Cisco Unified IP Conference Station 7936 Administration Guide for Cisco Unified CallManager 5.0

(Cisco Model Number CP-7936)

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

Text Part Number: OL-10751-01

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The following information is for FCC compliance of Class B devices: The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with Cisco's installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

Modifying the equipment without Cisco's written authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

You can determine whether your equipment is causing interference by turning it off. If the interference stops, it was probably caused by the Cisco equipment or one of its peripheral devices. If the equipment causes interference to radio or television reception, try to correct the interference by using one or more of the following measures:

• Turn the television or radio antenna until the interference stops.

• Move the equipment to one side or the other of the television or radio.

• Move the equipment farther away from the television or radio.

• Plug the equipment into an outlet that is on a different circuit from the television or radio. (That is, make certain the equipment and the television or radio are on circuits controlled by different circuit breakers or fuses.)

Modifications to this product not authorized by Cisco Systems, Inc. could void the FCC approval and negate your authority to operate the product.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco Unified IP Conference Station 7936 Administration Guide

CONTENTS

Preface

Overview

The Cisco Unified IP Conference Station 7936 Administration Guide for Cisco Unified CallManager 5.0 provides you with the information you need to understand, install, configure, and manage a Cisco Unified IP Conference Station 7936 on your network.

Audience

Network engineers, system administrators, or telecom engineers should review this guide to learn the steps required to properly set up the Cisco Unified IP Conference Station on the network.

The tasks described in this guide are administration-level tasks and are not intended for end users of the Cisco Unified IP Conference Station. Many of these tasks involve configuring network settings and affect the Cisco Unified IP Conference Station's ability to function on the network.

These tasks require familiarity with Cisco Unified CallManager since there is close interaction between the Cisco Unified IP Conference Station 7936 and Cisco Unified CallManager. The versions of Cisco Unified CallManager supported with the Cisco Unified IP Conference Station 7936 are 5.0, 4.2(1), 4.1(3), 4.0(1) and 3.3(5).

Objectives

This guide provides all the necessary steps to make the Cisco Unified IP Conference Station 7936 operational on the Voice over IP (VoIP) network. It does not provide detailed information about procedures performed on Cisco Unified CallManager or other network devices. Refer to the Cisco Unified CallManager documentation for information about configuring Cisco Unified CallManager, and to the reference material that accompanied other network devices at your site for information about configuring those devices.

Organization

This manual is organized as follows:

Chapter	Description
Chapter 1, "Overview of the Cisco Unified IP Conference Station 7936"	Review networking protocols, features, and connections; understand interactions with other Cisco IP Telephony products
Chapter 2, "Installing the Cisco Unified IP Conference Station 7936"	Install the Cisco Unified IP Conference Station 7936
Chapter 3, "Configuring the Cisco Unified IP Conference Station 7936"	Configure the Cisco Unified IP Conference Station 7936
Chapter 4, "Troubleshooting the Cisco Unified IP Conference Station 7936"	Troubleshoot and run diagnostics on the Cisco Unified IP Conference Station 7936
Appendix A, "Technical Specifications for the Cisco Unified IP Conference Station 7936"	Review technical specifications of the Cisco Unified IP Conference Station 7936
Appendix B, "Translated Safety Warnings"	Review translations of the safety warnings required for the proper installation of the Cisco Unified IP Conference Station

Related Documentation

For more information about the Cisco Unified IP Conference Station or Cisco Unified CallManager, refer to the following publications.

Product	Title	Location
Cisco Unified IP Conference Station 7936	*Cisco Unified IP Conference Station 7936 Phone Guide*	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm
	Guidelines for Using External Microphones with the Cisco Unified IP Conference Station 7936	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm
	Regulatory Compliance and Safety Information for the Cisco Unified IP Phone 7900 Series	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm
	Release Notes for the Cisco Unified IP Conference Station 7936	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm
	Cisco Unified CallManager documentation	http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm

Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

http://www.cisco.com/univercd/home/home.htm

You can access the Cisco website at this URL:

http://www.cisco.com

International Cisco websites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

All users can order annual or quarterly subscriptions through the online Subscription Store:

http://www.cisco.com/go/subscription

Click Subscriptions & Promotional Materials in the left navigation bar.

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/en/US/partner/ordering/index.shtml

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can submit e-mail comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer, and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute, or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at this URL:

http://www.cisco.com/wwl/export/crypto/tool/stqrg/htm

If you require further assistance, please contact us by sending e-mail to export@cisco.com.

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

http://www.cisco.com/go/psirt

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—security-alert@cisco.com
- Nonemergencies—psirt@cisco.com

Tip We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.*x* through 8.*x*.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on

---

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

http://www.cisco.com/tac

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

http://tools.cisco.com/RPF/register/register.do

Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

http://www.cisco.com/tac/caseopen

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The Cisco Product Catalog describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

  http://www.cisco.com/en/US/products/products_catalog_links_launch.html

- Cisco Press publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

  http://www.ciscopress.com

- Packet magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

  http://www.cisco.com/en/US/learning/index.html

Document Conventions

This guide uses the following conventions.

Convention	Description
boldface font	Commands and keywords are in **boldface**.
italic font	Arguments for which you supply values are in *italics*.
[ ]	Elements in square brackets are optional.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
`screen` font	Terminal sessions and information the system displays are in `screen` font.
`boldface screen` font	Information you must enter is in **`boldface screen`** font.
italic screen font	Arguments for which you supply values are in *italic screen* font.

Note Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Warnings use the following conventions.

Warning **IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Waarschuwing **BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus **TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention **IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung **WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza **IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel **VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! **INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! **VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR

Figyelem **FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Предупреждение **ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ

警告　重要的安全性说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告　安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

Overview of the Cisco Unified IP Conference Station 7936

The Cisco Unified IP Conference Station 7936 is an IP-based, hands-free conference station that uses Voice over IP (VoIP) technology. The Cisco Unified IP Conference Station replaces a traditional analog conferencing unit by providing business conferencing features, such as Call Hold, Call Resume, Call Transfer, Call Release, Call Pickup, Group Pickup, Redial, Mute, and Conference, over an IP network. Support for G.711 and G.729a audio compression is included.

The IP Conference Station works with several other key Cisco IP Telephony components, including Cisco Unified CallManager. The versions of Cisco Unified CallManager supported with the Cisco Unified IP Conference Station 7936 are 5.0, 4.2(1), 4.1(3), 4.0(1) and 3.3(5).

The following topics in this chapter provide information about the IP Conference Station and its interaction with other key components of the VoIP network.

- Understanding the Startup Process, page 1-6
- Installation and Set-up Requirements for the Cisco Unified IP Conference Station 7936, page 1-8

Networking Protocols

The IP Conference Station supports several industry-standard and Cisco networking protocols required for voice communication. Table 1-1 lists the supported networking protocols and a brief overview of each.

Table 1-1 Supported Networking Protocols

Networking Protocol	Purpose	Usage Notes
Cisco Discovery Protocol (CDP)	CDP is a device-discovery protocol that runs on all Cisco-manufactured equipment. Using CDP, a device can advertise its existence to other devices and receive information about other devices in the network.	The IP Conference Station uses CDP to communicate configuration information to the Cisco Catalyst switch. With CDP, each device sends periodic messages to a multicast address and in turn listens to the periodic messages sent by other devices. This allows devices on the network to discover one another and learn information such as protocols used, protocol addresses, and so on.
Dynamic Host Configuration Protocol (DHCP)	DHCP dynamically allocates and assigns an IP address to network devices. DHCP enables you to connect the IP phone into the network and become operational without manually assigning an IP address and configuring additional required network parameters.	DHCP is enabled by default. If disabled, you must manually configure the IP address, subnet mask, gateway, and TFTP server on each station.

Table 1-1 Supported Networking Protocols (continued)

Networking Protocol	Purpose	Usage Notes
Internet Protocol (IP)	IP is a messaging protocol that addresses and sends packets across the network.	To communicate using IP, network devices must have an assigned IP address, subnet, and gateway. IP addresses, subnets, and gateways identifications are automatically assigned if you are using the IP Conference Station with DHCP. If you are not using DHCP, you must manually assign these properties to each station locally.
Real-Time Transport (RTP)	RTP is a standard for transporting real-time data, such as interactive voice and video over data networks.	The IP Conference Station can collect and process RTP traffic from routers, hubs, and switches.
Skinny Client Control Protocol (SCCP)	Skinny Client Control Protocol. A Cisco protocol using low-bandwidth messages that allows communication between IP devices and the Cisco Unified CallManager.	The IP Conference Station uses SCCP to communicate with the Cisco Unified CallManager.
Transmission Control Protocol (TCP)	TCP is a a connection-oriented transport protocol.	The IP Conference Station uses TCP to connect to Cisco Unified CallManager.
Trivial File Transfer Protocol (TFTP)	TFTP allows you to transfer files over the network. On the IP Conference Station, TFTP enables you to obtain a configuration file specific to the IP Conference Station type.	TFTP requires a TFTP server in your network, which can be automatically identified from the DHCP server. If more than one TFTP server is running in your network, you must manually assign a TFTP server to each station locally.

Table 1-1 Supported Networking Protocols (continued)

Networking Protocol	Purpose	Usage Notes
User Datagram Protocol (UDP)	UDP is a connectionless messaging protocol for delivery of data packets.	The IP Conference Station receives and processes UDP messages.
Voice over IP (VoIP)	VoIP enables you to transfer voice communications over a data network using the Internet Protocol.	The IP Conference Station connects to the PSTN through a VoIP gateway.

Supported Features

The Cisco Unified IP Conference Station functions much like the traditional analog conferencing unit allowing you to set up and place conference calls and receive calls. The Cisco Unified IP Conference Station also supports features such as call hold, redial, mute, call resume, call transfer and call release.

In addition to these traditional telephony features, the Cisco Unified IP Conference Station also includes features enabling you to administer and monitor it as an IP networking device. On the Cisco Unified IP Conference Station, you can locally configure features such as DHCP, TFTP, and IP settings.You can also integrate the Cisco Unified IP Conference Station with the corporate Lightweight Directory Access Protocol 3 (LDAP3) standard directory to enable users to search for co-workers' contact information directly from the Cisco Unified IP Conference Station. From Cisco Unified CallManager, you can modify additional settings, which are viewable from the Cisco Unified IP Conference Station's network configuration settings. Use this guide for information about configuring these settings.

Available Connections

The Cisco Unified IP Conference Station includes the following connections for accessing the data network and providing power to the station:

- Power Interface Module (PIM) for connection between the Cisco Unified IP Conference Station and the network.
- A single RJ-45 connector for accessing the data network and connecting to the PIM, which provides power to the Cisco Unified IP Conference Station.
- Universal power supply for connection to a standard electrical power outlet in the wall.

Understanding Interactions with Other Cisco Unified IP Telephony Products

To function in the IP telephony network, the Cisco Unified IP Conference Station must be connected to a networking device, such as a Cisco Catalyst switch, in order to obtain network connectivity. The Cisco Unified IP Conference Station must also be registered with a Cisco Unified CallManager system in order to make and receive calls.

Understanding How the Cisco Unified IP Conference Station 7936 Interacts with Cisco Unified CallManager

Cisco Unified CallManager is a scalable, distributable and highly available enterprise IP telephony call processing system. Cisco Unified CallManager software runs on a Windows 2000 server and sets up and tears down calls between phones, integrating traditional PBX functionality with the corporate IP network. Cisco Unified CallManager manages the components of the IP telephony system, the conference stations, the phones, access gateways, and the resources necessary for such features as call conferencing and route planning.

For information about configuring Cisco Unified CallManager to work with the IP devices described in this chapter, refer to the *Cisco Unified CallManager Administration Guide* and the *Cisco Unified CallManager System Guide*.

Understanding the Startup Process

When connecting to the VoIP network, the Cisco Unified IP Conference Station goes through a standard startup process. Table 1-2 describes the startup process.

Table 1-2 Cisco Unified IP Conference Station 7936 Startup Process

Startup Process Step	Description
1. Loading the Stored Station Image	The Cisco Unified IP Conference Station has non-volatile Flash memory in which it stores firmware images and user-defined preferences. At startup, the Cisco Unified IP Conference Station runs a bootstrap loader that loads a station image stored in Flash memory. Using this image, the station initializes its software and hardware.
2. Configuring VLAN	If the Cisco Unified IP Conference Station is connected to a Cisco Catalyst switch, the switch next informs the conference station of the voice virtual local area network (VLAN) defined on the switch. The Cisco Unified IP Conference Station needs to know its VLAN membership before it can proceed with the Dynamic Host Configuration Protocol (DHCP) request for an IP address.
3. Obtaining an IP Address	If the Cisco Unified IP Conference Station is using DHCP to obtain an IP address, the station queries the DHCP server to obtain one.
4. Accessing TFTP Server	In addition to assigning an IP address, the DHCP server also points the Cisco Unified IP Conference Station to a TFTP server. You must configure option 150 on the DHCP server for the TFTP information to be passed from the server to the client. If the Cisco Unified IP Conference Station has a statically-defined IP address, you must manually configure the IP address of an alternate TFTP server; the Cisco Unified IP Conference Station uses this alternate TFTP server to receive its information.

Table 1-2 Cisco Unified IP Conference Station 7936 Startup Process (continued)

Startup Process Step	Description
5. Requesting the Configuration File	Configuration files (.cnf file format) for each telephony device, which define connection parameters for Cisco Unified CallManager, are stored on the TFTP server. If you have enabled auto-registration in Cisco Unified CallManager, the Cisco Unified IP Conference Stations access a default configuration file (XMLDefault.cnf.xml) from the TFTP server. If you have manually entered the Cisco Unified IP Conference Stations into the Cisco Unified CallManager database, each station accesses an .xml file corresponding to its device name.
6. Contacting Cisco Unified CallManager	The configuration file defines how the Cisco Unified IP Conference Station communicates with Cisco Unified CallManager. After obtaining the file from the TFTP server, the station next attempts to make a TCP connection to the highest-priority Cisco Unified CallManager on the list. The Cisco Unified IP Conference Station supports a sampling rate of up to 60ms. However, configuring the sampling rate above 30ms may result in voice quality degradation. For details, see the Cisco IP Telephony Solution Reference Network Design (SRND) for Cisco Unified CallManager 4.0 and 4.1 at the following URL; http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_implementation_design_guide_chapter09186a0080447513.html#wp1043960

Installation and Set-up Requirements for the Cisco Unified IP Conference Station 7936

To install and configure the Cisco Unified IP Conference Station, you must configure some network settings, set up Cisco Unified CallManager, and manually configure changes on the Cisco Unified IP Conference Station.

Table 1-3 provides information about these procedures.

Table 1-3 Installation and Set-up Requirements for the Cisco Unified IP Conference Station

Task	Purpose	For More Information
1. Configure routers, gateways, and switches to handle voice communication	Sets up the IP telephony network.	See the documentation included with these devices.
2. Configure Cisco Unified CallManager	Supports call processing and handling in the network.	See the Cisco Unified CallManager documentation or online help in the Cisco Unified CallManager application.
3. Decide whether to use auto-registration for your Cisco Unified IP Conference Stations or manually add them to the Cisco Unified CallManager database	Determines how the Cisco Unified IP Conference Station is added to the Cisco Unified CallManager database and how a directory number is assigned.	• See the "Preparing to Install" section on page 2-1. • See the Cisco Unified CallManager documentation or online help in the Cisco Unified CallManager application.
4. Connect the Cisco Unified IP Conference Station to the network	Adds the Cisco Unified IP Conference Station to the network.	See the "Installing and Connecting to the Network" section on page 2-16.
5. Manually configure network settings on the Cisco Unified IP Conference Station	Sets IP settings if not using DHCP in the network and assigns a TFTP server.	See the "Configuring Startup Network Settings" section on page 2-21 and the "Accessing Network Configuration Settings" section on page 3-8.

Setting Up the Cisco Unified IP Conference Station 7936

Before you install your Cisco Unified IP Conference Station, you must first assess your network configuration (such as the use of DHCP or static addressing).

Refer to the appropriate topics in this chapter to understand how to install and configure the Cisco Unified IP Conference Station.

Preparing to Install

Before you begin installing the Cisco Unified IP Conference Station, you must configure Cisco Unified CallManager for the conference stations and decide how you want the stations to be added to the Cisco Unified CallManager database.

You can choose to auto-register the stations with Cisco Unified CallManager, or you can add the stations manually. Because Cisco Unified CallManager handles the call processing on the network, this is a critical step.

Setting the Default Device Load

To set the default device load for the Cisco Unified IP Conference Station in Cisco Unified CallManager, follow these steps:

Procedure

Step 1 Copy the Cisco Unified IP Conference Station load to the C:\Program Files\Cisco\TFTP Path directory on the Cisco Unified CallManager server.

Step 2 Start Cisco Unified CallManager Administration.

Step 3 Choose **System > Device Defaults**.

Step 4 In the Device Defaults Configuration window, scroll down to the Cisco 7936 Device Type.

Step 5 Set the Load Information to the load in the C:\Program Files\Cisco\TFTP Path directory.

Step 6 Scroll back to the top of the page and click **Update**.

Adding a New Device

To add the Cisco Unified IP Conference Station as a new device in Cisco Unified CallManager, follow these steps:

Procedure

Step 1 Choose **Device > Add a New Device**.

The Add a New Device page displays.

Step 2 Choose **Phone** from the Device Type drop-down list box, and click **Next**.

The Add a New Phone page displays.

Step 3 Choose the **Cisco 7936** phone type and click **Next**. (Once you select a phone type, you cannot modify it.)

The Phone Configuration page displays.

Step 4 Enter the required fields as described in the following table.

Field	Description
MAC Address	Enter the Media Access Control (MAC) address that identifies the Cisco Unified IP Conference Station 7936. The value contains 12 hexadecimal characters. The MAC address is located on the bottom of the Cisco Unified IP Conference Station. You can also display the MAC address when the Cisco Unified IP Conference Station is powered on by pressing the **Menu** button and navigating to the Admin Setup menu. Press **Select**, enter the administrator password (the default is **#), and press the **Enter** softkey. Select System Info and scroll through the system information to find the MAC address.
Device Pool	Choose the device pool to which you want this Cisco Unified IP Conference Station assigned. The device pool defines sets of common characteristics for devices, such as region, date/time group, Cisco Unified CallManager group, and calling search space for auto-registration. The value you choose overrides the default value for this type of device.
Phone Button Template	Choose the appropriate phone button template. The phone button template determines the configuration of buttons on a phone and identifies which feature (line, speed dial, and so on) is used for each button.

Step 5 At the top of the page, click **Insert**.

Step 6 Add a directory number to this Cisco Unified IP Conference Station.

If you need instructions, refer to the "Directory Number Configuration Settings" topic in the Cisco Unified CallManager Administration online help.

Step 7 Reset the Cisco Unified IP Conference Station to apply the new settings.

Using Auto-Registration

Use auto-registration to automatically add an Cisco Unified IP Conference Station to the network and assign a directory number to it. The directory number assigned is the next available sequential number within the device pool assigned to the conference station type in Cisco Unified CallManager.

When you enable auto-registration in Cisco Unified CallManager, the Cisco Unified IP Conference Station begins the automatic startup process to obtain a directory number after the station is connected to the network.

You can also use auto-registration to quickly register all stations with the Cisco Unified CallManager database. You can then modify any settings, such as the directory numbers, from the Cisco Unified CallManager application.

The following procedure provides detailed steps you must perform in to automatically add a Cisco Unified IP Conference Station to the network using Cisco Unified CallManager. If you need additional information on this procedure, refer to the Cisco Unified CallManager Administration documentation or online help in the Cisco Unified CallManager Administration application.

Procedure

Step 1 Start Cisco Unified CallManager Administration.

Step 2 Enable auto-registration in Cisco Unified CallManager by selecting **System > Cisco Unified CallManager.**

Step 3 From the list of Cisco Unified CallManagers, select the Cisco Unified CallManager where you want to check auto-registration.

Step 4 Verify that the “Auto-registration Disabled on this Cisco Unified CallManager” setting is *not* selected.

Step 5 Install the station by following the instructions in the Installing the Cisco Unified IP Conference Station 7936, page 2-7.

Step 6 To modify settings, return to Cisco Unified CallManager Administration and select **Device > Phone.**

Enter search criteria for the new Cisco Unified IP Conference Station and click **Find**. You should see the MAC address for the new Cisco Unified IP Conference Station.

Adding Cisco Unified IP Conference Stations Manually

If you want to assign specific directory numbers to your Cisco Unified IP Conference Stations without using auto-registration, you must manually add each station to the Cisco Unified CallManager database.

If you are not using Dynamic Host Configuration Protocol (DHCP) in your network, you must also manually configure the IP settings and Trivial File Transfer Protocol (TFTP) server on each station.

Alternatively, you can use DHCP, and manually set the TFTP server. In this case, wait for the station to start up using DHCP, and then re-assign the TFTP server.

Using DHCP

If you are using DHCP in your network without auto-registration, you must manually add the Cisco Unified IP Conference Station to the Cisco Unified CallManager database.

To manually add the Cisco Unified IP Conference Station to the network, follow these steps. For additional information, refer to the Cisco Unified CallManager documentation or online help.

Procedure

Step 1 Start Cisco Unified CallManager Administration.

Step 2 Add a Cisco Unified IP Conference Station to Cisco Unified CallManager by selecting **Device > Add a New Device**.

The Add a New Device page displays.

Step 3 Choose **Phone** from the Device Type drop-down list box, and click **Next**.

The Add a New Phone page displays.

Step 4 Choose the **Cisco 7936** phone type and click **Next**.

The Phone Configuration page displays.

Step 5 Enter the required fields.

Step 6 Install the station by following the instructions in the Installing the Cisco Unified IP Conference Station 7936, page 2-7.

Assigning Static IP Addresses

If you do not use DHCP in your network, you must manually configure static IP addresses for each station.

To assign a static address to the Cisco Unified IP Conference Station, follow these steps. For additional information refer to the Cisco Unified CallManager documentation or online help.

Procedure

Step 1 Start Cisco Unified CallManager Administration.

Step 2 Add a station to Cisco Unified CallManager by selecting **Device > Add a New Device**.

The Add a New Device page displays.

Step 3 Choose **Phone** from the Device Type drop-down list box, and click **Next**.

The Add a New Phone page displays.

Step 4 Choose the **Cisco 7936** phone type and click **Next**.

The Phone Configuration page displays.

Step 5 Enter the required fields.

Step 6 Install the Cisco Unified IP Conference Station by following the instructions in the Installing the Cisco Unified IP Conference Station 7936, page 2-7.

Step 7 Configure the IP settings by following the instructions in the "Configuring IP Settings" section on page 3-10.

Step 8 Configure the TFTP server by following the instructions in the "Configuring Alternate TFTP Options" section on page 3-15.

Installing the Cisco Unified IP Conference Station 7936

Before you begin the installation of the Cisco Unified IP Conference Station, review the following information:

- "Network Requirements" section on page 2-7
- "Cisco Unified CallManager Configuration" section on page 2-8
- "Safety Notices" section on page 2-8
- "Installing and Connecting to the Network" section on page 2-16
- Additional information in the *Regulatory Compliance and Safety Information for the Cisco Unified IP Conference Station 7936* guide

Package Contents

Refer to the section on Installing and Connecting to the Network, page 2-16 for detailed information on package contents.

Network Requirements

For the Cisco Unified IP Conference Station to successfully operate as an IP conference station endpoint in your network, your network must meet the following requirements:

- Working VoIP (VoIP) Network
  - VoIP configured on your Cisco routers and gateways
  - Cisco Unified CallManager installed in your network and configured for call processing
- IP network that supports DHCP or manual configuration of IP address, gateway, and subnet mask
- TFTP Server

Cisco Unified CallManager Configuration

The Cisco Unified IP Conference Station requires Cisco Unified CallManager to handle call processing.

Note Refer to the Cisco Unified CallManager documentation or online help to ensure that the Cisco Unified CallManager is properly set up to manage the Cisco Unified IP Conference Station and to properly route and process calls.

If you plan to use auto-registration, verify that it is enabled and properly configured in Cisco Unified CallManager before connecting your Cisco Unified IP Conference Station to the network. See the "Using Auto-Registration" section on page 2-4 for details.

Safety Notices

Note Refer to *Regulatory Compliance and Safety Information for the Cisco Unified IP Conference Station 7936* for international agency compliance, safety, and statutory information for the Cisco Unified IP Conference Station 7936.

Warning **IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Waarschuwing **BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus **TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention **IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung **WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza **IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel **VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! **INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! **VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR

Figyelem **FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Предупреждение **ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ

警告 重要的安全性说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

Refer to this safety information about TN and IT Power Systems:

Warning **This equipment has been designed for connection to TN and IT power systems.**

Waarschuwing **Deze apparatuur is ontworpen voor verbindingen met TN en IT energiesystemen.**

Varoitus **Tämä laitteisto on suunniteltu yhdistettäväksi TN- ja IT-sähkövoimajärjestelmiin.**

Attention **Ce matériel a été conçu pour être connecté à des systèmes d'alimentation TN et IT.**

Warnung **Dieses Gerät ist so konstruiert, daß es an TN- und IT-Stromsysteme angeschlossen werden kann.**

Avvertenza **Questa apparecchiatura è stata progettata per collegamenti a sistemi di alimentazione TN e IT.**

Advarsel **Dette utstyret er utformet for å kunne kobles til TN- og IT-strømsystemer.**

Aviso **Este equipamento foi criado para ligações a sistemas de corrente TN e IT.**

¡Advertencia! **Este equipo se ha diseñado para ser conectado a sistemas de alimentación tipo TN o IT.**

Varning! **Denna utrustning har konstruerats för anslutning till elkraftssystem av TN- och IT-typ.**

Figyelem **Ez a berendezés TN és IT rendszerű elektromos hálózatokhoz csatlakoztatható.**

Предупреждение Это оборудование может быть подключено к системам электропитания без непосредственного заземления (TN-система) и системам с глухозаземленной нейтралью (IT-система).

警告 此设备用于连接到 TN 和 IT 电源系统。

警告 この装置は、TNおよびIT電源システムに接続することを前提に設計されています。

Warning **Read the installation instructions before you connect the system to its power source.**

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Warning **Ultimate disposal of this product should be handled according to all national laws and regulations.**

Warning **Do not work on the system or connect or disconnect cables during periods of lightning activity.**

Warning **To avoid electric shock, do not connect safety extra low voltage (SELV) circuits to telephone network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.**

Warning **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15 A U.S. (240 VAC, 10 A international) is used on the phase conductors (all current-carrying conductors).**

Warning **The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.**

Caution The Cisco Unified IP Conference Station 7936 is inoperable during a power outage if it is not supported by a UPS (uninterruptible power supply) when using a local power supply unit. This affects your ability to reach 911.

Caution Using a cell, mobile, or GSM phone, or two-way radio in close proximity to a Cisco Unified IP Phone might cause interference. For more information, refer to the manufacturer's documentation of the interfering device.

Using External Devices with Your Cisco Unified IP Phone

Refer to this information when using external devices with your Cisco Unified IP Phone.

- Depending on the quality of these devices and their proximity to other devices such as mobile phones or two-way radios, some audio noise may still occur. In these cases, Cisco recommends that you take one or more of the following actions:
  - Move the external device away from the source of the RF or AF signals.
  - Route the external device cables away from the source of the RF or AF signals.
  - Use screened cables for the external device, or use cables with a better screen and connector.
  - Shorten the length of the external device cable.
  - Apply ferrites or other such devices on the cables for the external device.
- Cisco cannot guarantee the performance of the system because Cisco has no control over the quality of external devices, cables, and connectors. The system will perform adequately when suitable devices are attached using good quality cables and connectors.

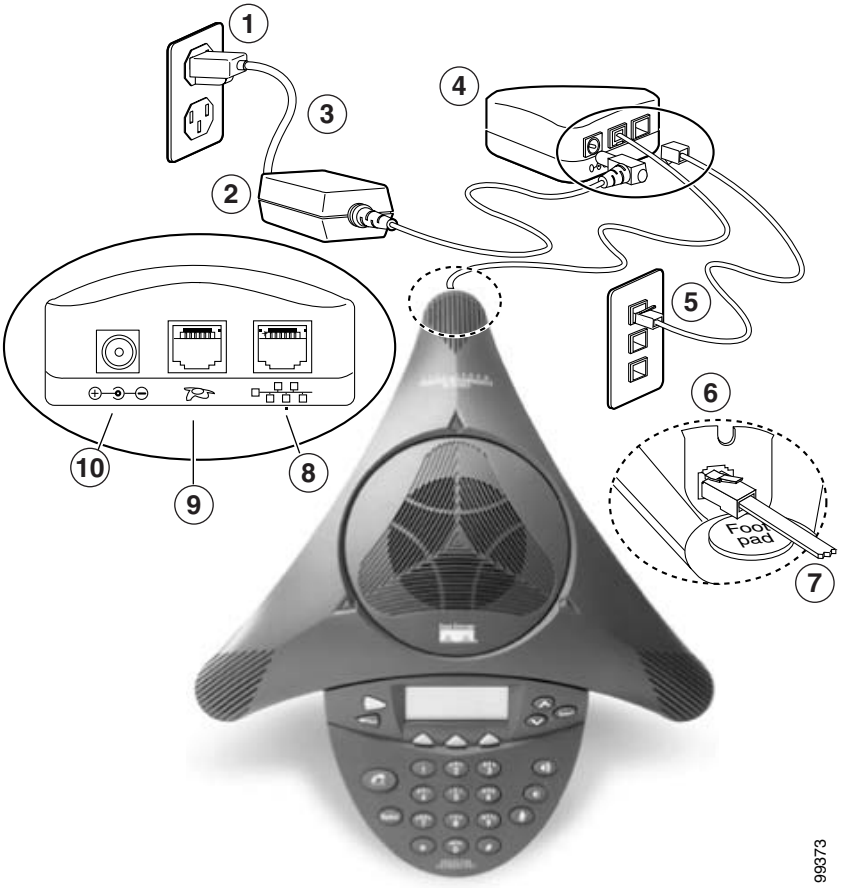
Installing and Connecting to the Network

You must connect the Cisco Unified IP Conference Station to the network and to a power source before using it.

Refer to Figure 2-1 on page 2-17 and Figure 2-2 on page 2-18 when you are installing the Cisco Unified IP Conference Station.

- Figure 2-1 shows the various components and power and cable connections used on the Cisco Unified IP Conference Station 7936.
- Figure 2-2 shows the optional, external microphones and their connection to the external microphone jacks on the underside of the Cisco Unified IP Conference Station 7936.

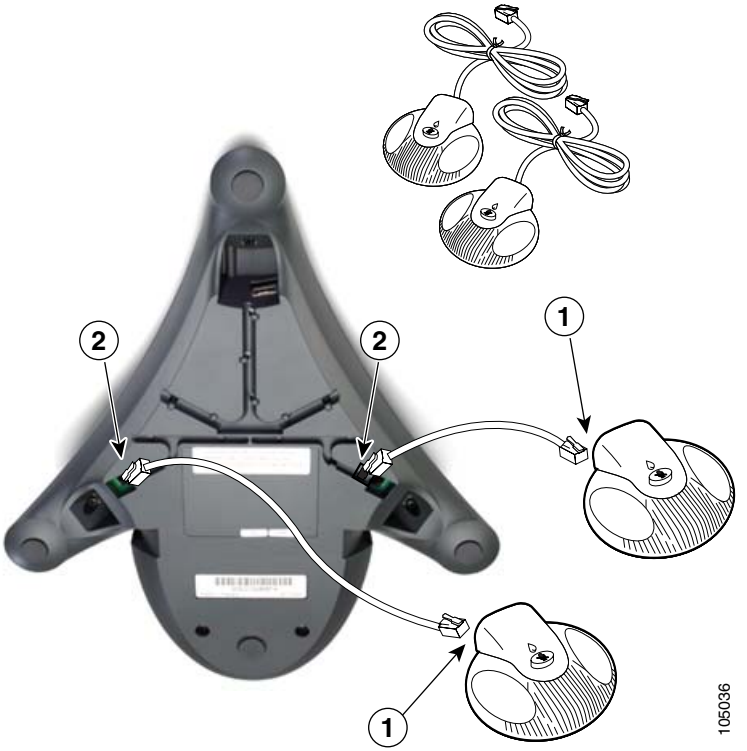
Figure 2-1 Cisco Unified IP Conference Station 7936—Components and Connections



1	Power outlet in the wall	**6**	RJ-45 port on the bottom of the Cisco Unified IP Conference Station
2	Power supply	**7**	Free end of the 25-foot CAT 5 cable
3	Power supply power cord	**8**	LAN connection on PIM
4	PIM	**9**	25-foot CAT 5 cable connection on PIM
5	LAN connection	**10**	DC adapter port on PIM for power supply unit

Note Daisy-chaining Cisco Unified IP Conference Stations to other Cisco Unified IP Phones is not a supported configuration and will not work.

Figure 2-2 External Microphone Connections on the Cisco Unified IP Conference Station 7936



1	Connect one end of the external microphone cable to the jack on the underside of the external microphone.
2	Connect the other end of the external microphone cable to the external microphone jack on the underside of the Cisco Unified IP Conference Station 7936.

To install a Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Place the Cisco Unified IP Conference Station on a flat surface, for example, a conference room table or desktop.

Step 2 Connect one end of the 6-foot CAT 5 cable to your data network port and connect the other end to the *network* (LAN) port on the PIM.

Step 3 Connect the free end of the 25-foot CAT 5 cable to the *RJ-45* port on the bottom of the Cisco Unified IP Conference Station. (The cable is pre-plugged into the PIM.)

Step 4 Connect the power supply unit to the *AC adapter* port on the PIM, and plug the other end into a standard electrical power outlet in the wall.

Step 5 If you are using the External Microphone Kit, connect each of the microphone extensions to the microphone jacks installed on the underside of the Cisco Unified IP Conference Station 7936. See Figure 2-2 on page 2-18 for an illustration of this connection.

Note If you do not correctly connect the cables, PIM, and the power supply, the Cisco Unified IP Conference Station will not work.

Use of any device other than the Cisco-provided external microphone kit will not work and may void the Cisco Unified IP Conference Station product warranty.

Verifying the Startup Process

After the Cisco Unified IP Conference Station has been connected to power for at least 15 seconds, it begins its startup process by cycling through the following steps.

Startup Process Steps	LCD Screen Message Display
1. Startup—The startup process occurs about 15 seconds after you power up the device.	Cisco Systems, Inc. Polycom Technology Copyright 2003
2. Configuring IP Address—These messages appear when the protocol is configuring the IP address.	Configuring IP... Press Menu to Reconfigure
3. Trivial File Transfer Protocol (TFTP) configuration—This message appears when connectivity is established with the TFTP server.	Station IP: IP address Contacting: TFTP Server
4. Cisco Unified CallManager configuration—This message appears when connectivity is established with the Cisco Unified CallManager.	Opening: Cisco Unified CallManager IP address
5. Cisco Unified CallManager registration—This message appears while the device is registering with the Cisco Unified CallManager.	Registering...
6. Initialization complete.	Press the Phone Key to get a dial tone

Note The startup process may take several minutes, and some of these messages may not appear due to the access speed of your network.

After the Cisco Unified IP Conference Station has successfully registered with the Cisco Unified CallManager, the following information appears in the LCD screen display:

- Date and Time
- IP Address
- Local number
- The message “Press the Phone Key to get a dial tone”
- Corp Dir and Ph Book softkeys

If the Cisco Unified IP Conference Station successfully passes through these steps, it has started properly.

Configuring Startup Network Settings

If you are not using DHCP in your network, you must manually configure the following network settings on the Cisco Unified IP Conference Station after installing the station on the network:

- IP address
- IP subnet mask
- Default gateway IP address
- TFTP server IP address

Collect the necessary information and follow the procedures described in Chapter 3, "Configuring the Cisco Unified IP Conference Station 7936".

Guidelines for Best Performance

Follow these guidelines to ensure optimum performance with the Cisco Unified IP Conference Station 7936 and the external microphones.

Note See the "Conference Room Setup Examples" section on page 2-22 for an illustration of proper equipment placement for different conference room configurations.

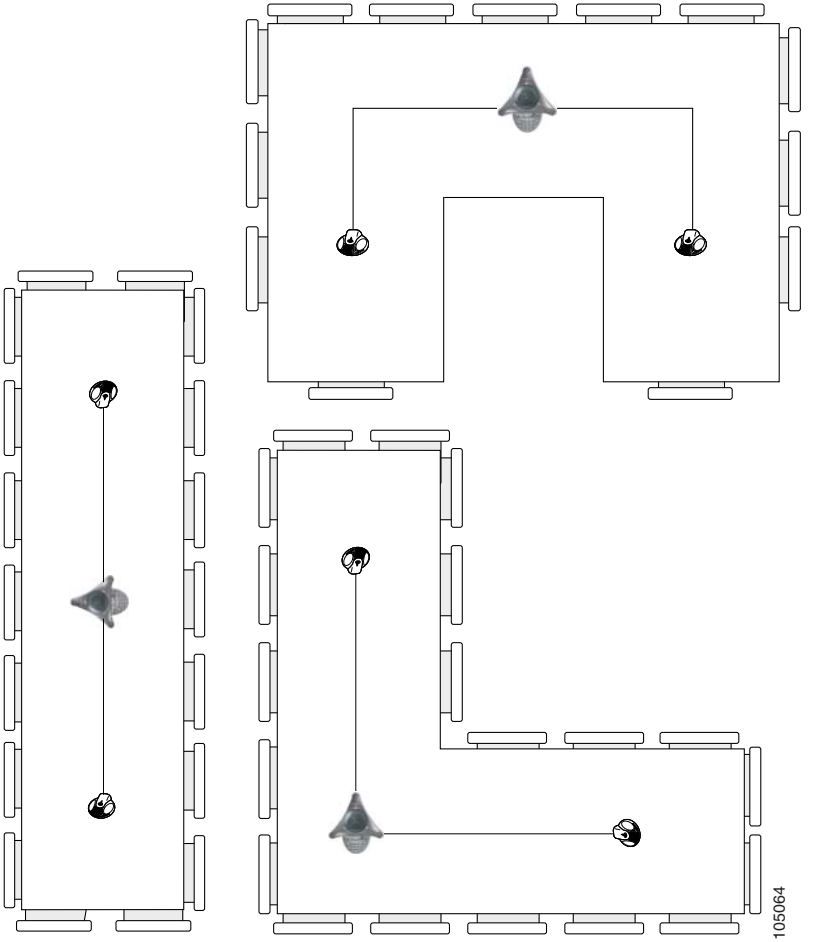
- Use the Cisco Unified IP Conference Station in closed offices and conference rooms up to 20 feet by 20 feet (without external microphones) and 20 feet by 30 feet (with external microphones).
- Place the Cisco Unified IP Conference Station 7936 base on a flat surface and make sure that it is clear from any reflective surfaces.
- Maintain a minimum distance of four feet between each external microphone and the Cisco Unified IP Conference Station 7936 base and other objects.
- Make sure that all microphones are acoustically unobstructed.

- Position the external microphones toward the areas that need to be covered, and so that the main pickup direction is pointed away from the Cisco Unified IP Conference Station 7936.
- Seat all conference participants the same distance from the Cisco Unified IP Conference Station 7936.
- Speak at normal conversation levels and direct your voice toward the Cisco Unified IP Conference Station 7936.
- Do not move or handle the Cisco Unified IP Conference Station 7936 base or the external microphones while on a call, and do not shuffle papers near the equipment.
- Minimize background noise from air conditioning units, fans, or other equipment in the office or conference room.

Conference Room Setup Examples

See Figure 2-3 on page 2-23 for examples of proper placement of the Cisco Unified IP Conference Station 7936 base and external microphones in different conference room configurations.

Figure 2-3 Cisco Unified IP Conference Station Base and External Microphone Placement



Using the Cisco Unified IP Conference Station 7936

The Cisco Unified IP Conference Station 7936 features two outboard microphone jacks to enable the use of optional, external microphones. Along with its enhanced speaker design, the Cisco Unified IP Conference Station is ideal for use in larger-sized conference rooms to facilitate conference calling. (You can order the Cisco Unified IP Conference Station without external microphones for use in smaller offices and conference rooms.)

The Cisco Unified IP Conference Station 7936 supports a maximum of two calls on a single line. The phone's control panel includes 25 keys; an LCD provides for information display.

When you press the Phone key on the Cisco Unified IP Conference Station 7936, the phone goes off-hook and a dial tone is heard. The dial sequence begins, and three LEDs are turned on (green) to indicate an active state. If a call is received while you are on an active call, a call waiting tone is played.

A backlight illuminates the LCD screen on the Cisco Unified IP Conference Station 7936. This backlight is turned on whenever a key is pressed. The backlight is turned off when the Cisco Unified IP Conference Station 7936 is not used or when a call exceeds one minute. If a second call is received when a call is in progress and the backlight is turned off, the light will be turned back on.

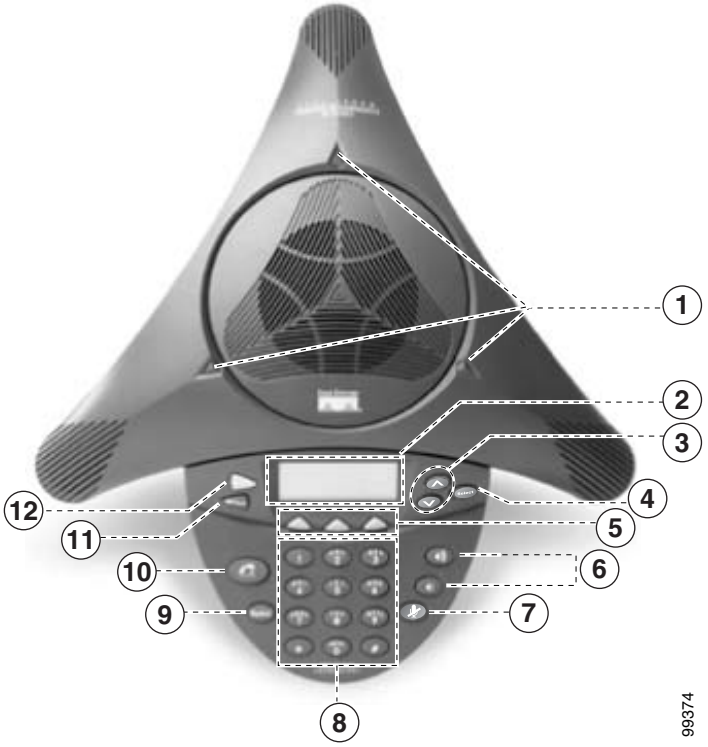
The Cisco Unified IP Conference Station 7936 includes three context-sensitive keys, a menu access and exit key, and scroll and select keys. The following functions are accessible via these keys:

- Call interface
- Configuration interface
- Additional call functions (functions that are not accessible through the softkeys)
- Phone Book access (a local phone book is available to store up to 20 numbers)

Feature Overview

See Figure 2-4 on page 2-25 for an explanation of the features and functions of the Cisco Unified IP Conference Station 7936.

Figure 2-4 Cisco Unified IP Conference Station 7936—Features and Functions



1	LEDs	Provide call status indicators. **Call State Off**—All LEDs off. **Powering On**—Red LEDs on. **Ready**—All LEDs off. **Dial Tone On**—Green LEDs on. **Dialing**—Green LEDs blinking. **Connected**—Green LEDs on. **Mute**—Red LEDs blinking. **Hold**—Red LEDs on. **Incoming Call**—Green LEDs blink with ring. **Ringing/Connecting**—Green LEDs blinking.
2	LCD screen	Provides a status indicator that reads "Press the Phone Key to get a dial tone" when the Cisco Unified IP Conference Station is online and fully operational. In the main display, the LCD screen shows the date and time, IP address, and local phone number assigned to the Cisco Unified IP Conference Station. Also displays the Cisco Unified IP Conference Station system status, including configuration and all administrative settings. The LCD screen is backlit.
3	Scroll buttons 	Allow you to scroll through the menus or through an open list in the LCD screen.
4	Select button 	Selects a menu option or list item that is highlighted.

5	Softkeys	**Answer**—Picks up the current call. **CFwdAll—**Redirects all of your incoming calls to another number. **Confrn**—Adds a party to a conference call. **Corp Dir**—Lets you search a corporate directory for a number to call. **EndCall**— Ends a call and returns to the resting display or to the active call list. **GrpPickUp**—Lets you pick up a call within your group or another group. **Hold**—Puts the active call on hold. **PickUp**—Lets you pick up a call within your group. **Ph Book**—Opens the Phone Book. **NewCall**—Lets you dial a new number. **Redial**—Redials the last number that you called. **Resume**—Returns to the selected held call. **Transfer**—Transfers the current call. **Join**—Joins 2 participants into a conference.
6	Volume buttons 	Increase or decrease the volume of the call, speaker, ringer, or dial tone, depending on which sound is currently active.
7	Mute button 	Turns call muting on or off.
8	Dialing pad	Allows you to dial phone numbers, add or edit Phone Book entries, and enter other input depending on the menu selected.

9	Redial button 	Automatically redials the last dialed number.
10	Phone button 	Allows you to get a dial tone, answer an incoming call, and hang up a call.
11	Exit button	Returns to the main LCD screen display from a menu, a list, or the Phone Book.
12	Menu button	Opens the main menu on the Cisco Unified IP Conference Station. The main menu includes the following selections: **Call Functions**—Opens the call function options, including Meet Me, Park, Pick-up, Group Pick-up, and Transfer. **Phone Book**—Opens the Phone Book. **Settings**—Opens the Settings options, including Contrast, Back Light, Language, Ringer, Time Format, and Date Format. **Admin Setup**—Opens Admin Setup.

Using the Keyboard Commands

The following keyboard commands are available for use on the Cisco Unified IP Conference Station 7936.

Keyboard Command	Accessible State	Feature Description
**#	In menu screens.	Use this command to access the Administrator menus.
#	In resting mode and two levels of menu screens. For example, you could use this keyboard command from the Main menu (first level) or from the Admin Setup menu (second level).	Use this command to restart the Cisco Unified IP Conference Station.
**1	In resting mode.	This command restores the default configuration of the Cisco Unified IP Conference Station. A confirmation screen is displayed before execution.
**6	In resting mode.	This command displays the MAC address of the Cisco Unified IP Conference Station.
**4	In resting mode.	Use this command to enable a Telnet connection to the phone. Telnet will be enabled until the phone is reset.
**8	In resting mode.	Use this command to invoke the digital signal processor (DSP) state information display. **Note** To see the DSP information, this must be done prior to a call being made. Once you are in a call, press the **Select** key to display; the DSP information will be displayed for the remainder of the call.
<Select, Select>	During an active call.	This command displays the active call statistics and the codec that is in use.

CHAPTER 3

Configuring the Cisco Unified IP Conference Station 7936

The Cisco Unified IP Conference Station 7936 is a network device and includes configurable network settings. You must configure many of these settings before the Cisco Unified IP Conference Station is accessible and usable for your users.

Refer to the following topics in this chapter for information about configuring your Cisco Unified IP Conference Station 7936.

Administrator Options

Table 3-1 describes administrator options that are available via the LCD menu. These configuration options are also available via the Cisco Unified IP Conference Station 7936 web interface. See the "Cisco Unified IP Conference Station 7936 Web Interface" section on page 3-36 for additional information.

Note Administrator options are password-protected.

Table 3-1 Administrator Option Setup for the Cisco Unified IP Conference Station

LCD Menu Item	Description
Admin Setup—Access this menu as follows: 1. Press the **Menu** button. 2. Press the **Up** or **Down** scroll button to select the Admin Setup menu. 3. Press the **Select** button. 4. Enter the administrator password (the default administrator password is **#).	The Admin Setup menu provides access to administrator menus. Administrator options are password-protected.
Network Setup—Access the Network Setup menu parameters by following the procedure above and selecting Network Setup. **Tip** Press the **Menu** button to return to the Admin Setup menu options, if desired.	The Network Setup menu allows you to configure certain network parameters, such as DHCP, domain names, static IP addressing and more. See the "Accessing Network Configuration Settings" section on page 3-8 for additional information.
Diagnostics—Access the Diagnostics menu by following the procedure above and selecting Diagnostics.	The Diagnostics menu allows you to test connectivity and to check network statistics.

Table 3-1 Administrator Option Setup for the Cisco Unified IP Conference Station (continued)

LCD Menu Item	Description
Restore Defaults—Access the Restore Defaults menu by following the procedure above and selecting Restore Defaults. Alternatively, you can restore the default configuration by pressing **1 from the phone's resting display menu.	The Restore Defaults menu allows you to restore the configuration of the IP Conference Station to the original factory settings. See the "Default Settings" section on page 3-20 for additional information.
Change Passcode—Access the Change Passcode menu by following the procedure above and selecting Change Passcode.	The Change Passcode menu allows you to change the administrator password used on the phone. See the "Changing the Administrator Password" section on page 3-25 for additional information.
HTTP Port Change—Access the HTTP Port Change menu by following the procedure above and selecting HTTP Port Change.	The HTTP Port Change menu allows you to change the HTTP port. The default HTTP port is 80. See the "Configuring the HTTP Port" section on page 3-17 for additional information.
System Info—Access the System Information menu by following the procedure above and selecting System Information.	The System Information menu allows you to view configuration information. See the "Verifying System Settings" section on page 3-3 for additional information.

Verifying System Settings

The Cisco Unified IP Conference Station contains detailed information about its current system settings. This information is useful when troubleshooting or when making changes to any system settings.

Note You can also use the Cisco Unified IP Conference Station 7936 web interface to view system settings. See the "Cisco Unified IP Conference Station 7936 Web Interface" section on page 3-36.

To verify system settings, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password. (The default administrator password is **#.)

Step 5 Press the **Enter** softkey.

Step 6 Press the **Up** or **Down** scroll button to select System Info and then press the **Select** button.

Step 7 Press the **Up** or **Down** scroll button to scroll through the system information described in Table 3-2.

Table 3-2 System Verification Steps on the Cisco Unified Conference Station

System Setting	Description	Usage Notes
Language	Displays the language selection for the Cisco Unified IP Conference Station.	English is the default language.
Local number	This is the local phone number or extension that is assigned to the Cisco Unified IP Conference Station.	Conference calls are initiated using this number.
DHCP	Indicates whether Dynamic Host Configuration Protocol (DHCP) is enabled or disabled.	DHCP is enabled by default; it can be disabled through the **Admin Setup** > **Network Setup** configuration menus.
MAC Address	Indicates the unique Media Access Control (MAC) address of the Cisco Unified IP Conference Station.	This address is the hardware address associated with the phone. It cannot be configured.

Table 3-2 System Verification Steps on the Cisco Unified Conference Station (continued)

System Setting	Description	Usage Notes
IP Address	This is the IP address assigned to the Cisco Unified IP Conference Station.	The IP address identifies the Cisco Unified IP Conference Station on the network. This address is set automatically if DHCP is enabled.
IP Mask	Indicates the subnet mask used by the IP Conference Station.	This IP address is set automatically if DHCP is enabled.
Router 1	Identifies the default gateway used by the IP Conference Station.	This IP address is set automatically if DHCP is enabled.
Host Name	Identifies the unique host name assigned to the IP Conference Station.	This address is assigned through Cisco Unified CallManager.
Domain	Identifies the domain in which the Cisco Unified IP Conference Stati on resides.	This domain name may be assigned through the DHCP server.
DNS Address	Identifies the Domain Name System (DNS) server address for the Cisco Unified IP Conference Station.	This IP address may be assigned through the DHCP server.
Op VLAN ID	Indicates the Virtual Local Area Network (VLAN) in which the Cisco Unified IP Conference Station is a member.	The VLAN ID is assigned to the Cisco Unified IP Conference Station via Cisco Discovery Protocol (CDP).
Adm VLAN ID	Indicates the administrative VLAN in which the Cisco Unified IP Conference Station is a member.	The administrative VLAN ID is assigned to the Cisco Unified IP Conference Station by the system administrator. See the "Configuring VLAN Options" section on page 3-14. **Note** This setting is ignored, if the VLAN ID is assigned via CDP.

Table 3-2 System Verification Steps on the Cisco Unified Conference Station (continued)

System Setting	Description	Usage Notes
CallManager 1 (CM1) Address, CallManager 2 (CM2) Address, CallManager 3 (CM3) Address, CallManager 4 (CM4) Address, CallManager5 (CM5) Address	Identifies the Cisco Unified CallManager systems that are available for processing calls from this Cisco Unified IP Conference Station. One of the Cisco Unified CallManager addresses will be displayed on the screen as active (A) and the other will be displayed as standby (S).	These IP addresses are set automatically by Cisco Unified CallManager. The source of the address is indicated by Addr, TFTP or SRST. “Addr” indicates the address is from the phone configuration. “TFTP” indicates a tftp address. “SRST” indicates an srst server from the phone configuration.
TFTP Server 1, TFTP Server 2, TFTP Server 3	Indicates the Trivial File Transfer Protocol (TFTP) Server IP addresses used by the IP Conference Station to obtain configuration files and the conference station’s firmware.	The IP addresses are set automatically if DHCP is enabled. TFTP Server 1 must be manually configured if Alternate TFTP Usage is enabled or if DHCP is disabled. TFTP Server 2 and 3 may be manually configured if Alternate TFTP Usage is enabled or if DHCP is disabled.
DSP Version	Indicates the DSP version loaded on the Cisco Unified IP Conference Station.	This number is automatically set by the IP Cisco Unified IP Conference Station.
Alt TFTP	Indicates whether or not an Alternate TFTP Server is enabled (yes/no).	This configuration must be manually set.
Boot Load ID	Indicates the current load ID of the phone’s firmware.	This is set automatically by the IP Conference Station.
App Load ID	Indicates the current load ID of the phone’s software.	This is set automatically by the IP Conference Station.
HW (hardware) Revision	Indicates the hardware revision level.	This number is set automatically by the IP Conference Station.

Table 3-2 System Verification Steps on the Cisco Unified Conference Station (continued)

System Setting	Description	Usage Notes
SW (software) Version	Indicates the firmware version loaded on the IP Conference Station.	This number is set automatically by the IP Conference Station.
Dial Tone	Indicates the dial tone setting on the IP Conference Station.	The default is Tone 1.
Ringer	Indicates the ringer sound setting on the IP Conference Station.	There are five ringer sounds. You can also shut off the ringer sound, in which case Ring Off would display on the LCD screen. The default ringer is Pro Ring.
Time	Indicates the time setting on the IP Conference Station.	There are two time format settings—12 hour and 24 hour.
Date	Indicates the date setting on the IP Conference Station.	There are two date format settings—MM/DD/YY and DD/MM/YY.
Codec	Indicates the compression setting on the IP Conference Station.	This is set automatically by the IP Conference Station.
Net Config	Indicates the Ethernet port configuration on the IP Conference Station.	This setting may be configured for full- or half-duplex (FDX or HDX).
Net Speed	Indicates the Ethernet port speed configuration on the IP Conference Station.	This configuration may be set to 10 Mbps, 100 Mbps, or Auto. The default is set to Auto.
HTTP Port	Indicates the HTTP port through which users access the web interface.	The default HTTP port is 80. This port number may be set to any number. If you change the default value, users will have to append the port number as a suffix to the IP address of the IP Conference Station when they access the web interface.
Elapsed Time	Indicates the elapsed time since the last reboot.	This value is automatically updated by the Cisco Unified IP Conference Station.

Table 3-2 System Verification Steps on the Cisco Unified Conference Station (continued)

System Setting	Description	Usage Notes
DSCP Call Ctl	Indicates the DSCP classification for protocol interfaces that are used in Cisco Unified CallManager-to-device communications.	This parameter is assigned through Cisco Unified CallManager.
DSCP Config	Interfaces the DSCP classification for any SCCP-based phone configuration, including any TFTP, DNS or DHCP access that is necessary for phone configuration.	This parameter is assigned through Cisco Unified CallManager.
DSCP Services	Indicates the DSCP classification for IP phone services on SCCP-based phones, including any HTTP traffic.	This parameter is assigned through Cisco Unified CallManager.

Accessing Network Configuration Settings

You must log in through the Admin Setup menu in order to access the IP Conference Station network settings.

To access the network settings, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password. (The default administrator password is **#.)

Step 5 Press the **Enter** softkey.

Step 6 Press the **Up** or **Down** scroll button to select Network Setup, and then press the **Select** button.

You can now access and change certain network parameters, including DHCP, static IP addressing, IP mask, DNS, Administrative VLAN, and Alternate TFTP.

After all changes are complete, you will be prompted to save the changes. If you select "YES", the phone will save the changes and reboot. If you select "NO", all changes will be discarded.

Note You can also use the Cisco Unified IP Conference Station 7936 web interface to change network options. See the "Cisco Unified IP Conference Station 7936 Web Interface" section on page 3-36.

Changing DHCP Settings

DHCP automatically assigns IP addresses to devices when you connect them to the network. Follow the appropriate procedures in this section to enable or disable DHCP.

Enabling DHCP

DHCP is enabled by default.

To reset DHCP if it becomes disabled, follow these steps:

Procedure

Step 1 From the Network Setup menu, press the **Up** or **Down** scroll button to select DHCP.

If DHCP is disabled, the option displays as:

```
DHCP Disabled
```

Step 2 Press the **Enable** softkey to enable DHCP.

Step 3 Press the **Save** softkey.

Disabling DHCP

If you are not using DHCP in your network, you can disable DHCP.

Disabling DHCP will enable configuration of a static IP address and Router IP address.

To disable DHCP before you manually assign an IP address to a Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 From the Network Setup menu, press the **Up** or **Down** scroll button to select DHCP.

If DHCP is enabled, the option displays as:

```
DHCP Enabled
```

Step 2 Press the **Disable** softkey to disable DHCP.

Step 3 Press the **Save** softkey.

Step 4 Press the **Yes** softkey to save your changes, or press **No** to cancel.

Step 5 Press the **Exit** button to return to the resting display menu.

Configuring IP Settings

Use these guidelines, along with the information in the following sections, to manually configure the IP settings on your Cisco Unified IP Conference Station.

- You can use 0.0.0.0 for the subnet mask only if the default gateway is also 0.0.0.0.
- Ensure the TFTP server has an IP address.
- Ensure the default gateway IP address is on the same subnet as the host IP address.

Assigning a Static IP Address

Note You can only manually assign an IP address if DHCP is disabled.

The IP address is the unique logical address identifying each host computer, or node, on a TCP/IP network. An IP address is a 32-bit number expressed as four decimal numbers from 0 to 255 separated by periods.

Each IP address has two parts:

- Network ID—identifies all hosts that are on the same physical network.
- Host ID—identifies a specific host on a network.

To manually configure an IP address, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select IP address.

The current IP address is displayed.

Step 2 Use the **<** softkey to delete the current IP address.

Step 3 Use the dialing pad to enter a new IP address.

Use the **.** softkey to enter periods (.) and the **<** softkey to correct any mistakes.

Step 4 Press the **Validate** softkey to check the IP address, mask and router. Press the **Save** softkey to save your changes.

Assigning a Subnet Mask

Note You can only manually assign a subnet mask if DHCP is disabled.

The subnet mask is used to partition the IP address into a network and a host identifier. The subnet mask is used to mask a portion of the IP address so that TCP/IP can distinguish the network ID from the host ID.

To manually configure a subnet mask, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select IP Mask.

The current IP Mask is displayed.

Step 2 Use the **<** softkey to delete the current subnet mask.

Step 3 Use the dialing pad to enter a new subnet mask.

Use the **.** softkey to enter periods (.) and the **<** softkey to correct any mistakes.

Step 4 Press the **Validate** softkey to check the IP address, mask and router. Press the **Save** softkey to save your changes.

Assigning a Default Gateway

Note You can only manually assign a default gateway if DHCP is disabled.

When you manually assign an IP address to an Cisco Unified IP Conference Station, you can assign the default gateway to be used.

To manually configure a default gateway, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select Router 1.

The current router IP address is displayed.

Step 2 Use the **<** softkey to delete the current IP address.

Step 3 Use the dialing pad to enter a new IP address.

Use the **.** softkey to enter periods (.) and the **<** softkey to correct any mistakes.

Step 4 Press the **Validate** softkey to check the IP address, mask and router. Press the **Save** softkey to save your changes.

Assigning a Domain Name

The domain name is the name of the Domain Name System (DNS) domain in which the IP Conference Station is located.

DNS is used on the Internet for translating names of network nodes into addresses. For detailed information about DNS, refer to *Understanding the Domain Name System.*

To manually configure a domain name, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select Domain.

The current domain is displayed.

Step 2 Use the dialing pad to enter a new domain name.

To enter letters, use the numbers associated with a particular letter.

For example, the **2** key has the letters ABC. For a lower case "a," press **2** twice. Press the **2** key repeatedly to scroll through the available letters and numbers. Pause after the selected letter appears on the display.

Press the **<** softkey to correct any mistakes. Press the **.sp-_** softkey to use a period (.), space, dash (-), or underscore (_) character.

Step 3 Press the **Validate** softkey to check the name format.

Step 4 Press the **Save** softkey to save your changes.

Assigning DNS Servers

DNS allows users to specify remote computers by host names, which are character strings with a mnemonic value, rather than by IP addresses, which are strings of numbers.

The Cisco Unified IP Conference Station uses DNS servers to resolve the host name of TFTP servers, Cisco Unified CallManager systems, and web server host names when the system is configured to use names rather than IP addresses.

To manually configure a DNS server, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select DNS.

Step 2 Use the dialing pad to enter a new DNS server address.

Use the **.** softkey to enter periods (.). Use the **<** softkey to correct any mistakes.

Step 3 Press the **Validate** softkey to check the DNS IP Address.

Step 4 Press the **Save** softkey to save your changes.

Configuring VLAN Options

You can change the administrative VLAN used by the Cisco Unified IP Conference Station. However, if you have an auxiliary VLAN assigned on the Cisco Catalyst switch, that setting overrides any changes made on the Cisco Unified IP Conference Station.

To manually configure the administrative VLAN ID on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select Adm VLAN.

Step 2 Press the **<** softkey to erase the current VLAN ID.

Step 3 Use the dialing pad to enter a new VLAN ID (0 - 4094).

Step 4 Press the **Validate** softkey to check the VLAN ID. Press the **Save** softkey to save your changes.

Configuring Alternate TFTP Options

If DHCP is enabled in your network, the IP address of the TFTP Server that is to be used by the Cisco Unified IP Conference Station is automatically assigned. This setting cannot be changed; however, you can override the TFTP Server setting by manually configuring an alternate TFTP Server that is to be used by the Cisco Unified IP Conference Station to obtain configuration files and firmware.

If DHCP is disabled in your network, you must manually configure TFTP Server 1 to be used by the Cisco Unified IP Conference Station. You may optionally configure TFTP Server 2 and 3.

To configure an alternate TFTP Server, see the "Using an Alternate TFTP Server" section on page 3-15.

Using an Alternate TFTP Server

If you want to override the TFTP Server setting that the Cisco Unified IP Conference Station received through DHCP, you must manually enable an alternate TFTP Server. (Use this option if you want to point your Cisco Unified IP Conference Station to a specific TFTP Server.)

To enable an alternate TFTP Server, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select Alt TFTP.

If the Cisco Unified IP Conference Station is not using an alternate TFTP Server, the option displays as:

`Alt TFTP NO.`

Step 2 Press the **Yes** softkey.

The Alternate TFTP option reads `Yes`.

Step 3 Press the **Down** scroll button to select Alt TFTP Addr.

Use the dialing pad to enter a new Alternate TFTP Server address.

Use the **.** softkey to enter periods (.), and the **<** softkey to correct any mistakes.

Step 4 Press the **Save** softkey to save your changes.

Step 5 Assign a TFTP Server address in the TFTP Server 1 field.

Assigning a TFTP Server Address

If DHCP is disabled in your network or if DHCP is enabled and Alternate TFTP Usage is YES, you must manually configure TFTP Server 1 to be used by the Cisco Unified IP Conference Station. You may optionally configure TFTP Server 2 and 3.

To assign a TFTP Server Address, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select IP address.

The current IP address is displayed.

Step 2 Use the **<** softkey to delete the current IP address.

Step 3 Use the dialing pad to enter a new IP address.

Use the **.** softkey to enter periods (.) and the **<** softkey to correct any mistakes.

Step 4 Press the **Validate** softkey to check the IP address, mask and router. Press the **Save** softkey to save your changes.

Assigning an Ethernet Port Configuration

To assign an ethernet port configuration, follow these steps:

Procedure

Step 1 Press the **Up** or **Down** scroll button to select Port Config. The current Ethernet port config is displayed.

Step 2 Press the **Next Mode** softkey until the desired mode is displayed.

Step 3 Press the **Save** softkey to save your changes.

Configuring the HTTP Port

For increased security, you might want to change the HTTP Port number.

To set the HTTP Port number, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password. (The default administrator password is **#.)

Step 5 Press the **Enter** softkey.

Step 6 Press the **Up** or **Down** scroll button to select HTTP Port Change, and then press the **Select** button.

Step 7 In the HTTP Port field, enter a new HTTP port number.

Note The default value is 80. You can enter any number. Users will have to use this number suffixed to the IP address of the Cisco Unified IP Conference Station when they access the web interface.

Step 8 Press the **Save** softkey to save your changes.

Verifying Firmware Version Information

You can obtain information about the firmware version installed on the Cisco Unified IP Conference Station.

To verify the firmware version on an Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password. (The default administrator password is **#.)

Step 5 Press the **Enter** softkey.

Step 6 Press the **Up** or **Down** scroll button to select System Information.

Step 7 Press the **Select** button.

Step 8 Press the **Up** or **Down** scroll button to select SW Version.

The firmware version number is displayed.

Resetting the Cisco Unified IP Conference Station

To reset the Cisco Unified IP Conference Station, press *** * # * *** on the dialing pad while the phone is in menu screens. The following message appears: `Restarting.`

The Cisco Unified IP Conference Station re-starts and goes through the startup process.

Caution If you reset the Cisco Unified IP Conference Station, any changes made that have not been saved are lost and set back to the previous settings.

Erasing the Local Configuration

If you want to erase all locally-stored configuration options, you can do so by restoring all settings to their factory default values, including enabling DHCP.

Caution Erasing the local configuration removes all user-defined changes made locally on the Cisco Unified IP Conference Station, including the Phone Book. If you choose this option, these settings are set back to their original, default values.

To restore the default settings, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password (the default administrator password is **#), and press the **Enter** softkey.

Step 5 Press the **Down** scroll button to select Restore Defaults.

Step 6 Press the **Select** button.

The following message appears:

```
All settings and data will be lost, including the Phone Book entries.
Press Yes to confirm or No to exit.
```

Step 7 Press the **Yes** softkey to confirm the restore, or press the **No** softkey to exit.

A message appears confirming that the settings have been restored to the defaults and the Cisco Unified IP Conference Station will restart.

Note You must hang up all calls before you can restart the Cisco Unified IP Conference Station.

Default Settings

Table 3-3 provides the Cisco Unified IP Conference Station default settings.

Table 3-3 Cisco Unified IP Conference Station Default Settings

Setting (Default Value)	Valid Options	Administrator-controlled	User-controlled	Notes
Administrator password (**#)	-	Y	N	
End-user password (7936)	-	Y	N	
CM1 address (no default)	-	N	N	Set by Cisco Unified CallManager (via the .cnf.xml file)

Table 3-3 Cisco Unified IP Conference Station Default Settings (continued)

Setting (Default Value)	Valid Options	Administrator-controlled	User-controlled	Notes
CM2 address (no default)	-	N	N	Set by Cisco Unified CallManager (via the .cnf.xml file)
CM3 address (no default)	-	N	N	Set by Cisco Unified CallManager (via the .cnf.xml file)
CM4 address (no default)	-	N	N	Set by Cisco Unified CallManager (via the .cnf.xml file)
CM5 address (no default)	-	N	N	Set by Cisco Unified CallManager (via the .cnf.xml file)
TFTP Server 1address (no default)	-	N	N	Set by DHCP server. Must be set by user if Alternate TFTP Usage is set to yes or if DHCP is disabled
TFTP Server 2 address (no default)	-	N	N	Set by DHCP server. May be set by user if Alternate TFTP Usage is set to yes or if DHCP is disabled
TFTP Server 3 address (no default)	-	N	N	Set by DHCP server. May be set by user if Alternate TFTP Usage is set to yes or if DHCP is disable
Alternate TFTP Server (No)	Yes/No	Y	N	Selectable
DHCP (Enable)	Enable/Disable	Y	N	

Table 3-3 Cisco Unified IP Conference Station Default Settings (continued)

Setting (Default Value)	Valid Options	Administrator-controlled	User-controlled	Notes
Ethernet port configuration (Auto)	Autosensing 100-Mbps FDX 100-Mbps HDX 10-Mbps FDX 10-Mbps HDX	Y	N	Selectable
HTTP Port (port number 80)	1 - 442	Y	N	Selectable
IP Address (no default)	-	Y	N	Can be statically assigned or DHCP
IP Subnet Mask (no default)	-	Y	N	
Router 1 (no default)	-	Y	N	This IP address is set automatically if DHCP is enabled
Domain name (no default)	-	Y	N	Assigned by the DHCP server
DNS address (no default)	IP address of the DNS server	Y	N	Assigned by the DHCP server
Admin VLAN ID (blank)[1]	0 - 4094	Y	N	Configurable VLAN ID
Op VLAN ID (no default)	-	N	N	Assigned by CDP
Language (English)	English	Y	Y	In the current release, English is the only available option
Compression (no default)	G.711 a-law/u-law; G.729a	N	N	Set by Cisco Unified CallManager
LCD screen contrast (level 6)	Levels 1 - 15	Y	Y	User selectable

Table 3-3 Cisco Unified IP Conference Station Default Settings (continued)

Setting (Default Value)	Valid Options	Administrator-controlled	User-controlled	Notes
Backlight (on)	On/Off	Y	Y	User selectable
Local number (no default)	-	N	N	Set by Unified Cisco CallManager
Phone Book (no default)	Maximum of 20 entries	Y	Y	
Ringer (Pro Ring)	Pro, Biz, Euro, Chirp, Bell, Ringer Off	Y	Y	User selectable
Dial tone (Tone 1)	Tone 1	Y	Y	In the current release, Tone 1 is the only available option
Volume (level 21)	Levels 1- 29	Y	Y	User selectable
Time of day (no default)	-	N	N	Set by Cisco Unified CallManager
Time of day format (12-hour)	12-hour 24-hour	Y	Y	User selectable
Date (no default)	-	N	N	Set by Cisco Unified CallManager
Date format (MM/DD/YY)	MM/DD/YY or DD/MM/YY	Y	Y	User selectable
Boot load ID	-	N	N	Embedded in the Application load, and set by the Cisco Unified IP Conference Station
Application load ID	-			Set by Cisco Unified CallManager

1. If the Administrative VLAN is not configured, this option is blank.

Upgrading the Application Load

You can upgrade the application load on the Cisco Unified IP Conference Station only from Cisco Unified CallManager.

To upgrade the application load, follow these steps:

Procedure

Step 1 Download the new application load from the Software Download Center at http://www.cisco.com/cgi-bin/tablebuild.pl/ip-7900se.

An example of the format used for the application load ID is:

```
cmterm_7936.3-3-2-0
```

Step 2 Copy the new load to the C:\Program Files\Cisco\TFTPPath directory.

Step 3 Start Cisco Unified CallManager Administration.

Step 4 Choose **System > Device Defaults**.

Step 5 In the Device Defaults Configuration window, scroll down to the Cisco 7936 Device Type.

Step 6 Change the Load Information to the new load that you downloaded.

Step 7 Click **Update**.

Step 8 Reset all of the Cisco Unified IP Conference Stations so that they receive the new load.

When the application load is being updated, messages similar to the following appear on the Cisco Unified IP Conference Station LCD screen.

Message Text for Successful Upgrade

```
Rebooting
```

(when reset through Cisco Unified CallManager), *or*

```
Restarting
(when reset by pressing **#**)
Cisco Systems, Inc.
Polycom Technology
Copyright 2003
Configuring IP
Press Menu to Reconfigure
Station IP: (IP address)
Contacting: (TFTP Server)
Upgrading...(percentage) done
DO NOT POWER OFF
Upgrading 100% done
Rebooting
Cisco Systems, Inc.
Polycom Technology
Copyright 2003
Configuring IP
Press Menu to Reconfigure
Station IP: (IP address)
Contacting: (TFTP Server)
Opening: CM IP address; Registering
```

Message Text for Unsuccessful Upgrade

```
Rebooting
```

(when reset through Cisco Unified CallManager), *or*

```
Restarting
(when reset by pressing **#**)
Cisco Systems, Inc.
Polycom Technology
Copyright 2003
Configuring IP
Press Menu to Reconfigure
Station IP: (IP address)
Contacting: (TFTP Server)
Upgrading...(percentage) done
DO NOT POWER OFF
Upgrading 0% done
File not found in TFTP Server
USING EXISTING VERSION
or
Error in upgrade file format
USING EXISTING VERSION
or
Bad Checksum in upgrade file
USING EXISTING VERSION
```

Changing the Administrator Password

To change the administrator password, follow these steps:

Note The Cisco Unified IP Conference Station 7936 web interface can be used to change administrator options. See the "Cisco Unified IP Conference Station 7936 Web Interface" section on page 3-36.

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select the Admin Setup menu.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password. (The default administrator password is **#.)

Step 5 Press the **Enter** softkey.

Step 6 Press the **Up** or **Down** scroll button to select Change Passcode and then press the **Select** button.

a. Use the dialing pad to enter the new password in the Passcode field.

   Use the **<** softkey to correct any mistakes.

b. Re-enter the new password in the Confirm field.

Step 7 Press the **Save** softkey to save the new password, or press the **Cancel** softkey to exit without saving.

Using the Diagnostics Menu

You can use the Diagnostics menu to view network statistics on the Cisco Unified IP Conference Station and to ping another device's IP address.

For detailed information about viewing network statistics on the Cisco Unified IP Conference Station, see the "Viewing Network Statistics" section on page 4-1.

For detailed information about using the Diagnostics menu to ping another device from the Cisco Unified IP Conference Station, see the "Using Ping" section on page 4-2.

See Chapter 4, "Troubleshooting the Cisco Unified IP Conference Station 7936" for additional troubleshooting information.

Changing the Settings Menu

You can change settings on the Cisco Unified IP Conference Station by using the Settings Menu,

Changing the Contrast Setting

To change the contrast setting on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Select **Settings** and then press the **Select** button.

Step 3 Press the **Up** or **Down** scroll button to select Contrast.

Step 4 Press the "**+**" or the "**-**" softkey to lighten or darken the contrast on the LCD screen.

Step 5 Press the **Exit** button to exit this menu.

Changing the Backlight Setting

To change the backlight setting on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Select **Settings** and then press the **Select** button.

Step 3 Press the **Up** or **Down** scroll button to select Backlight.

Step 4 Press the **On** or **Off** softkey to turn the backlight on or off on the LCD screen.

Step 5 Press the **Exit** button to exit this menu.

Changing the Ring Type Setting

To change the ring type setting on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Select **Settings** and then press the **Select** button.

Step 3 Press the **Up** or **Down** scroll button to select Ringer.

Step 4 Press the **Change** softkey.

Step 5 Press the **Up** or **Down** scroll button to select a ring type entry, and then press the **Listen** softkey to hear your selection.

There are five ringer sounds. You can also shut off the ringer sound, in which case Ring Off would display on the LCD screen. The default ringer is Pro Ring.

If you want to select a different ringer type, repeat Step 5.

Step 6 Press the **Save** softkey to save the ringer type.

Step 7 Press the **Exit** button to exit this menu.

Changing the Time Format Setting

To change the time format setting on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Select **Settings** and then press the **Select** button.

Step 3 Press the **Up** or **Down** scroll button to select Time Format.

Step 4 Select the time format you want to use.

There are two time format settings—12 hour and 24 hour.

Step 5 Press the **Exit** button to exit this menu.

Changing the Date Format Setting

To change the date format setting on the Cisco Unified IP Conference Station, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Select **Settings** and then press the **Select** button.

Step 3 Press the **Up** or **Down** scroll button to select Date Format.

Step 4 Select the date format you want to use.

There are two date format settings—MM/DD/YY and DD/MM/YY.

Step 5 Press the **Exit** button to exit this menu.

Configuring a Corporate Directory

You can access a directory of employee names and phone numbers on the Cisco Unified IP Conference Station by using a Lightweight Directory Access Protocol 3 (LDAP3) enterprise directory such as the default Cisco Unified CallManager Corporate Directory. Before users can access the directory, you must configure the directory on Cisco Unified CallManager.

Note If you use a custom enterprise directory, you must use the same XML format, script flow, HTML method and action that the default Cisco Unified CallManager Corporate Directory uses. The Cisco Unified IP Conference Station 7936 does not support all the XML tags, URLs, and action tags that are listed in the Cisco IP Phone Services Software Developer Kit (SDK).

Configuring Cisco Unified CallManager

To use the corporate directory, you must have users entered into a Lightweight Directory Access Protocol (LDAP) directory configured with Cisco Unified CallManager.

To configure the directory, follow these steps:

Procedure

Step 1 Open Cisco Unified CallManager

Step 2 Select **User > Global Directory**.

Search for users in the system.

Step 3 To add a new user, click **Add a New User**.

Add any desired users.

Refer to the online help in the Cisco Unified CallManager Administration application for details, or refer to the *Cisco Unified CallManager Administration Guide* and the *Cisco Unified CallManager System Guide*.

Using the Corporate Directory

After the corporate directory is configured in Cisco Unified CallManager, you can search the corporate directory by name or phone number.

Searching by Name

To search the corporate directory by name, follow these steps:

Procedure

Step 1 Press the **Corp Dir** softkey.

The search screen displays. You can search by First Name or Last Name, or both.

Step 2 Using the keypad, enter the search criteria, namely First Name and Last Name. Press the **Up** or **Down** scroll button to select a field.

When searching by name, you can enter one or more characters to broaden or narrow your search.

When entering letters, select the appropriate number key for the letter you want, and press that key the equivalent number of times for the correct letter. For example, to enter a B, press the **2** key two times, and to enter a C, press the **2** key three times.

Use the **<** softkey to go backward while entering search data.

To cancel a search, press the **Cancel** softkey.

Step 3 Press the **Search** softkey to start the search.

The message “Searching...” flashes on the LCD screen display.

Step 4 After the search results display, use the **Up** or **Down** scroll button to select an entry.

If the search results include more than 32 entries, you can press the **more >>** softkey followed by the **Next** softkey to display the next group of entries.

To go back to the previous group entries, press the **more >>** softkey followed by the **Back** softkey.

To return to the Search screen, press the **more >>** softkey followed by the **NewSearch** softkey.

Step 5 Press the **Dial** softkey to call the number. To edit the number before calling, press the **EditDial** softkey.

Step 6 To exit the directory, press the **Cancel** softkey or the **Exit** button.

Searching by Phone Number

To search the corporate directory by phone number, follow these steps:

Procedure

Step 1 Press the **Corp Dir** softkey.

The search screen displays.

Step 2 Press the **Up** or **Down** scroll button to select the Number field.

Using the keypad, enter the number. When searching by number, you can enter one or more digits to broaden or narrow your search.

Use the **<** softkey to go backward while entering search data.

To cancel a search, press the **Cancel** softkey.

Step 3 Press the **Search** softkey to start the search.

The message "Searching..." flashes on the LCD screen display.

Step 4 After the search results display, use the **Up** or **Down** scroll button to select an entry.

If the search results include more than 32 entries, you can press the **more >>** softkey followed by the **Next** softkey to display the next group of entries.

To go back to the previous group entries, press the **more >>** softkey followed by the **Back** softkey.

To return to the Search screen, press the **more >>** softkey followed by the **NewSearch** softkey.

Step 5 Press the **Dial** softkey to call the number. To edit the number before calling, press the **EditDial** softkey.

Step 6 To exit the directory, press the **Cancel** softkey or the **Exit** button.

Configuring a Local Directory

The Phone Book is a convenient way to store frequently dialed conference call numbers.

Note You can also use the Cisco Unified IP Conference Station 7936 web interface to access the Phone Book. See the "Cisco Unified IP Conference Station 7936 Web Interface" section on page 3-36.

Using the Phone Book

You can use the phone book as a directory for your frequently called conference numbers.

Opening the Phone Book

To open the phone book, press the **Ph Book** softkey.

Adding an Entry

To add an entry in the phone book, follow these steps:

Procedure

Step 1 To add an entry in the phone book, press the **New Entry** softkey.

Step 2 Using the Dialing pad, enter the last name, first name, and phone number for the new entry. Press the **Up** or **Down** scroll button to select the Last, First, or Number fields.

When entering letters, select the appropriate number key for the letter you want, and press that key the equivalent number of times for the correct letter. For example, to enter a B, press the **2** key two times, and to enter a C, press the **2** key three times.

Use the **<** softkey to go backward while entering data.

Step 3 Press the **Save** softkey to save the new entry, or press the **Exit** softkey to exit without saving.

Note You can add a maximum of 20 entries to the phone book.

Editing an Entry

To edit an entry in the phone book, follow these steps:

Procedure

Step 1 To edit an entry in the phone book, press the **Up** or **Down** scroll button to select an entry. Press the **View/Edit** softkey.

You can change or clear the selected entry using the **Change** or **Clr Entry** softkeys respectively. Press the **<** softkey to go backward when changing an entry.

Step 2 Press the **Save** softkey to save your changes, or press the **Exit** softkey to exit without saving.

Step 3 Press the **Menu** button to return to the main menu, or press the **Exit** button to return to the resting display.

Additional Features

These additional features are supported on the Cisco Unified IP Conference Station:

Note Refer to the *Cisco Unified CallManager Administration documentation* or online help in the Cisco Unified CallManager Administration application for information about configuring these additional features.

Refer to the *Cisco Unified IP Conference Station 7936 Phone Guide* for detailed steps on how to use these features.

- Meet-me Conference—The Cisco Unified IP Conference Station supports Meet-me conferences. A Meet-me conference allows other callers to dial into the conference call. A Meet-me conference requires a special conference number.
- Call Park—The Cisco Unified IP Conference Station allows you to store or "park" a call at a specified number and then use any other phone in the Cisco Unified CallManager system (for example, a phone in someone else's office or in a conference room) to retrieve the call. Call Park numbers need to be configured.
- Call Transfer—The Cisco Unified IP Conference Station supports the use of call transfer. This feature allows you to transfer the current call to another phone number.
- Call Forwarding—The Cisco Unified IP Conference Station supports call forwarding to redirect all of your incoming calls to another number. You can set up this feature on your Cisco Unified IP Conference Station by using the CFwdAll softkey. Or, you can log in to the Cisco Unified CallManager User Options web page to set up call forwarding when you are away from the Cisco Unified IP Conference Station. Refer to the *Cisco Unified IP Conference Station 7936 Phone Guide* for additional information.
- Call Pickup and Group Pickup—The Cisco Unified IP Conference Station allows you to answer a call that comes in on a telephone extension other than on your Cisco Unified IP Conference Station. When you hear an incoming call ringing on another phone, you can redirect the call to your Cisco Unified IP Conference Station by using the call pickup feature.There are two types of call pickup available on the Cisco Unified IP Conference Station. Call Pickup and Group Pickup are optional features that you can configure; the Cisco Unified IP Conference Station does not support these features by default.
  - Call Pickup—pick up incoming calls within your own group. The appropriate call pickup group number is dialed automatically when you choose this feature.
  - Group Pickup—pick up incoming calls within your own group or in other groups. You must dial the appropriate call pickup group number when using this feature.

- Remove Last Participant—The Cisco Unified IP Conference Station supports Remove Last Participant. This feature allows you to remove the last participant in a conference call.
- Join—The Cisco Unified IP Conference Station supports Join. This feature allows you to join 2 calls into a conference.

Cisco Unified IP Conference Station 7936 Web Interface

Some of the features and functions of the Cisco Unified IP Conference Station can be configured through the Cisco Unified IP Conference Station 7936 web interface.

Description of the Web Interface

The Cisco Unified IP Conference Station 7936 web interface appears in your web browser as a tri-pane window. The browser menu and toolbar appear at the top of the window, the table of contents links appear in the left navigation pane, and the linked information and configuration fields appear in the right pane. A banner also appears in the top right corner of the right pane and remains persistent through all the pages in the web interface. The banner information includes: software version, protocol type, boot load ID, application load ID, IP address, MAC address, and local number.

Note The content of the web interface is different for administrators and end-users. Both the administrator and end-user views require login passwords.

Using the Web Interface

To access the Cisco Unified IP Conference Station 7936 web interface, follow these steps:

Procedure

Step 1 Open your web browser.

Step 2 In the address field enter:

http://*IP address of the Cisco Unified IP Conference Station:<HTTP port number>*

Configuration information applies to the specific Cisco Unified IP Conference Station associated with the IP address you enter.

Note If you changed the HTTP port number, you need to use that number as a suffix to the IP address. If you did not change the HTTP port number, then you do not need to enter a suffix.

The web interface appears, and the initial login page is displayed.

Step 3 To log in as the administrator, enter the administrator password and click **Login**.

The default administrator password is **#.

Note When logged in to the IP Conference Station web pages, the web pages will time out after approximately 20 minutes of inactivity. You will then have to log back in.

Step 4 To log off, click **Administrator Logout**.

Information Available on All Web Pages

The top right portion of the Cisco Unified IP Conference Station 7936 web interface includes a separate section that displays consistent information for all of the web pages.

This section contains the following information; example text appears next to each item in the list:

- Software Version: *3.3(10.00.0004)*
- Protocol Type: *SCCP*
- Boot Load ID: *PC0503031418*
- Application Load ID: *CMTERM_7936.3-3-2-0*
- IP Address: *10.1.1.11*
- MAC Address: *00c742655892*
- Local Number: *2022*

Administrator Settings

The Administrator Settings include the following web pages:

- System Information
- Network Setup
- Phone Book
- Sounds
- Time & Date
- Diagnostics
- Passwords/HTTP Port Change
- Restore Factory Defaults

Each page is described in the sections that follow.

System Information

The System Information web page is the default page and provides the following read-only configuration information.

General settings, including:

- Language
- Local number

- DHCP
- IP Address
- IP Mask
- Router 1 Address
- Host Name
- Domain Name
- DNS Address
- Operational VLAN ID
- Admin VLAN ID
- CallManager 1 Address
- CallManager 2 Address
- CallManager 3 Address
- CallManager 4 Address
- CallManager 5 Address
- DSCP Call Control
- DSCP Configuration
- DSCP Services
- TFTP Server 1
- TFTP Server 2
- TFTP Server 3
- Alternate TFTP
- Hardware Revision
- Software Version
- DSP Revision
- HTTP Port
- DSCP Call Control
- DSCP Configuration
- DSCP Services

Sound settings, including:

- Dial Tone
- Ringer

Time/Date settings, including:

- Time
- Date

Compression information, including:

- Supported Codecs
- Current Call
- Dynamic Jitter Buffer
- Silence Suppression

Network Configuration settings, including

- Ethernet Port Configuration Mode
- Ethernet Port Configuration Speed

Network Setup

The Network Setup web page lets you change the following settings.

- DHCP—You can enable or disable DHCP for the IP Conference Station. When DHCP is enabled, the network dynamically assigns the IP address to the IP Conference Station.

Note If you disable DHCP, you must manually set the IP address, IP mask, and Router for each IP Conference Station.

- Domain Name and DNS Server IP Address—You can set the Domain Name and the DNS Server IP Address for the Cisco Unified IP Conference Station.
- Administrative VLAN ID—You can set the Administrative VLAN ID for the Cisco Unified IP Conference Station. The VLAN ID should be a number between 0 and 4094.

- TFTP Servers—You can set the alternate TFTP Server for the Cisco Unified IP Conference Station.
- Ethernet Configuration—You can set Ethernet port configuration and the Ethernet port speed for the Cisco Unified IP Conference Station.

Phone Book

The Phone Book web page lets you quickly add, delete, and edit entries. You can also dial numbers from the Phone Book.

On the Phone Book web page, you can view entries by alphabetical sequence or by numbers only.

Opening the Phone Book and Viewing Entries

To open the Phone Book web page, click **Phone Book** in the navigation pane.

To view the entries:

- By alphabetic sequence: Click one of the letter combinations, for example to view entries beginning with the letter “D”, click **DEF**.
- By phone number, click Dial **Numbers Only**.

Adding an Entry

To add an entry in the phone book, follow these steps:

Procedure

Step 1 Click the **Add** button.

Step 2 Enter the phone number, last and first name, and company name.

Note The Phone number and last name are required entries.

Step 3 Click **Add New Entry**.

Repeat these steps to add other entries to the phone book. You can add a maximum of 20 entries in the phone book.

Deleting an Entry

To delete an entry in the phone book follow these steps:

Procedure

Step 1 Select the entry you want to delete.

Step 2 Click the **Delete** button.

Step 3 Confirm the deletion by clicking the **Delete** button again.

Editing an Entry

To edit an entry in the phone book, follow these steps:

Procedure

Step 1 Select the entry you want to change.

Step 2 Click the **Edit** button.

Make any changes to the entry.

Step 3 Click the **Update** button to save your changes.

Dialing a Number in the Phone Book

To dial a number in the phone book, select the entry you want and click **Dial**. The following message appears on the web page:

```
Your call attempt from the web is successful!
```

Note You can only dial one call from the Phone Book web page at a time. Multiple calls from the Phone Book web page are not supported.

Sounds

The Sounds web page lets you select the ringer sound and the dial tone.

Opening the Sounds Web Page

To open the Sounds web page, select the entry you want and click **Sounds** in the navigation pane.

Changing the Ringer Sound

To change the ringer sound, follow these steps:

Procedure

Step 1 Select a ringer sound from the drop-down list.

There are five ringer sounds: Pro, Biz, Euro, Chirp, Bell, and also Ringer Off.

Note Selecting Ringer Off shuts off the ringer sound on the Cisco Unified IP Conference Station.

Step 2 Click **Set Ringer**.

Step 3 Click **Test Ringer** to hear the Sound you selected.

Time & Date

Normally, the time and date is automatically set from the Cisco Unified CallManager.

The Time & Date web page lets you manually change the time and date formats that appear on the LCD screen on the Cisco Unified IP Conference Station. Table 3-4 describes how to set the Time & Date from the web page.

Table 3-4 Time and Date Set From The Web Page

If you want to...	Do this...
Open the Time & Date web page	Click **Time & Date** in the navigation pane.
Change the time format	**1.** Select the 12-hour clock option button for 12-hour time format, or select the 24-hour clock option button for 24-hour time format. **2.** Click **Change** to save your changes.
Change the date format	**1.** Select the MM/DD/YY option button for a month/date/year format, select the DD/MM/YY option button for a day/month/year format, or select the YY/MM/DD option button for a year/month/date format. **2.** Click **Change** to save your changes.

Diagnostics

The Diagnostics web page lets you test network connectivity to another device. Table 3-5 describes how to use the Diagnostics web page.

Table 3-5 Diagnostics

If you want to...	Do this...
Open the Diagnostics web page	Click **Diagnostics** in the navigation pane.
Ping another device to test connectivity	**1.** Enter the IP address or name of the device you want to ping. **2.** Click **Ping.** If connectivity has been established, you should receive a reply back from the device. If the ping request times out, there is no connectivity between the devices. To resolve this problem, start by checking the physical connections on the devices.

Passwords/HTTP Port Change

The Passwords/HTTP Port Change web page lets you change the administrator and user login passwords Table 3-6 describes how to use the Passwords/HTTP Port Change web page.

Table 3-6 Passwords/HTTP Port Change

If you want to...	Do this...
Open the Password Web Page	**1.** Click **Passwords/HTTP Port Change** in the navigation pane.
Change the Administrator Password	**1.** In the Old Admin Password field, enter the current administrator password. **2**. In the New Admin Password field, enter the new administrator password. **3.** In the Confirm Admin Password field, enter the new administrator password again. **4.** Click **Change.**

Table 3-6 Passwords/HTTP Port Change (continued)

If you want to...	Do this...
Change the End User Password	**1.** Click **Change User Password**. **2.** In the Old User Password field, enter the current user password. **3.** In the New User Password field, enter the new user password. **4.** In the Confirm User Password field, enter the new user password again. **5.** Click **Change.**
Change the HTTP Port	**1.** Click **Change HTTP Port.** **2.** In the New HTTP Port field, enter a new HTTP Port number. For example: *http://IP address of Cisco Unified IP Conference Station:<HTTP port number>* The default value is 80. When you change the HTTP Port number, a user must add the HTTP port number following the IP address of a Cisco Unified IP Conference Station when accessing the web interface. **3.** Click **Change.**

Restore Factory Defaults

The Restore Factory Defaults web page lets you restore the factory default settings on the Cisco Unified IP Conference Station.

If you want to...	Do this...
Open the Restore Factory Defaults Web Page	**Caution** When you restore the factory defaults, all current settings, configuration, and data, including the phone book entries, are lost. Click **Restore Factory Defaults**. **Note** For a list of default settings, refer to the "Default Settings" section on page 3-20.

Troubleshooting the Cisco Unified IP Conference Station 7936

The Cisco Unified IP Conference Station includes diagnostic capabilities in the LCD interface to help you troubleshoot problems that might occur.

Refer to the appropriate topics in this chapter to troubleshoot the Cisco Unified IP Conference Station.

Viewing Network Statistics

You can view network statistics through the Diagnostics menu.

Note Network statistics are not available on the web interface.

To view network statistics, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select Admin Setup.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password (the default administrator password is **#) and then press the **Enter** softkey.

Step 5 Press the **Up** or **Down** scroll button to select Diagnostics, and then press the **Select** button.

Step 6 Select Network Statistics and press the **Select** button.

The following statistical information appears.

- Network stats (for example, Auto-FDX-100Mbps or 10Mbps-HDX)
- Rcv: count of frames received
- Xmt: frames transmitted
- REr: frames received in error
- BCast: broadcast frames

Use the **Clear** softkey to clear the current counts and start all counts at zero for the current session.

Step 7 Press the **Menu** button to go back to the Diagnostics menu, or press the **Exit** button to return to the resting display.

Using Ping

You use Ping to test network connectivity to another device. Ping is available through the Diagnostics menu.

To use Ping, follow these steps:

Procedure

Step 1 Press the **Menu** button.

Step 2 Press the **Up** or **Down** scroll button to select Admin Setup.

Step 3 Press the **Select** button.

Step 4 Enter the administrator password (the default administrator password is **#) and then press the **Enter** softkey.

Step 5 Press the **Up** or **Down** scroll button to select Diagnostics, and then press the **Select** button.

Step 6 Select Ping and press the **Select** button.

Step 7 Use the dialing pad to enter the IP address of the device you want to ping.

Press the **.** softkey to enter periods (.) and press the **<** softkey to correct mistakes.

Step 8 Press the **Execute** softkey.

A reply message similar to the following should display:

```
Reply from 0.0.0.0
```

Step 9 Press the **Menu** button to go back to the Diagnostics menu, or press the **Exit** button to return to the resting display.

Other Troubleshooting Information

Table 4-1 provides troubleshooting information for possible problems with the Cisco Unified IP Conference Station.

Table 4-1 Troubleshooting Information

Problem Description	Resolution
LCD screen message display	If the message “Obtaining IP Address” is persistent in the LCD screen display, check the DHCP server and check the network connections. If the message “Cannot contact TFTP Server” is persistent in the LCD screen display, check to make sure that the TFTP Server is up and running.
Poor voice quality when calling digital cell phones using the G.729 codec ⚠ **Caution** Using a cell, mobile, or GSM phone, or two-way radio in close proximity to a Cisco Unified IP Phone might cause interference. For more information, refer to the manufacturer's documentation of the interfering device.	In Cisco Unified CallManager, you can configure the network to use the G.729 codec (G.711 is the default). When the G.729 codec is used, calls between the Cisco Unified IP Conference Station and a digital cellular phone will have poor voice quality. Use the G.729 codec only when necessary. For more information, refer to the Cisco Unified CallManager application online help.
No dial tone	Check that all connections are secure and in place. Make sure all connections are correct.
Cisco Unified IP Conference Station does not ring	Check that the ringer setting is not “Ringer Off.” Check the volume level.

Table 4-1 Troubleshooting Information (continued)

Problem Description	Resolution

Cisco Unified IP Conference Station resetting	• The Cisco Unified IP Conference Station resets when it loses contact with the Cisco Unified CallManager software.
	
	The following status message appears in the LCD screen if the Cisco Unified IP Conference Station loses contact with the Cisco Unified CallManager software.
	
	`Registering`
	
	• The Cisco Unified IP Conference Station resets when it loses contact with the network.
	
	The following status message appears in the LCD screen if the Cisco Unified IP Conference Station loses contact with the network.
	
	`Configuring IP`
	
	These lost connections can be due to any network connectivity disruption, including cable breaks, switch outages, and switch reboots.

No LCD screen display	Check to make sure that the Cisco Unified IP Conference Station has power. Make sure that the power supply unit is plugged in.
LCD screen display issues	You might see beat frequencies (scan lines) in the LCD screen if you are using certain types of older fluorescent lights in your building. Moving the Cisco Unified IP Conference Station away from the lights, or replacing the lights, should resolve the problem.
DTMF delay	When you are on a call that requires keypad input, if you press the keys too quickly, some of them might not be recognized.

Technical Specifications for the Cisco Unified IP Conference Station 7936

This appendix describes the technical specifications for the Cisco Unified IP Conference Station.

Physical and Operating Environment Specifications

Specification	Value or Range
Operating temperature	0°C to 40°C (32° to 104°F)
Operating relative humidity	20% to 85% (non-condensing)
Storage temperature	-30°C to 55°C (-22° to 131°F)
Height	31.5 cm (12 1/2 in.)
Width	30.2 cm (12 in.)
Depth	5.7 cm (2 1/4 in.)
Weight	0.8 kg (1 3/4 lb.)

Specification	Value or Range
Power	• AC/DC adapter (100-240 V~, 50-60 Hz, 500 mA) • Power Interface Module (PIM) • Country Cord (orderable)
Conference Room Coverage	20 ft. by 30 ft. (with external microphones)
Audio Range	300Hz to 3500Hz (narrow band support)
Loudness	86.5dB at 0.5 meters
Cables	• One 6-ft. CAT 5 cable • One 25-ft. CAT 5 cable
Cable Distance Requirements	As supported by the Ethernet Specification, each Conference Station must be within 100 meters (330 feet) of a wiring closet.

Cable Specifications

- Keyed RJ-45 plug for the 25-ft. CAT 5 cable connection on the bottom of the IP Conference Station unit
- Keyed RJ-45 plug for the 25-ft. CAT 5 cable connection on the PIM
- RJ-45 plug for the 6-ft. CAT 5 cable connection on the PIM
- 30-volt power connector for power connection on the PIM

Translated Safety Warnings

Refer to the *Regulatory Compliance and Safety Information for the Cisco Unified IP Phone 7900 Series* for translations of the safety warnings required for the proper installation of the Cisco Unified IP Conference Station 7936.

The *Regulatory Compliance and Safety Information for the Cisco Unified IP Phone 7900 Series* is available at the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm

I

K

L

M

N

P

S

T

V

W