



# **The i2004 Internet Telephone User Guide**

**February, 2000**

# The i2004 Internet Telephone User Guide

The i2004 Internet Telephone User Guide shows you how to install and operate your i2004 Internet Telephone.

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## **Input on 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 Class 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.

This Class A digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

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

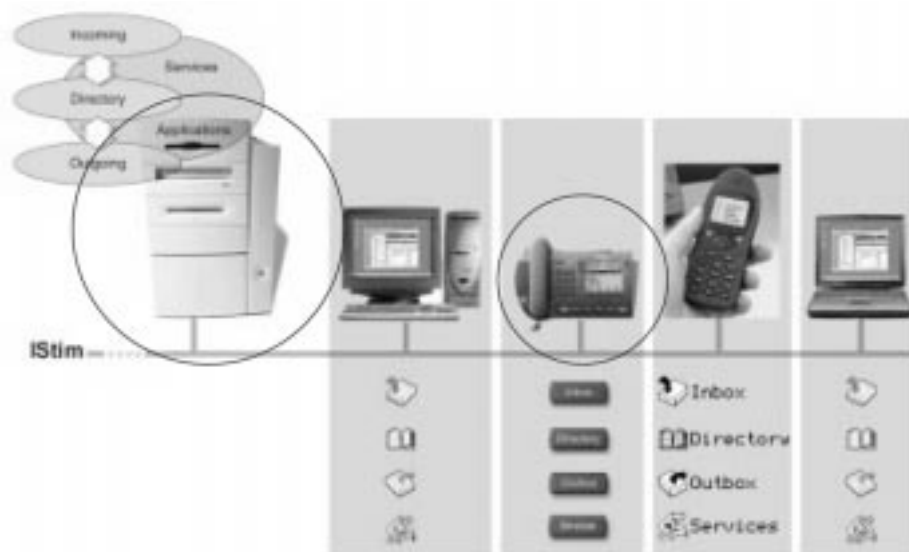
## i2004 Internet Telephone - Introduction

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.

IP telephony brings the power of your desktop computer to your telephone set and brings dial tone to your personal computer.

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 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, directory, and voicemail and 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

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



## Display Screen

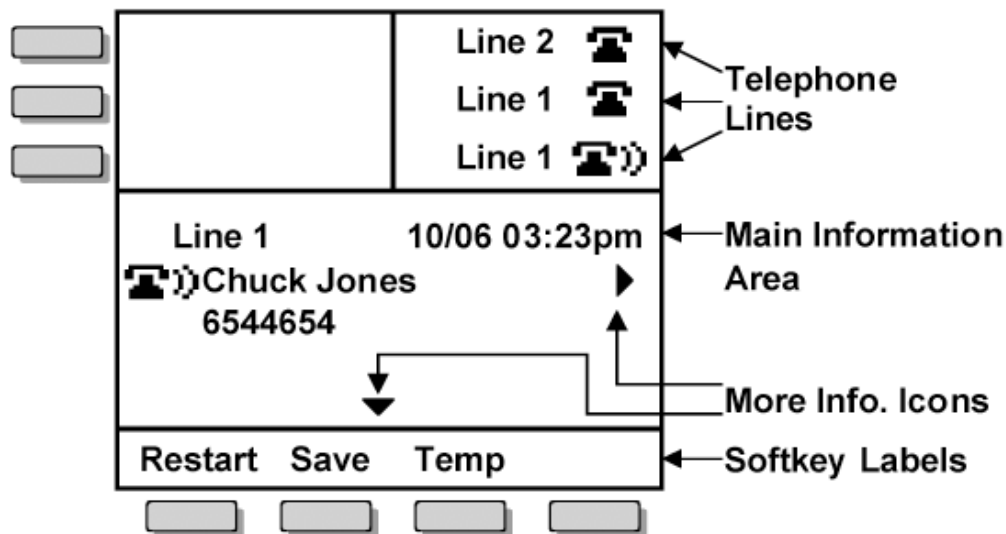
The i2004 Internet Telephone is a feature-rich telephone that has a built-in display screen for ease of use.

The display screen has three areas to show different types of information. (See Figure 3.) 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 3

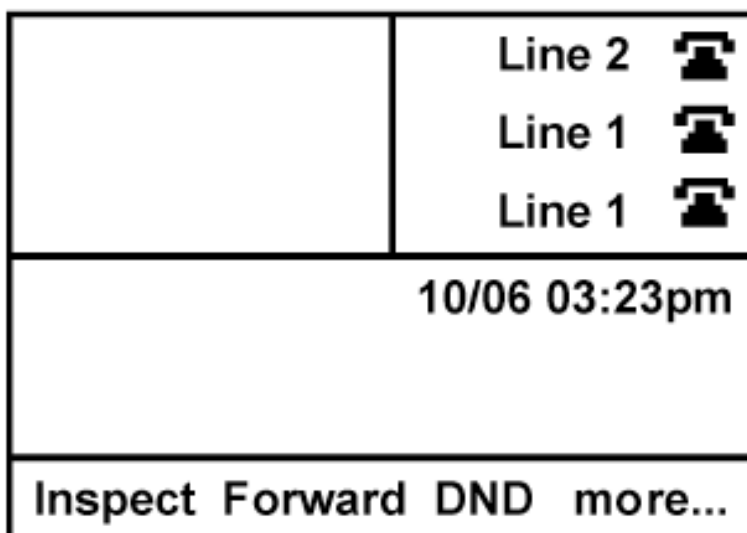


## Softkeys

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 4.)

Figure 4





## Multiple Line Appearances

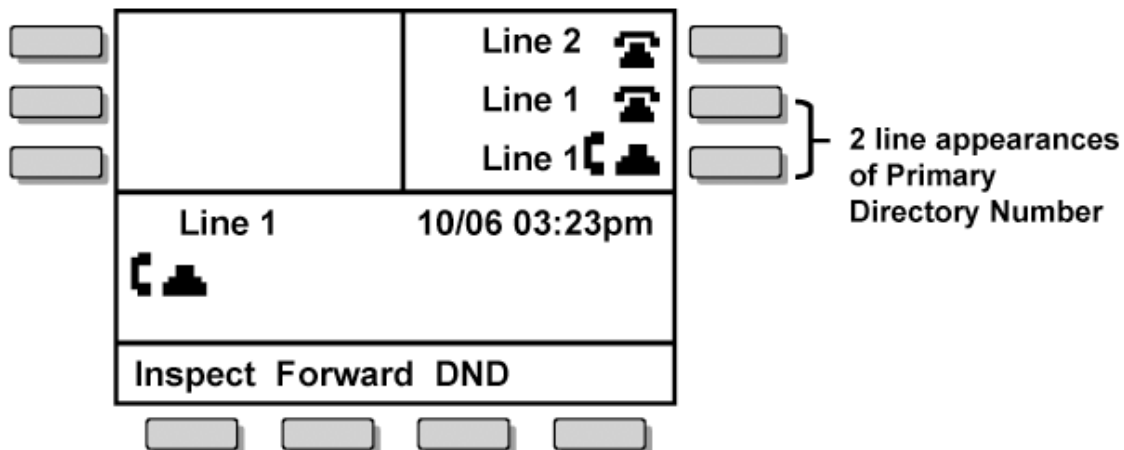
The i2004 Internet Telephone includes six programmable keys for multiple telephone lines and line appearances that can be updated by your system administrator. Each unique line and appearance for that line has a dedicated key assigned to it using the programmable **LINE** keys. Line key labels display "Line X" with the primary line labeled "Line 1."

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 5.) 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.

The i2004 Internet Telephone includes special features that permit you to determine the status of the line before accessing it and that provide for call privacy so other MADN group users do not interrupt your call. Special icons identify the status of each telephone line: ringing, on hold, or idle.

Figure 5



# 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.

## ***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.

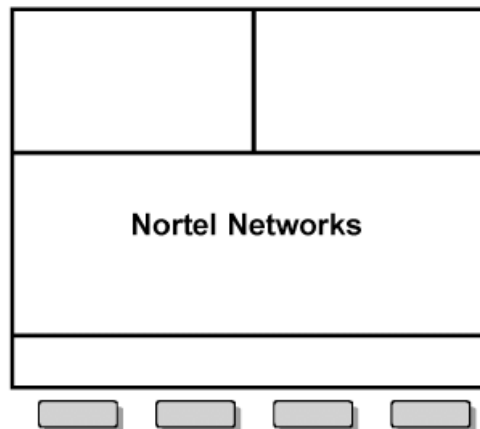
**Step 3:** Plug the AC Power adapter into the base of the telephone, and plug the adapter into the nearest 120V AC (60 Hz) outlet.

## ***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.

To begin the initialization process, you must enter a PASSWORD while the introduction screen appears after powering your i2004 Internet Telephone. If no password is entered, or a password is not entered within the first two seconds of the initialization process, your set will be initialized automatically. Automatic initialization will utilize the default entries and will not be stored in your set's permanent memory. (See Figure 6.)


Figure 6



Enter the default password by pressing each of the four softkeys (located at the bottom of the display screen) once, pressing from left to right. The default entry for each parameter will be displayed on the screen. (See Figure 7.)

Figure 7

<b>Manual Cfg</b>			
SET IP: 255. 255. 255. 255_			
OK	Bkspace	Clear	Cancel



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.

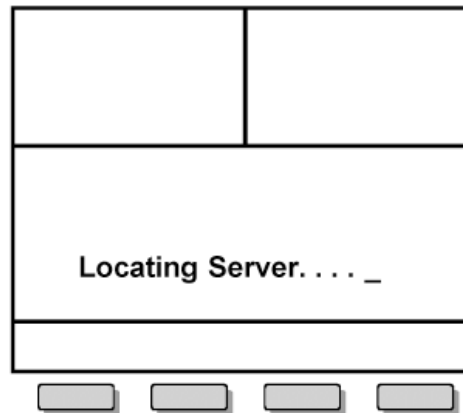
The following table defines the required parameters.

Parameter	Definition
SET IP	IP address for the i2004 Internet Telephone
NETMASK	Net submask
DEF GW	Default gateway IP network address
S1 IP	Primary server IP address
S1 PORT	Primary server port number
S1 ACTION	Primary action code (enter 1 for UNISim)
S1 RETRY COUNT	Primary retry count (value from 0-255, enter 10)
S2 IP	Secondary server IP address
S2 PORT	Secondary server port number
S2 ACTION	Secondary action code (enter 1 for UNISim)
S2 RETRY COUNT	Secondary retry count (value from 0-255, enter 10)
DHCP	Is DHCP required? (disable with 0)

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

When each parameter has been entered, your i2004 Internet Telephone will attempt to connect to the server. (See Figure 8.)

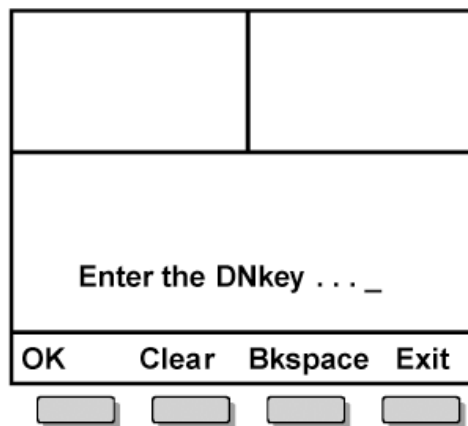
Figure 8



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 9.) This information should be provided by your system administrator. This prompt will only occur once, so if the your i2004 Internet Telephone has completed the initialization process previously, this step will not occur.

Figure 9



If the telephone set was previously initialized, just connect all the telephone cords and power adapter - no additional actions are required to begin using your i2004 Internet Telephone.

## Making A Call

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.)

### ***Off-Hook Dialing:***

- u Using your Handset
- u Using your Headset key or Handsfree key

### ***On-Hook Dialing:***


- u Predialing with your Handset
- u Predialing with your Headset key or Handsfree key

Figure 10




## Making a Call with Off-Hook Dialing

### *Using your Handset*

1. Lift the **HANDSET** to make a call using the primary line or lift the **HANDSET** and press a **LINE** key 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.

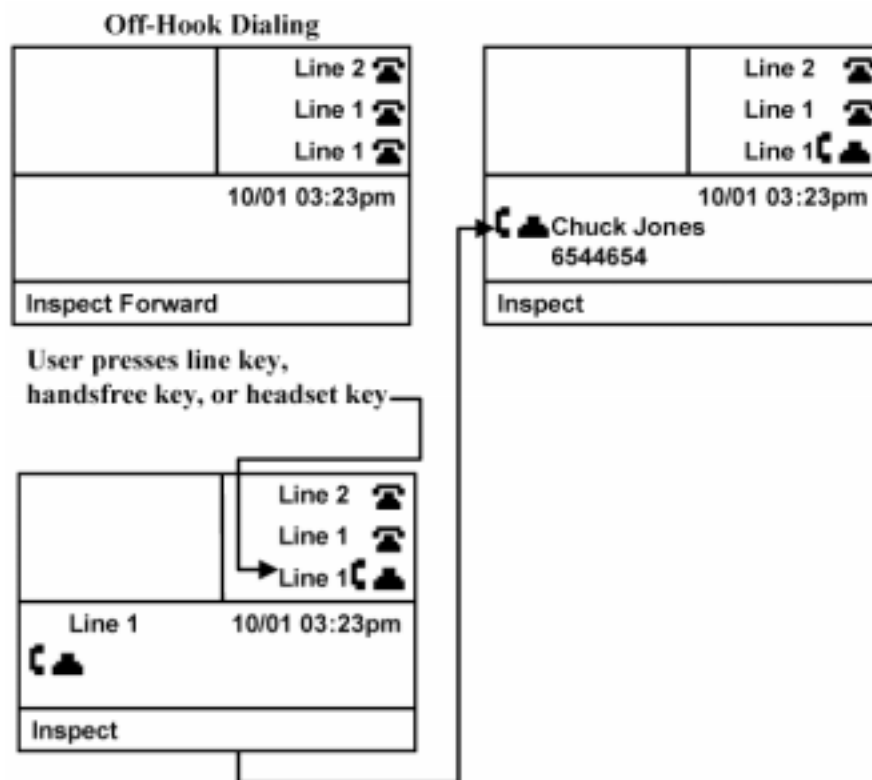
### *Using your Headset or Handsfree Keys*

1. Press the **HANDSFREE** or **HEADSET** key. 
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 Centrex switch associated with the number you are dialing, it will appear on the display. (See Figure 11.)

Figure 11





## Making a Call with On-Hook Dialing

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

### ***Predialing with your Handset***

1. Enter the phone number (no dial tone will be heard).
2. Lift the **HANDSET**.
3. Replace the **HANDSET** to end the call (or press **GOODBYE**).

The primary line is used to place the call.

### ***Predialing with your Headset or Handsfree Keys***

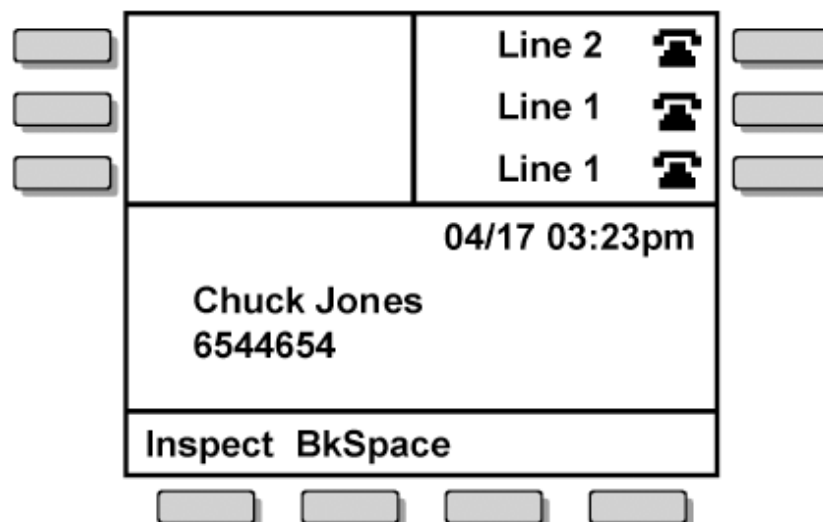
1. Enter the phone number (no dial tone will be heard).
2. Press the **HANDSFREE** or **HEADSET** key and the call is routed to the appropriate speaker.
3. Press **GOODBYE** to end the call.

The primary line is used to place 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 **BKSPACE** softkey to delete the entered numbers individually, correct the entry, and complete your call.

Figure 12



## 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 name and number are not delivered, the display will state, "Unknown Caller."

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

1. Answer the call by:
  - lifting the handset,
  - pressing the **LINE** or **HANDSFREE** key (for hands free speaker use), or
  - pressing the **HEADSET** key for headset use.
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***

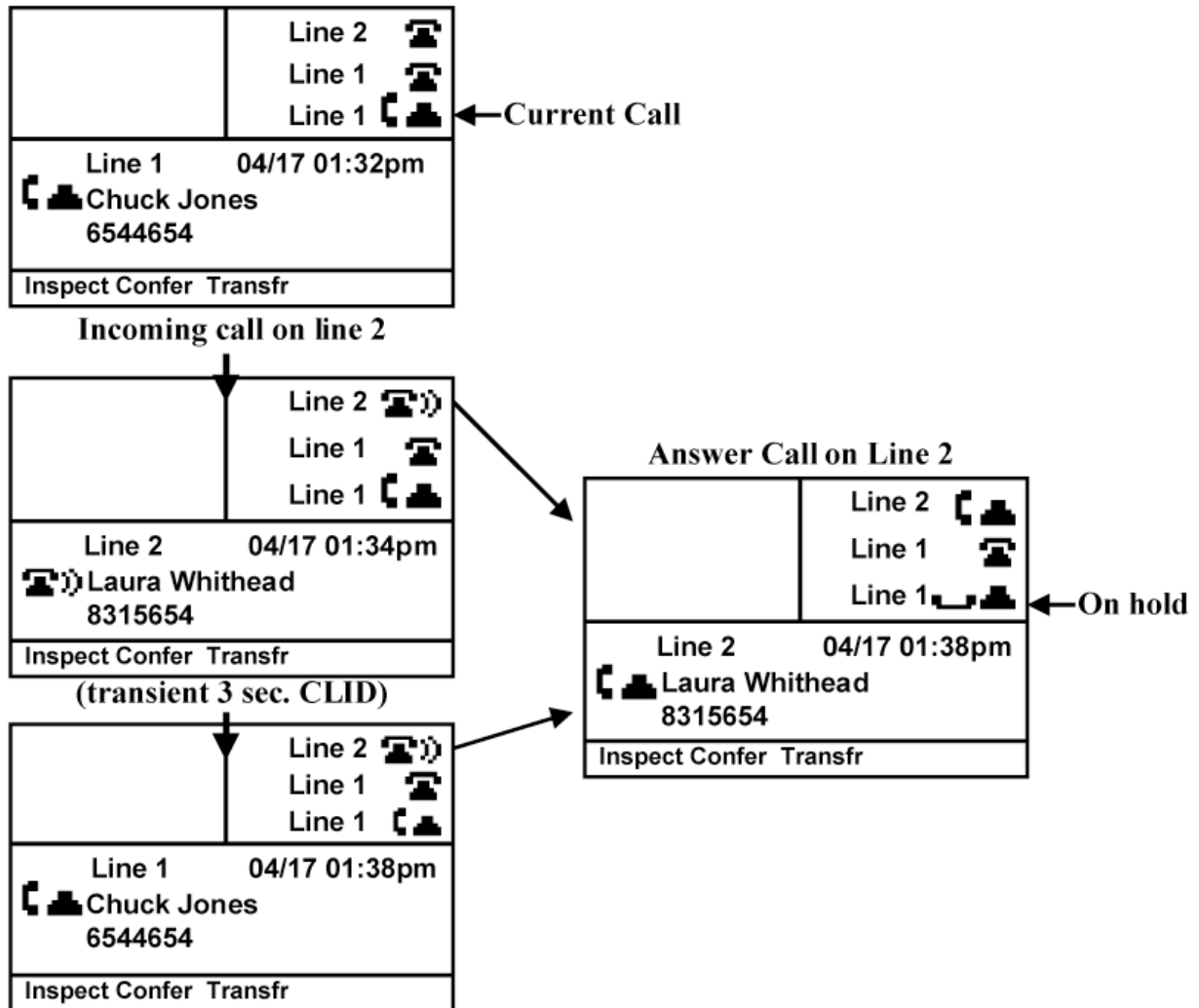
1. Answer the new call by pressing the **LINE** key for the incoming call.
2. Your first caller will be *automatically* placed on hold, and your display will show the new caller.
3. Press **GOODBYE** to end the current call, or press **HOLD** to place this caller on hold.
4. Press the appropriate **LINE**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



## Placing and Retrieving a Call on Hold

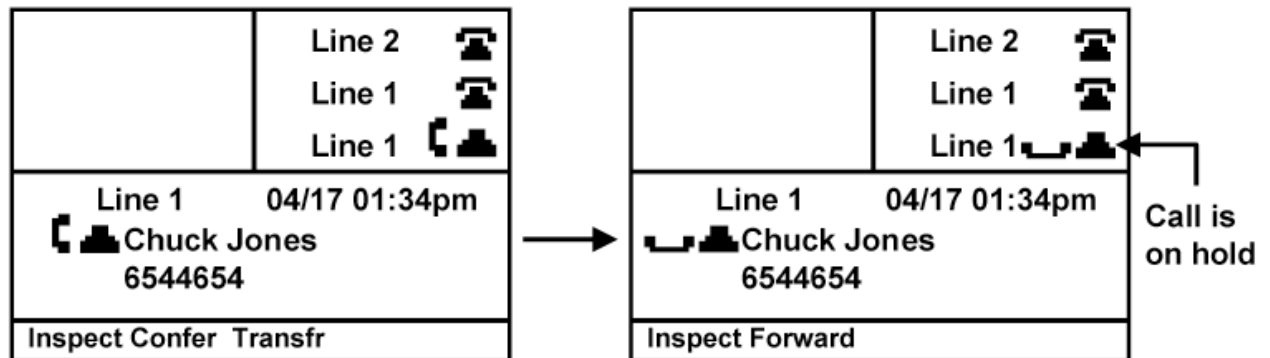
This feature allows you to answer additional incoming calls or to hold a call until you are ready for the caller. Your i2004 Internet Telephone has a red key designated for the **HOLD** function.

### *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.

The Line icon key flashes to indicate that the line is on hold. (See Figure 14.)

Figure 14



## Transferring a Call

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

This feature allows you to transfer calls in several ways:

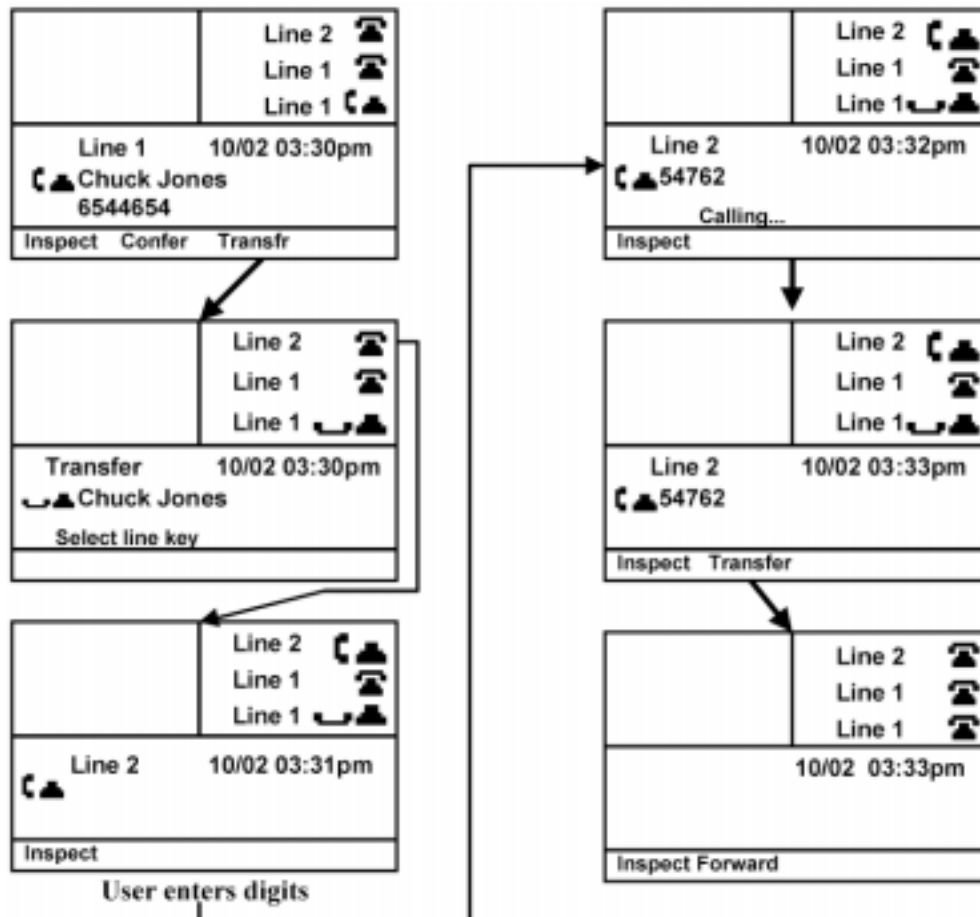
- announcing your transferred call before releasing it,
- speaking with your called party privately before releasing the call, or
- transferring the call directly.

Your display screen will prompt you through the steps required to use this feature and will provide the status of the call. (See Figure 15.)

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

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

Figure 15



## Conferencing Calls

Use call conferencing when you need to join several callers together. Your i2004 Internet Telephone allows you to establish conference calls by individually adding each phone number, or by conferencing active calls together. (See Figure 16.)

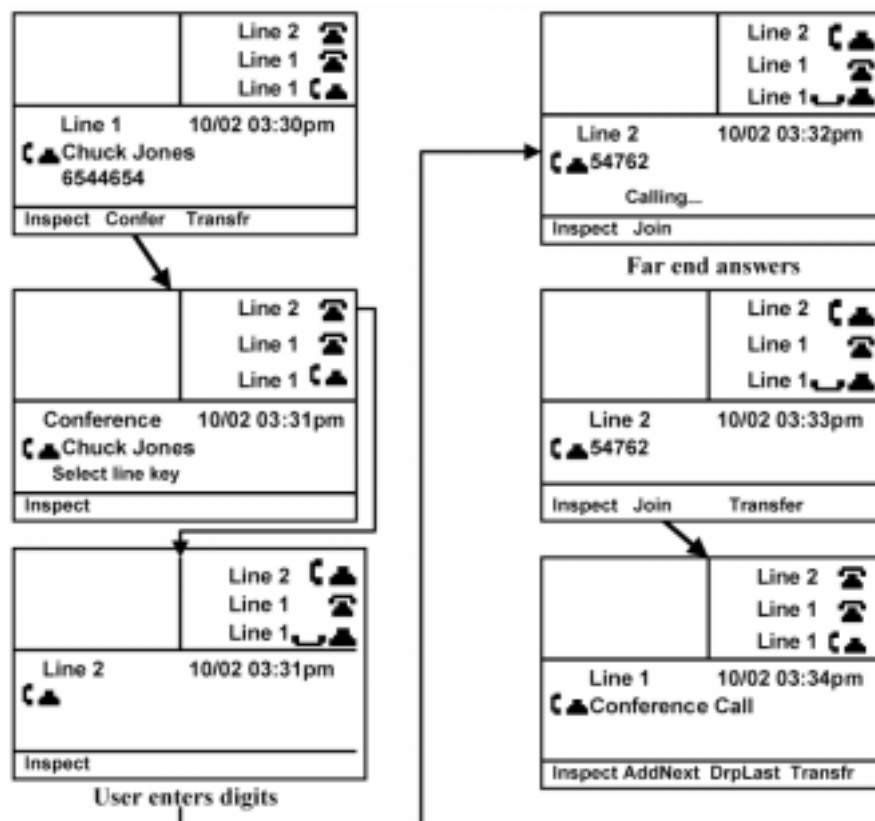
### ***Setting up a 3-way conference call***

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

After dialing your second caller, 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 16



Adding additional callers to your active conference call is just as simple as using the softkey options. (See Figure 17.)

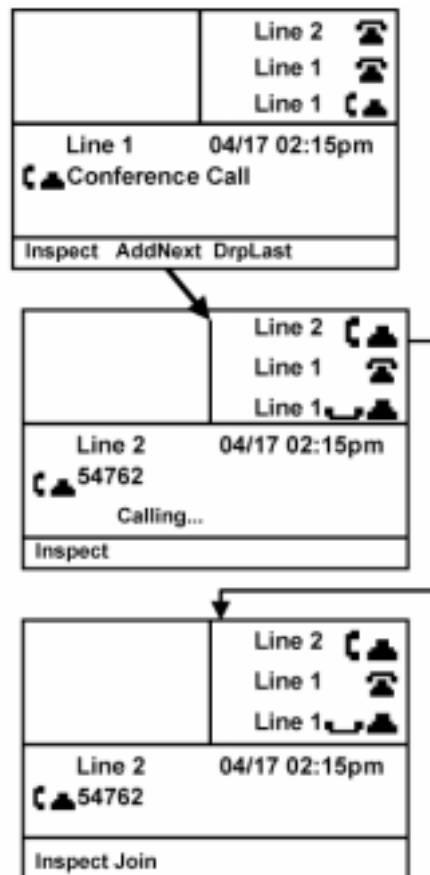
***Adding a new party while on an active 3-way conference call***

1. Press the **ADDNEXT** softkey.
2. Select another **LINE** key - your conference call will automatically be placed on hold.
3. Enter the phone number of the individual you want to add to the conference.
4. Press **JOIN** to rejoin your conference call.

Softkey options provide additional functionality to your conferencing. 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 i2004 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.

Figure 17



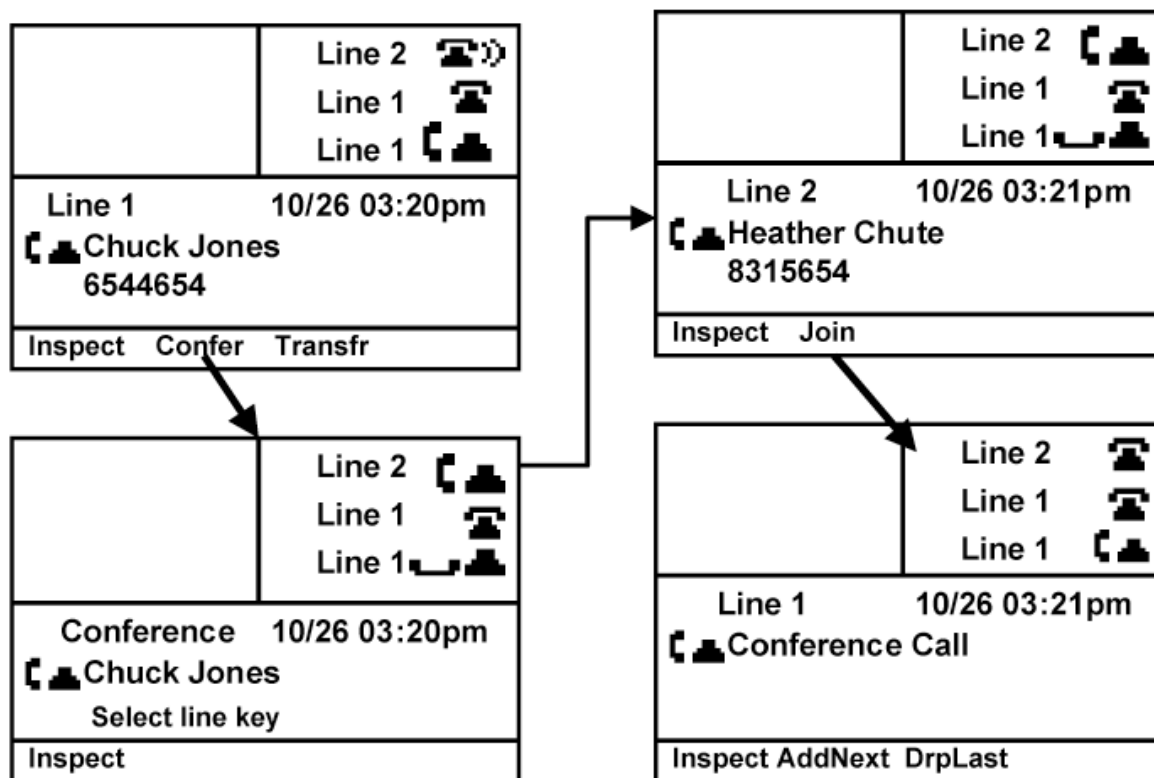
Your i2004 Internet Telephone allows you to connect easily two independent calls for an immediate three-way conference. (See Figure 18.)

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

1. Press the **CONFER** softkey.
2. Press the **LINE** key to retrieve your second caller - your active call will be placed on hold.
3. Press **JOIN** to begin the conference call.

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 18





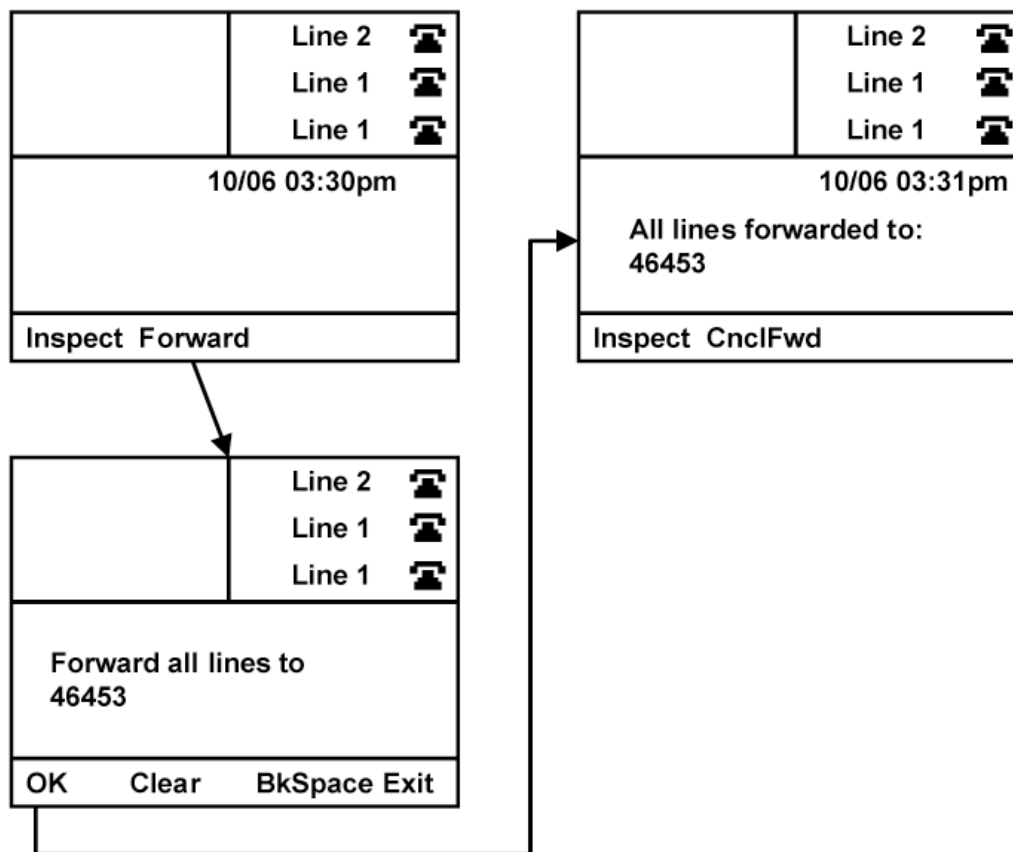
## Forwarding Calls

When forwarding calls, incoming calls to all telephone numbers assigned to your i2004 Internet Telephone are forwarded, except for any lines associated with a MADN group. (See Figure 19.)

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

1. Press the **FORWARD** softkey.
2. Enter the phone number you want to forward your calls to.
3. Press **OK** to complete the forwarding.

Figure 19



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 i2004 Internet Telephone and accept incoming calls.

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

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

## Inspect

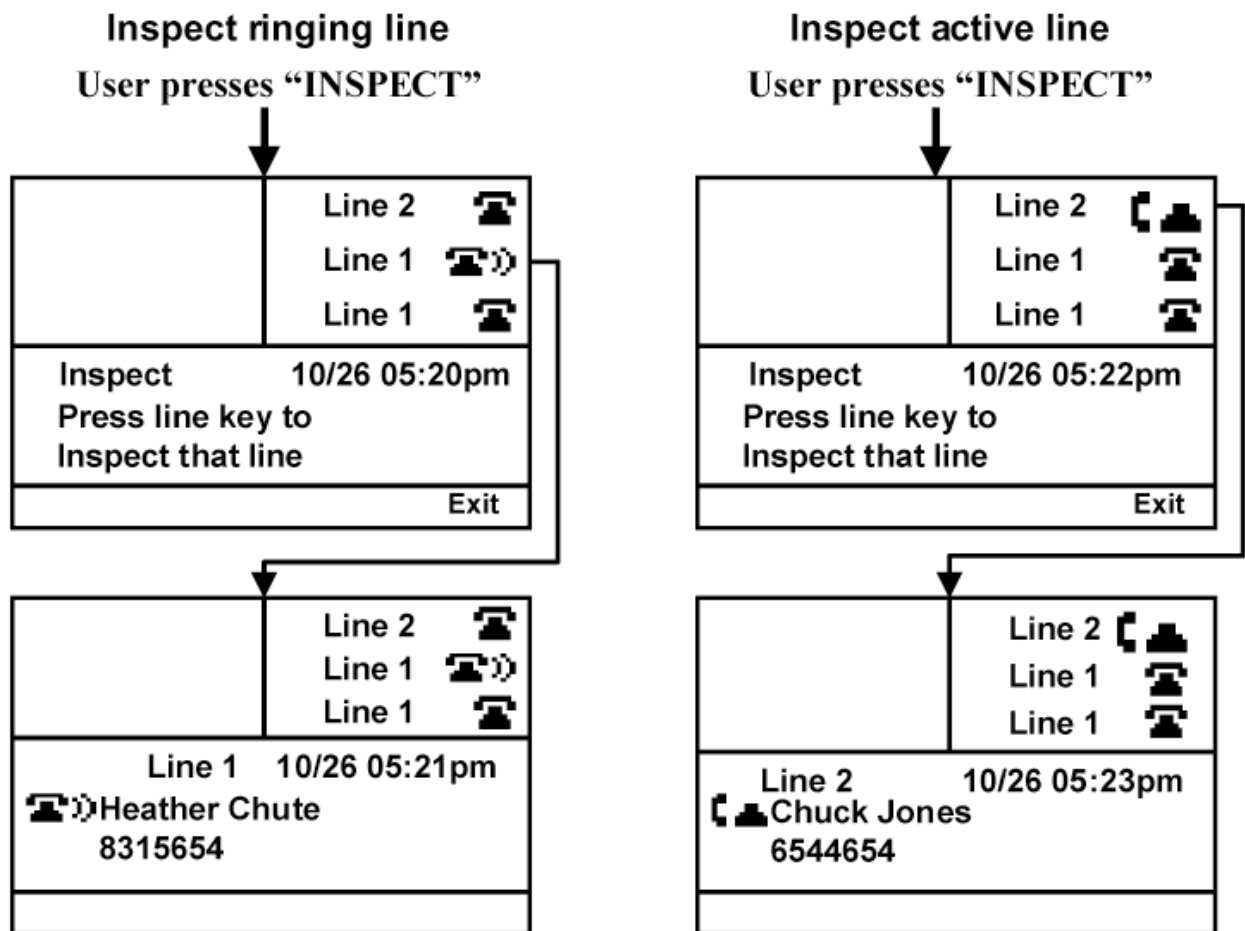
If your i2004 Internet Telephone has two or more line appearances, the Inspect feature is available. Inspect allows you to view information about a line without accessing it first. When you inspect a line, the call status and Caller ID information (if available) will display on your set. You can inspect lines that are in use, on hold, or ringing with a new call. (See Figure 20.)

### ***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 20



## Do Not Disturb

Work at your desk uninterrupted with this feature on your i2004 Internet Telephone. Do Not Disturb (also known as Make 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. (See Figure 21.)

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

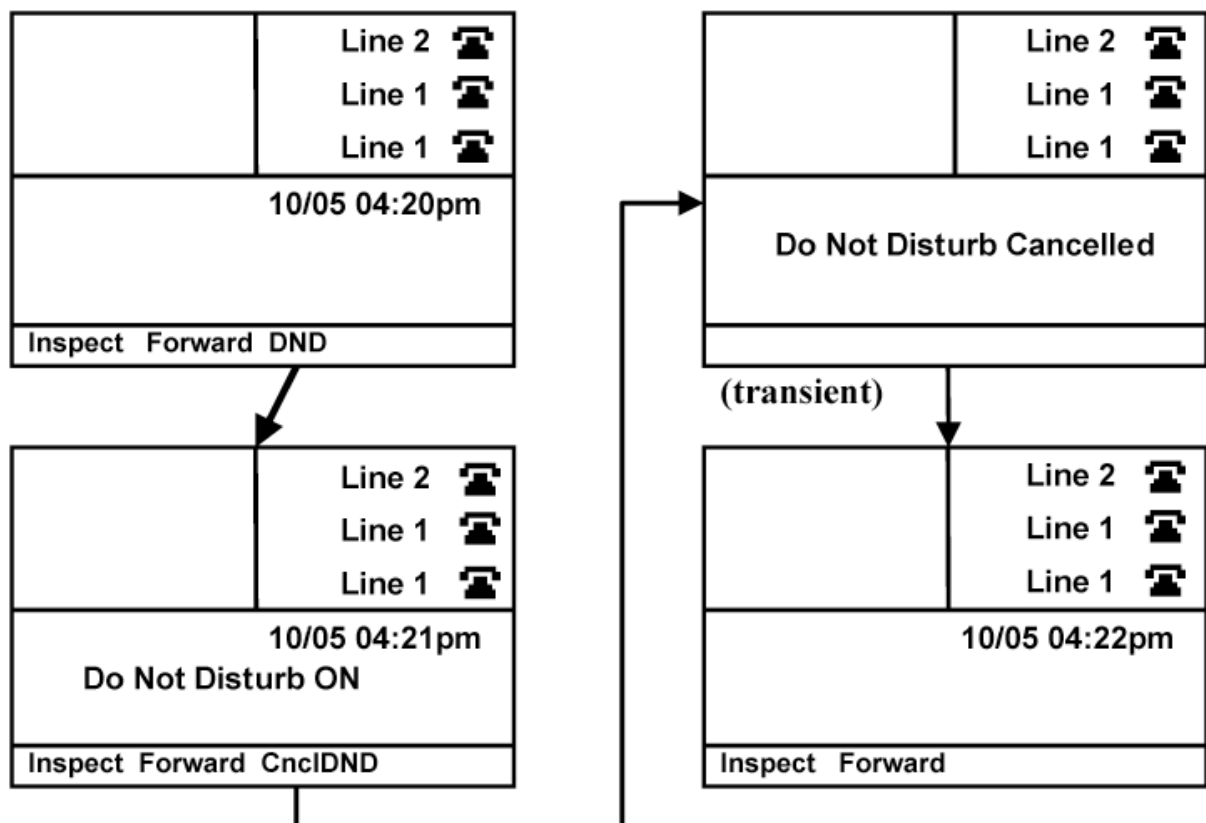
1. Press the **DND** softkey.

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 20.)

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

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

Figure 21



## Message Waiting and Message Retrieval

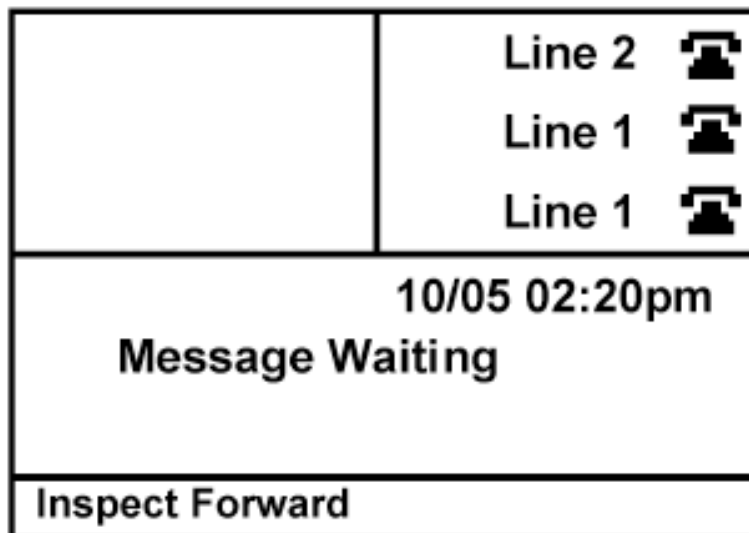
Your i2004 Internet Telephone will tell you when you have messages in your voice mailbox if you subscribe to voice mail services from your local telecommunications provider. Your display will provide a message ("Message Waiting"), and the Set Lamp will flash when the phone is idle. (See Figure 22.)

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

1. 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 22



# Enhanced Features

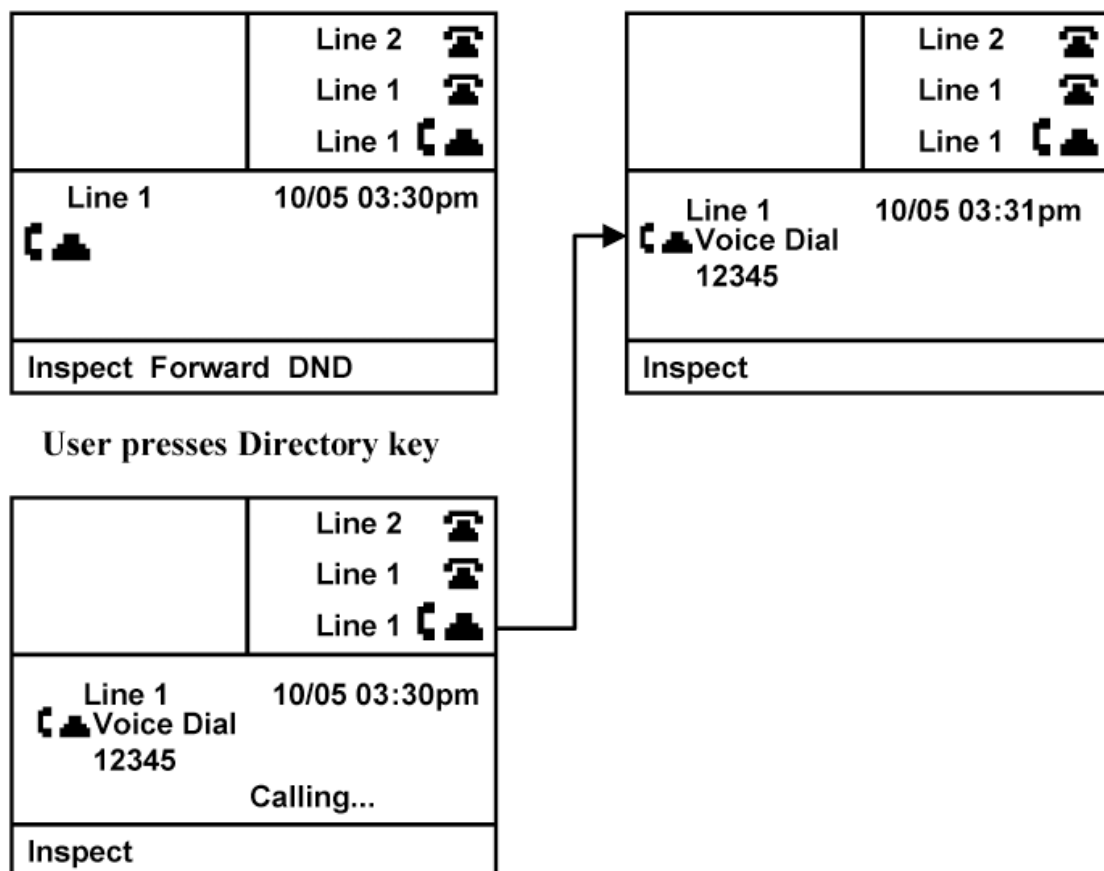
## Directory

Your i2004 Internet Telephone includes one-button access to your network-based voice dialing service. Access this feature by pressing the **DIRECTORY** key on your set. (See Figure 23.) Refer to Figure 2 in this guide for the location of this special key.

### *When your phone is idle*

1. Lift the **HANDSET**.
2. Press the **DIRECTORY** key.
3. Your phone will display the phone number to reach your Voice Dial application and dial the call for you.
4. Replace the **HANDSET** to end the call (or press **GOODBYE**).

Figure 23



You can access this feature in a predial mode as well.

***Predialing with your Handset***

1. Press the **DIRECTORY** key (no dial tone will be heard).
2. Press the **CALL** softkey or lift the **HANDSET** (or press **HANDSFREE**, or **HEADSET**).
3. Replace the **HANDSET** to end the call (or press **GOODBYE**).

The primary line is used to place the call unless another **LINE** key is selected.

If your i2004 Internet Telephone is not configured with this feature, your display will show "Service Not Available", and you will hear a non-working tone through the speaker.

## Call Park

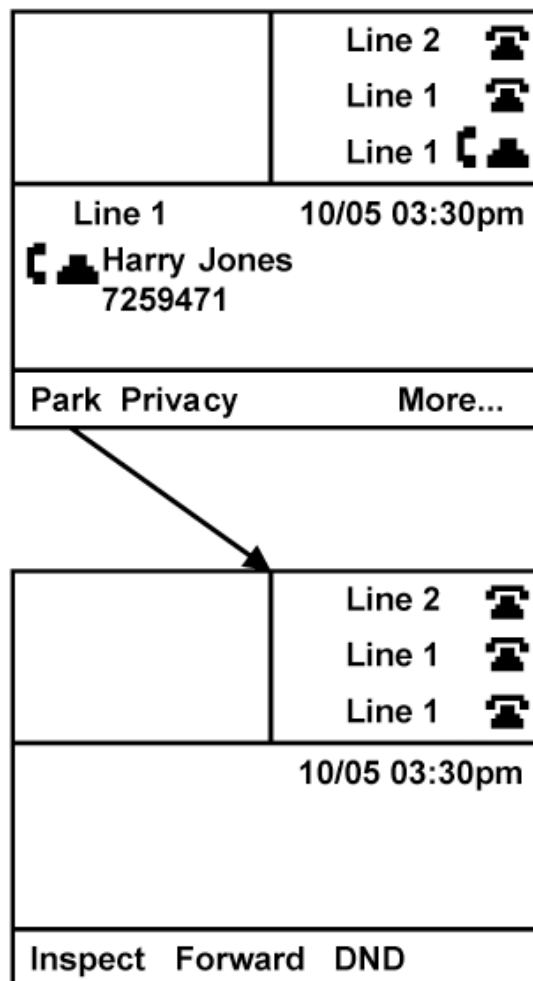
Your i2004 Internet Telephone allows you to temporarily hold a call so it can be retrieved from another set with the single press of a softkey even if you do not know in advance where you will be retrieving the call. (See Figure 24.)

### ***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 24



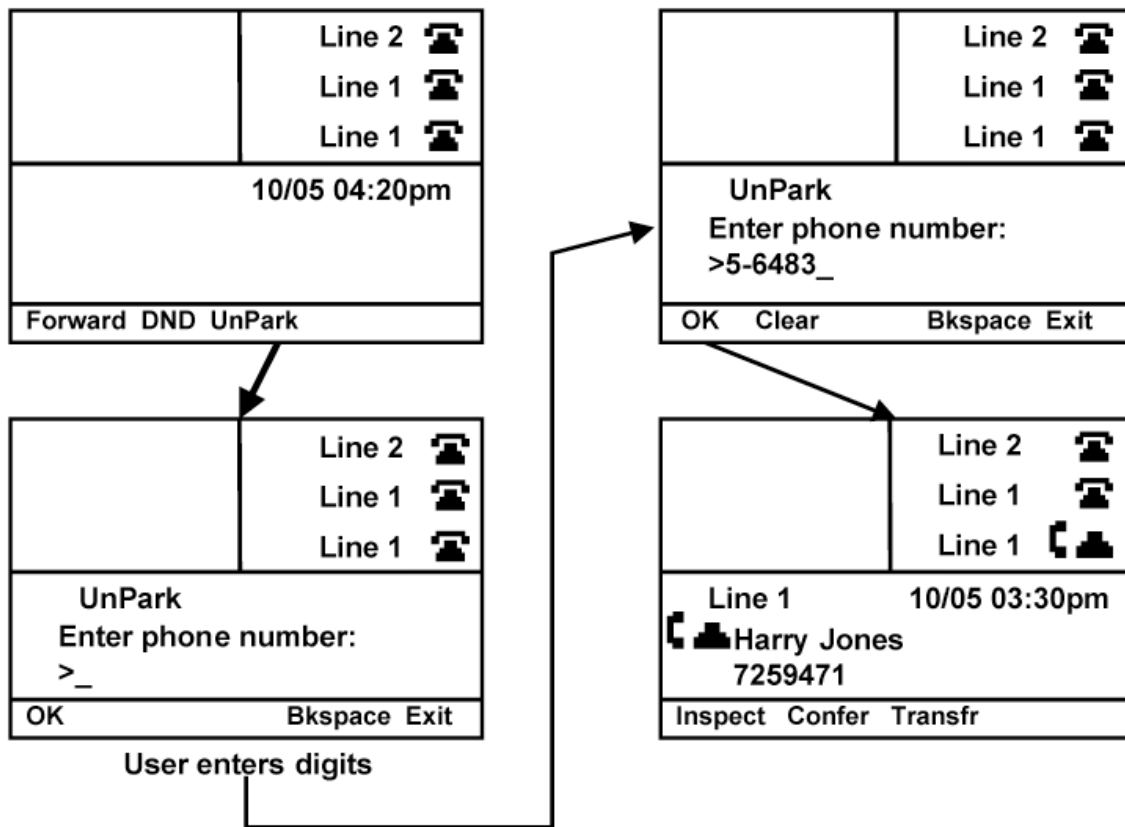
You can retrieve a parked call just as easily. (See Figure 25.)

***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 25





## Call Pickup

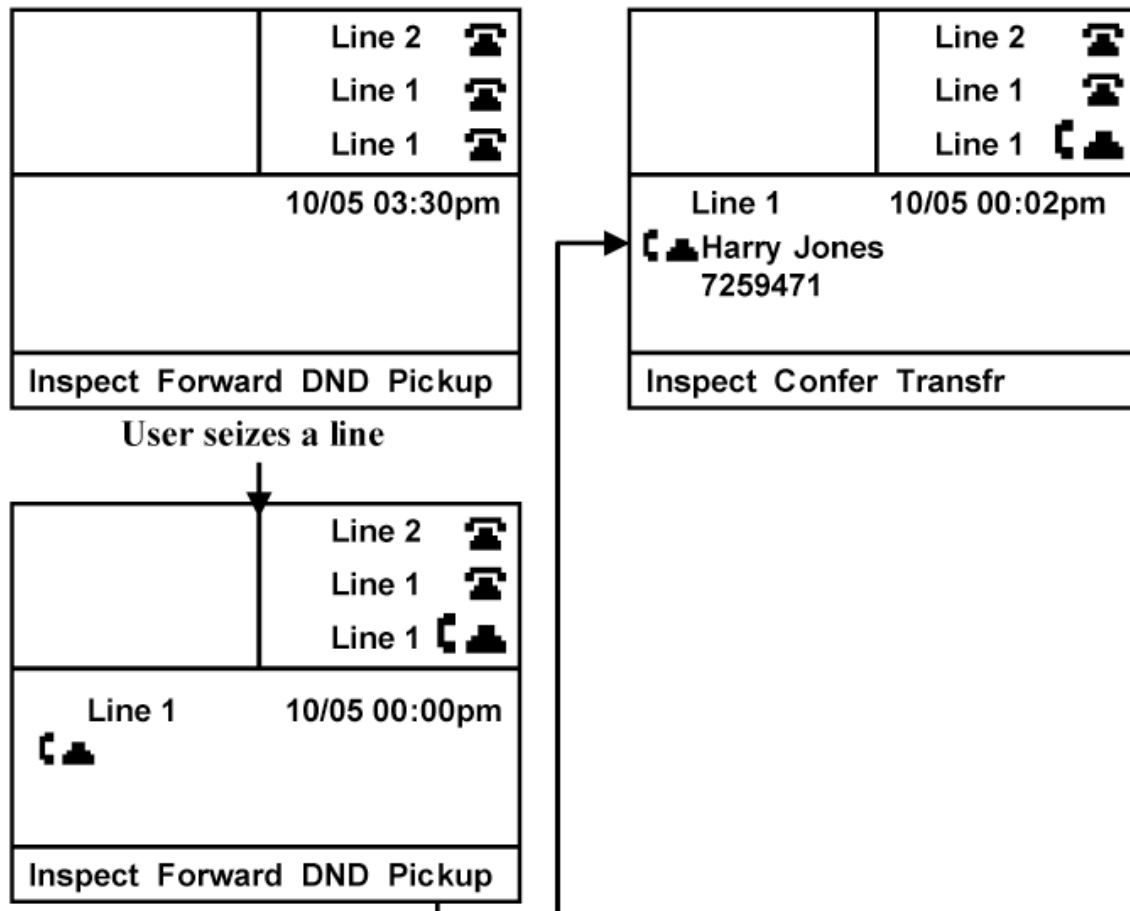
i2004 Internet Telephone users that are in the same Call Pickup group can answer ringing calls from other sets in their pickup group. (See Figure 26.) The system administrator establishes these pickup groups. You may want to check with your system administrator to determine if your set is part of a pickup 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 26



## Ring Again

In busy offices, it can be difficult to reach your party without getting a busy signal. Ring Again will notify you when the number you are trying to call becomes available. (See Figure 27.)

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

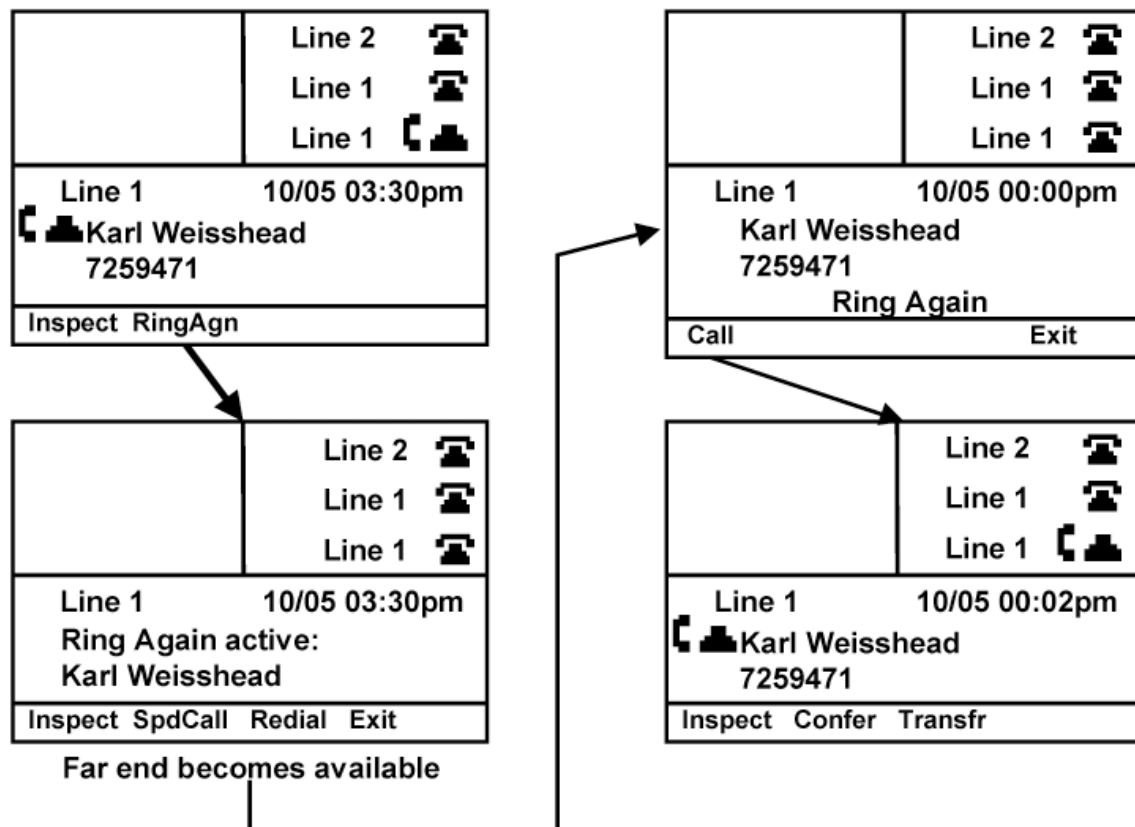
1. When you hear the "busy signal", press the **RINGAGN** softkey.

When the line becomes available, a comment on your display and a tone through the speaker will notify you, prompting action to complete the call. (See Figure 27.) If you decide not to complete the call, you may cancel the Ring Again by pressing the Exit softkey.

### ***When Ring Again is active***

1. Press the **CALL** softkey, or lift the **HANDSET** to use the primary line, (or press **HANDSFREE** or **HEADSET**).

Figure 27



## 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 28.)

### ***While on a call***

1. Press the **PRIVACY** softkey.

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 28

