VCON

Group Videoconferencing Systems

HD1000

Set-Top Videoconferencing System and Integrator's Codec
Version 2.5

User's Guide

CAUTION:
To comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules, only HD1000 original equipment should be used. All cables used to connect the HD1000 and peripherals must be shielded and grounded. Operation with non-certified accessories or non-shielded cables may result in interference to radio or television reception

Limited Warranty

VCON Ltd. warrants the Product identified by the serial number indicated on the HARDWARE either accompanying the SOFTWARE or purchased separately will be free from defects in materials and workmanship under normal use and service for a period of ONE (1) year from the date of receipt. This Limited Warranty shall not apply to any product that in the opinion of VCON Ltd. has not been installed or upgraded according to accompanying documentation from VCON Ltd. or been subject to misuse, misapplication, negligence r accident while in the hands of the purchaser. VCON Ltd. warrants that SOFTWARE will perform according to accompanying user documentation for a period of 90 (ninety) days from the date of receipt; replacement SOFTWARE will be warranted for 90 (ninety) days from the date of receipt.

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LIABILITIES VCON's entire liability and the Purchaser's exclusive remedy shall be at VCON's option, either return of the price paid or repair/replacement of the Product not meeting VCON's declared Limited warranty. VCON or its suppliers shall not be liable in any event to anyone for any indirect, incidental, consequential, special or exemplary damages including without limitation damages for loss of business profits, business interruptions, business information or other pecuniary loss arising out of the use of or inability to use the said Product even if advised of the possibility of such damages. In any case, VCON's entire liability under any provision of this agreement shall be limited to the amount actually paid by the Purchase for the Product.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this system that are not expressly approved by VCON Ltd. may void the user's authority to operate the equipment.

Safety Notice

Do not open the HD1000 unit. There are no user-servicable parts inside. Opening the unit voids the warranty and can also cause injury. Please refer servicing to VCON-trained service personnel.

When you use the HD1000 system, observe the following safety guidelines:

1. Make sure the attached accessories are electrically rated to operate with the AC power available in your location.

2. Plug the accessories' power cables into properly grounded power sources.

3. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension, use a three-wire cable with properly grounded plugs.

4. Make sure that nothing rests on the cables and that the cables are not located where they can be stepped on or tripped over.

5. Do not spill food or liquids on the system or accessories.

6. Keep the system away from radiators and heat sources, and do not block cooling vents.

7. Do not run the equipment in an environment with ambient temperature higher than 35°C or lower than 10°C.

FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC rules.

The FCC Wants You to Know

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

About This User's Guide

This User's Guide explains how to videoconference with the VCON HD1000. The chapters emphasize a how-to approach, and include detailed instructions for participating in conferences and getting the most out of the system's capabilities.

The following chapter summary briefly describes this guide's contents:

Chapter 1	**Welcome to HD1000**	
	Introduction to the HD1000 and its components.	
Chapter 2	**Setting Up HD1000**	
	Instructions, drawings and cautions describing how to connect HD1000's components and accessories.	
Chapter 3	**Getting Started**	
	Instructions for starting HD1000, navigating within dialog boxes, and making calls with the Manual Dialer.	
Chapter 4	**Videoconferencing Basics**	
	Instructions for answering calls; creating, editing and deleting Phone Book entries; using Phone Book entries to start calls; and calling through a gateway.	
Chapter 5	**Network Configuration**	
	Setting up HD1000's network configuration and various communication properties.	
Chapter 6	**Video and Audio Adjustments**	
	Adjusting the video (monitors, cameras, display settings) and audio quality of videoconferences.	
Chapter 7	**Streaming Media**	
	Description of the HD1000's Streaming feature, including setting its configuration and starting a streaming session.	
Chapter 8	**Data and Application Sharing**	
	Procedures for setting up data sharing and opening a data connection with a remote party.	
Chapter 9	**Web-Based Remote Management**	
	Instructions for setting various HD1000 configuration properties over the Internet from a remote computer.	

VCON Technical Support

This User Guide and the HD1000 Online Help were designed to help you use your VCON Group Videoconferencing system easily and to enjoy its many features.

If a situation occurs that is not covered by the supplied documentation, contact your local VCON distributor, and request assistance from their VCON-trained technical support department. Please describe the problem, device, and PC operating system (if applicable), and any other relevant details.

Also, you may access the Technical Support section of the VCON website (www.vcon.com/support/index.shtml) in order to check its knowledge base or initiate other customer support processes:

Page	Type of support
Support Notes	Troubleshoot or receive technical information about specific VCON products.

Page	Type of support
Downloads	Download a new software release or a free product evaluation.
Demo Numbers	Test your videoconferencing system.
License Key Requests	Request a permanent license key for your organization's MXM(s).

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1 WELCOME TO HD1000

1.1 High-Quality Videoconferencing Codec

The HD1000 is a high-quality videoconferencing engine for integration into a custom multimedia room environment. When combined with external audio mixers, video switches and touch-screen control devices, product developers may create almost any rich media communication application for industries such as health care, education facilities, and corporate boardrooms. The HD1000 includes a suite of integration APIs (HDK) which add life-like video and crisp, clear audio to your products or services. You may download the HDK Programmer's Guide from VCON's website (www.vcon.com>Documentation>Manuals).

The types of functions which the HDK serial and IP-based APIs implement include:

- Call initiation
- Call termination
- Set call parameters
- Set system parameters
- Streaming control

- Set network QoS parameters
- System reboot
- Multicast settings
- Debugging messages

1.2   Set-top Conferencing System

The HD1000 is a high-quality set-top conferencing system combining videoconferencing and streaming video. The HD1000 provides several distinctive attributes and features which makes it an ideal solution for many group videoconferencing environments:

❑   **TV-like video and crisp audio quality**
The HD1000 includes VCON's award-winning technology and solutions for maintaining high quality during video, audio and control transmissions. It supports H.261, H.263, H.263+, H.263++, and 60 bps interlaced video mode. It also supports G.711, G.722, G.723.1, G.728 and G.729 audio transmission. Features such as Automatic Buffering, Automatic Lip Synch Enabling, and Acoustic Echo Cancellation (AEC) provide superior performance.

❑   **Variety of Single and Dual Display Configurations**
The HD1000 supports various single and dual monitor setups of TV-type and VGA-type monitors (VGA, XGA, SVGA). The dual TV and XGA+TV configurations allow the streaming of People and Content video using H.239 or DuoVideo technology.

In a dual monitor configuration, one monitor (TV or VGA-type) displays the remote video and the other monitor (TV) displays local video and the system interface.

❑   **System Security**
Administrators may restrict access to the system's configuration, prevent unauthorized outgoing calls, or lock the system completely.

The HD1000 supports the H.235 protocol, which provides secure signaling, video and multimedia communications in an H.323 conferencing environment.

❑   **Quality of Service (QoS)**
VCON's PacketAssist™ Architecture preserves optimum quality of your videoconference according to available bandwidth and network traffic. The HD1000 applies mechanisms such as IP Precedence to prioritize the video, audio and control bits, and DiffServ to transfer packets according to the HD1000's specific needs.

❑ **Multicast and Unicast Streaming**
The HD1000 applies HD Simulcast™ technology, which provides multiple ways of streaming live conferences out over your organization's network and over the Internet, where it can be viewed by any authorized person with a streaming viewer. Users can simultaneously stream a presentation and live video to remote sites. The streaming functions may be accessed through the HD1000's Web-based Management, allowing network administrators to begin and end streaming, freeing the conference leader (Chair) to control the meeting.

❑ **Participation in Interactive Multicast**
Using VCON's Interactive Multicast, all parties in the videoconference see and hear the same video, audio, and data sharing. HD1000 users may temporarily receive the floor, in which their video and audio are seen by the other parties until the floor returns to the session's controller (*Chair*).

❑ **Remote Management Through a Web Browser**
From any computer on the same network as your HD1000, several functions may be accessed through Microsoft® Internet Explorer.

❑ **Media Xchange Manager®Support**
VCON's Media Xchange Manager® (MXM) provides centralized management of an organization's videoconferencing network. If the HD1000 logs into an MXM server, it receives gatekeeper services, bandwidth management, remote call initiation, and telephony functions, such as call forwarding, call pickup, call transfer, ad-hoc videoconferencing, and IP-to-ISDN connection through a gateway.

❑ **Remote Software Upgrade**
The HD1000's software version may be upgraded, using the HD Upgrade Utility, from an MXM (if the HD1000 is logged into it) or another computer at a remote location.

❑ **Multi-language Interface**
The main HD1000 interface and web management program provide menus, commands and options in several languages.

❑ **Call Logging**
The HD1000 can keep a record of outgoing and incoming calls, for administrative purposes such as call billing and network usage analysis.

1.3   HD1000 System Components

The HD1000, consisting of a main unit and remote control set, joins with separately purchased display monitor(s) and camera to constitute a complete set-top conferencing appliance. Optional accessories are available for enhancing the abilities of the standard system (see "Additional Accessories" on page 5). The software is preinstalled.

HD1000 Main Unit

The Main Unit contains the video card, software for operating the system, and various connectors for connecting the other components and accessories.
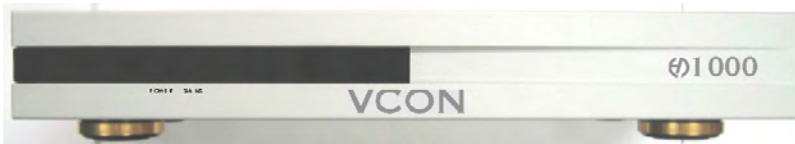
Remote Control

The hand-held remote control provides quick and easy access to all functions. Infrared signals are sent out from the bulb at the top of the remote control and are picked up by the sensor on the HD1000 unit.

For details about the remote control buttons, see "The Remote Control" on page 35.

Additional Accessories

The following items are required for videoconferencing and may be purchased through your local VCON distributor.

TV Monitor	Consult with your VCON distributor for recommendations regarding monitors.
Pan/Tilt/Zoom Cameras	PTZ cameras are controlled through the system software, either from the hand-held remote control or from a remote PC using the Web-based Management program. You can pan, tilt and zoom the camera in many directions during videoconferences. Up to six pre-set positions can be set for instant recall through the remote control.

The following accessories are supported by the HD1000 and may be purchased through your local VCON distributor.

Document Camera	A document camera displays documents that are placed on the camera's slide. High-quality resolution is guaranteed by the S-Video connection between the document camera and the HD1000.
Speakers	A three-piece computer audio system that delivers a high level of power (200 W) and accuracy. The system consists of two speakers and a subwoofer.
IR Receiver	The HD1000 main unit has a built-in infrared (IR) receiver for receiving command signals from the remote control. However, the HD1000 main unit may be located at a different location than the TV monitor(s). Therefore, an infrared (IR) receiver increases the range from which the HD1000 receives command signals from the remote control, which then transfers those signals to the HD1000.

2 SETTING UP HD1000

This chapter explains how to set up the HD1000 and connect accessories.

2.1 Package Checklist

Before setting up the HD1000 for the first time, carefully unpack its package. Check that the listed items are included, in accordance with the supplied product.

If anything is missing or damaged, contact your local VCON distributor as soon as possible.

❑ HD1000 main unit

❑ Microphone and cable

❑ Hand-held remote control

❑ Power supply 90-264 VAC, 60W, 5V-7A, 12V-3A

❑ Dual RCA cable (red/white)

❑ Dual RCA cable (yellow/white)

❑ Serial-to-dual terminal cable

❑ Communication cable RJ-45

❑ RCA-to-RCA cable (yellow)

❑ MiniDIN-to-MiniDIN 4-pin cable (2 units)

❑ Camera control cable (DB-9 to MiniDIN-8)

❑ Power cord 10A/250V or 10A/110V (according to region)

❑ HD1000 User's Guide

2.2   Connecting the Basic Components

CAUTION   Before connecting accessories, turn off the power and disconnect the system and the accessory (if applicable) from their power supplies.

Carefully unpack the Main Unit, and position it on a stable horizontal area.

See the following sections for instructions about connecting:

* Single Monitor - TV and VGA-type

* Two TV Monitors

* Tabletop Microphone

* Camera (purchased either separately or as an optional accessory from VCON)

* LAN

* Power Supply
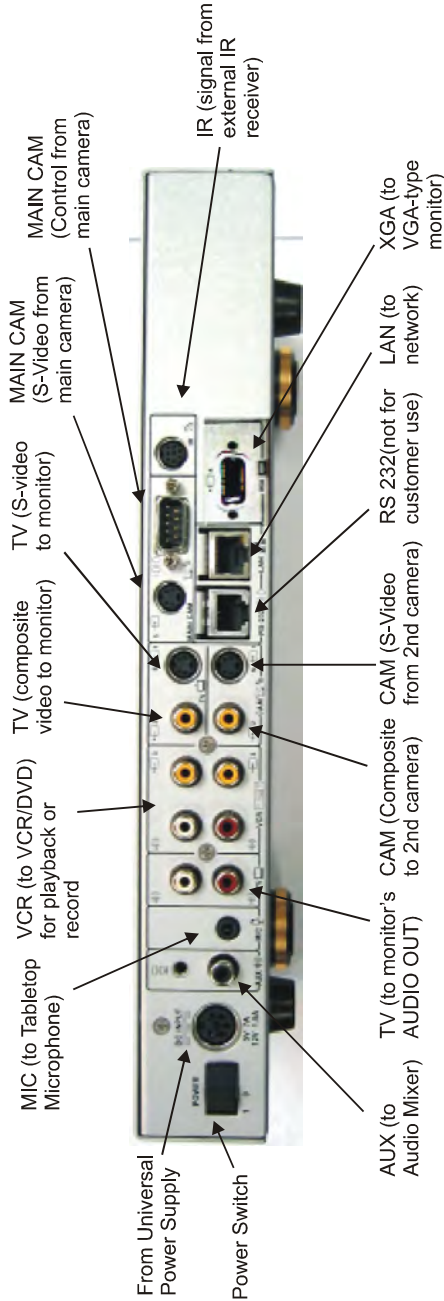
HD1000 Rear Panel Connections

IR (signal from external IR receiver)

MAIN CAM (Control from main camera)

XGA (to VGA-type monitor)

MAIN CAM (S-Video from main camera)

LAN (to network)

TV (S-video to monitor)

RS 232(not for customer use)

TV (composite video to monitor)

CAM (S-Video from 2nd camera)

VCR (to VCR/DVD) for playback or record

CAM (Composite to 2nd camera)

MIC (to Tabletop Microphone)

TV (to monitor's AUDIO OUT)

AUX (to Audio Mixer)

From Universal Power Supply

Power Switch

Connecting a Single Monitor

The HD1000's video may be displayed on either a TV monitor or VGA-type monitor (VGA/SVGA/XGA), such as Plasma or LCD monitors.

Connecting a TV Monitor

➤ **To connect the TV monitor to the HD1000**

1. Place the unplugged TV on the cart, if provided, or on a sturdy surface near the HD1000 main unit.

2. Connect the S-Video cable (CAB90051) between the TV's Video In connector and the HD1000's **TV1** connector.

3. Connect the Audio cable between the TV's Audio In connectors and the HD1000's **AUDIO IN** connectors (Left=White, Right=Red).
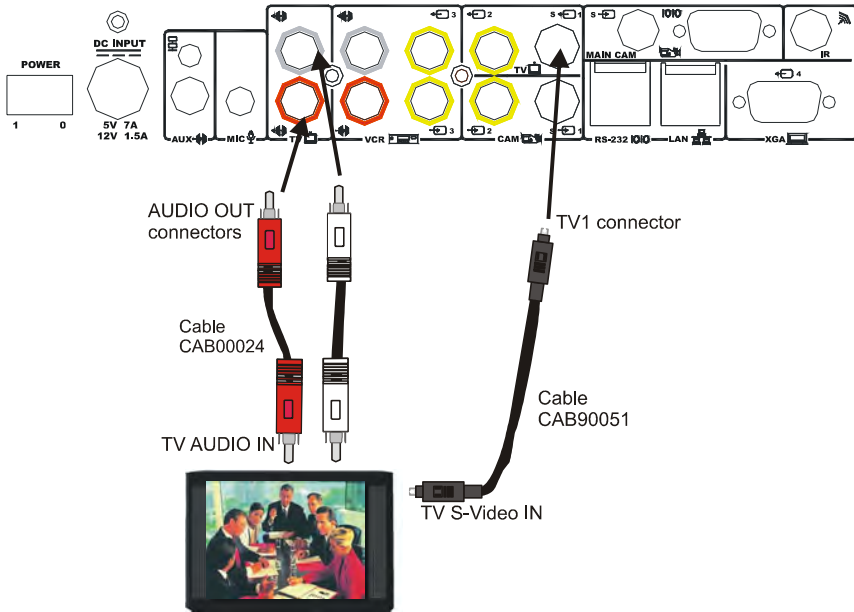
Connecting HD1000 to a Single TV Monitor

4. After starting the HD1000, press <Menu>. The main Menu appears. Select **Monitor**.
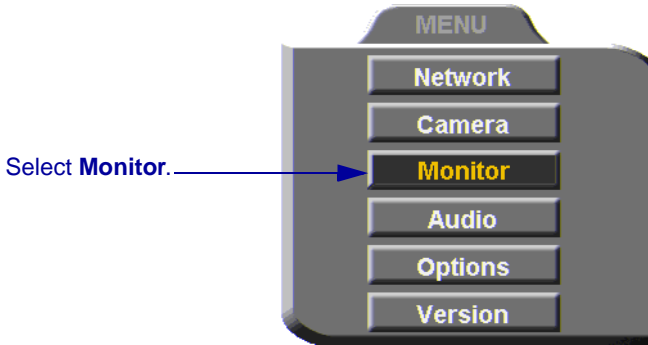
Select **Monitor**.

5. To view video and HD1000 menus and dialog boxes, you must define the monitor configuration. If this configuration is not defined correctly, your monitor will be blank. In the Monitor dialog box, set the following properties:

Monitor Mode   Select **TV1**.

Select **TV1**
Monitor Mode.
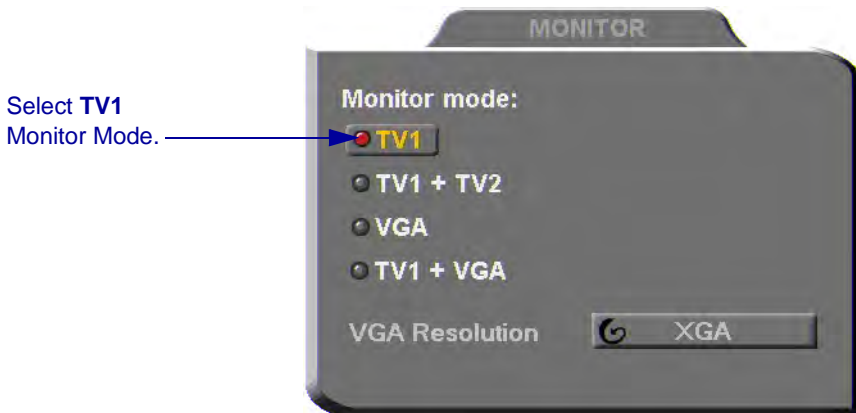
6. Press <OK> to apply the changes and close the dialog box.

Connecting a VGA-type Monitor

To enable the use of a VGA-type monitor with the HD1000 for the first time, you must first connect the HD1000 to a TV monitor and change the Monitor settings.

➤ **To connect a VGA-type monitor to the HD1000**

1. Place the unplugged monitor on the cart, if provided, or on a sturdy surface near the HD1000 main unit.

2. Connect the monitor's VGA cable (15-pin) to the HD1000's **XGA** connector.

3. Connect the Audio cable between the monitor's Audio In connectors and the HD1000's **AUDIO IN** connectors (Left=White, Right=Red).
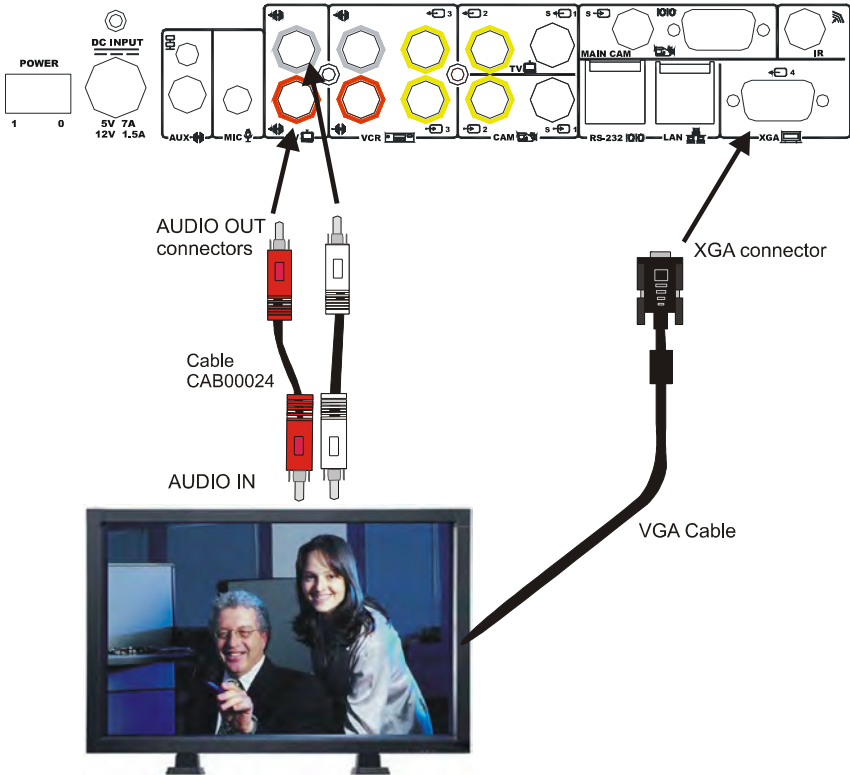
Connecting HD1000 to a Single VGA-type Monitor

4.   After starting the HD1000, press <Menu>. The main Menu appears. Select **Monitor**.

Select **Monitor**.

5.   To view video and HD1000 menus and dialog boxes, you must define the monitor configuration. If this configuration is not defined correctly, your monitor will be blank. In the Monitor dialog box, set the following properties:

Monitor Mode   Select **VGA**.

VGA Resolution   Choose **VGA**, **SVGA**, or **XGA**.

Select **VGA**
Monitor Mode.

Select **VGA**,
SVGA, or **XGA**
VGA Resolution.
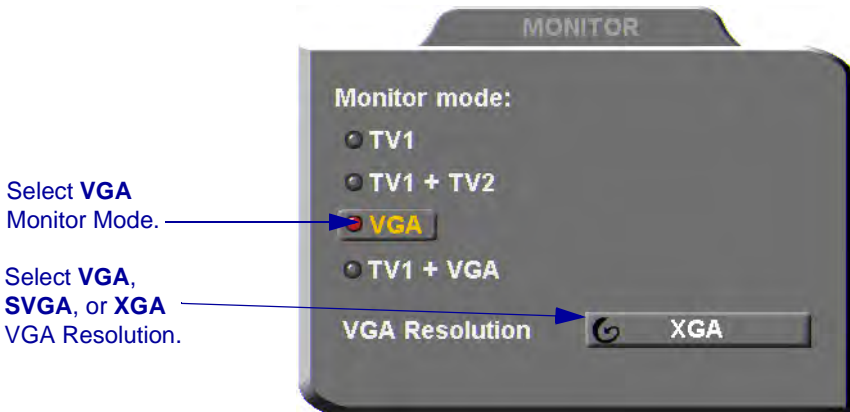
6.   Press <OK> to apply the changes and close the dialog box.

7. Disconnect the TV monitor from the HD1000.

Connecting a Dual Monitor Configuration

HD1000 supports the use of two monitors to display both parties on full screens during videoconferences. This configuration is called *Dual Monitor*.

A Dual Monitor configuration consists of:

● 2 TV monitors - An S-Video TV monitor displays local video and the application interface, and a Composite TV monitor displays remote video.

-or-

● 1 VGA-type monitor and 1 TV monitor - A VGA-type monitor (such as Plasma or LCD) displays remote video and the application interface, and an S-Video TV monitor displays local video.

VCON supplies two types of cables to connect between the Main Unit and the VIDEO-IN connectors on the TV monitor. See the illustration on the next page.

Connecting Dual TV Monitors

➤ **To connect dual TV monitors**

1. Place the unplugged TVs on the cart, if provided, or on a sturdy surface near the HD1000 main unit.

2. Connect the supplied video cables between the HD1000 and the TV:

S-Video Connection	Connect the S-Video cable (CAB90051) between the system's **TV1** connector and the Video In connector of the TV which will display the user interface and local video.
Composite Connections	Connect the Composite cable (CAB72010) between the Video In connector of the TV which will display remote video, and the system's **TV2** connector.

3. Connect the Audio cable between the TV's Audio In connectors and the system's **AUDIO IN** connectors (Left=White, Right=Red).
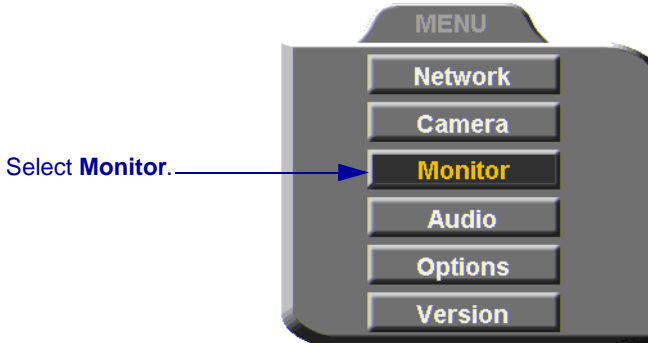
Connecting HD1000 to a Dual TV Monitor Configuration

To view video and HD1000 menus and dialog boxes, you must define the monitor configuration. If this configuration is not defined correctly, your monitors will be blank.

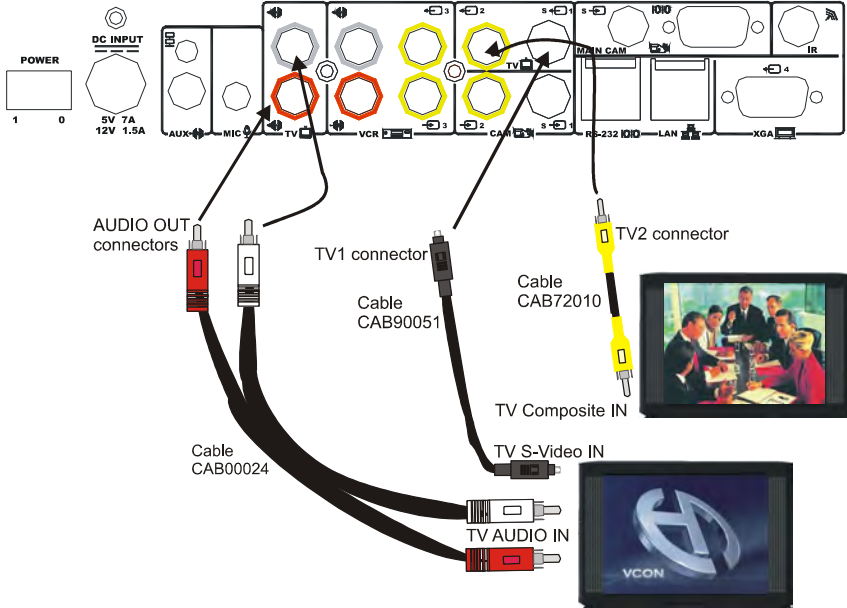## Connecting a Dual VGA-type Monitor and TV Monitor Configuration

➤ **To connect a VGA monitor and a TV monitor**

1. Place the unplugged monitors on the cart, if provided, or on sturdy surfaces near the HD1000 main unit.

2. Connect the video cables between the HD1000 and the TV:

VGA connection   Connect the VGA-type monitor's control cable to the **XGA** connector on the HD1000's rear panel.

S-Video Connection   Connect the S-Video cable (CAB90051) between the HD1000's **TV1** connector and the Video In connector of the TV which will display the user interface and local video.

3. Connect the Audio cable between the TV's Audio In connectors and the system's **AUDIO IN** connectors (Left=White, Right=Red).
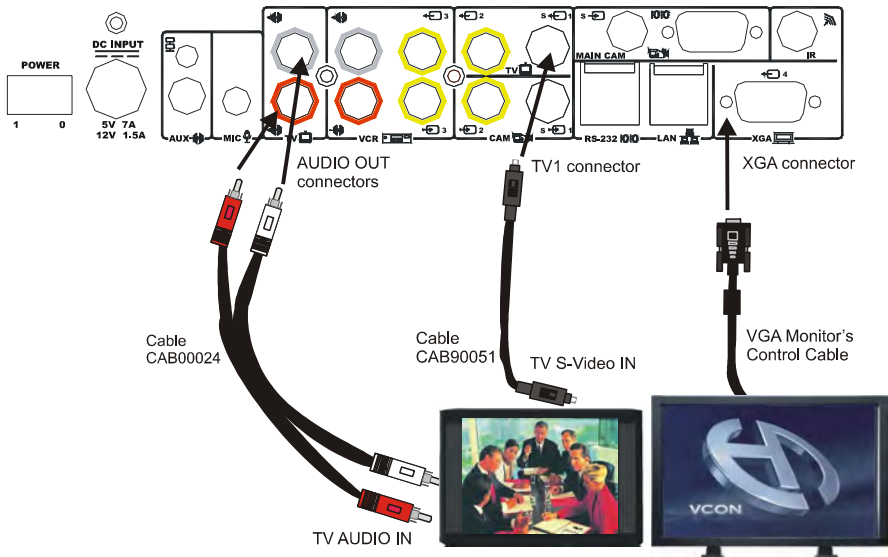
Connecting HD1000 to Dual VGA + TV Monitor Configuration

➤ **To define the dual monitor configuration in the HD1000**

1. After starting the HD1000, press <Menu>. The main Menu appears. Select **Monitor**.
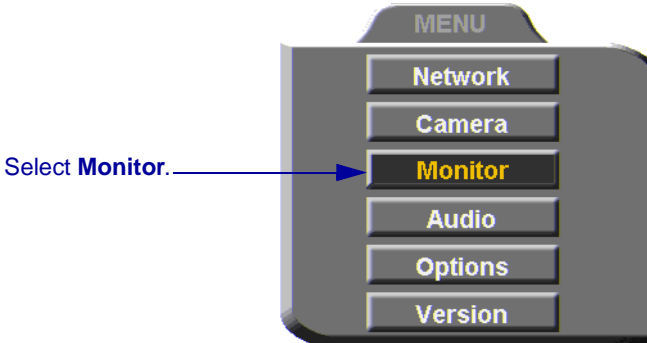
Select **Monitor**.

2. In the Monitor dialog box, set the following properties:

Monitor Mode Select **TV1 + TV2** or **TV1 + VGA**, depending on whether two TV monitors or a TV and VGA monitor, respectively, are connected to your HD1000.

VGA Resolution Choose the resolution for the VGA monitor of the configration.

Select **TV1 + TV2**
or **TV1 + VGA**
Monitor Mode.

If one monitor is VGA:
Select **VGA**, **SVGA**,
or **XGA** VGA
Resolution.
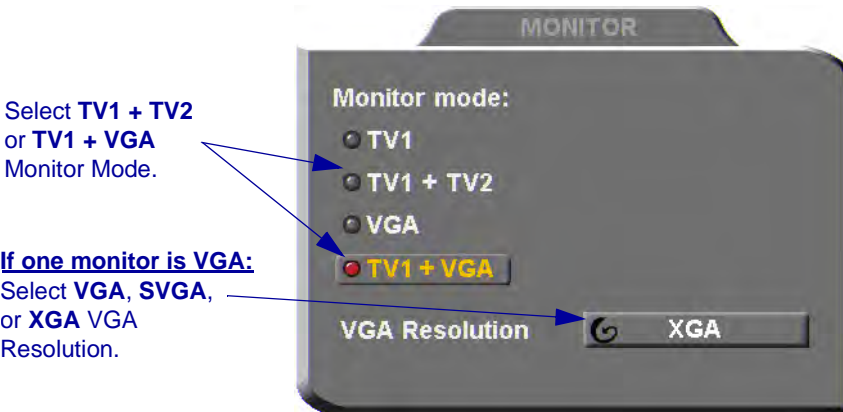
3. Press <OK> to apply the changes and close the dialog box.

Connecting the Tabletop Microphone

➤ **To connect the Tabletop microphone to the HD1000**

1. Connect the microphone to the **MIC** connector on the HD1000.

2. Place the microphone on the conference table with the cable stretching toward the HD1000. It is recommended that the microphone be placed at least 2 m (7 ft) from the TV speakers.
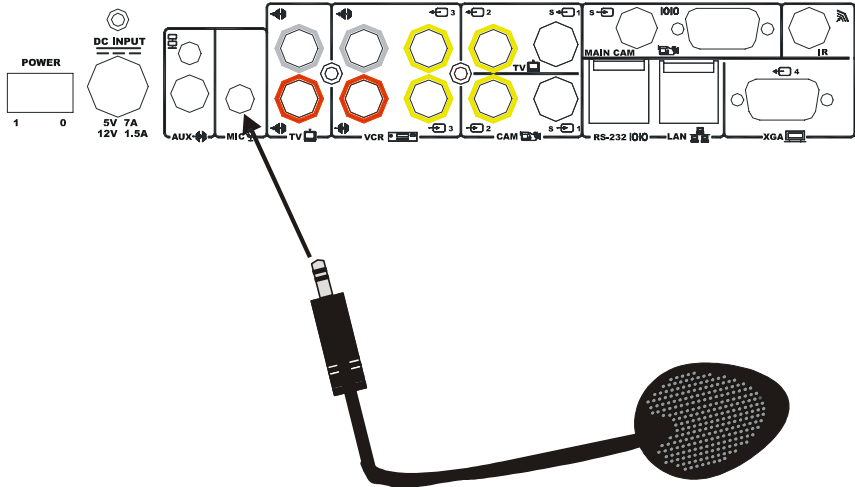
Connecting the Tabletop Microphone to the HD1000

Connecting the Main Camera

The camera may be purchased separately or as an optional accessory from VCON.

➤ **To connect the main camera to the HD1000**

1. Connect the 4-pin MiniDIN-MiniDIN cable between the HD1000's **MAIN CAM S-VIDEO** port and the camera's **S-VIDEO OUT** connector.

2. Connect the Camera Control cable between the HD1000's **IOIO** port and the camera's **RS232C IN** connector.

3. Connect the camera's power cord between an electricity source to its power supply, and then connect the power supply to the camera's **DC IN** connector.

To ensure that the HD1000 displays the correct NTSC/PAL video format, make sure that the camera is turned on before starting the HD1000.
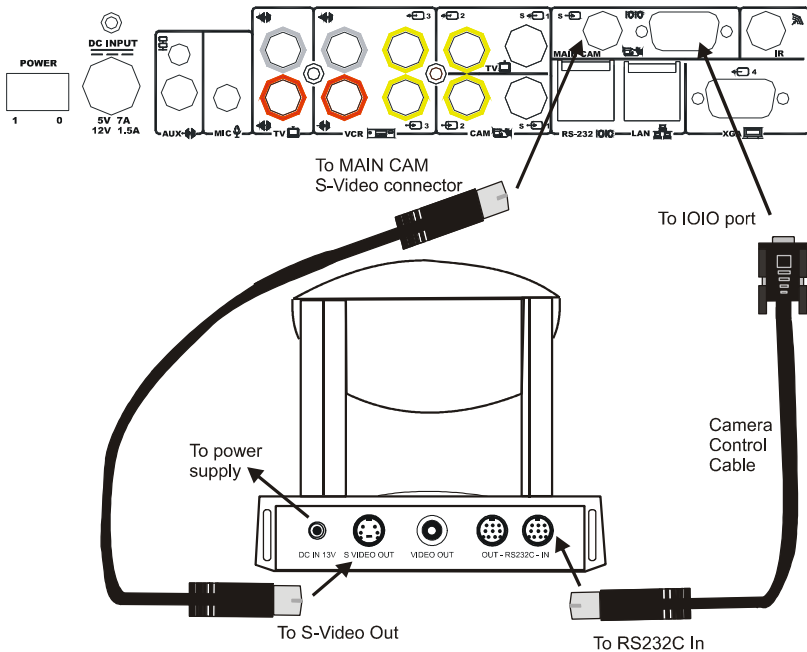
Connecting the Main Camera to the HD1000

Connecting the LAN

A standard RJ-45 interface for connection to your LAN is provided.

➤ **To connect a network (LAN) cable to the system**

❑ Connect the LAN cable between the LAN port (RJ-45) on the rear of the system and to the LAN socket on the wall.
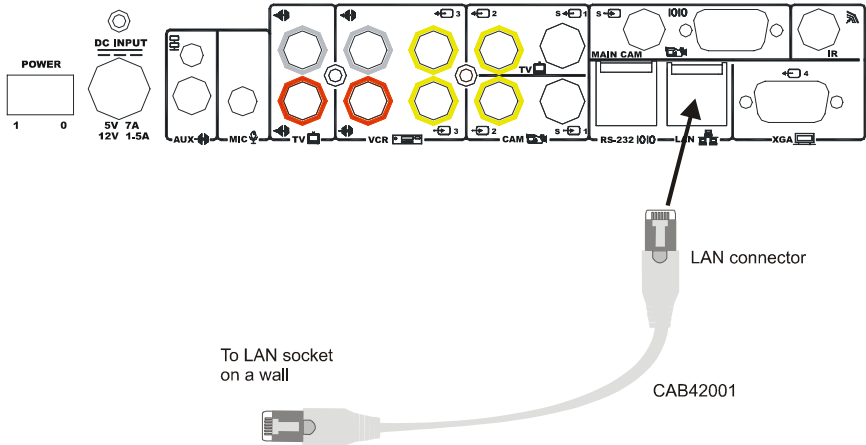
HD1000 to LAN Connection

After you turn on the HD1000, check that the network connection is correct.

➤ **To check for correct network connection**

1. Press <Status>. The Status dialog box opens.

2. Press the green **DIAGNOSE** SoftKey. The Diagnostics dialog opens.

    If the connection to the network is working properly, the Diagnostics dialog box displays the line speed of the connection.

Select **DIAGNOSE** to view a diagnostic report.

LAN STATUS

Station name:	HD0022
User number:	1001
IP address:	172.20.10.204
Gatekeeper:	172.20.10.205
MXM server:	172.20.10.205
Last call duration:	00:00:13

ERASE PBK   LOAD DEFAULTS   REBOOT

DIAGNOSTIC

* Ethernet speed: 100 MB Full duplex.

Connecting to an Electrical Source

After connecting the HD1000 to the accessories, connect the system to the power supply. A 100-250VAC/50-60Hz universal power supply is supplied in the HD3000 package.

➤ **To connect the HD1000 to a power supply**

1.   Insert the power supply's DIN connector (6-pin) to the DC Input socket on the rear of the system.

2.   Insert the power cable plug into the receptacle on the power supply.

3.   Insert the other plug of the power cable into a grounded AC wall socket.

4.   Press the **Power** button next to the AC Input socket to turn on the HD1000.
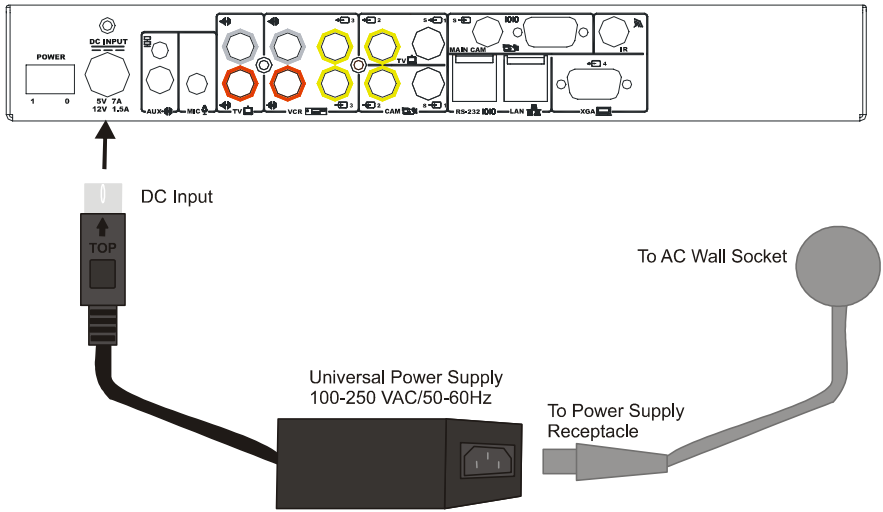
Connecting HD1000 to the Electrical Power Source

2.3   Connecting Optional Accessories

See the following sections for instructions about connecting:

- Multiple cameras

- DVD/VCR for playback to the conference

- VCR for recording the conference

- External IR Receiver (if the main unit is located where it cannot receive command signals from the remote control)

Connecting Multiple Cameras

HD1000 supports the use of up to two additional cameras, which may be connected and controlled through the remote control and/or the web management program.

➤ **To connect additional cameras**

1. Connect the 4-pin MiniDIN-MiniDIN cable between the HD1000's **MAIN CAM S-VIDEO** port and the camera's **S-VIDEO OUT** connector.

2. Connect the Camera Control cable between the HD1000's **IOIO** port and the camera's **RS232C IN** connector.

3. Connect a Composite video cable between the Video connector of the camera and the system's **CAM2** connector.

If you are using only one additional camera, we recommend that you use the S-Video connection, which supplies higher quality video.

Do not connect the S-Video and Composite cables to the same camera, which causes degraded video quality.
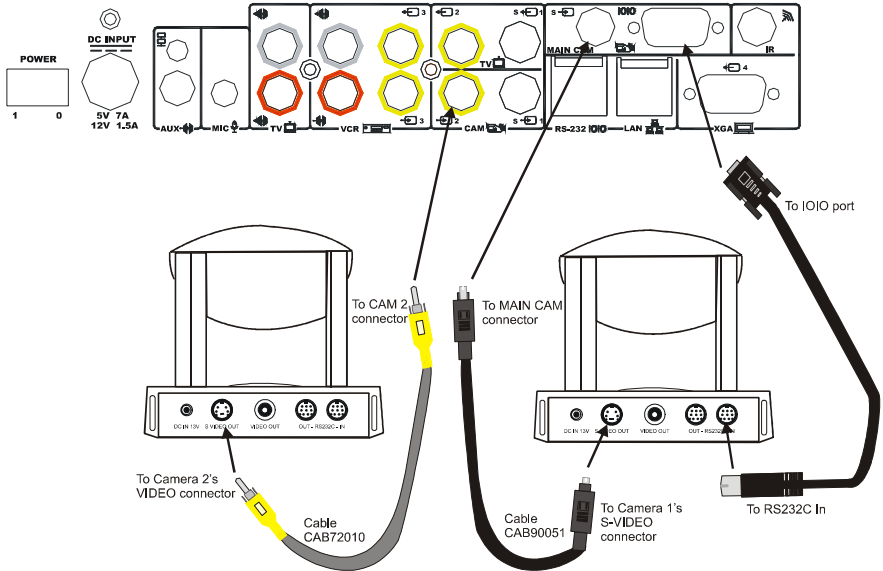
Connecting HD1000 to Multiple Cameras

Connecting a DVD/VCR for Playing Back Videoconferences

The HD1000 supports the playback of a DVD or videocassette to a videoconference.

For specific instructions on installing and operating the DVD or VCR, see its accompanying user's guide.

➤ **To connect a DVD or VCR for playback**

1. Connect the video RCA cable (of cable CAB00042) between the VIDEO OUT connector of the DVD/VCR and the HD1000's lower **VCR 3** (VIDEO IN) yellow connector.

2. Connect the audio RCA cable (of cable CAB00042) between the AUDIO OUT connector of the DVD/VCR and the HD1000's lower **VCR AUD** (In) red connector.
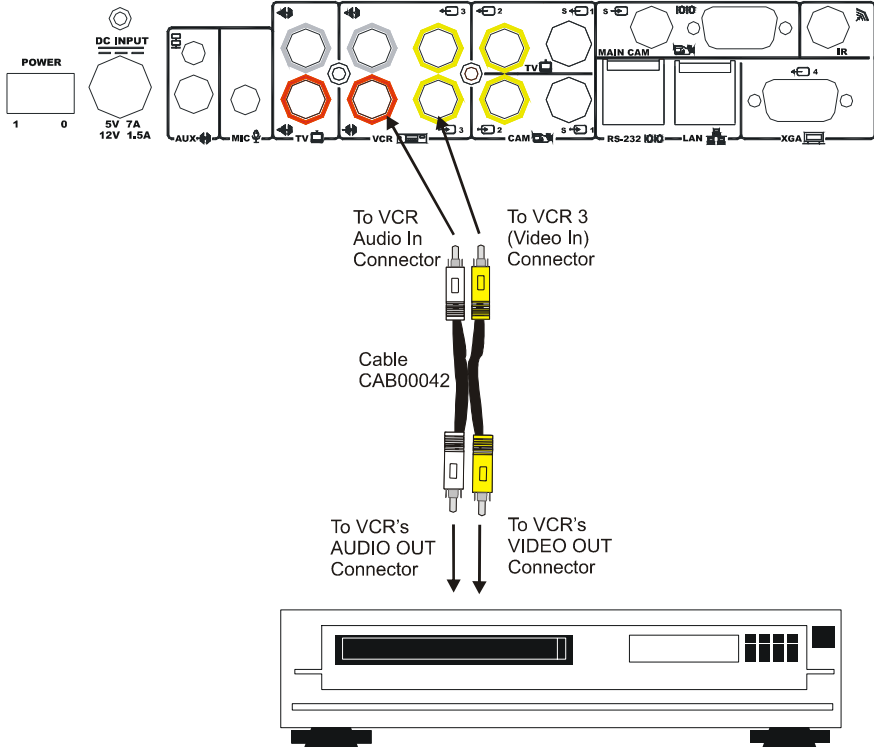
Connecting a DVD or VCR to the HD1000 for Playback

3. Connect the DVD/VCR to its power supply and insert the videocassette.

4. Navigate to the HD1000's Audio configuration. Define the following:

Audio Input   Select **Tabletop Mic**.

VCR Audio Mix   Select **VCR Playback**.

In this configuration, the remote side will hear a mix of the microphone (MIC) input and the HD1000's VCR Audio Input. See "Selecting a Microphone" on page 87 and "Setting Mixing Modes" on page 89 for instructions on how the playback can be mixed in with the videoconference.

Set Audio Input to **Tabletop Mic**.

Set VCR Audio Mix to **VCR Playback**.
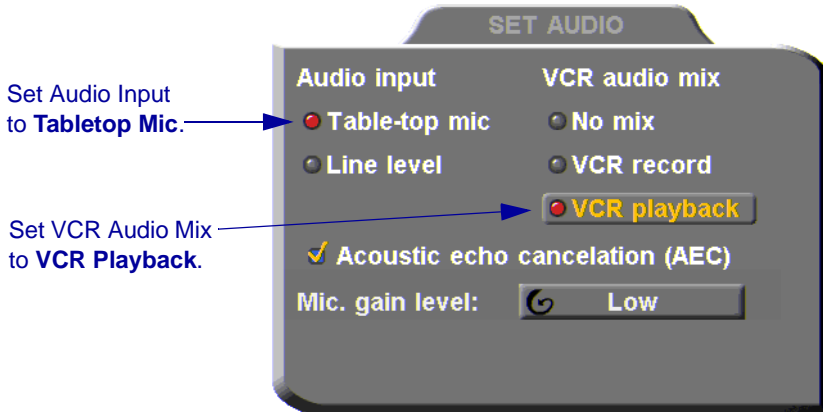
Audio Configuration for VCR Playback

5. On the remote control, press <CAM> to open the Camera configuration. Select the VCR icon.

Select the VCR icon.

Connecting a VCR for Recording Videoconferences

The HD1000 supports the recording of a videoconference.

> For specific instructions on installing and operating the VCR, see its accompanying user's guide.

➤ **To connect a VCR for recording**

1. Connect the VCR's video RCA cable between the VIDEO IN connector of the VCR and the HD1000's upper **VCR 3** (VIDEO OUT) yellow connector.

2. Connect the VCR's audio RCA cable between the AUDIO IN connector of the VCR and the HD1000's upper **VCR AUD** (Out) white connector.

   See the illustration on the following page.

3. Connect the VCR to a power source. Insert an empty videocassette.

4. Navigate to the HD1000's Audio configuration. Define the following:

VCR Audio Mix   Select **VCR Record**

   In this configuration, the remote side will hear a mix of the remote and the local video. See for instructions on how the recording can be mixed in with the videoconference.

Set VCR Audio Mix to **VCR Record**.
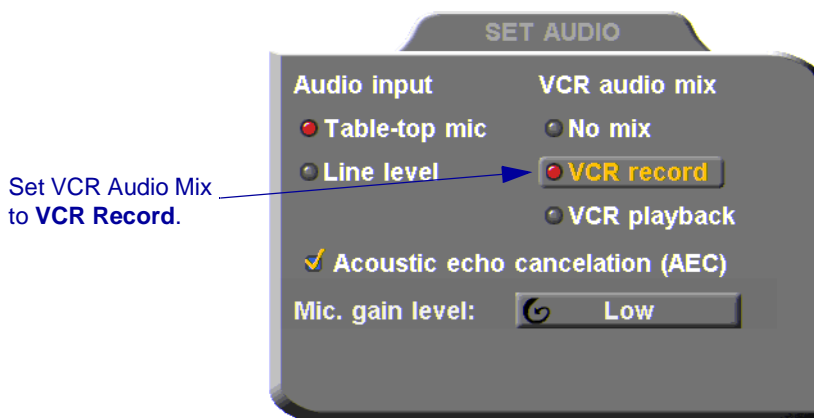
Audio Configuration for VCR Recording
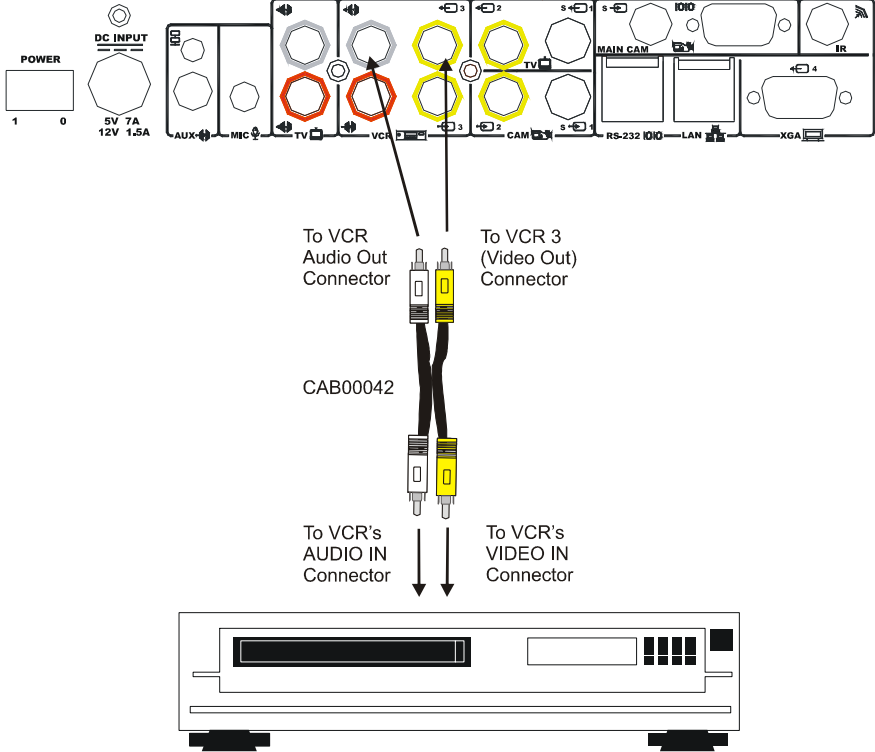
Connecting a VCR to the HD1000 System for Recording

Connecting the External IR Receiver

The HD1000 main unit has a built-in IR receiver for receiving command signals from the remote control. However, you may want to place the HD1000 main unit in a location that's not visible to your meeting room's occupants. To set up this type of room environment, an external IR receiver is available as an option.

Connect and place the external IR receiver so it receives signals in a straight line from the remote control.

➤ **To connect an external IR receiver to the HD1000**

❑ Connect the receiver's MiniDIN connector to the HD1000's IR connector.
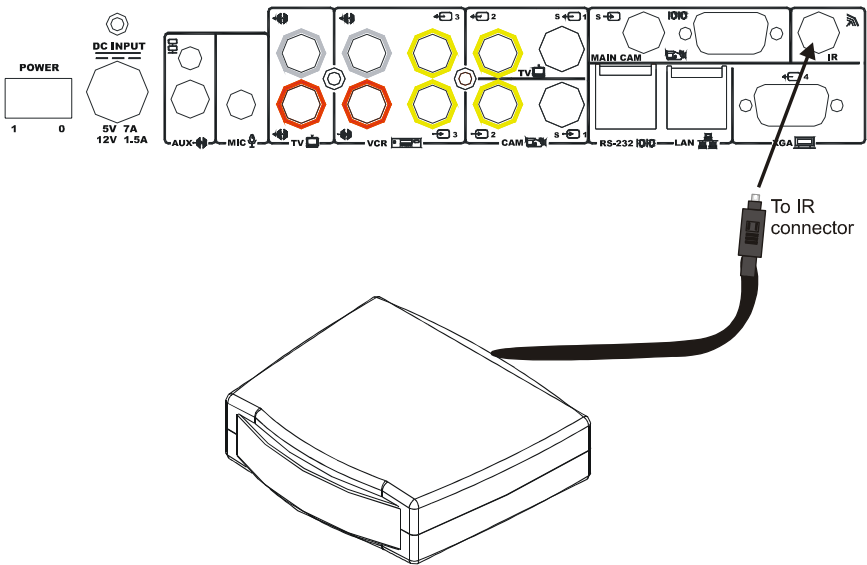
Connecting an External IR Receiver to the HD1000

Connecting an Audio Mixer

Connecting an audio mixer lets you add several audio inputs to the HD1000.

These instructions are applicable to most audio mixers available in the marketplace. For specific instructions on installing and operating the audio mixer, see its accompanying user's guide.

➤ **To connect an audio mixer to the HD1000**

1. Connect all audio sources (microphones, DVD/VCR, etc.) to the mixer.

2. Connect an unbalanced mono cable between the Mono LINE OUT connector of the mixer and the HD1000's **AUX** connector.

3. Since connection to the HD is through a single line, configure the mixer for mono (or monophonic) sound production.
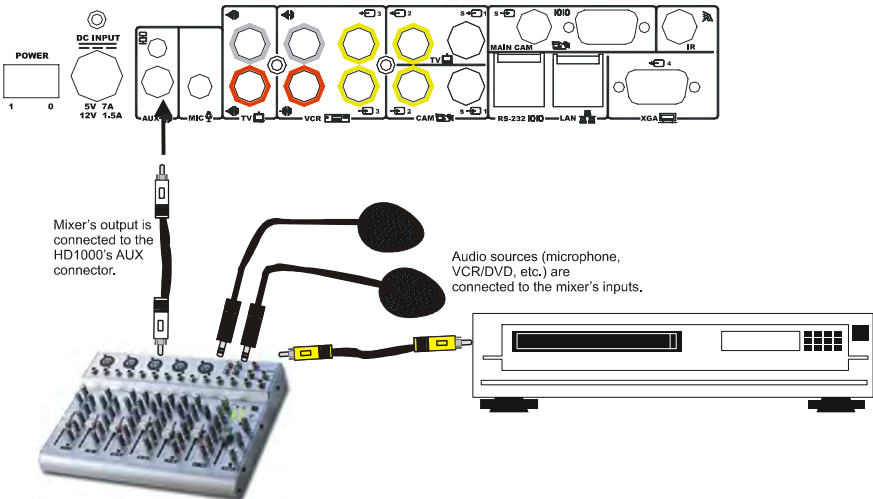
Connecting an Audio Mixer and Audio Components to the HD1000

3 GETTING STARTED

This chapter explains how to operate HD1000 and to make a call. It includes the following sections:

❑ Starting and Shutting Down HD1000

❑ The Remote Control

❑ HD1000 Screens

❑ Navigating in HD1000

❑ Setting up the Network Configuration

❑ Starting a Videoconference from the Manual Dialer

3.1 Starting and Shutting Down HD1000

Make sure the system is set up, the camera and TV monitor are turned on, and the cables are connected properly. See "Connecting the Basic Components" on page 8.

➤ **To start up HD1000**

1. On the back of the Main Unit, press the **POWER** button on, marked (I).

2. Wait until the HD1000 Ready Screen appears, and HD1000 is ready to make and receive calls.

Introduction Screen

If the Ready Screen does not appear after 1 minute from the time you started the system, see Chapter 14, "Troubleshooting".

➤ **To shut down the HD1000**

❑ Press the **Power** button on th e rear of the HD1000.

Power button
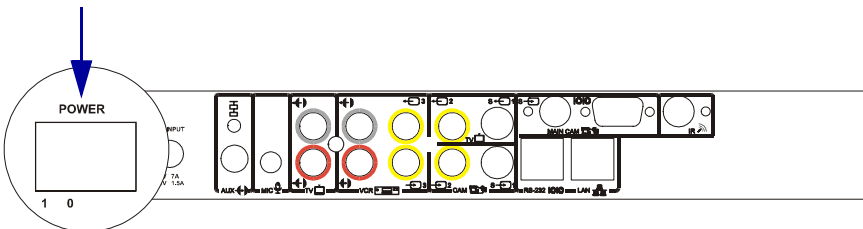
3.2   The Remote Control

Use the remote control to work with the HD1000. Operate the remote control within six meters of the HD1000 unit.

Use only alkaline batteries in the remote control device.

Go up/down one Microsoft®
PowerPoint slide

On-screen Help

View status

Access Multicast /
Multipoint control

Select preset position

Set a preset position

Soft keys

Number pad

Delete character

Arrow buttons

Select camera

Raise/lower volume

Select button
Display Main menu

Zoom in/out

Open Phone Book/
Start call

Disconnect call

Move PIP (Picture in
picture)

Close dialog box
OK or **Cancel**

Display control

Mute Speaker

Speed dial

Mute Microphone

Mute video

3.3   HD1000 Screens

The HD1000 screens provide an efficient videoconferencing environment. The types of elements displayed by the system are:

HD1000 Ready Screen

❏   Indicates that HD1000 is operational and provides a home screen.

❏   <Dial>, <Menu>, <Status> and <Help> are active.

Dialog Boxes

HD1000's dialogs provide on-screen information. They can contain checkbox options, menu options, and data-entry boxes. Press the arrow buttons to move among the options and boxes.

Tabs

Some dialogs contain various tabs, which are related sets of categorized options.

❏   Press the up and down arrows to move among tabs.

❏   Press the right arrow to open a dialog.

❏   Press the left arrow to leave a dialog and move among the tabs again.

SoftKey Guide

The four colored keys located on the covered part of the remote control are the SoftKeys.
SoftKey functions change according to the status of the system and the displayed dialog. The SoftKey Guide at the top of the screen indicates the current functions.

3.4   Navigating in HD1000

Whether making videoconference calls or setting configurations, you use the supplied remote control to navigate and enter information.

Moving Around the Menus and Dialog Boxes

To perform various functions, you must access the system's menus and dialog boxes. Many dialog boxes are divided into tabs (groups of related options and configuration properties). This section explains how to navigate among the menus, dialog boxes and tabs, and how to select entries or items.

➤ **To navigate using the remote control**

❑ Press the arrow buttons.

— To move along tabs or entries in dialog boxes, press the up and down arrows.

— To enter a tab or an entry inside a dialog box, press the right arrow.

— To exit a tab, press the left arrow.
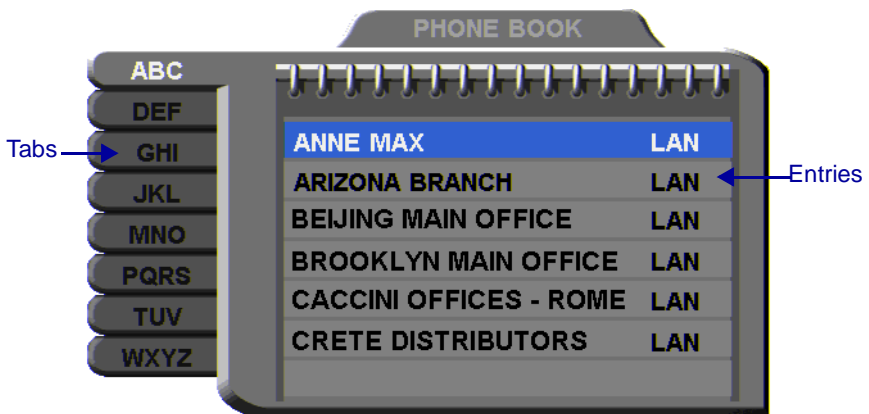
➤ **To select an option**

1. Navigate to the menu or checkbox option.

2. Press the Select (Menu) button, located in the middle of the arrow buttons.
   To deselect an option, press the Select (Menu) button again.

➤ **To close a dialog box**

❑ To apply changes and close the dialog box, press <OK>.

   -or-

   To close a dialog box without applying changes, press <Cancel>.

Entering Data

Some dialog boxes contain text boxes for entering data.

➤ **To enter numbers in a text box**

1. Enter numbers by pressing the number pad's keys on the remote control.

   If you make a mistake, press <Clear>.

➤ **To enter alphabetical characters**

1. Navigate to the box in the dialog where the data is to be entered.

2. Press the yellow **KEYBOARD** SoftKey on the remote control. The on-screen keyboard appears.

On-screen Keyboard for Alphanumeric Data Entry

To enter lower case letters, press the red **LOWER CASE** SoftKey on the remote control. To enter upper case letters, press the red SoftKey again.

Press the arrow keys to navigate to the character you want to enter.

3. Press the Select button to select the character.

If you make a mistake, select the **DEL** button on the on-screen keyboard or the <Clear> button on the remote control.

4. Press <OK> to close the keyboard. The characters you selected are entered in the dialog box.

3.5 Setting up the Network Configuration

To initiate and receive calls, the HD1000's network LAN and H.323 configuration must be defined correctly.

1. Press <Menu>. The main Menu appears. Select **Network**.

2. Define LAN and H.323 properties as required. For a full explanation of the Network Configuration, see "Communication and Network Configuration" on page 55.

3.6   Starting a Videoconference from the Manual Dialer

Numbers dialed in the Manual Dialer are not stored in the Phone Book. It is more efficient to store frequently repeated destinations in the Phone Book. See Adding New Phone Book Entries.

Before Calling

Before you start videoconferences, you can mute the microphone to ensure that the other side does not overhear a local discussion before you notice that the connection is made. See "Adjusting the Volume" on page 85 and "Automatically Muting the Microphone During Incoming Calls" on page 86.

Calling Through the Manual Dialer

➤ **To dial through the Manual Dialer**

❑ To dial a number, press the buttons on the Number Pad. The Manual Dialer dialog box appears. The numbers that you press appear in the **Address** box.
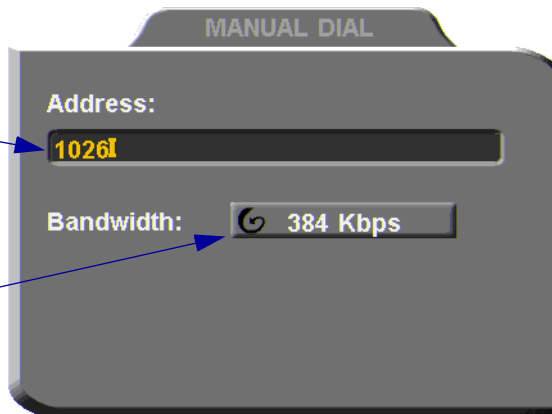
-or-

1. Press <Dial>. The Phone Book screen appears.

2. Press the blue **MANUAL DIAL** SoftKey. The Manual Dialer dialog box appears.

Enter a User Number, IP address,or DNS name

Press the right or left arrow button to select the maximum bandwidth

Manual Dialing

3. Enter the IP Address, DNS name or User Number of the party.

IP Address   Example: 123.124.125.126

DNS Name   Example: john.widget.com

Station Name   Example: HeadOffice

User Number   Example: 102

4. Navigate to the **Bandwidth** value and press the right or left arrow button until the maximum bandwidth required for this call appears.

5. Press <Dial> to dial the number.

6. To dial the previous number, press the red **REDIAL** SoftKey on the remote control.

4 VIDEOCONFERENCING BASICS

This chapter provides instructions on videoconferencing with HD1000. It includes the following operations:

❑ Answering a videoconferencing call

❑ Adding and editing Phone Book entries

❑ Starting videoconferences from the Phone Book, the Speed Dial, and Redial buttons

❑ Ending videoconferences.

4.1 Answering Videoconferencing Calls

You can accept and reject incoming calls manually, or answer them automatically.

Manually Answering Calls

When there is an incoming call, HD1000 rings. A message, including the caller's station name or address, asks if you want to answer the call.
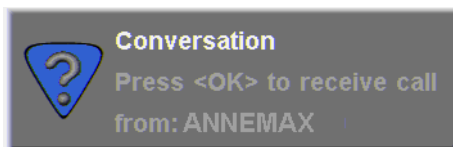
➤ **To answer the call**

❑ Press <OK>. HD1000 completes the connection.

   The other party's (*remote*) video appears on your monitor. The In Call icon appears, indicating that the call has been successfully connected.
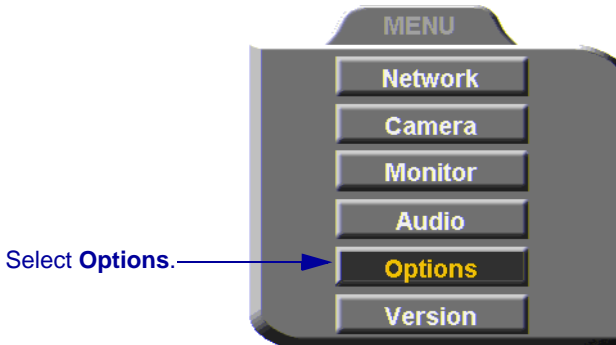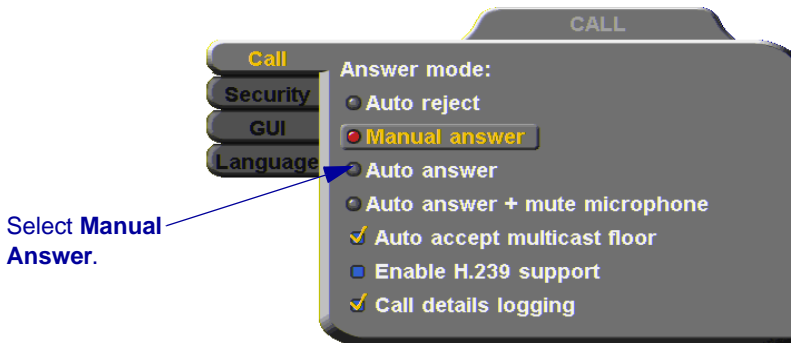

➤ **To reject the call**

❑ Press <Cancel>.

➤ **To set Manual Answer**

1. Press <Menu>. The main Menu opens. Select **Options**.

MENU

Network
Camera
Monitor
Audio
Select **Options**. → Options
Version

2. If you want to accept/reject calls as they come in, select **Manual Answer**.

CALL

Call
Security
GUI
Language

Answer mode:
○ Auto reject
● Manual answer
○ Auto answer
○ Auto answer + mute microphone
✓ Auto accept multicast floor
■ Enable H.239 support
✓ Call details logging
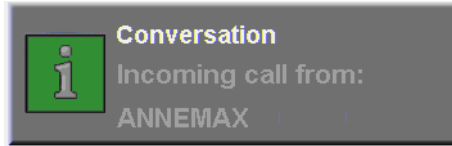
Select **Manual Answer**.

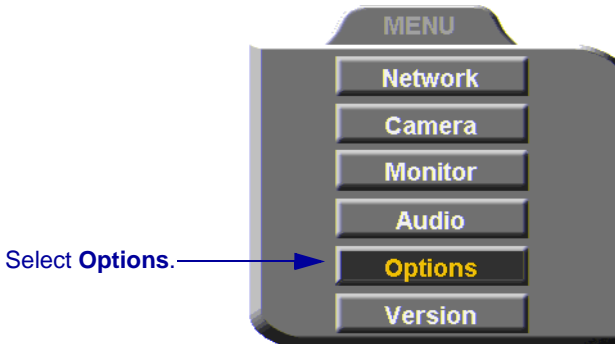3. Press <OK> to apply changes and close the dialog box.

OK

Automatic Answer

If Automatic Answer is selected, incoming calls connect automatically. The remote video appears on your monitor, and the In Call icon appears.
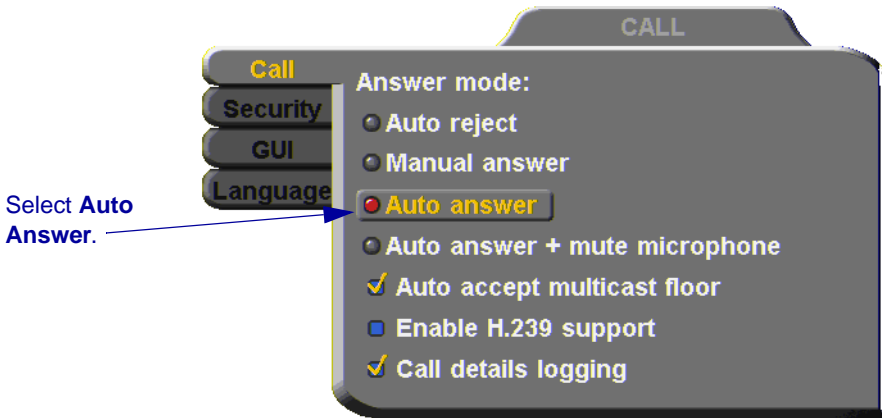

➤   **To set Auto Answer**

1.   Press <Menu>. The main Menu opens. Select **Options**.

2.   If you want HD1000 to answer all calls, select **Auto Answer**.

Select **Auto Answer**.

3. Press <OK> to apply changes and close the dialog box.

[OK]

Other Call Answering Options

In addition to basic manual and automatic answering, HD1000 provides additional options for answering incoming calls.

Point to Point

Point-to-point conferences are calls between two end points.

Auto Reject	Select to automatically reject all incoming point-to-point calls (*Do-not-disturb*).
Auto + Mute Mic.	Select to automatically accept point-to-point incoming calls but to mute the outgoing audio at the beginning of the conference. After the conference begins, you may turn the audio back on.

Multicast

|	
Auto Accept Multicast Floor	During interactive multicast conferences, the *Floor* (one user's video and audio being broadcast to all participants at the same time) may be granted to you by the conference's organizer (*Chair*).
	Select this option to automatically accept the floor when it's granted to you.

4.2   Adding New Phone Book Entries

It is more efficient to store frequently repeated destinations in the Phone Book.

➤ **To create a new Phone Book entry**

1.   Press <Dial>. The Phone Book opens.
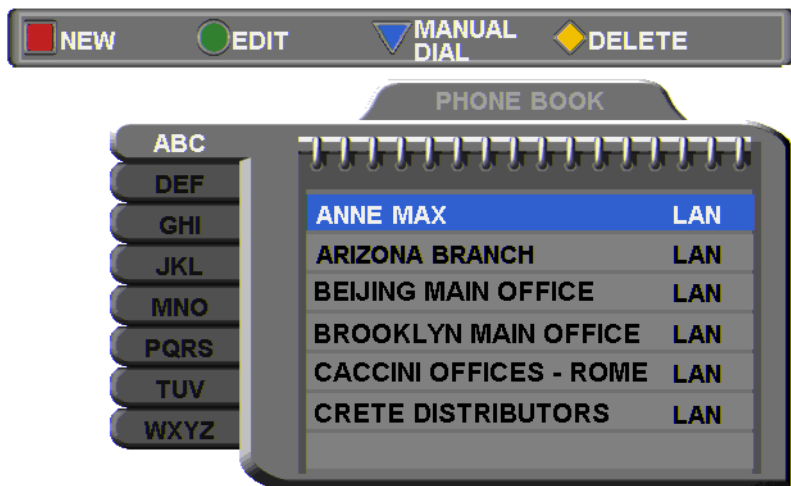
2.   Press the red **NEW** SoftKey. The New Entry dialog box opens.

3.   Enter a **name** for this entry (to open the on-screen keyboard, press the yellow **KEYBOARD** SoftKey - see "Entering Data" on page 38). The name must begin with a letter; it cannot begin with a number or symbol.

4. Enter the entry's IP Address, DNS Name, Station Name or User Number
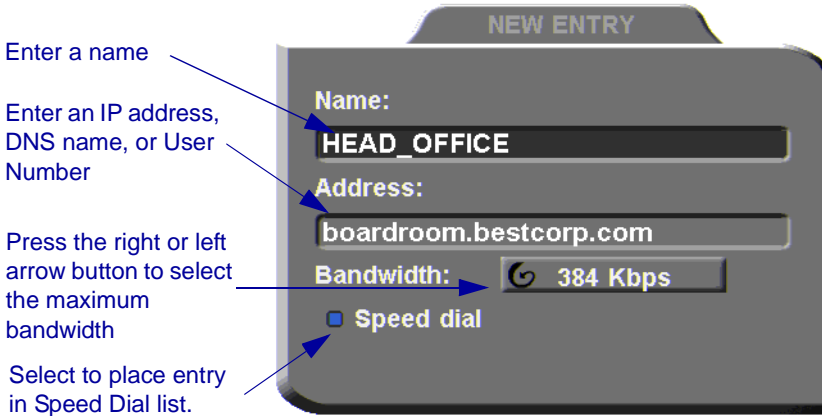   (see "Dialing Options" on page 51).

The DNS name is case-sensitive. For example, if the host name of the station
you want to call is HEAD_OFFICE, enter it in all caps, including the
underscore: HEAD_OFFICE.vcon.com

5. Set appropriate dialing properties and options:

Bandwidth   Press the right or left arrow key to choose the maximum
                   bandwidth for calls dialled to this contact.

Speed Dial   Select if you want this entry to appear in the Speed Dial
                   list, with the shown entry number. See "Starting
                   Videoconferences from the Speed Dial list" on page 54.

6. Press <OK> to add the entry and close the dialog box.

Enter a name

Enter an IP address,
DNS name, or User
Number

Press the right or left
arrow button to select
the maximum
bandwidth

Select to place entry
in Speed Dial list.

New Phone Book Entry

## Automatically Adding the Remote Party to the Phone Book

If the remote party in a conference is not listed in the Phone Book, the HD1000 provides an option to add its entry to the Phone Book after the call ends.

➤ **To enable automatic entry addition to the Phone Book**

1. Press <Menu>. The main Menu opens. Select **Options**.

Select **Options**.

2. Select **Auto Generate Phonebook Entries**.
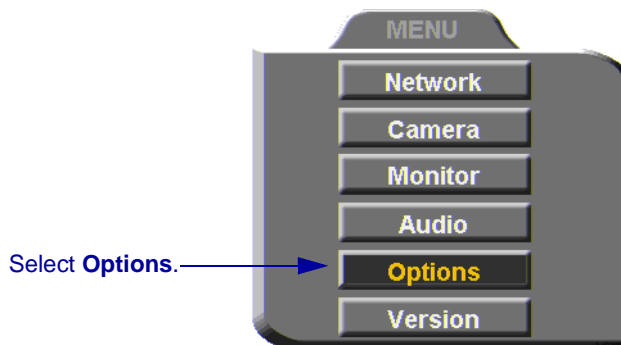
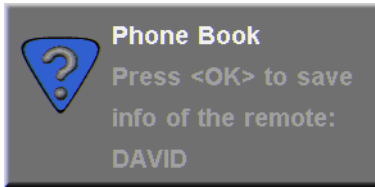Select **Auto Generate Phonebook Entries.**.
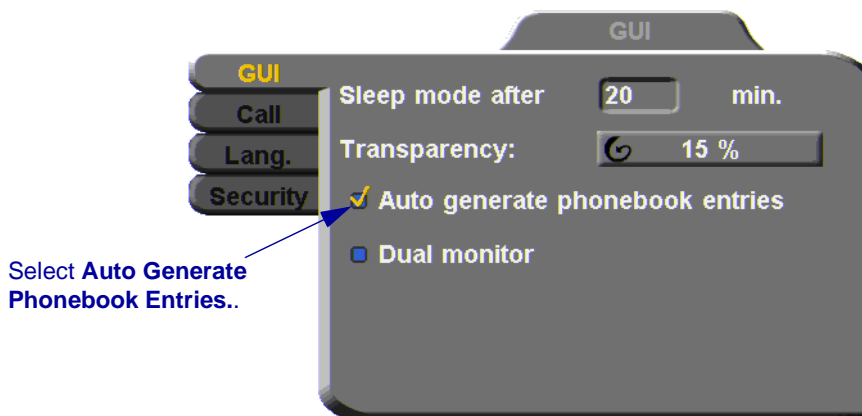
3. Press <OK> to apply changes and close the dialog box.

4. After the call ends, the request to add the remote party to the Phone Book appears. Click **OK** to complete it.

> **Phone Book**
> Press <OK> to save
> info of the remote:
> DAVID

Editing and Deleting Phone Book Entries

➤ **To edit an entry**

1. Navigate to a Phone Book entry. Press the green **EDIT** SoftKey. The Edit Entry dialog box opens. It looks like the New Entry dialog box and contains the information entered earlier.

2. Change data appropriately. Press <Clear> to erase the character to the left.

3. Press <OK> to apply the changes and close the dialog box.

➤ **To delete an entry**

1. Navigate to the Phone Book entry. Press the yellow **DELETE** SoftKey. A message appears to confirm the deletion.

> **PhoneBook**
> Delete the selected entry?
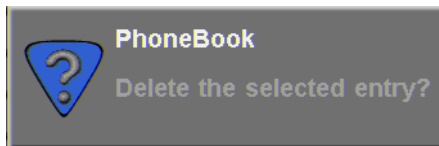
2. Press <OK> to delete the entry and close the dialog box.

4.3   Starting Videoconferences

You can start a videoconference either from the Manual Dialer dialog box as described in "Calling Through the Manual Dialer" on page 40, or by using one of the following methods:

- Starting Videoconferences from the Phone Book
- Starting Videoconferences from the Speed Dial list

Dialing Options

The following table defines the network address types supported by HD1000. Enter one of these address types in the Manual Dial dialog box or in a New Entry dialog box of the Phone Book.

Address Type	Example	Applicable When
IP Address	212.219.130.100	Always applicable. Usually dynamic, changing without notification, so the other address types are often preferred.
DNS Name	Room1.corp.com	The IP addresses of a DNS server and of a WINS server are configured. The HD1000 Station Name is the first part of the DNS address.
User Number (E.164)	259	Both HD1000 and the remote system are registered with a VCON Media Xchange Manager® (MXM) or Gatekeeper. Any number.
Station Name (H.323 Alias)	Room1	Both HD1000 and the remote system are registered with a Gatekeeper. Any string of characters beginning with an alphabetical letter.

Starting Videoconferences from the Phone Book

Phone Book entries makes dialing easier and more efficient. From the Phone Book, you can dial without entering the address or phone numbers again.

➤ **To dial from the Phone Book**

1. Press <Dial>. The Phone Book opens.

2. Navigate to the alphabetical tab that contains the entry you want to dial. Press the right arrow button to enter the tab.

3. Navigate to the entry that you want to dial. The entry shows the following information:
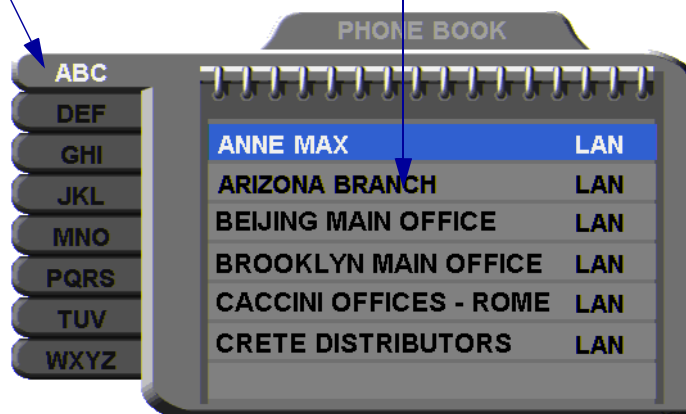
Name   The name of the videoconferencing contact.

Address   The address of the contact is listed below the phone book.

Bandwidth   The bandwidth listed below the phone book shows the maximum bandwidth setting for the selected entry.

4. Press <Dial> or <OK>. HD1000 dials the number.

Navigate to a letter tab   Select a name and press <Dial> or <OK> to start a videoconference

Starting Videoconferences from the Speed Dial list

Dialing out from the Speed Dial is faster than from the Phone Book. You don't have to search through tabs and various entries, because there are only nine entries in the Speed Dial, and they are all in one dialog box. Also, you can dial a Speed Dial entry simply by pressing its number instead of navigating within the dialog box.
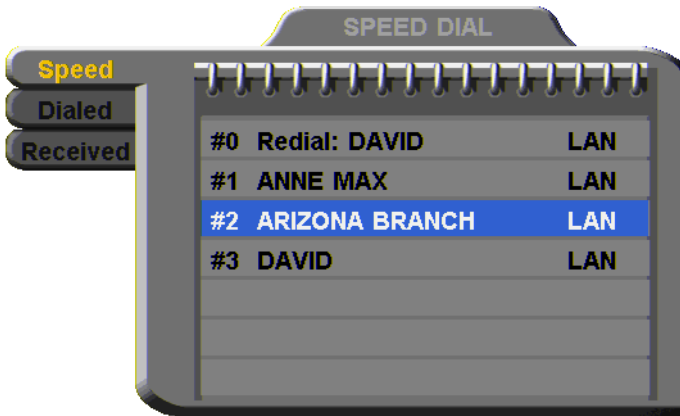
➤ **To add an entry to the Speed Dial**

❑ In the New Entry or Edit Entry dialog boxes, select **Speed Dial**.

✔ Speed dial

➤ **To dial a number from the Speed Dial**

1. When the screen is clear of dialog boxes, press <Speed Dial>. The Speed Dial list appears.

SPEED DIAL

Speed
Dialed
Received

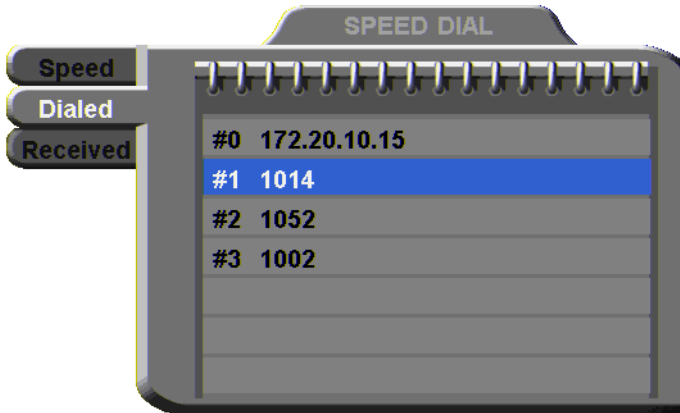| #0 Redial: DAVID | LAN |
#1 ANNE MAX	LAN
#2 ARIZONA BRANCH	LAN
#3 DAVID	LAN

2. Press the number of the Speed Dial entry that you want to dial. The selected entry is dialed. You don't have to press <Dial>.

-or-

Navigate to the **Dialed** or **Received** tab to call a party that you engaged in a recent conference.

➤ **To redial a Speed Dial entry**

❑ From the Speed Dial screen, press <0> or <Speed Dial> again.

➤ **To delete a Speed Dial entry**

1. Navigate to the entry you want to delete and then press the red **DELETE** SoftKey. A message asks for confirmation.

2. Press <OK>. The entry is deleted from the Speed Dial list (the Phone Book entry is not affected).

   -or-

1. Navigate to a Phone Book entry. Press the green **EDIT** SoftKey. The Edit Entry dialog box opens.

2. Deselect **Speed Dial**.

Calling Through Gateways

On certain occasions, you may need to call out from your local network (LAN call) to parties who are connected to different networks, ISDN lines, or telephone exchanges. In such situations, dialing through a gateway is required.
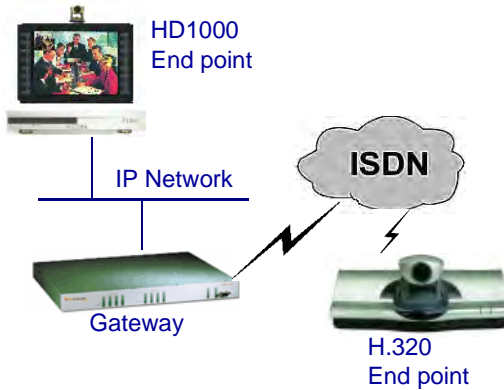
HD1000 to Gateway to an ISDN Address

Before attempting a Gateway call, ask the system administrator to give you the calling syntax. The syntax includes a service access number and, in some cases, a variation of punctuation signs.

➤ **To call through a Gateway**

1. Open the Manual Dial dialog (see "Starting a Videoconference from the Manual Dialer" on page 40) and dial [*service access number*][*ISDN number(s)*] in accordance with the system administrator's instructions.

2. Set the required **Bandwidth** or use the default bandwidth.

3. Press <Dial>.

   The gateway's gatekeeper receives the call. It recognizes the syntax that the system administrator instructed you to enter, and it passes the call onto the Gateway. You must be registered with a Gatekeeper to reach a Gateway (see "H.323 Network Registration and Properties" on page 62 for details).

   The Gateway calls the destination, and when it receives an answer, it begins the videoconference, continuously translating between H.320 (ISDN) and H.323 (IP).

MANUAL DIAL

Enter the service access number (**9**) and then the 1st ISDN number

Address:

90015129557890
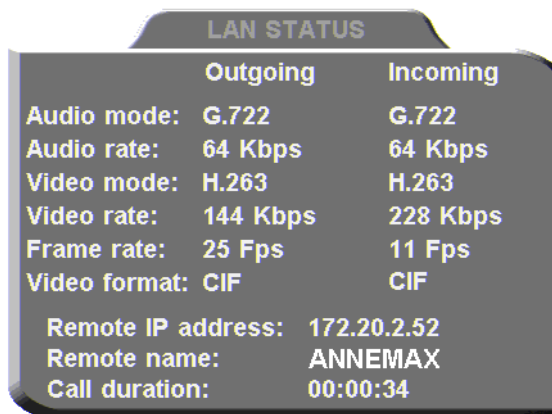
Bandwidth: ↻ **384 Kbps**
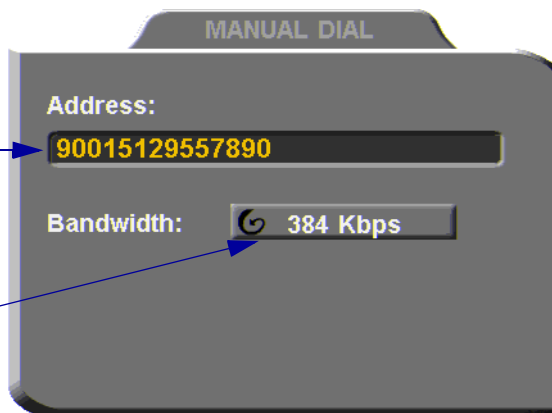
Press the right arrow button to select the maximum bandwidth

Verifying the Status of a Call

During an active videoconference you can check the status of the call to see the identification of the remote party, the bandwidth of the call, the current compression modes, etc.

➤ **To check the status of the current call**

1. Press <Status>. The Status dialog box appears.

🔴 **ADJUST** 🟢 **DIAGNOSE** 🔻   🔶

LAN STATUS

	Outgoing	Incoming
Audio mode:	G.722	G.722
Audio rate:	64 Kbps	64 Kbps
Video mode:	H.263	H.263
Video rate:	144 Kbps	228 Kbps
Frame rate:	25 Fps	11 Fps
Video format:	CIF	CIF

Remote IP address: 172.20.2.52
Remote name: ANNEMAX
Call duration: 00:00:34

2. Press <OK> to close the dialog box.

OK

4.4 Ending Videoconferences

➤ **To end a point-to-point call**

1. Close any open dialog boxes.

2. Press <Hang up>. A message appears, asking for confirmation.
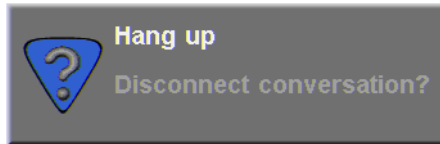
Hang Up Confirmation Message

3. Press <Hang up> again or <OK>. The videoconference is terminated.

To cancel the Hang up command and continue the videoconference, press <Cancel> in response to the confirmation message.

5 NETWORK CONFIGURATION

This chapter explains how to set up HD1000 to operate with your network connections. Network options may be edited at any time, from the HD1000, from a remote station through a web browser (see *HD Web Management User's Guide*), or from the Media Xchange Manager® (MXM).
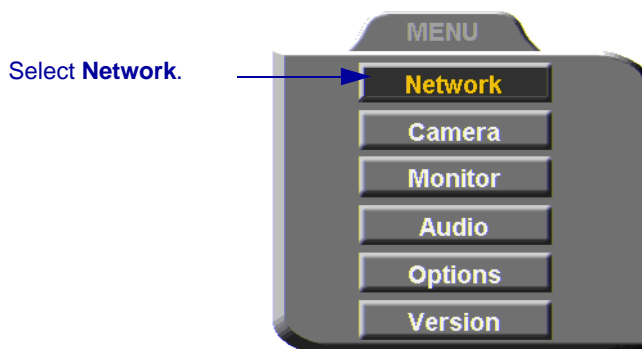
5.1 Communication and Network Configuration

After you connect the HD1000 to the LAN (see "Connecting the LAN" on page 21 for connection details), set up the HD1000's network configuration.

Whenever the HD1000 is not in a call, you can edit the configuration in the Set Network dialog box. The communication and network configurations include:

- LAN Connection and Registration
- H.323 Network registration and properties
- QoS priorities and NAT address

➤ **To set up network connections**

1. Press <Menu>. The main Menu appears. Select **Network**.

   Select **Network**.

   MENU
   - Network
   - Camera
   - Monitor
   - Audio
   - Options
   - Version

2. In the LAN dialog box, set up the communication, networking and streaming configurations, navigating among the tabs, properties and entering information appropriately.

For descriptions
of each tab

LAN

LAN	
H.323	
Streaming	
Advanced	

■ **Automatically obtain IP**

IP address:	172.20.25.144
Sub-net mask:	255.255.0.0
DNS server:	
WINS server:	
Domain:	bestcorp.com
Default gateway:	172.20.0.254
MAC address:	00:D0:E7:50:01:04

3.   Press <OK> to apply the changes and close the dialog box.

OK

A message states that HD1000 will restart in a few seconds. After
restarting, the changed properties are in effect.

-or-

Press the left arrow key to navigate to another tab.

LAN Connection

In the **LAN** tab, enter the HD1000's address and information about its connection to the LAN (Local Area Network).

Automatically Obtain IP	Select to enable HD1000 to receive its network configuration from the LAN's DHCP server and enter it automatically in the **LAN** tab.
	If this option is not selected, you have to enter the LAN properties manually. Consult with your system administrator.
IP Address	If your HD1000 receives an address automatically, it is a temporary address which is liable to be changed when the network's users' IP addresses are updated periodically.
	If you manually enter an IP address here, the address remains permanently.
Subnet Mask	Your company's subnet mask.
DNS Server & WINS Server	IP Addresses of the DNS server and the WINS server. Registering with these servers enables HD1000 to translate names to IP addresses.
Domain	DNS domain name of your company (for example, **bestcorp.com**).
Default Gateway	IP address of the network's Gateway router. The gateway helps HD1000 send and receive calls between subnets.
MAC Address	The unique Media Access Control (MAC) address of your HD1000 device.

Select to obtain the whole LAN configuration automatically.

If the configuration is not obtained automatically, enter all the addresses manually.

LAN

LAN	☐ Automatically obtain IP
H.323	IP address: 172.20.25.144
Streaming	Sub-net mask: 255.255.0.0
Advanced	DNS server:
	WINS server:
	Domain: bestcorp.com
	Default gateway: 172.20.0.254
	MAC address: 00:D0:E7:50:01:04
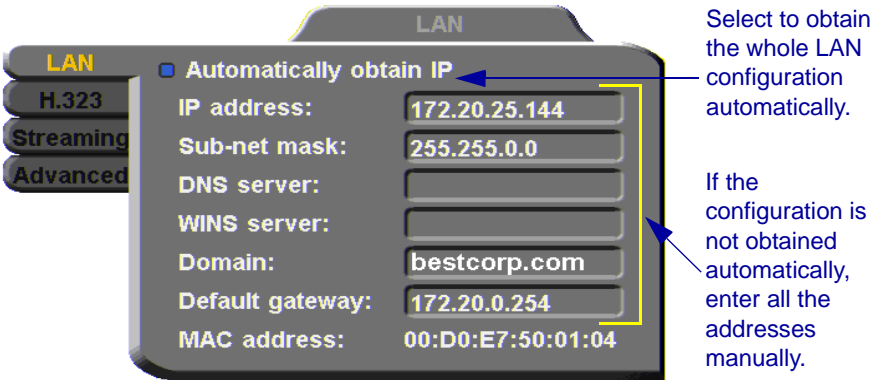
H.323 Network Registration and Properties

H.323 is the standard for video, audio, and data streaming over IP networks. In the H.323 tab, define how the HD1000 handles these functions within its LAN environment. These properties include:

❑ H.323 Management - registration of the HD1000 with a remote H.323 management and service provider

❑ Automatic Video Transmission Adjustment - automatic preservation of optimum transmission, in response to changing network conditions

H.323 Management

Many H.323 networks include devices such as the VCON Media Xchange Manager® (MXM) or a gatekeeper, which provide important management functions and provision of communication services to large numbers of users within defined zones on a LAN or WAN. HD1000 supports registration with the MXM and with third-party H.323 Gatekeepers.

The following table lists the services that HD1000 receives if it registers with an MXM

❑ Telephony exchange features, such as Call Transfer, Ad-hoc Conference, Call Forward and Call Pickup.

❑ Address translation and short-number dialing to registered users within the same zone and to other zones.

❑ Allocation of network resources, such as bandwidth management.

❑ Remote call initiation from the MXM Administrator.

❑ Remote configuration management by a system administrator.

❑ Presence in online directories (LDAP).

❑ HD1000 software version upgrade from the MXM Administrator.

In the **H.323** tab, choose to register the HD1000 in a VCON MXM or in an H.323 Gatekeeper.

None; Gatekeeper; MXM	To register with the **MXM** or a **Gatekeeper** and receive services from them, select the appropriate option. Select **None** to operate HD1000 as a stand-alone system.
MXM Server IP	Enter the IP address of the MXM, if applicable.
Gatekeeper IP	Enter the IP address of the Gatekeeper, if applicable.
User Number	Videoconferencing contacts registered with the same MXM or other Gatekeepers will be able to dial using your User Number as well as your IP address.

Enter a number to register HD1000 with the MXM or Gatekeeper. Some of these devices may register your device under this number, while others assign these numbers, regardless of your request. |
| **Station Name** | The Station Name is the identification of the HD1000 on the connected network. Consult with the system administrator before modifying this box.

If the system is registered with the WINS server or a Gatekeeper, HD1000 can use station names instead of IP addresses for starting and receiving calls. When you register with a Gatekeeper, the station name is entered as your User Name.

If the system has access to a Domain Name System (DNS) server, the Station Name is also the DNS Host Name of the system. Enter the Host Name, then a dot, then the Domain Name: **StationName.Domain.com** (see "Entering Data" on page 38 for instructions on entering alphanumerical data from the keyboard). |

Select if HD1000 registers with an MXM, third-party gatekeeper, or operates independent of a management system.

Enter the addresses of the external network server(s) (MXM or Gatekeeper) that provide management and H.323 services to the HD1000.

Select **None** to operate HD1000 outside of the control of an MXM or gatekeeper.

Enter a preferred User Number and/or Station Name for identification and dialing purposes. If possible, the MXM or Gatekeeper may assign HD1000 this preferred number.

Automatic Video Transmission Adjustment

The **H.323** tab also includes options that enable HD1000 to preserve optimum transmission quality automatically, according to current network conditions (for example, available bandwidth).

Enable Lip Synchronization Mechanism	Select this option to synchronize the audio and video of a LAN conversation. You can adjust the lip synch during a call. See "Adjusting Quality of Video Calls" on page 82.

Automatic Buffering Control	Buffer Control optimizes the transmission of the video for the available dynamic bandwidth. If network conditions require, the system holds back frame transmission before transmitting, in order to attain smooth playback and avoid "jumping".
	Select this option to make the buffer control automatic. Deselect it to make it adjustable during LAN conversations. See "Adjusting Quality of Video Calls" on page 82.
Bandwidth Adjustment	Enables videoconferences to precede at reduced bandwidth if the network is congested. Deselecting this option maintains a constant bandwidth during the session, but it may cause network problems.
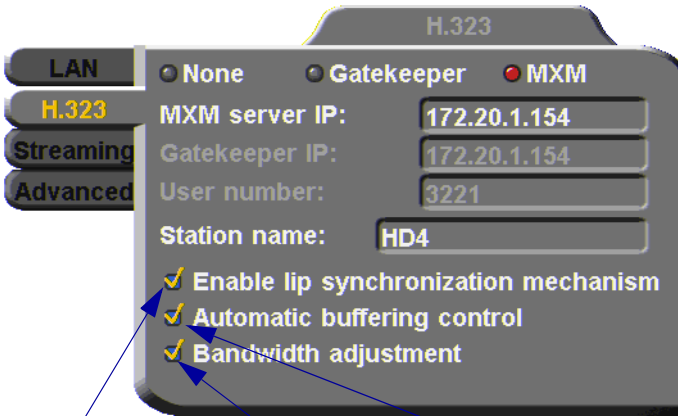
Select to activate automatic Lip Synchronization, which synchronizes the audio and video by delaying either the audio or the video stream, so that both arrive at the same time.

Select to enable the system to automatically adjust video transmission in accordance with network conditions.

Select to enable videoconferences to precede at reduced bandwidth if the network is congested

Advanced Properties

In the Advanced dialog box, administrators can view or modify the following:

❑ Setting Quality of Service (QoS) Priority Levels - control of the Quality of Service that will be used for transmitting packets from the HD1000.

❑ Setting a Public NAT Address for the HD1000 - entering the public IP address of the HD1000 (if your organization's network is protected by NAT).

Setting Quality of Service (QoS) Priority Levels

VCON's PacketAssist™ Architecture simplifies Video over IP bandwidth management and delivers true Quality of Service (QoS) for IP networks. PacketAssist automatically adapts video meeting transmissions to current network conditions, while ensuring optimal video and audio performance.

The **Advanced** tab contains properties for controlling the type of Quality of Service that will be used for transmitting packets from the HD1000.

CAUTION VCON sets the Quality of Service default values. We recommend that only system administrators with knowledge of QoS make any changes, if required.

➤ **To set Quality of Service options**

1. Set QoS properties as follows (see tables on page 69):

QoS Priority Type   Select the type of QoS priority used for transmitting packets during heavy network congestion conditions.

❑ **None** - network transfers packets in a normal Best-Effort method (*First In, First Out*, or *FIFO*).

❑ **IP Precedence** - network gives priority to video, audio, control bits according to the eight levels of IP precedence.

❑ **Diffserv** - network transfers packets according to specific differentiated services priority levels.

Priority Values   For **Video**, **Audio**, and **RTCP** (Real Time Control Protocol) **Priority**, enter an appropriate priority level. According to their priority levels, bits are queued for forwarding by QoS-supporting routers.

The priority levels vary, depending on whether the selected Priority Type is **IP Precedence** or **Diffserv**.

Select the type of QOS Priority used by your system.
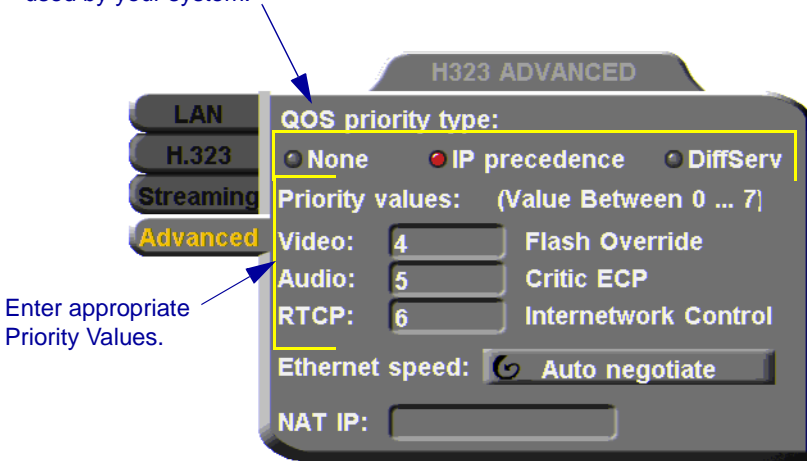
Enter appropriate Priority Values.

H323 ADVANCED		
LAN	**QOS priority type:**	
H.323	○ None ● IP precedence ○ DiffServ	
Streaming	**Priority values:** (Value Between 0 ... 7)	
Advanced	Video: 4 **Flash Override**	
	Audio: 5 **Critic ECP**	
	RTCP: 6 **Internetwork Control**	
	Ethernet speed: ↻ Auto negotiate	
	NAT IP:	

2.   To return to the default QoS values, press the blue **RESET** SoftKey.

3.   Press <OK> to save the QoS settings and close the dialog box.

For best results, it is recommended that RTCP packets receive the highest priority, to ensure that QoS features continue to operate during the entire call.

Audio packets should receive a higher priority than video packets, as a meeting can continue without video, but not without audio.

IP Precedence Values

Value	Description
0	Routine
1	Priority
2	Immediate
3	Flash
4	Flash Override
5	Critic/ECP
6	Internetwork Control
7	Network Control

DiffServ Values

Value	Description
000000	Probability Timely Forwarding 0
001000	Probability Timely Forwarding 1
010000	Probability Timely Forwarding 2
011000	Probability Timely Forwarding 3
100000	Probability Timely Forwarding 4
101000	Probability Timely Forwarding 5
110000	Probability Timely Forwarding 6
111000	Probability Timely Forwarding 7
101110	Expedited Forwarding
001010	Forward Class 1 Low Drop
001100	Forward Class 1 Mid Drop
001110	Forward Class 1 High Drop
010010	Forward Class 2 Low Drop
010100	Forward Class 2 Mid Drop
010110	Forward Class 2 High Drop
011010	Forward Class 3 Low Drop
011100	Forward Class 3 Mid Drop
011110	Forward Class 3 High Drop
100010	Forward Class 4 Low Drop
100100	Forward Class 4 Mid Drop
100110	Forward Class 4 High Drop

Ethernet Speed

In the **Advanced** tab, define the speed of the network to which the HD1000 is connected. The HD1000 supports 10 MB and 100 MB half-duplex and full-duplex networks.

If the **Ethernet** (network) **speed** is defined to **Auto-Negotiate**, the HD1000 can determine the common set of networking options supported between it and the remote parties in a conference. For example, they can figure out the highest speed that they each support, or automatically set full-duplex operation if both parties support that mode.

Define the speed of the connected network.
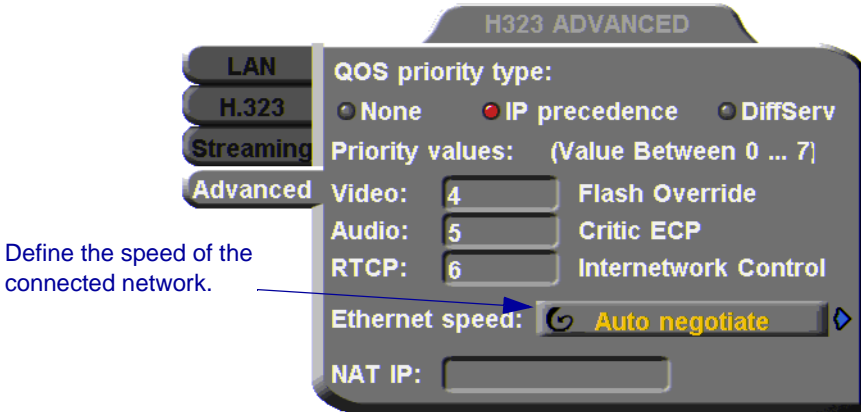
Setting a Public NAT Address for the HD1000

NAT (Network Address Translation) is a protocol in which a LAN uses one set of IP addresses for internal communication (within an organization's private LAN) and a different, single address for communication with a public network, such as the Internet. In this way, a NAT helps protect a LAN from exposure to unwanted traffic.

To hide a LAN's users from other networks, the NAT maps the private addresses to the public address. The public address is then used to identify the local users to remote contacts. Therefore, remote contacts use this public address to call the local users, without knowing their actual local addresses.

In the **Advanced** tab, you can enter the public address (if applicable) for your HD1000.

➤ **To define the public address for the HD1000**

❑ In the **NAT IP** box, enter the public address used for contacting your HD1000 device.

Enter the public address for your HD1000.
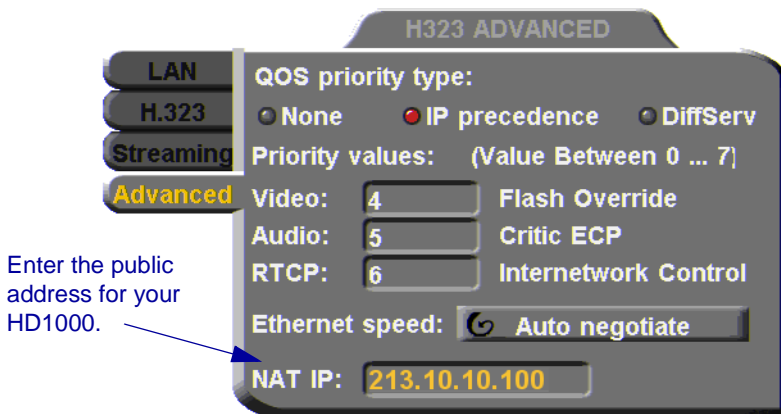
5.2   Testing Network Configuration

After you configure the Set Network dialogs and restart HD1000, you can check that the changes that you made were applied.

➤ **To check network configuration**

1. Press <Status>. The Status dialog box appears.

   The Status dialog box informs you if your HD1000 is connected with the local LAN and if the HD1000 is registered with a Gatekeeper and/or an MXM.

❑ Check that the IP Address displayed is the one that you set or received for the system.

❑ Check if the system is logged into an MXM or registered with a Gatekeeper, depending on the H.323 options that you chose.

If you selected **Gatekeeper** and entered the correct IP address in the Network dialog box's **H.323** tab, the HD1000 should be registered in the Gatekeeper. If it is not, change the **User Number** that you entered. You might have entered a number that is already occupied.

For more troubleshooting details, press the green **DIAGNOSE** SoftKey (see "System Diagnostics" on page 127).
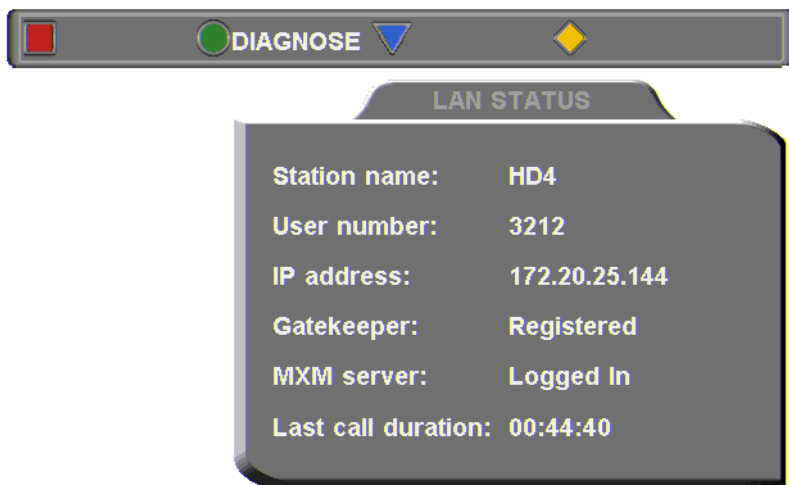
6   VIDEO AND AUDIO ADJUSTMENTS

This chapter explains how to adjust the video and audio variables for optimizing quality. Some of these adjustments should be made before entering into a videoconference; others are available only during a call.

6.1   Adjusting the Video

To customize the HD1000's video transmission and display, you can control and adjust the following:

❑   Video Settings – adjust the brightness, color, contrast and hue.

❑   Camera Configuration – adjust, select and position the main camera and optional cameras.

❑   Display Configuration – customize the display and mute video.

Adjusting the Camera Settings

To save time during a videoconference, adjust the brightness, color, contrast and hue while you are not in a call. If necessary, you can adjust them again at any time.

➤ **To adjust camera settings**

1.   Press <Menu>. The main Menu appears. Select **Camera**.

Select **Camera**.
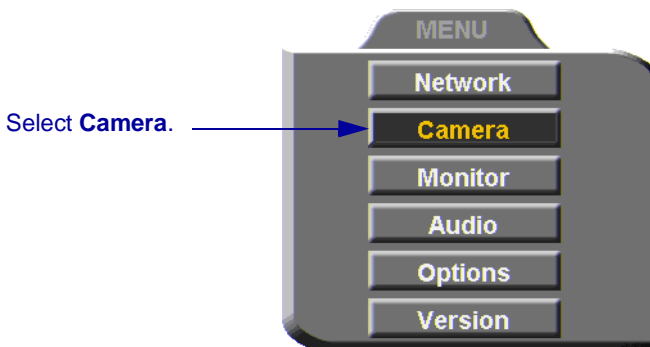
The Set Camera dialog box opens and the camera adjustment SoftKeys appear at the top of the screen.

2. To adjust Brightness, Color, Contrast, or Hue, press the appropriate SoftKey.

3. To increase the setting, press the right arrow key.
   To decrease the setting, press the left arrow key.

4. Press the up and down arrow keys to switch to other camera settings.

5. To return to the default camera settings, press the red **RESET** SoftKey.

6. Press <OK> to save the settings and close the dialog box.

To increase the setting, press the right arrow key.
To decrease the setting, press the left arrow key.

To navigate among the settings, press the up and down arrows.

Selecting the Current Camera

Current camera selection is always available. At any time, you can select different local video sources.

➤ **To select the current camera**

1. Press <camera>. The Local Camera Selection menu opens. The currently selected camera is highlighted.

Press the down arrow to switch to remote camera selection (if Far End Camera control is enabled).

Press the up arrow to switch back to local camera selection.

AuxCamera 1 is selected.

2. Press the left or right arrow buttons to switch between the local video sources (up to six):

An S-Video camera connected to a CAM connector.

A video source connected to the VCR connector.

Main camera connected to the S-Video connector on the rear panel.

A Composite camera connected to a CAM connector.

During a videoconference, you can also select the current remote video source if the remote party enabled *Far End Camera Control* (*FECC*). Using FECC, one party may select, position and control the other party's camera. To enable the remote party to control your camera, see "Far End Camera Control" on page 80.

3. During a conference with a party who enabled FECC, press the down arrow key to view the remote camera selection options.

4. Press the left or right arrow buttons to switch between the remote video sources.

5. Press <OK> to select the highlighted camera (and the selected Local camera) and close the dialog box.

Selecting the PTZ Camera Type

If a Pan/Tllt/Zoom (PTZ) camera is connected to the HD1000, specify its type in the Select Camera dialog box.

➤ **To select the PTZ camera type**

1. Press <Menu>. The Main Menu opens. Select **Camera**.
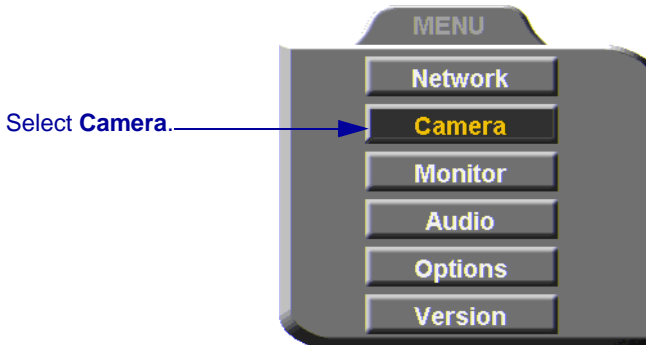
Select **Camera**.

2. In the Set Camera dialog box, navigate to **Main**. Press the right arrow button to switch between camera types. If you are not using a PTZ camera, select **None**.

   If a second PTZ camera is connected, select **Cam 1** and select its camera type.

Select the PTZ camera type.
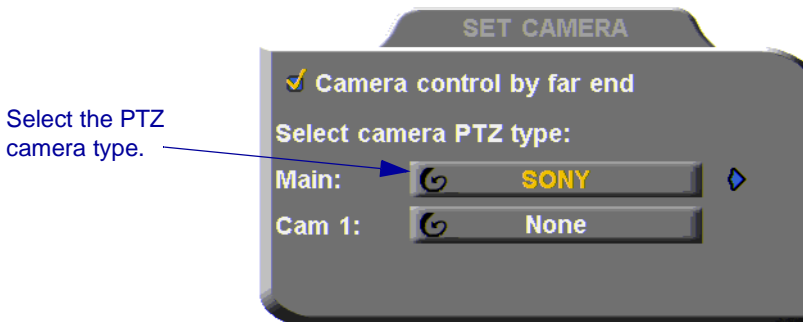
Controlling the Camera

You can position cameras at any time, either prior to or during a call. You can pan, tilt, and zoom a camera every time you want to change the local display, or you can save preset positions.

Positioning the Camera

When the screen is clear of dialog boxes, either in or out of a videoconference, you can control the camera in various ways:

❑ Manual positioning - temporarily positioning the camera as required.

❑ Preset positioning - focusing the camera on a specific person or location, then saving the position and recalling it when needed.

❑ Far-end camera control.

➤ **To manually position the camera**

❑ To pan the camera left and right, press the left and right arrow keys. To tilt it up and down, press the up and down arrow keys.

❑ To zoom in and out, press the <+> and <-> of the Zoom button.

➤ **To preset a camera position**

1. Manually position the camera.

2. Press the green SoftKey.

3. Press a number on the number pad. Each of the numbers between 0 and 9 may represent a preset position.

➤ **To restore the camera to a preset position**

1. Press the red SoftKey.

2. Press the number (0-9) in the number pad corresponding with the position you want. The camera positions itself accordingly.

Far End Camera Control

The *Far End Camera Control* (*FECC*) option permits the remote party to control your camera, so that they see views that are convenient for them. FECC provides control over the pan/tilt/zoom positioning and the adjustment of brightness, color, contrast and hue.

➤ **To enable the remote party to control your HD1000's camera**

1. Press <Menu>. The Main Menu opens. Select **Camera**.
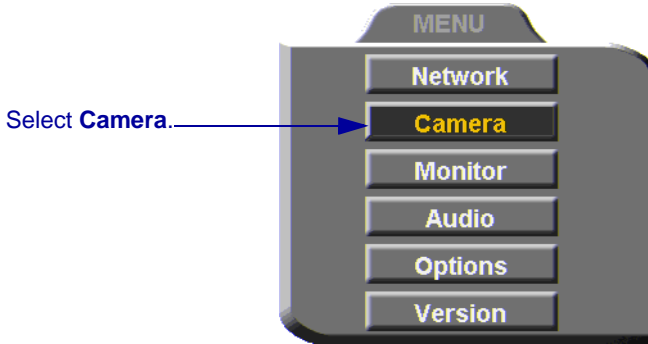
Select **Camera**.

2. In the Set Camera dialog box, select **Camera Control by Far End**.

3. Press <OK> to apply the change and close the dialog box.

Select to enable the remote party to control your camera.

Display Modes

Different display modes are available during a videoconference.

❑ **Local** - your party

❑ **Remote** - the other party

❑ **Data** - image of the screen display from the computer that opened a data connection to the HD1000.

➤ **To switch between viewing Local and Remote video**

❑ Press <Display> on the remote control.

Muting the Outgoing Video

You can mute the local outgoing video if you want to stop sending video temporarily. The remote party then sees a frozen video image until you unmute it.

Muting the video does not affect the video or audio from the remote party. If you want to mute the audio also, see "Adjusting the Volume" on page 85.

➤ **To mute the video**

❑ Press <Mute Video>.

An animated icon at the bottom of the screen indicates that the outgoing video is frozen.

➤ **To unmute the video**

❑ Press <Mute Video> again.

Adjusting Quality of Video Calls

HD1000 can automatically adjust its video and audio for dynamic IP bandwidth. However, you may want to adjust the quality-control mechanisms yourself if you experience the following problems:

❑ Parts of the video are covered with blocks (low motion control).

❑ The audio and video fall out of synchronization (low quality lip synch).

❑ The video freezes and then doubles up frames (inefficient buffering).

➤ **To adjust the quality of your video calls**

1. Press <Status>. The Status dialog box opens.

ADJUST	**DIAGNOSE** ▼	◆

LAN STATUS		
	Outgoing	**Incoming**
Audio mode:	G.722	G.722
Audio rate:	64 Kbps	64 Kbps
Video mode:	H.263	H.263
Video rate:	144 Kbps	228 Kbps
Frame rate:	25 Fps	11 Fps
Video format:	CIF	CIF
Remote IP address:	172.20.2.52	
Remote name:	ANNEMAX	
Call duration:	00:00:34	
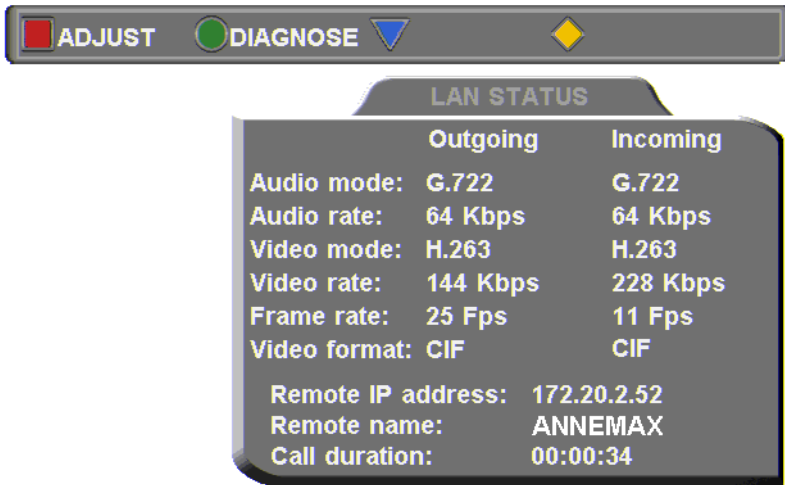
During a call, the red **ADJUST** SoftKey is available. You can access the Adjustment sliders only during a call.

2. Press the red **ADJUST** SoftKey. The first slider appears.

RESET

Press the red RESET SoftKey
to return to the default settings.

Press right arrow to
increase; left arrow
to decrease levels

Press the up or
down arrow to
navigate among
the sliders

MOTION CONTROL

Slow   Medium   Fast
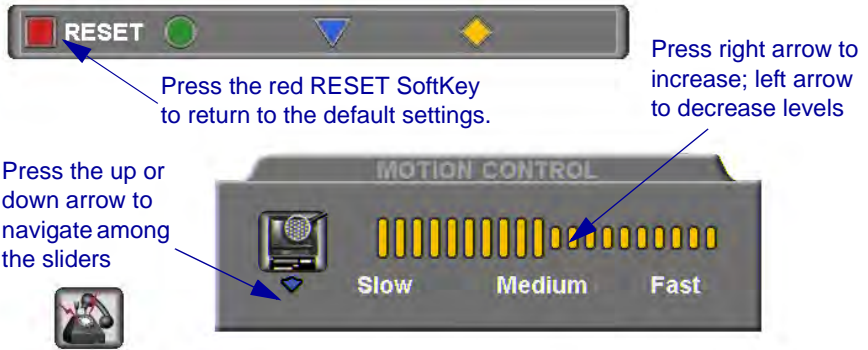
3.   Press the up and down arrow keys to view and adjust the
     different sliders:

**Motion
Control**

Press the left arrow key to clear up blocks in
the video (**Slow** motion).

Press the right arrow key for smoother, more
continuous motion (**Fast** motion).

Lip Synch

Press the left arrow key if sound comes
before motion (**Delay Audio**).

Press the right arrow key if motion comes
before sound (**Delay Video**).

The Lip Synch slider is only available if Lip Synchronization is enabled
(see "Automatic Video Transmission Adjustment" on page 65).

LIP SYNCH

Delay
Audio   Delay
                         Video
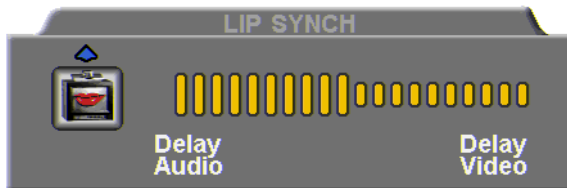
Buffering

Press the left arrow key for a more realistic video (**Less Delay**).

Press the right arrow key to clear up video freezing and jumping **(Smoother Motion)**.

The buffering slider is only available if Automatic Buffering is disabled (see "Automatic Video Transmission Adjustment" on page 65).

— For best results, start the sliders at one end and gradually adjust them.

— To reset the default values, press the red **RESET** SoftKey.

4. Press <OK> to apply the changes and close the sliders.

6.2   Adjusting the Audio

HD1000 supports various and powerful audio features:

❑   Increasing, decreasing or muting the volume of incoming and outgoing audio

❑   Switching between different local microphones and other audio sources

❑   Setting VCR mixing options

❑   Setting audio options to support special environments

Adjusting the Volume

You can adjust the volume at any time, in or out of a videoconference, when a dialog box is open or when the screen is clear. The following volume controls are available:

●   Increase or decrease the volume of the incoming audio

●   Mute the incoming audio

●   Mute the outgoing audio

➤   **To adjust the volume of incoming audio**

❑   Press the right volume button to increase the volume, or press the left volume button to decrease the volume.

Volume Level

➤   **To mute the speaker**

❑   Press Mute <Speaker>. An animated picture on the bottom of the screen indicates that the speakers are muted.

To restore the speaker, press Mute <Speaker> again.

➤   **To mute the microphone**

❑   Press Mute <Microphone>. An animated picture on the bottom of the screen indicates that the microphone is muted.

To restore the microphone, press Mute <Microphone> again.

Automatically Muting the Microphone During Incoming Calls

When Auto Answer is turned on, there is a possibility that the remote side will hear your audio before you're ready to interact with them. This carries the risk of broadcasting something you don't want the remote side to hear. To protect against this scenario, you can automatically mute your microphone (Audio Out) at the start of automatically answered incoming calls.

➤ **To automatically mute the microphone at the start of incoming calls**

1. Press <Menu>. The Main Menu opens. Select **Options**.
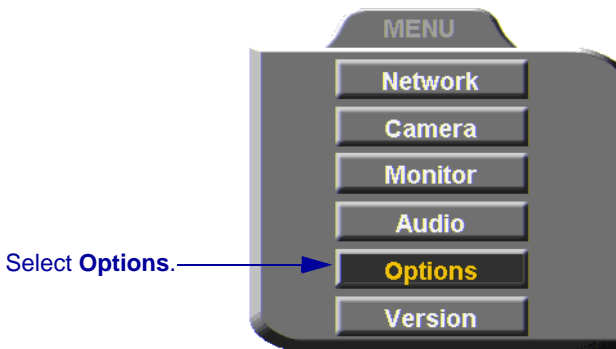
Select **Options**.

2. In the Options dialog box, navigate to the **Call** tab, select **Auto + Mute Mic.**

Select to mute the microphone automatically whenever the HD1000 accepts an incoming call.
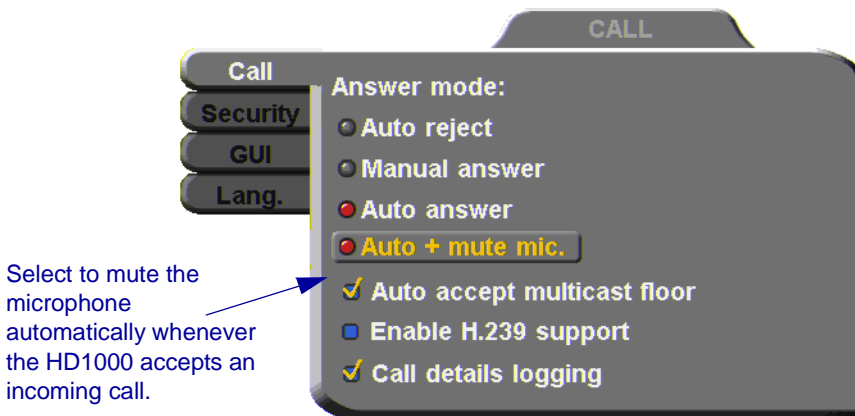
Selecting a Microphone

If you connected a mixer or a second microphone to the VCR AUD IN connector on the HD1000 (see "Connecting a DVD/VCR for Playing Back Videoconferences" on page 25), choose which audio source to use.

➤ **To choose an audio source**

1. Press <Menu>. The Main Menu opens. Select **Audio**.
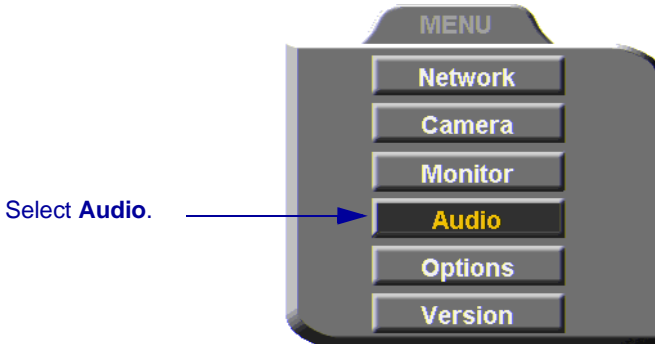
Select **Audio**.

2. In the Set Audio dialog box, select the appropriate **Audio Input** option.

TableTop To use a tabletop microphone or other audio source connected to the HD1000's **MIC** connector.

Line Level To use a microphone or other audio source (such as VCR, mixer, etc.) connected to the HD1000's VCR AUD connector.

3. Press <OK> to apply the changes and close the dialog box, or go on to the next procedure to select VCR mixing options.

OK

Select the current audio source.

SET AUDIO

Audio input

○ Table-top mic
○ Line level

VCR audio mix

○ No mix
○ VCR record
○ VCR playback

☑ Acoustic echo cancelation (AEC)

Mic. gain level: ↺   Low
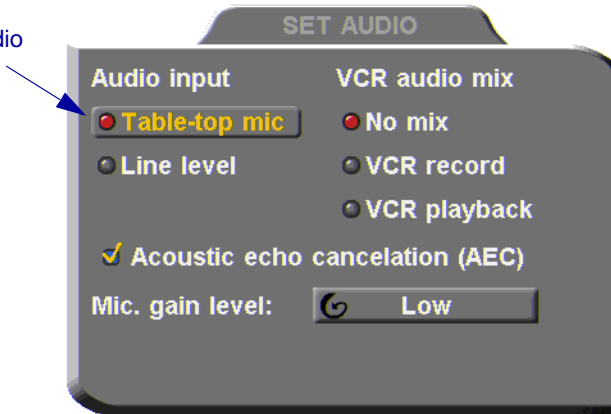
Setting Mixing Modes

Mixing modes determine how the audio from a DVD or VCR connected to the HD1000 is mixed and sent to the remote party or recorded to a VCR cassette.

➤ **To set up a mixing mode**

1. In the Set Audio dialog box, select the **VCR Audio Mix** mode.

Audio Origin Mixing Mode	Local Party	Remote Party	DVD/VCR
No Mix	Hears the remote party's audio.	Hears the local party's audio.	Not applicable.
VCR Record	Hears the remote party's audio.	Hears the local party's audio.	Records audio from the local and remote parties (connected to VCR's Audio In).
VCR Playback, Tabletop mic	Hears the remote party's audio and the VCR playback audio.	Hears the local party's audio and the VCR playback audio.	Records audio from the remote party (connected to VCR's Audio Out).

2. Press <OK> to apply the changes and close the dialog box, or go on to the next procedure to select audio options for special room environments.

Select an audio mixing mode.

Enabling Echo Cancellation

When the microphone picks up audio from your speakers, an echo is created. Acoustic Echo Cancellation (AEC) suppresses this effect. By default, AEC is turned on.

You should disable AEC only if audio input comes through a Line Level connection from a playback device that does not capture sound from the conference room.

➤ **To turn on AEC**

1. In the Set Audio dialog box, select **Acoustic Echo Cancellation**.

2. Press <OK> to apply the changes and close the dialog box.

Select to enable AEC.
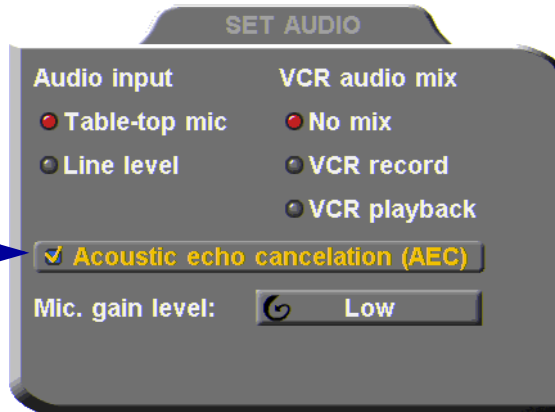
Setting the Microphone Gain Level

The gain level is the amplification of the microphone volume when transmitted to the conference. Depending on your microphone or other audio input, you may adjust the gain to a suitable level.

➤ **To adjust the gain level**

1. In the Set Audio dialog box, navigate to **Mic. Gain Level**.

2. Press the right or left arrow key to set the gain to **Low**, **Medium**, or **High**.

Set the gain level for your system's microphone.
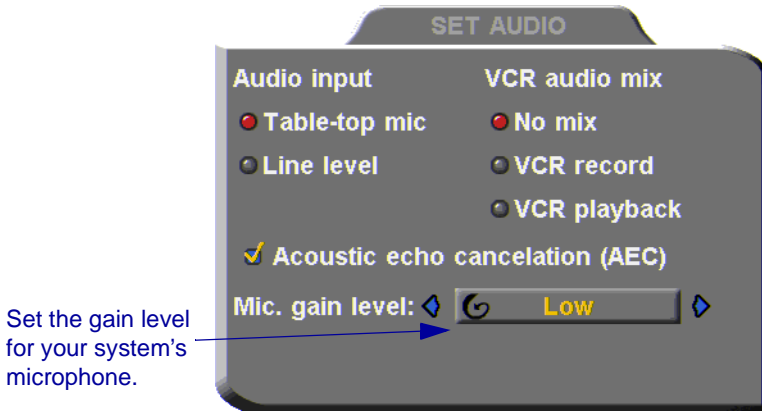
3. Press <OK> to apply the changes and close the dialog box.

7   STREAMING MEDIA

Streaming refers to the continuous transmission of media (video, audio and/or data) in one direction. Unlike videoconferencing, which requires realtime, two-way transmission with sufficient bandwidth, successful streaming has less stringent transmission requirements. Streaming may take place whether or not the HD1000 is engaged in a call.

Multicast and unicast streaming are available for HD1000 users:

❑ A *multicast* stream refers to the same stream simultaneously sent from one terminal to more than one client.

❑ A *unicast* stream refers to one stream being sent from one terminal to only one client.

The transmitted media is not stored on the client computer. Instead, the client's viewing application runs the stream as it collects and processes it, even if the client is still receiving the stream.

> To view streams, VCON's Broadcast Viewer or Apple's QuickTime Player must be installed on the client computer.

Using VCON's HD DualStream™, the HD1000 can send a video and data stream simultaneously. HD DualStream enables video transmission using the H.263 codec in CIF, and data transmission (as video images) using H.263 at 4CIF resolution. If the viewing client's conferencing system or PC supports 4CIF, the data images appear in 4CIF. Otherwise, the data displays in CIF.

7.1   Setting Streaming Properties

In the **Streaming** tab, define the configuration for transmitting streaming media from the HD1000.

➤ **To set the Streaming configuration**

1.   Press <Menu>. The main Menu appears. Select **Network**.

Select **Network**.
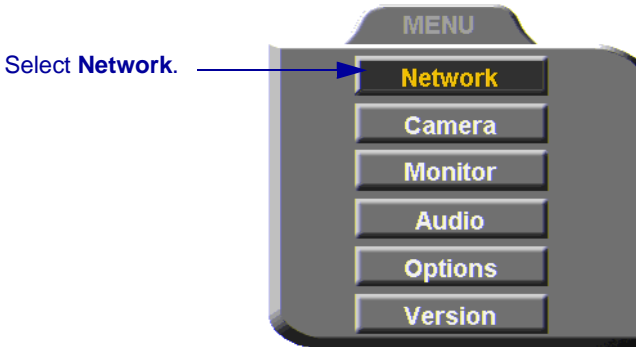
2.   Navigate to the **Streaming** tab.
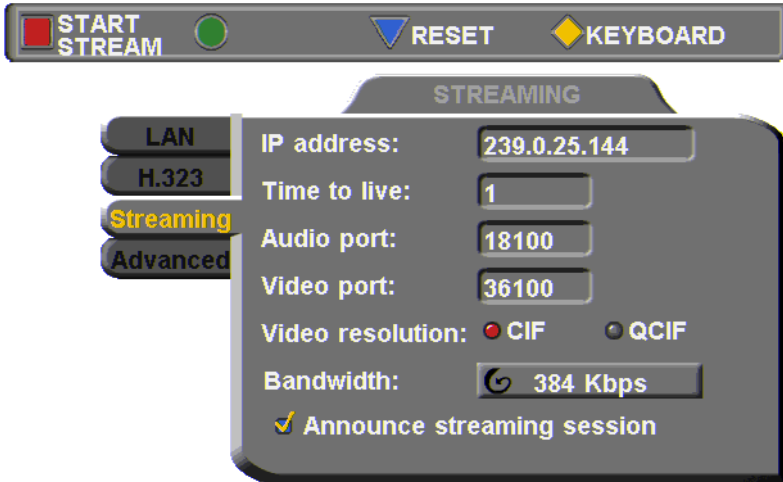
3. Set Streaming properties as follows:

The default configuration is recommended for most streaming conditions. Change them ONLY if your system's or network's specifications differ from the default values.

IP Address
The destination IP address for a multicast streaming broadcast. The HD1000 defines this address internally. This address must be a class D address in the range of **224.0.0.0** to **239.255.255.255**.

The sender transmits the streams to this address and viewers receive the stream from this address.

Time to Live
The maximum number of routers that the stream may pass through.

Audio Port
The ID of the port used for the audio connection.

Video Port
The ID of the port used for the video connection.

Video Resolution
❑ Select **CIF** to transmit video at a higher resolution and lower frame rate, using Common Interchange Format (CIF). Usually, CIF provides better overall video quality, especially when a higher transmission bandwidth, such as 2 x BRI (at least 128 kbps) is available.

❑ Select **QCIF** to transmit video at a medium resolution and higher frame rate, using Quarter Size Common Interchange Format (QCIF). Use QCIF if the viewers' systems do not support CIF format, or if you transmit over low bandwidth.

Bandwidth
Click the right arrow to select the maximum bandwidth for the streaming media.

Announce Streaming Session
Select to send announcements of your streaming session over the network to client Viewer Programs other than HD1000 (such as VCON's Broadcast Viewer).

7.2   Starting a Streaming Session

➤ **To start a streaming session**

1.   Press <Menu>. The main Menu appears. Select **Network**.

Select **Network**.
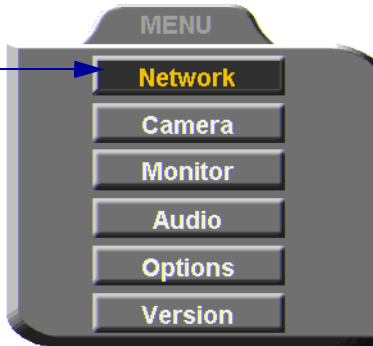
2.   Navigate to the **Streaming** tab.
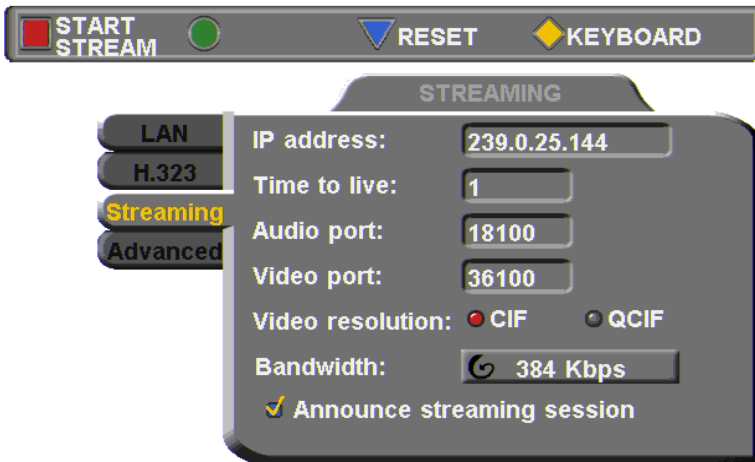
3.   Press the red **START STREAM** SoftKey.

4.   To stop streaming, press the red **STOP STREAM** SoftKey.

8 DATA AND APPLICATION SHARING

The ability to share data and applications is an important feature of enterprise conferencing. For example, you and the other parties can exchange files, view a business presentation together, or analyze the execution of another application.

To share data and applications, a personal computer must be connected to the same network as the HD1000.

This chapter explains how to set up your HD1000 for data sharing, to open a data connection, and start the data stream.

8.1 Minimum PC System Requirements

The HD Data Utility may be installed and operated on any computer that meets the following minimum requirements:

Operating System	Windows 2000/XP, Pentium III or higher
Minimum CPU Speed	500 MHz
Color Resolution	24 bpp, 32 bpp
Screen Display	640x480, 800x600, 1024x768

8.2 Installing the HD Data Utility

The HD Data Utility enables you to share data applications with the other contacts in your conferences.

➤ **To install the HD Data Utility**

1. Go to the Downloads page of the VCON website (http://www.vcon.com/support/downloads.shtml).

2. Find and click the **HD2000 Data Utility** link. The Download window opens in your browser.

3. Downloading from the VCON site requires registration.

   If you've downloaded items from the site before, enter your e-mail address and password. If you forgot your password, click the Password Reminder link to request that VCON send it to your e-mail address.

If you're downloading for the first time, click the **New Users** link. Fill out the registration form and VCON will send you a password quickly. After receiving the password, enter your e-mail address and password to log in.

4. Click the **Download** link to start downloading the HD Data Utility.

5. After downloading the file, restart your computer.

8.3 Opening a Data Connection

To open a data connection and display the PC screen on the HD1000, run the HD Data Utility on the remote computer.

➤ **To start a data connection**

1. Run **Start>Programs>VCON>HD Utilities>Data Utility**.

2. Enter the IP address of the HD1000.

3. Click **Connect** to view what's displayed on the PC's screen.

    To indicate the open data connection, an icon appears in the Windows taskbar near the bottom of the screen.

➤ **To disconnect the data connection**

1. If the Data Utility is minimized, double-click the data connection icon.

2. Click **Disconnect**.

8.4   *Data Display on Participants' Monitors*

This section describes what participants see in various types of data-sharing situations:

- Sharing with VCON HD systems
- Sharing with non-HD systems
- Streaming

Data Sharing Between HD Systems

During a conference with other HD systems (HD100, HD2000,HD3000, or HD5000), or with systems supporting HD DualStream™, the HD1000 can send two streams (video and data) at the same time.

❑   If the remote party operates in **Dual Monitor**, the shared application appears on one monitor and your HD1000's video appears on the second monitor.

❑   If the remote party operates in **Single Monitor**, the shared application appears in full screen display and your HD1000's video appears in a Picture-in-Picture (PIP) display.

> The data stream will display in 4CIF resolution in systems supporting 4CIF. Otherwise, the data displays in CIF.

Remote party's video

Data stream through the HD1000
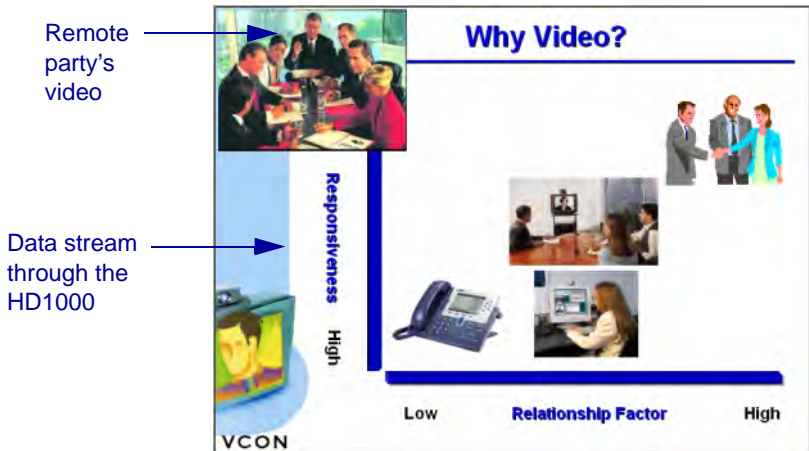
Data Sharing to a non-HD System

Non-HD systems refer to VCON's Falcon, MediaConnect products, ViGO, and other vendors' products.

In this situation, the remote party receives only the data, but may display its local video in addition to the data. The data is actually transmitted as video, with a resolution of 4CIF (or CIF if the remote system does not support 4CIF).

Streaming Data

Data applications may also be shared by streaming the data to any person who connects to the HD1000. Anyone can see the data in one of the following viewers:

❑ VCON's Broadcast Viewer.

❑ HD1000's Web-based Remote Viewer. Connecting to the HD1000 through Internet Explorer, users see both the data and the video from the HD1000.

You can turn the streaming on from the HD1000 interface or the HD1000 Web-based Remote Management. After several seconds, the data stream starts. The data appears in the appropriate viewer of any user connecting to the stream.

➤ **To turn on data streaming from the HD1000 interface**

1. Open a data connection to the HD1000 (see).

2. Press <Menu>. The main Menu appears. Select **Network**.

3. In the Streaming dialog box, press the red **START STREAM** SoftKey.
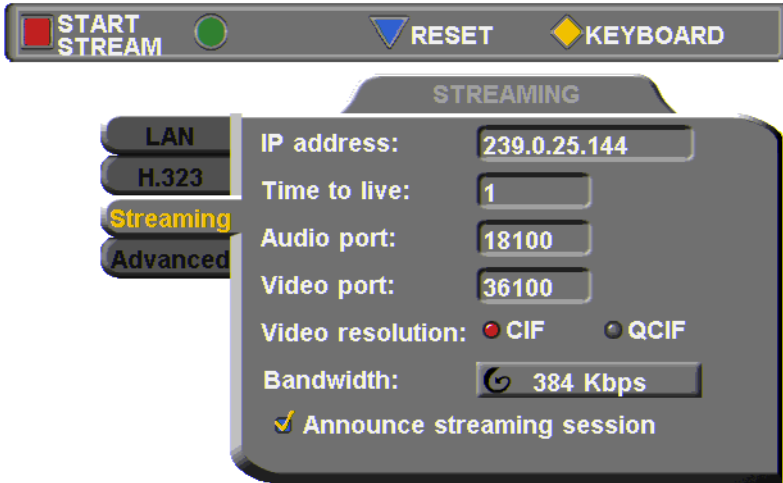
The default configuration is recommended for most streaming conditions. Change them ONLY if your system's or network's specifications differ from the default values (see "Setting Streaming Properties" on page 94).

Turn streaming off by pressing the red **STOP STREAM** SoftKey.

Enabling H.239 Dual Streaming

The H.239 standard enables the HD1000 to convert PC application graphics into a separate media stream and transmit it parallel to the video stream. Video systems supporting H.239 display shared data and remote video in separate windows. Systems not supporting H.239 display only the shared data in a single window.

➤ **To enable H.239 streaming**

1. Press <Menu>. The main Menu opens. Select **Options**.

Select **Options**.

2. Select **Enable H.239 Support**.
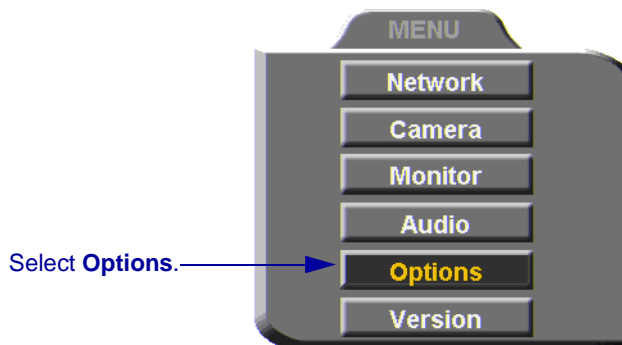
Select **Enable
H.239 Support.**
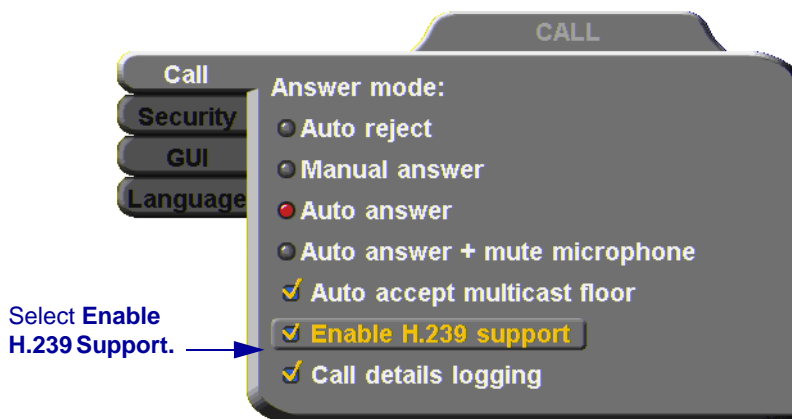
3. Press <OK> to apply changes and close the dialog box.

9 WEB-BASED REMOTE MANAGEMENT

HD1000 contains an embedded web management program, which provides powerful operational and management capabilities from computers in remote locations. You can access the HD Web Management from any PC through an Internet Explorer browser.

To access the Web Management program, the following prerequisites must be met:

❑ HD1000 must be set to enable remote web management.

❑ The user must enter a correct password.

❑ Internet Explorer 5 or higher must be installed on the remote PC.

For details on working with the Web Management, see the *HD Web Management User's Guide*.

9.1 Enabling Remote Management of the HD1000

To manage and operate the HD1000 remotely, turn on the Web Management option in the HD1000's configuration.

➤ **To enable remote management of your HD1000**

1. Press <Menu>. The main Menu opens. Select **Options**.

Select **Options**.
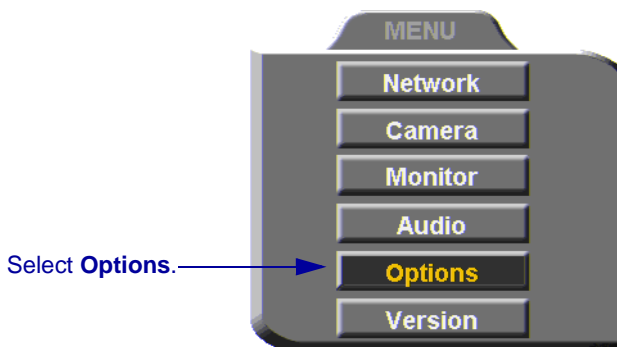
2. Navigate to the **Security** tab.

3. Select **Enable Web Management**.

4. To secure the Web Management program against unauthorized access, enter a password using numbers and/or letters. To type letters, press the yellow **KEYBOARD** SoftKey to open the online keyboard.

Enter the system's **Password** using numbers and/or letters. To type letters, press the yellow softKey.

Security tab

Select **Enable Web Management** to make remote management available.

.
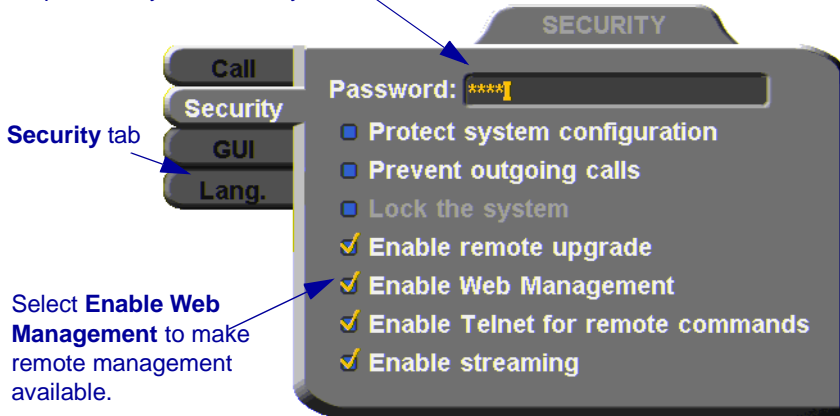
5. Press <OK> to apply the change and close the dialog.

9.2   Logging into the Web Management Program

➤ **To log into the Web Management Program**

❑ In your remote computer's browser, enter the IP address of your HD1000. For example, **x.y.z.a**, where [x.y.z.a] is the IP address.

10 MULTIPOINT CONFERENCING WITH INTERACTIVE MULTICAST

Interactive Multicast is an alternative to MCU sessions, allowing the broadcast of identical video streams, audio streams, and data application sharing packets from one party to multiple parties. Interactive Multicast uses bandwidth more efficiently than an MCU does, and it does not limit the number of users in a session or the number of sessions per license; most MCUs do.

During an Interactive Multicast, the initiating party (*Chair*) calls one or more parties (*Participants*) to start the conference and controls its progression. All parties receive identical transmissions.

Many VCON products provide the capability to carry out Interactive Multicast video meetings over a Local Area Network (LAN), in which the Chair *and* all Participants may be seen and heard during the duration of the meeting. The HD1000 can join an Interactive Multicast as a Participant - only Participant functions are available.

As a Participant, you may receive the floor, in which its video and audio is seen and heard, respectively, by the other Participants and the Chair for a period of time.

Interactive Multicasts can proceed in the form of a lecture or demonstration, in which Participants' participation is restricted and controlled by the Chair, or as a free discussion, in which everyone has the right to be seen and heard without the need to receive permission from the Chair.

10.1   Entering an Interactive Multicast

➤ **To enter an Interactive Multicast**

❑   Answer an incoming call from the Chair of an Interactive Multicast.

-or-

Call the IP address of the session after the Interactive Multicast starts.

You will see and hear the same video and audio as everyone else in the conference.

10.2   *Participating in an Interactive Multicast*

After you join an Interactive Multicast, you will see and hear the same remote video and audio as everyone else in the meeting.

During the session, you may request the floor. When you have the floor, all the other participants see and hear you.

Requesting the Floor

To speak and be seen, request the Floor from the Chair.

➤   **To request the Floor**

   1.   Press <Multipoint>. A message asks if you want to receive the floor.

   2.   Press <OK>.

To skip the message and automatically receive the Floor every time the Chair grants it to you, select **Auto Accept Multicast Floor** in the **Call** dialog box.

Select to accept the multicast floor automatically without having to confirm acceptance.

Returning the Floor

When you finish speaking to the floor, return the Floor to the Chair.

➤   **To return the Floor**

   1.   Press <Multipoint>. A message asks if you want to return the floor.

   2.   Press <OK>.

11 TELEPHONY EXCHANGE FUNCTIONS

Users that are registered with a VCON Media Xchange Manager® (MXM) receive all the regular Gatekeeper services, plus call exchange services.

The MXM assigns every registered user a new User Number (directory number), to ensure that every user has a unique number. To dial other registered users, you can enter the User Number and then press <Dial>.

If your HD1000 is registered and managed by an MXM, call exchange functions are available:

- Call Forward
- Call Transfer
- Inviting Additional Parties to an Ad-hoc Conference
- Simplified Gateway Dialing
- Connecting to an MCU Videoconference

11.1 Logging In to the MXM

To log in to an MXM, you must enter its address in the Network Configuration. Consult with your system administrator.

➤ **To log in to the MXM**

    1.   Press <Menu>. The Main Menu opens. Select **Network**.

Select **Network**.
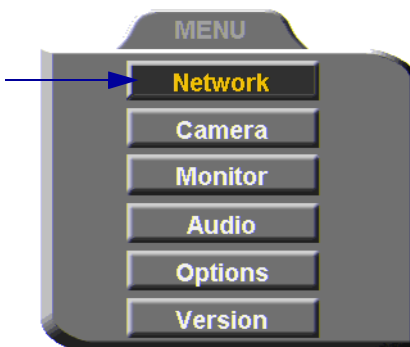
2.   Navigate to the **H.323** tab and press the right arrow button to access H.323 properties.

3.   Select the **MXM** option.

4.   In the **MXM Server IP** box, enter the IP address of the MXM.

Select to enable the system to register with the MXM

Enter the IP address of the MXM

H.323 tab
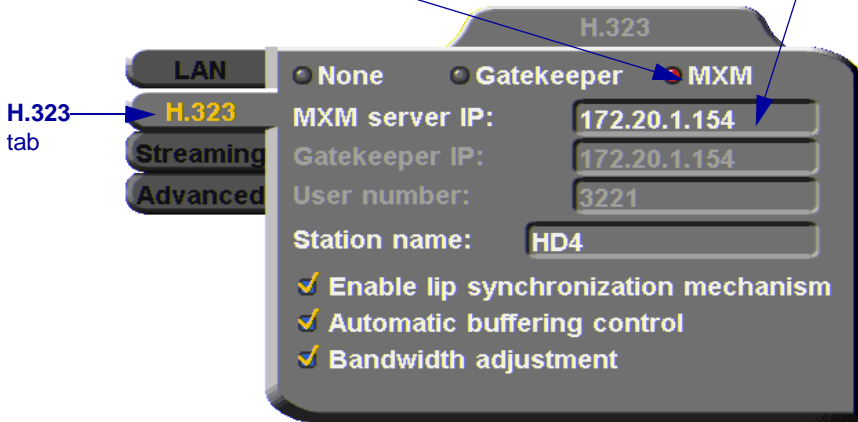
5.   Press <OK> twice. A message states that HD1000 will restart in a few seconds.

If the MXM is in Open mode, it automatically permits the HD1000 to register or log in.

If the login attempt is unsuccessful, consult with the system administrator. The administrator must then grant login permission before the HD1000 can log in.

11.2   Call Exchange Services

If HD1000 is registered with the MXM, telephony services are available for videoconferencing. The available services are:

- Call Forward
- Call Transfer
- Inviting Additional Parties to an Ad-hoc Conference
- Gateway Dialing for IP-to-ISDN

Call Forward

If Call Forward is activated for the HD1000, the MXM forwards calls to another specific user if you are unable to answer. The Call Forward settings for the HD1000 may be done by both the administrator (in the MXM Administrator application) or you. The last changes, regardless of who made them, are valid.

In HD1000, you can enable Call Forwarding by dialing a system function code. The code may be either the factory default value or a value set by the administrator.

➤ **To set Call Forwarding**

❑ In the Manual Dialer, dial one of the following (bold values are factory defaults):

1. To enter the "*", press the yellow **KEYBOARD** Softkey from the Manual Dialer screen, navigate to the "*" and select it, and then press <OK>.

2. After dialing, a "Call Rejected" message appears. However, the request is accepted by the MXM if the directory number is valid.

For this feature	Dial this number
Forward on no answer	***70** (or other code number), followed by [*other destination directory number*], and then press <Dial>.
	Activate if you want to forward calls intended for you to another specific user. The interval before transferring the call is set by the administrator.
	For example, *****70751**+<Dial> will forward calls to user 751.

For this feature	Dial this number	
Forward on busy	***71** (or other code number), followed by [*other destination directory number*], and then press <Dial>.	
	Activate if you want to forward calls to another specific user if you are engaged in another videoconference.	
	For example, ***71751**+<Dial>will forward calls to user 751.	
Unconditional forward	***72** (or other code number), followed by [*other destination directory number*], and then press <Dial>.	
	Activate if you want to forward ALL calls intended for you to another specific user.	
	For example, ***72751**+<Dial>will forward calls to user 751.	

➤ **To disable Call Forwarding**

❑ In the LAN Manual Dialer, dial one of the following (bold values are factory defaults):

To disable this feature	Dial this number	
Forward on no answer	***70*** (or other code number), and then press <Dial>.	
Forward on busy	***71*** (or other code number), and then press <Dial>.	
Unconditional forward	***72*** (or other code number), and then press <Dial>.	

After dialing, a "Call Rejected" message appears. However, the request is accepted by the MXM if the directory number is valid.

Call Transfer

Using the Call Transfer feature, you can transfer an open videoconference from the HD1000 to another party. As a result, the videoconference will continue between your original remote party and the party to which you transferred the call. HD1000 will be disconnected from the call.

➤ **To transfer an open videoconference to another party**

1. Press any of the number keys on the remote control. The Manual Dial dialog box and SoftKey menu open.

2. Press the red **MXM CALL CONTROL** Softkey.

3. In the MXM Call Control box, enter the directory number of the party to whom you want to transfer the call. To browse entries from the Phone Book, press the right and left arrow keys on the remote control.

4. Press the red **TRANSFER** SoftKey.

Press the red Softkey to transfer the videoconference to the entered address
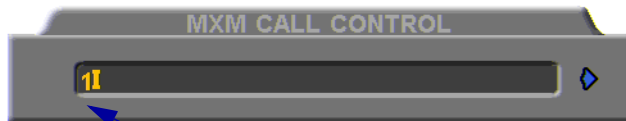
Enter the address of the additional party for transferring the conference

The call gets transferred to the party that you requested. When that party accepts the call, the HD1000 is disconnected from the videoconference. The call continues between the original remote party and the newly-joined party.

Inviting Additional Parties to an Ad-hoc Conference

The Invite command lets you "invite and join" additional parties into an "ad-hoc multipoint videoconference." During an open videoconference between two parties, HD1000 provides an Invite button for calling the additional parties.

You can invite another party by selecting its entry from the Phone Book or by entering its address directly.

➤ **To invite other parties into an ad-hoc videoconference**

1. Press any of the number keys on the remote control. The Manual Dial dialog box and SoftKey menu open.

2. Press the red **MXM CALL CONTROL** Softkey.

3. In the MXM Call Control box, enter the directory number of the party that you want to invite. To browse entries from the Phone Book, press the right and left arrow keys on the remote control.

4. Press the green **INVITE** SoftKey.

Press the green Softkey to transfer the videoconference to the entered address
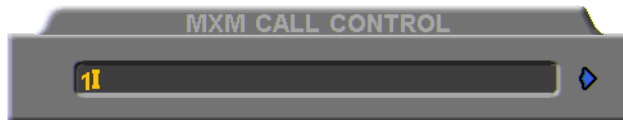
Enter the address of the additional party for transferring the conference

5. HD1000 dials the number.

    After several seconds, the additional party is added to the session, which is now a multipoint conference. The parties' video is displayed in Voice-Activated Switching.

Simplified Gateway Dialing

If HD1000 is logged into an MXM, simplified gateway dialing is available for starting a videoconference through a LAN connection to an ISDN destination.

The default function code for starting a call through a gateway is **9**. The system administrator may change this code, if necessary (see the *Media Xchange Manager Administrator's Guide*).

➤ **To start a LAN-to-ISDN call through a gateway**

1. In the Manual Dialer, dial [*service access number*][*ISDN number*].

2. Set the required **Bandwidth** or use the default bandwidth.

Enter the service access number (**9**) and then the ISDN number

MANUAL DIAL

Address:
90015129557890

Bandwidth: 384 Kbps

Press the right arrow button to select the maximum bandwidth
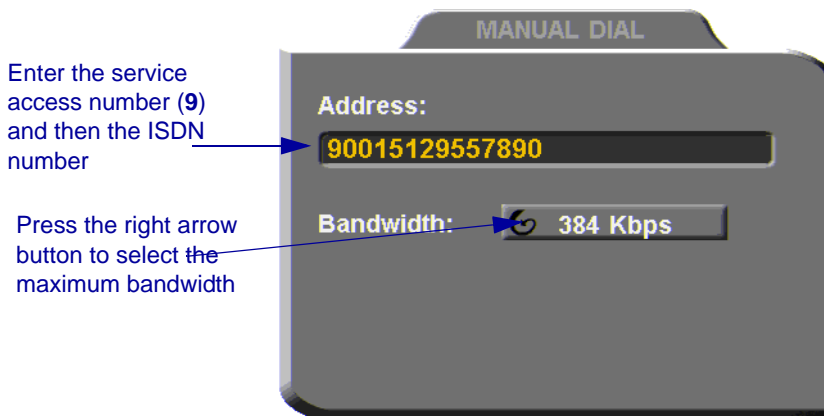
Dialing a LAN-to-ISDN Call Through a Gateway

12 SYSTEM SECURITY

You can protect against unauthorized use of the HD1000 by defining restrictions on configuration changes and the initiation of videoconferences.

The Security dialog box in the Options contains the options and properties for setting up a security configuration:

❑ Setting a Security Password

❑ Setting Security Properties

❑ Locking the System

➤ **To access the Security properties**

1. Press <Menu>. The main Menu opens. Select **Options**.
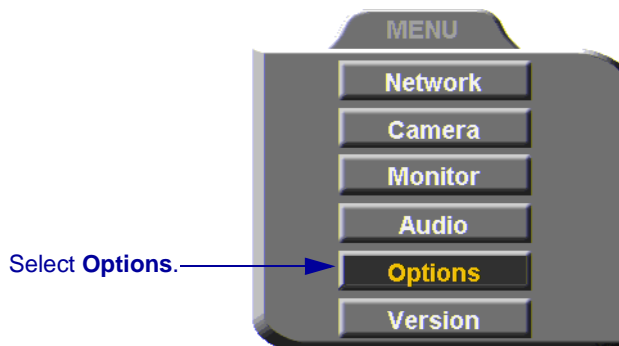
Select **Options**.

2. In the Options dialog box, navigate to the **Security** tab. If you previously set a security password (see "Setting a Security Password" on page 121), enter it in the Password dialog box.

KEYBOARD

SECURITY

Call

Security

GUI

Lang.

Password:

- ☐ **Protect system configuration**
- ☐ **Prevent outgoing calls**
- ☐ Lock the system
- ✓ **Enable Remote Upgrade**
- ✓ **Enable Web Management**
- ✓ **Enable Telnet for remote commands**
- ✓ **Enable Streaming**

Encryption mode: None
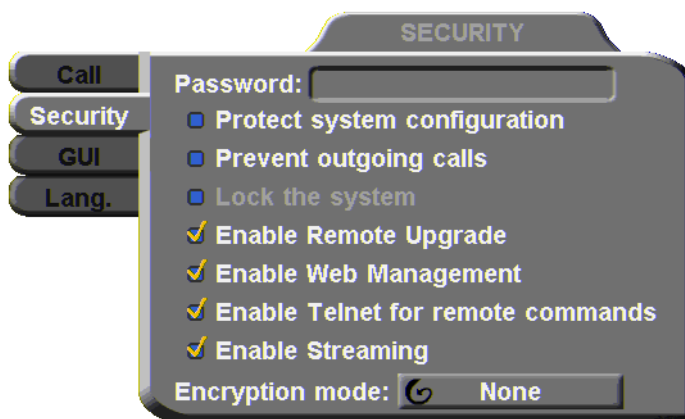
3. After setting Security properties, press <OK> to save the settings and close the dialog box.

OK

12.1   Setting a Security Password

A password prevents unauthorized users from changing the system configuration, initiating videoconferences, and/or accepting videoconference calls. The password is mandatory for locking the system completely from all of the actions stated above.

A password for accessing security should be unique and known only to the administrators. After a password is defined, any user must enter the password to gain access to the restricted functions. This password is also required for accessing remote configuration through the HD1000's Web-based Manager (see Chapter 9, "Web-Based Remote Management"). If you forget your password, contact your local VCON distributor's technical support.

➤ **To set a security password**

1.   In the Security dialog box's **Password** box, enter numbers and/or letters. To type letters, press the yellow **KEYBOARD** SoftKey.

Enter the system's password using numbers and/or letters. To type letters, press the yellow softKey.
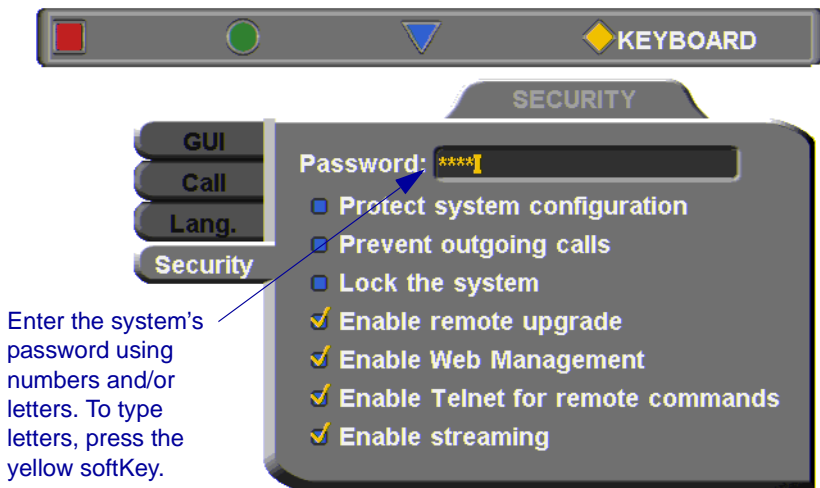
12.2 Security Properties

The Security dialog box contains the available security options for the HD1000.

Protect System Configuration
Select to prevent unauthorized changes to the system configuration. The system's configuration is then disabled to videoconferencing users.

Prevent Outgoing Calls
Select to prevent users from initiating calls.

Lock the System
See "Locking the HD1000" on page 124

Enable Remote Upgrade
Select this option to enable the transfer of upgrades and patches to the HD1000 unit.

1. For upgrading the HD1000 software through the HD Upgrade Utility.

2. For software integrators to send software patches, upgrades, and modifications to the HD1000.

Enable Web Management
Select this option to enable remote access to the HD1000 through the Web Management Utility (see "Web-Based Remote Management" on page 105).

Enable Telnet for Remote Commands
Select this option to enable Telnet access for programming the HD1000 software, using the HD1000's ZAPI application. This access is intended for software integrators.

Enable Streaming
Select this option to enable the transmission of multimedia streaming from this HD1000.

Encryption Mode

Choose the mode of encryption for this HD1000's conferences.

❑ Choose **None** to allow unsecured calls.

❑ **AES** (Advanced Encryption Standard) is a standard encoding method for encrypting data transmissions in commercial and government sectors of the USA and its use is growing worldwide. Select this option to encrypt all of this HD1000's calls. If the remote side has not also enabled encryption, the call attempt will be unsuccessful.

❑ **Auto** enables the HD1000 to encrypt a call if the remote side has also enabled encryption. If the remote side has not enabled encryption, an outgoing call will be unsecured.

Prevent unauthorized changes to the system configuration.

Prevent users from initiating calls.

Prevent unauthorized use of HD1000.

Enable transfer of software upgrades and patches to HD1000.

Enable remote management of the HD1000.
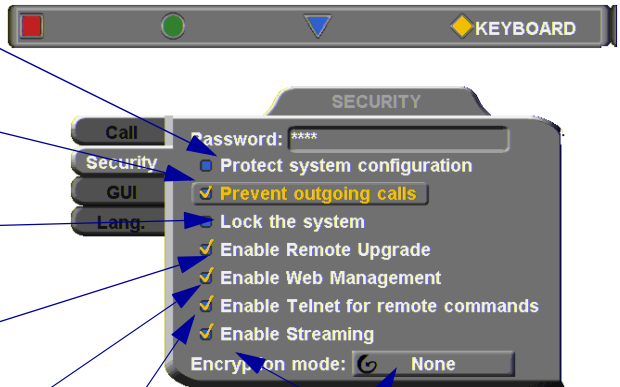
Enable Telnet access for programming.

Enable multimedia streaming from the HD1000.

Type of encryption used on outgoing calls.

12.3   Locking the HD1000

Locking the HD1000 completely prevents unauthorized use, such as configuration changes and initiation and acceptance of videoconferences.

When the HD1000 is locked, a password is mandatory for accessing all of these functions. After a password is defined, any user must enter the password to unlock the system and gain access to the restricted functions. If you forget your password, contact your local VCON distributor's technical support.

➤ **To lock the system**

1.   Press <Menu>. The main Menu opens. Select **Options**.

2.   Press the yellow **SECURITY** SoftKey.

3.   In the **Password** box, enter a password using numbers and/or letters. To type letters, press the yellow **KEYBOARD** SoftKey to open the onscreen keyboard.

4.   Select **Lock the System**.

5.   Press <OK> to save the settings and close the dialog box.

Enter the system's password using numbers and/or letters. To type letters, press the yellow softKey.

Select to prevent unauthorized use.
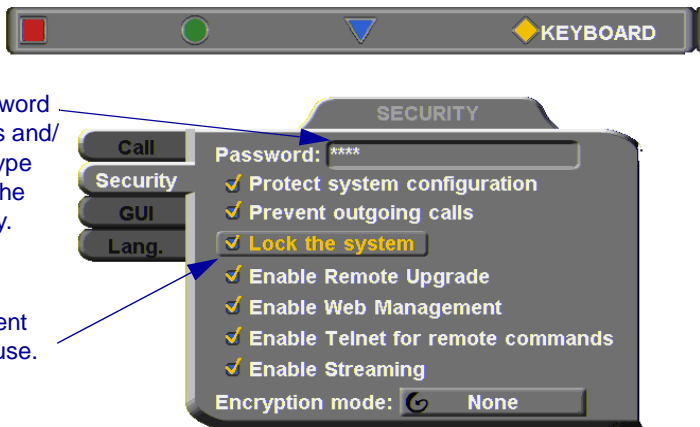
13 CALL LOGGING

13.1 Enabling Call Log Recording

The Call Log enables your company or organization to keep a record of conferences that your HD1000 both dials and receives. The HD1000 generates a Call Details Report (CDR) which is accessible from the HD Web Management program. You can analyze this information in detail for departmental accounting or network planning purposes.

The CDR provides call duration, remote party identification, call direction, video and audio codecs and formats, and more.

➤ **To enable Call Log Records**

1. Press <Menu>. The Main Menu opens. Select **Options**.

Select **Options**.
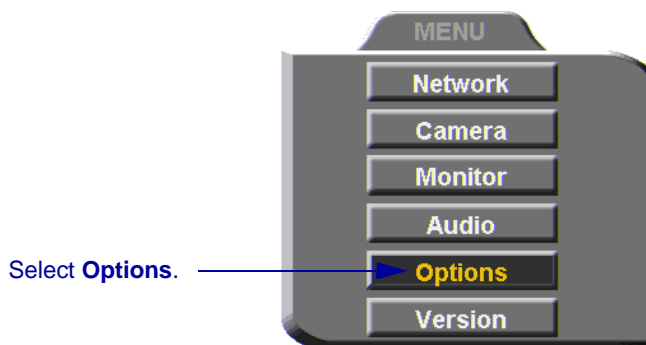
2. Select **Call Details Logging** to enable the creation of call logs.

Select **Call Details Logging**
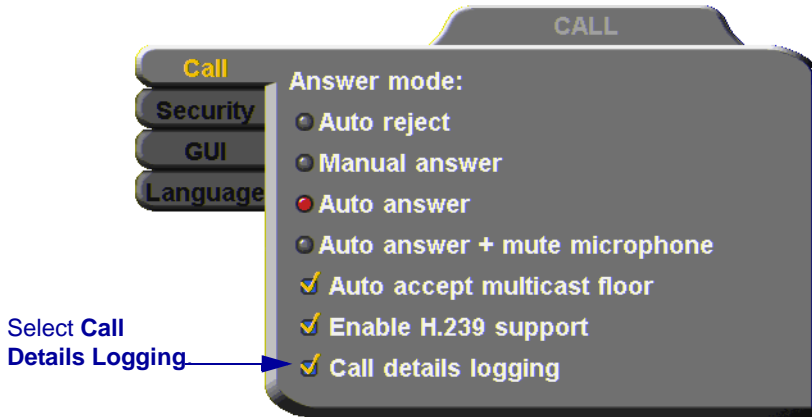
3. Press <OK> to apply changes and close the dialog box.

13.2 Viewing the Call Log

You may view the Call Log through the HD Web Management program.

➤ **To view the Call Log**

1. On the left side of the screen, click **Utilities** and then **Call Details Report**.

2. The CDR opens in another browser window.

Call Duration	Call Direction	Remote Name	Remote Address	Video Mode (RX)	Video Format (RX)	Video Bitrate (RX)	Video FrameRate (RX)	Audio Mode (RX)	Audio Bitrate (RX)	Video Mode (TX)	Video Format (TX)	Video Bitrate (TX)	Vid Fram (T
00:02:46	<-	SANDY	172.20.1.18	H261	NULL	0	0	G728	0	H263	CIF	0	
00:03:06	<-	DAVID SCHOR	172.20.10.21	H263	CIF	0	0	G722	50	H263	CIF	494	2
00:00:13	->	DAVID SCHOR	172.20.10.21	H263	CIF	0	0	G722	57	H263	CIF	135	1

14 TROUBLESHOOTING

This chapter provides simple solutions for common oversights and issues.

If a situation occurs that is not covered by the supplied documentation, contact your local VCON distributor, and request assistance from their VCON-trained technical support department. Please describe the problem, device, and PC operating system (if applicable), and any other relevant details.

The solutions in this chapter are grouped by the type of equipment affected by the oversight or failure.

System or Equipment	Issues concerning the HD1000 unit or connected accessories
Network or Communications	Issues concerning networks, interface lines, and network equipment. This section is further categorized into IP, Streaming and Data Transfer issues.

14.1 System Diagnostics

To begin searching for the source of a problem, check the Diagnostics dialog. It describes any network and server problems that may exist.

➤ **To open the Diagnostics Dialog**

1. Press <Status>. The Status dialog box opens.

2. Press the green **DIAGNOSE** SoftKey. The Diagnostics dialog opens.

   If there is a problem described in the Diagnostics dialog, consult with the system administrator to find a solution.

Select **DIAGNOSE** to view a diagnostic report.

🟥 🟢**DIAGNOSE** 🔽 🔶

LAN STATUS

Station name:	HD0022
User number:	1001
IP address:	172.20.10.204
Gatekeeper:	172.20.10.205
MXM server:	172.20.10.205
Last call duration:	00:00:13
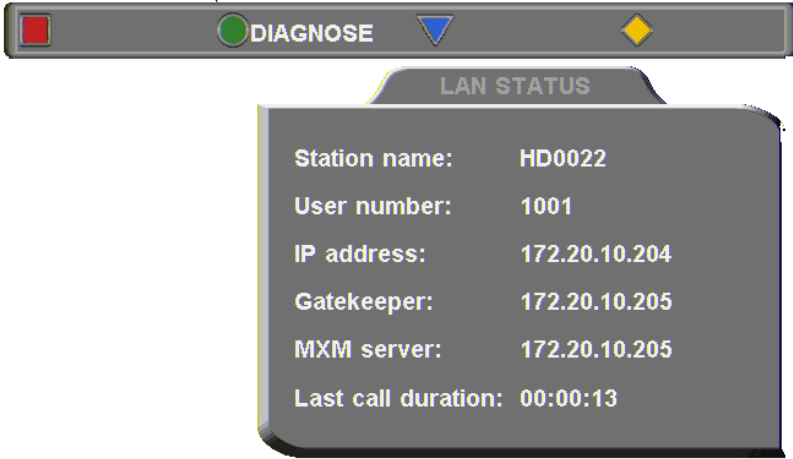
Select **ERASE PBK** to delete the Phone Book. Use this if the Phone Book is not usable and then recreate it or load a previously backed-up Phone Book.

Select **LOAD DEFAULTS** to restore the factory-set defaults for the system

Select **REBOOT** to restart the HD1000.

🟥 🟢**ERASE PBK** 🔽**LOAD DEFAULTS** 🔶**REBOOT**

DIAGNOSTIC

* Ethernet speed: 100 MB Full duplex.
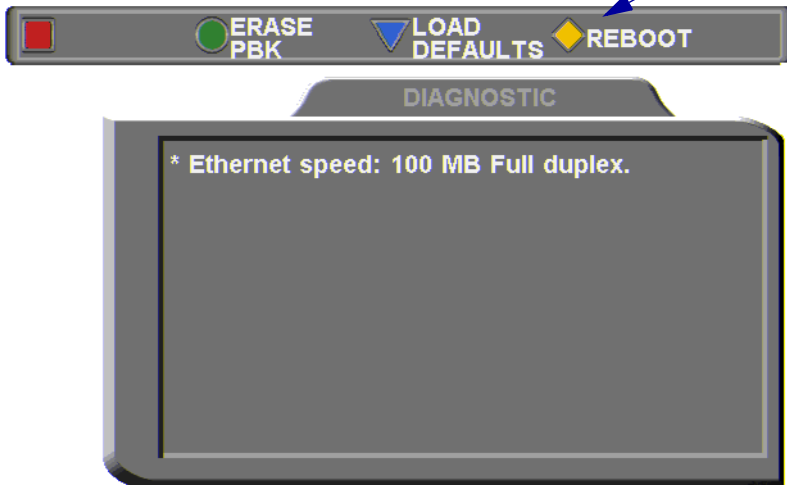
❑ If you have a problem with the Phone Book, you can erase it completely, by pressing the green **ERASE PBK** SoftKey.

A confirmation message appears. Click **OK** if you are sure you want to erase all Phone Book entries.

❑ You can restore the factory-set defaults for the system, by pressing the blue **LOAD DEFAULTS** SoftKey.

A confirmation message appears. Click **OK** if you are sure you want to cancel all changes made to the HD1000 options and settings and restore the original defaults.
HD1000 restarts.

❑ To restart the system, press the yellow **REBOOT** SoftKey.

If the problem you are trying to solve is not described in the Diagnostics dialog, try to find the solution in the following sections.

14.2 Starting HD1000 .

Condition	Solution
The HD1000 starts up slowly.	❑ Verify that the LAN cable is connected by the following methods: — Check that the green LED underneath the LAN connector on the rear panel is on. — Press <Status> and then the green **DIAGNOSE** SoftKey to check the LAN speed.
After loading, video from the camera is visible but the menus and address books are not.	3. Make sure that the HD1000 is connected to your monitor's S-Video In connector. -or- If the TV only has a Composite Video In connector, connect it to the HD1000's VCR Video Out connector.

14.3   Video/Audio

Condition	Solution
After startup, the screen is black.	1. Verify that the TV monitor is on. 2. Verify that at least one camera is connected securely. 3. Switch to another camera. On the remote control, press <camera> and then the arrow buttons until a camera view is visible.
During a conference over the Internet, the video and audio quality are poor.	❑ The Internet connection is either limited or insufficient. Call at a lower bitrate.
The video display is shaking, shows flashing lines, or is black and white or discolored.	❑ ***If a PAL main camera is connected*** The main camera may have been turned on AFTER the HD1000 started up, causing it to display NTSC video. Turn the HD1000 off and on again (do not turn off the camera).
The remote party cannot hear you, but you can hear them.	1. Verify that the microphones and TV monitors on both the local and remote sides are connected properly and securely. 2. Press <Menu> and select **Audio**. Make sure that the tabletop microphone is the selected audio input.

14.4   Software Upgrade

Condition	Solution
The "Upgrade cannot start" message appears.	❏ Press <Menu> and access the Options>Security dialog box. Select **Enable Remote Upgrade**.
Following the upgrade, a configuration dialog box appears automatically.	❏ If the upgrade is unsuccessful, the HD1000 enters Installer Mode. Verify that the displayed LAN configuration is correct and run the Upgrade program again.

14.5   Unsuccessful Call .

Condition	Solution
A "Call rejected" message appears.	1. Press <Status> and check if the HD1000 is registered to an MXM or Gatekeeper. If no, but you want MXM or Gatekeeper management, access the Network<H.323 dialog box and enter the MXM/Gatekeeper's correct address.
	2. Verify that the remote party is registered with the same or a neighboring Gatekeeper.
	3. If you use DNS names to dial, access the Network>LAN dialog box to verify the correct DNS server name.
You cannot receive calls dialed to the HD1000's Station Name.	❏ Access the Network>LAN dialog box and verify the correct WINS server name.

14.6   Streaming Media

Condition	Solution
You cannot view streaming video.	❏ If a supported viewer is not installed on your PC, the Web Management redirects you to the viewer's installation page. Install the viewer and then try again to view the stream.

A MULTI-LANGUAGE INTERFACE

The HD1000 application's interface (menus, dialog boxes, commands) may be viewed in several different languages. The default language after initial installation or upgrade is English. However, you may easily switch the interface language to:

- Français
- Español (Spain or Mexico)
- Deutsch
- Português (Portugal or Brazil)
- Italiano
- Japanese
- Chinese
- Suomi
- Svenska
- Russian
- Other

➤ **To change the interface's language**

1. Press <Menu>. The main Menu opens. Select **Options**.

2. Navigate to the **Lang.** tab.

3. Select the language you want and then click **OK**. The HD1000 application's interface then appears in the language you chose.

Navigate to the **Lang**. tab.

Select the interface's language

B   SOFTWARE UPGRADE

This chapter explains how to upgrade to new software versions of your HD1000. Whenever VCON notifies HD1000 customers that a version upgrade is available, you can download and install it in your system. Unless instructed otherwise, the latest software version is available from VCON's website: (www.vcon.com>Support>Downloads).

The methods for upgrading the HD1000 software are:

❑ Running the HD Upgrade Utility from a remote PC

❑ Upgrading directly from the HD1000

B.1   Upgrading From a Remote PC

The HD Upgrade Utility is a program that enables you to upgrade HD1000 software from a remote PC. You can download the utility from VCON's website.

Before Downloading

Before you upgrade the HD1000 software, make sure that the following conditions are present:

❑ A quiet period of the network. We recommend that you perform upgrading when activity on the network is low. Heavy network traffic may interfere with the procedure and cause upgrade failures.

❑ The possibility of electrical failure is at a minimum.

❑ The computer from which the upgrade will run (referred to throughout this document as **the remote PC**) fills the following requirements:

— Windows XP, 2000, or NT (with Service Pack 5.0).

— No other programs should run at the same time as the HD1000 upgrade program.

Enable Remote Upgrade

To enable upgrading through the HD utility, you must enable remote upgrading in the HD1000's Security dialog box.

➤ **To enable remote software upgrading of the HD1000**

1. Press <Menu>. The main Menu opens. Select **Options**.
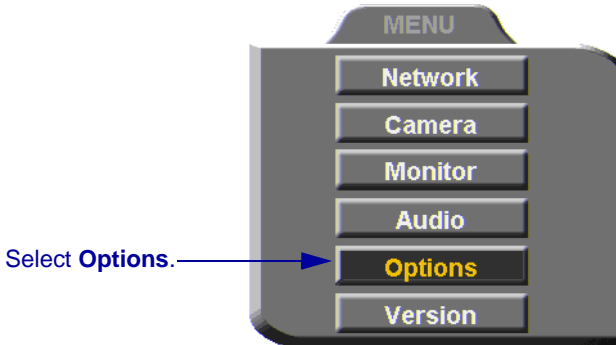
Select **Options**.

2. Navigate to the **Security** tab. If you previously set a security password (see "Setting a Security Password" on page 121), enter it in the Password dialog box.

3. Select **Enable Remote Upgrade**.

Select **Enable Remote Upgrade** to open the connection for upgrading software.
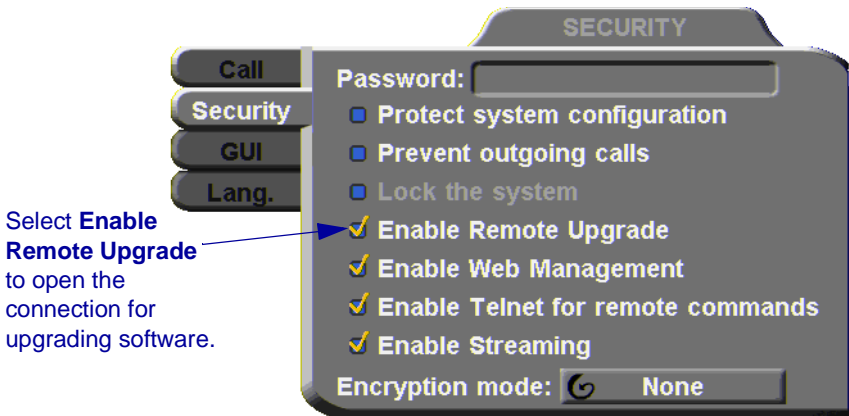
4. Press <OK>.

Downloading the HD Upgrade Utility

The HD Upgrade Utility is available from the Downloads page of VCON's website (http://www.vcon.com).

➤ **To download the Upgrade utility**

1. On the www.vcon.com>Support>Downloads page, click the link for downloading the HD Upgrade utility.

2. Download the setup file to your PC.

3. Run the setup file to install the utility on the remote PC. Perform the steps in the Upgrade utility's installation wizard. Click **Finish** when the process is complete.

Downloading the New Software Version

After downloading the Upgrade Utility, return to the VCON website to download the new software version.

➤ **To download the new software version**

❑ On the **www.vcon.com>Support>Downloads** page, click the link for downloading the new HD1000 software version.

Installing the New Upgrade in the HD1000

Run the Upgrade Utility to install the new version in the HD1000.

➤ **To install the upgrade in the HD1000**

1. Run **Start>Programs>VCON>HD Utilities>Upgrade Utility**.
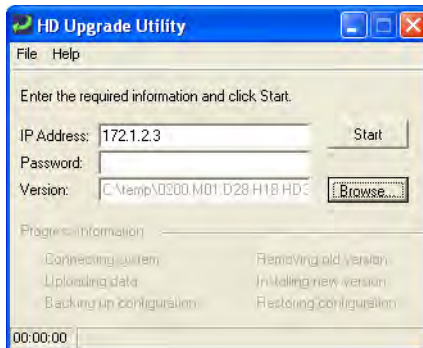
2. Type the **IP address** of the HD1000.

3. If applicable, enter the **Password** defined in the HD1000's Security settings (see "Setting a Security Password" on page 121).

4. Click **Browse** to select the upgrade file that you previously downloaded from the VCON website.

5. Click **Start**.

CAUTION   The entire procedure takes several minutes. Do **not** restart HD1000 until the upgrade process is complete!

6. When the upgrade installation finishes, the HD1000 restarts.

7. When the HD1000 is ready again, verify that the new version was installed correctly. Press <Menu>. The main Menu appears. Select **Versions**.

Select **Version**.
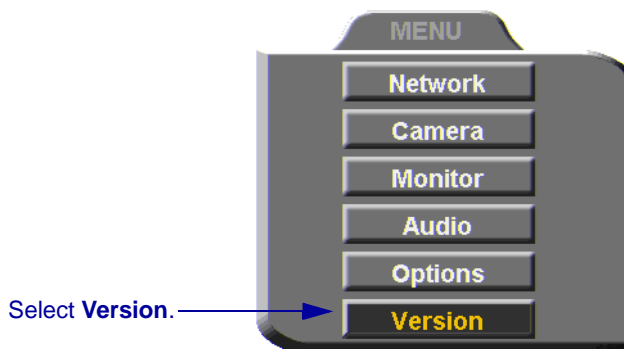
8. Check that the **Software Version** matches the downloaded filename.

Software version:	0200.M01.D19.H18
Flash version:	13110312
Firmware version:	19002900
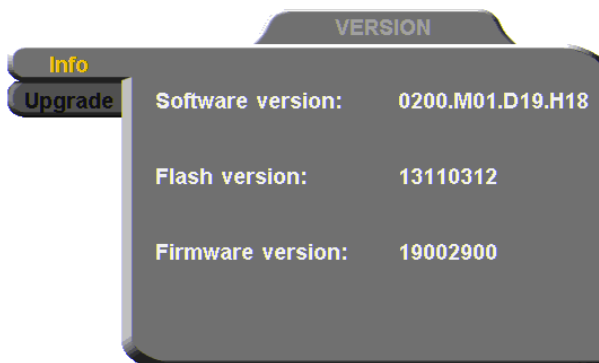
B.2 Upgrading from the HD1000

Alternatively, you may upgrade the HD1000 software directly from the HD1000. Checking for upgrade can be done automatically or at your own initiative.

> To upgrade through the HD1000, the system's LAN configuration must be set up completely - all parameters must be defined (see "LAN Connection" on page 61).

Automatically Checking for Upgrade

Automatic Checking for Upgrade enables the HD1000 to check the FTP site for a new software version whenever the system restarts.

➤ **To set up automatic upgrading**

1. Press <Menu>. The main Menu appears. Select **Versions**.

MENU

Network
Camera
Monitor
Audio
Options
Select **Version**. ──────▶ Version
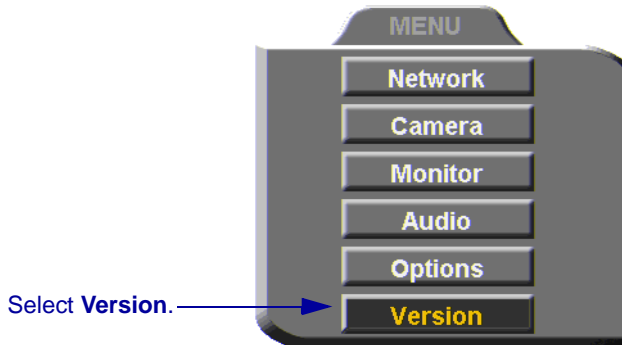
2. Navigate to the **Upgrade** dialog box.

3. Select **Automatically Check for Upgrade**. The HD1000 will check the FTP site for a new software version whenever the system restarts.

4. The **Check for Upgrade** box commands the HD1000 to check for the upgrade after a specific period, IF the system has not restarted during the interim. Enter the number of days in this period.
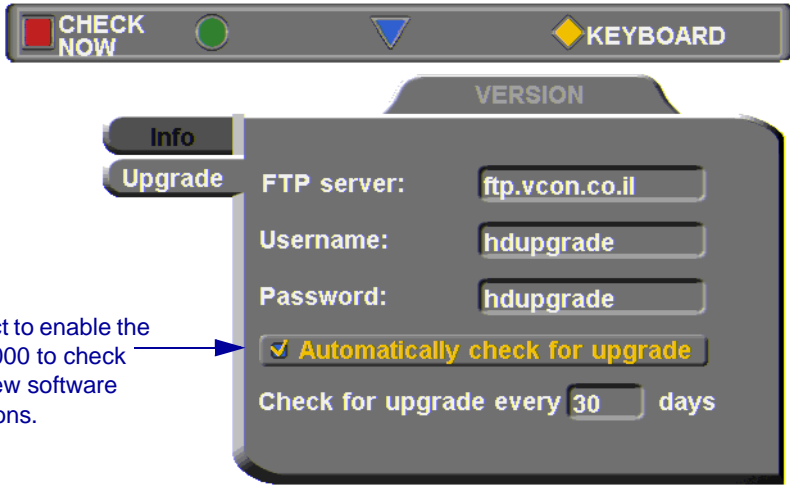
Select to enable the HD1000 to check for new software versions.

5. Press <OK>.

`OK`

Manual Upgrade

Checking for new upgrade availability manually may be done at any time.

➤ **To upgrade manually**

1. In the Upgrade dialog box, press the red **CHECK NOW** SoftKey.

2. If a new version is available, a message appears, identifying the version and asking if you want to download it.

3. To proceed with the upgrade, press <OK>.

`OK`

B.3 Confirming Successful Upgrade

The upgrade process has been completed. HD1000 then restarts itself and runs through the usual opening process. Wait until the Ready Screen (see "HD1000 Screens" on page 36) appears.

At this stage, confirm that the latest software is running on your system.

➤ **To check the version of the HD1000 software**

1. Press <Menu>. The main Menu appears. Select **Versions**.

Select **Version**.
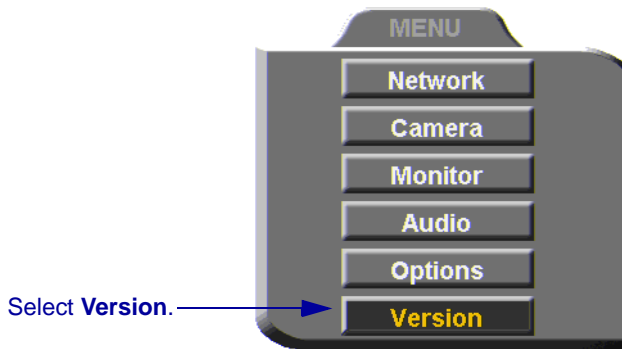
2. In the Info dialog box, verify that the **Software Version** matches the name of the upgrade file that you downloaded. If it does, HD1000 is ready for use!

Verify that the Software Version matches the name of the Upgrade file.
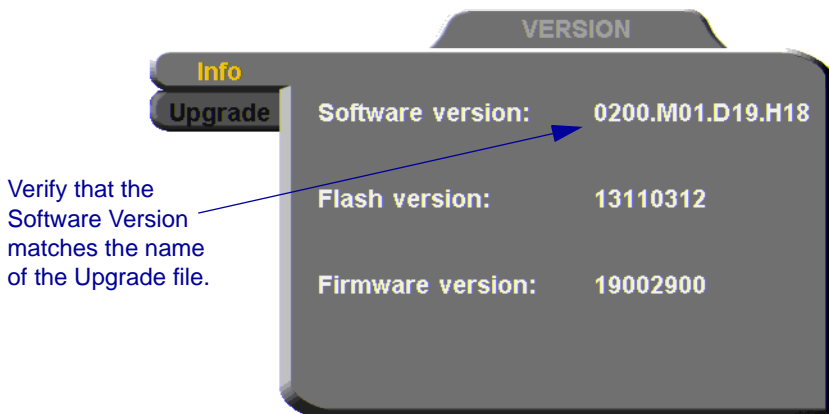
B.4   Installer Mode

If for some reason the upgrade was not successfully completed, HD1000 enters Installer Mode after it restarts.

1. Verify that you've entered the correct Network information before running the upgrade program again.
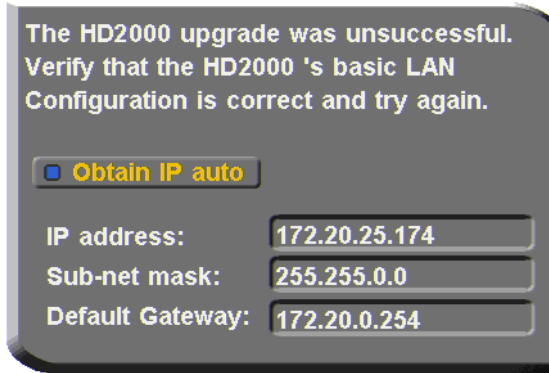
2. Write down or copy the IP address of the HD1000. Press <OK>.

3. Rerun the upgrade process from the HD Upgrade Utility. Be sure to enter the correct IP address for the HD1000.

    If this process is unsuccessful again, contact VCON's Technical Support (see "VCON Technical Support" on page vi).

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