adapter into the nearest 120V AC (60 Hz) outlet.

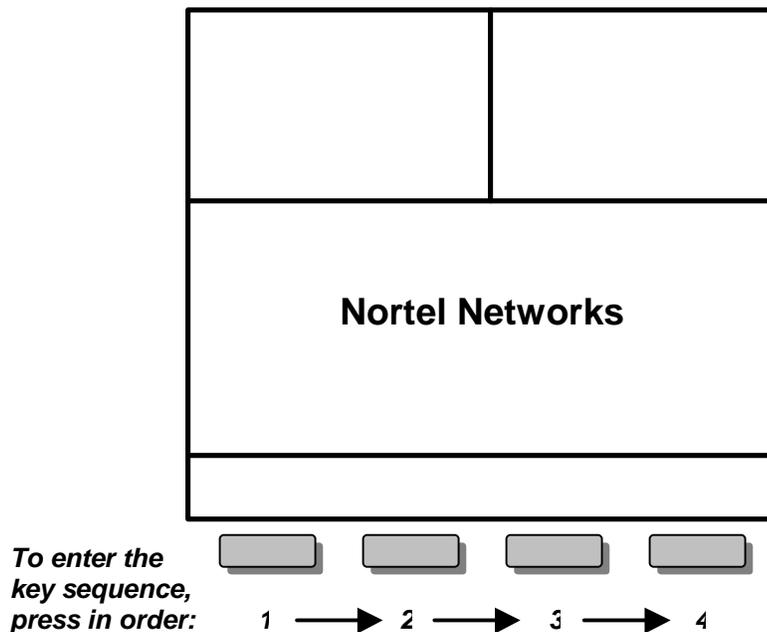
## Initializing the i2004 Internet Telephone

When you first connect your i2004 Internet Telephone to a power source, all hardkey indicator lights and softkey icons may flash. This indicates that the phone has not yet been initialized. You may need to contact your system administrator to determine the correct information to use during the initialization procedure.

When the i2004 Internet Telephone is first powered up, you will see the introduction screen as shown in Figure 3 below. To begin the initialization process, you must enter a **key sequence** while the introduction screen appears after powering your i2004 Internet Telephone. If the key sequence is not entered within the first two seconds of the initialization process, your set will be initialized with previously entered parameters.

Enter the initialization key sequence by pressing each of the four softkeys (located at the bottom of the display screen) once, pressing from left to right.

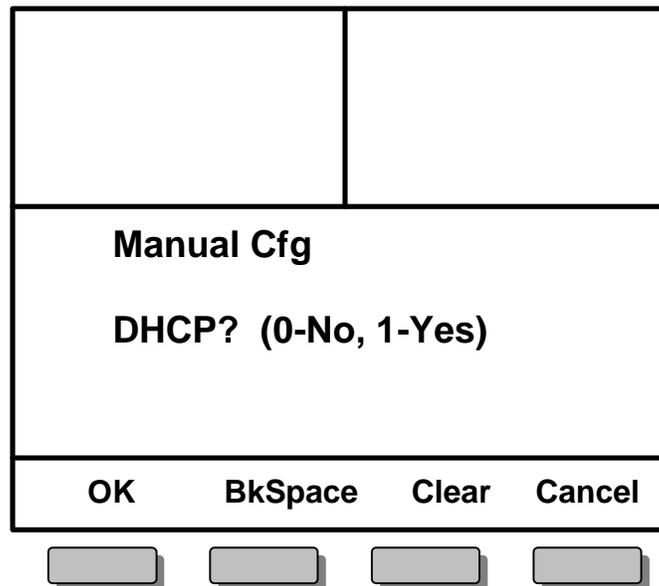
**Figure 3**



The default entry for each parameter will be displayed on the screen (see Figure 4).

**NOTE:** Some versions of the i2004 begin with the prompt 'SET IP'. You will then be asked to edit or accept all of the parameter information in Table 1 on page 10. The last parameter prompt will be 'DHCP?'. In this situation, you should enter **0** – the set will then display 'Locating server' (see Figure 5 and go to the instructions that follow it).

**Figure 4**



On most i2004 sets, you are first prompted to set DHCP parameters.

**If the i2004 will use DHCP**, enter a **1** on the keypad. You will be asked to indicate the level of DHCP use; enter **0** for full DHCP (parameters will be set automatically) or **1** for partial DHCP (parameters will be partially entered). Once parameters are entered, 'Locating server' will appear on the display (see Figure 5 and go to the instructions that follow it).

**If the i2004 will not use DHCP**, enter a **0** on the keypad. You will be prompted to set all necessary parameters manually.

As you enter parameters manually, use the **BKSPACE** or **CLEAR** softkeys to edit the default entry. BkSpace will delete each character as the key is pressed. Clear will delete the entire entry.

Enter requested information in the menu fields by pressing the number keys on the dialpad. Press the \* key to enter a period (".") when entering the set's IP address.

Pressing **OK** will record the entry and advance the initialization to the next parameter. Pressing **CANCEL** will abandon the manual configuration process and restart the power-up process.

Each parameter must have a corresponding entry. An error "beep" will notify you if you attempt to advance to the next parameter without a field entry.

The following table defines the required parameters.

**Table 1**  
**i2004 Installation Parameters**

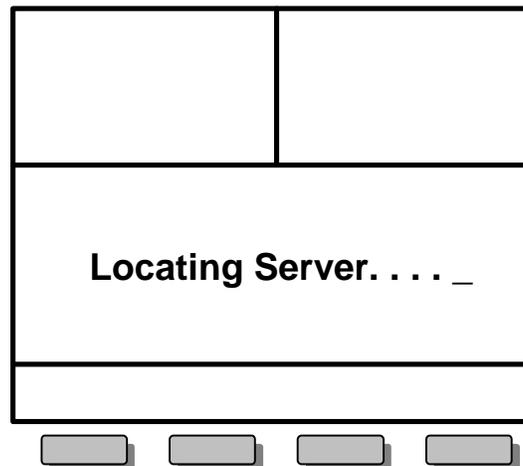
Parameter	Definition
SET IP	IP address for the i2004 Internet Telephone
NETMASK	Net submask
DEF GW	Default gateway IP network address
S1 IP	IP address of the communications server
S1 PORT	Listening port of the communications server
S1 ACTION	Enter 1 for UNISlim
S1 RETRY COUNT	Primary retry count (value from 0-255, enter 10)
S2 IP	Enter value for "S1 IP"
S2 PORT	Enter value for "S1 PORT"
S2 ACTION	Enter value for "S1 ACTION"
S2 RETRY COUNT	Enter value for "S1 RETRY COUNT"

Your system platform may require additional parameters. See your system specific User Guide for details.

## Entering a DN Key

When each parameter has been entered, your i2004 Internet Telephone will attempt to connect to the server (see Figure 5).

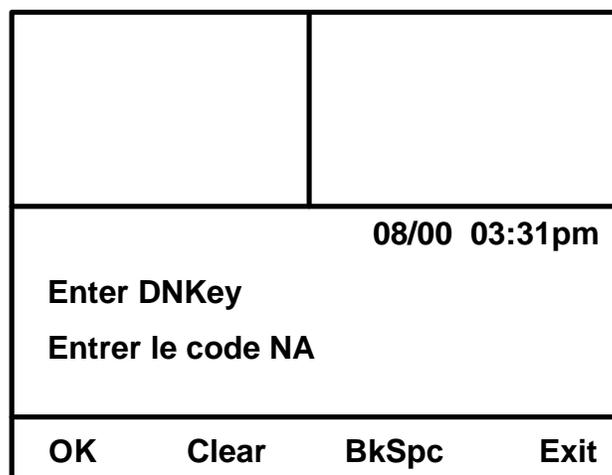
**Figure 5**



If your telephone set cannot locate the server, it will automatically retry every two minutes. After several attempts, if your telephone set does not locate the server, contact your system administrator for assistance.

After successfully connecting to the server, you will be prompted to enter the DNKey (see Figure 6). Enter the 10-digit or 20-digit DN key provided by your system administrator and then press the **OK** soft key.

**Figure 6**



Your system administrator may have assigned a password to your DN. If so, you will be prompted to enter the password.



## **Basic Functions of the i2004 Internet Telephone**

## Basic Functions of the i2004 Internet Telephone

<a href="#">Display Screen</a>	14
<a href="#">Softkeys</a>	15
<a href="#">Multiple Line Appearances</a>	16
<a href="#">Icons</a>	17
<a href="#">Basic Calls</a>	18
<a href="#">Making a Call</a>	19
<a href="#">Pre-Dialing</a>	20
<a href="#">Answering a Call</a>	21

## Basic Functions of the i2004 Internet Phone

### *Display Screen*

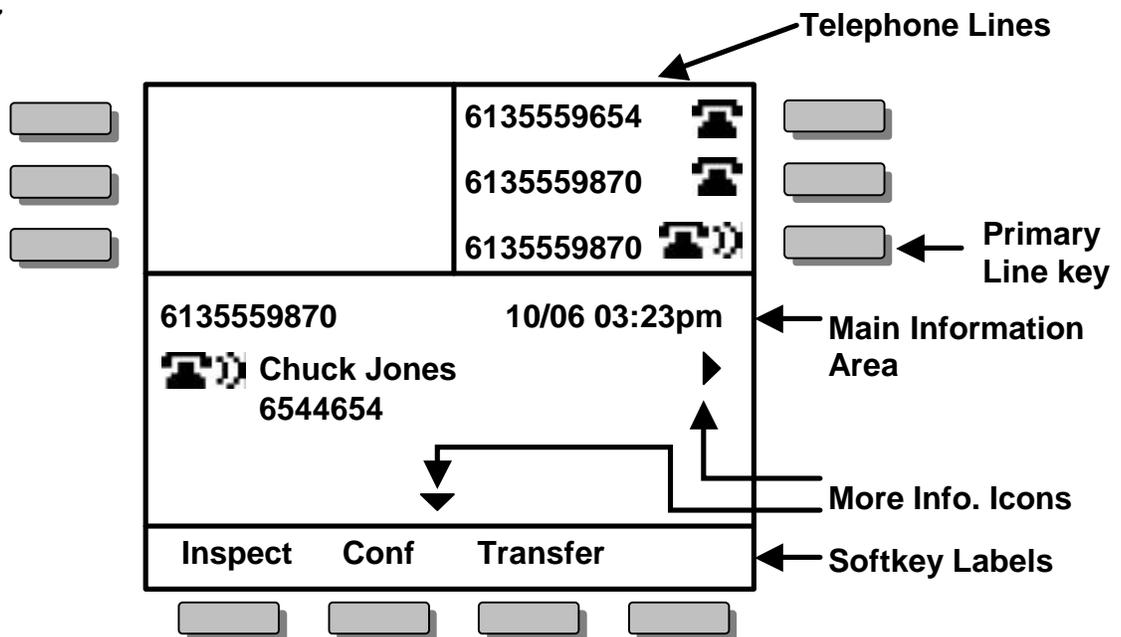
The i2004 Internet Telephone is a feature-rich capable telephone that has a built-in display screen for ease of use.

The display screen has three areas to show different types of information (see Figure 7). The top half of the display screen shows the available telephone lines associated with your i2004 Internet Telephone. Your primary telephone line will always be associated with the lower right-hand **LINE** key and is highlighted with a special green key.

The middle portion of the display screen is the main information area and identifies incoming callers by name and number (if programmed with Caller ID) and provides status messages. When the telephone is idle, this display area identifies the current date and time and reminds you if your phone is forwarded or blocked from receiving incoming calls.

The lower portion of the display screen provides "on screen" information about the available features programmed for each softkey on your i2004 Internet Telephone. These features are easily accessed by pressing the corresponding keys.

**Figure 7**

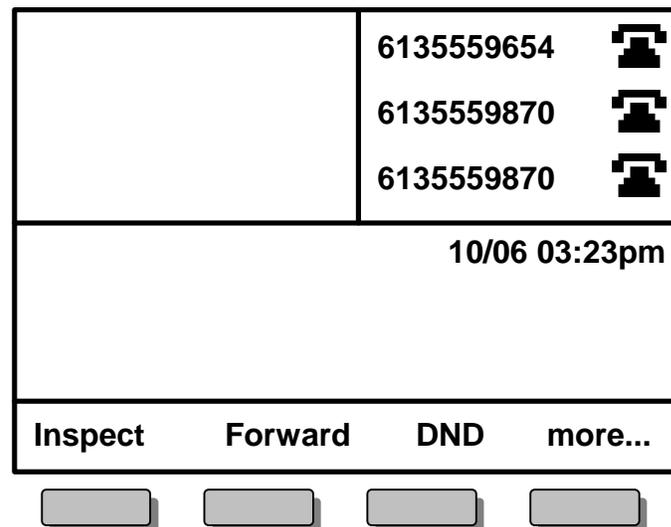


## Softkeys

The softkeys on the i2004 Internet Telephone add greater versatility and provide easy access to features that are customized for your current call activity. For example, while on a call, softkeys offer one-button access to Call Conference and Call Transfer – no more activation codes to remember! When the phone is idle, softkey features may include Inspect, Forward and Do Not Disturb. Each available option is identified on the display screen above the appropriate softkey.

If your i2004 Internet Telephone is programmed with more than four features (the number of softkeys available), additional features can be accessed through nested menu options. Pressing **MORE...** will provide one-button access to the remainder of the feature list (see Figure 8).

**Figure 8**



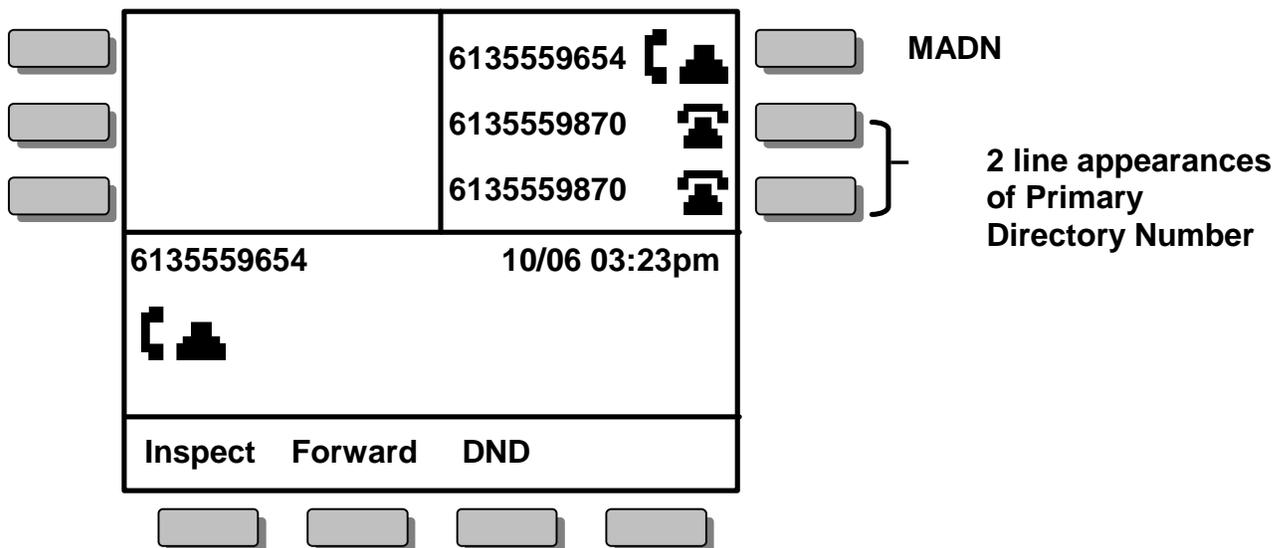
## Multiple Line Appearances

The i2004 Internet Telephone includes six programmable keys for multiple telephone lines and line appearances that can be updated by your system administrator. Each unique line and appearance for that line has a dedicated key assigned to it using the programmable **LINE** keys. Line key labels display the associated phone number.

The i2004 Internet Telephone allows for multiple appearances of the same telephone line. You can have two line appearances of your primary directory number to facilitate call handling (see Figure 9). This feature prevents your callers from reaching busy signals when you are on another call, and it functions like Call Waiting. Caller ID is available on your additional line so you will know who is calling before you interrupt your current call. Now you can choose to pick up the call, conference it into your current call, or ignore it and allow your caller to be forwarded to your voicemail!

A single telephone line that is established as a Multiple Appearance Directory Number (MADN) can appear on multiple phones, making call sharing easier to manage in a busy office. MADN lines will display the same label across all terminals that share the line.

Figure 9



## Icons

The i2004 Internet Telephone includes special icons that identify the status of each telephone line: ringing, on hold, or idle.



Icon 1: This icon will appear when the telephone line is idle. In a MADN group, this icon indicates that all members in the MADN group are idle.



Icon 2: This icon indicates another MADN member is originating a call on the MADN DN but the remote party has not answered. For instance, if users A and B are part of the same MADN group and A originates a call on the MADN DN to party C, the MADN appearance on B's display will show this icon. When C answers, the MADN appearance on B's display changes to Icon 5 (see below).



Icon 3: This icon indicates an incoming, ringing call. In a MADN group all members in the MADN group will show this icon.



Icon 4: This icon indicates the telephone line is off-hook either initiating or answering a call, or has bridged onto a call presented to a MADN group.



Icon 5: This icon indicates another MADN member has established a call on the MADN line.



Icon 6: This icon indicates that an active call has been put on Hold. In a MADN group the icon will blink only if no other MADN members are active on the call.

## Basic Calls

The i2004 Internet Telephone gives you multiple options to make a call. Each of these options is described in detail. You can make a call either in the off-hook mode or in the on-hook mode by using your handset, headset, or hands-free speaker (see Figure 10).

On the following pages you will see more detailed information about how to make calls by:

### Normal Dialing:

1. Using your Handset
2. Using your Headset key or Handsfree key

### Pre-Dialing:

1. Pre-dialing with your Handset
2. Pre-dialing with your Headset key or Handsfree key

Figure 10



## Making a Call

### Using your Handset

1. Lift the **HANDSET** to make a call using the primary line, or press a **LINE** key and then lift the **HANDSET** to select another line. 
2. Enter the phone number.
3. Press **GOODBYE** to end the call (or replace the **HANDSET**).

The primary line is always selected unless you select another **LINE** key.

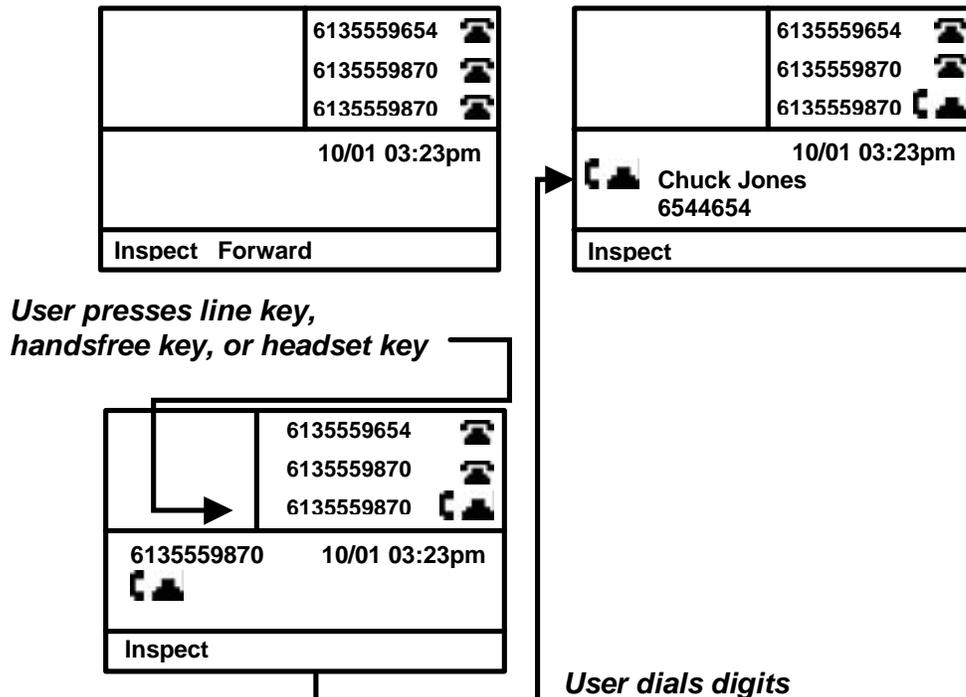
### Using your Headset or Handsfree Keys

1. Press the green **HANDSFREE** or **HEADSET** key, or press a **LINE** key and then press the green **HANDSFREE** or **HEADSET** key to select another line. 
2. Enter the phone number.
3. Press **GOODBYE** to end the call.

Dial tone is heard from the speaker if **HANDSFREE** was selected.

When placing a call in one of the off-hook positions, the display will show the number you are dialing. If there is a corresponding name in the switch associated with the number you are dialing, it will appear on the display (see Figure 11).

**Figure 11**



## Pre-Dialing

Pre-dialing allows you to verify the phone number dialed on the phone's display before completing your call.

### ***Pre-dialing with your Handset***

1. Enter the phone number (no dial tone will be heard).
2. Lift the **HANDSET** to make a call using the primary line, or press a **LINE** key and then lift the **HANDSET** to select another line.
3. Replace the **HANDSET** to end the call (or press **GOODBYE**).

### ***Pre-dialing with your Headset or Handsfree Keys***

1. Enter the phone number (no dial tone will be heard).
2. Press the **HANDSFREE** or **HEADSET** key, or press a **LINE** key and then press the **HANDSFREE** or **HEADSET** key to select another line.
3. Press **GOODBYE** to end the call.

Pressing a **LINE** key after entering a phone number on the keypad will automatically activate the **HANDSFREE** function on your phone. All the line icons will appear as idle until you press a **LINE**, **HEADSET** or **HANDSFREE** key or lift the **HANDSET** (see Figure 12).

If you make an error while entering the phone number, you do not have to cancel the call. Just press the **BKSPC** softkey to delete the entered numbers individually, correct the entry, and complete your call.

**Figure 12**

	6135559654	
	6135559870	
	6135559870	
	04/17 03:23pm	
6544654		
Inspect	BkSpC	Exit

## Answering a Call

The calling party's name and number, if available, will be displayed on incoming calls if the telephone is idle (if the phone is holding a call, not on an active call, receiving Caller ID from another call, or in a functional area such as the Directory). In some instances, only the number will be displayed.

### ***If the telephone is idle***

1. Answer the call by performing one of the following actions:
  - Lift the handset.
  - Press the **LINE** key for the incoming call.
  - Press the **HANDSFREE** key.
  - Press the **HEADSET** key.
2. Press **GOODBYE** to end the call.

Incoming calls will ring the set and display a ringing phone on the LINE key. 

If you are on another call, the new name and number will display for three seconds after the first ring, then revert to the current call's display (see Figure 13).

### ***While on another call***

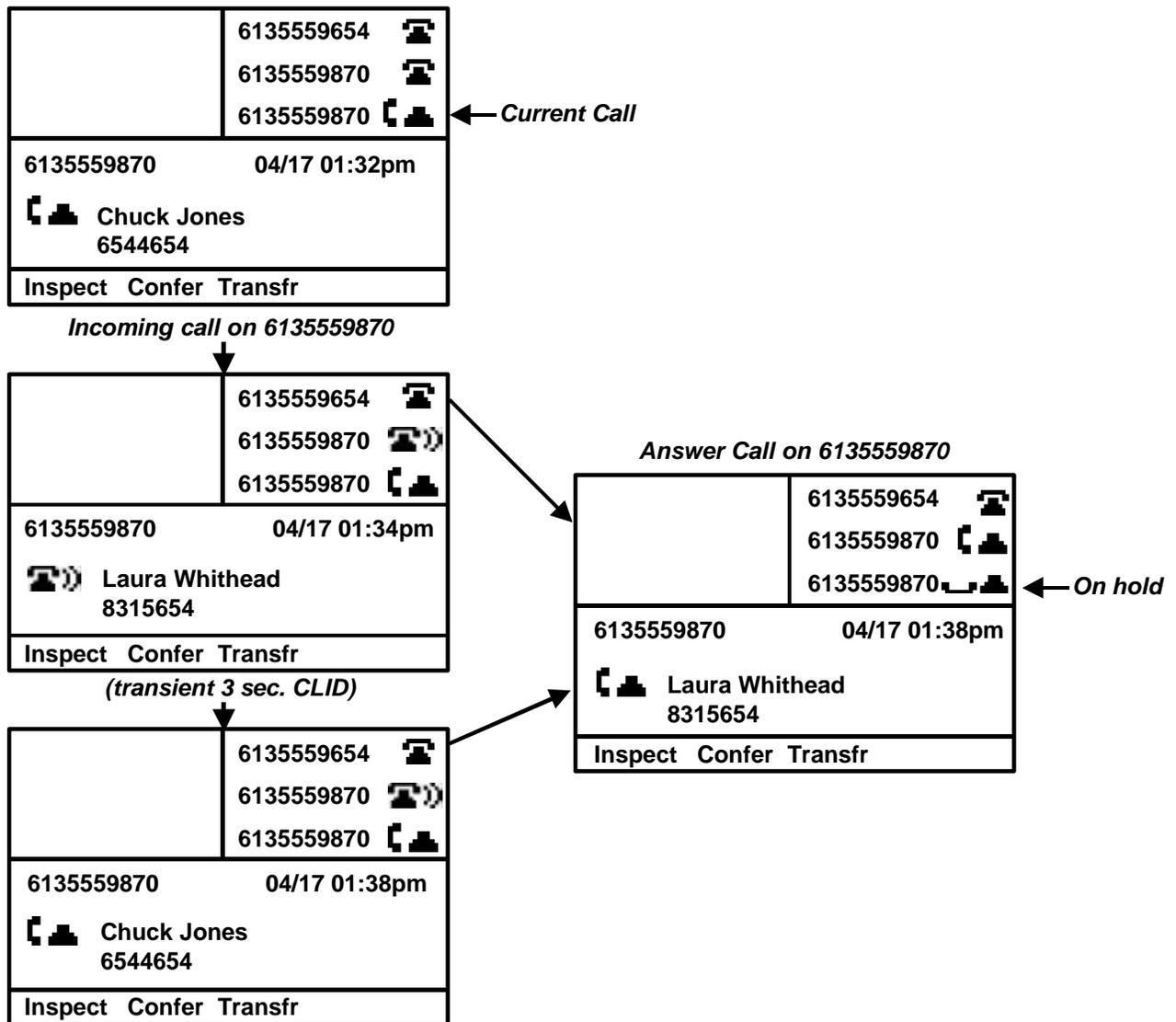
1. Answer the new call by pressing the **LINE** key for the incoming call.
2. Your first caller will be *automatically* placed on hold, and your display will show the new caller.
3. Press **GOODBYE** to end the current call, or press **HOLD** to place this caller on hold.
4. Press the appropriate **LINE** key to return to either caller.

A short tone is heard to alert you to another incoming call.

*Call Waiting – Multiple Line Appearance*

If the new call is on the second line appearance of your primary line, your caller will not hear a busy signal, and the incoming call can be handled like any other call. Press the **LINE** key, and your current call will be automatically placed on hold while you speak to the new caller. Press the **LINE** key of the held call to return to the first caller (see Figure 13).

**Figure 13**



**Skip to information about i2004 and network services – page 61**



## **Installing the i2050 Software Phone**

## Installing the i2050 Software Phone

<a href="#">Features Overview</a>	<a href="#">25</a>
<a href="#">Finding the Information You Need</a>	<a href="#">27</a>
<a href="#">Overview of i2050 Installation for IGW Access</a>	<a href="#">28</a>
<a href="#">Step 1: Verify Hardware &amp; Software Requirements</a>	<a href="#">29</a>
<a href="#">Step 2: Install the USB Audio Headset</a>	<a href="#">31</a>
<a href="#">Step 3: Install i2050 Software Phone Application</a>	<a href="#">33</a>
<a href="#">Step 4: Run the i2050 Configuration Tool</a>	<a href="#">35</a>
<a href="#">Step 5: Start the i2050 and Enter a DN Key</a>	<a href="#">41</a>
<a href="#">Troubleshooting</a>	<a href="#">42</a>

## Features Overview

The i2050 Software Phone is a Voice over IP application that allows people to communicate over the LAN and WAN from their PCs. It combines the rich set of classic telephony services of the switch along with PC resident directory capabilities.

At a glance, the i2050:

- offers the rich set telephony services of the switch
- offers the "universality" of a Windows-based application (Windows 2000, Windows 98)
- encapsulates the operation of the i2004, providing all i2004 functionality in a familiar interface wrapper. The i2050 provides:
  - Quality of Service (QoS) and authentication
  - automatic detection of call server location using DHCP
  - access to features and services provided by the network (such as call features, calling line identification and voice mail)
- reduces the number of wires required to the desktop by eliminating the need for separate computer and telephone wires
- presents an intuitive, flexible interface including:
  - slide out trays to provide access to frequently used features and services
  - retractable trays to provide a smaller interface with full operational capabilities for a single line
  - viewable line status
  - 10 item lists for quick dial and call log access from both the main and system tray interface
  - user customizable interface and directories
  - multilingual interface (English, French, and local language)
  - programmable macro functions for programming lengthy dialing patterns
  - hotkeys to map the computer keyboard to application buttons
- can be operated from the Windows system tray, allowing the user to take and place calls without interrupting other work
- includes a directory application which provides "one-click" direct dialing, access to a variety of directory types, quick dial lists, incoming and outgoing call logs
- interfaces with TAPI applications such as Outlook and ACT!
- provides immediate answers to user questions through online help

- includes a USB Headset Adapter that provides a controlled high quality audio environment. The adapter:
  - offers predictable, absolute audio levels
  - uses standard Windows drivers
  - requires no additional software or drivers
  - is supported on Windows 98 and Windows 2000
  - includes an in-use lamp connector
- includes a user selectable ringing device to alert the user to incoming calls through speakers when the headset is not being worn
- supports G.723, G.729 and G.711 codecs for a operation at a variety of network connection speeds

### **Intuitive, user-friendly interface**

The intuitiveness of the i2050 Software Phone interface is based on its similarity and compatibility with the ergonomics of the i2004 Internet Telephone and Windows-based applications. Training investment with the i2004 and network applications presented using the i2004 are directly portable to i2050 use.

Moreover, the i2050 Software Phone allows users to customize the interface for their own intuitive preferences for:

- volume of speaker and microphone
- type of "receiver and speaker" (handset, headset, or hands-free communication)
- language of interface
- ringer device

The i2050 Software Phone presents clearly identified windows that allow users to:

- manage one or more calls in progress
- access local or remote corporate directories
- track and manage records of incoming and outgoing calls
- access network resident services provided by the call server such as voice mail

## Finding the Information You Need

The i2050 softphone functions on several Nortel Networks product lines. Users of the i2050 on all platforms can use the i2050 macros and softphone directory. In addition to this base functionality, IGW Access offers i2050 users several additional product-specific features. Supported features include Call Transfer, Conference and Call Forwarding, among others.

Table 2 summarizes the documentation contained on the CD-ROM that comes with the i2050 software package.

**Table 2**  
**i2050 Documentation Roadmap**

Document	Description
Help Contents	<ul style="list-style-type: none"> <li>• This information is available directly from within the softphone application. After you install the softphone, start it by double-clicking <b>the i2050 Software Phone</b> icon on your PC's desktop. When the i2050 softphone GUI appears, click on the <b>i</b> button in the lower right corner of the softphone and select <b>Help Contents...</b> . The i2050 softphone Help GUI appears.</li> <li>• This help information explains how to use the base functionality of the i2050 softphone. The information is not specific to any particular Nortel Networks product line.</li> <li>• Help Contents are available in several languages.</li> </ul>
Internet Phone User Guide	<ul style="list-style-type: none"> <li>• This document. This information is specific to the IGW Access product.</li> <li>• This document does not explain how to use certain features available in the i2050 base functionality, such as the i2050 softphone directory and i2050 macros. To learn how to use these features, please see the Help Contents.</li> </ul>

## Overview of i2050 Installation for IGW Access

Prior to installing the i2050, get answers from your system administrator to the following questions:

- Does your network use full DHCP? If not, what IP address and port should you specify for the Communications Server?
- What is your DN Key?

Next, use the following procedure when setting up the i2050 on IGW Access for the first time:

1. Verify your PC meets the hardware and software requirements of the i2050.
2. Install the USB headset.
3. Install the i2050 softphone using the i2050 Software Phone CD.
4. Run the **i2050 Software Phone Configuration Tool**. Check the settings on the following tabs:
  - **Communications Server**
  - **Select Sound Devices**
  - **Server Type**
  - **Hardware ID**
5. Start the i2050. When prompted, enter your DN key.

These steps are explained in more detail on the following pages.

## ***Step 1: Verify Hardware and Software Requirements***

### **Minimum PC Requirements**

- Pentium Pro 200 MHz
- 128 MB memory (for Windows 2000)
- 64 MB memory (for Windows 98)
- 55 MB free hard-drive space (all languages)
- USB port
- Monitor settings: 16 bit High Color; 800x600 resolution or higher

### **Supported Operating Systems**

- Windows 2000 Professional
- Windows 2000 Professional Service Pack 1
- Windows 2000 Professional Service Pack 2
- Windows 98 Second Edition

The following page discusses additional requirements.

## Installation Privileges

As documented in the i2050 Help system, installation of the i2050 Software Phone on Windows 2000 requires the installer be either:

- An administrator
- A Power User with elevated privileges

Installation uses a two step process where the installation first (step 1) extracts itself from the self-extracting setup.exe provided; and then (step 2) runs the actual installation. Using "Run As..." to provide temporary administration privileges for setup.exe is not sufficient. In the case of "Run As..." administrator execution of the self-extraction operation (step 1) will run in a different user context (administrator) than the actual installation (step 2) (the user context). This will result in the application failing to install.

To elevate installation privileges on Windows 2000:

- Go to WINNT\system32\gpedit.msc
- Change "Computer Configuration -> Administrative Templates -> Windows Installer -> Always install with elevated privileges" to Enabled
- Change "User Configuration -> Administrative Templates -> Windows Installer -> Always install with elevated privileges" to Enabled

## Temporary Disk Space Requirements

During installation the i2050 unpacks and installs from a temporary location(s). Files in these temporary locations are deleted after the installation is complete. The temporary locations are specified by Windows environment variables: TEMP and TMP. Space required for the various unpacking and installing activities is roughly 120 Meg.

If you are experiencing installation failure due to insufficient space you need to:

- Obtain more free space on the installation and/or TEMP/TMP drive
- And/or point the TEMP and TMP variables to another drive
- And/or install the i2050 to another drive.

## ***Step 2: Install the USB Audio Headset***

### **Overview of USB Audio Kit**

Operation of the i2050 Software Phone requires the use of the Nortel Networks USB Audio Kit.

The USB Audio Kit provides a high quality predictable audio interface which is highly optimized for telephony applications. The USB Audio kit allows the i2050 Software Phone to have an absolute and predictable loss and level plan implementation which is necessary to meet TIA-810, FCC part 68 and its international equivalents as well as the ADA requirements for the hearing impaired. With the USB Audio kit, the i2050 can achieve performance rivaling or surpassing that of hardware telephones.

The USB Audio Kit is fully compliant with version 1.1 of the USB Device Specification and Windows Plug & Play specifications. It is fully compatible with the suspend and resume functions for effective use in battery operated laptops. It is functional on Windows 2000 Professional, Windows 98, Windows 98 Second Edition, and Windows Millennium. No drivers or software are required for installation.

#### **In the box**

- USB Headset Adapter
- Installation Guide (English and French)
- USB cord
- Telephony grade monaural headset
- Lower cordset with quick disconnect

#### **Connectors**

- RJ-9 headset/handset jack
- Accessory jack for "in-use" lamp
- USB device jack

#### **Specifications**

- Native Audio format: 16 bit linear 8 KHz over USB, limited to 8 bit PCM logarithmic coding in hardware
- OS Compatibility: Windows 98, 98SE, 2000, ME
- Power Source: USB power provided from computer
- Enumeration: Enumerates as USB Composite Device and USB Audio Device
- Channels: Mandatory control channel for enumeration, bi-directional isochronous channel for audio
- Electret Microphone Bias: 3 V
- Maximum SPL Protection: limited in headset
- In-Use Lamp Connector: Isolated contact closure - polarity insensitive

## Steps to Install the USB Audio Headset

1. Connect the coiled lower cord to the headset cord with the Quick Disconnect connector. Ensure the Quick Disconnect is securely fastened.
2. Connect the headset cord to the RJ9 jack on the adapter.
3. Connect the USB cable to the headset adapter and to one of the USB jacks on the back of your PC or USB hub.
4. The first time the headset adapter is plugged in, there will be a delay while the Windows operating system configures the device and locates appropriate driver software. During the installation you may be prompted to supply the original Windows CD ROM so that the Windows operating system can locate drivers.

## USB FAQ

- *My computer doesn't have USB, can I use an add-on USB card?*

The computer must have a USB connector. The USB Headset has not been tested on USB add on or upgrade cards. Performance or operation is not guaranteed of these cards.

- *I don't have enough USB ports available, can I use a USB hub?*

The USB Headset has been tested successfully behind a variety of USB hubs. It is not practical to test on all of them but no issues have been uncovered on the ones that have been tested. For best results, use a powered hub.

## Optional In-Use Indicator (not provided with kit)

A 2.5mm output jack is provided next to the USB connector for activation of a visual in-use indicator such as the 1127P Desktop Visual Alerter from Algo Communication Products Ltd. (604) 454-3790 / sales@algosolutions.com or equivalent.

### **Step 3: Install the i2050 Software Phone Application**

**Note:** *If you are upgrading an existing version of the i2050 software on your PC, log out and exit the application. You must un-install the old version (via Add/Remove Programs) before installing a new version of the i2050 software.*

**Note:** *Install the Nortel Networks USB Audio Kit before installing the i2050 Software Phone. By doing this you will be presented with the option of using the USB Audio Device during configuration of the i2050 (step 4).*

#### **To install using the i2050 Software Phone CD**

1. Exit any programs that are running.
2. Disable any anti-virus programs that are running.
3. Insert the i2050 Software Phone CD into the CD-ROM drive of your computer. If the install wizard starts, go to step 6. If the install wizard does not start, go to step 4.
4. Double click the **My Computer** icon and then double click the **CD** icon.
5. Double click the **Setup** icon.
6. Follow the instructions on the display to complete the installation.

## Additional installation steps for Windows 2000

To enable QoS functionality (DiffServ and 802.1p/q) on Windows 2000, you must install two software packages: Windows QoS Packet Scheduler and the Nortel Networks QoS Service. The installation of both software packages requires administrator privileges.

To install the QoS Packet Scheduler:

1. In **Windows Control Panel**, double-click **Network and Dialup Connections**.
2. Right click the Local Area Connection for the device to be used and click **Properties**.
3. In the **Local Area Connection Properties** window, Click **Install**.
4. In the **Select Network Component Type** dialogue, click **Service** and then click **Add**.
5. In the **Select Network Service** dialogue, click **QoS Packet Scheduler** and then click **OK**. You may be required to insert the Windows 2000 CD-ROM.

To install the Nortel Networks QoS Service

- If you have administrator privileges, the Nortel Networks i2050 QoS Service is installed as part of the i2050 Software Phone installation.
- If you do not have administrator privileges, then an administrator must install the Nortel Networks i2050 QoS Service for you using a separate installation. This installation can be found in the i2050 CD-ROM's QoS sub-directory. The administrator should install the Nortel Networks i2050 QoS Service after both the Windows QoS Packet Scheduler and the i2050 Software Phone have been installed. Subsequently the user (Power User with elevated privileges) can perform upgrades to the i2050 itself. The administrator can perform upgrades for the QoS service.

When the Nortel Networks i2050 QoS Service is installed and running it can be viewed in Windows' Services (In the **Windows Control Panel**, select **Administrative Tools** and then select **Services**).

## ***Step 4: Run the i2050 Configuration Tool***

You configure the i2050 Software Phone using the i2050 configuration utility.

To start the configuration utility, select the following from the **Start** menu:  
**Start>Programs>Nortel Networks>i2050 Software Phone>Configuration Tool**

The configuration utility has nine tabs listed below. You will need to check your settings for the tabs shown in boldfaced.

- **Communications Server**
- **Select Sound Devices**
- **ServerType**
- QoS
- **Hardware ID**
- Advanced Audio
- Listener IP
- Trace
- About

### **Configuration Tool Tab - Communications Server**

If your site uses DHCP:

1. Select the **Obtain server address automatically** option.

**Note:** *To use DHCP, your site needs a DHCP server with communications server IP address values programmed as per the i2004.*

If your site is not using DHCP:

1. Select the **Use the following server address information** option.  
Enter the IP address and port number of the communications server provided by your system administrator.

**Note:** *Using DHCP may not be appropriate for mobile users. These users commonly want to connect to their office communications server rather than the local office server.*

## Configuration Tool Tab - Select Sound Devices

**Table 3 Select Sound Devices**

Attribute	Description
Headset Microphone	Allows you to select the microphone used for making calls. Select <b>USB Audio Device</b> .
Headset Speaker	Allows you to select the speaker used for making calls. Select <b>USB Audio Device</b> .
Volume Control	Allows you to set the volume level for the headset device.
Ringing Speaker	Allows you to select a different speaker as a ringing device. If you select the computer speakers rather than on the headset, you can hear the phone ringing when you have taken the headset off.
Audio Quality	Allows you to adjust the internal buffering on the computer. This allows you to compensate for computer performance. If the audio is choppy or broken, move the slider toward <b>Higher Quality</b> .
I use a modem to connect to the network	Select this option if you are using a low speed connection. When you select this option, the i2050 Software Phone reports to the communications server that G729 and G723 are the supported codecs. The communications server may select G711 later depending upon its programming. When you clear this option, the i2050 Software Phone reports that it supports G711, G723 and G729A/G729AB. Not all servers support all codecs. G711 requires high bandwidth; G729 requires medium bandwidth; G723 requires low bandwidth.
Apply to all users	Users with administrator privileges (as determined by Windows) can apply selected audio settings to all users on a computer.

## Configuration Tool Tab - Server Type

For the IGW Access product, select **CENTREX** and then click **APPLY**.

## Configuration Tool Tab - QoS

**Note:** *This screen is intended for expert users only.*

You use this screen to enable or disable 802.1 Quality of Service (QoS) support on the i2050 Software Phone. Since only Windows 2000 supports 802.1, this screen is not applicable to Windows 98 users.

If you select the setting “Automatic Detection”, the i2050 will decide if 802.1 QoS should be used. When you select this option, the i2050 will attempt to connect with 802.1q added to the packets. If the attempt is successful, then the i2050 Software Phone will use 802.1q for the call. If the attempt fails (there is a timeout after approximately 1 second), the i2050 Software Phone will attempt to connect again without adding 802.1q to the packets.

Remember that 802.1p/q support requires all the following:

- PC is running Windows 2000.
- Windows QoS Packet Scheduler must be installed and running.
- Nortel Networks i2050 QoS Service must be installed and running.
- Selection of “On” or “Automatic Detection” on the i2050 Configuration Utility’s QoS Tab.
- Support of 802.1p by the PC’s NIC card.
- Support of 802.1p by the network.

## Configuration Tool Tab - Hardware ID

**Table 4 Hardware ID**

<b>Attribute</b>	<b>Description</b>
Hardware ID	Do not change the information in the first or last box in the Hardware ID field. The middle box contains the MAC address for the Ethernet card installed in your computer. If the middle box is blank or contains all 0s, contact your system administrator to get the unique number to enter in this field.
Auto-Create	This button is for expert users only. It changes the MAC address that appears in the middle Hardware ID box. If your computer has more than one Ethernet card (and therefore more than one MAC address), click the Auto-Create button to cycle through the set of MAC addresses on your computer.
Firmware Version	Shows the software version of the i2050 Software Phone.

## Configuration Tool Tab - Advanced Audio

**Note:** This screen is intended for expert users only.

You can use this screen to override the communications server defined values. Changing the values on this screen should be considered a last resort if audio quality issues are encountered.

**Table 5 Advanced Audio**

<b>Attribute</b>	<b>Description</b>
Use Communication Server values	The i2050 Software Phone uses the values assigned by the communications server. This is the normal mode of operation.
Override Communication Server Values	In very rare cases where audio quality is adversely affected by network performance for a few clients, these values may be able to achieve a workable balance of quality.

## Configuration Tool Tab - Listener IP

**Note:** This screen is intended for expert users only.

This screen identifies the IP addresses and ports where the i2050 Software Phone is listening for UNISTim traffic. You can use this screen to override the port assignments when there is a conflicting application on the computer.

**Table 6 Listener IP**

<b>Attribute</b>	<b>Description</b>
Use all addresses	The i2050 Software Phone listens to the IP addresses on all of the network interface cards on the PC for UNISTim traffic. This is the normal mode of operation.
Port	This value may require adjustment if another application on the computer is using the same port. The two applications can co-exist by moving the port or IP address the i2050 Software Phone is listening to.
Use specific address	Using a specific address may be useful in cases where there is more than one Ethernet card and an application conflict exists.

## Configuration Tool Tab - Trace

**Note:** *This screen is intended for Nortel Networks personnel only.*

This screen can be used to record UNISlim traffic. For normal operation, the Enable option should be cleared. This disables the Trace feature.

## Configuration Tool Tab - About

This screen identifies the version of the i2050 Configuration Utility. This always matches the version of the i2050 Software Phone application.

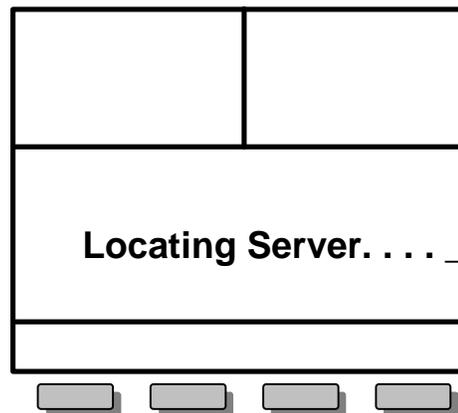
### ***Step 5: Start the i2050 and Enter a DN Key***

To start the i2050, select the following from the **Start** menu:

**Start>Programs>Nortel Networks>i2050 Software Phone>i2050 Software Phone**

After you start the i2050, your i2050 Software Telephone will attempt to connect to the server (see Figure 14).

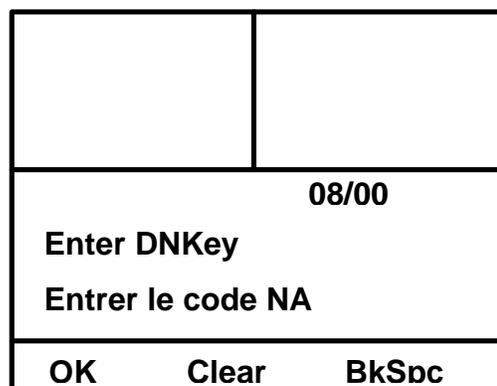
**Figure 14**



If your telephone set cannot locate the server, it will automatically retry every two minutes. After several attempts, if your telephone set does not locate the server, contact your system administrator for assistance.

After successfully connecting to the server, you will be prompted to enter the DNKey (see Figure 15). Enter the 10-digit or 20-digit DN key provided by your system administrator and then press the **OK** soft key.

**Figure 15**



Your system administrator may have assigned a password to your DN. If so, you will be prompted to enter the password.

## Troubleshooting

### Application fails to install

**Symptom:** During installation the following error message appears:

**Error 1931: The Windows Installer service cannot update the system file <filename>**

**Description:** You are trying to install i2050 Software Phone on an outdated version of the operating system.

**Action:** To fix the problem, you may have to upgrade your operating system. Check the Hardware and Software Requirements section of this document for the information on supported operating system releases.

### Application fails to connect

If the application fails to connect properly, use the following table to correct the problem.

**Table 7**  
**Solving Connection Problems**

Item	Description/action
<p>After you start the i2050, the i2050 displays 'DHCP server not available'</p>	<p>The i2050 cannot obtain the IP address of the Communications Server from the DHCP server. Find out from your system administrator if your network provides full DHCP. If the network does not use full DHCP, your system administrator must provide you the IP address and port of the Communications Server.</p> <p>Next, verify your i2050 is using the settings provided by your system administrator. Start the <b>i2050 Configuration Tool</b> and select the <b>Communications Server</b> tab. Check the following:</p> <ul style="list-style-type: none"> <li>• <i>If your network provides full DHCP</i> – verify that the i2050 Configuration Tool has selected the setting <b>Obtain a server address automatically</b>.</li> <li>• <i>If your network does not provide full DHCP</i> – verify that the i2050 Configuration Tool has selected the setting <b>Use the following server address information</b>. Furthermore, the i2050 Configuration Tool should have selected the setting <b>IP Address</b>, and should show the IP address and listening port of the Communications Server.</li> </ul> <p>If necessary, correct your i2050 settings and then restart the i2050.</p>
<p>After you start the i2050, the i2050 displays 'Connecting' indefinitely or 'Server Unreachable.'</p>	<p>The i2050 cannot connect to the server at the specified IP address. Make sure that the i2050 is attempting to connect to the correct IP address and port. Start the <b>i2050 Configuration Tool</b> and select the <b>Communications Server</b> tab. Verify the settings as described above.</p>
<p>After you start the i2050, the i2050 displays 'Hardware ID Conflict'</p>	<p>The i2050 is not using a unique hardware ID. Contact your system administrator.</p>



## **Basic Functions of the i2050 Software Phone**

## ***Basic Functions of the i2050 Software Phone***

<u><i>User Interface Options</i></u>	<u>46</u>
<u><i>Display Screen</i></u>	<u>49</u>
<u><i>Softkeys</i></u>	<u>50</u>
<u><i>Multiple Line Appearances</i></u>	<u>51</u>
<u><i>Icons</i></u>	<u>52</u>
<u><i>Basic Calls</i></u>	<u>53</u>
<u><i>Making a Call</i></u>	<u>54</u>
<u><i>Pre-Dialing</i></u>	<u>55</u>
<u><i>Answering a Call</i></u>	<u>56</u>
<u><i>TAPI Enabled Applications</i></u>	<u>58</u>

## Basic Functions of the i2050 Software Phone

The following section provides a brief description of how to use the graphical user interfaces of the i2050 to perform basic functions. More detailed information is available in the i2050 Help Contents. See page 27 to see how to access the i2050 Help Contents.

### *User Interface Options*

There are three user interface options available on the i2050. They are:

- The Primary User Interface
- The System Tray Interface
- The Local Directory Interface

These interfaces are designed to accommodate a wide variety of users, regardless of their preferences in working with Windows tools. For more detailed information about using all of the i2050 functions, see the i2050 Help Contents.

**Primary Interface** – The i2050's Primary User Interface provides call control and access to other network services. The display area and application buttons are mapped directly from the i2004 Internet Telephone; therefore knowledge of one interface is directly portable to the other, reducing training costs.

- The default presentation of this interface shows operational **trays retracted**. In this mode the user can operate most features. Calls can be answered or made by pressing the green off-hook button. In this mode the call server will select the line to answer or engage. The user can also hang up, hold, retrieve from hold, mute, adjust volume and access network services such as voice mail.
- The **Lines Tray** shows up to six lines or feature buttons provisioned for the phone by the call server. The status of each line is illustrated by a graphic icon. The line is labeled based on its call manager provisioning information.
- The **Number Pad Tray** provides a graphic keypad to dial numbers with a mouse. In all tray selections numbers can also be dialed by using the computer keyboard numbers.
- The **Combo Tray** combines the Line Tray and the Number Pad Tray, but hides the line state icons.
- The **Local Directory Quick Access Trays** maintain lists of quick dial, redials and callers. Ten of the items in these lists can be viewed and dialed directly from the Quick Access Trays.

Within the Primary User Interface the computer keyboard provides hotkeys for:

- Handsfree (Enter)
- Release (F12 or Escape)
- Hold (F5)
- Softkeys/Interactive keys (F1-F4)
- Alphabetic keys map to numbers (identical to i2004 dial pad mapping) and '/' on the numeric pad maps to '#' key
- Arrow keys map to navigation keys
- Alt-V will paste or insert data to the interface (for example, you can copy a number from Outlook and paste it into the i2050 interface)

**System Tray Interface** – The i2050 System Tray Interface allows much of the application’s functionality to be operated from the Windows System Task Tray. This allows the user to operate the i2050 without interrupting their workflow. For example, the user can answer an incoming call from the System Tray without launching the Primary User Interface.

Easy access to the Local Directory’s Quick Dial, Redial and Caller lists is provided by fly-out menus.

**Local Directory Interface** -- The i2050’s Directory Interface allows the user to maintain a personal directory for placing calls. The directory may be stored with the i2050 itself (by default in a local file named Directory.mdb); or linked to external directories. Linking to LDAP, Outlook, Windows Address Book (WAB) and ACT! directory types is supported.

Users can create, modify and delete entries in the local directory and may copy entries from external directories, the redial list and the caller lists into the local directory (select an entry, right click and select **Add to Local Directory ...**).

Directory lists can be “filtered” in simple or complex ways; for example, to show people whose last name starts with ‘B’ and work for ‘Nortel Networks.’

Ten items from each of the Quick Dial, Caller List and Redial List are also viewable from the Primary User Interface and the System Tray Interface.

The Quick Dial list is a shortcut to entries stored elsewhere (in the local directory or in an external directory). The Callers list and Redial list are stored as lists within the i2050’s directory storage file.

Calls can be made by selecting a contact entry and then:

- right clicking and selecting which of the contact’s numbers to call; or by
- pressing the call function at the top of the directory window.

## Display Screen

The i2050 Software Telephone is a feature-rich Internet telephone that has a GUI designed to simulate the i2004 Internet Phone. The interface includes a built-in display screen for ease of use.

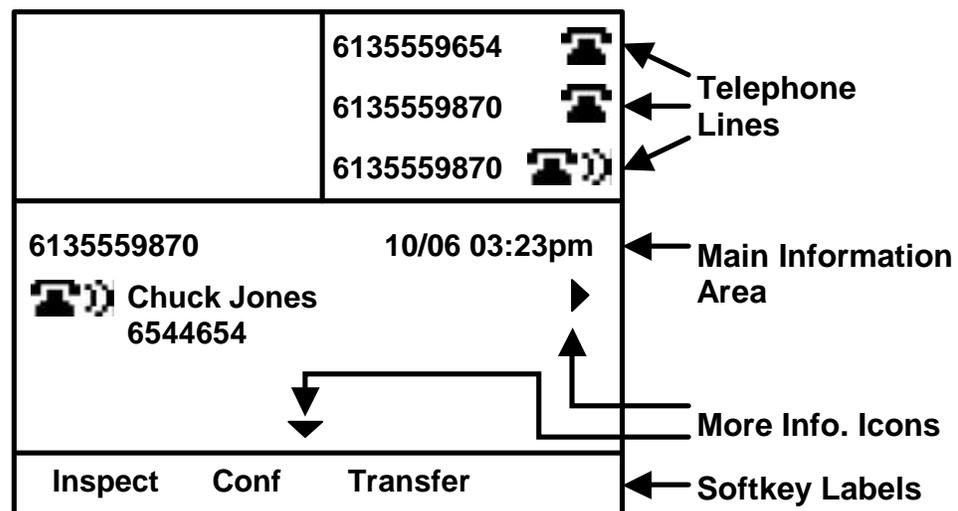
*Note: To accommodate users of both the i2050 and the i2004, the figures in this section of the document have been drawn to simulate the i2004 screen. However, the instructions and content of the figures applies equally to both models.*

The display screen has three areas to show different types of information (see Figure 16). The top half of the display screen shows the available telephone lines associated with your i2050 Software Telephone. Your primary telephone line will always be associated with the lower right-hand **LINE** key.

The middle portion of the display screen is the main information area and identifies incoming callers by name and number (if programmed with Caller ID) and provides status messages. When the telephone is idle, this display area identifies the current date and time and reminds you if your phone is forwarded or blocked from receiving incoming calls.

The lower portion of the display screen provides "on screen" information about the available features programmed for each softkey on your i2050 Software Telephone. These features are easily accessed by clicking on the corresponding buttons.

**Figure 16**



## Softkeys

The softkeys on the i2050 Software Telephone add greater versatility and provide easy access to features that are customized for your current call activity. For example, while on a call, softkeys offer one-button access to Call Conference and Call Transfer – no more activation codes to remember! When the phone is idle, softkey features may include Inspect, Forward and Do Not Disturb. Each available option is identified below the display screen.

If your i2050 Software Telephone is programmed with more than four features (the number of softkeys available), additional features can be accessed through nested menu options. Pressing **MORE...** will provide one-button access to the remainder of the feature list (see Figure 17).

Figure 17

	6135559654 		
	6135559870 		
	6135559870 		
10/06 03:23pm			
Inspect	Forward	DND	more...

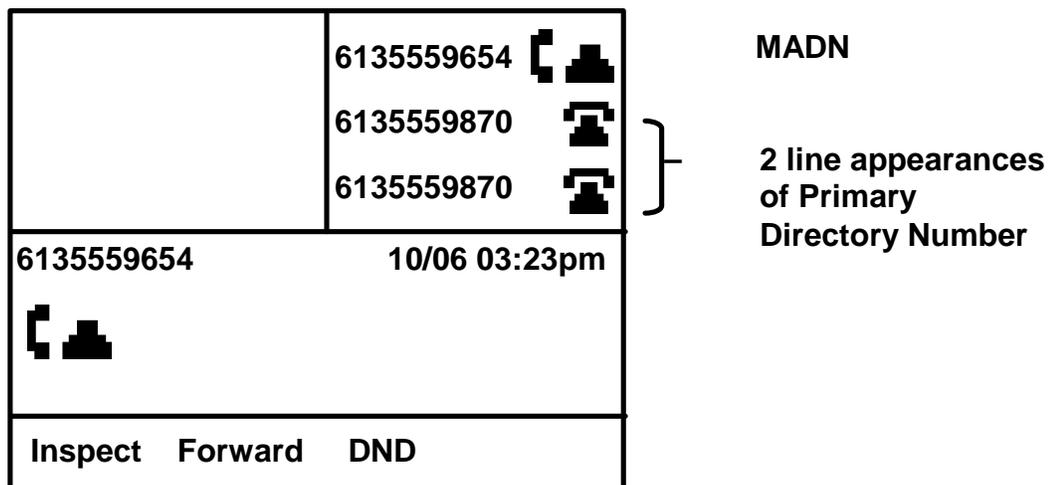
## Multiple Line Appearances

The i2050 Software Telephone includes six programmable buttons for multiple telephone lines and line appearances that can be updated by your system administrator. Each unique line and appearance for that line has a dedicated button assigned to it using the programmable **LINE** buttons. Line button labels display the associated phone number.

The i2050 Software Telephone allows for multiple appearances of the same telephone line. You can have two line appearances of your primary directory number to facilitate call handling (see Figure 18). This feature prevents your callers from reaching busy signals when you are on another call, and it functions like Call Waiting. Caller ID is available on your additional line so you will know who is calling before you interrupt your current call. Now you can choose to pick up the call, conference it into your current call, or ignore it and allow your caller to be forwarded to your voicemail!

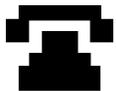
A single telephone line that is established as a Multiple Appearance Directory Number (MADN) can appear on multiple phones, making call sharing easier to manage in a busy office. MADN lines will display the same label across all terminals that share the line.

Figure 18



## Icons

The i2050 Software Telephone includes special icons that identify the status of each telephone line: ringing, on hold, or idle.



Icon 1: This icon will appear when the telephone line is idle. In a MADN group, this icon indicates that all members in the MADN group are idle.



Icon 2: This icon indicates another MADN member is originating a call on the MADN DN but the remote party has not answered. For instance, if users A and B are part of the same MADN group and A originates a call on the MADN DN to party C, the MADN appearance on B's display will show this icon. When C answers, the MADN appearance on B's display changes to Icon 5 (see below).



Icon 3: This icon indicates an incoming, ringing call. In a MADN group all members in the MADN group will show this icon.



Icon 4: This icon indicates the telephone line is off-hook either initiating or answering a call, or has bridged onto a call presented to a MADN group.



Icon 5: This icon indicates another MADN member has established a call on the MADN line.



Icon 6: This icon indicates that an active call has been put on Hold. In a MADN group the icon will blink only if no other MADN members are active on the call.

## Basic Calls

The i2050 Software Telephone gives you multiple options to make a call. Each of these options is described in detail on the following pages (see Figure 19).

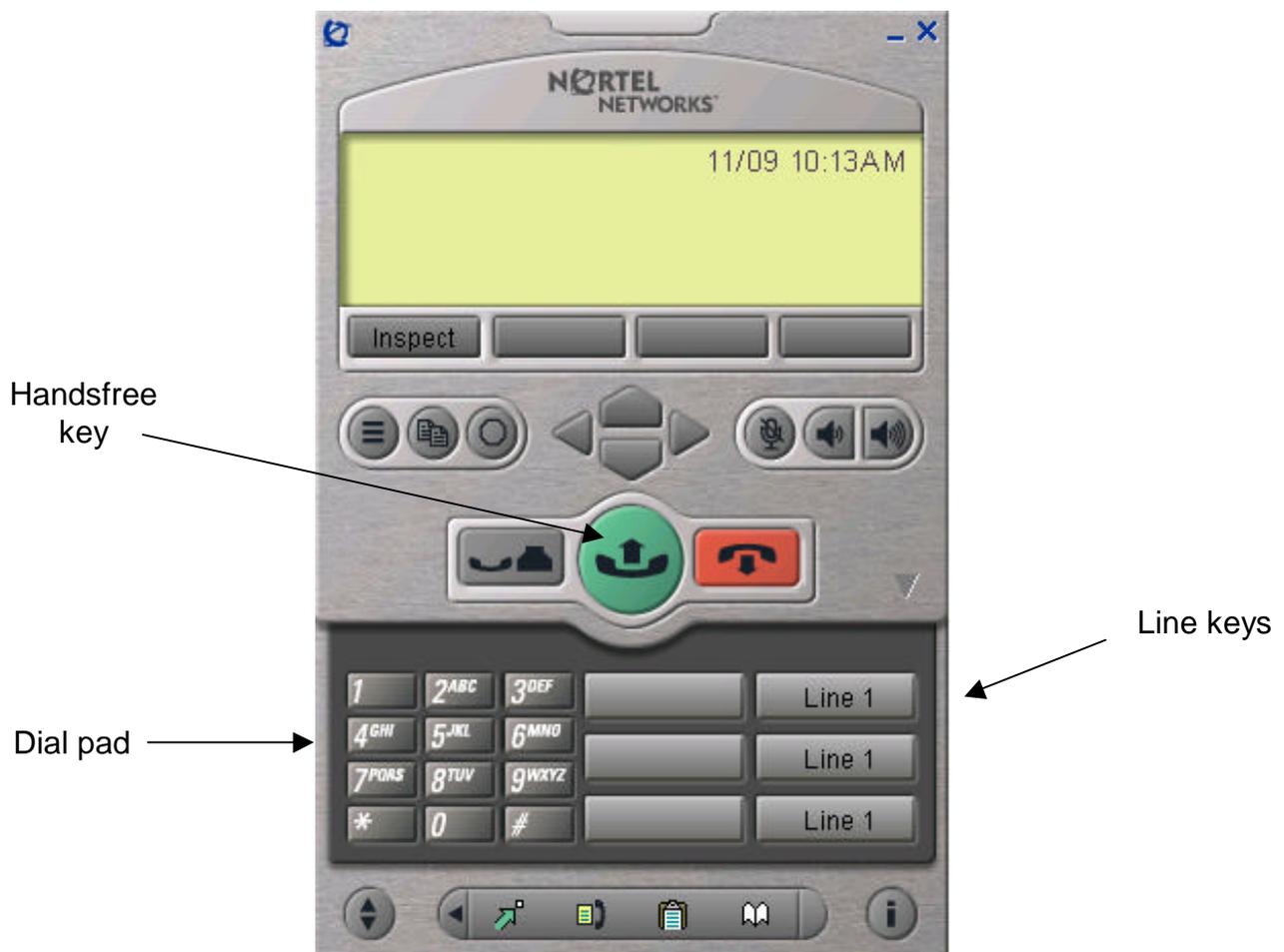
### Normal Dialing:

- Select a line (by clicking on a **LINE** key or the **HANDSFREE** key) and then dial digits (using the keyboard number pad or Softphone dial pad)

### Pre-Dialing:

- Dial digits (using the keyboard number pad or Softphone dial pad) and then select a line (by clicking on a **LINE** key or the **HANDSFREE** key)

Figure 19



## Making a Call

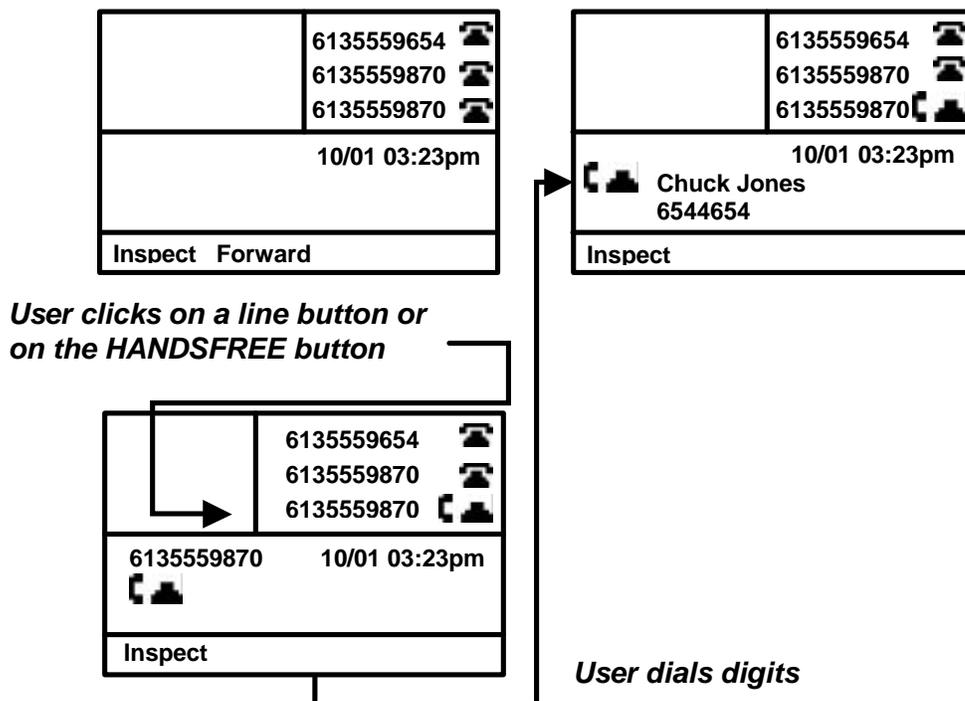
### ***Making a Call***

1. Be sure you are wearing your headset and that it is properly connected.
2. Click the **HANDSFREE** key to make a call on your primary line, or click on a **LINE** key to select another line. 
3. Enter the phone number using the pad on your keyboard or using the mouse and the Software Phone Dial Pad.
4. Click on **GOODBYE** to end the call.

The primary line is always selected unless you select another **LINE** button.

When placing a call, the display will show the number you are dialing. If there is a corresponding name in the switch associated with the number you are dialing, it will appear on the display (see Figure 20).

**Figure 20**



## Pre-Dialing

Pre-dialing allows you to verify the phone number dialed on the phone's display before completing your call.

### ***Pre-dialing a Call***

1. Select the Software Phone window so that it is active.
2. Enter the phone number using the keyboard number pad or using the mouse and the Software Phone dial pad.
3. Select the line you want to use by clicking on a **LINE** key, or click on the **HANDSFREE** key to select your primary number.
4. Click on **GOODBYE** to end the call.

Clicking on a **LINE** key after entering a phone number on the keypad will automatically activate the **HANDSFREE** function on your phone. All the line icons will appear as idle until you click on **LINE** or **HANDSFREE** (see Figure 21).

If you make an error while entering the phone number, you do not have to cancel the call. Just click on the **BKSPC** softkey to delete the entered numbers individually, correct the entry, and complete your call.

**Figure 21**

	6135559654	
	6135559870	
	6135559870	
	04/17 03:23pm	
6544654		
Inspect	BkSpc	Exit

## Answering a Call

The calling party's name and number, if available, will be displayed on incoming calls if the telephone is idle (if the phone is holding a call, not on an active call, receiving Caller ID from another call, or in a functional area such as the Directory). In some instances, only the number will be displayed.

### ***If the telephone is idle***

1. Ensure you are wearing your headset and that it is properly connected.
2. When you receive a call, you will hear the Software Phone ringer through the Ringing Speaker (the device you specify during configuration).
3. Answer the call by clicking on the **HANDSFREE** button or click on the **LINE** key of the ringing line.
4. Press **GOODBYE** to end the call.

Incoming calls will ring the set and display a ringing phone on the LINE key. 

If you are on another call, the new name and number will display for three seconds after the first ring, then revert to the current call's display (see Figure 22).

### ***While on another call***

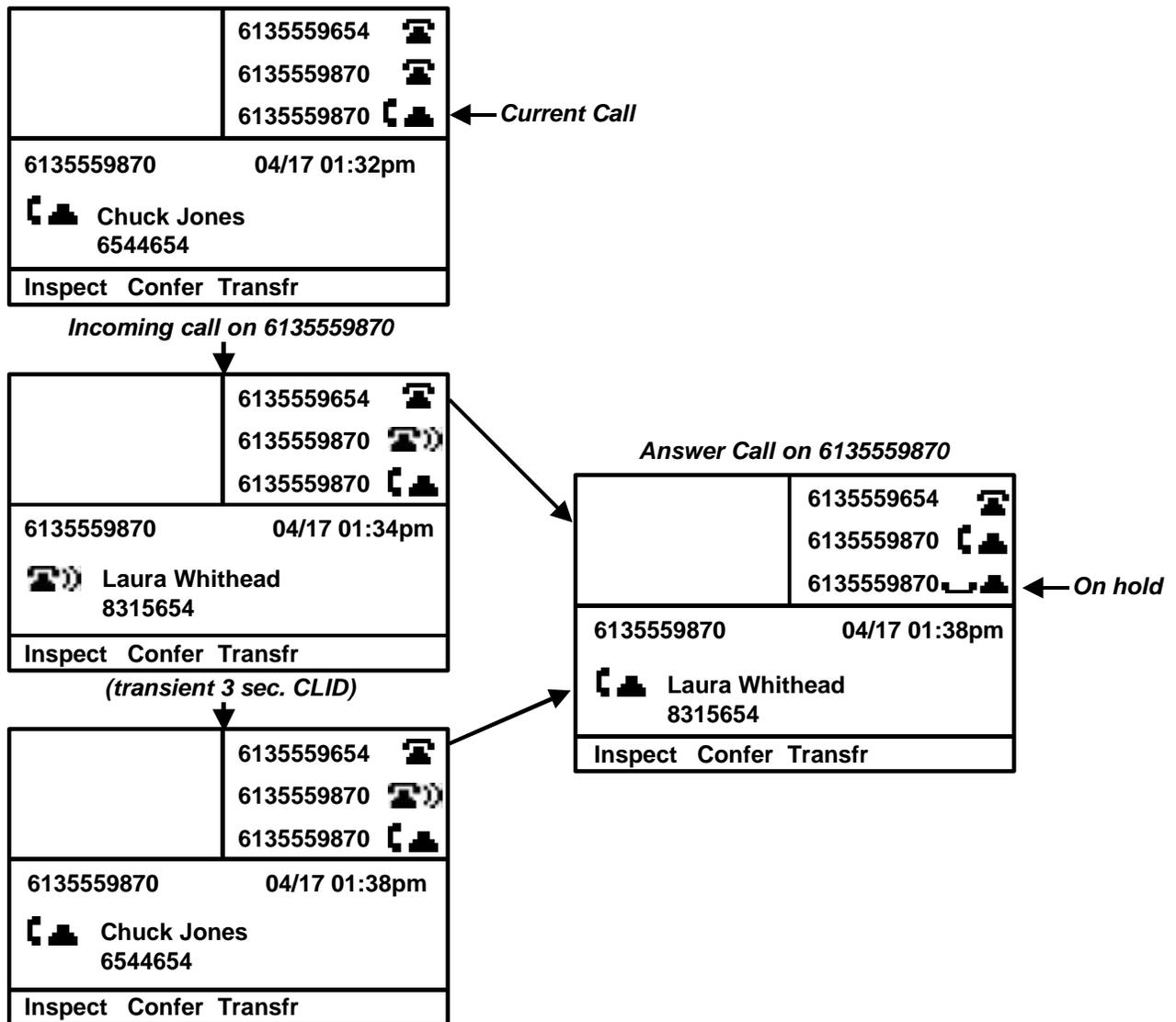
1. Answer the new call by clicking on the **LINE** key for the incoming call.
2. Your first caller will be *automatically* placed on hold, and your display will show the new caller.
3. Click on **GOODBYE** to end the current call, or click on **HOLD** to place this caller on hold.
4. Click on the appropriate **LINE** key to return to either caller.

A short tone is heard to alert you to another incoming call.

**Call Waiting – Multiple Line Appearance**

If the new call is on the second line appearance of your primary line, your caller will not hear a busy signal, and the incoming call can be handled like any other call. Click on the **LINE** key, and your current call will be automatically placed on hold while you speak to the new caller. Click on the **LINE** key of the held call to return to the first caller (see Figure 22).

**Figure 22**



## ***TAPI Enabled Applications***

Applications which use Microsoft's TAPI interface to control telephony devices can be used with the i2050 Software Phone. TAPI enabled applications can use the i2050 Software Phone's TAPI Service Provider (TSP) to make, answer, hold, un-hold and clear calls.

As described below in more detail, to use TAPI enabled application with the i2050 the user must:

- Ensure the i2050 TSP is installed
- Select a physical location (country and area code)
- The i2050 Software Phone must be running before the TAPI enabled application can use the i2050 TSP.

### **Ensure the i2050 Telephony Provider / Driver (TSP) is Installed**

Go to the list of installed TAPI Service Providers.

- Windows 2000: TSP's are called "telephony providers". The TSP list is found in *Settings* → *Control Panel* → *Phone and Modem Options*; under the *Advanced* tab.
- Windows 98: TSP's are called "telephony drivers". The TSP list is found in *Settings* → *Control Panel* → *Telephony*; under the *Dialing Properties* button.

In the list of installed providers/drivers look for the i2050 TSP which is called "*Nortel Networks i2050 Software Phone Telephony Service Provider*".

- This entry is added to this list by default during i2050 installation.
- If the i2050 TSP is present then it does not need to be installed (added).

If the i2050 TSP is not present in this list then press the *Add...* button. Next, select the Nortel Networks i2050 Software Phone Telephony Service Provider on the resulting dialogue and press the *Add...* button.

## Select a Physical Location

If TAPI has never been used before on this computer, then a dialogue requesting the device's location information will be presented when:

- The user opens *Phone and Modem Options*.
- The user selects *MakeCall* from the i2050 icon in the system tray.
- The user presses the edit button (a pencil icon beside the phone number field when the cursor is in the *Phone Number* field) from an i2050 Directory contact's *Properties* dialogue.

The location information requested is the country name, the area code, and the number (if any) to dial for an outside line.

Information required here is relative to the trunk gateway used by the Communications Server to which the i2050 is connected. For example, if the Communications Server is in Charlotte (area code 704) and a mobile user is located in New Mexico (area code 505); then the Charlotte location (area code 704) will be the user's location from a dialing point of view and for this dialogue. If there is doubt about the location, then place a test call and look at the area code of the called party in the calling line identification. Note that while Windows supports multiple locations, for mobile users, it is the location of the Communications Server infrastructure which is important here. Thus in the example above the mobile user from New Mexico will not have to change their location when they are in Los Angeles, since the location of their Communications Server has not changed.

## i2050 Must Be Running to Use TAPI Applications

To use TAPI applications with the i2050, the i2050 must first be running. Connectivity to, and authentication by, the Communications Servers typically takes longer than TAPI applications are prepared to wait to place a call. The applications therefore will return error messages if the i2050 has not been previously started.

## TAPI Example - Microsoft Outlook

Consult Outlook documentation for details on the use of Microsoft Outlook. This section uses Outlook as an example of configuration and operation of a typical TAPI enabled application.

To place a call from Outlook:

- Select Contacts within Outlook
- Select a contact and right click; then select Call Contact...
- If this is the first time using the i2050 as the dialer for this application; or if another TSP was being used previously then:
  - Press the Dialing Options... button on the New Call dialogue.
  - The Dialing Options Dialogue contains a "Connect Using Line" combo box. In this box use the drop-down menu to select "i2050 Software Phone".
  - Note: This drop-down list typically shows only 2 entries initially, so the user must scroll down to see the i2050 Software Phone entry.
  - Note: If the i2050 Software Phone is not in the "Connect Using List" then ensure the i2050 telephony provider/drive is installed (see above).
- Press Start Call to make a call
  - Note: if the Start Call button is not enabled, then ensure the i2050 telephony provider/drive is installed (see above).
- Press End Call to end the call



## **Using Network Services with an i2004 or i2050 Phone**

## Using Network Services with an i2004 or i2050 Phone

<u>SL-100 Features</u>	<u>63</u>
<u>Placing and Retrieving a Call on Hold</u>	<u>63</u>
<u>Transferring a Call</u>	<u>64</u>
<u>Conferencing Calls</u>	<u>65</u>
<u>Forwarding Calls</u>	<u>68</u>
<u>Inspect</u>	<u>69</u>
<u>Do Not Disturb</u>	<u>70</u>
<u>Message Waiting and Message Retrieval</u>	<u>71</u>
<u>Call Park</u>	<u>73</u>
<u>Call Pickup</u>	<u>75</u>
<u>Ring Again</u>	<u>76</u>
<u>Privacy and Privacy Release</u>	<u>77</u>
<u>Speed Call</u>	<u>78</u>
<u>IGW Access Features</u>	<u>80</u>
<u>Outbox and Redial</u>	<u>80</u>
<u>Incoming Callers List</u>	<u>82</u>
<u>Personal Directory</u>	<u>85</u>
<u>Services Key</u>	<u>88</u>
<u>Changing Language</u>	<u>89</u>
<u>Changing Phone Options</u>	<u>90</u>
<u>Using Session Features</u>	<u>92</u>
<u>Setting or Changing your Password</u>	<u>93</u>
<u>Viewing Network Info</u>	<u>94</u>
<u>Changing Display Formats</u>	<u>95</u>

## Using Network Services with an i2004 or i2050 Phone

*The i2050 Software Phone is designed with a user interface that closely resembles the appearance and functions of the i2004 Internet Telephone. The information provided in this document is described in terms of the i2004. However, the information also applies to the i2050 Software Phone interface.*

*For more detailed help on using the i2050, please refer the online help tools.*

### SL-100 Features

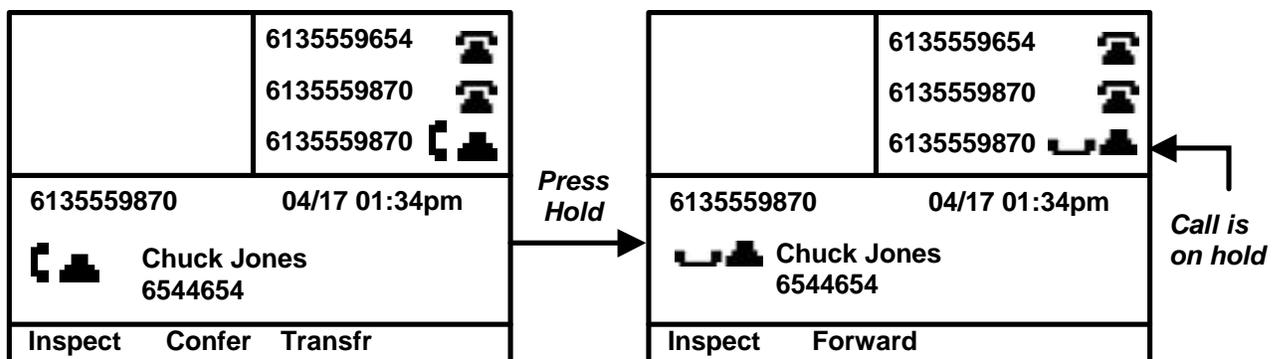
#### Placing and Retrieving a Call on Hold

This feature allows you to answer additional incoming calls or to hold a call until you are ready for the caller. Your Internet Telephone has an orange key designated for the **HOLD** function.

##### While on a call

1. Press the **HOLD** key. 
2. Press the appropriate **LINE** key to retrieve the call, or press **HOLD** again to return to the last call placed on hold.

Figure 23



## Transferring a Call

Softkeys make transferring an active call to another telephone number simple.

This feature allows you to transfer calls in several ways:

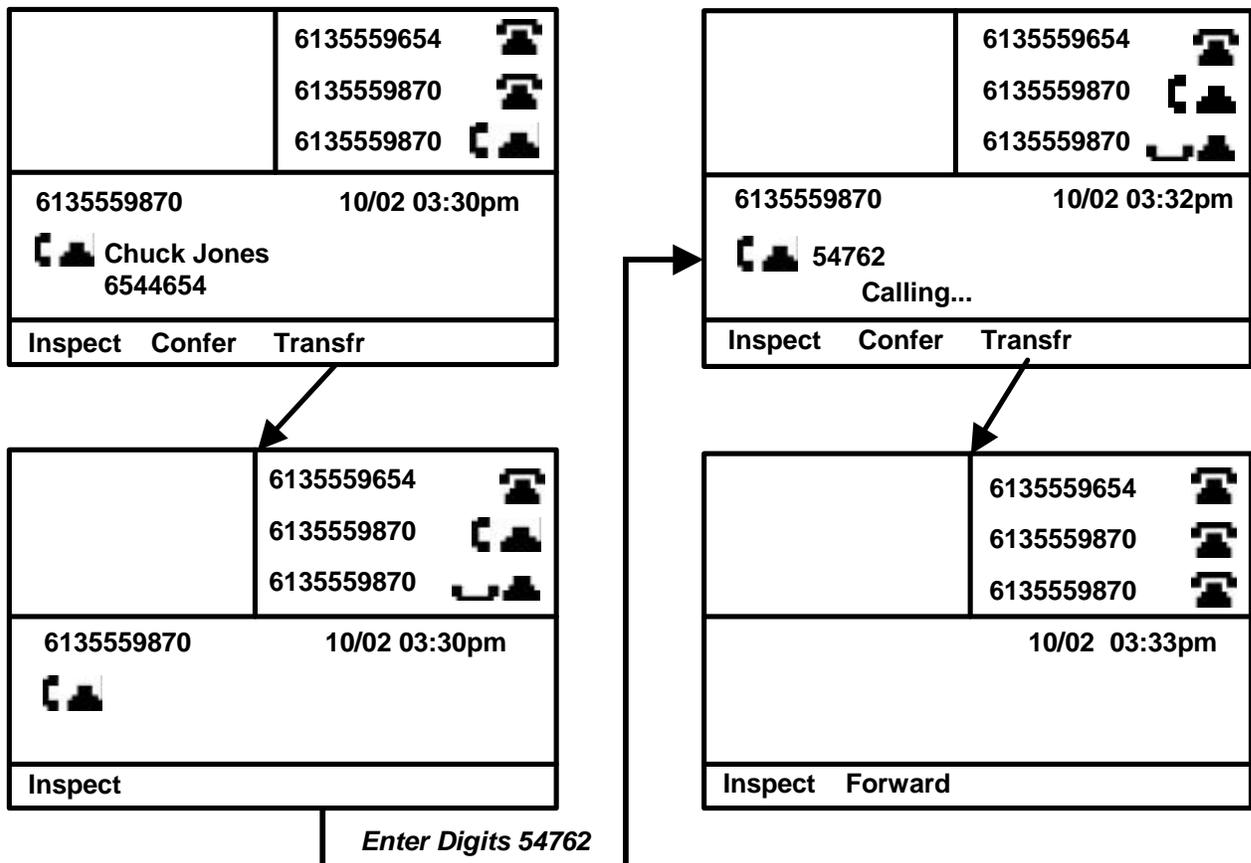
- announcing your transferred call before releasing it,
- speaking with your called party privately before releasing the call, or
- transferring the call directly.

Your display screen will prompt you through the steps required to use this feature and will provide the status of the call (see Figure 24).

### ***While on an active call***

1. Press the **TRANSFR** softkey - your active call will be automatically placed on hold.
2. Enter the phone number you want to transfer your active call to.
3. Press **TRANSFR** again when you are ready to “send” the call to the dialed number.
4. Your set will return to idle.

**Figure 24**



## Conferencing Calls

Use call conferencing when you need to join several callers together. Your Internet Telephone allows you to establish conference calls by individually adding each phone number, or by conferencing active calls together (see Figure 25).

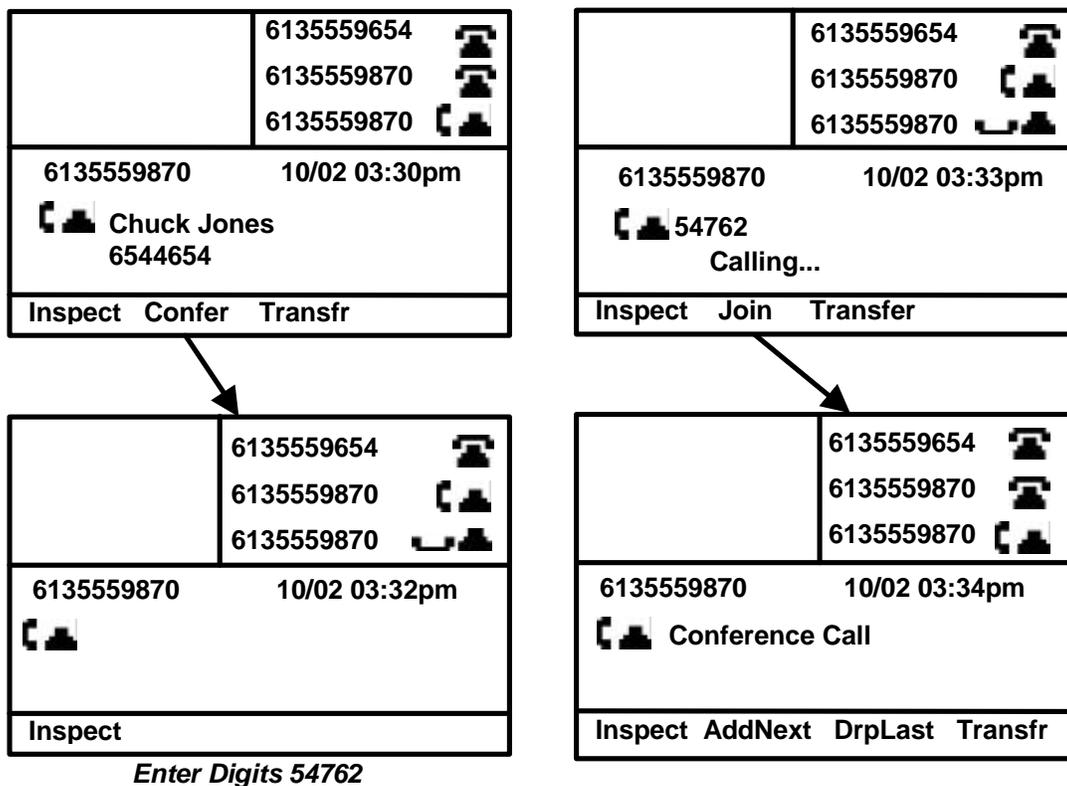
### **Setting up a 3-way conference call**

1. Start with an active call by calling the telephone number of one of the conference individuals.
2. Press the **CONFER** softkey - your active call will be automatically placed on hold and an idle line will be seized.
3. Enter the phone number of the next individual you want to conference with.
4. Press **JOIN** to bring all parties together and begin the conference call.

After dialing your second caller, delay pressing **JOIN** and you may speak privately before beginning the conference call.

When you press **JOIN**, the line used to call the second party will become available for other calls.

**Figure 25**



### Adding Additional Calls

Adding additional callers to your active conference call is just as simple as using the softkey options (see Continuation of Figure 25).

NOTE: The maximum number of people that can be conferenced in a call is limited by the bridge size provisioned on the switch. Please check with your service administrator.

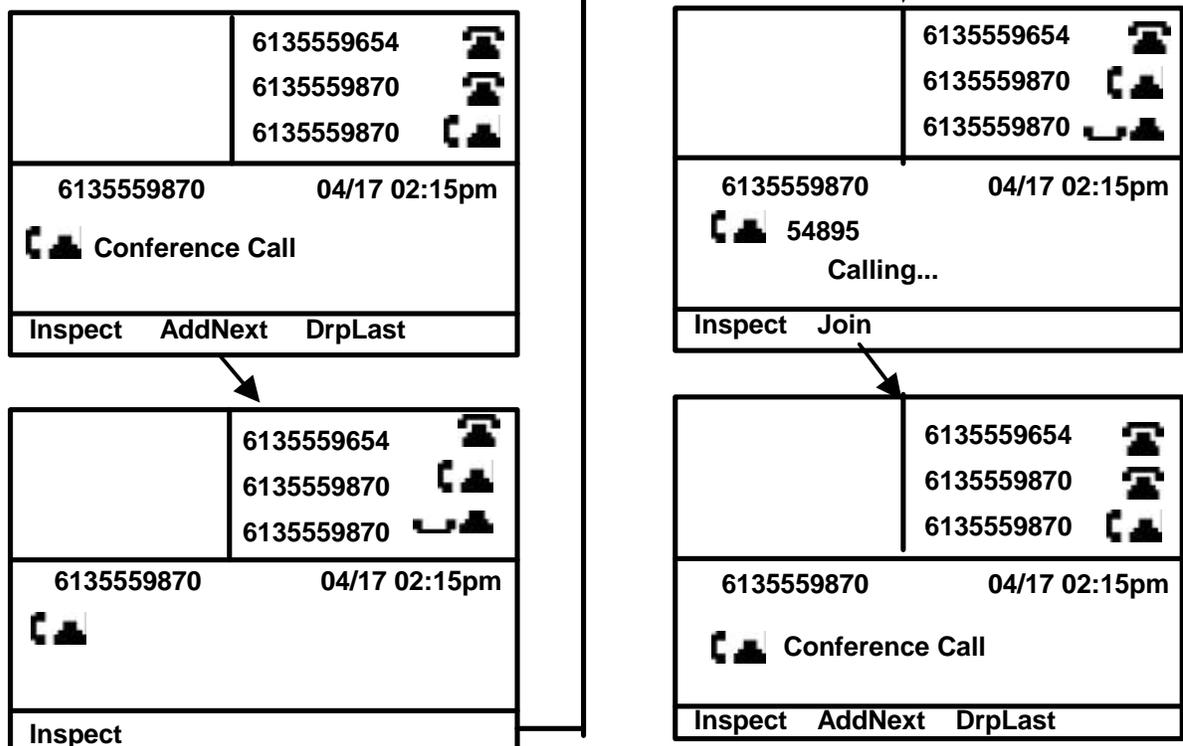
#### Adding a new party while on an active 3-way conference call

1. Press the **ADDNEXT** softkey, your conference call will automatically be placed on hold and an idle line will be seized.
2. Enter the phone number of the individual you want to add to the conference.
3. Press **JOIN** to rejoin your conference call.

The **DRPLAST** softkey allows you to remove the last phone number added to the conference call. Press this softkey while on an active conference call and the last party added to the call will be dropped from the conference.

If your Internet Telephone is configured with Flex Call, pressing **GOODBYE** will remove you from the conference call while leaving the other parties connected even if you originated the conference call. Check with your system administrator to determine how your set and the associated features are configured.

#### Continuation of Figure 25



### Adding on Incoming Calls to your Conference

Your Internet Telephone allows you to easily connect two independent calls for an immediate three-way conference (see Figure 26).

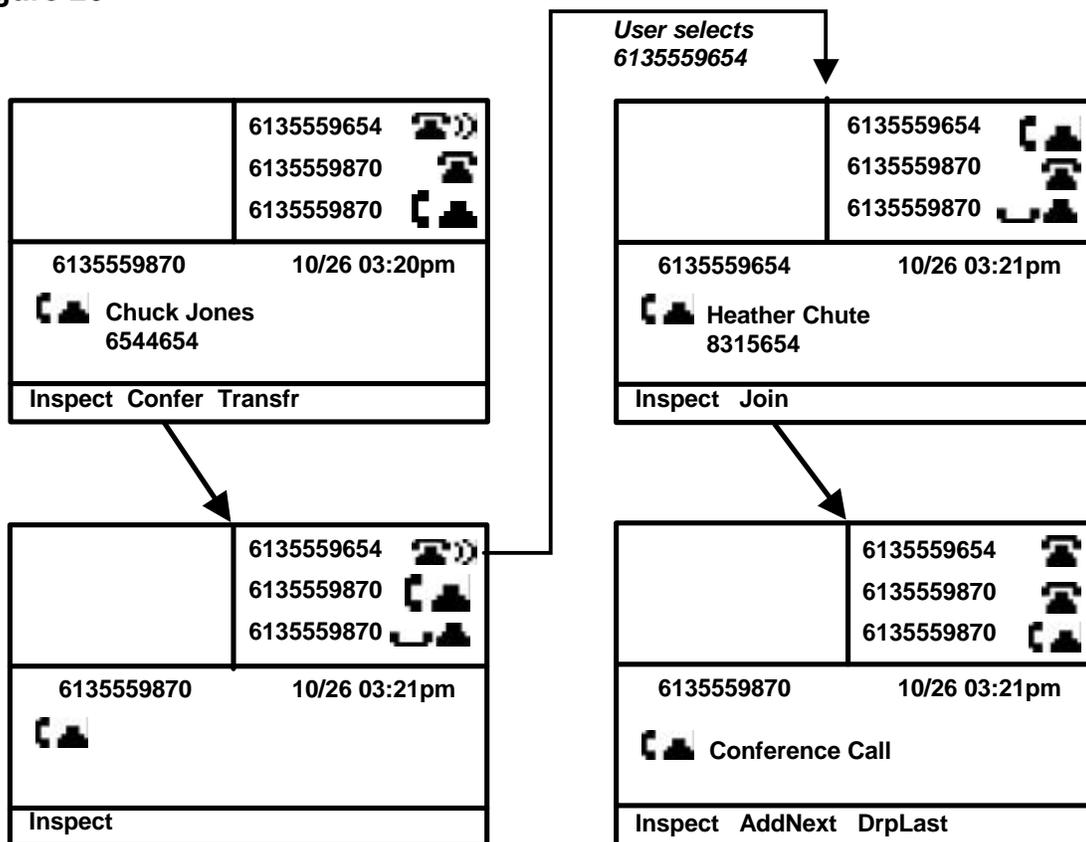
When pressing the **CONFER** softkey, your Internet Telephone will always seize an available line on your set. To conference two active callers you will need to release this line to complete your conference.

#### Setting up a 3-way conference call by joining two active calls

1. While on an active call, press the **CONFER** softkey - an available line will be seized and your caller will be placed on hold.
2. Press the **LINE** key to retrieve the other caller (not the call placed on hold in step 1) - the seized line will be released.
3. Press **JOIN** to begin the conference.

Be sure to press **JOIN** instead of **TRANSFR**. Pressing **TRANSFR** will transfer your first caller to your second caller and disconnect you from the call. You can use the **ADDNEXT** and **DRPLAST** softkeys to further enhance your conference call.

Figure 26



## Forwarding Calls

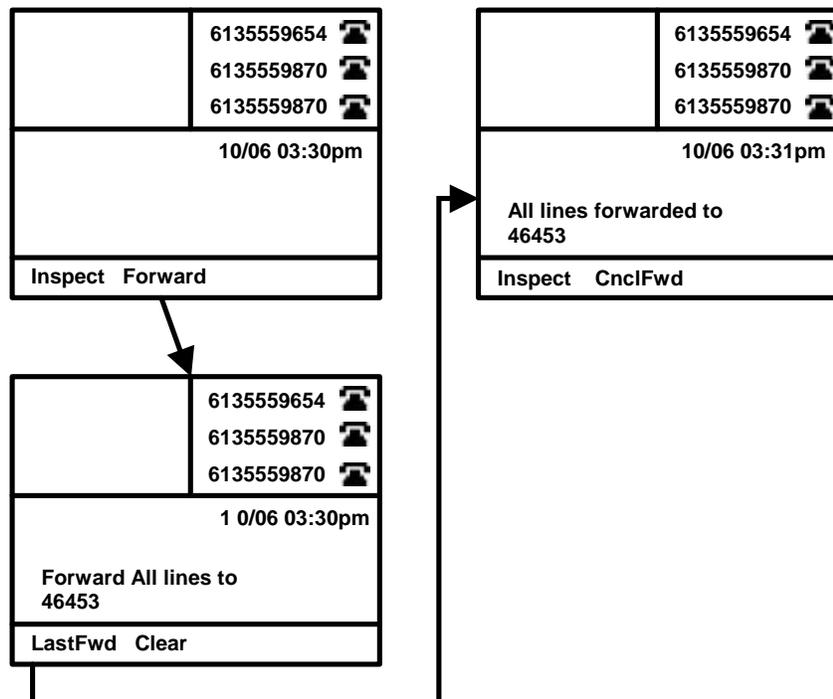
A special softkey allows you to easily forward your calls. You can select the most recently 'forwarded to' number, or change the number your calls are forwarded to (see Figure 27).

When forwarding your calls, incoming calls to all telephone numbers (except MADN numbers) assigned to your Internet Telephone are forwarded to the number you designate.

### ***When your phone is idle***

1. Press the **FORWARD** softkey.
  2. Press the **LASTFWD** softkey. The number last forwarded to will be displayed.
- Or...**
1. Enter a new forwarding number.
  2. Press **OK** to complete the forwarding of your calls.

**Figure 27**



When your calls are forwarded, a comment on your display screen will remind you of the number you have forwarded to. A softkey option allows you to cancel call forwarding from your Internet Telephone and accept incoming calls.

### ***When your phone is forwarded***

1. Press the **CNCLFWD** softkey to cancel call forwarding.

## Inspect

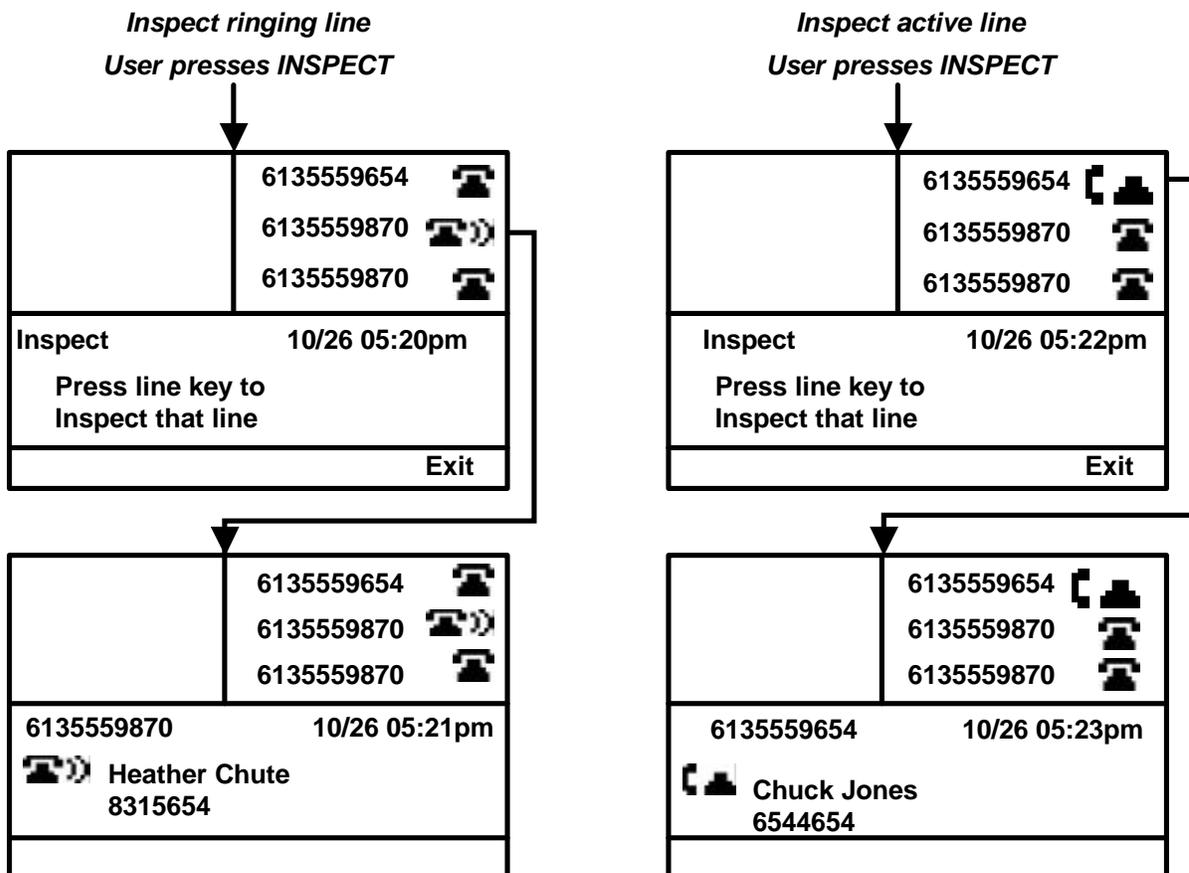
If your Internet Telephone has two or more line appearances, the Inspect feature is available. Inspect allows you to view information about a line without accessing it first. When you inspect a line, the call status and Caller ID information (if available) will display on your set. You can inspect lines that are in use, on hold, or ringing with a new call (see Figure 28).

### ***When your phone is idle, ringing, on hold, or active***

1. Press the **INSPECT** softkey.
2. Press the **LINE** key for the line you wish to inspect.

If the line you inspect is active, on hold, or ringing, the Caller ID record will display in the main information area of the display. If the line is idle, the directory number and status ('No Call') will display.

**Figure 28**



## Do Not Disturb

Work at your desk uninterrupted with this feature on your Internet Telephone. Do Not Disturb (also known as Make Set Busy) prevents incoming calls from ringing on your set. Calls to numbers other than your primary line, such as MADN group numbers, won't ring on your set either, so ringing phones will not interrupt your work. Incoming calls will hear busy signal (see Figure 29).

### ***When your phone is idle***

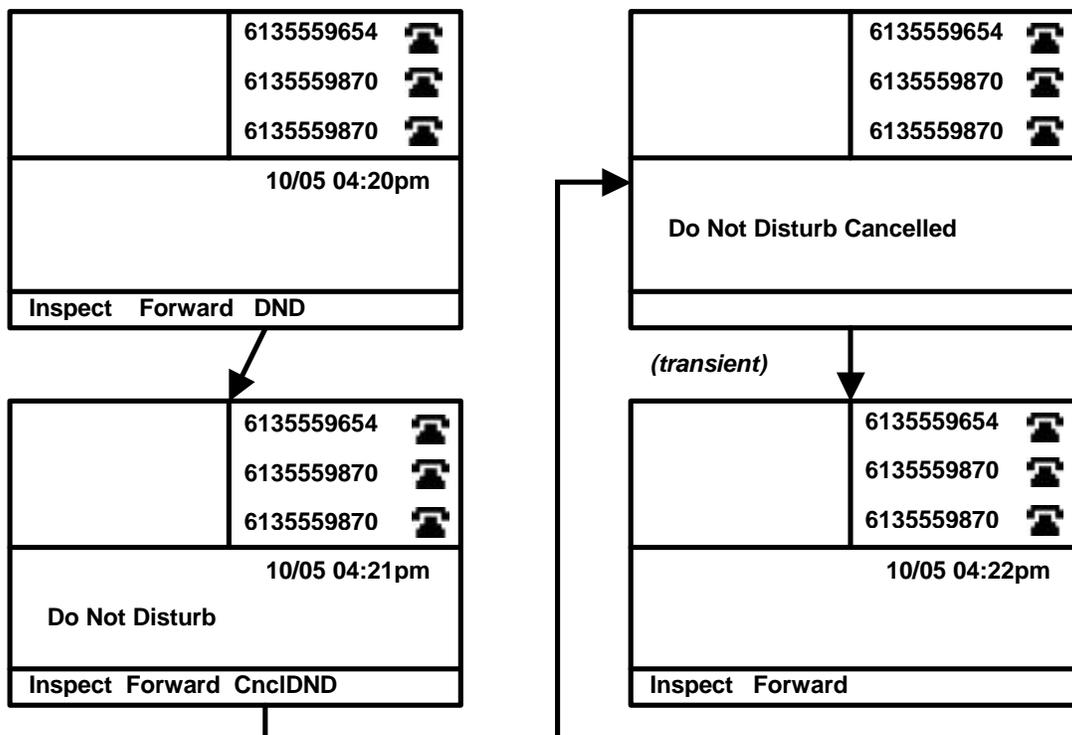
1. Press the **DND** softkey.

When you activate this feature, a comment on your display screen will remind you that your set will not accept incoming calls. A softkey option allows you to deactivate this feature easily and return your phone to an idle status, ready for incoming calls (see Figure 29).

### ***When Do Not Disturb is activated***

1. Press the **CNCLDND** softkey to cancel Do Not Disturb.

**Figure 29**



## Message Waiting and Message Retrieval

Your Internet Telephone will tell you when you have messages in your voice mailbox if you subscribe to voice mail services from your local telecommunications provider. Your display will provide a message ('Message Waiting'), and the Set Lamp will flash when the phone is idle (see Figure 30).

### ***To check for messages***

1. Go off hook and enter the phone number for your voice mail provider.
2. Review your messages.
3. Press **GOODBYE** to end your call.

When you have listened to your voice mail messages, the Set Lamp will extinguish, and the display will return to idle status.

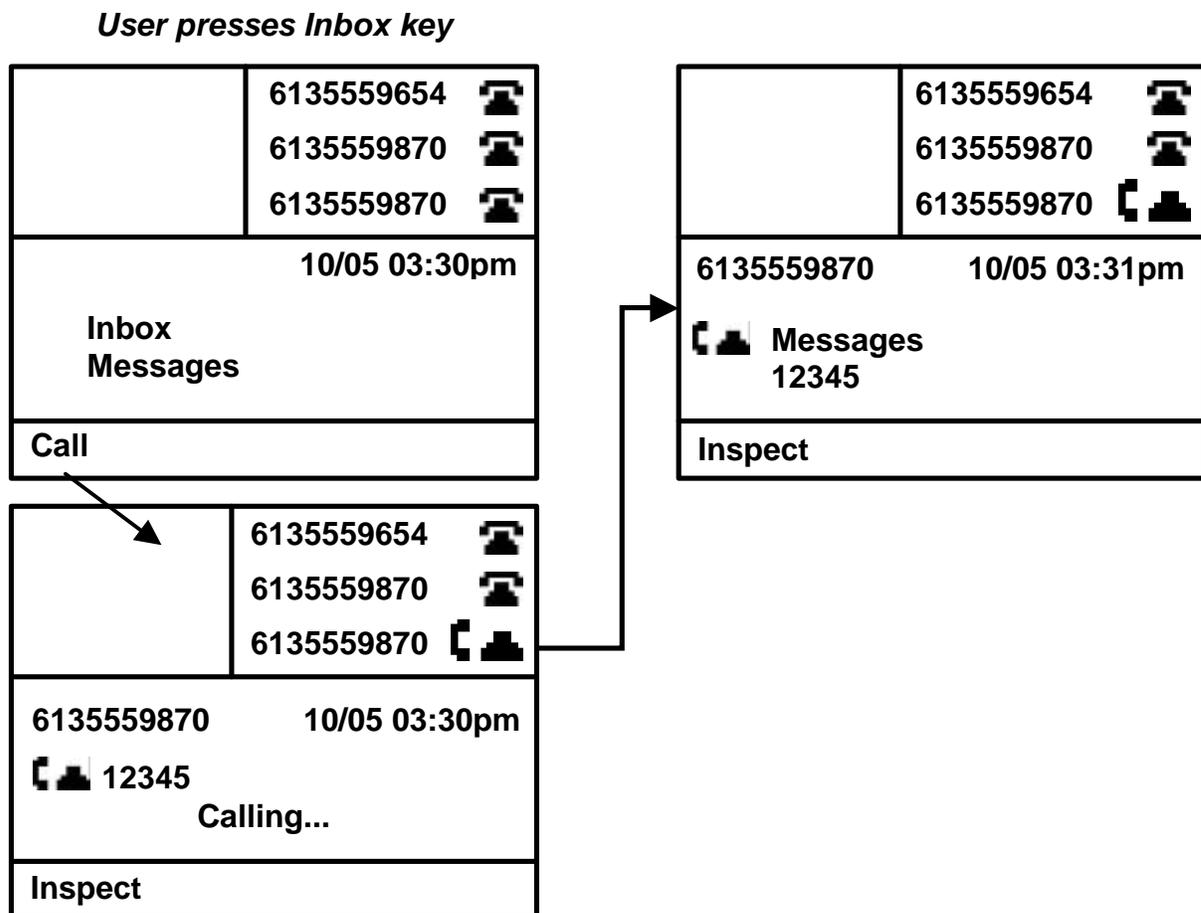
**Figure 30**

	6135559654 
	6135559870 
	6135559870 
10/05 02:20pm	
<b>Message Waiting</b>	
<b>Inspect</b>	<b>Forward</b>

If your Internet Telephone is provisioned with a network-based messaging application, connecting to your mailbox is as easy as pressing the **INBOX** key.

**To check for messages**

1. Press **INBOX** – 'Inbox', 'Messages' and the **CALL** softkey will appear on the display.
2. Press the **CALL** softkey to call your messaging system with the primary line.
3. Review your messages.
4. Press **GOODBYE** to end your call.

**Figure 31**

## Call Park

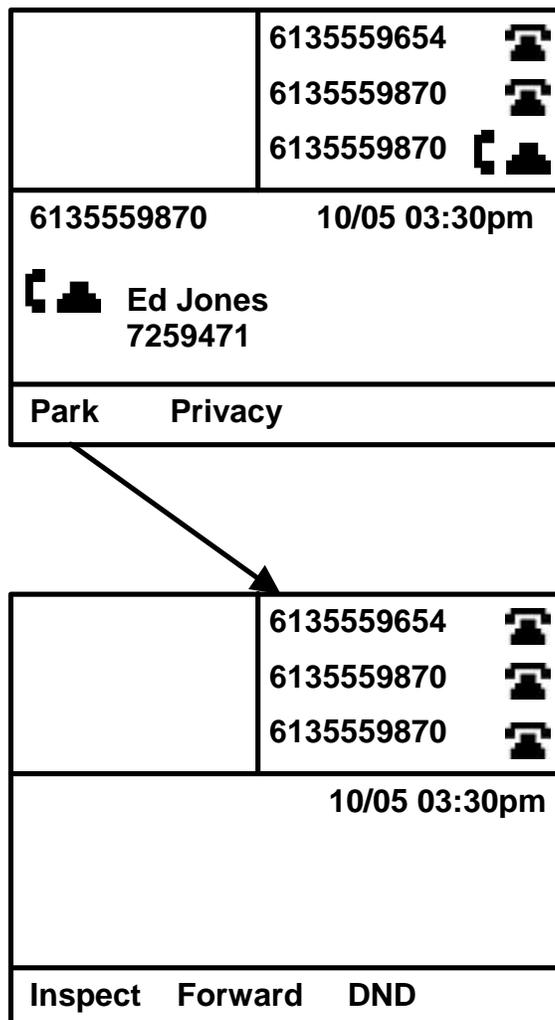
Your Internet Telephone allows you to temporarily hold a call so it can be retrieved from another set with the single press of a softkey even if you do not know in advance where you will be retrieving the call (see Figure 32).

### ***While on an active call***

1. Press the **PARK** softkey.

The call will be "parked" and the set becomes idle and ready for new callers. The "parked" call is now ready to be retrieved from any set.

**Figure 32**



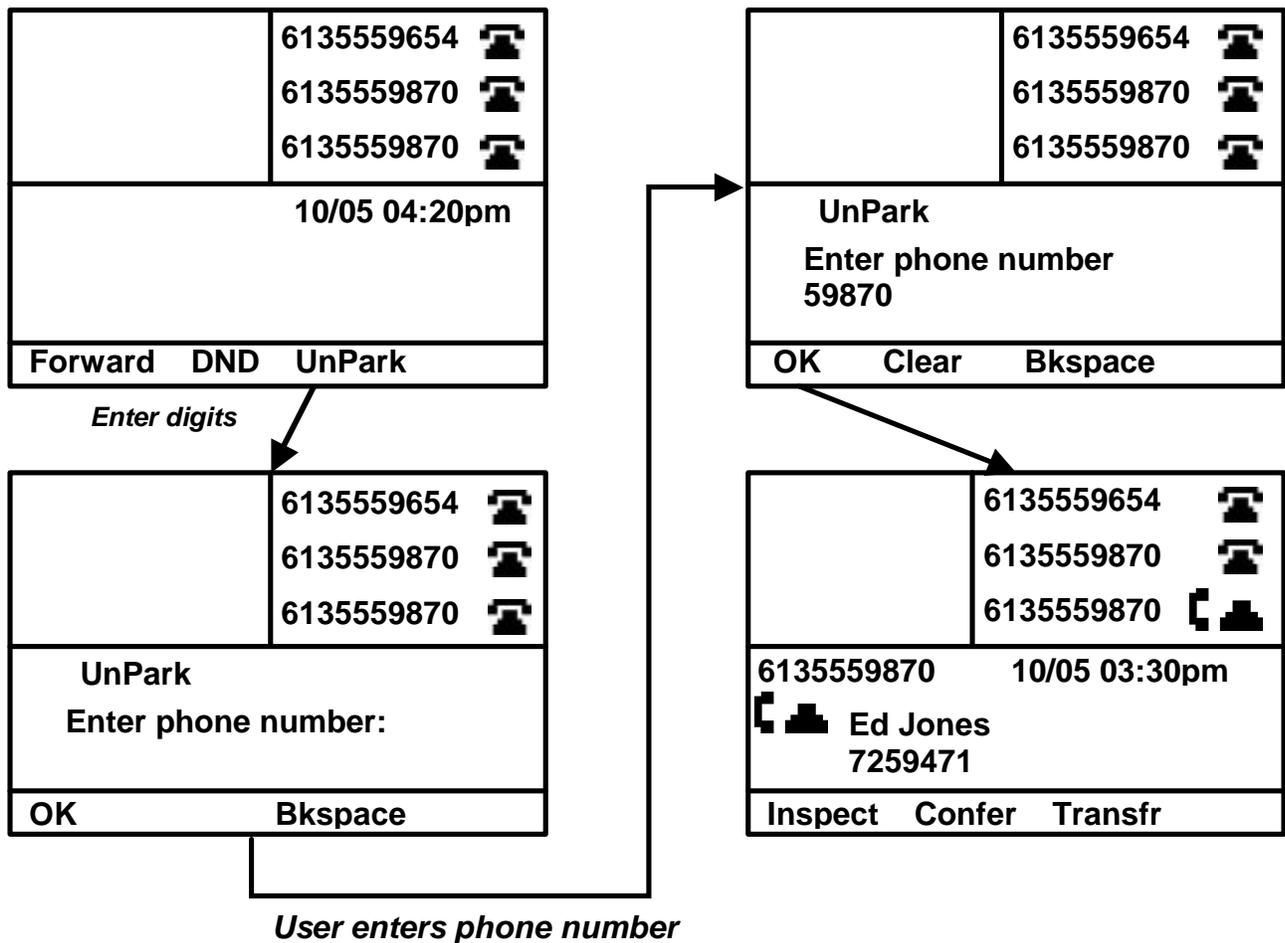
You can retrieve a parked call just as easily (see Figure 33).

**When your phone is idle**

1. Press the **UNPARK** softkey.
2. Enter the telephone number of the line where the call was parked.
3. Press the **OK** softkey.

The primary line will be used to capture the call.

**Figure 33**



## Call Pickup

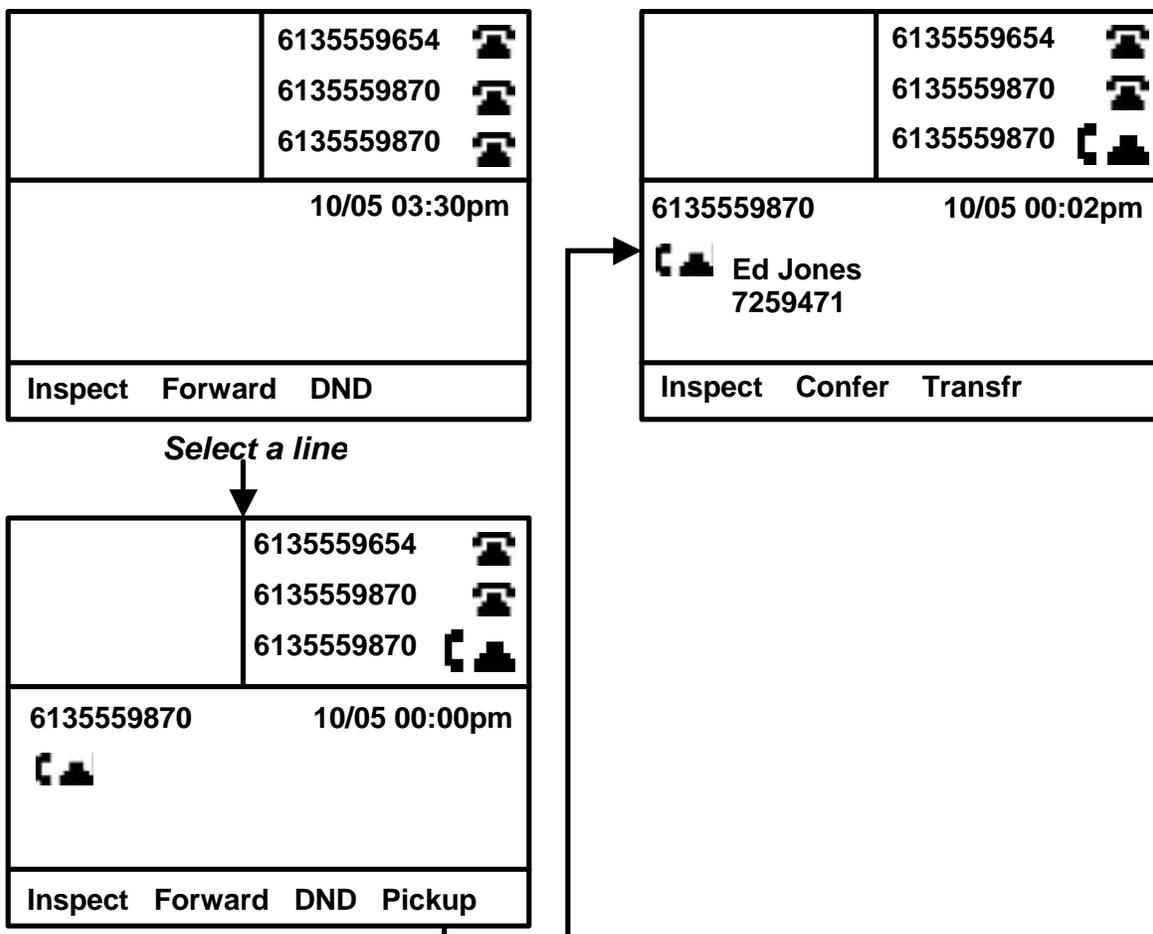
Internet Telephone users that are in the same Call Pickup group can answer ringing calls from other sets in their pickup group (see Figure 34). The system administrator establishes these pickup groups. You may want to check with your system administrator to determine if your set is part of a pickup group and to determine the other users in your group.

### ***When your phone is idle***

1. Lift the **HANDSET** to use the primary line, or lift the **HANDSET** and press a **LINE** key to select another line.
2. Press the **PICKUP** softkey.

The incoming call in the pickup group will be routed to your line.

**Figure 34**



## Ring Again

In busy offices, it can be difficult to reach your party without getting a busy signal. Ring Again (also known as Automatic Call Back) will notify you when the number you are trying to call becomes available (see Figure 35).

### *While on a "busy" call*

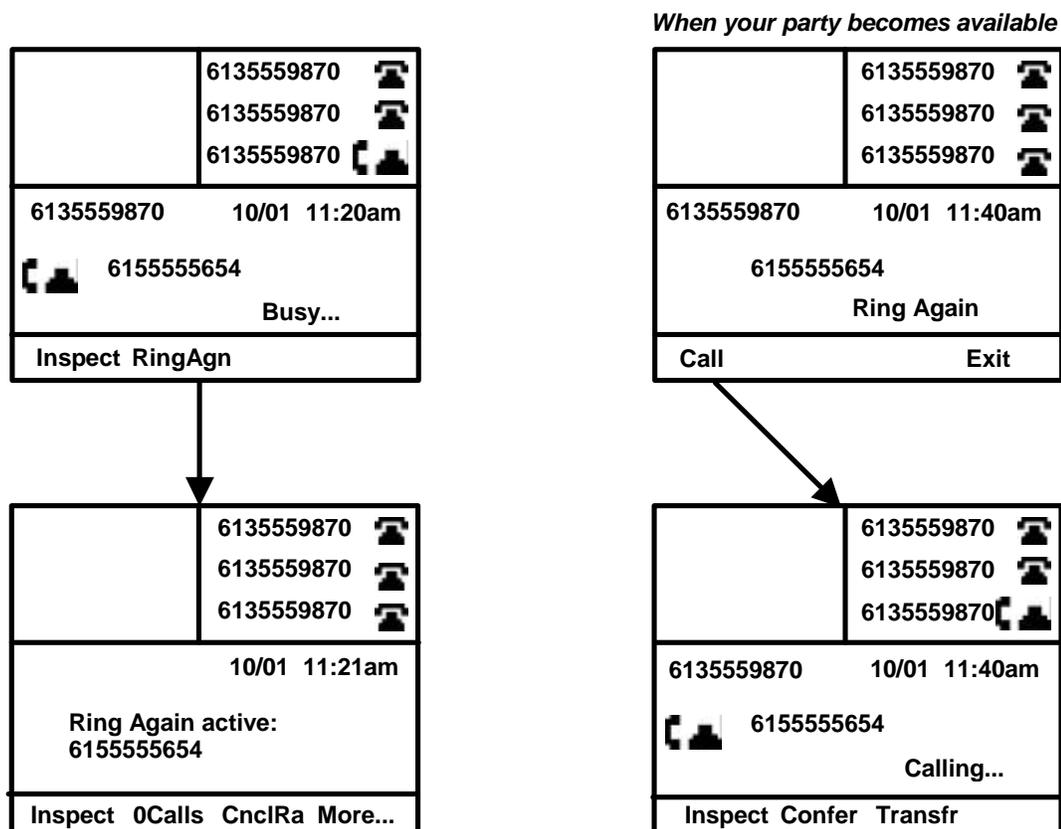
1. When you hear the "busy signal", press **RINGAGN**. If the switch allows Ring Again activation against the remote party, then the line will be released and the feature will be activated.
2. Your display will identify that the Ring Again feature is active. You may cancel the feature by pressing the **CNCLRA** softkey.

When the line becomes available, a tone through the speaker will notify you, prompting action to complete the call.

### *When You Receive Ring Again Notification*

1. To call the remote party, perform one of the following actions: press the **CALL** softkey, lift the **HANDSET**, press the **HANDSFREE** key, or press a **LINE** key. The network will connect you to the party that you have been trying to reach and you will hear the ring back tone.

Figure 35



## Privacy and Privacy Release

Typically, lines in a MADN group can be shared by several users, and more than one user can access a call at the same time. To ensure privacy on sensitive calls, the Privacy feature prevents others in your MADN group from joining your call. Check with your system administrator to determine how your MADN lines are programmed (see Figure 36).

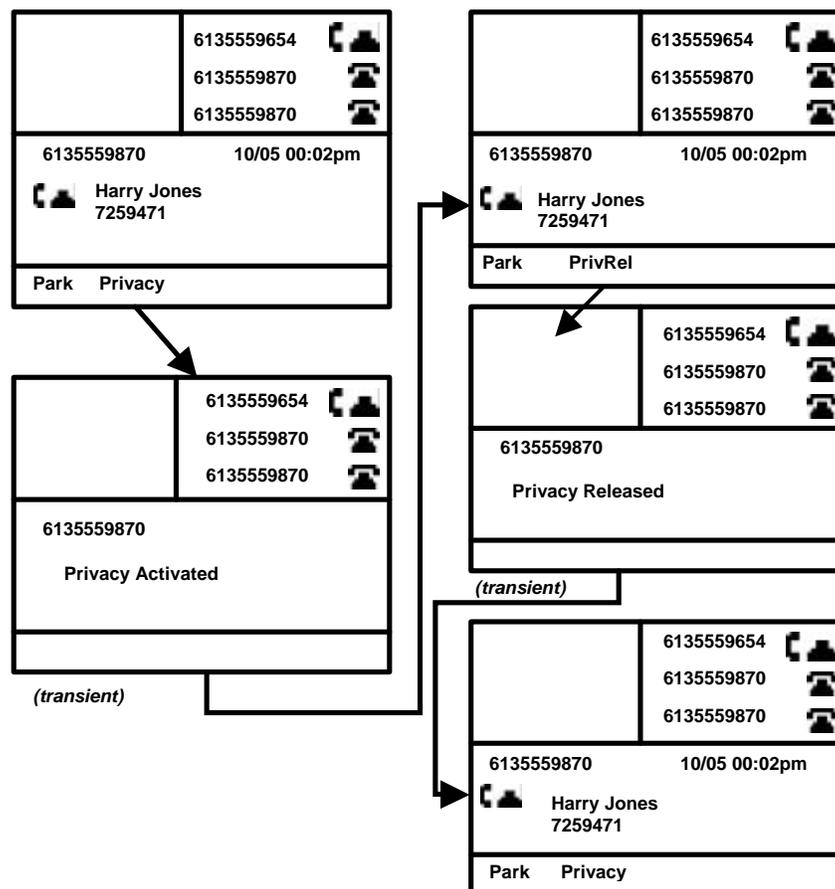
### **While on a call**

1. Press the **PRIVACY** softkey to prevent others in your MADN group from joining the call.
2. Press the **PRIVREL** softkey at any time to allow others in your MADN group to join the call.

The Privacy feature deactivates at the end of a call and must be reactivated on subsequent calls if required.

If your MADN group is programmed as “private” all calls are placed and retrieved in the Privacy mode. Your MADN group users can join your call if you activate the Privacy Release feature by pressing the **PRIVREL** softkey. This feature then deactivates at the end of a call and must be reactivated on subsequent calls.

**Figure 36**



## Speed Call - Programming

You can assign 1- and 2-digit codes to specific numbers to perform speed calling. Your Internet Telephone uses softkeys to make this task simple (see Figure 37).

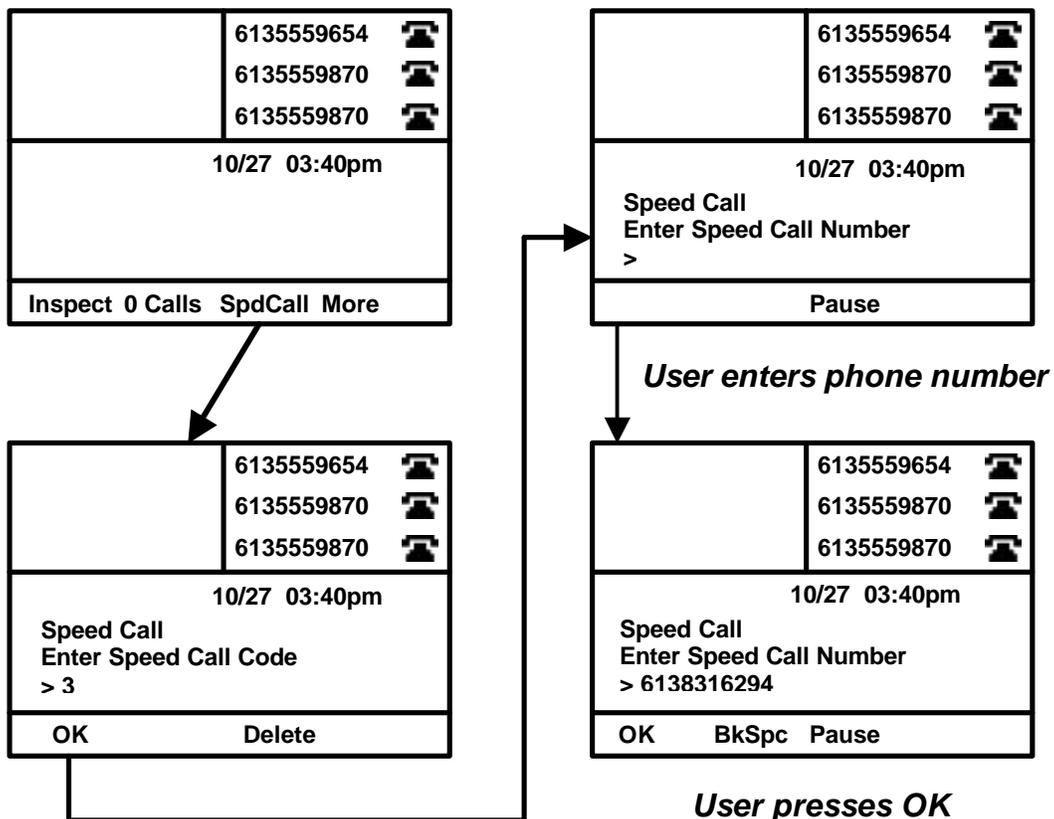
### ***When your phone is idle***

1. Press **SPDCALL**.
2. Enter an available 'speed dial code' – this will be the number(s) you dial to place a call to your party.
3. Press **OK**.
4. Enter the phone number you want to associate with this code.
5. Press **OK** to save your entries.

### ***To delete a Speed Call assignment***

1. Press **SPDCALL**.
2. Enter the 1- or 2-digit speed call code you wish to remove.
3. Press **DELETE**.

**Figure 37**



## Speed Call – Abbreviated Dialing

Now that your set is programmed, placing a call with Speed Call is simple.

### ***When your phone is idle***

1. Lift the handset (or press **HEADSET** or **HANDSFREE**).
2. Press the **SPDCALL** softkey.
3. Press the 1- or 2-digit code assigned to the party you wish to call.
4. Press **OK**. Your call will be placed.

Your display will show the number called, preceded by the speed dial code.

## ***IGW Access Features***

### **Outbox and Redial**

Your Internet Telephone is equipped with an Outbox feature which logs the last ten dialed numbers. You may access your Outbox list to display and redial any listed number by using your softkeys. If you subscribe to Caller ID services from your local service provider, the party's name may also display in your Outbox records.

Select numbers in your Outbox by using the navigation keys to move throughout the list, or press the number on your keypad that corresponds with the Outbox entry and quickly move to that listing in your Outbox. For example, pressing the number 6 on your dialpad will move to the sixth listing in your Outbox (see Figure 38).

#### ***To access your OUTBOX***

1. Press **OUTBOX** – up to three names or numbers will appear on your display.
2. Use your navigation keys to move up or down in the list. When you get to the end of the listed numbers, your display will show ‘– End of List –’
3. The name or number selected will be highlighted.
4. Press **EXIT** or press the **QUIT** key to exit the menus.

To place a call to the number selected, perform one of the following actions: press the **CALL** softkey, lift the **HANDSET**, press the **HANDSFREE** key, or press a **LINE** key.

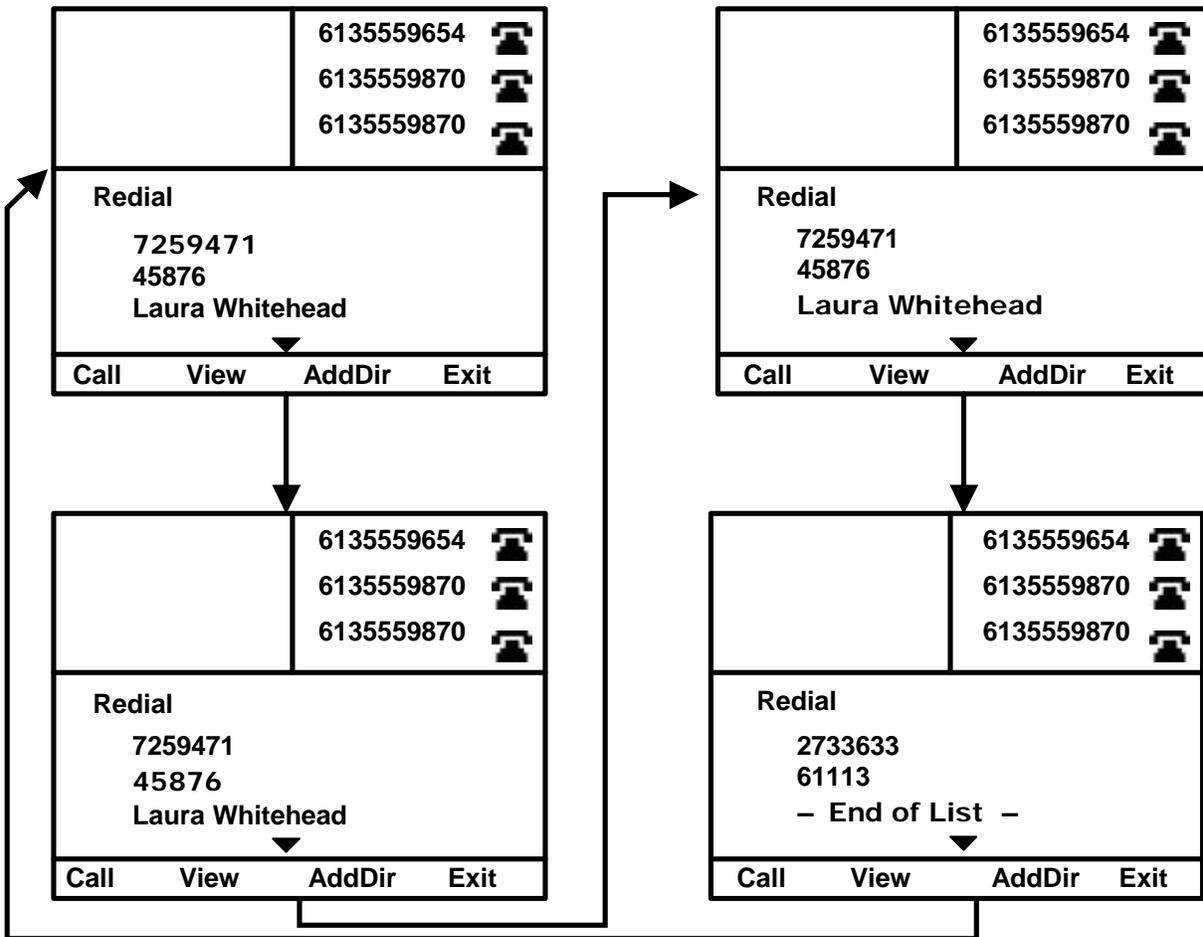
Pressing the **VIEW** softkey will display the number associated with a name in your Outbox list.

Use the **ADD DIR** softkey to add the number from your Outbox to your Personal Directory. See the section called Personal Directory in this User Guide for additional information regarding editing your Directory.

Pressing **EXIT** will exit the Outbox log and return to an idle state.

**Figure 38**

*User presses Down navigation key four times*



## Incoming Callers List

Your Internet Telephone includes an Incoming Callers List, which displays caller information for recently received calls. A softkey on your set will identify the number of callers in your Callers List, and your screen will display the caller's name and phone number and the date and time of the call (see Figure 39).

Each call display will include a phone icon identifying whether the call was answered  or missed  and whether the log has been viewed or not. An 'N' designates a new call while a 'V' identifies that the log has been previously viewed. Each record will include the caller's number (and name if identified) and date and time of call.

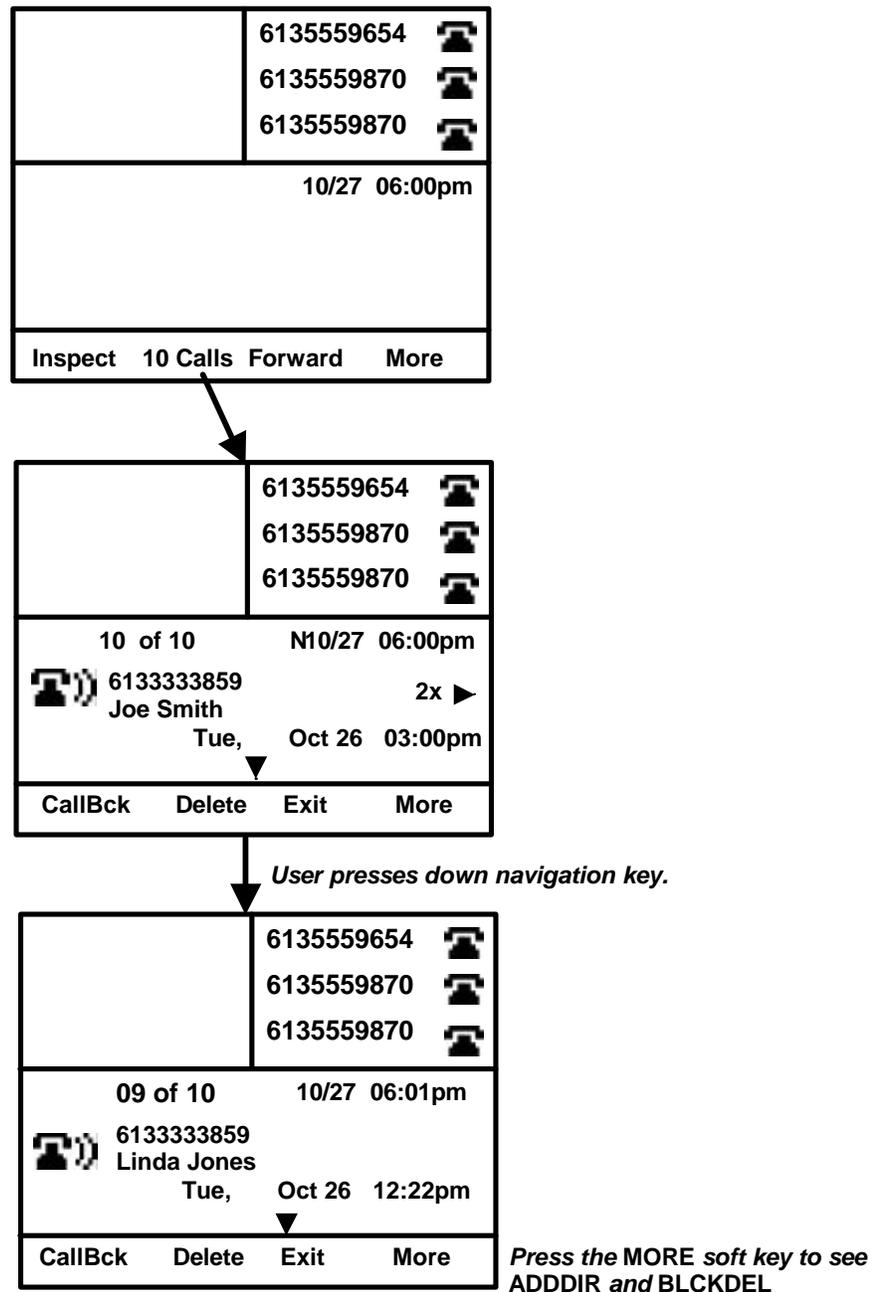
The **CALLS** softkey will identify the number of unviewed caller records in your log, (i.e., xxCALLS). Caller records are displayed in the order calls were received with the most recent caller first. If you have more than one caller record the 'more info' icon will display at the bottom of your screen. Use your up and down navigation keys to move you through your different callers.

The display screen will note the number of times a call was received if multiple calls were received from the caller. In this case, the 'more info' icon will display on the right of your screen. Use the left and right navigation keys to display the data for these additional calls from the same caller. Multiple calls from the same caller will be sorted with the most recent call first.

### ***When your phone is idle***

1. Press the **xxCALLS** softkey.
2. Use your navigation keys to move through the list of callers.
3. Press **QUIT** on your set to exit the Callers List.

Figure 39



If you receive an incoming call while viewing your Callers List, answering the call will automatically exit the Callers List.

You can delete calls from your Callers List by pressing the **DELETE** softkey. Clear the entire log by pressing **MORE** and then the **BLCKDEL** softkey.

Other softkey options include Call Back and Add to Directory.

## Incoming Callers List – CallBack and AddDir

Press **CALLBCK** while viewing the Callers List to place a call to the displayed party. In many business environments, the displayed number must be edited before you are able to complete a call. For example, your telephone system may require that you dial a **9** to seize a line outside the business' network. You may have to insert a **1** in the number string if the call will be a long distance call.

Edit the displayed number by using your left and right navigation keys to move the cursor throughout the number displayed. Pressing digits on your dialpad will insert digits in the number string to the left of the cursor. Pressing the **ERASE** softkey will remove the character above the cursor in the number string.

Then, originate the call by pressing **DIAL** (an available line will be automatically seized), lifting your handset (an available line will be seized), or pressing the **HANDSFREE** key, or pressing a **LINE** key.

Pressing **CANCEL** will return you to the Callers List without placing a call to the displayed number.

You can easily add numbers to your personal directory while viewing your Callers List. Press **MORE**, then **ADDIR** and an entry will be included in your personal directory which contains the name and number displayed in your Callers List. See the Personal Directory section of this guide for additional information regarding editing your directory records.

## Personal Directory

Your Internet Telephone is equipped with a Personal Directory which is accessed by pressing the **DIRECTORY** key on your set. Because your Personal Directory is stored on the server that manages your Internet Telephone, your directory is saved even if your set loses power.

Numbers are listed in your Directory in alphabetic order by the first name entered. If your administrator has defined a directory assistance number, then the first listing will be 'TPS directory.' This listing represents the directory assistance number defined by your administrator. Display your Directory entries by pressing the up and down navigation keys, or press the number on your dialpad which corresponds with the first letter of your party's first name. For example, pressing **4** will jump to the listings in your directory beginning with the letter 'G'.

While numbers from your Outbox and Callers List can be quickly added to your Directory using the **ADDIR** softkey, the Directory can also be updated manually (see Figure 40).

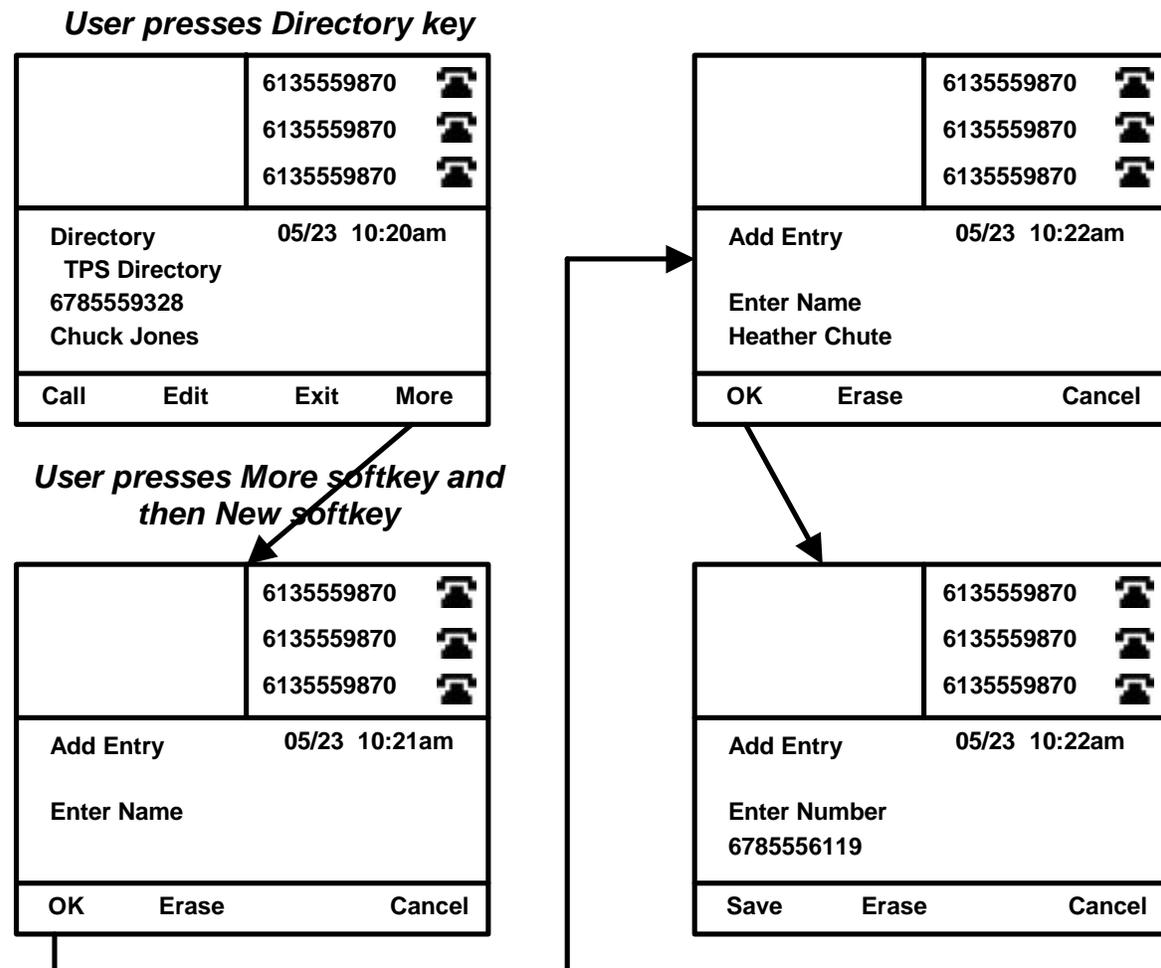
### ***To update your DIRECTORY***

1. Press **DIRECTORY** – the first listing in your directory will display.
2. Press **NEW**. (The user must press the **MORE** softkey in order to see the **NEW** softkey.)
3. Enter the name by pressing the corresponding numbers on your keypad.
4. Press **OK**.
5. Enter the telephone number associated with your Directory entry.
6. Press **SAVE** to save your changes.

If you make a mistake while entering the name or telephone number, use the left and right navigation keys to move forward or backward to edit the existing entry.

The numeric keys on your dialpad are associated with the letters of the alphabet. Additionally, press **1** for the following characters: comma, dash, apostrophe, ampersand, period, and the number 1. Press the **0** key to enter a space.

Figure 40



While viewing your directory you may edit entries using the softkeys available in the same manner as you would enter new directory listings. Use your navigation keys to move the blinking cursor within the text or number displayed to insert new numbers or letters in the saved directory listing.

#### **To edit your DIRECTORY**

1. Select the listing that needs editing by using your up and down navigation keys – the selected entry will be highlighted.
2. Press **EDIT**.
3. The listed name will display first. Press **OK** if the entry is correct. If changes are required, move the blinking cursor to left of the character that needs changing. Press **ERASE** to remove digits from the listing, or press the appropriate key on your dialpad to add digits.
4. Press **OK**. The phone number associated with the listing will be displayed.
5. Make changes to the number listed, or press **OK** if the entry is correct.
6. Press **SAVE** to save your changes.

## Personal Directory – Abbreviated Dialing

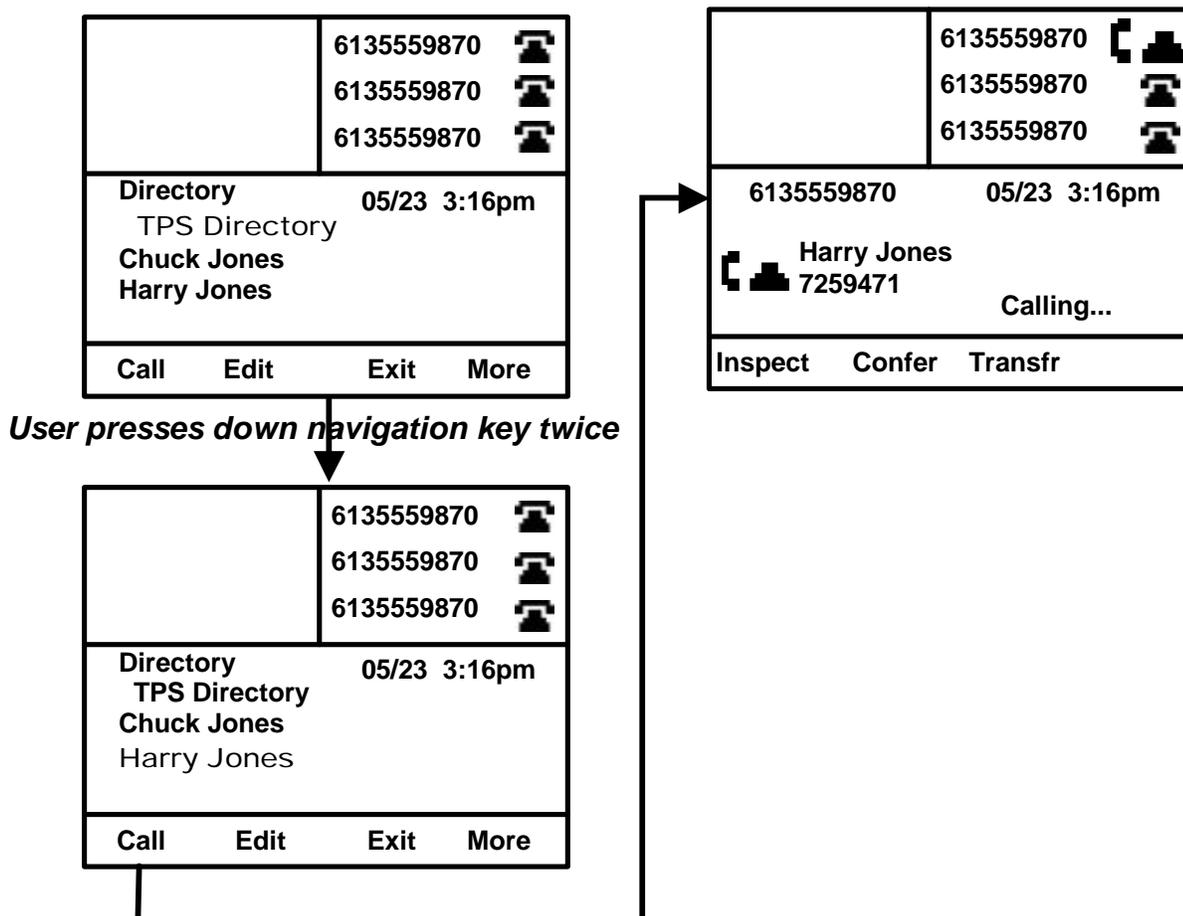
The Personal Directory available with your Internet Telephone makes abbreviated dialing simple. Because your directory lists names as well as numbers, there are no codes to remember.

Remember the numbers listed in your Directory appear in alphabetic order (see Figure 41).

### **To dial a number listed in your directory**

1. Press the **DIRECTORY** key on your set – the first listing in your directory will display.
2. Press the 'down' navigation key to select the appropriate directory listing, or press the number on your dialpad which corresponds with the first letter in the directory listing you wish to dial. Your selected listing will be highlighted.
3. To place a call to the number selected, perform one of the following actions: press the **CALL** softkey, lift the **HANDSET**, press the **HANDSFREE** key, or press a **LINE** key.
4. Press **GOODBYE** to disconnect your active call.

**Figure 41**



## ***Services Key***

You can customize several settings on your Internet Telephone through the SERVICES key (the key with a globe on it). Pressing SERVICES accesses a series of nested menus which allows you to view and/or change the set's language, time zone, display appearance, and other phone options.

### ***When your phone is idle***

1. Press **SERVICES** on your set – the first level of the nested menus will appear on your display.
2. Use your navigation keys to move up or down in the list of services. When you get to the end of the listed options, your display will show ‘– End of List –.’ Press the right navigation key to view an explanation of the option.
3. The option selected will be highlighted. Once you find the service or option you wish to edit, press the **SELECT** softkey.
4. After making your change, press **OK** to save the edits.
5. Press **EXIT** or press the **QUIT** key to exit the menus.

The services available are:

- Language
- Phone Options
- Session
- Network Info
- Display Format

See the remaining sections in this guide for information on changing a specific option.

## Changing Language

Your Internet Telephone is equipped to display commands and other screen options in two different languages: English and French. The Services menu allows you to change the language used by your set.

### ***When your phone is idle***

1. Press **SERVICES** – the first level of the nested menus will appear on your display.
2. Use your navigation keys to choose Language.
3. Press **SELECT**.
4. Use your navigation keys to choose the appropriate language – your selection will be highlighted. Press **OK**
5. Press **OK** again to reset your phone with the new option, or press **CANCEL** to cancel your change.

## Changing Phone Options

The Phone Options menu in Services allows you to customize the display and ringing of your Internet Telephone. Menu options include: Display Contrast, Time Zone, Timed Display, Incoming Call Alert, and Bandwidth.

### ***To change Display Contrast (for i2004 users only)***

1. Press **SERVICES**.
2. Use your navigation keys to choose Phone Options and press **SELECT**.
3. Use your navigation keys to choose Display Contrast and press **SELECT**.
4. Use your left and right navigation keys to decrease or increase the display's contrast levels.
5. Press **OK** to save your changes.

The display on your Internet Telephone displays the current time. Choosing the correct time zone will ensure your display includes the correct time.

### ***To change Time Zone***

1. Press **SERVICES**.
2. Use your navigation keys to choose Phone Options and press **SELECT**.
3. Use your navigation keys to choose Time Zone and press **SELECT**.
4. Use your up and down navigation keys to choose the correct time zone for your geographic area – your selection will be highlighted.
5. Press **OK** to save your changes.

The Timed Display option is available on your Internet allows you to change the amount of time a transient message is displayed on your set's screen.

### ***To change Timed Display***

1. Press **SERVICES**.
2. Use your navigation keys to choose Phone Options and press **SELECT**.
3. Use your navigation keys to choose Timed Display and press **SELECT**.
4. Use your up and down navigation keys to increase or decrease the amount of time you want transient messages to display on your set.
5. Press **SAVE** to save your changes.

Users of the Internet Telephone can choose the way the phone identifies incoming calls. Available options include typical ringing, a single burst tone, or no audible indication at all.

***To change Incoming Call Alert***

1. Press **SERVICES**.
2. Use your navigation keys to choose Phone Options and press **SELECT**.
3. Use your navigation keys to choose Incoming Call Alert and press **SELECT**.
4. Use your up and down navigation keys to choose the appropriate option – your selection will be highlighted.
5. Press **SAVE** to save your changes.

When establishing a call, the Internet Telephone will use the highest quality codec allowed by the IGW Access system. However, if the user is connecting over a low bandwidth connection, the user can specify that the Internet Telephone should set up calls using only codecs that require low bandwidth.

***To change Bandwidth Selection***

1. Press **SERVICES**.
2. Use your navigation keys to choose Phone Options and press **SELECT**.
3. Use your navigation keys to choose Bandwidth and press **SELECT**.
4. Use your up and down navigation keys to choose the appropriate option – your selection will be highlighted.
5. Press **SAVE** to save your changes.

## Using Session Features

The Session menu in Services provides for logging off your Internet Telephone, resetting the telephone terminal, and establishing a new password or changing an existing password.

### ***To Log Out***

1. Press **SERVICES**.
2. Use your navigation keys to choose Session and press **SELECT**.
3. Use your navigation keys to choose Log Out and press **SELECT**.
4. Press **OK** to log out (your phone will display "Enter the DNKey") or press **CANCEL** to discard the request.

Resetting your Internet Telephone will un-register the set with your system software, then re-register using the previously identified DNKey. This feature may be useful if your set becomes unstable.

### ***To Reset***

1. Press **SERVICES**.
2. Use your navigation keys to choose Session and press **SELECT**.
3. Use your navigation keys to choose Reset and press **SELECT**.
4. Press **OK** to reset your phone or press **CANCEL** to discard the request.

## Setting or Changing your Password

### *To establish a password*

1. Press **SERVICES**.
2. Use your navigation keys to choose Session and press **SELECT**.
3. Use your navigation keys to choose Change Password and press **SELECT**.
4. Enter your selected password using the keys on your dialpad – your password may contain only numeric characters.
5. Press **OK**.
6. Enter your selected password again to confirm.
7. Press **SAVE** – if both entries were correct, your password will be saved.

### *To change a password*

1. Press **SERVICES**.
2. Use your navigation keys to choose Session and press **SELECT**.
3. Use your navigation keys to choose Change Password and press **SELECT**.
4. Enter your existing password using the keys on your dialpad.
5. Press **OK**.
6. Enter a new password by using the keys on your dialpad – your password may contain only numeric characters.
7. Press **OK**.
8. Enter your selected password again to confirm.
9. Press **SAVE** – if both entries were correct, your password will be saved.

## Viewing Network Info

The Network Info menu provides the user with specific information about the Internet Telephone, including the terminal address, TPS address, and firmware version.

The terminal address information contains the public IP address and port (labeled Pub and separated by a colon), the private IP address (labeled Priv) and the MAC address (labeled MAC).

### **To view Terminal Address**

1. Press **SERVICES**.
2. Use your navigation keys to choose Network Info and press **SELECT**.
3. Use your navigation keys to choose Terminal Address and press **SELECT**.
4. Press **EXIT** when you have completed viewing the information.

The TPS address information contains the TPS's virtual IP address and listening port (labeled IPv and separated by a colon), the physical IP address (labeled IPp), and the software version (labeled Version).

### **To view TPS Address**

1. Press **SERVICES**.
2. Use your navigation keys to choose Network Info and press **SELECT**.
3. Use your navigation keys to choose TPS Address and press **SELECT**.
4. Press **EXIT** when you have completed viewing the information.

The last option available in the Network Info menu is Firmware Version.

### **To view Firmware Version (available to i2004 users only)**

1. Press **SERVICES**.
2. Use your navigation keys to choose Network Info and press **SELECT**.
3. Use your navigation keys to choose Firmware Version and press **SELECT**.
4. Press **EXIT** when you have completed viewing the information.

## Changing Display Formats

Users can change the format of time and date displays on the Internet Telephone.

Time displays include a 12-hour clock, twenty-four-hour clock and French time format.

Date displays include the month appearing in text or numeric form in the following formats: MM/DD, DD/MM, Mon DD and DD Mon.

### ***To change Time Format***

1. Press **SERVICES**.
2. Use your navigation keys to choose Display Format and press **SELECT**.
3. Use your navigation keys to choose Time Format and press **SELECT**.
4. Available formats will be displayed – use your navigation keys to choose a new format – your selection will be highlighted.
5. Press **OK** to save your changes, or press **EXIT** to cancel.

### ***To change Date Format***

1. Press **SERVICES**.
2. Use your navigation keys to choose Display Format and press **SELECT**.
3. Use your navigation keys to choose Date Format and press **SELECT**.
4. Available formats will be displayed – use your navigation keys to choose a new format – your selection will be highlighted.
5. Press **OK** to save your changes, or press **EXIT** to cancel.