IP Phone 1200 Series Installation

IP Phone 1200 Series
Business Communications Manager

Document Status: **Standard**

Document Version: **01.04**

Document Number: **NN40050-302**

Date: **January 2008**

NORTEL

Contents

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.

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.

Warnings

- 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."

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

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.

Table 1 EMC compliance (Sheet 1 of 2)

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	CISPR 22	Class B Emissions: Information technology equipment - Radio disturbance

Table 1 EMC compliance (Sheet 2 of 2)

Jurisdiction	Standard	Description
European Community	EN 55022	Class B Emissions: Information technology equipment - Radio disturbance
	EN 55024	Information technology equipment - Immunity characteristics Limits and methods of measurement
	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 lists Safety compliance for various jurisdictions.

Table 2 Safety compliance

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

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

Other

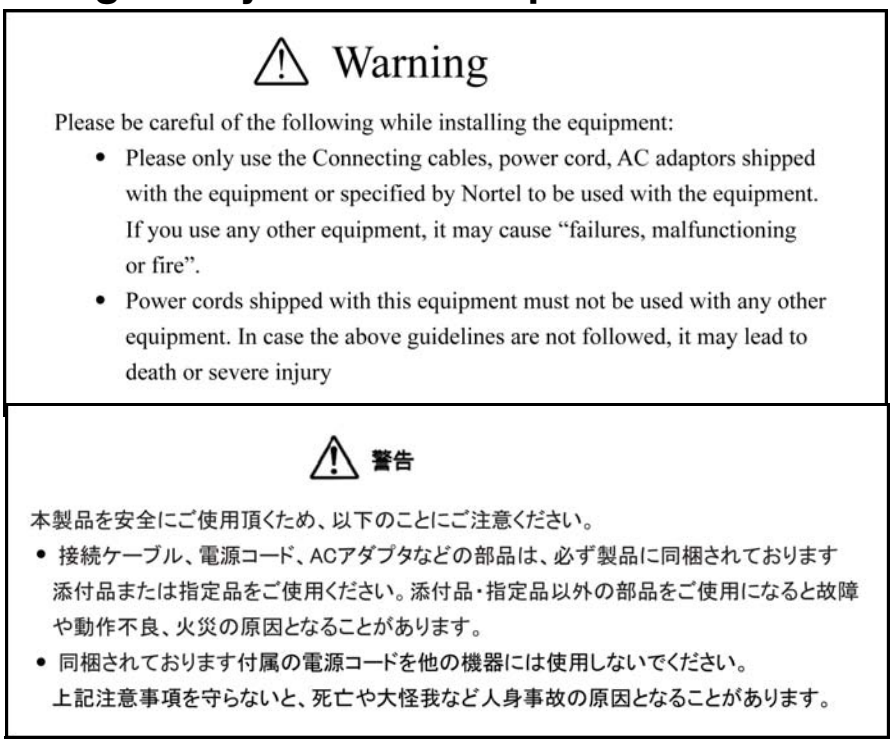
US/Canada: Hearing Aid Compatibility (HAC) as per FCC Part 68

This equipment complies with the CE Marking requirements. CE

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 www.nortel.com or Nortel Networks GmbH address: Ingolstaedter Strasse 14-18, 80807 Munich Germany

DenAn regulatory notice for Japan



⚠ Warning

Please be careful of the following while installing the equipment:

- Please only use the Connecting cables, power cord, AC adaptors shipped with the equipment or specified by Nortel to be used with the equipment. If you use any other equipment, it may cause “failures, malfunctioning or fire”.
- Power cords shipped with this equipment must not be used with any other equipment. In case the above guidelines are not followed, it may lead to death or severe injury

⚠ 警告

本製品を安全にご使用頂くため、以下のことにご注意ください。

- 接続ケーブル、電源コード、ACアダプタなどの部品は、必ず製品に同梱されております添付品または指定品をご使用ください。添付品・指定品以外の部品をご使用になると故障や動作不良、火災の原因となることがあります。
- 同梱されております付属の電源コードを他の機器には使用しないでください。

上記注意事項を守らないと、死亡や大怪我など人身事故の原因となることがあります。

Connecting Power

Use Only with Nortel approved Limited Power Source 48Vdc 520mA (FSP Group Inc. Model: FSP025-1AD207A)

Connecting to Local Area Network (LAN)

Severe damage to your IP Phone will occur if this set is plugged into an ISDN connection. Consult your system administrator to ensure that you are plugging your set into a 10/100 Base-T ethernet jack.

Operation

The earpiece / mouthpiece region on the handset can attract and retain small objects.

Location

It is recommended that this unit not be exposed to direct sunlight for a prolonged period of time.

How to get help

This section explains how to get help for Nortel products and services.

Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. More specifically, the site enables you to:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support Web site, and you have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Chapter 1
New in this release

This is the first release of the IP Phone 1200 series of IP Phones and expansion modules. The IP Phone 1200 series use the customer Internet Protocol (IP) data network to communicate with the BCM. The IP Phone translates voice into data packets for transport using IP. A dynamic host configuration protocol (DHCP) server can be used to provide information that enables the IP Phone network connection and connection to the BCM.

For information about using the IP Phone 1200 series of phones and expansion modules, see the *IP Phone 1200 Series User Guide* (NN40050-111).

Features overview

This section describes some of the new IP Phone 1200 series features.

LCD

The LCD shows rows of text, with a maximum of 25 characters in each row. The IP Phone 1210 has a three-row LCD, the IP Phone 1220 has a six-line LCD, and the IP Phone 1230 has a nine-row LCD. For more information about the LCD, see Display screen (page 20).

Soft keys

The four six-character soft keys are located directly below the LCD. The feature or action for each soft key changes depending on the menu or feature you access. For more information about programing the one-touch indicator keys, see IP Phone 1210, 1220, and 1230 keys and descriptions (page 14).

Feature keys

The programmable feature keys are located on either side of the navigation keys. The features include Quit, Services, Redial, Messages, Directory, and Conferences. The IP Phone 1210 has two of these keys. The IP Phone 1220 and 1230 have six keys. For more information about the feature keys, see IP Phone 1210, 1220, and 1230 keys and descriptions (page 14).

Call processing fixed keys

The six call processing keys include Mute, Handsfree, Goodbye, Applications, Headset, and Hold. For more information about the call processing keys, see IP Phone 1210, 1220, and 1230 keys and descriptions (page 14).

Headset jack

You can connect a headset to the headset jack on your IP Phone for handsfree use. For more information about the headset jack, see Connecting the headset (optional) (page 27).

Handset jack

You can connect the handset to the handset jack located on the back of your IP Phone. For more information about the handset jack, see Connecting the handset (page 27).

Accessory expansion module

The expansion modules are hardware accessories that connect to the IP Phone and provide additional line appearances and feature keys. The expansion modules are not available on the IP 1210. For more information about the expansion modules, see Expansion modules for the IP Phone 1210, 1220, and 1230 (page 22).

LAN Ethernet

Connect your IP Phone to your LAN using an Ethernet cable to enable full functionality of your IP Phone. If your Ethernet port is equipped with Power over Ethernet (PoE), your IP Phone can be powered through the LAN port. For information about the LAN Ethernet, see Connecting the LAN Ethernet cable (page 28).

PoE or AC power

Your IP Phone supports both AC power and Power over Ethernet (PoE). For AC power, you must order the Nortel-approved AC power adapter (N0146475). For more information about PoE and AC power, see Connecting the power (optional) (page 28).

Wall-mounted

You can mount your IP Phone on a wall. For more information about mounting an IP Phone on a wall, see Wall-mounting the IP Phone (optional) (page 29).

Programmable keys

Your system administrator assigns the programmable keys as line, intercom, or memory keys. The label for each key appears on the LCD next to the key. The IP Phone 1220 has four programmable keys. The IP Phone 1230 has ten programmable keys. For more information about programmable keys, see IP Phone 1210, 1220, and 1230 keys and descriptions (page 14).

Chapter 2
Introduction

This section provides information about:

IP Phone 1210, 1220, and 1230

The Nortel IP Phone 1210, 1220, and 1230 bring voice and data to the desktop by connecting directly to a Local Area Network (LAN) through an Ethernet connection.

In this guide, programmable button labels appear beside the keys, and soft key labels appear directly above the keys.

For information about telephone features and how to use them, see the *Telephone Features User Guide* (NN40020-100).

Basic features

The IP Phone 1210, 1220, and 1230 support the following features:

- four six-character soft keys
- six call processing fixed keys
  - Mute
  - Handsfree
  - Goodbye
  - Applications
  - Headset
  - Hold
- fixed feature keys:
  - Services
  - Conference
- volume control keys for adjusting ringer, speaker, handset, and headset volume
- LCD display
- headset jack
- handset jack
- high-quality speakerphone
- hearing aid compatibility
- accessory expansion module (AEM) port

- 10/100 Ethernet ports
  - — Ethernet port for LAN connection
  - — Ethernet port for optional PC connection
- Power over Ethernet (PoE) or power through a supported AC adapter
- wall-mounted

In addition, the IP Phone 1220 and IP Phone 1230 models have the following features:

- user-defined feature keys with labels and indicators
- additional fixed feature keys:
  - — Redial
  - — Quit
  - — Messages
  - — Directory

CAUTION
Risk of equipment damage
Do not plug the IP Phone 1210, 1220, or 1230 into a regular telephone jack. This results in severe damage to the IP Phone. Consult your system administrator to ensure that you plug your IP Phone into a 10/100 BaseT Ethernet jack.

CAUTION
Risk of equipment damage
The IP Phone 1210, 1220, and 1230 are for use in an indoor environment only.

IP Phone components

Your IP Phone 1210, 1220, and 1230 comes with

- foot stand
- handset
- handset cord
- 2.1 m (7 ft) CAT5 Ethernet cable
- number plate and lens

IP Phone 1210, 1220, and 1230 keys and descriptions

For the location of the keys and components on the IP Phone 1210, 1220, and 1230, see the following figures. For a description of the keys and components on your IP Phone 1210, 1220, and 1230, see Table 3 “IP Phone 1210, 1220, and 1230 keys descriptions” (page 18). Some keys or components are not available on all IP Phone models.

Figure 1 IP Phone 1210

Figure 2 IP Phone 1220

Figure 3 IP Phone 1230

Table 3 IP Phone 1210, 1220, and 1230 keys descriptions (Sheet 1 of 2)

Key or component	Description
Message waiting indicator/ Incoming call indicator	When a message is waiting, the red message waiting indicator flashes. Also, when the ringer sounds, this indicator flashes.
User-defined feature keys (not available on the IP Phone 1210)	The keys on either side of the display area are programmable keys with labels on the LCD display. The system administrator programs these keys as either memory, line, or intercom keys. A steady LCD light beside a programmable line (or intercom) key indicates that the call is active. A flashing LCD light indicates that the line or intercom call is on hold or that you have an incoming call.
Display screen	Shows the call information and phone status icons and guides you while using features.
Soft keys	Soft keys are below the display area. The LCD label above each key changes based on the active feature. The Feature soft key is on the bottom left of the display area and is used to access various phone options, such as changing the ring type (Feature *6).
Programmable keys	The keys on either side of the navigation keys are programmable keys. The IP Phone 1210 has two keys, while the IP Phone 1220 and 1230 have six keys. The system administrator programs these keys with the following features: Conference—access conferencing capabilities. Quit—close an active menu or dialog box. Pressing the Quit key does not affect the status of active calls. Message—open your CallPilot mailbox. For more information about mailbox options, see your *CallPilot Quick Reference Card*. Redial—redial the last number called. Directory—access speed call. Services—access the scrollable Feature Display menu (FEATURE *900) that includes • Call Pickup • Call Park • Voice Call • Page • Background Music • Message Send • Hot Desking • Call Forward • Do Not Disturb • Speed Call • Last Number Redial • Block Outgoing Name/Number Double-press the Services key to access the Local Tools menu, and use the navigation keys to make a selection.

Table 3 IP Phone 1210, 1220, and 1230 keys descriptions (Sheet 2 of 2)

Key or component	Description
Navigation keys (with Enter key)	Press the Navigation keys to scroll through menus and lists that appear on the display screen. The outer part of this key cluster rocks for up, down, left, and right movements. Press the Enter key, at the center of the Navigation key cluster, to confirm menu selections. In most menus, you can press the Enter key instead of the Select soft key.
Volume control keys	Press the Volume control keys to adjust the volume of the ringer, handset, headset, speaker, and the Handsfree feature. Press the top button to increase the volume, and press the bottom button to decrease volume.
Mute key	Press the Mute key to listen to the receiving party without transmitting. Press the Mute key again to return to two-way conversation. The Mute LED indicator, on the Mute key, flashes to indicate that the microphone is muted. The Mute key applies to handsfree, handset, and headset microphones. The microphone remains muted for your current call and all other calls until you press the Mute key again to turn the microphone on.
Handsfree key	Press the Handsfree key to activate handsfree. The Handsfree LED indicator, on the Handsfree key, lights to indicate when handsfree is active.
Goodbye (Release) key	Press the Goodbye key to terminate an active call.
Applications key	Press the Applications key to access external server applications.
Headset key	Press the Headset key to answer a call using the headset or to switch a call from the handset or handsfree to the headset. The Headset LED indicator, on the Headset key, lights to indicate that the headset is in use.
Hold key	Press the Hold key to put an active call on hold. Press the flashing line (DN) soft key to return to the caller on hold.

Keycap defaults

The keys on the IP Phone 1210, 1220, and 1230 can have one of two sets of keycaps: iconic or textual. You can order your IP Phone 1210, 1220, and 1230 with one set of keycaps. Table 4 “Keycap defaults” (page 19) shows the two sets of keycaps available.

Table 4 Keycap defaults (Sheet 1 of 2)

Function	Iconic keycap	Textual keycap
Conference		
Services		
Quit		

Table 4 Keycap defaults (Sheet 2 of 2)

Function	Iconic keycap	Textual keycap
Message		Message
Directory		Directory
Redial		Redial
Increase volume		Volume +
Decrease volume		Volume -
Mute		Mute
Handsfree		Handsfree
Goodbye		Goodbye
Applications		Applications
Headset		Headset
Hold		Hold

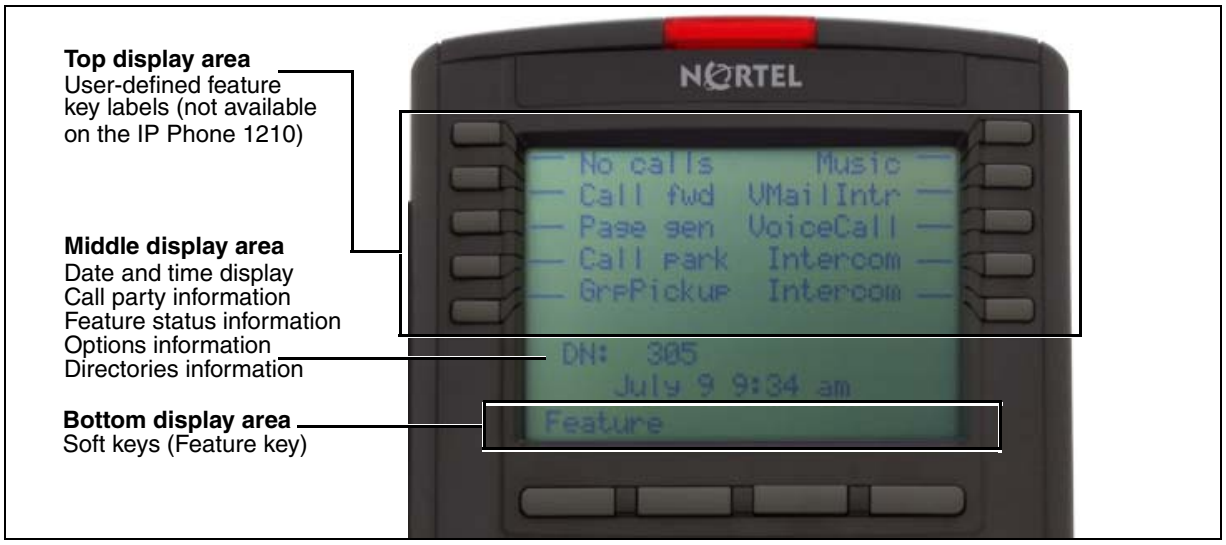
Display screen

Your IP Phone 1210, 1220, and 1230 have two or three display areas, depending on the model you are using:

- The top display area provides labels for the programmable buttons (not available on the IP Phone 1210).
- The middle display area contains single-line information for items such as caller number, caller name, feature prompt string, user-entered digits, and date and time information.
- The bottom display area provides labels for the four soft keys.

The following figure shows an idle IP Phone 1230 display screen.

Figure 4 IP Phone 1210, 1220, and 1230 display screen (IP Phone 1230 shown)



Rear view of IP Phone

Your IP Phone 1210, 1220, and 1230 is equipped with a handset jack, headset jack, LAN Ethernet port, PC Ethernet port, AEM port, and an AC power port, as shown in Figure 5 “IP Phone ports” (page 21). You can also attach a foot stand to the IP Phone 1200 series phones. You can attach the foot stand in one of two positions, as shown in Figure 6 “Foot stand positions” (page 22).

Figure 5 IP Phone ports

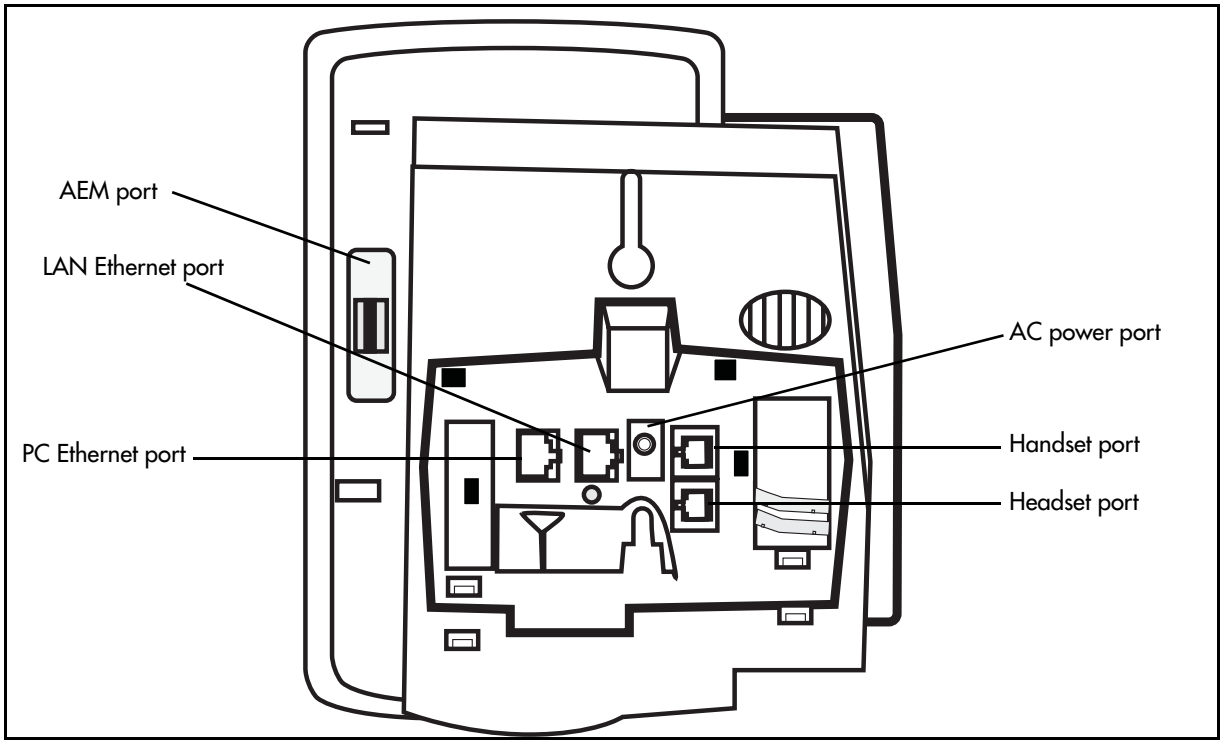
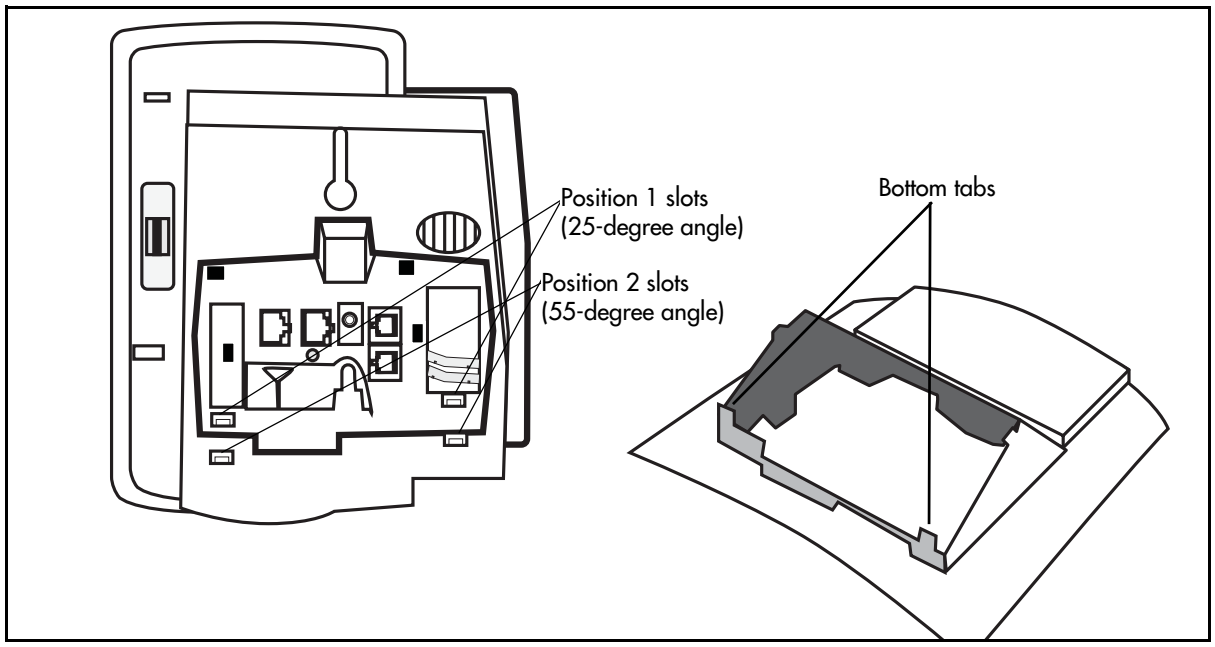


Figure 6 Foot stand positions



Expansion modules for the IP Phone 1210, 1220, and 1230

This section provides information about the LCD Expansion Module:12-Key Self-Labeling and the LED Expansion Module:18-Key Paper Label.

The LCD Expansion Module: 12-Key Self Labeling and LED Expansion Module: 18-Key Paper Label are hardware accessories that connect to the IP Phone and provide additional user-defined feature keys. The IP Phone 1220 and 1230 support the expansion modules.

Basic features

The expansion modules provide either 12 or 18 additional user-defined feature keys for your IP Phone. You can place the IP Phone and expansion modules on your desktop or you can wall-mount the IP Phone and expansion modules.

The feature keys only support lines when the expansion modules are running in enhanced mode.

When the expansion modules are booting up, you can clear the features that are programmed into the line or feature keys by pressing the lower four line or feature keys, in sequence, from bottom to top. The line or feature keys return to their default autodial settings.

You can add a maximum of seven LCD Expansion Module: 12-Key Self Labeling to an IP Phone, or a maximum of five LED Expansion Module: 18-Key Paper Label. You cannot use a combination of both expansion module types on a single IP Phone.

The following IP Phones support the expansion modules:

- IP Phone 1220
- IP Phone 1230

Keys and descriptions

For the location of the keys and components on the expansion modules, see the following figures. For a description of the keys and components on your expansion modules, see the Table 5 “Expansion module key descriptions” (page 24). Some keys or components are not available on all expansion modules.

Figure 7 LCD Expansion Module: 12-Key Self Labeling

Figure 8 LED Expansion Module: 18-Key Paper Label

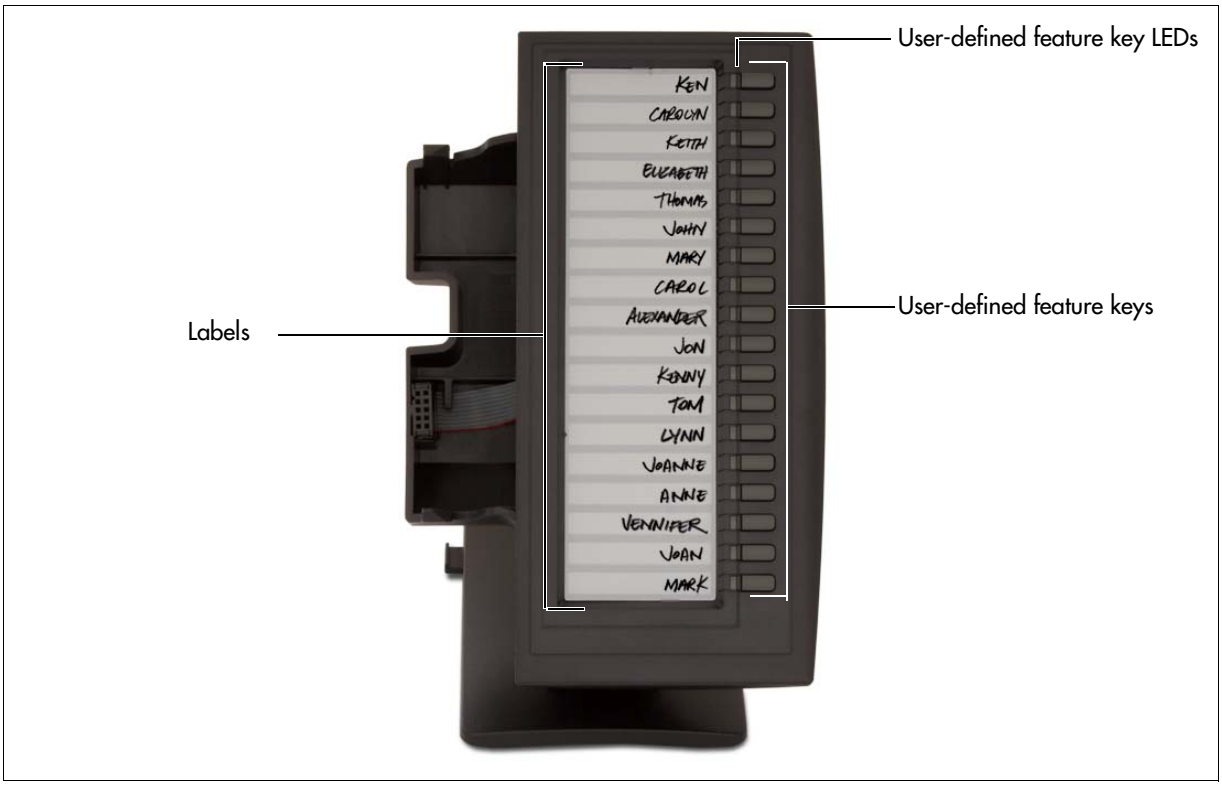


Table 5 Expansion module key descriptions

Key or component	Description
User-defined feature keys	The keys on the Expansion Modules are programmable keys with an LCD display or paper labels. The system administrator programs these keys as either memory, line, or intercom keys. A steady LCD light beside a programmable line (or intercom) key indicates that the call is active. A flashing LCD light indicates that the line or intercom call is on hold or that you have an incoming call.
Display	The LCD display provides labels for the programmed keys and icons that show the feature state.
User-defined feature key LEDs	The LEDs show the feature state for the programmed keys.
Labels	Create your own labels for each key.

Chapter 3
IP Phone installation

Complete the procedures in this chapter to

- prepare the IP Phone for installation
- install the IP Phone
- wall-mount the IP Phone
- install the expansion module

For more detailed IP Phone installation procedures, see the *Telephony Device Installation Guide* for your BCM system.

Prerequisites

- Ensure you have the following components:
  - IP Phone 1210, 1220, or 1230
  - foot stand
  - handset
  - handset cord
  - 2.1 m (7 ft) CAT5 Ethernet cable
- If you are wall-mounting an IP Phone, ensure you have the following tools:
  - Phillips or flat-head screwdriver, depending on the type of screws you have
  - two screws
  - pen or pencil
  - measuring tape
- Ensure you have one software license for each IP Phone being installed.

CAUTION
Risk of service loss
Do not plug your IP Phone into an ISDN connection. Severe damage can result. The IP Phone does not support multiple devices connected through the PC Ethernet port.

Navigation

- "Attaching the foot stand (optional)" on page 26
- "Connecting the handset" on page 27
- "Connecting the headset (optional)" on page 27
- "Connecting the power (optional)" on page 28

- "Connecting the LAN Ethernet cable" on page 28
- "Connecting the PC Ethernet cable" on page 29
- "Wall-mounting the IP Phone (optional)" on page 29

Attaching the foot stand (optional)

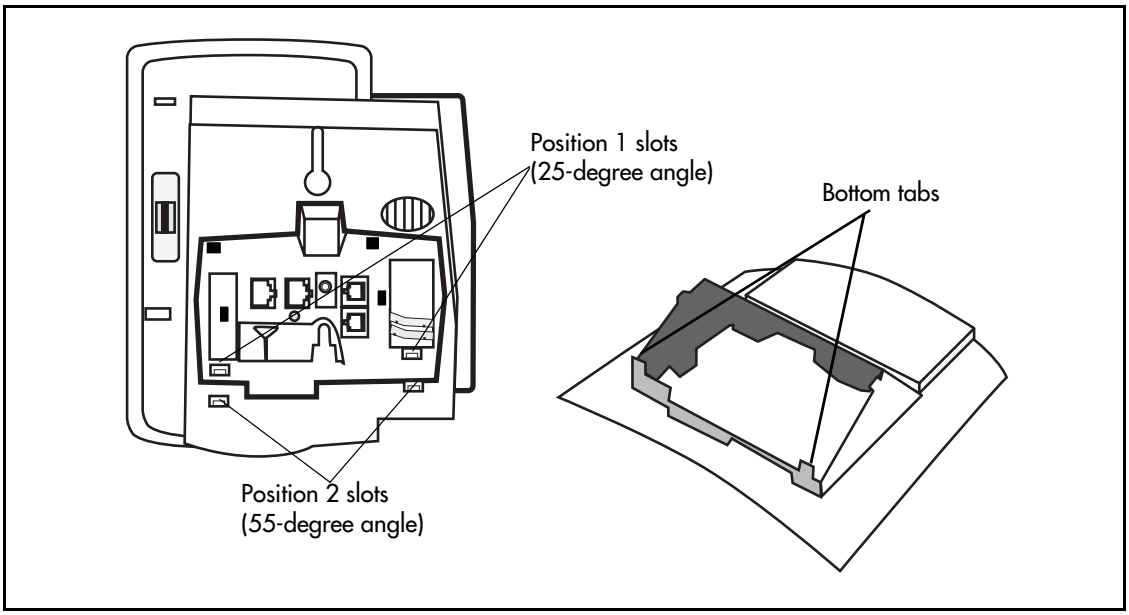
Attach the foot stand in the appropriate slots depending on the desired angle for your IP Phone. If you insert the foot stand into the upper slots, your IP Phone sits at a 25-degree angle. If you insert the foot stand into the lower slots, your IP Phone sits at a 55-degree angle.

If you are installing your IP Phone on a wall, do not attach the foot stand.

Procedure steps

Step	Action
1	Align the bottom tabs on the foot stand with the position 1 slots or the position 2 slots on the back of your IP Phone. *In position 1 the IP Phone sits at a 25-degree angle.* *In position 2 the IP Phone sits at a 55-degree angle.*

Figure 9 Attach the IP Phone foot stand



2	Press the foot stand into the slots until it snaps into place.

End

Connecting the handset

Connect the handset to the IP Phone.

Procedure steps

Step	Action
1	Plug the end of the handset cord with the short straight section into the handset.
2	Plug the other end of the handset cord with the long straight section into the handset jack marked with the symbol on the back of the IP Phone.
3	**(Optional)** Thread the cord through the channel in the foot stand (if installed) so that it exits on the side of the foot stand.
	End

Connecting the headset (optional)

If you have a headset, you can connect the headset to the IP Phone. For information on how to use your headset with your IP Phone, see the *IP Phone 1200 Series User Guide* (NN40010-302).

Procedure steps

Step	Action
1	Plug the headset cord into the headset jack on the back of the IP Phone marked with the symbol.
2	Thread the cord through the channel in the side of the foot stand.
3	Set up the headset according to the instructions included with the headset.
	End

Connecting the power (optional)

Your IP Phone supports both AC power and Power over Ethernet (PoE). For AC power, use only the Nortel-approved Global Power Supply (N0146475) and the country-specific IEC cable that you can order separately. To use PoE, your connected LAN must support PoE.

Procedure steps

Step	Action
1	Connect the DC barrel connector to the power jack on the back of the IP Phone.
2	Thread the cable through the channel in the foot stand to secure the cable.
3	Plug the country-specific IEC cable into the Global Power Supply, and then plug the Global Power Supply into the nearest AC power outlet.
	End

Connecting the LAN Ethernet cable

Connect your IP Phone to your LAN using an Ethernet cable to enable full functionality of your IP Phone. If your Ethernet port is equipped with Power over Ethernet (PoE), your IP Phone can be powered through the LAN port. Do not extend the LAN Ethernet cable outside the building.

Procedure steps

Step	Action
1	Plug one end of the supplied LAN Ethernet cable into the LAN Ethernet port on the back of your IP Phone marked with the symbol.
2	Thread the cable through the channel in the foot stand.
3	Connect the other end of the cable to your LAN Ethernet connection. *The LAN LED on the back of the IP Phone lights when a LAN connection is established.*
	End

Connecting the PC Ethernet cable

Connect the PC Ethernet cable between your IP Phone and your computer to enable your computer to access the LAN.

Procedure steps

Step	Action
1	Plug one end of the PC Ethernet cable (not supplied) into the PC Ethernet port on the back of your IP Phone marked with the symbol.
2	Thread the cable through the channel in the foot stand.
3	Connect the other end of the cable to the LAN port on your computer.
	End

Wall-mounting the IP Phone (optional)

You can install your IP Phone on a wall. You wall-mount the IP Phone using the keyhole on the back of the IP Phone. You do not need the foot stand for wall-mounted applications.

Procedure steps

Step	Action
4	Remove the foot stand.
1	Ensure all cables are properly routed and the IP Phone is functioning.
2	Make small marks on the wall where you want to align each of the two keyhole slots.
3	Insert the screws (not provided) so that they protrude slightly from the wall.
4	Align the keyholes on the back of the IP Phone with the screws in the wall.
5	Slide the IP Phone down on the screws to secure the IP Phone in position.
	End

Chapter 4
Expansion module installation

Complete the procedures in this chapter to install the expansion modules for IP Phone 1200 series phones. The procedures in this section are applicable to both the LCD Expansion Module:12-Key Self-Labeling and the LED Expansion Module:18-Key Paper Label.

Complete the procedures in this chapter to

- attach the expansion module to an IP Phone
- wall-mount the IP Phone and expansion module
- attach the expansion module foot stand

Prerequisites

- If you are wall-mounting an IP Phone, ensure you have the following tools:
  - Phillips or flat-head screwdriver, depending on the type of screws you have
  - two screws
  - pen or pencil
  - rule
- Ensure you have expansion module foot stands—one for each expansion module.

Navigation

- "Installing the expansion module" on page 32
- "Installing additional expansion modules" on page 33
- "Attaching the foot stand" on page 34
- "Completing the installation" on page 34
- "Wall-mounting the IP Phone with one or more expansion modules (optional)" on page 35

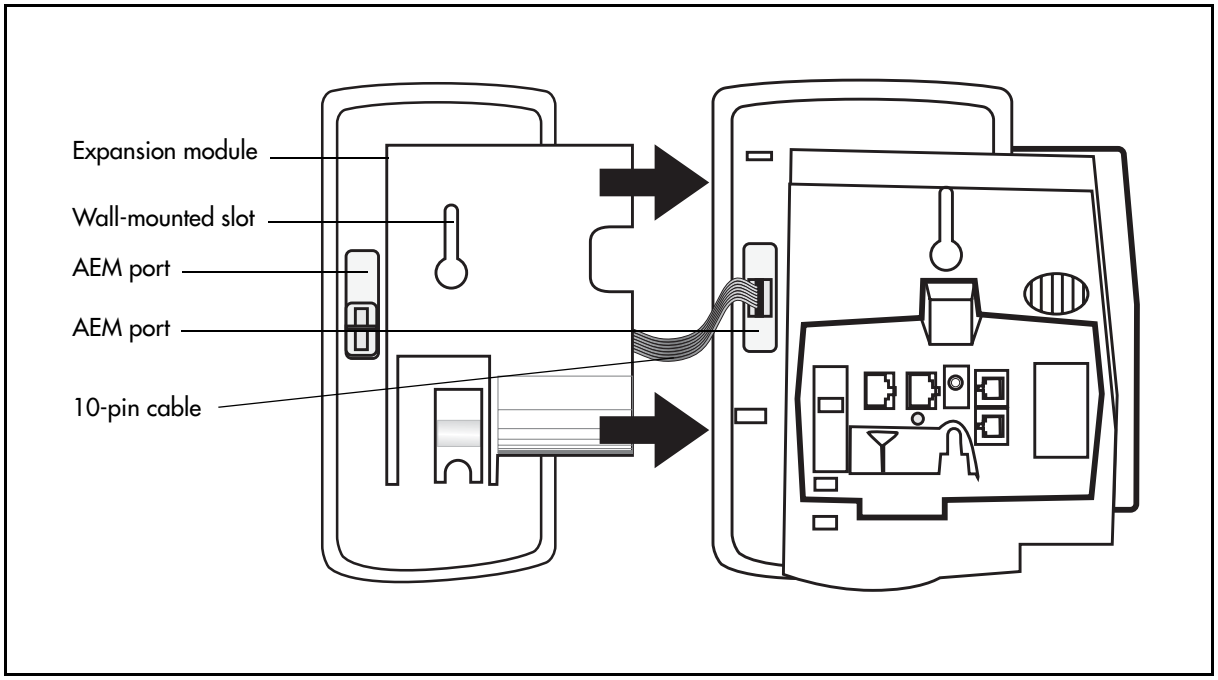
Installing the expansion module

CAUTION
Risk of damage to equipment
To avoid damaging the equipment, remove the power (PoE cable or local power) from the IP Phone before you connect the expansion module.

Procedure steps

Step	Action
1	Remove power from the IP Phone.
2	Remove the IP Phone from the foot stand.
3	At the back of the IP Phone, remove the rubber plug from the accessory expansion module (AEM) port.

Figure 10 Connect the expansion module to the IP Phone



4	Plug the 10-pin cable from the expansion module into the AEM port on the IP Phone (or expansion module). *Align the red line on the cable with the triangular mark next to the AEM port.*
5	Place the connecting arm of the expansion module behind the IP Phone.
6	Align the expansion module connecting tabs with the connecting slots on the back of the IP Phone.

7	Press the expansion module and IP Phone firmly together until the expansion module locks into place.

End

Installing additional expansion modules

CAUTION
Risk of damage to equipment
To avoid damaging the equipment, remove the power (PoE cable or local power) from the IP Phone before you connect the expansion module.

Prerequisites

- You need one 10-pin cable for each expansion module you want to install.
- You need one foot stand for each expansion module you want to install. Not required for wall-mounted applications.

Procedure steps

Step	Action
1	Remove power from the IP Phone and existing expansion module.
2	Remove the IP Phone and expansion module from the foot stand.
3	At the back of the first expansion module attached to the IP Phone, on the right side, remove the rubber plug from the AEM port.
4	Plug the 10-pin cable into the AEM port on the first expansion module.
5	Place the connecting arm of the next expansion module behind the first expansion module.
6	Align the connecting tabs of the second expansion module with the connecting slots on the back of the first expansion module.
7	Repeat steps 1 through 6 for each subsequent expansion module you add.

End

Attaching the foot stand

Attach the foot stand in the appropriate slots depending on the desired angle for your IP Phone and expansion modules.

If you are installing your IP Phone and expansion modules on a wall, do not attach the foot stand.

Procedure steps

Step	Action
1	Align the bottom tabs on the foot stands with the position 1 slots or the position 2 slots on the back of the expansion module and IP Phone.
2	Ensure that the tab on the expansion module foot stand is under the tab on the IP Phone foot stand.
3	Press the foot stand into the slots until it snaps into place. *Ensure that the angle of the expansion module foot stand is equal to the angle of the IP Phone foot stand.* *In position 1 the phone sits at a 25-degree angle.* *In position 2 the phone sits at a 55-degree angle.*
4	Repeat this procedure for each expansion module you attach to the IP Phone.
	End

Completing the installation

Connect power the IP Phone and expansion modules to complete the installation.

Procedure steps

Step	Action
1	Connect power to the IP Phone. *The IP Phone and expansion modules power up.* *The expansion modules use the electrical connection of the IP Phone for power. Expansion modules do not have their own power source.*
2	After you power up your IP Phone, the expansion module LEDs or LCD display icons flash (depending on expansion module type), until communication with the IP Phone is established.
	End

Wall-mounting the IP Phone with one or more expansion modules (optional)

You can install your IP Phone on a wall. You wall-mount the IP Phone using the keyhole on the back of the IP Phone. You do not need the foot stand for wall-mounted applications.

Procedure steps

Step	Action
1	Ensure all cables are routed properly.
2	If necessary, ensure that power is connected.
3	Remove the foot stand from the IP Phone and each expansion module.
4	Make a small mark on the wall where you want to align the keyhole slot of the IP Phone.
5	Insert a screw (not provided) so that it protrudes slightly from the wall.
6	Measure straight across from the mark, approximately 13 cm (5.25 in.).
7	Make another mark to identify the position of the expansion module keyhole slot.
8	Insert a screw (not provided) so that it protrudes slightly from the wall.
9	Repeat steps 6 through 8 for each additional expansion module attached to the IP Phone. Allow approximately 11 cm (4.5 in.) space between expansion module mounting slots.
10	Align the keyholes on the back of the IP Phone and expansion modules with the screws in the wall.
11	Slide the IP Phone and the expansion modules down on the screws to secure the phone in position.
	End

Chapter 5
IP Phone registration

Ensure that you have loaded the appropriate BCM keycodes to activate the Nortel IP Phone 1200 series phones on your BCM system.

Navigation

Determining the registration process

You register IP Phones in two-stages: setting up the system programming and choosing global or automatic registration.

Procedure steps

Step	Action
1	Through the Business Element Manager, set up the system programming to receive registration under **Configuration > Resources >Telephony Resources > IP Sets**.
2	On the IP Terminal Global Settings panel, select **Enable registration**.
3	If you want to use a single password to configure and register the phone, select **Enable global registration**.
4	In the **Global password** field, type a numeric password.
5	If you want the system to automatically assign DN records to the phones, select **Auto-assign DNs**.
	End

Registering the IP Phone (global registration with password)

You must register IP Phones with the system to be able to use the call features and system features.

Procedure steps

Step	Action
1	Restart the phone by disconnecting and reconnecting the power.
2	After about 4 seconds, the top light flashes and NORTEL appears on the screen.
3	When the greeting appears, immediately and quickly press the four soft keys directly under the display one at a time, from left to right. *Press the button sequence within 1.5 seconds; otherwise the phone does not enter configuration mode.*
4	Type 26567*738, when prompted for password.
5	Use the up and down navigation keys to scroll to **3. Network Configuration**.
6	Press **Select**. *If EAP Enable appears on the screen, you successfully accessed the configuration mode.* *If any other message appears, disconnect, then reconnect the power, and try to access the configuration mode again.*
7	Enter the network parameters, as prompted.
8	As each parameter prompt appears, use the keypad to define values.
9	Use the star (*****) key to enter the period in the IP addresses.
10	Press **OK**.
	End

Moving an IP Phone without changing the DN

IP Phones retain their DN when they are moved to a new location on the same subnet.

If the new location is on a different subnet, you must make the appropriate changes to the phone IP addressing. However, do not change the S1 IP address or the S2 IP address.

Procedure steps

Step	Action

1 Disconnect the power from the IP Phone.

2 Disconnect the network connection.

3 Move the IP Phone to the new location.

4 At the new location, reconnect the network cable.

5 Reconnect the power connection.

If your network is using partial DHCP, reconfiguration is not required at this step.

End

Moving an IP Phone and changing the DN

Complete this procedure to move an IP Phone and change the DN for the new location. For procedures on how to register and deregister DNs for your IP Phones, see the *Device Configuration Guide* or *Telephony Device Configuration Guide* for your BCM system.

Procedure steps

Step	Action
1	Deregister the DN through the Business Element Manager.
2	Disconnect the network connection and the power connection from the IP Phone.
3	Reinstall the IP Phone at the new location.
4	Reconfigure the IP Phone.
5	Register the new DN through the Business Element Manager.

End

Chapter 6
IP Phone configuration

Your IP Phone 1210, 1220, and 1230 have both local and server-based options. You can navigate the Local Tools menu in two ways:

- Follow the prompts on the screen.
- Where a menu entry has a number in front of it, select that entry by pressing the associated key on the dial pad. For example, when you are in the Local Tools menu, you can access 2. Local Diagnostics by pressing the 2 key on the dial pad.

Double-press  (Services) quickly to open the Local Tools menu and access the options in the following table.

Table 6 Local Tools menu options and descriptions

Main menu	Submenu	Description
1. Preferences	--	Use the Preferences menu to set or change preferences for your IP Phone.
	1. Contrast	Use the Contrast tool to change the physical settings of the display.
	2. Language	Use the Language tool to select the language used on your phone.
2. Local Diagnostics	--	Your system administrator uses the Local Diagnostics menu to perform diagnostics on the IP Phone and network. The Local Diagnostics menu is for system administrator use only.
	1. IPSet and DHCP Info	Use the IPSet and DHCP Info tool to view reports about IP Phone and DHCP operation. This tool is for system administrator use only.
	2. Netwk Diagnostic Tools	The Network Diagnostic Tools menu contains tools to diagnose network problems. This menu is for system administrator use only.
	3. Ethernet Statistics	Use the Ethernet statistics tool view reports about Ethernet operation. This menu is for system administrator use only.
	4. IP Network Statistics	Use the IP Network statistics tool to view reports about network operation. This menu is for system administrator use only.
3. Network Configuration	--	Use the Network Configuration tool to display configuration information for your IP Phone. This tool is for system administrator use only.
4. Lock Menu	--	The system administrator uses the Lock Menu tool to protect the Local Tools menu items from accidental or unwanted changes. The Lock Menu tool is not available on all systems. If the menu entry appears dimmed, it is not enabled on your phone. Contact your system administrator to find out of this feature is available for your use.

Local preferences configuration

Use the Preferences menu to configure local preferences, including display settings and language.

Changing the display settings

Use the Contrast tool to change the physical settings of the display.

Procedure steps

Step	Action
1	Double-press (Services) quickly to open the Local Tools menu.
2	Press **1** on the dial pad to open the Preferences menu.
3	Press **1** on the dial pad to open the Contrast menu.
4	Press the **Left/Right** navigation keys to decrease or increase the contrast.
5	Press **OK** to accept the changes, or **Cancel** to cancel the changes.
	End

Setting the language

Use the Language tool to select the language used on your IP Phone.

Procedure steps

Step	Action
1	Double-press (Services) quickly to open the Local Tools menu.
2	Press the **1** key on the dial pad to open the Preferences menu.
3	Press the **2** key on the dial pad to open the Language option.
4	Press the **Up/Down** navigation keys to scroll and highlight the desired language (for example, German [Deutsche]).
5	Press **Select** to save the desired language, or press **Cancel** to keep existing configurations.
	End

Diagnostic tasks

Use the Local Diagnostics menu to perform diagnostics of the IP Phone and network. The Local Diagnostics menu is for administrator use only.

Viewing IP Phone and DHCP information

Use the IP Set & DHCP Info tool to view reports about IP Phones and DHCP operation. This tool is for administrator use only.

Procedure steps

Step	Action
1	Double-press  (Services) quickly to open the Local Tools menu.
2	Press **2** on the dial pad to open the Local Diagnostics menu.
3	Press **1** on the dial pad to open the IP Set & DHCP Information menu.
4	Press the **Up/Down** navigation keys to scroll through and view the settings.
5	Press **Return** after you have viewed the appropriate information.
6	Press **Cancel** to exit.
	End

Diagnosing network problems

Use the Network Diagnostic Tools menu to diagnose network problems. This menu is for administrator use only.

Procedure steps

Step	Action
1	Double-press  (Services) quickly to open the Local Tools menu.
2	Press **2** on the dial pad to open the Local Diagnostics menu.
3	Press **2** on the dial pad to open the Ntwrk Diagnostic Tools menu.
4	Press the **Up/Down** navigation keys to scroll through and view the settings.
5	Press **Return** to keep existing configurations.
	End

Viewing Ethernet statistics

Use the Ethernet statistics tool to view reports about Ethernet operation. This menu is for administrator use only.

Procedure steps

Step	Action
1	Double-press  (Services) quickly to open the Local Tools menu.
2	Press **2** on the dial pad to open the Local Diagnostics menu.
3	Press **3** on the dial pad to open the Ethernet Statistics menu.
4	Press the **Up/Down** navigation keys to scroll through and view the settings.
5	Press **Return** to keep existing configurations.
	End

Viewing reports about network operations

Use the IP Network Statistics menu to view reports about network operation. This menu is for administrator use only.

Procedure steps

Step	Action
1	Double-press  (Services) quickly to open the Local Tools menu.
2	Press **2** on the dial pad to open the Local Diagnostics menu.
3	Press **4** on the dial pad to open the IP Network Statistics menu.
4	Press the **Up/Down** navigation keys to scroll through and view the settings.
5	Press **Return** to keep existing configurations.
	End

Viewing configuration information

The Network Configuration menu displays configuration information. This tool is for administrator use only.

Procedure steps

Step	Action
1	Double-press (Services) quickly to open the Local Tools menu.
2	Press **3** on the dial pad to open the Network Configuration menu.
3	Press the **OK** key to scroll through and view the settings.
4	Press **Cancel** to keep existing configurations.
	End

Locking the menu

Use the Lock Menu tool to protect the Local Tools menu items from accidental or unwanted changes. This menu is for system administrators.

The Lock Menu tool is not available on all systems. If the menu entry appears dimmed, it is not enabled on your IP Phone. Contact your administrator to find out of this feature is available for your use.

Procedure steps

Step	Action
1	Double-press (Services) quickly to open the Local Tools menu.
2	Press **4** on the dial pad to open the Lock Menu option.
3	Enter the password.
4	Press **Select** to lock the menus.
5	Press **Cancel** to keep the existing configuration.
	End