Standard

MCS 5100 Release 4.0
Standard 01.05
Part No. NN42020-103
March 2009

IP Phone 2004 User Guide

NORTEL

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Revision history

March 2009

Standard 01.05. This document up-issued to update technical content in the section Placing a call on hold in the chapter Make and receive calls.

March 2007

Standard 01.04. This document has been updated with the latest updates on the Regulatory and Safety Information section.

February 2007

Standard 01.02. This document is issued to support Multimedia Communication Server 5100 Release 4.0.

January 2007

Standard 01.01. This document is issued to support Multimedia Communication Server 5100 Release 4.0. This document contains information previously contained in the following legacy document, now retired: *IP Phone 2004 User Guide* (NN10042-113).

November 2005

Standard 3.0. This document is up-issued to support MCS 5100 Release 3.5.

November 2005

Standard 2.0. This document is up-issued to support MCS 5100 Release 3.5.

October 2005

Standard 1.0. This document is up-issued to support MCS 5100 Release 3.5.

New in this release

The following sections describe what is new in this document for Multimedia Communication Server (MCS) 5100 Release 4.0.

Feature changes

The following new features affect this document:

- "CFW and DND E911 operator callback" on page 13
- "Language support" on page 14
- "Lotus Notes integration" on page 14
- "MCP granular service packaging" on page 15
- "MCS E911 caller hold" on page 15
- "Multiple Login restrictions" on page 15

The following sections describe how the new features affect this release.

CFW and DND E911 operator callback

This feature provides enhancements to the Enhanced 911 (E911) system. When an Emergency Operator attempts to call back to a caller who dialed 911, the call is not blocked, rerouted or preempted by other calls. Therefore, the caller who made the 911 call can be contacted directly.

The following settings are overridden during an E911 call:

- Do Not Disturb (DND) enabled
- Call Forwarding (CFW) enabled
- Routable Services enabled

This feature also ensures that the callback has priority if the Session Manager server is in a minor or major overload situation.

Language support

This feature provides the ability for MCS 5100 clients to support multiple languages. The clients include the Multimedia PC Client, Multimedia Web Client, Personal Agent, IP Phone 2002, IP Phone 2004, IP Phone 2007, and MAS conferencing announcements. The supported languages are:

- English
- Parisian French
- German
- Latin America Spanish
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese
- Portuguese

Lotus Notes integration

This feature integrates the Multimedia PC Client with the IBM Lotus Notes application. The Multimedia PC Client for IBM Lotus Notes provides the following advanced IP telephony features:

- make SIP calls from inside Lotus Notes
- track incoming, outgoing, and missed calls in Lotus Notes folders
- use Lotus Notes contacts as your Lotus Notes directory
- see who is online and let others know that you are online
- control a Nortel IP Phone (IP Phone 2002, IP Phone 2004 or IP Phone 2007)
- send and receive files from contacts that have a SIP address
- send web pages, share whiteboards and share clipboards
- decline, redirect or ignore incoming calls
- send and receive text messages
- chair and participate in conference calls and use web collaboration (requires MAS)

MCP granular service packaging

With this feature, you can control the operation of services on a domain or user basis. Features such as Instant Messaging and Web Collaboration can be controlled. Users or domains can be restricted in their use of the service. The ability to send and receive instant messages is controlled, as well as the ability of a user or a group of users to transfer files, transfer a clipboard, send a URL to a user, or to manipulate a whiteboard.

MCS E911 caller hold

This feature adds two enhancements to the Enhanced 911 (E911) system.

- The originator of a 911 call cannot invoke mid-call features (such as Hold, Transfer, Call Park, and Conferencing), cannot make an additional call, and cannot receive incoming requests outside the emergency call.
- The originator of a 911 call cannot disconnect the call. The public safety answering point (PSAP) must disconnect the call.

Multiple Login restrictions

This feature provides the following enhancements:

- restriction to the number of simultaneous log-ons for an MCS user using a Multimedia PC Client, hardware SIP telephone or Multimedia Web Client
- configuration of the maximum number of simultaneous log-ons
- implementation and access enforcement through the service packages
- authorization to administrators to log out a user's connections
- restriction of call attempts from unregistered nodes

Other changes

This document is renumbered from NN10042-113 to NN42020-103.

This document includes safety information about the use of connecting cables, power cords, and AC adaptors that ship with the equipment or that Nortel specifies.

Citrix Application Gateway support is withdrawn in MCS 5100 Release 4.0.

Regulatory and safety information

This chapter contains regulatory and safety information.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help..



Note: The user should not make changes or modifications not expressly approved by Nortel Networks. Any such changes could void the user's authority to operate the equipment.

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

Warning: This is a Class B product. In a domestic environment this product can cause radio interference in which case the user must take adequate measures.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

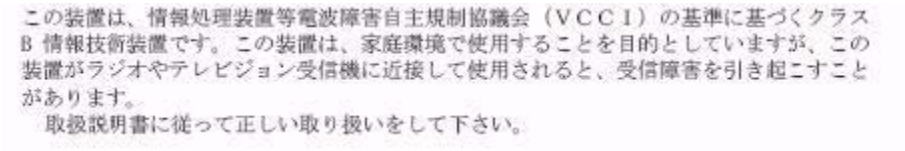

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取扱説明書に従って正しい取り扱いをして下さい。

Table 1 Lists EMC compliance for various jurisdictions

Jurisdiction	Standard	Description
United States	FCC CFR 47 Part 15	Class B Emissions: FCC Rules for Radio Frequency Devices
Canada	ICES-003	Class B Emissions: Interference-Causing Equipment Standard: Digital Apparatus
Australia/New Zealand	AS/NZS 3548 CISPR 22	Class B Emissions: Information technology equipment -Radio disturbance
European Community	EN 55022	Class B Emissions: Information technology equipment -Radio disturbance
	EN 55024	Information technology equipment - Immunity characteristics Limits and methods of measurement

Table 1 Lists EMC compliance for various jurisdictions

Jurisdiction	Standard	Description
	EN 61000-3-2	Limits for harmonic current emissions (equipment input current <= 16 A per phase)
	EN 61000-3-3	Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current <= 16 A
Japan	VCCI	Regulations for voluntary control measures.

Table 2 Safety

Jurisdiction	Standard	Description
United States	UL 60950-1	Safety of Information Technology Equipment
Canada	CSA 60950-1-03	Safety of Information Technology Equipment
Australia/New Zealand	AS/NZS 60950.1:2003	Safety of Information Technology Equipment
European Community	EN 60950-1	ITE equipment - Safety - Part 1: General requirements

Other Safety Approvals: IEC 60950-1: ITE equipment - Safety - Part 1: General requirements

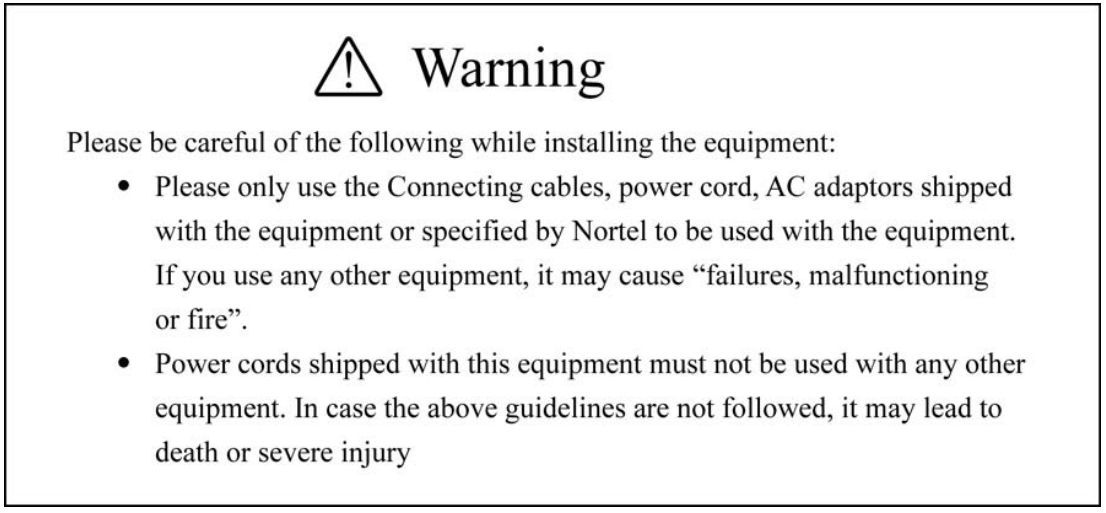
US/Canada: Hearing Aid Compatibility (HAC) as per FCC Part 68.

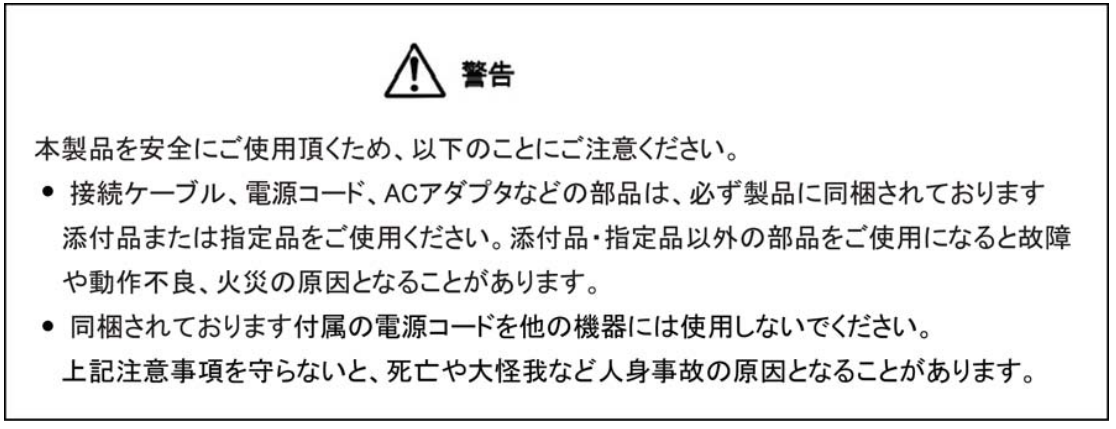
This equipment complies with the CE Marking requirements.

Australia: AS/ACIF S004: Voice Frequency Performance Requirements for Customer Equipment

EU Countries: This device complies with the essential requirements and other relevant provisions of Directive 1999/5/EC. A copy of the Declaration may be obtained from http://www.nortel.com/products/announcements/eumrdc/index.html or Nortel Networks GmbH address: Ingolstaedter Strasse 14-18, 80807 Munich Germany.

DenAn regulatory notice for Japan





Introduction

This guide describes how to install, configure and use your Nortel IP Phone 2004.

The topics in this chapter include:

- "How this guide is organized" on page 21
- "Audience" on page 22
- "Text conventions" on page 22
- "Acronyms" on page 23
- "Related publications" on page 23
- "How to get help" on page 24

How this guide is organized

This guide is organized as follows:

- "IP Phone 2004 overview" on page 35
- "Installation and initialization" on page 25
- "Configuration" on page 51
- "Make and receive calls" on page 65
- "Call management" on page 83
- "Advanced features and services" on page 97
- "Troubleshooting" on page 109

For a brief overview of how to use the SIP Multimedia PC Client to control your IP Phone 2004 (a configuration called the SIP Multimedia Client Set), see "Appendix A: Multimedia PC Client and the IP Phone 2004" on page 113.

For a brief overview of how to use the SIP Multimedia Office Client to control your IP Phone 2004 (a configuration called the SIP Multimedia Client Set), see "Appendix B: Multimedia Office Client and the IP Phone 2004" on page 115.

For a brief overview of how to use the SIP Multimedia PC Client for IBM Lotus Notes to control your IP Phone 2004 (a configuration called the SIP Multimedia Client Set), see "Appendix C: Multimedia PC Client for IBM Lotus Notes and the IP Phone 2004" on page 117.

For information about setting up telephones that are not already configured, see, "Appendix D: DHCP parameter configuration" on page 119.

For a list of telephone parts numbers and where to go for help, see "Appendix E: Customer support" on page 125.

For information about the SIP-enabled version of the IP Phone 2004, see "Appendix G: NetConfig on SIP-enabled phones" on page 143. There are minor differences between the user interface on the IP Phone 2004 in SIP mode and the user interface in Unistim mode. The differences are noted throughout this document.

Audience

This guide is intended for IP Phone 2004 users.

Text conventions

This guide uses the following text conventions:

bold text	Indicates the IP Phone 2004 soft key you must press. For example, press the **Ok** soft key.
italic text	Indicates new terms, document titles Example: See IP Phone 2004 *User Guide* (NN42020-103).

Acronyms

This guide uses the following acronyms:

DHCP	Dynamic Host Configuration Protocol
DND	Do Not Disturb
DTMF	dual-tone multi-frequency
ISDN	Integrated Services Digital Network
IM	instant message
IP	Internet Protocol
IPCM	Internet Protocol Client Manager
LAN	local area network
LCD	liquid crystal display
MAC	Media Access Control
LED	light emitting diode
QoS	Quality of Service
SIP	Session Initiation Protocol
VoIP	Voice over IP
WAN	wide area network

Related publications

Other publications related to the *IP Phone 2004 User Guide* (NN42020-103):

- *Quick Reference* (NN42020-119)
- *IP Phone 2002 User Guide* (NN42020-126)
- *IP Phone 2004 Quick Reference* (NN42020-122)
- *IP Phone 2007 User Guide* (NN42020-104)
- *Multimedia Office Client User Guide* (NN42020-139)
- *Multimedia PC Client User Guide* (NN42020-102)
- *Personal Agent User Guide* (NN42020-100)

How to get help

For service issues, please contact your local support or Information Services team.

Installation and initialization

This chapter describes how to install and initialize your IP Phone 2004.

The topics in this chapter include:

- “Before you begin” on page 26
- “Installing your IP Phone 2004” on page 26
- “Initializing your IP Phone 2004” on page 27
- “Resetting your IP Phone 2004” on page 33
- “Upgrading firmware” on page 33

Note: Contact your system administrator to ensure that your network is prepared for you to install and initialize your IP Phone 2004.

Note: IP Phone 2004 (phase 2) users can upgrade to SIP functions. For information about using this phone, see “Appendix F: IP Phone 2004 with SIP firmware” on page 127.

If the IP Phone is not upgraded with SIP firmware, it is a Unistim-only phone. SIP-enabled phones can function in either SIP or Unistim mode.

Tip: SIP-enabled phones in Unistim mode function identically to Unistim-only phones.

Before you begin

Before you begin setting up your telephone, ensure that you have the following components:

- IP Phone 2004
  - telephone handset
  - telephone handset cord
  - IP Phone 2004 base
- AC adapter
- Ethernet cable
- active LAN connection

Note: You can install optional keycaps for the buttons on your IP Phone 2004. For more information, see the installation manual that is included with the keycaps.

Installing your IP Phone 2004

Warning: Severe damage occurs if your IP Phone 2004 is plugged into an ISDN connection. Contact your system administrator to ensure that you plug the telephone into a 10/100BaseT Ethernet jack.

1 Connect one end of the handset cord to the handset jack (identified with a handset icon) on the telephone base and connect the other end of the handset cord to the handset.

Choose one of the following connections:

a For a telephone that does not share a LAN access with a PC:

Connect one end of the Ethernet cable to the Ethernet plug (identified with a network icon) on the telephone and the other end to your 10/100BaseT Ethernet jack.

b For a telephone that shares a LAN access with a PC:

Complete step a and connect one end of a second Ethernet cable to the PC Ethernet port (identified with a PC icon) on the back of the telephone and the other end to the computer's Ethernet port.

2. Plug the AC adapter into the base of the telephone.
3. Plug the AC adapter into the nearest electrical outlet.
4. Ensure that your power cable and handset cable are properly fitted into the provided slots.
5. Fit the base and hinge it into the plastic slots at the front of the telephone and press down firmly until the base snaps into place.

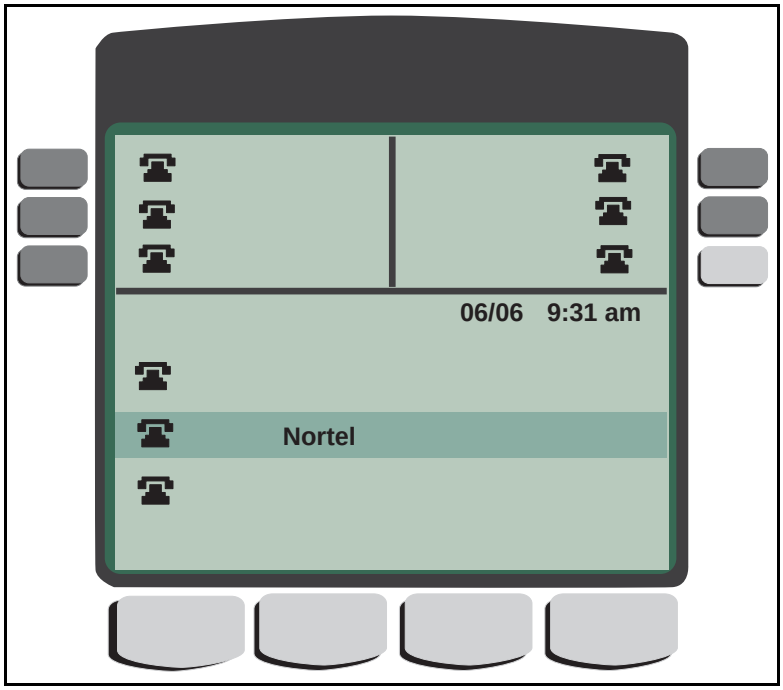


Tip: If you have trouble locking the base, or if the phone is not level on your desktop, ensure the cables to the telephone are not obstructing the base.

Initializing your IP Phone 2004

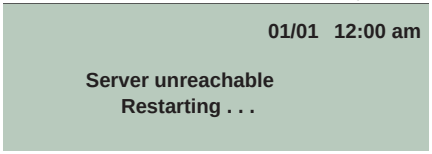
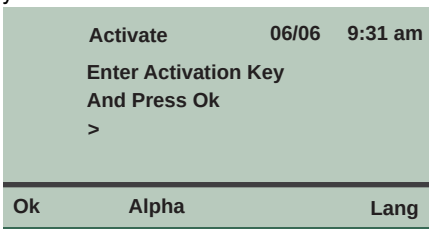
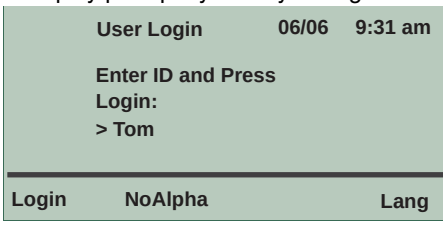
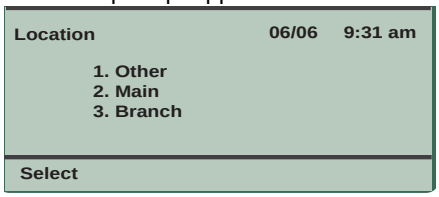
After you power on the IP Phone 2004 for the first time, you see the introduction screen with a flashing Nortel display as shown in Figure 1 "Introduction screen" on page 28.

Figure 1 Introduction screen



Tip: Your IP Phone 2004 can be preconfigured or can require a partial or total initialization. For more information, see the following table.

Table 3 Initialization

After you power up your IP Phone 2004	Then
The display shows that the server is unreachable and resets continuously. 	Follow the instructions in "Appendix D: DHCP parameter configuration" on page 119.
The telephone connects to the server and the display prompts you to enter an activation key. 	Go to "Entering an activation key" on page 30.
The telephone connects to the server and the display prompts you for your log on ID. 	The IP Phone 2004 is provisioned but a user is not assigned. Go to "Logging on to your IP Phone 2004" on page 30.
The telephone connects to the server and the location prompt appears 	Your telephone is ready to use. Go to "Choosing your location" on page 32.

Entering an activation key

After the IP Phone 2004 connects to the server, the Enter Activation Key screen appears.

Note: The user is prompted for an activation key when the phone is in Unistim mode only.

Note: Your activation key is provided by your system administrator.

Note: If your IP Phone 2004 is unable to locate the server, it automatically tries to connect every two minutes. After several attempts, if your telephone does not locate the server, contact your system administrator for assistance.

At the Enter Activation Key screen, enter the activation key and press the **Ok** soft key.

After the IP Phone 2004 is provisioned, the telephone displays an idle display that indicates you are ready to use the phone, or you receive a prompt to log on.

Logging on to your IP Phone 2004

The telephone is ready for you to log on to it, and the idle screen appears.

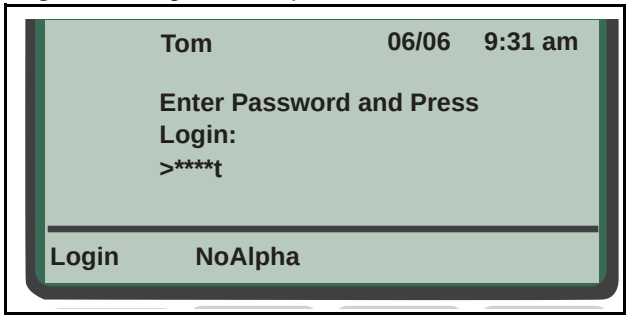
To log on, at the prompt, enter your user name and password supplied by your system administrator.

For instructions about entering alphanumeric information, see "Entering alphanumeric characters" on page 45. The following figure shows an example of Tom logging on.

Tip: When you enter your user name, do not include the @domain portion.

Figure 2 "Log on example" on page 31 shows the user Tom entered his password: guest. After you enter each character, the previous character is replaced with an asterisk. To enter characters that are not letters or numbers, press the NoAlpha soft key first.

Figure 2 Log on example



Tip: To change your password, see *Personal Agent User Guide* (NN42020-100).

Choosing your location

If the IP Phone 2004 is provisioned into the database and a user is assigned, the location prompt appears.

Your system can serve different locations. For your safety, you must specify your location so that emergency services can be routed to you.

1. Scroll through the list of locations using the **up** and **down** navigation buttons.
2. Choose your location choice and press **Select**.
3. If you selected **Other**, in step 2 a warning message appears.

   "Warning: A location was selected that may affect your emergency services. Display this warning in the future?"
4. If you selected **Other** in step 2, select **Yes** or **No**.

   If you select Yes, this warning appears each time you log on or after your telephone or server resets. If you select No, you do not see this warning again.



Note: If you move your location, you can reset your location using the Config menu. For instructions on resetting your location, see "Specifying location" on page 60.

Specifying log on time

After you choose your location you can specify how long you want to stay logged on.

1. To enter the amount of time you want to be logged on, press the third soft key and change **Days** to **Hours**, as desired.
2. Press the **Timed** soft key to log on for the specified amount of time. The system automatically logs you off after the specified time elapses.

To log on permanently, press the **Login** soft key to use the network provisioned values.

The system automatically registers you again and you remain logged on until you manually log off.

After you log on, the idle display appears.



Tip: You can change the idle screen text (for example, Welcome). For more information, see "Configuring idle display" on page 59.

Resetting your IP Phone 2004

To reset your IP Phone 2004, use the Reset Phone option in the Config menu (see "Resetting your IP Phone 2004" on page 63) or unplug your telephone.

Upgrading firmware



Tip: Ensure your IP Phone 2004 has the most recent firmware. If there is a new firmware load available, you need to upgrade your phone.



Note: This upgrade procedure applies only to phones functioning in Unistim mode.

1. After the display prompts you to upgrade your firmware, if you want to upgrade your firmware immediately, press the **Now** soft key.
2. If you want to wait to upgrade your firmware, press the **Later** soft key. You can manually start the update at a later time through the Configuration menu (see "Displaying IP Phone 2004 information" on page 62).



Note: If you press the **Later** soft key, the system periodically prompts you to upgrade.

IP Phone 2004 overview

This chapter describes the features and services on your IP Phone 2004 and some basic functions.

The topics in this chapter include:

- "Features and services" on page 35
- "Useful terms" on page 37
- "IP Phone 2004 layout and display" on page 39

Features and services

Your IP Phone 2004 functions as your traditional telephone does, but includes functions that are available by using your Internet connection. Here are some of the features and services:

- Hardware features
  - integrated 3-port switch (LAN, PC, and internal port for voice)
  - high-quality Voice over IP (VoIP) sound
  - integrated headset jack
  - local generation of call alerting, call progress, and dial tones (as well as support for out-of-band DTMF signaling) to conserve valuable LAN/WAN bandwidth
  - dedicated hold, release, handsfree, headset, and mute buttons
  - user-selectable ringer, speaker, handset, and headset volume
  - multifield LCD for calling party number and for subject display (between SIP clients)
  - wideband-compatible speakerphone (150 Hz to 7 kHz) with acoustic echo cancellation
  - hearing-aid compatible

- Software features
  - Call Forward, Ignore, Decline, and Transfer
  - speed dial from an inbox, outbox, or address book
  - conference, call waiting, and call hold
  - automatic registration on activation of the telephone
  - multiple user log on, inbox
  - outbox
  - address book
  - list of friends
  - global address book search
  - program keys to speed dial a specific number, send IM, Do not Disturb, call forward, presence, and stock query
  - call park
  - message waiting indicator (icon and telephone lamp lights red)
  - Meet Me audio conferencing (For configuration information, see *Personal Agent User Guide* (NN42020-100) and for user information, see *Meet Me Audio Conferencing Quick Reference* (NN42020-113). This system feature is optional.)
  - roaming between domains in the same system. (This feature depends on system provisioning; contact your system administrator for details.)

Your IP Phone 2004 provides features not available on traditional phone systems including:

- instant messages: Send, receive, and reply to instant messages on your IP Phone 2004.
- stock query: Obtain stock quotes directly on your IP Phone 2004. Stock query is available only in Unistim mode

Note: To determine whether this feature is activated for your system, contact your system administrator.

- bulletins: Receive messages from your service provider on the display screen of your IP Phone 2004, such as news of an upcoming system upgrade.
- QoS: View and change the quality of service information for the media stream of the call on your IP Phone 2004. Your service provider can use this information to analyze network performance.

Useful terms

The following sections describe some useful terms that you should be familiar with when using your IP Phone 2004.

Multiple user logon

Your IP Phone 2002 can support up to four lines. Therefore, four people can log on to a single IP Phone 2002 to receive and place calls.

The first person who logs on to the telephone has the primary line. You can be logged on to several IP Phones at the same time. The maximum number of devices or clients that you can log on to depends on your service package. Your administrator can force a log out from your devices or clients.

Use the menu options to configure or view parameters that are specific to a line. If several users are logged on to the telephone, then the system prompts you to select your line button. After several users are logged on, their individual line icon blinks to indicate there is a voice mail message or a feature is activated.



Note: IP Phone 2004 with SIP firmware does not support additional lines.

Address

To enter an address to call someone, you enter a SIP address or a telephone number.

A SIP address is a unique identifier of users on the IP network. It has the same format as an e-mail address, for example, jdoe@lab1.org, but it is not an e-mail address. The characters before the at sign (@) represent the user name, in our example, jdoe. The characters after the at sign represent the domain name of the server, in our example, lab1.org. If you are in the same domain as the user you are calling, you do not need to enter the domain name section of their SIP address (for example, @lab1.org).

The network can track where you are and route your calls after you log on to any IP Phone 2002 by using your SIP address. Use SIP addresses to take advantage of other features such as presence.

To make it easier to place calls, you can store addresses (SIP addresses or telephone numbers) in a personal address book.

Address book



Your personal network-based address book is a tool for managing addresses. You can save your addresses for quick call access, as well as organize addresses into groups. If you enter a nickname for an entry in your address book, that nickname appears on your display after the person calls you.

Inbox



Your IP Phone 2004 makes a record of the calls you receive. You can view the calls you received by pressing the inbox button. By using the soft keys, you can view a list of the people who called you or a list of the calls you missed. You can dial entries in your inbox by pressing a soft key.

Outbox



Your IP Phone 2004 keeps track of all the calls you make. To view these calls, press the outbox button. You can redial entries from your outbox by pressing a soft key.

Friends

Within your network-based address book you can designate entries as friends. If you enter the SIP address of the person, you can see their online presence status.

Presence

You can designate entries in your network-based address book as friends. If you enter the SIP address of the person, you can see their online presence status. Use the **View** menu to change your presence status to let other users know if you are online or away from your desk. Use the View menu to check the presence of the users that you designate as friends.

Meet Me audio conferencing

Use this feature to host audio conferences by providing a dial-in number and access code to participants. The chairperson activates the conference with their own password. The Meet Me audio conference window displays users who join the conference.

Users who have access to the Personal Agent can change their chairperson password and select the option of whether the conference ends automatically after they disconnect. For more information about Meet Me audio conference preferences, see *Personal Agent User Guide* (NN42020-100). For information about Meet Me audio conferencing on your system, see your system administrator.

IP Phone 2004 layout and display

These sections describe the buttons on your IP Phone 2004.

IP Phone 2004 buttons

Your IP Phone 2004 includes buttons that provide instant access to features of the telephone. For the layout and identification of buttons, see the following figure.

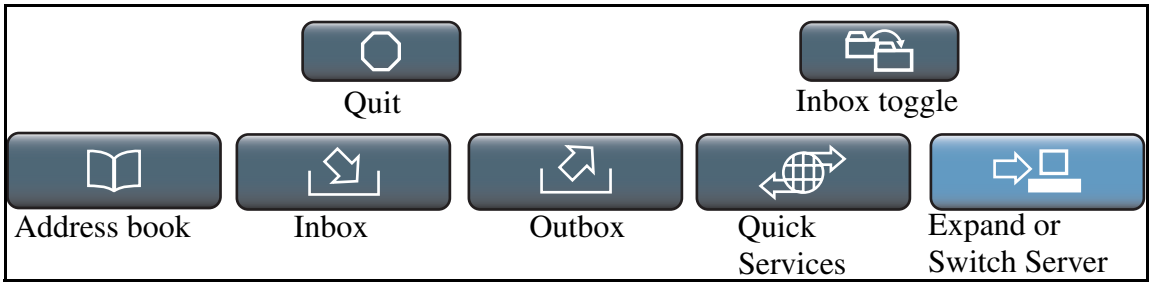
Figure 3 IP Phone 2004



IP Phone 2004 quick buttons

The IP Phone 2004 quick buttons provide access to preprogrammed services. The quick buttons are located under the navigation buttons on your IP Phone 2004.

Figure 4 Navigation buttons

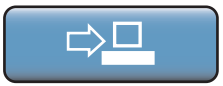


During certain operations (such as receiving an incoming call), the quick buttons are disabled. In some situations (such as programming a Forward to Destination), you can use the address book, inbox and outbox quick buttons to select or switch between the lists as applicable. Table 4 “Quick buttons and functions” on page 42 lists the IP Phone 2004 quick buttons and functions.

Table 4 Quick buttons and functions

Pressing this quick button...	**Activates this function and soft keys...**
Address book 	Access to a network-based address book. Press • **Call** to place a call to the entry that appears on the display • **Add** to add an entry to the list • **Modify** to edit or delete the entry • **Ok** to return to the idle display If several users are logged on to the phone, the system displays a list of address books and the following soft keys • **Select** to display the address book • **Cancel** to return to the idle display For more information, see “Manage your address book” on page 91.
Inbox 	Displays a log of received calls. Press • **Call** to place a call to the entry that appears on the display • **All/Missed** toggles between the list of all calls and the list of missed calls • **Delete** to remove the entry from the list • **Ok** to return to the previous screen (list of inboxes or the idle display) If several users are logged on to the phone, you is first presented with a list of inboxes and the following soft keys • **Select** to display the missed calls for the inbox • **Cancel** to return to the idle display For more information, see “Manage the inbox” on page 89.
Outbox 	Displays a log of the calls you made most recently. Press • **Call** to dial the entry • **Delete** to remove an entry • **Ok** to return to the previous menu If several users are logged on to the phone, you is first presented with a list of outboxes and the following soft keys • **Select** to display the missed calls for the outbox • **Cancel** to return to the idle display For more information, see “Manage your outbox” on page 93.
Quick Services 	Access to the Presence, Global Search, Stock Query, Send IM, Do Not Disturb, and Retrieve Parked Call features. Press • **Select** to select the entry • **Cancel** to return to the idle display For more information about these features see “Advanced features and services” on page 97.

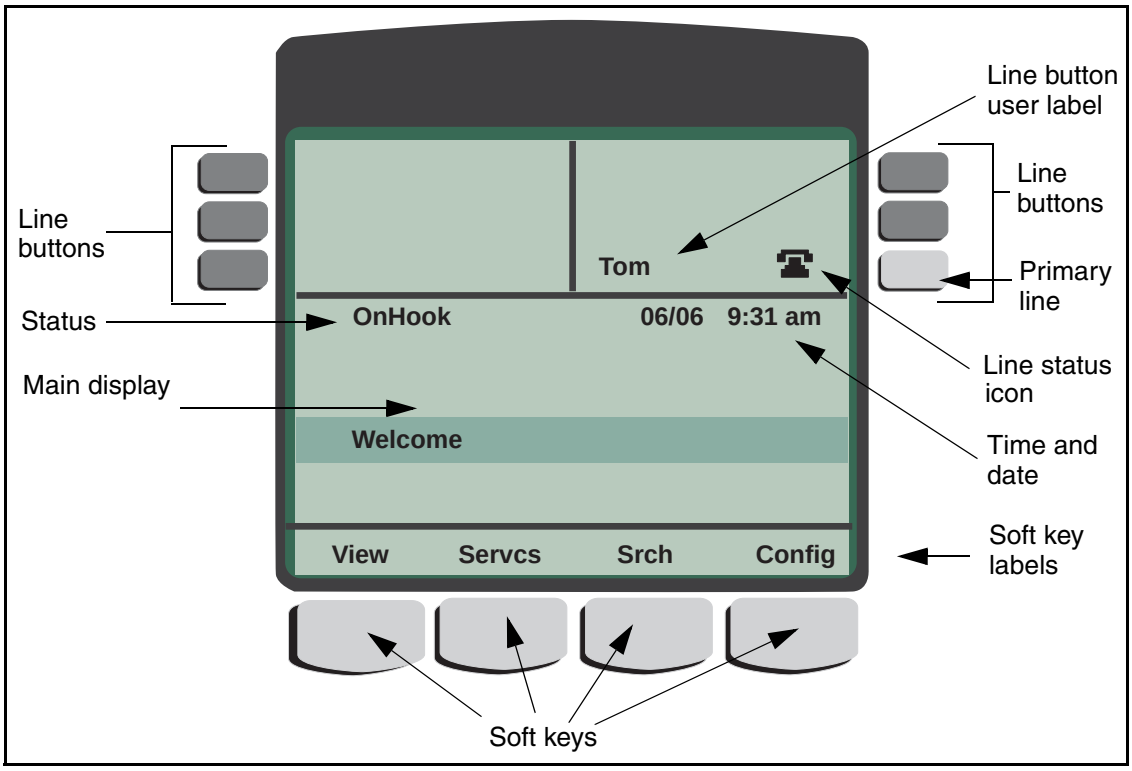
Table 4 Quick buttons and functions

Pressing this quick button...	**Activates this function and soft keys...**
Expand or Switch Server 	This quick button function changes depending on the services available on your server. Use this button to select an alternate IP server. The screen displays Use Alternate Server?" and displays the IP address and Port of the alternate server. Press Ok to have your IP Phone 2004 try to connect to the alternate server or press Cancel to return to the idle display.
Quit 	Cancel a feature or function.
Inbox lists toggle 	Toggle between the inbox lists of all calls or just the list of calls that you missed.

The IP Phone 2004 display

Figure 5 “IP Phone 2004 display” on page 44 shows the display area and layout of the IP Phone 2004.

Figure 5 IP Phone 2004 display



The main display shows the date, time, and any bulletins that were sent by your service provider. The display changes to show call activity (such as, who is calling), feature activation, and menu options.

The line information area of the display shows:

- who is logged on to the telephone and is assigned to them. The primary line is assigned to the first person to log on.
- line status icons that change according to call activity. For more information about icons see "Recognizing common IP Phone 2004 icons" on page 48.

The soft key area of the display shows the labels for the corresponding telephone buttons below the label. The soft key labels change depending on the telephone activity. From the idle display, you can access the View, Services, and Config menus, as well as activate the Srch (Global Search) feature.

Entering alphanumeric characters

You can make a call by dialing a telephone number or by dialing a person's alphanumeric address (for example, jdoe2@domain.com). Alphanumeric dialing refers to spelling names or words by dialing the alphabetic characters that are on keys with the numbers on the numeric dialpad of your IP Phone 2002.

For example, the 6 button on your telephone dialpad represents the letters m, n, and o. You can cycle through the letters (and then the number) by pressing the number button repeatedly. Names or words that have two adjacent letters that require the same button, such as in the name nortel, are entered by entering the first character, briefly pausing, and entering the next letter.

To practice using alphanumeric dialing, follow the steps in Table 5 "Alphanumeric dialing" on page 45 to spell the word nortel.

Table 5 Alphanumeric dialing

Step	Action	Result
1.	Go off-hook, press the **Alpha** soft key, and press the 6 (MNO) button twice on the dialpad.	The first time the 6 button is pressed, m appears on the display. The second time the 6 button is pressed the letter n appears on the display.
2.	Pause for 1 second and press the 6 button three times.	The letter o appears on the display.
3.	Press the 7 button three times.	The letter r appears on the display.
4.	Press the 8 button.	The letter t appears on the display.
5.	Press the 3 button twice.	The letter e appears on the display.
6.	Press the 5 button three times.	The letter l appears on the display.



Note: Your IP Phone 2004 can already use alphanumeric dialing by default. If you see the **NoAlph** soft key, the phone is already in alphanumeric dialing mode.

Tip: To enter an uppercase letter, press the up navigation button following the entered letter. To change to lowercase press the down navigation button following the entered letter. The back navigation button erases the last character. To enter a space, press the right navigation button.

In alphanumeric dialing, the **1** dialpad button represents the characters shown in Table 6 “Characters” on page 46.

Table 6 Characters

Character	Name
@	at sign
*	star (used as a wildcard symbol in global searches)
.	period
-	dash
_	underscore
&	ampersand
’	apostrophe
^	carat
?	question mark
!	exclamation point
(	left parenthesis
)	right parenthesis
,	comma
1	numeral 1

Note: To enable or disable the alphanumeric dialing option, see “Preference configuration” on page 56.

Searching for addresses

You can search through the addresses in your inbox, outbox and personal address book as shown in Table 7 “Search addresses” on page 47. How you search is configured in your preferences (see “Configuring the search method” on page 57).

Table 7 Search addresses

Index	Enter the number associated with the entry.
1st Character Search	Enter the first character of the entry.
Name Search	Enter all of the characters of an entry name.



Note: For information about searching the global address book, see “Global search” on page 105.

The default search method for the IP Phone 2004 is Name Search.

1. Press a quick button to access your inbox, outbox, or address book.

   This example shows the address book.

2. Press the dialpad button for the first letter (or character) in the address you are looking for.

   For example, to search for jdoe in your address book, you press the **5** dialpad button once for the letter j.

   All the entries that begin with the letter j are accessible to scroll through with the down navigation button.

3. Press **Call** to call this entry.
4. Press **Add** to add a new entry.
5. Press **Del** to delete an entry.
6. Press **Modify** to modify the entry.
7. Press **Ok** to return to the idle display.

Helpful hints

As you use the IP Phone 2004 menus or enter text, remember the following tips:

- In a numbered menu list, press the dialpad number that corresponds to the item on the list to select it.
- Use the navigation buttons to scroll vertically and horizontally through display information.
- Use the star (*) dialpad button to return to the beginning of a list and the pound (#) button to go to the end of a list.
- To capitalize a letter, enter the letter using the dialpad and then press the **up** navigation button to apply capitalization.

Recognizing common IP Phone 2004 icons

The IP Phone 2004 displays various icons to indicate call and feature status. Table 8 “Common icons” on page 48 presents some of the more common icons that you see on the display.

Table 8 Common icons

Icon	Meaning
	telephone line is idle
	shows a call feature is activated (for example, call forward and DND). The display text changes periodically to alert you that a feature is active (DND Active or FWD Active). when blinking, indicates a problem with the network try to log on again or contact your network administrator
	ringing call
	if this icon appears beside a line button, the telephone is off-hook if this icon appears in the Inbox then it indicates a call that you answered

Table 8 Common icons

Icon	Meaning
	another active call
	active call is on Hold
	message waiting (telephone lamp lights red)
	instant message
	missed call (icon blinks)
	line button is programmed for a feature such as Speed Dial, Do Not Disturb, Send IM, Call Forward, Stock Query and Change Presence Status

Configuration

This chapter describes the settings that you can customize on your IP Phone 2004.

The topics in this chapter include:

- "Config menu" on page 52
- "Volume settings" on page 53
- "Adjusting contrast" on page 56
- "Preference configuration" on page 56
- "Configuring idle display" on page 59
- "Specifying location" on page 60
- "Configuring language preferences" on page 60
- "Date and time preferences" on page 61
- "Displaying IP Phone 2004 information" on page 62
- "Resetting your IP Phone 2004" on page 63
- "Switching server control" on page 63

Config menu

The Config menu on the IP Phone 2004 includes the following options:

1	Volume Setting
2	Contrast Setting
3	Preferences
4	Idle Display
5	Location
6	Language Preference
7	Time Preferences
8	Display Version
9	Reset Phone
10	Switch Controller



Tip: For quick selection, press the number on the dialpad that corresponds to the menu item. Use the **up** and **down** navigation buttons to scroll through the Configuration menu list. To reach the beginning of the list, press the star button (*). To reach the end of the list, press the pound (#) button.



Note: Parameters that are specific to a line can be configured or viewed using menu options. If several users are logged on to the telephone, then the system prompts you to select your line button.



Note: In SIP mode, this menu has additional options. For more information about these options, see “Configuration” on page 51.

Volume settings

The volume settings submenu includes the following options:

1 Ring Pattern

2 Handset Volume

3 Headset Volume

4 Handsfree Volume

5 Alerting Volume



Tip: You can adjust the handset, headset, handsfree, and alerting volume as a call is ringing or while you are on an active call by using the volume control bar located below the dialpad. The new volume setting becomes the default for the telephone.



Note: If you configure a new volume setting using the volume submenu, you must press the **Save** soft key in order to apply your new volume setting.

Adjusting ring pattern

The IP Phone 2004 has several ring patterns. You can select a ring pattern to distinguish your telephone is ringing.

1. Press the **Config** soft key.
2. Choose the **Volume Setting** option and press the **Select** soft key.
3. Choose the **Ring Pattern** option and press the **Select** soft key.
4. Use the **up** and **down** navigation buttons to scroll through the different ring pattern options.

   The speaker plays the ring pattern.
5. Press **Ok** at the ring pattern of your choice.
6. Select another volume setting to change.
7. To apply the change, press **Save**.

8 Press **Cancel** to return to the idle display and discard your changes.

Adjusting handset volume

1 Press the **Config** soft key.

2 Choose the **Volume Setting** option and press the **Select** soft key.

3 Choose the **Handset Volume** option and press the **Select** soft key.

4 Use the right and left navigation buttons to increase and decrease the volume. A shaded bar graph indicates the volume level.

5 Press **Ok**.

6 Select another volume setting to change

7 To apply the change, press **Save**.

8 Press **Cancel** to return to the idle display and discard your changes.

Adjusting headset volume

1 Press the **Config** soft key.

2 Choose the **Volume Setting** option and press the **Select** soft key.

3 Choose the **Headset Volume** option and press the **Select** soft key.

4 Use the right and left navigation buttons to increase and decrease the volume. A shaded bar graph indicates the volume level.

5 Press **Ok**.

6 Select another volume setting to change.

7 To apply the change, press **Save**.

8 Press **Cancel** to return to the idle display and discard your changes.

Adjusting handsfree volume

1 Press the **Config** soft key.

2 Choose the **Volume Setting** option and press the **Select** soft key.

3 Choose the **Handsfree Volume** option and press the **Select** soft key.

4 Use the right and left navigation buttons to increase and decrease the volume. A shaded bar graph indicates the volume level.

5 Press **Ok**.

6 Select another volume setting to change.

7 To apply the change, press **Save**.

8 Press **Cancel** to return to the idle display and discard your changes.

Adjusting alerting volume

1 Press the **Config** soft key.

2 Choose the **Volume Setting** option and press the **Select** soft key.

3 Choose the **Alerting Volume** option and press the **Select** soft key.

4 Use the right and left navigation buttons to increase and decrease the volume. The speaker plays the ring volume that corresponds to the setting you choose.

5 Press **Ok**.

6 Select another volume setting to change.

7 To apply the change, press **Save**.

8 Press **Cancel** to return to the idle display and discard your changes.

Adjusting contrast

1. Press the **Config** soft key.
2. Choose the **Contrast Setting** option and press the **Select** soft key.
3. Use the navigation left and right buttons to make the display lighter or darker.
4. Press the **Ok** soft key after you are satisfied with the contrast.
5. Press the **Cancel** soft key to cancel any changes to the display.

Preference configuration

The preferences submenu includes the following options:

- Alpha Dialing—configure the default dialing mode
- IM Display—block instant messages from appearing on the display
- Search Method—select the search method: by index, by first character, or by name
- Ignore Action—choose a behavior for the Ignore soft key
- Dialpad—select the character set for your language

Configuring alphanumeric dialing

You can configure the telephone dialpad for alphanumeric dialing or to dial only numbers.

1. Press the **Config** soft key.
2. Choose the **Preferences** option and press the **Select** soft key.
3. Choose the **Alpha Dialing** option and press the **Change** soft key.
4. Press the **Ok** soft key to change the alphanumeric dialing option.
5. Press the **Cancel** soft key to exit without saving your changes.



Tip: For more information about using alphanumeric dialing, see "Entering alphanumeric characters" on page 45.

Configuring IM display

You can choose to block incoming instant messages so that the text does not appear on the telephone display. Instant messages are not blocked by default.

1 Press the **Config** soft key.

2 Choose the **Preferences** option and press the **Select** soft key.

3 Choose the **IM Display** option and press the **Change** soft key.

4 Press the **Ok** soft key to change the IM Display option.

5 Press the **Cancel** soft key to exit without saving your changes.

Configuring the search method

You can select the method to search for entries in your address book, inbox and, outbox. The choices are listed in Table 9 “Search method choices” on page 57.

Table 9 Search method choices

Index	Enter the number associated with the entry.
1st Character Search	Enter the first character of the entry.
Name Search	Enter all of the characters of an entry name.

1 Press the **Config** soft key.

2 Choose the **Preferences** option and press the **Select** soft key.

3 Choose the **Search Method** option and press the **Change** soft key.

4 Select a search method from the list.

5 Press the **Ok** soft key to change the search option.

6 Press the **Cancel** soft key to exit without saving your changes.



Tip: For information about using the search function, see to “Searching for addresses” on page 68.

Configuring the ignore action

You can configure the actions of the Ignore soft key. The Local setting stops an incoming call from ringing on your IP Phone 2004. Any other devices defined in your ring list continue to ring for the duration of the ring list before advancing to the next ring list. The Network setting stops the incoming call from ringing on all the devices that are defined in your ring list and forwards the call to the next ring list if one was defined. For example, you can configure your ring list sequence to go to your voice mail account.



Tip: For more information about creating a ring list, see *Personal Agent User Guide* (NN42020-100).

1. Press the **Config** soft key.
2. Choose the **Preferences** option and press the **Select** soft key.
3. Choose the **Ignore Action** option and press the **Change** soft key.
4. Press the **Ok** soft key to change the **Ignore Action** option.
5. Press the **Cancel** soft key to exit without saving your changes.

Configuring the dialpad characters

You can change the dialpad character setting to the alphanumeric character set for your language.

To change the dialpad character set:

1. Press the **Config** soft key.
2. Choose the **Preferences** option and press the **Select** soft key.
3. Choose the **Dialpad** option and press the **Change** soft key.
4. Use the up and down navigation buttons to scroll through the options.
5. Choose your dialpad character set and press the **Ok** soft key.
6. Press the **Cancel** soft key to exit without saving your changes.

Configuring idle display

You can customize a text label to display your telephone is idle.

1. Press the **Config** soft key.
2. Choose the **Idle Display** option and press the **Select** soft key.

   The display shows Set Idle Display: [text label].
3. Use the left navigation button to erase the current text and enter the text you want to display on your telephone, for example, John's phone.
4. Press the **Ok** soft key.

   The new text label displays on the screen when the telephone is idle.

   OR

   To return to the idle display, press **Cancel**.

Specifying location

You can access the system from different locations. For example, you can move to another building or temporarily log on to another IP Phone. After you log on, the system prompts you to select your location (from a predefined list). The location is needed to correctly route emergency services. You can also change your location by using the Config menu.

1. Press the **Config** soft key.
2. Use the **up** and **down** navigation buttons to choose the Location option and press the **Select** soft key.

   If you select **Other** as your location, a warning message appears. "Warning: A location was selected that can affect your emergency services. Display this warning in the future?"
3. Select **Yes** or **No**.

   If you select **Yes**, you are prompted each time you log on or when your telephone or server resets. If you select **No**, you do not see this warning again.



Note: If you choose Other as your location, there can be a delay in locating you if you dial an emergency number.

4. Press the **Ok** soft key.
5. If you receive a prompt to select a sub-location, follow the prompts to continue.

   The Back soft key returns you to the previous display.

Configuring language preferences

1. Press the **Config** soft key.
2. Choose the **Language Preferences** option and press the **Select** soft key.
3. Press **Change** and use the **up** and **down** navigation buttons to scroll through the language options.

4 Choose your language option and press the **Select** soft key.

OR

To return to the idle display, press **Cancel**.

Date and time preferences

You can choose how the date and time displays on your telephone screen and you can configure your time zone.



Tip: Use the left and right navigation buttons to scroll the text horizontally.

Changing date format

You can choose whether the date format displays as month/day or day/month.

1 Press the **Config** soft key.

2 Choose the **Time Preferences** option and press the **Select** soft key.

3 Press the **DateFm** soft key.

4 Choose the date format you prefer and press the **Select** soft key.

5 Press **Ok** to exit or choose another Time Preferences option.

Changing time zone

1 Press the **Config** soft key.

2 Choose the **Time Preferences** option, and press the **Select** soft key.

3 Press the **TmZone** soft key.

4 Choose the time zone format you want, and press the **Select** soft key.

5 Press **Ok** to exit or choose another Time Preferences option.



Tip: Use the left and right navigation buttons to horizontally scroll the time zone descriptions.

Changing time format

1 Press the **Config** soft key.

2 Choose the **Time Preferences** option, and press the **Select** soft key.

3 Press the **TimeFm** soft key.

4 Choose the time format you want and press the **Select** soft key.

5 Press **Ok** to exit or choose another Time Preferences option.

Displaying IP Phone 2004 information

1 Press the **Config** soft key.

2 Choose the **Display Version** option and press the **Select** soft key.

The screen displays the system release, build and date, IPCM IP address and port, firmware version, MAC address, IP address of the IP Phone 2004, terminal ID, domain, and location.

3 Use the navigation buttons to scroll through the information on the screen.

4 Press the **FirmW** soft key for a prompt to upgrade the firmware.

OR

To return to the idle display, press **Cancel**.



Note: The FirmW soft key is not available in SIP mode. For more information about upgrading the firmware while the phone is in SIP mode, see “Appendix F: IP Phone 2004 with SIP firmware” on page 127.

Resetting your IP Phone 2004

1. Press the **Config** soft key.
2. Choose the **Reset Phone** option and press the **Select** soft key.
3. Press the **Ok** soft key to confirm the reset.

   OR

   To return to the idle display, press **Cancel**.

Switching server control

If you lose the connection to your server, your IP Phone 2004 automatically switches to the secondary server. You can also manually switch to the secondary server.

1. Press the **Config** soft key**.**
2. Choose the **Switch Controller** option and press the **Select** soft key.
3. At the display prompt, confirm the IP address and port number of the alternate server.
4. Press the **Ok** soft key.



Tip: As a shortcut, you can use the  quick button to change servers.

Make and receive calls

This chapter describes the ways that you can place and receive calls on your IP Phone 2004.

The topics in this chapter include:

- "Getting started with your IP Phone 2004" on page 66
- "Placing a call" on page 67
- "Enter an address" on page 68
- "Answering an incoming call" on page 71
- "Receiving a second call" on page 72
- "Ending a call" on page 74
- "Placing a conference call" on page 74
- "Placing a call on hold" on page 75
- "Call Park" on page 76
- "Transferring a call" on page 77
- "Incoming call options" on page 78
- "Sending and receiving instant messages" on page 81

Getting started with your IP Phone 2004

Table 10 “Common functions” on page 66 lists the steps for some of the functions you use on an everyday basis.

Table 10 Common functions

To	Do this
Place a call	1. Pick up your handset or press the **Handsfree** button to go off hook on the primary line (the green line button). 2. Dial a phone number or enter an alphanumeric address. See “Enter an address” on page 68. 3. Wait briefly for the phone to place the call automatically, or press the **Send** soft key. 4. Hang up the handset or press the  button to disconnect the call. To place a call to an entry in your inbox, outbox, address book, or list of friends, see Chapter , “Call management,” on page 83.
Place a conference call	1. After you make or receive a call, press the **NewCall** soft key to invite an additional party to the conversation. 2. Dial a phone number or enter an address. The second number rings. 3. Wait for an answer, then press the **Join** soft key. 4. Hang up the handset or press the **Goodbye** soft key to disconnect from the conference.
Check a stock quote	1. Select the **Servcs** soft key. 2. Use the navigation buttons to choose and select the **Stock Query** feature from the display area. 3. Use the dialpad to enter the symbol of the stock you wish to query. If you make a mistake, reenter the symbol and the previous entry is deleted. 4. Select the **Submit** soft key to start your query. After the query is complete, the quote appears on the display.

Soft key dialing options

After you go off-hook to make a call, the idle display changes and includes the following soft keys.

Table 11 Soft key dialing options

Press	To
VMail	Dial your voice mailbox (if configured).
Redial	Dial the last number you called.
Alpha/NoAlph	Activate alphanumeric dialpad characters.
Subject	To select a call subject to add to your call.

Note: The **Rdial** soft key appears on the display after you make your first call.

Placing a call

You can make calls with your IP Phone 2004 in any of the ways shown in Table 12 “Calling methods” on page 67.

Table 12 Calling methods

To make a call with the	Do this
Handsfree button	Press the **Handsfree** button to go off-hook on the primary line (the green line button) and produce a dial tone.
Line button	Press any available line button to produce a dial tone. An available line has a user name label next to it.
Handset	Pick up the handset.
Headset button 	Press this button to go off-hook on the primary line (the green line button) and produce a dial tone.

Tip: Press  to disconnect from the call at any time.

Enter an address

To make a call, you can dial a number (numeric address such as, 555-1212) or an alphanumeric SIP address (jdoe2@domain.com).

Using the dialpad:

1. Use the dialpad to dial the number.

   The left navigation button acts as a backspace button.

2. Press the **Send** soft key to place the call or wait for the phone to automatically place the call.

Using alphanumeric dialing:

1. Take the handset off-hook and press the **Alpha** soft key.
2. Enter the name or word.
3. Press the **Send** soft key to place the call or wait for the phone to automatically place the call.

Note: For more information about alphanumeric dialing, see "Entering alphanumeric characters" on page 45 and "Preference configuration" on page 56. If the **NoAlph** soft key appears on your display, alphanumeric dialing is already enabled.

Searching for addresses

To make a call, you can choose an entry from your address book, inbox, or outbox. To quickly locate the entry you are looking for, you can do a search. The method you use to search for entries depends on what is configured in your preferences. See "Configuring the search method" on page 57.

Select your address book, inbox, or outbox, the display indicates the type of search method.

The three search methods are listed in Table 13 “Search methods” on page 69.:

Table 13 Search methods

Search method	Do this
Index	Enter the number of the entry item.
1st Character Search	Enter the first character of the entry name. For example, press 4 on the dialpad to search for entries that begin with the letter G. Press 4 twice to search for entries that begin with the letter H.
Name Search	Enter all of the characters in a name.

Searching the global address book

From the idle display of your telephone you can search the global address book and initiate calls.

1. Press the **Srch** soft key on the idle display of your IP Phone 2004.
2. Choose the field that you want to search.
3. Press **Select**.
4. Enter your search parameter.

   Use the dialpad and the **Alph/NoAlph** soft key to enter alpha and numeric characters.



Tip: To enter a wildcard symbol, press the star (*) button on the dialpad.

5. Press **Ok**.

   The display shows the results of your search.
6. Press **Call** to initiate a call.

7 Press **Save** to add this entry to your personal address book.



Tip: You can also access the search capability through the Services menu. For more information about the Services menu, see "Global search" on page 105.

Adding a subject to a call

You can send a line of text to explain the subject of the call. The subject text appears on the display on the phone that receives the call.

Before you perform this procedure, you must define a list of call subjects. For information about creating or changing subject text, see "Adding call subjects" on page 87.

1 While making a call, press the **Subject** soft key and use the navigation buttons to choose the desired subject.

2 Press the **Select** soft key.



Tip: If you have access to the Personal Agent, you can customize your list of subjects. For more information, see *Personal Agent User Guide* (NN42020-100).

Adding a subject to a call from your Personal Address Book, Inbox or Outbox

To add a subject to a call from your Personal Address Book, Inbox or Outbox.

1 Go off hook.

2 Press **Subject**.

3 Press **Select** to choose a pre-defined subject.

4 Press the **Addressbook**, **Inbox** or **Outbox** key.

5 Highlight the entry you wish to call.

6 Press **Select**.

Answering an incoming call

After your IP Phone rings to announce an incoming call, select one of the available options. shown in Table 14 “Incoming call handling options” on page 71

Table 14 Incoming call handling options

Press	To
Answer	Answer the call with handsfree or to pick up the handset.
Redrct	Send the call to another destination.
Decline	Stop the call from ringing (cancel).
Ignore	Stop the call from ringing and process it through a ring list.

See “Incoming call options” on page 78 for more information.

Note: For information about configuring ring lists, see *Personal Agent User Guide* (NN42020-100).

Active call actions

After you answer a call, the options shown in Table 15 “Call in-progress options” on page 71 are available.

Table 15 Call in-progress options

Press	To
Trnsfr	Transfer the call to another party.
Audio	Display details and change the current codec setting. See “Changing audio configuration while on a call” on page 111 for more information.

Table 15 Call in-progress options

Press	To
NewCall	Start a new outgoing calls.
Park	Place the call on hold on the system so that another person can retrieve it. See "Call Park" on page 76 for more information.

Receiving a second call

If you are on an active call and a second call comes in on the same line, the IP Phone 2004 alerts you with an audible beep and by displaying the ringing call information.

To answer an incoming call while you are on an active call, press the line button next to your name.

OR

Highlight the caller's ID and press the **Answer** soft key.

Note: You cannot receive a second call while you are on an emergency services call.

For example:

- While mjane and jdoe are talking, jdoe receives a call from csmith.
- An audible beep alerts jdoe of the call from csmith.
- The information about the call with mjane no longer appears on the screen.
- The caller ID for csmith displays and a ringing icon appears next to csmith.
- The soft keys along the bottom of the screen also change. The soft keys apply to csmith's call.
- Jdoe can use the soft keys to answer, redirect, decline, or ignore the call from csmith while continuing to talk to mjane.

- To answer the incoming call with csmith, jdoe presses the line button next to jdoe's name, or presses the **Answer** soft key, while csmith's caller ID information is highlighted.



Tip: After the phone rings to announce a second call, the soft keys indicate the options for the second call, until the ringing stops or the call receives treatment.

- The first call (between mjane and jdoe) is placed on hold.
- The new call between csmith and jdoe becomes active.
- After you answer the second call, the display changes to indicate this new state. The display icons indicate the state of the calls. The soft keys change and apply to the highlighted call, which is now csmith.

Switching between active calls on the same line

1. Use the navigation buttons to choose the inactive call.
2. Press the line button associated with the call or press the **Switch** soft key to switch calls.

The following example describes how to switch between calls on the same line:

- Jdoe uses the navigation buttons to choose the inactive call with mjane.
- Jdoe presses the **Switch** soft key or the line button next to jdoe's name on the screen. The call between csmith and jdoe is placed on hold.
- Again, the call between mjane and jdoe becomes active, and mjane's line remains highlighted. The phone icons on the screen indicate the state of both calls.
- After the active call is switched, the display changes. The hold icon appears beside the call on hold and the off-hook icon appears beside the active call.
- Highlighting csmith's call and pressing the **Switch** soft key places mjane on hold and switch the call back to csmith.



Tip: Switching between calls works for both incoming and outgoing calls.

Ending a call

To end an active call, press the **Goodbye** button or place the handset on the receiver.

Note: You cannot end an emergency services call. Emergency services calls are ended only by emergency services personnel.

In the following example, jdoe is conversing with mjane. mjane's call is highlighted. To end this active call:

- Jdoe presses the **Goodbye** button or places the handset on the receiver. The call is released between jdoe and mjane. The call between jdoe and csmith is left on hold. The information about the call between jdoe and csmith still displays using the full screen.
- Jdoe presses the **Hold** soft key to resume the conversation with csmith.

Placing a conference call

Use the IP Phone 2004 to connect calls to form a conference.

While you are on a call, you can start a conference call to connect new parties to the call.

Note: You cannot initiate a conference while you are on an emergency services call.

1. While on a call, press the **NewCall** soft key.

   Your current call is placed on hold.
2. Enter the address of the person you want to join the call.
3. Press the **Send** soft key.

   The new address rings. After the new party answers the call, the display changes. You can speak to the party while the original party is still on hold.
4. Press the **Join** soft key to connect the calls.

Placing a conference call to entries in your inbox, outbox, or address book

1 Press the **NewCall** soft key.

Your current call is placed on hold.

2 Press an inbox, outbox, or address book quick button.

3 Choose an entry.

4 Press the **Select** soft key.

The new address rings. After the new party answers the call, the display changes. You can speak to the new party while the original party is still on hold.

5 Press the **Join** soft key to connect the calls.

Tip: Any party, including the originator of the conference call, can hang up and the remaining callers on a conference call remains connected.

Placing a call on hold

Note: You cannot place an emergency services call on hold.

1 Press the **Hold** button to place the other party on hold.

The  icon beside the line button flashes.

2 Press the line button associated with the call on hold to resume the conversation.

Tip: If someone else places you on hold (remote hold) the hold icon on your display flashes.

Call Park

You can park an active call so another user can retrieve it. A call can be parked and assigned a call ID for general retrieval or it can be parked for a specific user. See "Retrieve a parked call" on page 105, for instructions on entering a call ID to retrieve a parked call. If a call is parked for you specifically, a message appears on your telephone with soft keys to retrieve, ignore or make a New call.



Tip: This feature must be enabled in your service package. Contact your system administrator for more information.



Note: You cannot park an emergency services call.

Parking an active call for general retrieval

1. Press the **Park** soft key.
2. Press the **Park** soft key again. The display shows the parked call and the call ID number to retrieve it.
3. Communicate the call ID number to the person that needs to retrieve the call. If the call is not retrieved then it rings back on your telephone.



Tip: Use the Personal Agent to configure the amount of time a call is parked before it rings back to you. For more information, see *Personal Agent User Guide* (NN42020-100).

Parking an active call for a specific user

1. Press the **Park** soft key.
2. Press the **User** soft key.

3 Enter the name or address of the person who needs to retrieve this call and press the **Ok** soft key.

The user that you designate to retrieve this parked call receives a message on their display. If the call is not retrieved, it rings back on your telephone.



Tip: If you wanted to take a call from another telephone, or move to a private office, you can park a call against yourself. In this case, the parked call does not ring back to you if you don't pick it up within the specified time.

Transferring a call

You can transfer a call without speaking to the recipient (blind transfer), or you can speak to the recipient before you make the transfer (consult transfer).



Note: You cannot transfer an emergency services call.

Making a blind transfer

While you are on a call, you can transfer a call to another party without waiting for that party to answer. The originating or terminating party can initiate the transfer, but is not included in the call after the transfer.

1 Press the **Trnsfr** soft key.

2 Enter the address where you want to transfer this call, or press the quick buttons to access and select an entry from the inbox, outbox, or address book.

3 Press the **Trnsfr** soft key.

The display prompts you to select whether you want to consult with the called party.

4 Press the **No** soft key to complete the transfer without consulting with the party you are calling.

The original called party is placed on hold. The display confirms if the transfer is complete or fails.

5 Press the **Ok** soft key to return to an idle display.

6 If the transfer failed, press the line key to reconnect the call.

Making a consult transfer

While you are on a call, you can call another address, speak with the recipient, and transfer the original call to the new address.

1 Press the **Trnsfr** soft key.

2 Enter the address where you want to transfer this call, or press the quick buttons to access and select an entry from the inbox, outbox, or address book.

3 Press the **Trnsfr** soft key.

The display prompts you to select whether you want to consult with the called party.

4 Press the **Yes** soft key to consult with the party you are calling.

The original called party is placed on hold. The call to the new address rings.

5 Consult with the party you wish to transfer the first call to.

6 Press the **Trnsfr** soft key to complete the transfer, or press **Cancel** to disconnect and return to the original call.

The display confirms if the transfer is complete or fails.

7 Press the **Ok** soft key to return to an idle display.

8 If the transfer failed, press the line key to reconnect the original call.

Incoming call options

The following soft key options are available for incoming ringing calls.

Table 16 Soft key options for incoming ringing calls

Press	To do this
Answer	Answer the call.
Redrct	Redirect the call to another address.

Table 16 Soft key options for incoming ringing calls

Press	To do this
Decline	Stop the call from ringing. The call does not advance to the next ring list. The call is cancelled and a message is sent to the caller. **Note**: Decline stops a call from ringing on all devices defined in your ring list.
Ignore	Stop the call from ringing on your IP Phone 2004 (call handling depends on the feature configuration). The call is then handled by your ring list. For more information about Ignore feature configuration, see "Configuring the ignore action" on page 58.

Redirecting a call

1 Press the **Redrct** soft key.

2 Enter the new address by using the dialpad.

3 Press the **Redrct** soft key to add the new party.



Note: You cannot redirect a call to a caller who redirected the call to you. For example, if Caller A calls Caller B, Caller B can redirect the call to Caller C and return to available status. Although Caller B is available, Caller C cannot redirect the call to Caller B because the system treats this route as already attempted without success. This treatment prevents redirect loops. If Caller C attempts to redirect the call to Caller B, the call ends and Caller A receives a temporarily unavailable message.

Redirecting an incoming call using the outbox or address book

1 Press the **Redrct** soft key.

2 Press an outbox or address book quick button.

3 Choose the entry you want to redirect to and press the **Select** soft key.

4 Press the **Redrct** soft key.

Decline a call

After you decline an incoming call, your telephone stops ringing. The caller receives a decline message and a busy signal. You can also decline a call and specify a reason, if you configure reject reasons through the View menu.

Declining a call without a reason

1. Press the **Decline** soft key.
2. Press the **Ok** soft key to decline the call.

   The calling party receives a busy signal.
3. Press the **Cancel** soft key to cancel the decline.

Declining a call with a reason

1. Press the **Decline** soft key.
2. Press the **Reason** soft key.

Note: If there are no reject reasons defined then the Reason soft key does not appear on the display.

3. Choose a reason and press the **Select** soft key.
4. Press the **Ok** soft key to decline the call.

   The calling party receives a busy signal and the reject reason appears on their display.
5. Press the **Cancel** soft key to cancel the decline.

Tip: For information about creating or changing a list of Reject Reasons, see "Adding reject reasons" on page 88. For information about configuring the IP Phone 2004 to automatically decline all calls, see "Do Not Disturb" on page 103.

Ignoring a call

You can stop an incoming call from making the phone ring and have your ring list route your call. See “Configuring the ignore action” on page 58 for an explanation of options.

1 Press the **Ignore** soft key.

2 Press the **Ok** soft key to pass the call.

Your ring list routes the call. After the ring list is exhausted, the caller receives a busy signal.

3 Press the **Cancel** soft key to cancel the ignore process.

Tip: For more information about creating a ring list, see *Personal Agent User Guide* (NN42020-100)

Sending and receiving instant messages

Your IP Phone 2004 sends a beep to alert you after you receive an instant message (IM) and shows the message on the display.

To send an instant message, press the  quick button and select the **Send IM** option.

Tip: For more information about instant messages, see “Sending an instant message” on page 100.

Call management

This chapter describes how to manage your calls efficiently by using both the IP Phone 2004 quick buttons and advanced features in the View menu.

The topics in this chapter include:

- "Accessing the list of friends" on page 85
- "Changing your presence status" on page 85
- "Adding call subjects" on page 87
- "Adding reject reasons" on page 88
- "Viewing line information" on page 88
- "Manage the inbox" on page 89
- "Manage your address book" on page 91
- "Manage your outbox" on page 93
- "Manage your IM box" on page 94

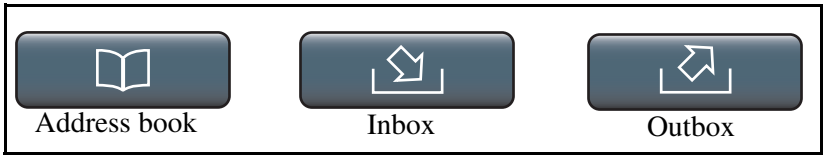
The View menu option provides the following options:

1	Friends
2	Presence
3	Call Subject
4	Reject Reason
5	Line Information
6	Inbox
7	Address Book
8	Outbox

Tip: For quick selection, press the number on the dialpad that corresponds to the menu item. Use the up and down navigation buttons to scroll through the Configuration menu list. To reach the beginning of the list, press the start (*). To reach the end of the list, press the pound (#) button.

Note: Parameters that are specific to a line can be configured or viewed using menu options. If several users are logged on to the telephone, then the system prompts you to select your line button.

Some of these items can also be accessed using the quick buttons.



Accessing the list of friends

You can maintain a list of users that you frequently contact by using the Personal Agent. Use the View menu on your IP Phone 2004 to see who, in your list of friends, is connected or unavailable.

1. Press the **View** soft key.
2. Choose the **Friends** option and press the **Select** soft key to access your list of Friends.

   Your personalized list of friends appears on the display.
3. Choose an entry and press the **Status** soft key to see the presence information for this entry.
4. You can call or IM the entry you chose.



Tip: For more information about creating a list of friends, see *Personal Agent User Guide* (NN42020-100).

Changing your presence status

Use the presence option to display your status. Users that have you in their friends list can see if you are connected or unavailable. You can also customize your own presence option (see page 86).

1. Press the **View** soft key.
2. Choose the **Presence** option and press the **Select** soft key. Your current presence status appears on the display.

3 Press the **Change** soft key. Use the up and down navigation buttons to choose either the **Connected** or **Unavailable** option.



Tip: If you select **Unavailable - Busy** as your status calls do not ring on your telephone. Incoming calls are either handled by the Make Subscriber Busy (MSB) route (through the Personal Agent, if applicable) or they are treated the same way as the Ignore feature. This feature depends on your service package.

4 Press the **Select** soft key.

5 Choose a presence option and press the **Select** soft key.

The display shows your new presence status and prompts you to confirm.

6 Press the **Ok** soft key to confirm.

Customizing presence options

You can add up to four customized presence options to either the Connected or Unavailable options list. The text for a customized presence option can be up to 32 characters in length.

1 Press the **View** soft key.

2 Choose the **Presence** option and press the **Select** soft key.

3 Press the **Yes** soft key.

4 Use the up and down navigation buttons to choose either the **Connected** or **Unavailable** option.

5 Press the **Select** soft key.

6 Use the up and down navigation buttons to scroll through the current list.

7 Press the **Add** soft key.

8 Enter a text label for your presence option using the dialpad (for example, in a conference).

9 Press the **Ok** soft key.

The display prompts you to select this new presence option as the current default.

10 Press the **Ok** soft key to confirm or press **Cancel** to return to the View menu.

If you press **Cancel**, the new menu option still appears in the list although you did not choose it as your default.



Tip: To change your presence status by using a key, see "Program Key" on page 107.

Adding call subjects

You can create a list of call subjects to let the person you are calling know the reason for your call. The subject text can be up to 100 characters in length, however recipients sometimes need to scroll to see long messages.



Note:
You can only add a subject to a call by going off-hook and dialing a number. Calls made from the Addess book, Inbox or Outbox do not allow a subject to be sent.

1 Press the **View** soft key.

2 Choose the **Call Subject** option and press the **Select** soft key.

3 Press the **Add** soft key.

If this is your first call subject, you can enter the text immediately.

4 Enter the subject text.

5 Press the **Ok** soft key.



Tip: You can choose an existing Subject entry and press the **Modify** soft key to edit the text, or use the **Delete** soft key to remove an entry from the list.



Note: For information about using this feature, see "Adding a subject to a call" on page 70.

Adding reject reasons

If you cannot answer a call, you can send a message that tells the caller why you cannot answer. The reject reason text can be up to 40 characters in length. Recipients must scroll to see messages longer than 24 characters.

1. Press the **View** soft key.
2. Choose the **Reject Reasons** option and press the **Select** soft key.
3. Press the **Add** soft key and enter the desired text.
4. Press the **Ok** soft key.



Tip: You can choose an existing reject reason entry and press the **Modify** soft key to edit the text or press the **Delete** soft key to remove the entry from the list.



Note: For information about using this feature see “Decline a call” on page 80.

Viewing line information

You can see the user name, domain, presence, IM active, redial option, and feature activation information for each user logged on to the telephone.

1. On the idle display screen, press the **View** soft key.

   If there is more than one user logged on to the telephone, the system prompts you to press the Line button for the user information you want to query.
2. Select the **Line Information** option and press the **Select** soft key.

   The information about the user assigned to that line appears on the display. Use the up and down navigation buttons to scroll through the information.
3. Press the **Ok** soft key to return to the View menu.

Manage the inbox

Your IP Phone 2004 maintains an inbox list of calls that you returned. You can access this list using the **View** soft key or by pressing the inbox quick button .

After your telephone is idle and you access the inbox, the following soft key options appear.

Table 17 Inbox soft key options—idle phone

Press	To
Call	Dial the highlighted inbox entry
All/Missed	Toggle between the inbox lists of all calls or missed calls
Delete	Delete an entry from the inbox
Ok	Return to the idle display

After you are on a call and you access the inbox, the following soft key options appear.

Table 18 Inbox soft key options—call in progress

Press	To
Select	Dial the highlighted inbox entry
Cancel	Return to the active call display



Tip: Use the right navigation button to access the details information to the right of the screen. Use the left navigation button to scroll back to the previous screen.

Calling an inbox entry

1 From the idle display screen, press  .

Use the navigation buttons to choose a particular user if more than one user is logged on, and press the **Select** soft key to access that inbox.

2 Choose an entry or enter the number associated with the entry.

3 Press the **Call** soft key to dial the entry and return the call.

Calling an inbox entry while you are on a call

1 From the idle display screen, press  .

Use the navigation buttons to choose a particular user if more than one user is logged on, and press the **Select** soft key to access that inbox.

2 Choose an entry or enter the number associated with the entry.

3 Press **Select**.

The active call is placed on hold and the new call rings.

Saving an inbox entry to the address book

1 Choose the entry and press the right navigation button to access entry details.

2 Press the **Save** soft key.

The system displays the message “Save as?”. You can change the entry text. Use the left navigation button to erase the existing text if you need to add new text.

3 Press the **Save** soft key again.

The system displays the message "Add (entry name) to Friends?".

4 Press the **Yes** or **No** soft key.

Note: You cannot save an inbox entry to the address book while you are on an active call.

Tip: If you enter a nickname for an entry in your address book, that name appears on your display after the person calls you.

Deleting an inbox entry

1 Press  .

2 Choose an entry or enter the number associated with the entry.

3 Press the **Delete** soft key.

4 Press **Ok**.

5 To delete all the entries from a particular caller, press the **AllUsr** soft key.

6 To delete all the inbox entries press the **All** soft key.

Manage your address book

Use the IP Phone 2004 to keep a list of addresses.

Tip: Use the right navigation button to access details, including presence status. Use the left navigation button to scroll back to the previous screen.

Accessing your address book

1 Press  .

OR

Press the **View** soft key, choose the address book option and press the **Select** soft key.

2 Use the navigation buttons to choose an entry.

3 Press the **Call** soft key to place a call.

Adding an entry

1 From the address book screen, press the **Add** soft key.

2 Enter the name and press the **Ok** soft key.

3 Enter an address and press the **Ok** soft key.

The system displays the message "Add (entry name) to Friends?".

4 Press the **Yes** or **No** soft key.

Removing an entry from the address book

1 From the address book screen, choose the entry in the address book.

2 Press the **Delete** soft key.

3 To delete the entry, press the **Ok** soft key.

OR

To cancel the deletion, press **Cancel**.

Editing an entry in the address book

To edit or change a address book entry:

1 From the address book screen, choose the entry in the address book.

2 Press the **Modify** soft key.

3 Edit the name and press the **Ok** soft key.



Tip: The **Delete** soft key permanently removes this entry from the address book.

4 Edit the address and press the **Ok** soft key.



Tip: You can press the **Back** soft key to return to the edit name display.

If the entry is a friend, then the display prompts you "Remove (entry name) from Friends?". If the entry is not in the list of friends, then the display prompts "Add (entry name) to Friends?".

5 Press the **Yes** or **No** soft key.

Manage your outbox

The IP Phone 2004 keeps a list of all your outgoing calls in the outbox.

Accessing your outbox

1 Press  .

OR

Press the **View** soft key, choose the **Outbox** option and press the **Select** soft key.

2 Use the navigation buttons to choose an entry or enter the number associated with the entry.

3 Press the **Call** soft key to dial the entry.



Tip: Use the right navigation button to display entry details.

Deleting an outbox entry

1 Press  .

2 Use the navigation buttons to choose an entry or enter the number associated with the entry.

3 Press the **Delete** soft key.

4 To delete the single entry press **Ok**.

5 To delete all the entries from a particular caller press the **AllUsr** soft key.

6 To delete all the outbox entries press the **All** soft key.

Saving an outbox entry to the address book

1. Choose the entry and press the right navigation button to access entry details.
2. Press the **Save** soft key.

   The system displays the message, “Save as?” You can change the entry text.
3. Press the **Save** soft key again.

   The system displays the message "Would you like to add this entry to the friends list?"
4. Press the **Yes** or **No** soft key.

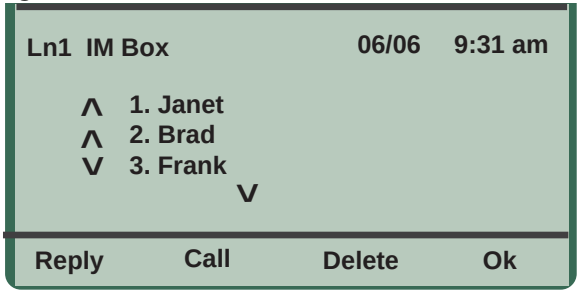
Manage your IM box

Your IP Phone 2004 maintains a list of all your incoming and outgoing instant message sessions. The IM box limit is twenty entries. When the limit is reached the oldest IM is deleted and the new entry is added to the list.

If you activate Do Not Disturb, IMs do not appear on your display but they are logged in the IM box. IMs blocked by the Configuring IM display configuration also still appear in the IM box.

Through the View menu you can access the IM box list. Figure 6 “IM box list” on page 94 is an example of an IM box.

Figure 6 IM box list



The up arrow icon indicates outgoing IMs and the down arrow icon indicates incoming IMs.

The softkey options are:

Table 19 IM box soft key options

Press	To
Reply	Initiate an IM to the highlighted entry.
Call	Call the highlighted entry.
Delete	Delete an entry from the IM box.
Ok	Return to the idle display.

View IM details

You can see the date of the IM as well as the text message by highlighting an individual entry and pressing the right navigation button. The display indicates if a message is too large to appear. When you view IM details the following softkey options appear:

Table 20 View IM details soft key options

Press	To
Reply	Initiate an IM to the highlighted entry.
Call	Call the highlighted entry.
Fwd	Forward the IM text to another user.
Ok	Returns to the IM box.

Advanced features and services

This chapter describes the many advanced features of your IP Phone 2004.

The topics in this chapter include:

- “Services menu” on page 98
- “Configuring stock query” on page 99
- “Sending an instant message” on page 100
- “Call forward” on page 102
- “Do Not Disturb” on page 103
- “User log on” on page 104
- “User logout” on page 104
- “Retrieve a parked call” on page 105
- “Global search” on page 105
- “Program Key” on page 107

Services menu

The Services menu gives you access to advanced IP Phone 2004 features:

1	Stock Query
2	Send IM
3	Call Forward
4	Do Not Disturb
5	User Login
6	User Logout
7	Retrieve Parked Call
8	Global Search
9	Program Key



Tip: For quick selection, press the number on the dialpad that corresponds to the menu item. Use the up and down navigation buttons to scroll through the Configuration menu list. To reach the beginning of the list, press the start (*). To reach the end of the list, press the pound (#) button.



Note: Parameters that are specific to a line can be configured or viewed using menu options. If several users are logged on to the telephone, then the system prompts you to select your line button.



Note: Stock Query is not available in SIP mode.

Configuring stock query

You can configure your IP Phone 2004 to display stock quotes.

Note: To determine whether this feature is activated for your system, contact your system administrator.

1. Press the **Servcs** soft key.
2. Choose the **Stock Query** option and press the **Select** soft key.
3. Enter the symbol of the stock that you want to query.

   The default mode for entering a stock symbol is alphanumeric. Use the left navigation button to delete individual characters. The **Clear** soft key deletes the entire line.
4. Press the **Query** button.

   The display can change briefly to show that the query is in progress. After the query is complete, the result appears.
5. Press the **Save** soft key.
6. Press the **Add** soft key to add this stock query to a bulletin that displays on your screen.
7. You can also query for another stock or press the **Cancel** soft key to return to the idle display.

Tip: For a shortcut to the stock query option, press the  button.

Removing a stock query entry

1. Press the **Servcs** soft key.
2. Choose the **Stock Query** option and press the **Select** soft key.
3. Enter the symbol of the stock that you want to delete from your Stock Query Bulletin list.

   The default mode for entering a stock symbol is alphanumeric.

4 Press the **Query** button.

The display can change briefly to show that the query is in progress. After the query is complete, the result displays.

5 Press the **Save** soft key. The display prompts you to remove the stock.

6 Press the **Remove** soft key to delete this entry.

Sending an instant message

You can send an instant message that appears on the telephone display of another user on the system.

Note: The ability to send or receive instant messages depends on your service package.

1 From the idle display screen, press the **Servcs** soft key.

2 Choose the **Send IM** option and press the **Select** soft key.

3 Enter the recipient's address (for example, jdoe2@domain.com).

4 Press the **Next** soft key.

5 Enter your message text.

6 Press the **Send** soft key.

You can press the **Next** soft key, enter another text message, and press the **Send** soft key to continue sending IMs to this same address.

Tip: For a shortcut to the Send IM option, press the  button.

Note: Instant messaging can be enabled or disabled. It is not enabled by default.

Sending an IM to an entry in the inbox, outbox, or address book

1. Press the **Servcs** soft key.
2. Choose the **Send IM** feature and press the **Select** soft key.
3. Press an **Inbox**, **Outbox,** or **Address Book** quick button.
4. Choose an entry and press the **Select** soft key.
5. Enter your message text.
6. Press the **Send** soft key.

Handling incoming instant messages

1. Use the navigation buttons to scroll through the IM text.
2. Use the **Detail** soft key to view details about the IM.
   a. Press **Call** to call the sender of the IM.
   b. Press the **Reply** soft key to reply to an IM.
   c. Enter a text message and select the **Send** soft key, or press **Cancel** to return to the idle display.
3. Use the **Prev** and **Next** soft keys if you have more than one IM to view.
4. Press the **Cancel** soft key to clear all IM messages.



Note: The IP Phone 2004 can display only 10 instant messages at a time. The system deletes any additional instant messages. It is important to clear your instant messages.

Call forward

You can forward your calls to other locations by using your IP Phone 2004 Call forward feature. This feature overrides existing routing rules that you configure through the Personal Agent.



Tip: If you are logged on to several IP Phones, Call Forward applies to all lines assigned to you.



Note: The Call Forward feature is bypassed if you place an emergency services call. Calls returned by emergency services personnel ring at the location where the call originated.

Forwarding a call

1. Press the **Servcs** soft key.
2. Choose the **Call Forward** option and press the **Select** soft key.

   See the note below if there is more than one user logged on.)
3. Enter the destination address, or press an **inbox**, **outbox,** or **address book** quick button and select an entry from the list.
4. Press the **Forwrd** soft key.

   The display beside the line button periodically changes to indicate that calls are now forwarded and the telephone icon appears hollow.



Note: If several users are logged on to the IP Phone 2004, you must press the line button next to the line you want to forward or press the **Ok** soft key to forward the primary line.



Tip: You can place outgoing calls, even though your line is forwarded to another location.

Canceling a forwarded call

1. Press the **Servcs** soft key.
2. Choose the **Call Forwarding** option and press the **Select** soft key.
3. Press the **Ok** soft key to cancel forwarding for the primary line.

   If several users are logged on, the system prompts you to press the line button next to the line that was forwarded. After you press the forwarded line button, call forwarding is canceled immediately.



Tip: If you are logged on to several IP Phones, every line associated with you has call forwarding canceled.

Do Not Disturb

The Do Not Disturb (DND) feature blocks all calls on a line. Your IP Phone 2004 does not ring if a call arrives.

If your IP Phone 2004 is the only telephone defined in your active ring list, incoming calls are sent to the next ring list. If you have several contacts in your ring list, the other devices ring for the defined number of rings before the call moves to the next ring list.



Tip: For more information about creating a ring list, see *Personal Agent User Guide* (NN42020-100).



Note: You cannot enable the Do Not Disturb feature during an emergency services call.

Enabling the Do Not Disturb feature

1. Press the **Servcs** soft key.
2. Choose the **Do Not Disturb** option and press the **Select** soft key.

3 Press the **Ok** soft key to enable Do Not Disturb.

The display beside the line button periodically changes to indicate that DND is active and the telephone icon appears hollow.

Canceling DND

The line button telephone icon and text indicate that the DND feature is active.

1 Press the **DND** soft key on the idle display.

2 Confirm the cancellation.

Canceling DND by using the Services menu

1 Press the **Servcs** soft key.

2 Press the down navigation button to choose the **Do Not Disturb** option and press the **Select** soft key.

3 Press the **Ok** soft key to disable Do not Disturb.

User log on

1 Press the **Servcs** soft key.

2 Choose the **User Login** option and press the **Select** soft key.

3 Enter your user ID and press **Login**.

4 Enter your password and press **Login**.

5 Choose your location and press **Select**.

6 Press the **Days/Hours** soft key to enter an amount of time and press **Timed** or press the **Login** soft key to use the network provisioned values.

User logout

1 Press the **Servcs** soft key.

2 Choose the **User Logout** option and press the **Select** soft key. The system prompts you to indicate your line (if there is more than one user logged on)

and then prompts for your password. If you press the **Ok** soft key then the primary line button user is automatically selected.

3 Enter your password.

4 Press the **Logout** soft key.

Retrieve a parked call

You can retrieve a call that is parked on the system if you have the call ID.

1 Press the **Servcs** soft key.

2 Choose the **Retrieve Parked Call** option and press the **Select** soft key.

3 Enter the call ID and press **Ok**.



Tip: If a call is parked for you, after you access the Retrieve Parked Call option, the system prompts you. You can choose to retrieve your parked call or enter another call ID.

Global search

You can search through the global address book of all users on your system in order to make a call or to add entries to your personal address book.



Tip: Use the star (*) character to indicate a wild card in the search string. Enter the star character by pressing the star (*) button on the keypad or by using the special characters that are available in alphanumeric dialing. See “Entering alphanumeric characters” on page 45.

Performing a global search

1 Press the **Servcs** soft key.

2 Choose the **Global Search** option and press the **Select** soft key.

The system prompts you to choose the method of search. Options include; **User Name**, **Name**, **Last Name**, **First Name** and **Phone Number**. Use the up and down navigation buttons to scroll through the options.

3 Choose an option and press **Select**.

4 Enter the characters (letters or numbers) for the search and press the **Ok** soft key.

The entries, up to a maximum of 100, that match your search parameter appear on the display.



Tip: Use the right navigation button to view the presence details of the highlighted entry. Press the **Call** soft key to place a call to this entry. Press the **Save** soft key to save this entry to your personal address book.

5 Press the **Srch** soft key to continue searching the global address book or press the **Cancel** soft key to return to the idle display.

Global address book restrictions

The Administrator can restrict access to the global address book.

When the Global Address Book Enabled parameter is configured to false, the Srch soft key is not displayed on the idle screen of the Nortel IP Phone 2004.

When the Global Address Book Enabled parameter is configured to false and a user selects Global Search from the Quick Servcs or Services menu, the system displays the following error messages.

- The global address book is disabled by the network administrator.
- Search not available.

When several users are logged on to a telephone, the Srch soft key is removed only if all the users are in a domain that has the Global Address Book Enabled configured to false.

When the user selects the search function by using the Srch soft key or by using the service menus, and several users are logged on, the system prompts the user to select the person that they want to search for. The user sees only those people whose domains have the global address book enabled. If no one has the global address book available, the user sees an error message.

Program Key

With the Program Key, you can program the unused line buttons on your IP Phone 2004 to:

- speed dial an address or number
- send an IM to a specific person
- activate Do not Disturb
- forward your calls
- change your presence status
- make a stock query

If several users share a phone, the following rules apply:

- After several users are logged on, the primary line users' programmed line buttons occupy the unused line buttons. After the primary line user logs off, the programmed line buttons for the second user appear.
- The users who log on after the primary line user occupy the line buttons sequentially and override any programming.
- After a user logs off, the previous programming for the line button returns.
- Several users can program any unoccupied line buttons.
- After the primary line user logs off, the programming for the second line button user appears on unoccupied line buttons.



Note: The primary line button (1) is not available for programming.

Programming a line button

1. Press the **Servcs** soft key.
2. Choose the **Program Key** option and press the **Select** soft key.

The display lists the unused line buttons that are available to program. Use the up and down navigation buttons to scroll through this list.

3 Choose the line button you want to program and press the **Set** soft key.

The display lists the feature options that are available. Use the up and down navigation buttons to scroll through this list.

4 Choose the feature you want to program and press the **Set** soft key.

The display prompts you to enter a text label for this button. The text label appears beside the line button at the top of your telephone.

5 Follow the prompts to enter the information to program this button.

Removing features from a line button

1 Press the **Servcs** soft key.

2 Choose the **Program Key** option and press the **Select** soft key.

The display lists the line buttons that are available to program. Use the up and down navigation buttons to scroll through this list.

3 Choose the button you want to remove programming from and press the **Remove** soft key.

The text label for the button is deleted. The button is now available as a line button or for programming.

Troubleshooting

This chapter includes instructions for solving some common problems that can occur on the IP Phone 2004.

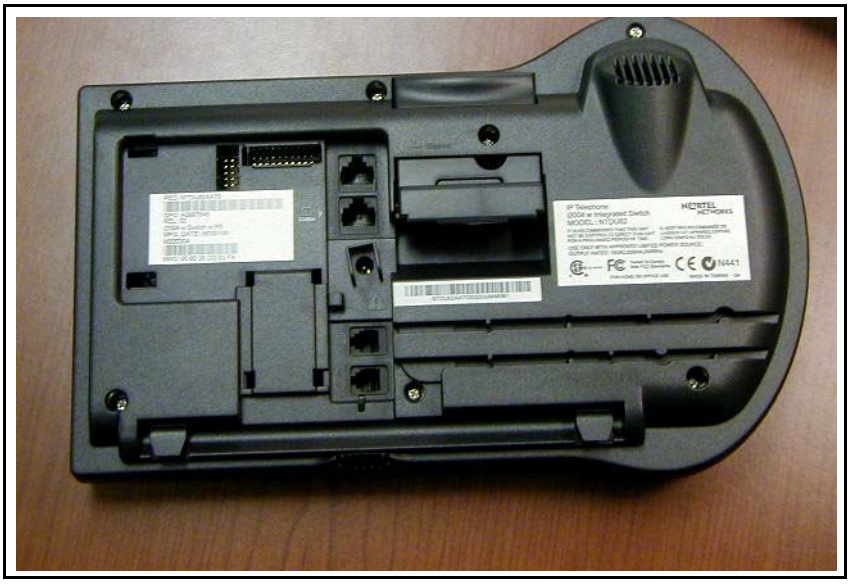
The topics in this chapter include:

- "Locating the MAC address" on page 109
- "Manually restarting your IP Phone 2004" on page 110
- "Call does not connect" on page 110
- "Call is connected but there is no audio" on page 111
- "Recording quality of service information" on page 112

Locating the MAC address

Examine your IP Phone 2004. The white label on the bottom left of the phone lists a series of numbers. The last number is the MAC address (similar to 00 60 38 XX XX XX). Record this address for future use. See Figure 7 "MAC location" on page 110.

Figure 7 MAC location



Manually restarting your IP Phone 2004

There are two ways to manually restart your IP Phone 2004.

To manually restart your phone:

Power cycle (unplug and replug) your phone.

OR

Press the **Config** soft key and select the **Reset Phone** option.

Call does not connect

Before you report a network problem, ensure that you are using the correct SIP address to place your call.

Use SIP addresses

Rather than dialing an IP address (for example, ron@12.134.47.78), remember to use the SIP address (for example, ron3@acme.com). The proxy server that routes the call can serve several domains and not know the domain where a user IP address resides.

Domain name

You must enter the domain (for example, @acme.com) if the person you are calling is not in your domain.



Note: The domain name in a user address need not be an Internet domain.

Call is connected but there is no audio

If you are using the handset, check that the headset button is not activated. The red LED beside the headset button indicates when the headset option is active. After the headset option is active, and even if there is no headset plugged in, you cannot receive or transmit audio through the handset.

Changing audio configuration while on a call

While on a call, you can change speech codec settings to achieve better audio quality. The term codec is an acronym that stands for Compression/ Decompression. The codec setting controls how speech compresses and decompresses into digital packets for transmission over the network. However, it also means that the speech delay is increased on the call.

1 During an active call, press the **Audio** soft key.

2 Select the **Change audio setting** option and press **Ok**.

3 Use the navigation buttons to choose the required quality setting and press **Select**.

Tip: Your system administrator sets the default codec and framesize for all your calls.

Note: The changed setting applies only to the current active call. The settings return to default for the next call.

A general rule for selecting the codec and framesize is show in Table 21 “Codec and frame size” on page 112.

Table 21 Codec and frame size

High quality	Medium quality	Low quality
PCMU 20 ms	PCMU 30 ms	G729A 30 ms
PCMA 20 ms	PCMA 30 ms	
G729A 20 ms		

Recording quality of service information

To improve your service or to determine a solution to a quality issue, the administrator can ask you to record quality of service information for your calls.

1 Press the **Audio** soft key.

2 Select the **Monitor audio quality** option.

3 Record the information displayed for this call.

Appendix A: Multimedia PC Client and the IP Phone 2004

You can use your IP Phone 2004 to provide premium-quality voice communication while your PC, with the Multimedia PC Client, provides advanced IP and multimedia services.This configuration is called the Multimedia Client Set. For more information about this Multimedia Client Set, see *Multimedia PC Client User Guide* (NN42020-102).

Note: The ability to use your Multimedia PC Client to control your IP Phone 2004 depends on your service package.

Note: You must be logged on to both the IP Phone 2004 and the Multimedia PC Client for the Multimedia Client Set to work.

Configuring the Multimedia PC Client to control your IP Phone 2004

1. Select **Tools > Preferences** and then select the **i200x Internet Telephone** list item.
2. Select the **Use the i200x telephone for voice instead of PC** check box.
3. Enter the port number (and optionally the MAC address) for the IP Phone 2004.

Tip: The Multimedia PC Client can automatically detect and fill the MAC address field with information it obtains from the first IP Phone that contacts it on the port specified in step 4.

4 Select the **Network controls the i200x telephone when PC Client exits** check box if you want the network to take over control of the IP Phone 2004 after the Multimedia PC Client exits.

This feature is selected by default.

5 Select the **PC Client routes voice to/from i200x (for private IP addresses)** check box if you want the Multimedia PC Client to route voice to and from the telephone for private IP addresses.

This option can be required if you use a private LAN in a home office. This option is not usually required for work office use. This feature is not selected by default.

6 Click **Ok** to save your changes or click **Cancel** to exit without saving.

IP Phone 2004 indicator

The Multimedia PC Client main window has a status area with a telephone icon. This icon is lit if the Multimedia PC Client controls the IP Phone 2004 for voice telephony.

Appendix B: Multimedia Office Client and the IP Phone 2004

You can use your IP Phone 2004 to provide premium-quality voice communication while your PC, with the Multimedia Office Client, provides advanced IP and multimedia services. This configuration is called the Multimedia Client Set. For more information about this Multimedia Client Set, see *Multimedia Office Client User Guide* (NN42020-139).

Note: You must be logged on to both the IP Phone 2004 and the Multimedia Office Client for the Multimedia Client Set to work.

Note: The ability to use your Multimedia Office Client to control your IP Phone 2004 depends on your service package.

Configuring your Multimedia Office Client to control your IP Phone 2004

1. In the Microsoft Outlook, select **Multimedia** > **Preferences** and then select the **200x** list item.
2. Select the **Use the i200x telephone for voice instead of PC** check box to indicate that you want the IP Phone to provide voice while the PC provides advanced IP and multimedia services.
3. Enter the port number (and optionally the MAC address) for the IP Phone.

Tip: The Multimedia Office Client can automatically detect and fill the MAC address field with information it obtains from the first IP Phone that contacts it on the port specified in step 3.

4 Select the **Network controls the 200x telephone when Multimedia Office Client exits** check box if you want the network to take over control of the IP Phone after the Multimedia Office Client exits.

By default, this check box is selected.

5 Check whether the Multimedia Office Client routes voice to and from the telephone for private IP addresses.

This option can be required if you use a private LAN in a home office. It is not usually required for work office use. By default, this check box is not selected.

6 To save your changes, click **OK**.

OR

To exit without saving, click **Cancel**.

IP Phone 2004 indicator

The Multimedia Office Client main window has a tool bar with a 200x toggle button. This button is highlighted if the Multimedia Office Client controls the IP Phone 2004 for voice telephony.

Appendix C: Multimedia PC Client for IBM Lotus Notes and the IP Phone 2004

You can use your IP Phone 2004 to provide premium-quality voice communication while your PC, with the Multimedia PC Client for IBM Lotus Notes, provides advanced IP and multimedia services. This configuration is called the Multimedia Client Set. For more information about this Multimedia Client Set, see *Multimedia PC Client for IBM Lotus Notes User Guide* (NN42020-148).

Note: You must be logged on to both the IP Phone 2004 and the Multimedia PC Client for IBM Lotus Notes for the Multimedia Client Set to work.

Note: The ability to use your Multimedia PC Client for IBM Lotus Notes to control your IP Phone 2004 depends on your service package.

Configuring your Multimedia PC Client for IBM Lotus Notes to control your IP Phone 2004:

1. In the Multimedia PC Client for IBM Lotus Notes client, select **Multimedia** > **Preferences** and then select the **200x** list item.
2. Select the **Use the i200x telephone for voice instead of PC** check box to indicate that you want the IP Phone to provide voice while the PC provides advanced IP and multimedia services.
3. Enter the port number (and optionally the MAC address) for the IP Phone.

Tip: The Multimedia PC Client for IBM Lotus Notes can automatically detect and fill the MAC address field with information it obtains from the first IP Phone that contacts it on the port specified in step 3.

4 Select the **Network controls the 200x telephone when Multimedia PC Client for IBM Lotus Notes exits** check box if you want the network to take over control of the IP Phone when the Multimedia PC Client for IBM Lotus Notes exits.

   By default, this check box is selected.

5 Check whether the Multimedia PC Client for IBM Lotus Notes routes voice to and from the telephone for private IP addresses.

   This option can be required if you use a private LAN in a home office. It is not usually required for work office use. By default, this check box is not selected.

6 Click **OK** to save your changes or click **Cancel** to exit without saving.

IP Phone 2007 indicator

The Multimedia PC Client for IBM Lotus Notes main window has a tool bar with a 200x toggle button. This button is highlighted when the Multimedia PC Client for IBM Lotus Notes controls the IP Phone 2004 for voice telephony.

Appendix D: DHCP parameter configuration

If your IP Phone 2004 indicates that the server is unreachable and it continuously resets after you power it up, you must configure some parameters.

Considerations for parameter configuration

When configuring parameters, consider the following items:

- To enter requested information in the menu fields, press the number keys on the dialpad. Press the star (*) key to enter a period (.) when you enter an IP address.
- To record the entry and advance the initialization to the next parameter, press **Ok**.
- To abandon the manual configuration process and restart the power-up, press **Cancel**.
- If you enter parameters manually, use the **BKSpace** or **Clear** soft keys to edit the default entry. Press the **BKSpace** soft key to delete a single character. Press the **Clear** soft key to delete the entire entry.
- If you try to move to the next parameter without entering text in the current field, an audible beep notifies you. Each parameter must have a corresponding entry.

Begin the initialization process

To begin the initialization process, at the flashing Nortel screen, quickly press each of the four soft keys (located at the bottom of the display screen) once, pressing from left to right.

Tip: If you miss the flashing introduction screen, unplug and plug in your IP Phone 2004 to reach the configuration screen where you can press the soft keys.

If your network supports DHCP go to "If your network supports DHCP" on page 120. If your network does not support DHCP go to "If your network does not support DHCP" on page 122.

If your network supports DHCP

To initialize you phone if your network supports DHCP, at the prompt in the display area of your phone, enter the configuration parameters listed in Table 22 "DHCP configuration parameters" on page 120.

Tip: Your system administrator can tell you if your network supports DHCP.

Table 22 DHCP configuration parameters

Parameter	Value	Definition
DHCP (enable)	1	Yes
DHCP (full or partial)	1	Partial
Cached IP?	0-No, 1-Yes	Select Yes if the cached IP address for this telephone is used if the DHCP server fails.
S1 IP	<valid Server IP address>	Primary server (IP Client Manager or Multimedia PC Client) IP address
S1 PORT	5000	Primary server port

Table 22 DHCP configuration parameters

Parameter	Value	Definition
S1 ACTION	1	Primary action code (must be configured to 1)
S1 RETRY Count	1	Primary retry count
S2 IP	<valid Server IP address>	Secondary server (IP Client Manager or Multimedia PC Client) IP address **Note:** If you do not know the secondary IP address, use the primary IP address for the secondary address.
S2 Port	5000	Secondary server port **Note:** If you do not know the secondary port, use the primary port.
S2 ACTION	1	Secondary action code (must be configured to 1)
S2 RETRY COUNT	1	Secondary retry count
VLAN (0=No, 1=Yes)	0	QoS 802.1q VLAN Tag Service
cfg XAS	0-No, 1-Yes	Select No

Warning: The VLAN parameter must not be selected unless the underlying network switches are configured to filter on VLAN IDs. Otherwise, the IP Phone 2004 can fail to work properly.

After you press the **Ok** soft key for the last configuration parameter, the system displays the message "Locating Server".

If your network does not support DHCP

Use the following procedure to initialize your phone if your network does not support DHCP.

Parameter configuration

1 At the prompt in the display area of your phone, enter 0 by using the dialpad, to indicate that DHCP is not supported.

2 At the prompt in the display area of your phone, enter the configuration parameters listed in Table 23 “Configuration parameters” on page 122..

Warning: The VLAN parameter must not be selected unless the underlying network switches are configured to filter on VLAN IDs. Otherwise, the IP Phone 2004 can fail to work properly.

Table 23 Configuration parameters

Parameter	Value	Definition
SET IP	<valid IP address>	IP address of your IP Phone 2004 provided by your system administrator
NETMSK	<valid subnet mask>	Subnet Mask provided by your system administrator
DEF GW	<valid Default Gateway>	Default gateway IP network address provided by your system administrator
S1 IP	<valid Server IP address>	Primary server (IP Client Manager or Multimedia PC Client) IP address
S1 PORT	5000	Primary server port
S1 ACTION	1	Primary action code (enter 1 for UNIStim)
S1 RETRY Count	1	Primary retry count
S2 IP	<valid Server IP address>	Secondary server (IP Client Manager or Multimedia PC Client) IP address **Note:** If you do not know the secondary IP address, use the primary IP address for the secondary address.

Table 23 Configuration parameters

Parameter	Value	Definition
S2 Port	5000	Secondary server port **Note:** If you do not know the secondary port, use the primary port.
S2 ACTION	1	Secondary action code (enter 1 for UNIStim)
S2 RETRY COUNT	1	Secondary retry count
VLAN (0=No, 1=Yes)	0	QoS 802.1a VLAN Tag Service

Parameter	Value	Definition
SET IP	<valid IP address>	IP address of your IP Phone 2004 provided by your system administrator
NETMSK	<valid subnet mask>	Subnet Mask provided by your system administrator
DEF GW	<valid Default Gateway>	Default gateway IP network address provided by your system administrator
S1 IP	<valid Server IP address>	Primary server (IP Client Manager or Multimedia PC Client) IP address
S1 PORT	5000	Primary server port
S1 ACTION	1	Primary action code (enter 1 for UNIStim)
S1 RETRY Count	1	Primary retry count
S2 IP	<valid Server IP address>	Secondary server (IP Client Manager or Multimedia PC Client) IP address **Note:** If you do not know the secondary IP address, use the primary IP address for the secondary address.
S2 Port	5000	Secondary server port **Note:** If you do not know the secondary port, use the primary port.

Parameter	Value	Definition
S2 ACTION	1	Secondary action code (enter 1 for UNIStim)
S2 RETRY COUNT	1	Secondary retry count
VLAN (0=No, 1=Yes)	0	QoS 802.1a VLAN Tag Service

After pressing the **Ok** soft key on the last configuration parameter, you see the message "Locating Server".

What to do next

After the IP Phone 2004 locates the server, follow the instructions in Table 24 "What to do next" on page 124.

Table 24 What to do next

If	Then
The telephone connects to the server and the display prompts you to enter an activation key.	Go to "Entering an activation key" on page 30.
The telephone connects to the server and the location prompt appears.	Your telephone is ready to use. Go to "Choosing your location" on page 32.

Appendix E: Customer support

You can order the following parts and supplies for your IP Phone 2004 from your authorized distributor.

Table 25 Parts and supplies

Description	Part number
Power supply—North America	A0619627
Power supply—Europe	A0619635
Power supply—Australia, New Zealand	A0647042
Power supply—Japan	A0828858
Power supply—Ireland	A0656598
Ethernet cat 5 cable (7 foot)	A0648375
Footstand assembly—(charcoal color used for both ethergray and charcoal models)	A0891623
Handset (ethergray)	A0788874
Handset (charcoal)	A0758634
Handset cord (ethergray)	A0788682
Handset cord (charcoal)	A0720560
Headset	A0779338
Number card	P0744243
Number card lens	P0744242

For help finding an authorized distributor, call 1-800-4NORTEL (1-800-466-7835).

Appendix F: IP Phone 2004 with SIP firmware

IP Phone 2004 (phase 2) users can upgrade to SIP functions. This chapter describes how to setup and initialize your IP Phone 2004 with SIP firmware.

The topics in this appendix include:

- "Overview" on page 127
- "Before you begin" on page 129
- "Upgrading to SIP-enabled firmware" on page 131
- "Switching to SIP mode" on page 132
- "Switching between modes" on page 132
- "Connecting the IP Phone 2004 with SIP firmware" on page 133
- "Initializing the IP Phone 2004 with SIP firmware" on page 134
- "IP Phone 2004 with SIP firmware" on page 136
- "Resetting the IP Phone 2004 with SIP firmware" on page 138
- "SIP firmware upgrades" on page 138
- "Features that are unique to SIP mode" on page 138



Note: Contact your system administrator to ensure that your network is prepared for you to install and initialize your IP Phone 2004 with SIP firmware.

Overview

IP Phones, as delivered from the factory, are only capable of using the Unistim protocol to communicate with the server. They cannot communicate using Session Initiation Protocol (SIP) until their firmware is upgraded to a SIP-enabled version. Only the Phase 2 IP Phone 2004 can be upgraded for SIP. After the phone is upgraded, the phone continues to use Unistim until it is switched to SIP mode.

An upgrade from Unistim-only firmware to SIP-enabled firmware can be achieved only through network messaging with the IPCM. This is prepared by your MCS system administrator. Configuring and switching the phone to SIP mode can be automated by your system administrator. This is the most convenient and most popular method. Alternately, the administrator can configure the phone manually by using its keys to enter parameters as prompted by the NetConfig configuration screens immediately following reset.

Your phone can be already operating in SIP mode after you receive it. Ask your system administrator if you are unsure.

All system-based features for the Unistim version of IP Phone 2004 are supported in the IP Phone 2004 with SIP firmware version also.

After the phone is in SIP mode, it communicates with an MCS application server. After the phone is in Unistim mode, it communicates with an MCS IPCM server. The phone communicates in either SIP mode or Unistim mode, but not both simultaneously. Depending on the system configuration, the phone can be switched between Unistim and SIP modes using menu functions by switching between the servers, also known as controllers.

After the phone is in SIP mode, it receives firmware upgrades and network-based configuration data via a TFTP server. Therefore, TFTP server information must be configured into the SIP phone. Your system administrator can provide the information to configure the TFTP server information on your phone.

Before you begin

The following sections describe items that you must consider before you begin.

Modes of operation

You IP Phone can operate in the following modes:

- Unistim mode
- PC Client slave mode
- SIP mode



Note: The IP Phone 2004 with SIP firmware can operate in either Unistim or SIP mode. You define the mode of operation by specifying the action code for a particular S1/S2/S3 server configuration. The action code for Unistim is 1. The action code for SIP is 7.

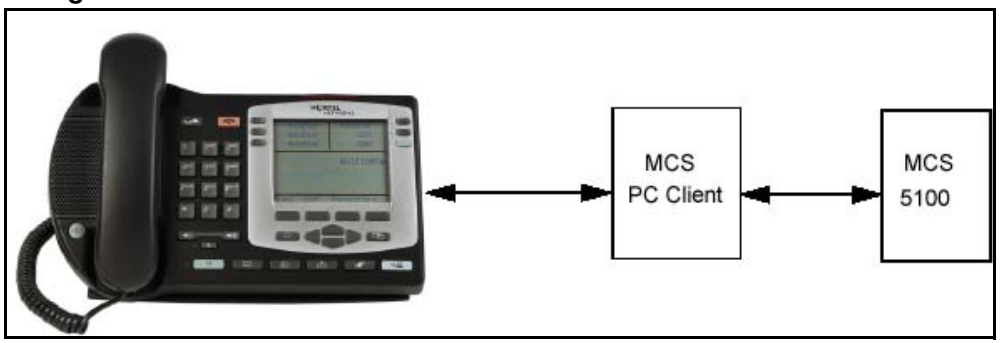
Unistim mode of operation

In Unistim mode, the IP Phone works exactly the same way as the Unistim phone from the same firmware load stream. Ensure that the action code is configured to 1 for unencrypted Unistim. In this mode, local configuration files and inbox or outbox files created in SIP mode are not available.

PC client slave mode of operation

In this mode, the phone is connected to the Multimedia PC Client in Unistim mode (action code 1). The Multimedia PC Client works as a Unistim TPS on one side and SIP client on the other side.

Figure 8 PC Client slave mode



You can switch the phone to the PC Client slave mode using the Multimedia PC Client if you are logged onto both devices. Otherwise, the phone can be manually associated with a PC. You can switch the IP Phone 2004 with SIP firmware back to its original state.

Note that in this mode, call logs and all local settings are not used because the telephone becomes fully stimulus and all UI is controlled by the PC client.

SIP mode of operation

In SIP mode, all features are local and all user preferences, inbox data, and outbox data are saved locally. Make sure the action code is configured to 7 for SIP mode.

General

Before you begin setting up your telephone, ensure that you have the following components:

- IP Phone 2004 with SIP firmware
- telephone handset
- telephone handset cord
- AC adapter

  The AC power adapter is optional because you can power the telephone over the LAN.

- Ethernet cable

- Active LAN connection

Note: You can install optional keycaps for the buttons on your IP Phone 2004. For more information, see the installation manual that is included with the keycaps

Upgrading to SIP-enabled firmware

If you need to upgrade your phase 2 IP Phone 2004 phone to the SIP-enabled firmware, you must trigger the phone to check for new firmware. After the phone checks for new firmware, it completes the upgrade process.

Your system administrator must prepare the IPCM to upgrade the firmware on your phone.

1. On your Unistim-only phone, press the **Config** menu key.
2. Choose the **Display Version** item and press the **Select** key.
3. Press the **FirmW** key.

   The system displays the prompt "Install latest firmware?" The system also displays your current firmware version and the new firmware version, which must be CT12D9x, where x is a digit or letter from A to F.
4. Press the **Now** key.

   The phone restarts and downloads the firmware. The CT12D9x firmware is the first of two firmware images downloaded.

   The phone restarts and downloads a second firmware. The name of the second firmware appears on the screen as 0692D9x.bin, where x is a digit or letter from A to F.

   The screen can pause or freeze for several minutes. This is normal. Eventually the phone restarts using the new firmware.

Switching to SIP mode

After you upgrade your phone to SIP-enabled firmware, it can operate in SIP mode. If your system administrator triggered your phone to switch to SIP mode, you can proceed to log on.

If your phone is not in SIP mode, you can switch to SIP mode by using one of the following two methods:

- switching controllers

  You can use this method only if your phone was programmed with the IP address of the application server in S2, which must have an action code of 7, and must also have a valid domain.

- modifying the NetConfig parameters

  You require the following information:

  — IP address of the application server

  — Port number of the application server (should be 5060)

  — Your domain name

  For information about how to enter the required parameters, see "Appendix G: NetConfig on SIP-enabled phones" on page 143.

Switching between modes

If your phone is configured for alternate IPCM and application servers, you can switch between the two servers.

1. In either mode, press the Config key.
2. Scroll down to the Switch Controller menu item and press the Select key.
3. Check the alternate controller (server) information.
4. Press the **OK** key to switch modes, or press the **Cancel** key.

   The phone switches controllers without rebooting.

Connecting the IP Phone 2004 with SIP firmware

Warning: Severe damage occurs if this phone is plugged into an ISDN connection. Contact your administrator to ensure that you plug the telephone into a 10/100BaseT Ethernet jack.

Note: Installation can be performed automatically, manually, or (with call server support) by using an automated process. After you download the SIP firmware, you must configure the phone before you can operate it in SIP mode.

1. Connect one end of the handset cord to the handset jack (identified with a handset icon) on the telephone base and connect the other end of the handset cord to the handset.
2. Choose one of the following connections:
   a. For a telephone that does not share a LAN access with a PC:

      Connect one end of the Ethernet cable to the Ethernet plug (identified with a network icon) on the telephone and the other end to your 10/100BaseT Ethernet jack.

   b. For a telephone that shares a LAN access with a PC:

      Complete step a and connect one end of a second Ethernet cable to the PC Ethernet port (identified with a PC icon) on the back of the telephone and the other end to the computer's Ethernet port.
3. Plug the AC adapter into the base of the telephone.
4. Plug the AC adapter into the nearest electrical outlet.
5. Ensure that your power cable and handset cable are properly fitted into the provided slots.
6. Fit the base and hinge it into the plastic slots at the front of the telephone and press down firmly until the base snaps into place.

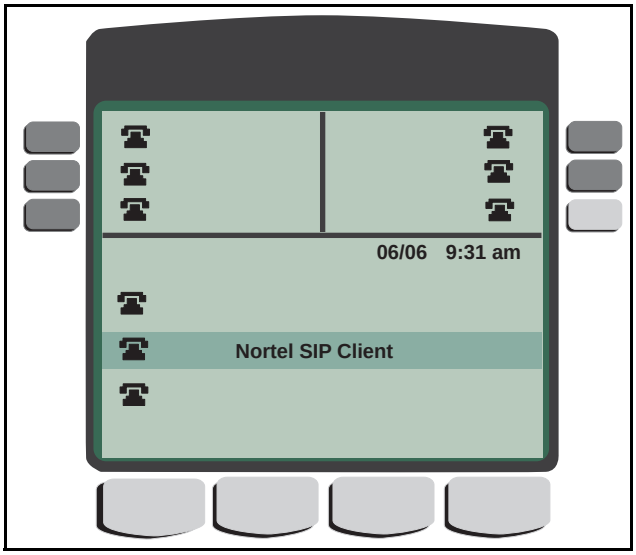
Tip: If you have trouble locking the base, or if the phone is not level on your desktop, ensure the cables to the telephone are not obstructing the base.

Initializing the IP Phone 2004 with SIP firmware

After you power up the IP Phone 2004 with SIP firmware for the first time, you see the idle screen.

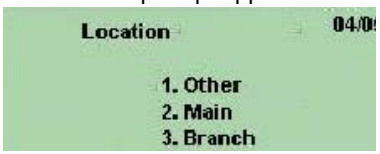
Note: You are not prompted to enter a location after you log on in SIP mode.

Figure 9 Idle screen



Tip: Your IP Phone 2004 with SIP firmware can be preconfigured, or can require a partial or total initialization. For information about how to proceed, see the following table.

Table 26 Initialization

After you power up your IP Phone 2004 with SIP firmware	Then
If the telephone connects to the server and the display prompts you for your logon ID. 	The IP Phone 2004 with SIP firmware is provisioned but a user is not assigned. Go to "Logging on to your IP Phone 2004 with SIP firmware" on page 136.
If the telephone connects to the server and the location prompt appears 	Your telephone is ready to use. Go to "Choosing your location" on page 136.

IP Phone 2004 with SIP firmware

Note: All main menus in SIP mode are identical to those for the Unistim telephone connected to IPCM, except for the banner menu. For more information about personalizing a banner, see "Personalizing a banner" on page 138.

Logging on to your IP Phone 2004 with SIP firmware

1 After the logon screen appears, enter your user ID.

Tip: When typing in your user name, you need only type in the user portion of the name, not the @domain portion.

Note: Only one user can log on to the IP Phone 2004 with SIP firmware.

The user ID of the last (or default) user appears.

2 If the displayed user ID is your ID, press the **Login** soft key.

3 Use the NoAlph/Alpha key to switch between alpha and numeric modes.

4 Enter your password.

The last symbol of the password appears for verification purposes. All other symbols are hidden.

5 Press the **Login** soft key.

The Alpha and Lang soft keys operate the same way as in the previous screen.

Choosing your location

Your system can serve different locations. For your own safety you must specify your location so that emergency services can be routed to you if needed.

1 From the **Config** menu, select **Location**.

2 Use the up and down navigation buttons to scroll through the list of locations.

3 Choose your location choice and press **Select**.

If you select **Other**, a warning message appears "Warning: A location was selected that may affect your emergency services. Display this warning in the future?"

4 If you selected **Other** in step 3, select **Yes** or **No**.

If you select Yes, then this warning appears each time you log on or after your telephone or server resets. If you select No, you do not see this warning again.



Note: If you move locations, you can change your location using the Config menu.

Specifying the logon time

After you choose your location you can specify how long you want to stay logged on.

1 To enter the amount of time you want to be logged on, press the third soft key and change **Days** to **Hours**, as desired.

2 Press the **Timed** soft key to log on for the specified amount of time. The system automatically logs you off after the specified time elapses.

To log on permanently, press the **Login** soft key to use the network provisioned values.

The system automatically registers you again and you remain logged on until you manually log off.

After you are logged on, the idle display appears.



Tip: The idle screen text (for example, Welcome) can be changed and varies depending on what was provisioned. For more information, see "Configuring idle display" on page 59.

Personalizing a banner

1 Enter the text you want to display as the banner.

2 Click OK.

Resetting the IP Phone 2004 with SIP firmware

Use the Reset Phone option in the Config menu or unplug your telephone.

Note: If you reset the phone while it operates in Unistim mode, it restarts in the same manner as a Unistim-only phone after an upgrade to SIP firmware. For example, if your system administrator configures SIP firmware upgrades to automatically switch to SIP mode, and you reset a SIP-enabled phone in Unistim mode, it restarts in SIP mode.

SIP firmware upgrades

For information about upgrading SIP firmware, see "Advanced Settings" on page 140.

Features that are unique to SIP mode

This section describes settings that are unique to SIP mode that you can customize on your IP Phone 2004.

The Configuration menu of the IP Phone 2004 includes two options in addition to the options described earlier in this guide. The new Configuration menu options are:

- Voice Mail Settings
  - Number
  - Mailbox
- Advanced Settings
  - Check for Updates

— Erase User Data



Tip: The new SIP-mode Configuration options are not part of the Unistim-mode list of options. Therefore, quick selection numbers for existing menu options are different.

The SIP-mode Configuration menu options are:

1 Volume Setting

2 Contrast Setting

3 Preferences

4 Idle Display

5 Location

6 Language Preference

7 Voice Mail Settings

8 Time Preferences

9 Display Version

10 Reset Phone

11 Switch Controller

12 Advanced Settings

Voice Mail Settings

The voice mail settings submenu offers the following options:

- Number—configure the number to dial to access the voice mail system
- Mailbox—your personal mailbox number

Configuring voice mail

To configure the number or SIP user name the IP Phone 2004 phone autodials to access your voice mail system:

1 Press the **Config** soft key.

2 Choose **Voice Mail Settings** and press the **Select** soft key.

3 Choose **Number** and press the **Change** soft key.

4 Use the left navigation button to erase the current text.

5 Enter your voice mail access number or SIP user name (without the domain).

6 Press the **Ok** soft key or press the **Cancel** soft key to exit.

To configure the number the IP Phone 2004 phone sends as your mailbox number:

1 Press the **Config** soft key.

2 Choose **Voice Mail Settings** and press the **Select** soft key.

3 Choose **Mailbox** and press the **Change** soft key.

4 Use the left navigation button to erase the current text.

5 Enter your mailbox number.

Include a trailing # character if it is required by your voice mail system.

6 Press the **Ok** soft key or press the **Cancel** soft key to exit.

Advanced Settings

The advanced settings submenu offers the following options:

- Check For Updates—check for a firmware update



Tip: You cannot use the Display Version menu item to check for firmware updates if the phone is in SIP mode. The FirmW soft key is not available in SIP mode.

- Erase User Data
  - — Your personal mailbox number
  - — Inbox
  - — Outbox
  - — User Settings

Checking for a firmware upgrade

1 Press the **Config** soft key.

2 Choose **Advanced Settings** and press the **Select** soft key.

3 Choose **Check For Updates** and press the **Ok** soft key.

The prompt "Check for updates?" appears.

4 Press the **Ok** soft key or press the **Cancel** soft key to go back to the previous submenu.



Note: If there is updated firmware to download or updated configuration or language files available, the phone downloads them. Any of these updates can require an update independent of the others. If new firmware is downloaded, the phone reboots. Configuration and language file updates does not cause the phone to reboot.

Clearing your inbox

1 Press the **Config** soft key.

2 Choose **Advanced Settings** and press the **Select** soft key.

3 Choose **Erase User Data** and press the **Ok** soft key.

4 Choose **Inbox** and press the **Ok** soft key.

The prompt "Delete Inbox data?" appears.

5 Press the **Ok** soft key or press the **Cancel** soft key to go back to the previous submenu.

Clearing your outbox

1 Press the **Config** soft key.

2 Choose **Advanced Settings** and press the **Select** soft key.

3 Choose **Erase User Data** and press the **Ok** soft key.

4 Choose **Outbox** and press the **Ok** soft key.

The prompt "Delete Outbox data?" appears.

5 Press the **Ok** soft key or press the **Cancel** soft key to go back to the previous submenu.

Clearing your user settings

1 Press the **Config** soft key.

2 Choose **Advanced Settings** and press the **Select** soft key.

3 Choose **Erase User Data** and press the **Ok** soft key.

4 Choose **Outbox** and press the **Ok** soft key.

The prompt "Delete User settings?" appears.

5 Press the **Ok** soft key or press the **Cancel** soft key to go back to the previous menu.



Tip: User settings include settings such as voice mail settings.

Appendix G: NetConfig on SIP-enabled phones

The following table describes the options available in the NetConfig (power-up) menu on an IP Phone 2004 with SIP firmware.

To start the phone configuration menus, press the four soft keys quickly from left to right as the initial prompt appears.

If you need to access the NetConfig menu, your system administrator provides you with the correct settings. This configuration is generally done via network messages managed through the TFTP server or IPCM. Some parameter prompts appear conditionally upon the preceding parameter value. Some advanced conditional parameters are not listed here.

Table 27 NetConfig menu options

Parameter	Value	Definition
EAP Enabled? [1=Y,0=N]	0 or 1	Extensible Authentication Protocol or 802.1x
DHCP? (0=No, 1=Yes)	0 or 1	1 for Yes or 0 for No
DHCP:0-Full,1-Partial	0 or 1	1 for Partial DHCP or 0 for Full DHCP
S1 IP	<valid Server IP address>	Primary server (IP Client Manager, PC Client or application server) IP address
S1 PORT	5000 for Unistim or 5060 for SIP	Primary server port
S1 ACTION	1 or 7	Primary action code 1 for Unistim (IP Client Manager or PC Client) or 7 for SIP (application server)
S1 RETRY Count	<number>	Primary retry count (0 or higher)

Table 27 NetConfig menu options

Parameter	Value	Definition
SIPdm	<domain name>	The domain name of the S1 application server if S1 ACTION is 7
S2 IP	<valid Server IP address>	Secondary server (IP Client Manager, PC Client, or application server) IP address
S2 PORT	5000 for Unistim, or 5060 for SIP	Secondary server port
S2 ACTION	1 or 7	Secondary action code 1 for Unistim (IP Client Manager or PC Client) or 7 for SIP (application server)
S2 RETRY Count	<number>	Secondary retry count (0 or higher)
SIPdm	<domain name>	The domain name of the S2 application server if S2 ACTION is 7
Cfg XAS?(0-No, 1-Yes)	0 or 1	Select Yes if your network supports a Net6 server for Web browsing through your SIP IP Phone 2004 Internet Telephone display. See your system administrator for provisioning information. 1 for Yes or 0 for No
XAS IP	<IP address>	XAS IP address
Cfg TFTP?(0-No,1-Yes)	0 or 1	1 for Yes to choose to configure TFTP support, or 0 for No
TFTP IP	<IP address>	IP address of the TFTP server
Cfg DNS?(0-No,1-Yes)	0 or 1	1 for Yes to choose to configure DNS support or 0 for No
DNS IP	<IP address>	IP address of the domain name server
VOICE VLAN?0-No,1-Yes	0 or 1	QoS 802.1q VLAN Tag Service. 1 for Yes or 0 for No

Table 27 NetConfig menu options

Parameter	Value	Definition
VLAN Cfg?0-Auto,1-Man	0 or 1	See local network configurations. 0 for automatic configuration or 1 for manual configuration
VOICE VLAN ID	<VLAN ID for voice>	The Voice VLAN ID. See local network configurations
DATA VLAN?0-No,1-Yes	0 or 1	See local network configurations. 1 for Yes or 0 for No
DATA VLAN ID	<VLAN ID for data>	See local network configurations
DUPLEX 0-AUTO, 1-FULL	0 or 1	1 for full duplex or 0 for automatic

Multimedia Communication Portfolio

Multimedia Communication Server 5100

IP Phone 2004 User Guide

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