ViewStation SP User Guide

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Important Information

Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Other Restrictions

You shall not and shall not allow any third party to 1) decompile, disassemble, or otherwise reverse-engineer or attempt to reconstruct or discover any source code or underlying ideas or algorithms of the software by any means whatsoever or 2) remove any product.

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Important Safeguards

Read and understand the following instructions before using the system:

- Close supervision is necessary when the system is used by or near children. Do not leave unattended while in use.
- Only use electrical extension cords with a current rating at least equal to that of the system.
- Always disconnect the system from power before cleaning and servicing and when not in use.
- Do not spray liquids directly onto the system when cleaning. Always apply the liquid first to a static free cloth.
- Do not immerse the system in any liquid or place any liquids on it.
- Do not disassemble this system (except as instructed in the manufacturer's instructions). To reduce the risk of shock and to maintain the warranty on the system, a qualified technician must perform service or repair work.
- Connect this appliance to a grounded outlet.
- In case of lightning storms, disconnect the telephone line cord from the system, and only connect the system to surge protected power outlets.
- Keep ventilation openings free of any obstructions.
- SAVE THESE INSTRUCTIONS.

Plug acts as Disconnect Device

The socket outlet to which this apparatus is connected must be installed near the equipment and must always be readily accessible.

Regulatory Notices

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Polycom could void the user's authority to operate this equipment.

- FCC compliant telephone cords and modular plugs are provided with this equipment. This equipment is designed to be connected to the telephone network or premises' wiring using a compatible modular jack, which is Part 68 compliant. See installation instructions for details.
- If your ViewStation SP causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. However, if advance notice is not practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC if you believe it is necessary.
- Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of your equipment. If they do, you will be given advance notice so as to give you an opportunity to maintain uninterrupted service.
- If you experience trouble with this equipment, ViewStation SP, please contact your equipment provider for repair/warranty information. If your equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.
- There are no user serviceable parts inside the videoconferencing unit, remote control, microphone pod, or power supply.
- This equipment may not be used on a public coin service provided by the telephone company. Connection to party lines is subject to state tariffs. Contact your state public utility commission or corporation commission for information.

Underwriters Laboratories Statement

The system is intended to be powered only by the supplied power supply unit.

CE Mark R&TEE Directive:

This ViewStation SP and ViewStation SP Product line has been marked with the CE mark. This mark indicates compliance with EEC Directives 89/336/EEC, 73/23/EEC 1999/5/EC. A full copy of the Declaration of Conformity can be obtained from Polyspan Ltd, Whichford House, Parkway Court, Oxford Business Park South, Oxford, OX4 2JY, UK

Declaration of Conformity:

Hereby, Polyspan Ltd. declares that this ViewStation SP and ViewStation SP Product line is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Konformitetserklæring:

Hermed erklærer Polyspan Ltd., at indestående ViewStation SP and ViewStation SP Product line er i overensstemmelse med de grundlæggende krav og de relevante punkter i direktiv 1999/5/EF.

Konformitätserklärung:

Hiermit erklärt Polyspan Ltd., dass der ViewStation SP and ViewStation SP Product line die grundlegenden Anforderungen und sonstige maßgebliche Bestimmungen der Richtlinie 1999/5/EG erfüllt.

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Polyspan Ltd. vakuuttaa täten, että ViewStation SP and ViewStation SP Product line on direktiivin 1999/5/EC keskeisten vaatimusten ja sen muiden tätä koskevien säännösten mukainen.

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Par la présente, Polyspan Ltd. déclare que ce ViewStation SP and ViewStation SP Product line est conforme aux conditions essentielles et à toute autre modalité pertinente de la Directive 1999/5/CE.

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Declaración de conformidad:

Por la presente declaración, Polyspan Ltd. declara que este ViewStation SP and ViewStation SP Product line cumple los requisitos esenciales y otras cláusulas importantes de la directiva 1999/5/CE.

Överensstämmelseförklaring:

Polyspan Ltd. förklarar härmed att denna ViewStation SP and ViewStation SP Product line överensstämmer med de väsentliga kraven och övriga relevanta stadganden i direktiv 1999/5/EG.

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Preface - How To Use This Guide

Thank you for purchasing a Polycom ViewStation SP! Soon, you will discover that video communications using the ViewStation SP is easy, fun, and productive. Polycom's ViewStations are the most easy-to-use video communications systems on the market today.

This User Guide provides information about setting up and using the following Polycom ViewStation SP products:

- ViewStation SP384 with a Triple BRI network interface module
- ViewStation SP128.

If you purchased a ViewStation or ViewStation FX/VS4000, see the *ViewStation* or *ViewStation FX/VS4000* User Guide.

If you purchased a ViewStation H.323 with Quad BRI or ViewStation H.323 with Lucent DCP or ViewStation MP or ViewStation 128, see the *ViewStation User Guide*.

Each ViewStation SP product has a *QuickStart Card,* which is shipped in the box with the ViewStation SP. The *QuickStart* card illustrates how to connect the required cables and optional equipment to the ViewStation SP.

ViewStation SP Basics

The Graphic User Interface or GUI is designed for ease of use. The following table is a definition of key icons function:

Icon	Icon Name	Function
	Text Field	To enter alphabetic characters, press the SELECT button on the remote control. The purpose of the Text Field is to enable the user to enter alphanumeric characters into the ViewStation SP. Numbers are entered with the remote control.
	Select Button	The SELECT button shown is on the remote control. This icon serves the same function as the Enter key.
	Network Connectivity Error	The Network Connectivity Error icon indicates severe packet loss between the near end and the far end site.
	Call Speed Indicators	The Call Speed Indicators illustrate the call speed of the near end or the far end ViewStation. Speeds may be set from the **Dialing Speeds** screen. See “Dialing Speeds,” on page 49.
	Network Line Indicator	The Network Line Indicators are shown when the ViewStation SP is powered on. Yellow Box: Checking line status Red Down Arrow: Error in network link Green Up Arrow: Line is connected

Conventions Used In This Document

This guide uses navigational conventions to make ViewStation SP setup and troubleshooting easy. These conventions are marked in **BOLD** for each screen followed by a greater than symbol (**>**). Figure A is an example of this convention

To view the user setup options go to the **User Setup** screen (**System Info > User Setup.**)

Figure A Flow Conventions

1

Getting Started

This chapter explains how to use the remote control, set up the ViewStation SP and configure the ViewStation SP for a specific network interface.

What You Need to Get Started

The following items are required:

- A television monitor
- A network connection
- A power source.

Additionally, the following items are required for each ViewStation SP as listed below:

- ViewStation SP384 with Triple BRI network interface module - Three ISDN lines from the ISDN service provider and an optional Ethernet LAN connection if H.323 videoconferencing is used.
- ViewStation SP128 - An ISDN line for up to 128 Kbps video communications and an optional Ethernet LAN connection if H.323 is used.

Television Monitors

Any S-Video or composite television monitor with RCA input ports may be used with the ViewStation SP. The size of the television monitor should be proportional to the size of the room where the ViewStation SP is used.

Power Source

The ViewStation SP has an auto-sensing 62 watt external power supply which supports line voltages between 100 and 240 VAC, 50 to 60 Hz.

Note Depending on the geographical location, some AC wall outlets may require a special adapter to conform with the local standard.

NT-1 Device

An ISDN Network Termination (NT-1) device may be required between the ISDN line and the ViewStation SP if your system is connected to a PBX or an ISDN line in North America, specifically, an ISDN U interface.

What's in the Box

The following items are included in the box. These items pertain to all ViewStation SP models. If an item is missing or damaged, contact your reseller.

What's in the box	ViewStation SP Models	
	SP384	SP128
ViewStation SP Unit	√	√
Microphone Pod	1	1
Remote Control	√	√
Power Supply with cord	√	√
QuickStart Card	√	√
Read Me First Document	√	√
User Documentation	√	√
Required Cables	3	3
Optional Cables	3	3
Miscellaneous Package	√	√
Clear RJ-45 BRI Cables	3	
Triple BRI (IMUX)	√	
RJ-45 Crossover Adapter	√	√

Using the Remote Control

The remote control packaged with the ViewStation SP is an integral part of the unit. Use the remote to highlight and select icons on the television monitor, enter alphanumeric characters in text fields, configure the address book, move the camera, adjust the volume, and place video calls. Remote control functionality is described on the ViewStation SP *QuickStart* card.

Setting Up the ViewStation SP

Setting up the ViewStation SP is easy. First, locate the *QuickStart* card in the ViewStation SP box.

The cable connectors are color-coordinated with the corresponding connectors on the back of the ViewStation SP. To connect the ViewStation SP, use the *QuickStart Card* as a guide and follow the steps below.

1. Place the ViewStation SP unit on top of the television monitor as shown in Figure 1-1. Ensure that the front lip of the ViewStation SP unit hangs over the edge of the television monitor.

Note Verify that the top surface area on the monitor is adequate to support the ViewStation SP. The surface area of the television monitor should provide enough support to prevent the ViewStation SP from sliding behind the monitor.

Figure 1-1. Placing the ViewStation SP

2. Connect the required cables to the back of the ViewStation SP as shown in the ViewStation SP *QuickStart* Card.
3. Center the microphone pod on a flat surface between the meeting participants and the ViewStation SP.
4. Connect optional equipment, such as an additional television monitor, a Video Cassette Recorder (VCR), a Digital Video Disc (DVD), a laptop, or a document camera to the back of the ViewStation SP.

Secure all loose cables with the provided cable tie. This prevents cables from getting tangled. Slide one end of the cable tie through the plastic square piece. Then, attach the square connector to the back of the television monitor.

Connecting the ViewStation SP to the ISDN Network

The following describes how to connect the ViewStation SP to an ISDN Network and an Ethernet LAN. Before setting up the ViewStation SP, ensure all the network connectivity issues are tested and resolved.

ViewStation SP384

The Triple BRI network interface module uses up to three ISDN lines for network connectivity and requires a Polycom Triple BRI inverse multiplexer that provides connectivity to conduct a videoconference at a maximum data rate of 384 Kbps. Complete the following to connect the ViewStation SP with Triple BRI to the network:

1. Connect three ISDN lines from RJ-45 wall jacks on the ISDN network to the connectors labeled ISDN S/T on the BRI network interface module.
2. Connect the RJ-45 cable with the green tip to the green RJ-45 port on the back of the ViewStation SP as shown on the *QuickStart* Card.
3. Connect the opposite end of the green tipped RJ-45 cable into the green RJ-45 port labeled  on the Triple BRI network interface module.

NT-1. If you are connected to an internal phone system, commonly called a PBX, you need to connect the ISDN cables from the Triple BRI network interface module to an ISDN network termination (NT-1) device, which is connected to the ISDN wall jack.

Note If you connect less than three ISDN lines to the Triple BRI network interface module, the status indicators shown on the TV monitor are displayed in red.

For more ISDN information, refer to the Appendix D, “ISDN Information,” on page 151.

ViewStation SP128

Complete the following steps to connect the ViewStation SP128 to an ISDN network:

1. Connect the green tipped RJ-45 cable to the green RJ-45 port on the back of the ViewStation SP.
2. Connect the opposite end of the green tipped cable to an ISDN wall jack.

For more ISDN information, refer to the Appendix D, “ISDN Information,” on page 151.

Once the interface is properly connected, the ViewStation SP is ready to be configured for EtherNet LAN connectivity.

Connecting the ViewStation SP to an Ethernet LAN

The following describes how to connect the ViewStation SP to an Ethernet LAN. Before setting up the ViewStation SP, ensure all the network connectivity issues are tested and resolved.

ViewStation SP384

Complete these steps to connect the ViewStation SP384 with to an Ethernet LAN network:

1. Connect the orange tipped RJ-45 cable to the RJ-45 port labeled LAN on the back of the ViewStation SP.
2. Connect the opposite end of the orange tipped RJ-45 cable with the orange tip to an Ethernet LAN wall jack.
3. If the LAN wall jack is active, a green light appears on the orange RJ-45 port on the back of the ViewStation SP384.

ViewStation SP128

Complete these steps to connect the ViewStation SP128 with to an Ethernet LAN network:

1. Connect the orange tipped RJ-45 cable to the RJ-45 port labeled LAN on the back of the ViewStation SP128.
2. Connect the opposite end of the orange tipped RJ-45 cable with the orange tip to an Ethernet LAN wall jack.
3. If the LAN wall jack is active, a green light appears on the orange RJ-45 port on the back of the ViewStation SP128.

Initial System Configuration

This section explains how to setup the ViewStation SP. Except where noted, the following section applies to both ViewStation SP models.

Setup Common to all ViewStation SPs

The following is a set of general setup procedures which covers all ViewStation SP models. Specific information which is unique to each ViewStation SP is noted.

1. Power on the television monitor and ViewStation SP.
2. On the **Welcome** screen, select the language used to display screens and information on the ViewStation SP.

Figure 1-2. ViewStation Select Language Screen

3. There are two Welcome screens for the ViewStation SP. The first is the **ViewStation Select Language** screen (shown in Figure 1-2.)

   The second **Welcome** screen (shown in Figure 1-3.) is a general greeting in the language selected. Specify the desired country and language on this screen and press the SELECT button on the remote control to continue.

Figure 1-3. ViewStation SP384 Main Welcome Screen

4. The next screen is the **How to Select Menu Items** shown in Figure 1-4. Take a moment to familiarize yourself with this screen. Press the SELECT button on the remote control to continue.

Figure 1-4. How to Select Menu Items Screen

5. The **System Name** screen is where the ViewStation SP name is assigned.

   Highlight the gray text field and press the SELECT button on the remote control. You may enter up to 34 alphanumeric characters.

   Highlight the **Return** icon and press the SELECT button on the remote control. Select the **Save** icon to continue.

Figure 1-5. ViewStation SP System Name Screen

6. Select the country where the ViewStation SP is located. This setting automatically configures ViewStation SP

communications settings. Use the ARROW buttons to scroll through the list. Highlight the country and press the SELECT button on the remote control.

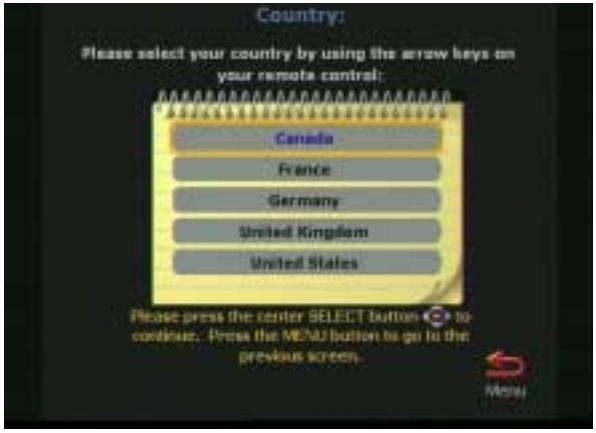

Figure 1-6. Select Country Screen

7. The **Call Preference** screen is used to specify the type of calling preference for the ViewStation SP. The Choices are:

ISDN Video Calls (H.320):

- **Checked:** Enables ISDN videoconferencing for the ViewStation SP.
- **Not Checked:** Disables ISDN videoconferencing for the ViewStation SP.

LAN/Internet Calls (H.323)

- **Checked:** Enables H.323 videoconferencing for the ViewStation SP.
- **Not Checked:** Disables the H.323 videoconferencing for the ViewStation SP.

Note At least one calling preference must be selected for their status indicators to appear on the main screen.

Display IP Dialing Extension: The IP Dialing Extension is used if a ViewStation SP is set up to use a Global Address Book (GAB.) See “Global Address,” on page 53.

- **Checked:** The IP or E.164 Dialing Extension is displayed when a video call is initiated in H.323 calls only.
- **Not Checked:** The IP or E.164 Dialing Extension is not displayed when a video call is initiated in H.323 calls only.

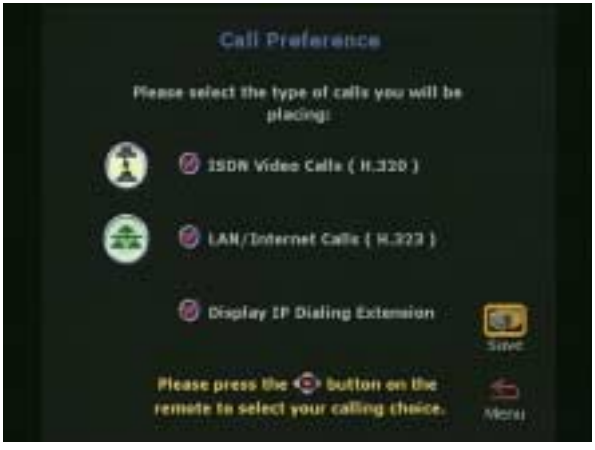

Figure 1-7. Call Preference Screen

8. The **H.323 Setup** screen is used to specify the H.323 name and extension. This screen appears only when H.323 is enabled for the ViewStation SP.

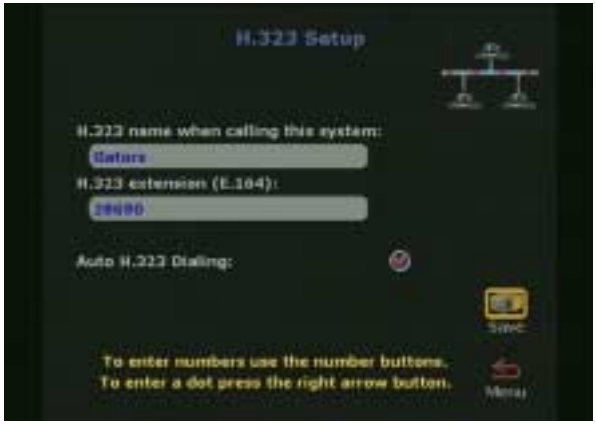

Figure 1-8. H.323 Setup Screen

An Auto H.323 Dialing check box appears below the H.323 extension (E.164). Complete the following steps to enter information on the **H.323 Setup** screen.

1. Enter a name in the **H.323 name when calling this system** text box. Select name which is easy to remember such as the name of the conference room.
2. Enter the H.323 extension (E.164). E.164 is a naming scheme based on the ViewStation SP serial number and MUST be unique to each ViewStation SP system.
3. Uncheck the **Auto H.323 Dialing** check box if displayed.

9. A network gatekeeper provides terminal gateway registration, address resolutions, bandwidth and admission control. It is commonly used for point-to-point *Internet* video calls.

   A gatekeeper is not required for point-to-point *Intranet* video calls. Select one of the following options for Gatekeeper:

Figure 1-9. ViewStation SP Gatekeeper Screen

   - **Off** - Gatekeeper is not used.
   - **Specify** - Enter the Gatekeeper IP address.
   - **Auto** - The ViewStation SP automatically searches for a Gatekeeper on the LAN. If no Gatekeeper is used, the ViewStation SP continues to search for a gatekeeper until this setting is changed. If the LAN has more than one Gatekeeper, specify the correct Gatekeeper manually.

10. On the **ISDN Video Numbers** screen, complete the following:
    - Enter the area or STD code.

- Enter the ISDN numbers assigned to the ViewStation SP. The ISDN service provider should have provided this number when the ISDN line was installed.

Figure 1-10. ViewStation SP384 ISDN Video Numbers Screen

Enter the ISDN numbers for the ViewStation SP384 as shown in Figure 1-10. The ISDN number for channels B1 and B2 are generally the same.

Figure 1-11. ViewStation SP128 ISDN Video Numbers Screen

Enter the ISDN numbers for the ViewStation SP128 as shown in Figure 1-11. The ISDN number for channels B1 and B2 are generally the same.

11. Auto Detect SPIDs:
    - On the **Auto-Detect SPIDs** screen, enter the Service Profile ID (SPID) numbers for the ViewStation SP. If connected to an internal phone system (PBX) or if the ViewStation SP is outside North America, a SPID may not be required.

    OR

    - Select the START icon for the ViewStation SP to automatically detect SPIDs.

Note If the ViewStation SP is unable to find the SPIDs, check the network connection and verify that the ISDN numbers have been entered correctly.

Figure 1-12. ViewStation SP384 Auto Detect SPIDs Screen

To manually enter the SPID numbers for the ViewStation SP384 as shown in Figure 1-12, highlight each line and channel and press the SELECT button on the remote control. Enter the SPID numbers accordingly.

Figure 1-13. ViewStation SP128 Auto Detect SPIDs Screen

To manually enter the SPID numbers for the ViewStation SP128 as shown in Figure 1-13, highlight each line and channel and press the SELECT button on the remote control. Enter the SPID numbers accordingly.

Note If the ViewStation SP is unable to find the SPIDs, check the network connection and verify that the ISDN numbers have been entered correctly.

12. ISDN Switch Protocol:
    Select the ISDN switch protocol according to the ISDN switch type used with the ISDN network as shown in Figure 1-14.

Figure 1-14. ISDN Switch Protocol Screen

13. If **PBX** is selected on the **Auto Detect SPIDs** screen, the following screen (shown in Figure 1-15) requires the number used by the ViewStation SP to obtain an outside line.

Figure 1-15. Outside Line Calls Screen

14. The **Telephone Numbers** screen shown in Figure 1-16 is where the phone number for the ViewStation SP (if used) is entered.

Figure 1-16. Telephone Numbers Screen

15. The **Camera Two** screen shown in Figure 1-17 is used to select the type of camera input to the ViewStation SP. These choices are:
    - **Document Camera:** Shown on the left side of the **Camera Two** screen. Select Document Camera icon if a document camera is used.
    - **VCR:** Shown on the right of the **Camera Two** screen. Select VCR if a VCR, DVD or a similar device option is used.

Figure 1-17. Camera Two Screen

When the setup is complete, The ViewStation SP displays the **Main Calling** screen.

Figure 1-18. Main Calling Screen

Network Status Indicators

Each time the ViewStation SP is powered on, **Network** icons are displayed below the **Video Call** icon on the **Main Calling** screen. The **Network** icon flashes a yellow numbered box while the ViewStation SP is validating ISDN lines or is waiting for the DHCP server (if used) to assign it an IP address. If the ViewStation SP uses a static or fixed IP address, the ViewStation SP verifies the IP is not in use.

Icon	Meaning
 Green Up Arrow	Network line is OK. The ViewStation SP is ready to place a video call.
 Yellow Box	The ViewStation SP is checking the status of the network line.
 Red Down Arrow	Network line failed to validate: The ISDN or LAN cable is not connected to the network, or is not functioning properly. Check the cable connection, contact your Network Manager or see “Network and Communications,” on page 140

Using the ViewStation SP Help

To access the ViewStation SP **Help** screen, press the INFO button on the remote control. If connected to a Global Management System, two icons appear on the screen. The first icon is the **Help** screen (noted below). The second screen is the Global Management System GMS Technical Support link and appears only when GMS is used.

Figure 1-19. Help Screen

Using The Info / Help

To access the **Info/Help** screen press the INFO button the remote control.

The **Help** screen is used to obtain information about:

- Navigation with the Remote Control
- Making a video call
- Connecting to a PC
- Using PowerPoint to display slides
- Making camera selections
- Using voice tracking
- Setting camera presets
- Sending telephone touch tones.

Figure 1-20. Help Screen

To choose a topic on the **Help** screen highlight the desired icon and press the SELECT button on the remote control.

Technical Support

The **Technical Support** icon (shown in Figure 1-19) is visible only when the ViewStation SP is using the Polycom Global Management System™. For more information on how to setup the Polycom Global Management System, see “Global Management,” on page 58.

To obtain Technical Support from the Polycom Global Management System, highlight the **Technical Support** icon and press the SELECT button on the remote control. A dialog box appears (Figure 1-21) asking you to enter a phone number. In order to provide rapid assistance, please include the area code with your phone number.

Once your phone number has been entered, a confirmation screen appears. This screen also provides a phone number to technical support to contact by voice.

Figure 1-21. Technical Support Help Screen

2

Optional Configurations

This chapter contains advanced configuration information for the ViewStation SP384 and the ViewStation SP128.

User Setup

The **User Setup** screen (**System Info > User Setup**) serves as a quick configuration tool allowing the ViewStation SP administrator or LAN manager to set basic options for the ViewStation SP (shown in Figure 2-1).

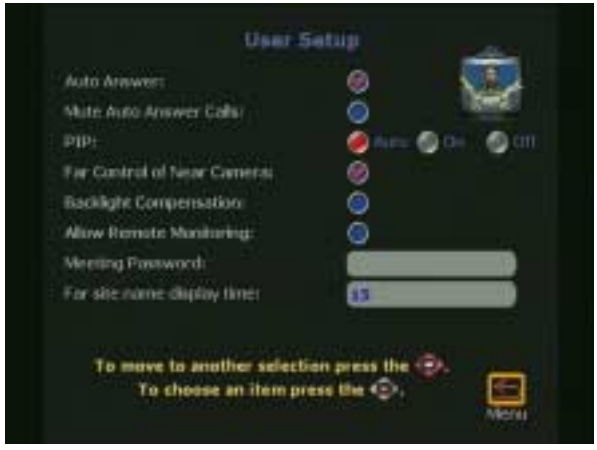

Figure 2-1. User Setup Screen

Auto Answer: The **Auto Answer** option allows the ViewStation SP to automatically answer incoming video calls.

- **Checked:** The ViewStation SP automatically answers incoming video calls.
- **Not Checked:** Incoming calls rings until they are manually answered or the far site disconnects.

Mute Auto Answer Calls: This option turns the microphone pod off and prevents the far site from hearing the near site when the ViewStation SP automatically answers incoming video calls.

- **Checked:** The ViewStation SP mute near site audio for incoming video calls which the ViewStation SP automatically answers.
- **Not Checked:** The ViewStation SP sends audio to the far site as normal.

  When the ViewStation SP is muted, both sites are notified with a microphone image located in the lower left side of the main screen. A red light illuminates on the microphone pod when the near site is muted.

PiP or Picture-in-Picture: The PiP feature allows the near site to adjust near camera views while in a videoconference. In this configuration, the **Camera** icon in the top right corner disappears when the remote control is placed on a flat surface.

- **Auto:** The ViewStation SP shows a PiP window when the call is first connected and when the remote control is not resting on a flat surface.
- **On:** The ViewStation SP shows a PiP window which remains in the lower right corner until the video call is completed.
- **Off:** The ViewStation SP does not show a PiP window.

Far Control of Near Camera: The **Far Control of Near Camera** option allows users on the far site to control the camera at the near end.

- **Checked:** A user on the far site may control the framing and angle of the camera on the near site by pressing the FAR button on the remote control.
- **Not Checked:** A user cannot change the framing and angle of the camera. When a far site user presses the FAR or ZOOM button on the remote control, any attempts to change the present orientation of the camera are ignored.

Backlight Compensation: The backlight compensation is used in conference rooms where the subject appears darker than the background. Use backlight compensation if the meeting participants appear dark.

- **Checked:** The camera automatically adjusts for a light background.
- **Not Checked:** Un-check the backlight compensation if moderate lighting is used for the ViewStation SP.

Allow Remote Monitoring: Remote monitoring allows a user to remotely view a conference room prior to a scheduled meeting using the ViewStation SP web interface. See “Using the ViewStation SP Web Interface,” on page 99.

- **Checked:** The ViewStation SP sends images every 10 seconds to the ViewStation SP web page.
- **Not Checked:** The ViewStation SP does not send any images.

Meeting Password: The meeting password is used to grant or limit un-restricted access to the non-administrative functions of the ViewStation SP’s web interface. See “Using the ViewStation SP Web Interface,” on page 99.

- **Text field empty:** No password is required.
- **Text field populated:** When the Meeting Password text field is populated with a password, that password is used to grant or restrict access the non-administrative features of the ViewStation SP web interface.

Far site name display time: The far site name display time displays the name of the far site for a defined number of seconds.

- **15 seconds:** The far site name is displayed for 15 seconds. This is the default.
- **Blank:** Displays far site name until call is ended.

Admin Setup

The **Admin Setup** screen (**System Info > Admin Setup**) is used to access the advanced configuration features of the ViewStation SP.

Figure 2-2. Admin Setup Screen

General Setup

The **General Setup** screen (**System Info > Admin Setup > General Setup**) is used to access the advanced configuration features of the ViewStation SP not contained in the **User Setup** screen. The General setup screen has the following seven user configurable fields:

- **Country:** Sets the country where the ViewStation SP is used.
- **Language:** Sets one of the languages used for the ViewStation SP.
- **System Name:** Sets the name displayed in a call for the ViewStation SP.
- **Auto Answer:** Sets the auto-answer feature when the ViewStation SP receives an incoming call.
- **Allow Dialing:** Permits or denies the ability to place a video call from the ViewStation SP.
- **Allow User Setup:** Permits or denies access to the **User Setup** screen.

- Maximum time in a call: Sets the maximum time for a video call.

Figure 2-3. General Setup Screen

Country: The **Country** field of the **General Setup** screen (shown in Figure 2-3) allows you to specify country specific calling parameters for your location. Click the **Country** field to access the **Country Setup** screen (Figure 2-4).

Figure 2-4. Country Setup Screen

The fields in the **Country Setup** screen allow you to set local calling parameters:

- **Country:** To select a country, highlight the blue country text field and press the SELECT button on the remote control. Scroll down the list of countries and highlight the desired country. The country code appears with the corresponding country.
- **Area Code Required:**
  - **Checked:** The ViewStation SP automatically adds the area code to the ISDN dialing prefix of calls placed from the ViewStation.
  - **Not Checked:** The ViewStation SP dials all calls as if the calls were within the local area code.
- **Phone International Access:** The international prefix is 011 for North America and 00 for European countries. The default depends on the country. Highlight the blue text field on the **Phone International Access** field. Enter the prefix assigned to make international calls.

When complete, highlight the **Menu** icon and press the SELECT button on the remote control.

Language: The **Language** field selects the language used for the ViewStation SP (see “ViewStation Select Language Screen,” on page 6.) Highlight the desired flag associated with a language and press the SELECT button on the remote control.

System Name: The system name is the name assigned by the user to identify the ViewStation SP. This can be any combination of alpha-numeric characters up to 34 characters in length.

Auto Answer: The **Auto Answer** option allows the ViewStation SP to automatically answer incoming video calls.

- **Checked:** The ViewStation SP automatically answers incoming video calls.
- **Not Checked:** Incoming calls ring until they are manually answered or the far site disconnects the call.

Allow dialing: The **Allow Dialing** option enables or disables dialing and access to the address book on the ViewStation SP.

- **Checked:** The ViewStation SP allows and access to the address book.

- **Not Checked:** The ViewStation SP prevents dialing and denies access to the address book.

  Figure 2-5 shows the message that is displayed when the **Allow Dialing** feature is not checked.

Figure 2-5. Allow Dialing Disabled Screen

Allow User Setup: The **Allow User Setup** option enables or disables users from changing the **User Setup** by removing the icon from the **System Information** screen as shown in Figure 2-6. This is generally used when the user setup policy has been defined by the LAN manager or the ViewStation SP administrator.

- **Checked:** Allows changes to the **User Setup** settings.
- **Not Checked:** Prevents changes to the **User Setup** settings.

Figure 2-6. Allow User Setup Disabled on System Information Screen

Maximum Time in Call: The default time for the maximum time in a call is 480 minutes.The **Maximum Time in Call** is used to limit the maximum time in a call. When the maximum time in a call is met, the ViewStation SP displays a yellow dialog box stating that the time of the call has exceeded and asks if you want to continue the call. If the call is extended, the time of the extended call is equal to the set maximum time in a call.

Video Network

The **Video Network** is used to configure ISDN configurations for the ViewStation SP.

ViewStation SP384

The **Network Setup** screen (**System Info > Admin Setup > Video Network**) shown in Figure 2-7 provides three icons which:

- Configure IMUX properties
- Configure video network properties
- Set call preferences.

Figure 2-7. Video Network Screen (Triple BRI Only)

IMUX (Inverse Multiplexer)

On the **IMUX** screen (**System Info > Admin Setup > Video Network > IMUX**,) the five icons as shown in Figure 2-8 are:

Numbers: Set ISDN video numbers.

SPIDs: Set the Service Profile IDs. SPID numbers are assigned to every terminal device by the ISDN provider. This is generally used in North America only.

Audio Quality: Adjust the audio quality of a video call.

Advanced Dialing: Define how a channel is dialed.

Dialing Speeds: Define dialing speed available when a call is placed.

Figure 2-8. Inverse Multiplexer Information Screen

Numbers

The **Numbers** screen (**System Info > Admin Setup > Video Network > IMUX > Numbers**) allows the ViewStation SP administrator or the LAN manager to enter the STD or area code and the ISDN Video numbers for each ISDN line.

Figure 2-9. ISDN Video Numbers Screen

1. Enter the STD or area code and press the down arrow on the remote control to continue to the next line.
2. Enter the ISDN phone number used for each line.
3. When complete, highlight the **Save** icon and press the SELECT button on the remote control.

Service Profile Identifier (SPIDs)

The **Service Profile Identifiers** screen (**System Info > Admin Setup > Video Network > IMUX > SPIDS**) or SPIDs appears only if United States or Canada is selected as the country. If the ViewStation SP is connected to an internal phone system (PBX), a SPID may not need to be entered.

Note If the ViewStation SP is unable to find the SPIDs, check the network connection and verify that the ISDN numbers have been entered correctly.

- Enter the SPID numbers provided by the ISDN service provider.
- If the ViewStation SP is connected to a PBX, select the **PBX** icon, since you may not need to locate SPIDs.
- To auto-detect the SPID numbers, highlight the **Start** icon and press the SELECT button on the remote control.

Note If this process is canceled, the ViewStation SP reboots and the entire setup procedure must be redone.

Figure 2-10. Auto Detect SPIDs Screen

Audio Quality

The **Audio Quality Preference** screen (**System Info > Admin Setup > Video Network > IMUX > Audio Quality**) allows the selection of an audio protocol. G.722 audio delivers a higher quality of audio than G.728 and uses 48 Kbps of the call bandwidth. G.728 delivers telephone quality audio and only uses 16 Kbps of the call bandwidth. G.728 is generally used for lower data rates.

To set the audio protocol, use the **+** and **-** zoom buttons on the remote control to move the slider.

Note Changing the audio quality preferences in a call can only be done in an H.320 call. No changes can be made while in an H.323 call.

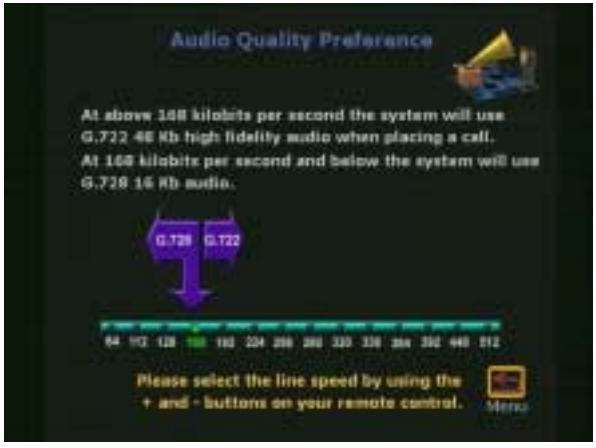

Figure 2-11. Audio Quality Screen

Advanced Dialing

On the **Advanced Dialing** screen (**System Info > Admin Setup > Video Network > IMUX > Advanced Dialing**) you can define how each ISDN channel is dialed. By default, channels are dialed in parallel.

- **Dial channels in parallel:** When this option is selected, the ViewStation SP dials all ISDN channels simultaneously.
- **Dial channels one at a time:** When selected, the ViewStation SP dials each ISDN channel one at a time

until that channel is connected then dials the next channel until all the channels are connected. This feature is used to overcome local network problems.

Figure 2-12. Advanced Dialing Screen

Dialing Speed

The **Dialing Speeds** screen (**System Info > Admin Setup > Video Network > IMUX > Dialing Speeds**) specifies the dialing speeds that are available when a call is placed.

Figure 2-13. Dialing Speeds Screen

- Highlight the circle to the right of each speed and press the SELECT button to select a speed. A red check mark

appears on the **Dialing** screen when a speed is selected.

ISDN Video Network

The **ISDN Video Network** screen (**System Info > Admin Setup > Video Network > ISDN Video Network**) contains information entered during system setup. The five user-configurable fields are:

Country Code: Choose the **Country Code** associated with the country where the ViewStation SP is used

Area Code: Choose the **Area Code** or **STD Code** where the ViewStation SP is used.

Number A: Enter the primary ISDN number assigned to the ViewStation SP.

Number B: Enter the secondary ISDN number assigned to the ViewStation SP.

ISDN Switch Protocol: Select the appropriate ISDN switch protocols. Contact the ISDN provider to determine the ISDN switch protocol.

ISDN Dialing Prefix: The ISDN dialing prefix is used to access an outside line if the ViewStation SP is connected to a PBX.

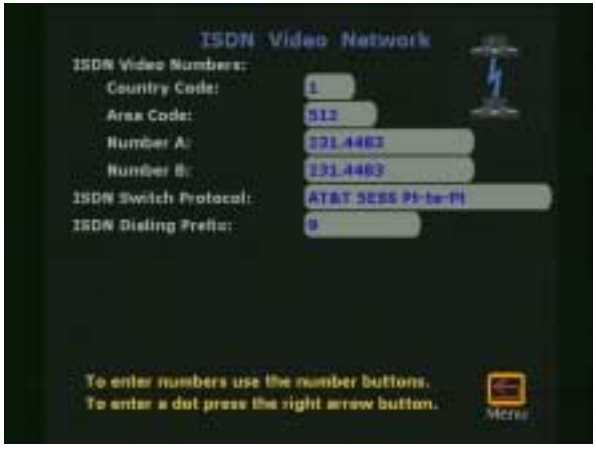

Figure 2-14. ISDN Video Network Screen

Call Preference

The **Call Preference** screen (**System Info > Admin Setup > Video Network > Call Preference**) shown in Figure 2-15 determines how a video call is made. The two types of calls made are:

ISDN Video Calls (H.320):

- **Checked:** Enables ISDN videoconferencing on the ViewStation SP.
- **Not Checked:** Disables ISDN videoconferencing ability on the ViewStation SP.

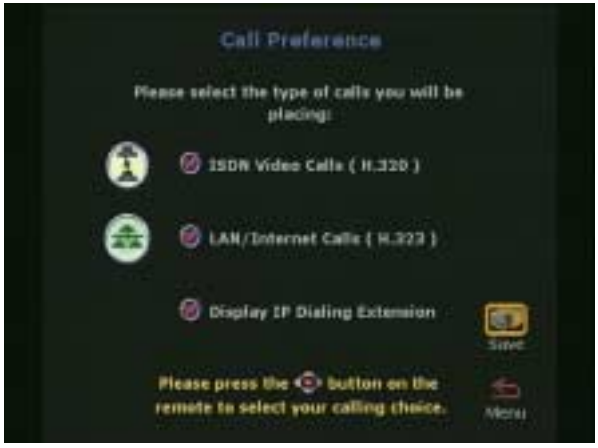

Figure 2-15. Call Preference Screen

LAN/Internet Calls or H.323:

- **Checked:** Enables H.323 videoconferencing on the ViewStation SP.
- **Not Checked:** Disables H.323 videoconferencing on the ViewStation SP.
- **Display IP Dialing Extension:** The IP dialing extension is used if a ViewStation SP is set up to use a Global Address Book (GAB).

  Checked: The E.164 Dialing Extension is displayed when a video call is initiated in H.323 calls only.

  Not Checked: The E.164 Dialing Extension is not displayed when a video call is initiated in H.323 calls only.

ViewStation SP128

The **Video Network** screen (**System Info > Admin Setup > Video Network**) shown in Figure 2-16 provides three icons which:

- Set Dialing Speeds.
- Configure Video Network properties.
- Set Call Preferences.

Figure 2-16. Video Network Screen (ViewStation SP128 Only)

Dialing Speeds

The **Dialing Speeds** screen (**System Info > Admin Setup > Video Network > Dialing Speeds**) specifies the dialing speeds that are available when a call is placed.

Figure 2-17. Dialing Speeds Screen

Highlight the box to the right of each speed and press the SELECT button to select a speed. A red check mark appears on the **Dialing** screen when a speed is selected.

ISDN Video Network

The **ISDN Video Network** screen (**System Info > Admin Setup > Video Network > ISDN Video Network**) contains information entered during system setup. The five user configurable fields are:

Country Code: Choose the **Country Code** associated with the country where the ViewStation SP is used.

Area Code: Choose the **Area Code** or **STD Code** where the ViewStation SP is used.

Number A: Enter the primary ISDN number assigned to the ViewStation SP.

Number B: Enter the secondary ISDN number assigned to the ViewStation SP.

ISDN Switch Protocol: Select the appropriate ISDN switch protocols. Contact the ISDN provider to determine the ISDN switch protocol.

Service Profile IDs (SPIDs): The **Service Profile Identifiers** screen (SPIDs) appears only if United States or Canada is

selected as the country. If the ViewStation SP is connected to an internal phone system (PBX), a SPID might not need to be entered.

Note If the ViewStation SP is unable to find the SPIDs, check the network connection and verify that the ISDN numbers have been entered correctly:

- Enter the SPID numbers provided by the ISDN service provider.
- If the ViewStation SP is connected to a PBX, select the **PBX** icon, since you might not need to locate SPIDs.

To auto-detect the SPID numbers, highlight the **Start** icon and press the SELECT button on the remote control.

Note If this process is canceled, the ViewStation SP reboots and the entire setup procedure must be redone.

ISDN Dialing Prefix: The ISDN dialing prefix is used to access an outside line if the ViewStation SP is connected to a PBX.

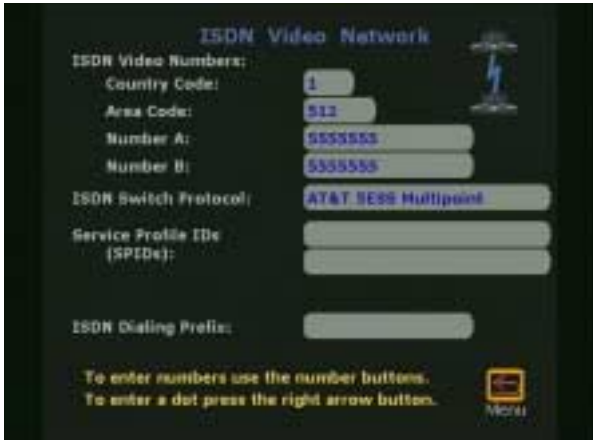

Figure 2-18. ISDN Video Network Screen

Call Preference

The **Call Preference** screen (**System Info > Admin Setup > Video Network > Call Preference**) shown in Figure 2-19 determines how a video call is made. The two types of calls made are:

ISDN Video Calls (H.320):

- **Checked:** Enables the ISDN videoconferencing for the ViewStation SP.
- **Not Checked:** Disables the ISDN videoconferencing ability for the ViewStation SP.

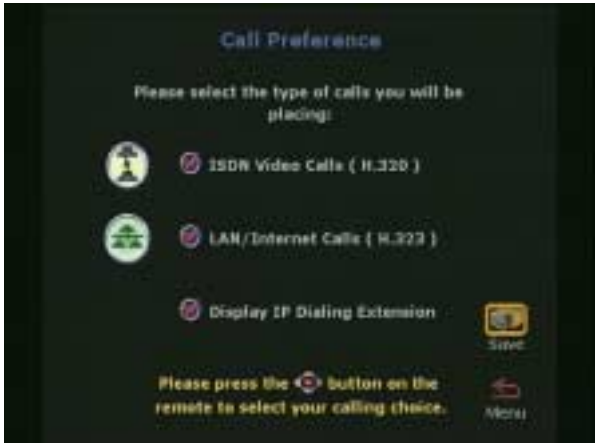

Figure 2-19. Call Preference Screen

LAN/Internet Calls or H.323:

- **Checked:** Enables H.323 videoconferencing for the ViewStation SP.
- **Not Checked:** Disables H.323 videoconferencing for the ViewStation SP.
- **Display IP Dialing Extension:** The IP dialing extension is used if a ViewStation SP is set up to use a Global Address Book (GAB.)

  Checked: The IP or E.164 dialing extension is displayed when a video call is initiated in H.323 calls only.

  Not Checked: The IP or E.164 dialing extension is not displayed when a video call is initiated in H.323 calls only.

LAN / H.323

The **LAN/H.323** screen (**System Info > Admin Setup > LAN/H.323**) is used to configure IP networking for the ViewStation SP. There are five user configurable screens accessed through the **LAN/H.323** screen (shown in Figure 2-20):

LAN/Intranet: Configure IP networking.

H.323: Configures gateway, gatekeeper, dialing speeds, QoS and firewall settings for the ViewStation SP.

SNMP: Sets up remote management.

Global Address: Specifies server IP, preferences, dialing rules, private network and gateway numbers.

Global Management: Set up global management.

Figure 2-20. LAN / H.323 Screen

LAN / Intranet

The **LAN & Intranet** screen (**System Info > Admin Setup > LAN/H.323 > LAN/Intranet**) shown in Figure 2-21 contains information needed for H.323 videoconferencing.

Host Name: The host name is the DNS name given to the ViewStation SP by the LAN Manager or the ViewStation SP administrator. It may be used in place of an IP address when dialing H.323 calls. For example, the host name of the ViewStation SP may be “Lobby” but the DNS name for that ViewStation SP is **lobby.austin.polycom.com**.

Figure 2-21. LAN & Intranet Screen

WINS Resolution: WINS resolution is a system that determines the IP address associated with a particular network device.

- **Checked:** The ViewStation SP sends requests to the WINS server for WINS name resolution.
- **Not Checked:** The ViewStation SP does not send any requests for name resolution to the WINS server.

Note The ViewStation SP sends a request for WINS resolution to the WINS server for up to 15 times. After 15 tries, the ViewStation SP stops sending WINS resolution requests to the server.

DHCP: Dynamic Host Configuration Protocol is used to auto-assign IP addresses within a LAN.

- **Server:** The ViewStation SP DHCP server assigns up to 12 IP addresses from 1.1.1.3 to 1.1.1.14 when this option is checked.

Note If the DHCP server option is not present, run the ViewStation SP SoftUpdate to enable the DHCP server option setup. See “Upgrading Software over the LAN,” on page 124.

- **Client:** The DHCP Server automatically assigns an IP, DNS server address, a default gateway, subnet mask and the

WINS server address.
When this option is selected, **IP**, **DNS**, **Default Gateway**, **Subnet Mask** and **WINS** server address fields cannot be changed.

- **Off selected:** When OFF is selected, the LAN manager or ViewStation SP administrator must enter all values as static addresses. These values do not change unless manually changed.
  - **IP Address:** Enter the static IP address assigned to the ViewStation SP.
  - **DNS Servers:** The ViewStation SP supports up to four DNS servers for multiple LANs.
  - **Default Gateway:** Enter the server's default gateway address.
  - **Subnet Mask:** Enter the subnet mask for the LAN.
  - **WINS Server:** Enter the WINS server address for the LAN.

H.323 Setup

The **H.323 Setup** screen (**System Info > Admin Setup > LAN/H.323 > H.323**) shown in Figure 2-22 is used to configure the H.323 communication protocols for the ViewStation SP.

Figure 2-22. H.323 Setup Screen

The following five items configurable by the user are:

- **Setup:** Defines the H.323 name and extension for the ViewStation SP. See “Setup,” on page 45.
- **Gateway:** Defines the gateway speed, prefix and suffix used for the ViewStation SP. See “Gateway,” on page 47.
- **Gatekeeper:** Defines the gatekeeper operation parameters for the ViewStation SP. See “Gatekeeper,” on page 48.
- **Dialing Speeds:** Defines the videoconferencing speeds for the ViewStation SP. See “Dialing Speeds,” on page 49.
- **QoS:** Defines firewall and NAT parameters for the ViewStation SP. See “Quality of Service (QoS) and Firewalls,” on page 50.

Setup

The **H.323 Setup** screen (**System Info > Admin Setup > LAN/H.323 > Setup**) is used to specify the H.323 or IP name.This information applies to the H.323 feature included with all models.

The H.323 extension (E.164) is a naming scheme based on the ViewStation SP serial number. This number MUST be unique to the ViewStation SP. On ViewStation SP models with ISDN options, an **Auto H.323 Dialing** check box appears below the **H.323 extension (E.164)** field.

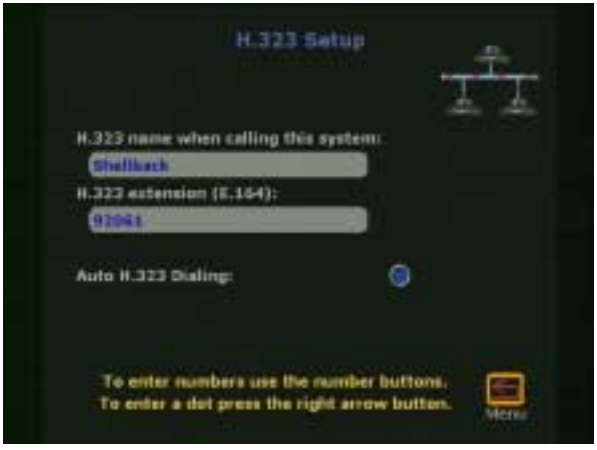

Figure 2-23. H.323 Setup Screen

H.323 name when calling this system: Enter a name in the text box. This name is displayed on the far-site during a

videoconference. Use a name which is easy to remember such as the name of the conference room.

- **H.323 extension (E.164)**: E.164 is a naming scheme used to identify the ViewStation SP with the H.323 name.

Auto H.323 Dialing: The ViewStation SP determines how a call is placed based on the number dialed and speed selected. For example:

For H.320 calls: If the number dialed is 555-1234 and the speed is 2X64, the ViewStation SP provides an additional field to place dials a non-bonding H.320 call.

For H.323 calls: If the number is 255.255.255.90 and the speed is 2X128 then the ViewStation SP dials a non-bonding H.323 call, but only provides one place holder for H.323 calls.

Note If you dial by DNS name or PBX extension, do not check this feature.

- **Checked:** The ViewStation SP assumes the video call is for H.323 videoconferences and provides only one place holder to make a video call.
- **Not Checked:** The ViewStation SP provides an option to place IP or ISDN calls as shown in Figures 2-24 and 2-25.

Figure 2-24. Video Phone Screen (with ISDN Selected)

Figure 2-25. Video Phone Screen (with IP Selected)

Gateway

The **Gateway** screen (**System Info > Admin Setup > LAN/H.323 > Gateway**) is used to configure the gateway profile in accordance with a specific gateway used on a LAN. The prefix and suffix are pre-programmed on the gateway and are associated with a bandwidth used for the gateway to make a call. For example:

72569

- The number 7 is assigned to a specific RadVision gateway.
- The number 256 is the bandwidth speed at which the gateway places a video call.
- The number 9 tells the gateway to place a call outside the LAN.

Figure 2-26. Gateway Screen

Note The gateway place calls if the bandwidth number corresponds to the correct line speed. For example:

An invalid speed is 255. Valid bandwidth speeds are listed on the **Gateway** screen shown in Figure 2-26. The Gateway rejects this value and does not connect the call.

The Gateway configuration has no effect if a gatekeeper or gateway is not used.

Gatekeeper

The **Gatekeeper** screen (**System Info > Admin Setup > LAN/H.323 > Gatekeeper**) shown in Figure 2-27 is used to enable, disable or configure an H.323 gatekeeper.

Off: The gatekeeper is not used. The **Gatekeeper IP Address** text field is not accessible.

Specify: The gatekeeper is used. Enter the gatekeeper IP address in the grey text box. Contact the LAN Manager to obtain the gatekeeper IP address.

Auto: When set to **Auto** the ViewStation SP automatically searches for the presence of an available gatekeeper. If a gatekeeper is not used and **Auto** has been selected, the ViewStation SP remains in **Auto** mode until changed.

Figure 2-27. Gatekeeper Screen

Note A gatekeeper is not required to make IP to IP Intranet calls.

If **Specify** or **Auto** is selected, one of three icons appears on the ViewStation SP **Main Calling** screen when the ViewStation SP is rebooted. These icons are:

- Red Down Arrow: Cannot find gatekeeper.
- Yellow Box: Found gatekeeper, but not allowed to register.
- Green Up Arrow: Found gatekeeper and registered.

Dialing Speeds

The **Dialing Speeds** screen (**System Info > Admin Setup > LAN/H.323 > Dialing Speeds**) shown in Figure 2-28 is used to set the IP and ISDN dialing speeds for the ViewStation SP.

- Nx56 and Nx64 (left side of screen) represent the dialing speeds for ISDN (H.320) calls.
- IPx56 and IPx64 (right side of screen) represent the dialing speeds for IP (H.323) calls.

The 2x options listed under IPx56 are used for gateway calls from the ViewStation SP. Non-2x options provide connection speeds from 56 Kbps to 768 Kbps.

Figure 2-28. ISDN and IP Dialing Speeds Screen

Quality of Service (QoS) and Firewalls

The **Quality of Service and Firewalls** screen (**System Info > Admin Setup > LAN/H.323 > QoS**) shown in Figure 2-29 allows the LAN Manager to use fixed or non-fixed TCP and UDP ports, select the IP precedence, Network Address Translator (NAT), and firewall options. The following options are configurable:

Figure 2-29. Quality of Service and Firewalls Screen

Use Fixed Ports: Specifies the fixed ports assigned to the ViewStation SP when sitting protected by a firewall.

IP Precedence: Specifies the priority given IP packages sent from the ViewStation SP. For IP precedence to work, all routers on the network MUST be configured to allow IP precedence.

System is behind a NAT: This option instructs the ViewStation SP to use the IP address that appears in the **NAT Outside (WAN) Address** field as its external IP address. When using a Virtual Private Network (VPN) for your network connection, make sure that **System is behind a NAT** is *not* selected.

Auto discover NAT: This options automatically assigns the WAN IP address to place calls outside the WAN.

NAT outside (WAN) address: Specify the external IP address used by the NAT if ViewStation SP is unable to discover the external IP address automatically.

For more information about configuring the ViewStation SP for operation behind a NAT (Network Address Translation.) See “Network Address Translation,” on page 147.

SNMP

The **SNMP** screen (**System Info > Admin Setup > LAN > SNMP**) provides for remote management from an SNMP console.

Figure 2-30. SNMP Setup Screen

The ViewStation SP sends SNMP reports on the following:

- Low battery power in the remote control.
- The system is active (powered on) after a long periods of inactivity.
- Authentication failure: An attempt has been made to log in as an administrator with the wrong password.
- Authentication success: The *A*dministrator has logged in successfully.
- Call failed for reason other than a busy line.
- A user has asked for help from the Technical Assistance Center. See “Using the ViewStation SP Help,” on page 19.
- The ViewStation SP is video call.
- A telephone or video call has disconnected.

User options on the **SNMP** screen are:

Enable SNMP:

- **Checked:** Enables SNMP management from an SNMP console.
- **Not Checked:** Disables SNMP management.

Administrator Contact Name: Enter the name of the person responsible for remote management of the system. The default setting is **IT Administrator**.

SNMP Console IP Address: Enter the IP address of the SNMP traps sent by the ViewStation SP. Enter 0.0.0.0 in this field if any SNMP management console is capable of receiving information from the ViewStation SP.

Location Name: Enter the location of the ViewStation. This field defaults to the ViewStation SP system name at your country name. For example, **Shellback At United States**.

Community Name: Enter the SNMP management community in which you want to enable the ViewStation SP. The default setting name for this field is **Public**.

System Description: This field displays the type of videoconferencing device. This field cannot be changed.

Global Address

The **Global Address Book (GAB)** screen (**System Info > Admin Setup > LAN/H.323 > Global Address**) shown in Figure 2-31.

Figure 2-31. Global Address Screen (ViewStations with ISDN)

Note The **Gateway Number** and **Private Net** features are not available at this time. These features will be available in a future release of the Global Management System.

Server

The **Global Address Server** screen (**System Info > Admin Setup > LAN/H.323 > Global Address > Server**) is used to specify the IP address of the GAB server.

Figure 2-32. Global Address Book Server Screen

Set the following options on this screen:

Server IP Address: Enter the IP address for the GAB server in the grey text area below the **Server IP Address** field.

Server Password: Enter the GAB server password, if there is one.

Display Global Addresses:

- **Checked:** The global addresses appear in the ViewStation SP address book.
- **Not Checked:** Only addresses entered manually are displayed on the ViewStation SP address book.

Register this System When Powered On:

- **Checked:** When the ViewStation SP is powered on, the ViewStation SP registers the name and new IP address (if DHCP is used) in the GAB.
- **Not Checked:** The ViewStation SP has access to the GAB, but does not register the name and new IP address (if DHCP is used) in the GAB.

Preferences

The Global Address Book Preferences screen (**System Info > Admin Setup > LAN/H.323 > Global Address > Preferences**) is used to set the global address book display and dialing preferences.

Figure 2-33. GAB Preferences Screen

Show Addresses in Address Book:

- **ISDN Video Calls (H.320)**
  - **Checked:** Displays global ISDN video numbers in the Global Address Book.
  - **Not Checked:** Only local ISDN numbers appear in the Global Address Book.
- **LAN/Internet Calls (H.323)**
  - **Checked:** Displays global IP addresses in the Global Address Book.
  - **Not Checked:** Only IP addresses which have ben entered manually appear in the Global Address Book.

Maximum Line Speed for Global Addresses: Set the line speeds for each type of call. The speeds selected affects only Global Address Book entries in the ViewStation SP address book.

Private NET

The **Private Net** feature (**System Info > Admin Setup > LAN/H.323 > Global Address > Private Net**) is not available at this time. These features will be available in a future release of the Global Management System.

Gateway Number

The **Gateway Number** feature (**System Info > Admin Setup > LAN/H.323 > Global Address > Gateway Number**) is not available at this time. These features will be available in a future release of the Global Management System

Dialing Rules 1

The **Dialing Rules 1** screen (**System Info > Admin Setup > LAN/H.323 > Global Address > Dialing Rules 1**), is used to set network dialing rules.

Figure 2-34. Dialing Rules 1 Screen

ViewStation SP number(s) are automatically normalized for the address books of other ViewStations. Global dialing takes into account the numbers, area codes (or city codes), country codes, and international dialing access codes for ViewStations which are placing and receiving calls.

If the ViewStation SP is in an organization's private network as well as a public network, additional information may be required to assist the GAB on how to call other systems on or off the private network. If the ViewStation SP uses a public network exclusively, additional information may not be required.

The GAB uses the following dialing rules when calling a public network or a private network.

Call From:	Call To:	Type of Call Placed:
Public Network	Public Network	Public Network
Public Network	Private Network	Public Network
Private Network	Public Network	Public Network
Private Network	Private Network	Private Network

The private network dialing rules are used to define a set of rules unique to the location of the ViewStation SP.

Number of Digits in Extension: Set the number of digits in the dialing extension. This usually applies to systems that are connected to a PBX.

International Dialing Prefix: Enter the prefix required to place international calls. This prefix is automatically inserted before any international numbers made from the GAB. This overrides the international dialing prefix that is normally set in the ViewStation SP **Country Setup** screen **(System Info > Admin Setup > General Setup > Country.)**

Public Network Access (Use Public Network):

- **Checked:** The ViewStation SP can dial calls outside of the private network.
- **Not Checked:** The ViewStation SP cannot place calls outside of the private network.

Public Network Dialing Prefix: Enter a dialing prefix as required by the PBX to dial out to the public network. This prefix is automatically inserted before dialing numbers to the public network from the GAB.

Public Network (same area code) Prefix: Enter a prefix if one is required to call within the same area code.

Private Network Access (Use Private Network):

- **Checked:** This option enables calls for the private network.
- **Not Checked:** This option disables calls for the private network.

Private Network Dialing Prefix: Enter the dialing prefix required to dial within a private network. This prefix is normally used to access an organization from inside the private network.

Dialing Rules 2

The **Dialing Rules 2** screen (**System Info > Admin Setup > LAN/H.323 > Global Address > Dialing Rules 2**) is used to set network dialing prefixes for different area codes.

Figure 2-35. Dialing Rules 2 Screen

If the private network requires a dial prefix to access certain area codes (or city codes), set these prefixes on this screen. This prefix is dialed before the area code. For example, some sites require a 9 before dialing a 1-800-xxx-xxxx number.

Enable the **Always Dial Area Code** option if you must dial the area code to sites that have the same local area code as the ViewStation SP. This is sometimes necessary for 10-digit dialing.

Global Management

The **Global Management** screen (**System Info > Admin Setup > LAN/H.323 > Global Management**) is used to remotely monitor, configure and maintain the ViewStation SP from a remote location. To use the Global Management feature, your organization must use Polycom Global Management System™ software.

The **Global Management** screen shown in Figure 2-36 contains icons used to configure the following global management for the ViewStation SP:

- **GMS Setup:** Configures GMS properties
- **Info 1:** Provides for contact and support for the GMS system.

Figure 2-36. Global Management Screen

GMS Setup

The **Global Management** screen (**System Info > Admin Setup > LAN/H.323 > Global Management > GMS Setup**) shown in Figure 2-37 is used to configure the Global Management options. These options are:

Allow Remote Monitoring:

- **Checked:** The ViewStation SP system administrator may view a call or view the room where the ViewStation SP camera is installed.
- **Not Checked:** No video is sent to the ViewStation SP system administrator page. See “System Information Remote Management,” on page 108.

Figure 2-37. Global Management Setup Screen

For privacy reasons, the **Allow Remote Monitoring** option can only be enabled or disabled from the ViewStation SP. ViewStation SP users with in a LAN or private network may wish to consider whether this feature should be enabled or disabled.

Time Difference from GMT: Enter the time difference from the local site and Greenwich Mean Time (GMT). This allows the global manager to view the local time of the managed ViewStation SP.

Daylight Savings Time (DST):

- **Checked:** Where DST is used.
- **Not Checked:** Where DST is not used.

Require Account Number to Dial: GMS 2.0 or later is required to use this option.

- **Checked:** This feature is used to log calls to a specific account for tracking and billing purposes. When selected, a call cannot be made without first entering an account number. This account number is saved in the GMS server database along with information specific to the call. Typically, the GMS administrator assigns the account number.

- **Not Checked:** Account numbers are not required to place a call and information specific to the call is not maintained in the GMS database.

Select Server URLs: Enter the IP address for the computer where Global Management System is installed.

Note If access to the GAB server is not available, check for an incorrect IP address in the **Global Management** screen (**System Info > Admin Setup > LAN/H.323 > Global Management > GMS Setup**.)

Global Management Information

The **Global Management Info** screen (**System Info > Admin Setup > LAN/H.323 > Global Management > Info 1**) provides for contact and support information for the Global Management System.

Figure 2-38. Global Management Information Screen

Data Conference

In the **Data Conference** screen (**System Info > Admin Setup > Data Conference**) enables or disables data conferencing through Microsoft NetMeeting or a ShowStation IP.

Microsoft NetMeeting Checked:

Enter the IP address of the PC Hosting NetMeeting.

ShowStation IP Checked:

Enter the IP address of the ShowStation IP.

Off Checked:

Data Conferencing is disabled.

Figure 2-39. Data Conference Screen

Note T.120/NetMeeting is not available in H.323 calls for the ViewStation SP.

Audio

The **Audio** screen (**System Info > Admin Setup > Audio**) is used to configure the following ViewStation SP audio properties.

ViewStation SP384

The **Audio** screen (**System Info > Admin Setup > Audio**) may be configured for the following:

Country Code: Enter the country code assigned to the country for the ViewStation SP.

Area Code: Enter the Area or STD Code for the ViewStation SP.

Room Telephone Number: Enter the phone number assigned to the room the ViewStation SP.

Figure 2-40. ViewStation SP384 Audio Screen

VCR Installed:

- **Checked:** Enables audio input through the VCR connection of the ViewStation SP.
- **Not checked:** Disables audio input through the VCR connection of the ViewStation SP.

Mute Auto Answer Calls:

- **Checked:** The ViewStation SP mutes near site audio when an incoming call is automatically answered by the ViewStation.
- **Not checked:** The ViewStation SP sends near site audio to the far site when a call is automatically answered.

Sound Effects Volume: Highlight the **Sound Effects Volume** field and press the VOLUME UP and DOWN keys on the remote control to select the audio levels of the ViewStation SP. The sound effects volume level may be adjusted from 1 to 10. At each increment, a tone notifies the user of the volume level.

Audio Quality: The **Audio Quality Preference** screen (**System Info > Admin Setup > Video Network > IMUX > Audio Quality**) shown in Figure 2-41 allows the selection of an audio protocol. G.722 audio delivers a higher quality of audio than G.728 and uses 48 Kbps of the call bandwidth. G.728 delivers telephone quality audio and only uses 16 Kbps of the video bandwidth. G.728 is generally used for lower data rates.

To set the audio protocol, use the **+** and **-** zoom buttons on the remote control to move the slider.

Changing the audio quality preferences in a call can only be done in an H.320 call. No changes can be made while in an H.323 call.

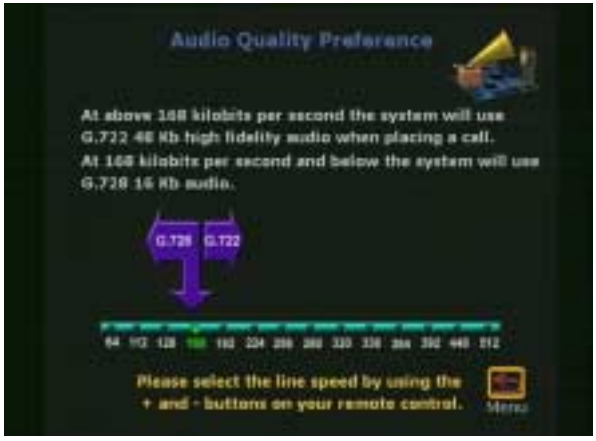

Figure 2-41. Audio Quality Screen

Acoustic Plus 716:

- **Checked:** Polycom's Acoustic Plus™ audio technology provides low bit rate, wide band audio (7 KHz/16Kb) quality without compromising video quality.
- **Not checked:** Disables the acoustic plus feature.

ViewStation SP128

The **Audio** screen (**System Info > Admin Setup > Audio**) is used to configure the following audio properties:

Country Code: Enter the country code assigned to the country for the ViewStation SP.

Area Code: Enter the Area or STD Code for the ViewStation SP.

Room Telephone Number: Enter the phone number assigned to the room for the ViewStation SP.

Figure 2-42. ViewStation 128SP Audio Screen

VCR Installed:

- **Checked:** Enables audio input through the VCR connection of the ViewStation SP.
- **Not checked:** Disables audio input through the VCR connection of the ViewStation SP.

Mute Auto Answer Calls:

- **Checked:** The ViewStation SP mutes near site audio when an incoming call is automatically answered by the ViewStation SP.
- **Not checked:** The ViewStation SP sends near site audio to the far site when a call is automatically answered.

Sound Effects Volume: When highlighted, use the VOLUME UP AND DOWN keys to select the audio levels of the ViewStation SP. The sound effects volume level may be adjusted from 1 to 10. At each increment, a tone notifies the user of the volume level.

Optimize (G728:G722): This feature is used to optimize the video or audio quality of the videoconferencing.

- **Video:** The video is set to G728 for optimum video quality.

- **Audio:** The bandwidth used for audio is set to G728 for optimum audio quality.

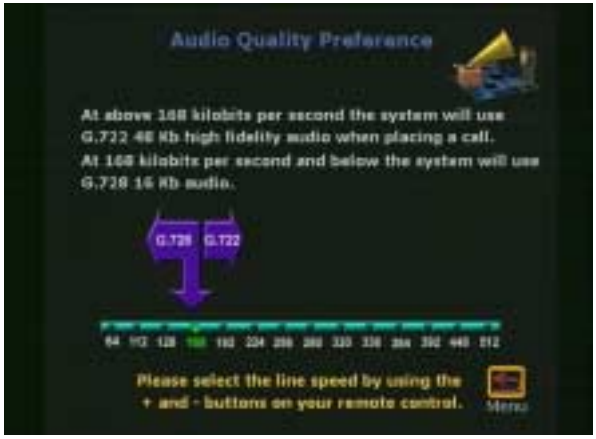

Figure 2-43. Audio Quality Screen

Acoustic Plus 716:

- **Checked:** Polycom's Acoustic Plus™ audio technology provides low bit rate wide band audio (7 KHz/16Kb) quality without compromising video quality.
- **Not checked**: Disables the acoustic plus feature.

Video / Camera

The **Video/Camera** screen (**System Info > Admin Setup > Video/Camera**) shown in Figure 2-44 is used to configure the ViewStation SP video and camera properties. These properties are:

Display Graphics in a Call:

- **Checked:** Graphics (mute, site name and number.)
- **Not checked**: If you disable this feature, no graphics are displayed on the screen when you're on the video screen in a call. This is used to provide a clean image without graphics.

Figure 2-44. Video & Camera Screen

Snapshot Timeout:

- **Checked:** By default, all slides and snapshots are displayed for a period of four minutes. When the display times out after four minutes, the ViewStation SP automatically returns to live video.
- **Not Checked:** The snapshot or slide stays on screen indefinitely until the near site user presses the SNAPSHOT button on the remote control to return to live video.

Note Both sites must have disabled **Snapshot Timeout** for this feature to work. If one side has not disabled **Snapshot Timeout**, the ViewStation SP reverts to the value set in this field.

Snapshot Camera: Select the camera used for snapshots.

- **1:** The ViewStation SP uses camera number 1 for snapshots.
- **2:** The ViewStation SP uses camera number 2 for snapshots.

PiP: Picture in Picture. The PiP window appears in the lower right hand corner during video calls.

- **Auto:** The PiP window is displayed when in a video call and when the remote control is not resting on a flat surface.
- **On:** The PiP is displayed continuously.

- **Off:** The PiP is not displayed.

Far Control of Near Camera: The far control of near camera feature allows the user on the far site to control the orientation of the near site camera by pressing the FAR button on the remote control.

- **Checked:** The far site may control the camera on the near site.
- **Not Checked:** The far site is unable to control the near camera.

Backlight Compensation: The backlight compensation is used in conference rooms with a light background.

- **Checked:** The camera automatically adjusts for a bright background.
- **Not Checked:** The camera does not adjust for a bright background. Un-check the **Backlight Compensation** if moderate lighting is used for the ViewStation SP.

Camera Direction: The camera direction is used to ease camera control for two modes of videoconferencing.

- **Normal:** Normal camera direction is used when a speaker is behind the ViewStation SP facing an audience. When the LEFT ARROW button is pressed on the remote control, the camera moves counter-clockwise and when the RIGHT ARROW button is pressed on the remote control, the camera moves clockwise.
- **Reversed:** The reversed camera direction is used for videoconferencing when the speaker is front of the ViewStation SP.

Primary Camera: Selects the primary camera used each time the ViewStation SP is powered on. The main camera does not have to be the primary camera, the ViewStation SP can however, use the camera 2 input as a primary camera.

- **1:** Camera 1 or the Main Camera (default).
- **2:** Camera 2 if connected to the ViewStation SP.

Camera 2 Input: Selects the type of composite or S-video camera input. Choices are:

- Document Camera
- VCR, DVD or other compatible camera.

Note AMX and Creston camera selection - If you are using AMX or Creston systems to control the ViewStation SP via infrared signals, the camera selection method for the remote control has been changed to prevent ambiguous or accidental camera selection. A change to your room controller software is required.

Security

The **Security** screen (**System Info > Admin Setup > Security**) shown in Figure 2-45 is used to set the ViewStation SP passwords. Use of passwords is not required for the ViewStation SP.

Figure 2-45. Security Screen

Admin Password: Set the password used to access the ViewStation SP web interface.

Meeting Password: The meeting password is used to grant or limit access to the non-administrative features to the ViewStation SPs web interface.

Software Update Password: The purpose of the software update password is to prevent accidental updating of the ViewStation software from the far site. This password is

automatically entered by the ViewStation SP from the initial setup.

Multi-Point Password: A conference password is sometimes required for a multi-point conference that uses a third-party MCU.

- **Text box**: If left blank, no multi-point password is selected. If the text box is populated, the ViewStation SP uses this password to connect to multi-point videoconferences.
- **Use Meeting Password:** The ViewStation SP uses the password (if any) previously entered in the **User Setup** screen (**System Info > User Setup**) and appears in the meeting password field in the **Security** screen (**System Info > Admin Setup > Security**.)

Software / Hardware

The **Software/Hardware** screen (**System Info > Admin Setup > Software/Hardware**) is used to obtain basic information on the software and hardware profiles of the ViewStation SP.

Software Information

The **Software** screen (**System Info > Admin Setup > Software/Hardware > Software**) provides the following information about the ViewStation SP:

- System Serial Number
- BOOTUI Number
- Software Version
- Network Interface Type
- ISDN Version
- ISDN Switch Protocols.

Hardware Information

The **Hardware** screen (**System Info > Admin Setup > Software/Hardware > Hardware**) provides the following information about the ViewStation SP:

- System Serial Number
- FPGA Version
- Network Interface Type
- Video Comm Interface

- Camera
- MIC 1 Version.

3

Using the ViewStation SP

This chapter describes how to use ViewStation SP functions.

Placing and Answering Calls

This section describes how to place and answer calls using the ViewStation SP.

Main Calling Screen

When the ViewStation SP is powered on, the **Main Calling** screen is displayed. The **Main Calling** screen is essentially the same for ViewStation SP384 and ViewStation 128 models. The screen for the ViewStation SP384 is shown in Figure 3-1.

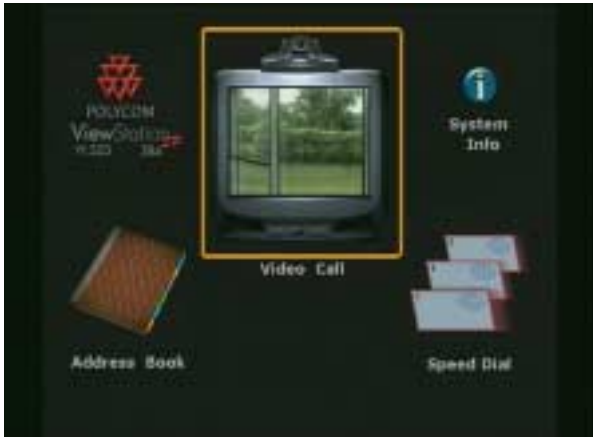

Figure 3-1. ViewStation SP384 Main Calling Screen

Note When the ViewStation SP is initially set up or when the system has been manually reset, a series of setup screens appears to establish language, country, and system settings.

ViewStation SP384 Line Indicators

The ViewStation SP checks the configuration of the ISDN lines every time the ViewStation SP is powered on or restarted. This process of checking the ISDN lines normally takes less than one minute.

Figure 3-2. ViewStation SP384 Main Calling Screen

If the ISDN line has failed or is not properly configured, a red down arrow status indicator displays on the **Main Calling** screen (shown in Figure 3-2). When a network problem is noted, a red, down arrow appears under the **ViewStation SP** icon. Check the network connection or contact the LAN Manager.

The ViewStation SP Triple BRI **Main Calling** screen is shown in Figure 3-3. The ViewStation SP has checked and verified three of the three ISDN lines as indicated by the three green up arrow icons on the screen.

- A red down arrow icon indicates no network connectivity.
- A yellow box icon indicates that the ViewStation SP is checking the ISDN line.
- A green up arrow icon indicates network connection.

When the ViewStation SP verifies each line connection, the yellow box icon turns a green up arrow. After a few seconds, all three green up arrows disappear.

Figure 3-3. ViewStation SP384 Main Calling Screen

If the ViewStation SP is checking the ISDN lines and the icons do not disappear, check the connection of the ViewStation SP and the configuration of your ISDN lines.

ViewStation SP128 Line Indicators

Each time the ViewStation SP128 is powered on, the network status indicators are displayed below the **Video Call** icon on the **Main Calling** screen. The icon flashes a yellow numbered box while the ViewStation SP checks the availability of the network line. If the icon turns to a red down arrow, check the cable connection or contact the network manager.

The icon turns green when the ViewStation SP has verified the network line and is ready to place a video call. After a few seconds, the icon disappears. These icons remain visible while the ViewStation SP is checking the status of or there is a problem with the network.

Placing a Video Call

There are four ways to place a video call:

- Manually
- Using speed dial
- Dialing from the web interface
- Using the address book.

Placing a Video Call Manually

To manually place a video call:

1. From the **Main Calling** screen, using the ARROW buttons on the remote control to select the **Video Call** icon. Press the SELECT button on the remote control. The **Video Phone** screen is displayed.

Figure 3-4. Video Phone Screen

2. On the numeric keypad on the remote control, enter the IP address or the DNS name or H.320 phone number for the far site end-point. For example:
   - **216.54.148.6** or **lobby.austin.polycom.com**. (H.323)
   - **512 367 2593** (H.320)

   Select the desired speed and type of call.

Note For H.320: If the far site end-point if it is within the same PBX system. Enter the last four digits of its number.

To clear all information in the address field, use the ARROW buttons on the remote control to select the CLEAR button. Press the SELECT button on the remote control.

Select the character using the arrow keys, enter the character by pressing the SELECT button on the remote control.

Call Progress Indictors: The gray call progress indicators on the lower left side of the screen appear when a video call is

initiated from the ViewStation SP and indicate the status of the call. The change in the call progress indicator balls represent the status as the call is being placed. The status indicators appear in the following order:

- 1/4 Blue - Ringing
- 1/2 Yellow - Call connected to the CO and is ringing at the far site
- 3/4 Orange - Negotiation
- Full Green - Connected.

3. The ViewStation SP continues to ring until the call is answered, is refused or is manually disconnected.
4. If there is no answer from the far site, press the CALL•HANG-UP button on the remote to end the call if the call did not connect, the ViewStation disconnects immediately, if the video call connects the following **Call Hangup Choices** screen are displayed:

   - Disconnect Video Call
   - Stay In a Call.

   Select the **Disconnect Video Call** icon and press the SELECT button on the remote control.
5. After a call connects, a PiP window appears in the lower right corner of the television monitor.
6. To end the call, press the CALL•HANG-UP button on the remote control.

   The **Call Hangup Choices** screen is displayed.

Figure 3-5. Call Hangup Choices Screen

7. Select the **Disconnect Video Call** icon and press the SELECT button on the remote control.

Note The calls automatically terminate after 60 seconds if no choice is made from the **Call Hangup Choices** screen.

8. When the call ends, a ViewStation SP displays a dialog which allows you to save the number in your address book. Once the number is saved to your address book, the dialog does not appear.

Placing a Video Call Using Speed Dial

Use the speed dial feature to redial the last six dialed numbers. Before a number is available for speed dialing, the number must be in the address book.

To place a speed dial call:

1. From the **Main Menu**, use the ARROW buttons on the remote to select the **Speed Dial** icon. The **Speed Dial** screen (Figure 3-6) is displayed when the SELECT button is pressed.

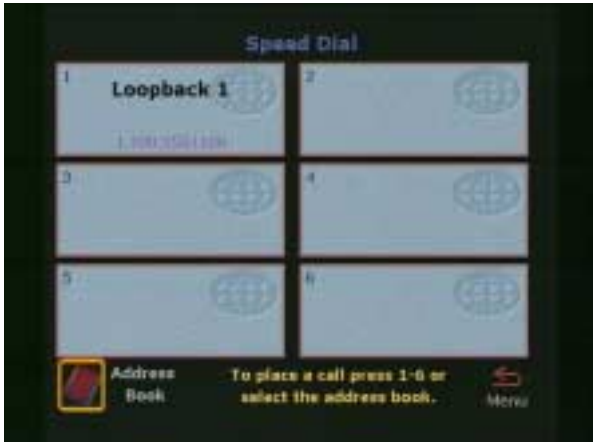

Figure 3-6. Speed Dial Screen

2. The **Speed Dial** screen displays a maximum of six speed dial entries. There are two ways to select a entry listed on the **Speed Dial** screen:

   - Use the remote control's numeric keypad to select the number of the speed dial entry you want to dial.

     The speed dial entry's number appears at the top left corner of the entry.

     OR

   - Use the ARROW buttons on the remote control to highlight the desired Speed Dial entry corresponding to the number of the speed dial entry and press the SELECT button on the remote control.

   To keep a specific entry on the **Speed Dial** screen, do the following:

   1. Select a number 1-6.
   2. Press the # button on the remote control. A **Lock** icon appears on the right side of the box for that number.
   3. Press the # button to toggle between locked and unlocked.

   Complete the following to add an entry from the address book to the **Speed Dial** screen:

   1. Press the ***** button on the remote control to jump to the **Address Book** screen.

2. On the **Address Book** screen, select the appropriate entry.
3. Press the SELECT button on the remote control.

Placing a Video Call From the Web Interface

Placing a call from the web interface can only be done if the ViewStation SP is connected to a PC. See “Placing a Call From the ViewStation SP Web Interface,” on page 110.

Using the Address Book

Similar to a hardcopy address book or a software product’s address book, the ViewStation SP provides an address book to store access names and numbers. With entries stored in the address book, a video call may be placed by name, instead of remembering or looking up a number and then manually dialing it. The ViewStation SP address book may hold up to 1000 entries. If your organization uses Polycom's Global Management System™ (GMS) software, you can configure the address book to automatically show all of the addresses that your organization uses.

This section describes how to:

- Add new entries
- Edit existing entries
- Delete entries in the address book.
- Transfer an address book to a far site
- Use the Global Address Book (GAB).

Adding an Entry to the Address Book

To add an entry to the address book:

1. From the **Main Calling** screen, select the **Address Book** icon. The **Address Book** screen is displayed.

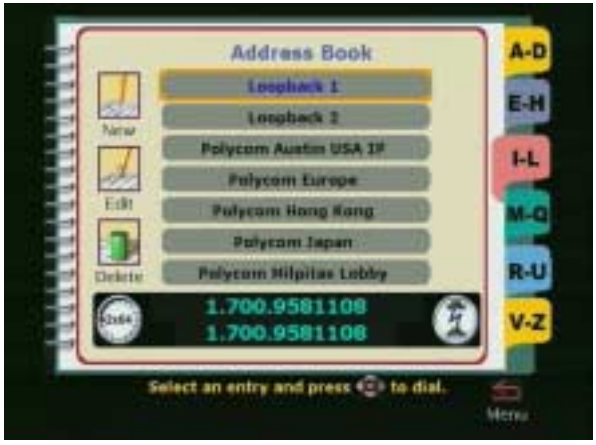

Figure 3-7. Address Book Screen

2. To display the **Add/Change Entry** screen, select the **New** icon and press the SELECT button on the remote control.

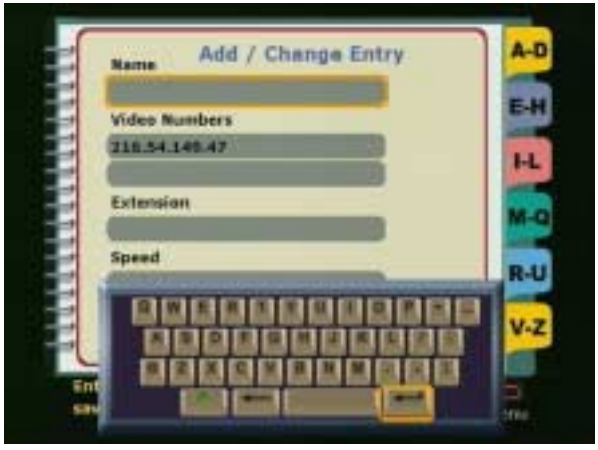

Figure 3-8. Add / Change Entry Screen

3. The yellow highlight box automatically appears in the **Name** field. A name must be entered before any additional information is entered.

   Use the ARROW buttons on the remote control to move to a letter on the keyboard. Press the SELECT button on the remote control to select that letter. The letter selected is displayed in the

Name field. Continue selecting letters until finished. Use the space bar on the keyboard to insert a space.

When the first letter is entered or a letter is entered after selecting a space, the letter is automatically entered in uppercase. Subsequent letters are in lowercase. If a specific letter is to be capitalized, first move to the **Shift** key, which is on the lower left of the keyboard as indicated by an up arrow.

Select the **Shift** key. Then, move to and select the next letter. That letter is displayed in uppercase.

For shift-lock, highlight the **Shift** key and press the select button on the remote control twice.

Editing an Existing Entry in the Address Book

To edit an existing entry in the address book:

1. From the **Main Calling** screen, select the **Address Book** icon and press the SELECT button on the remote control. The **Speed Dial** screen is displayed.
2. Select the **Address Book** icon on the **Speed Dial** screen and press the SELECT button again. The **Address Book** screen is displayed.
3. Using the ARROW buttons on the remote control, select the address book entry to be changed.
4. Use the LEFT ARROW button on the remote to select the **Edit** icon. Press the SELECT button on the remote control. The **Add/Change Entry** screen is displayed.
5. Use the ARROW buttons on the remote control to select the field to be changed.

   If the on-screen keyboard is not displayed, press the SELECT button on the remote control.

   To enter numbers, use the remote control. To enter letters, spaces, and punctuation, use the on-screen keyboard. To enter a dot, press the RIGHT ARROW button on the remote control.
6. To save the changes, select the **Save** icon and press the SELECT button on the remote control.

Deleting an Entry from the Address Book

To delete an existing entry from the address book:

1. From the **Main Menu**, select the **Address Book** icon and press the SELECT button on the remote control. The **Speed Dial** screen is displayed.
2. Select the **Address Book** icon on the **Speed Dial** screen and press the SELECT button again. The **Address Book** screen is displayed.
3. Using the ARROW buttons on the remote control, select the address book entry to be deleted.
4. Use the LEFT ARROW button on the remote control to move to the **Edit** icon.
5. Use the DOWN ARROW button on the remote control to move to the **Delete** icon. Press the SELECT button on the remote control to delete the entry.

Transferring an Address Book

To transfer the contents of your ViewStation SP address book to a far site ViewStation, both ViewStations must be in an ISDN or H.320 call to a single ISDN end point. To transfer the contents of the address book:

1. Select **System Info > Admin Setup > Software/Hardware**.
2. Select the **Send Address Book** icon.
3. If passwords are used on either far site or near site ViewStation SP, enter the far-site ViewStation's password in the **Software Update Security Password** field. This password must be the same as entered on the far site ViewStation SP **Security** screen (**System Info > Admin Setup > Security**.)

Figure 3-9. Send Address Book Screen

4. To start the transfer, click the **Start** icon.

Using the Global Address Book

You can access the Global Address Book (GAB) if your organization uses **Polycom's Global Management System**™ (GMS) software and the ViewStation SP is set to subscribe to the GAB server. The GAB provides ViewStation SP users with easy, one button dialing to and end-point in the global address book. The GAB automatically captures and updates ViewStation SP dialing information, country codes, and preferred line speeds.

To place a call, select a name from the **Address Book** list.

The following icons on the **Address Book** screen indicate GAB status and individual address status.

The display of this icon indicates the ViewStation SP is connected to the GAB server. When the icon rotates, it indicates that the ViewStation SP is actively accessing the GAB server for addresses. Notice the icon rotating as you scroll through the address book entries.

This icon indicates that the selected address is an address from the GAB. You cannot edit or delete global addresses from your ViewStation. You can perform these tasks only from the GAB console.

This icon lets you save a global address entry to your local address book.

This icon delete addresses from the ViewStation SP.

For more information about GMS software, see the **Polycom** Web site at **www.polycom.com**.

Answering a Video Call

There are two separate modes for answering video calls.

Manual

When the ViewStation SP receives an incoming call, a dialog box is displayed asking the user whether or not the call is to be answered. To answer the call, select YES. To refuse the call, select NO.

Auto-answer

By default, the ViewStation SP automatically answers any incoming call. To change the answering mode, go to the **General Setup** screen **(System Info > Admin Setup > General Setup)**. In the **Auto Answer** field, place a check mark to enable automatic answering. To use manual answering mode, the **Auto Answer** field must be unchecked.

Receiving a Multi-Point Call

The ViewStation SP384 and SP128 are capable of receiving multi-point calls from another multi-point enabled ViewStation. The following section describes how to use the multi-point features when in a multi-point call.

Using Chair Control in a Multi-point Call

Chair control is a feature that lets any non-Multi-point enabled ViewStation view a multi-point call and:

- Select which sites to view

- Select which site broadcasts has broadcasting capability
- Disconnect sites from a multi-point call.

Any site in the call can access and use chair control. However, only one site can have chair control at a time. The site must release chair control before another site can acquire it.

To use chair control, you must first be participating in a multi-point video call. Once you are in the call:

1. Press the NEAR button on the remote control. Select the **Gavel** icon to display the **Chair Control** screen:

Figure 3-10. Chair Control Screen

2. The icons on the left are chair control actions. The bottom right-center icons are the sites in the multi-point video call.

   To select sites in the video call, use the right and left arrow keys on the remote control. If there are more than three sites in the call, scroll to the right to see the additional sites.

   To select the actions to perform on the highlighted site, use the up and down arrow keys on the remote control.

   There are several chair control actions that any site in the multi-point call can perform. There are other chair control actions that only the site that currently has chair control can perform.

   The following topics describe the different actions.

Actions Any Site Can Perform

Any site in a multi-point video call can perform the following chair control actions:

Acquire chair: Enables chair control for your site. The other sites in the video call cannot acquire the chair until you release it. If your site has chair control, a small gavel is displayed in chair control mode. If you try to acquire chair control while another site has it, a message is displayed that tells you another site has chair control.

View Site: Displays the selected site in the live window. The View Site action overrides Presentation mode (voice-activated switching) and any broadcaster actions from the chair. It does not affect video at other sites.

Stop Viewing Site: Causes your ViewStation SP to return to Presentation mode (voice-activated switching) or broadcaster actions as set by the site that has chair control.

Make Me the Broadcaster: Sends a request to the chair control site to force all sites to view your site.

Select Broadcaster: Forces all sites to view the selected site, and disables Presentation mode (voice-activated switching).

Actions Only the Chair Control Site Can Perform

Only the site with chair control can perform the following chair control actions:

Select Broadcaster: Forces all sites to view the selected site, and disables Presentation mode (voice-activated switching).

Voice Switching: Enables Presentation mode (voice-activated switching). The site that is speaking appears full screen to all sites in the call.

Disconnect Site: Disconnects the selected site from the multi-point call.

End the Conference: Disconnects all sites in the multi-point call.

Adjusting Cameras and Sound

This section describes how to adjust the cameras and sound properties on the ViewStation SP which includes the following:

Selecting ViewStation SP Cameras

Before a camera can be panned, tilted, or zoomed, the target camera must be selected, complete the following to adjust the near site camera:

1. Press the NEAR button on the remote control
2. Select 1 or 2 for the desired camera.

The ViewStation SP displays the camera's current view full screen on the television monitor. A **Camera** icon facing toward you is displayed at the top right of the screen.

Figure 3-11. Near Camera Icon

During a call, the camera at the far site may be adjusted only if the far site has its **Far Control of Near Camera** option enabled. Other sites can control the camera on your ViewStation SP if this option is enabled. For more information, see "Video/Camera," on page 66.

To select the far-site camera during a call:

1. Press the FAR button on the remote control
2. Select 1 or 2 for the desired camera.

The ViewStation SP displays the camera's current view full-screen on the television monitor. A **Camera** icon facing away from you is displayed at the top right of the screen.

Figure 3-12. Far Camera Icon

To select another local camera:

1. Press the NEAR button on the remote control twice. At the bottom of the screen, the ViewStation SP displays the icons for all of the connected local cameras.
2. Use the ARROW buttons on the remote control to select the camera icon.
   Some icons might be displayed regardless of the connection or availability of the cameras. To verify the connection of auxiliary devices on the ViewStation SP before use. See the *QuickStart* card for the ViewStation SP model used.

Note The main camera cannot be disconnected. However, a primary camera, such as a document camera, may be set as the camera the ViewStation SP uses each time it is powered on. For more information about selecting a primary camera, see "Video/Camera," on page 66.

Pan, Tilt, and Zoom for the ViewStation SP Camera

To adjust the pan or tilt of a camera, use the ARROW buttons on the remote control.

- To pan to the left, press the LEFT ARROW button
- To pan to the right, press the RIGHT ARROW button
- To tilt up, press the UP ARROW button
- To tilt down, press the DOWN ARROW button.

To zoom in, press the top (+) of the ZOOM button on the remote control.

To zoom out, press the bottom (–) of the ZOOM button on the remote control.

These adjustments comply with the **Camera Direction - Reversed** option on *page 66*.

Setting Camera Presets

The ViewStation SP can be set to store up to ten preset camera positions and zoom settings for up to four near site cameras and the main far site camera. To set a preset:

1. Use the FAR or NEAR buttons on the remote control to select the near or far site camera.
   - Press the FAR button twice displays 10 preset icons for the FAR camera.
   - Press the NEAR button once displays 10 preset icons for the NEAR camera.
2. Position the camera using the ARROW buttons and the ZOOM control on the remote control.
3. Press the SELECT button on the remote control.

   The camera preset circles are displayed on the main television monitor:
   - 0-9 for the far camera
   - 0-9 for the near camera.

   If a camera preset circle is transparent, the preset is empty. If the circle is solid yellow, the preset is already assigned. To clear all of the presets, press the # key on the remote control.

4. Press a NUMBER button on the remote control to assign that preset button.

To select a camera preset:

1. Use the NEAR or FAR buttons on the remote control to determine which camera's preset to activate.
2. Immediately press the appropriately NUMBERED button on the remote control.

Automatic Voice Tracking

The main camera automatically moves to whomever is speaking during a video call. The ViewStation SP requires a few seconds to locate the speaker and once the ViewStation SP has located the speaker, the ViewStation SP sets his/her position and moves the camera automatically. If the speaker moves or a new speaker is introduced, the ViewStation SP adjusts for the current speaker.

To set automatic voice tracking, press the AUTO button once if auto tracking is on or twice if auto tracking is off. A **Camera** icon with a motor attached is displayed in the upper right corner of the main television monitor.

Automatic Tracking of Camera Presets

The main camera automatically tracks to preset positions. To set the camera to track to camera presets, press the AUTO button twice.

To turn automatic tracking off press the AUTO button.

Adjusting Sound

The volume of the ViewStation SP is related to the volume of the television monitor. For best results:

1. Set the volume on the television monitor to half its maximum volume.
2. Using the VOLUME buttons on the remote control, set the ViewStation SP volume at a comfortable hearing level.

To prevent far-site participants from hearing your conversation, press the MUTE button on the remote or microphone pod. The red light on top of the microphone pod is illuminated. When the MUTE

button is pressed, the **Mute** icon is displayed at the bottom left of the television monitor at both the far and near sites.

Positioning the Microphone Pod

Place the microphone pod in front of the video call participants.

Excessive feedback may occur if the microphone pod is too close to the audio output of the ViewStation SP. Place the microphone pod 5 feet or 1.5 meters away from television speaker and within 5 feet or 1.5 meters of the video call participants.

If a large conference room is used, ensure that all participants are within 10 feet or 3 meters of the microphone pod.

Sending Snapshots

The ViewStation SP's snapshot feature transmits snapshots from any local camera to the participants in a video call.

To send a snapshot:

1. Press the number on the remote that corresponds to the number of the camera on the screen.
2. Position and zoom the camera, as needed.
3. Press the SNAPSHOT button on the remote control.
4. The ViewStation SP displays the camera's current view, full screen, on the television monitor.
5. Press the SNAPSHOT button on the remote control again. The image is sent to all of the far sites in the call.

Snapshot Timeout

By default, snapshots are displayed for four minutes. After four minutes, the ViewStation SP automatically returns to live video. This feature may be disabled. When disabled, the snapshot display on the television monitor remains indefinitely or until the SNAPSHOT button on the remote control is pressed.

To display the snapshot indefinitely, both the near and far sites in the video call must disable the snapshot timeout feature. The snapshot

timeout feature is located on the **Video & Camera** screen (**System Info > Admin Setup > Video & Camera**.)

Using Optional Equipment

Adding optional equipment to the ViewStation SP enhances video communications and presentation quality. For instructions on installing optional equipment, see the *ViewStation SP QuickStart* card for your ViewStation SP system. The following optional equipment may be used with the ViewStation.

Camera: An additional camera may be added to provide continuous video of different speakers in the same room.

VCR: A video cassette recorder may be added to provide audio and video to all participants in a video call.

Document Camera: A Polycom Document Camera may be added to take pictures of an object or document and send the pictures to a far site. To use a document camera with the ViewStation SP:

- Press the NEAR button on the remote control.
- Use the ARROW buttons to select the **Document Camera** icon on the screen.

To switch display from the document camera to the main camera, press the NEAR button on the remote control, highlight the main camera icon and press the SELECT button on the remote control.

4

Using the ViewStation SP with a PC

This chapter describes how to use a PC with a ViewStation SP and the various tasks you can perform from the PC.

The ViewStation SP is equipped with an embedded web server which allows the PC user to access the ViewStation SP features such as:

- Select a Presentation
- View a Presentation
- Closed Caption
- Start NetMeeting
- System Information and Management.

These features are accessed on the ViewStation SP web interface screen. To use these features, connect your PC to the ViewStation SP over the LAN or through a direct Ethernet connection.

Note To connect the ViewStation SP directly to a PC, the cross-over connector included in the ViewStation SP box must be used

There are two ways to connect a PC to the ViewStation SP. Refer to the ViewStation SP *QuickStart* card for detailed information on connecting cables. It is assumed that the ViewStation SP is connected to the Ethernet LAN as shown in Figure 4-1 (**a** and **b**.)

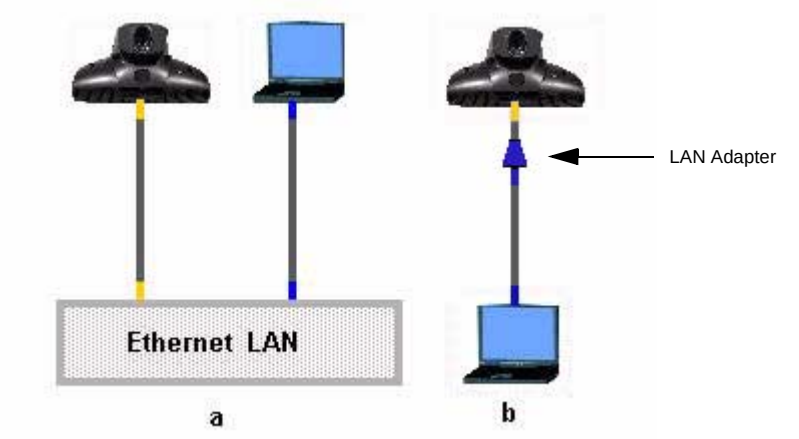

Figure 4-1. Two Unique ViewStation SP to PC Configurations

Figure 4-1 illustrates the two ways to connect a PC to a ViewStation SP.

Figure 4-1-**a** connects the PC to an Ethernet RJ-45 port on the LAN. The ViewStation SP is connected from orange RJ-45 port to the Ethernet LAN.

Figure 4-1-**b** illustrates direct connection of the ViewStation SP to a PC.

Connecting The ViewStation SP To a LAN

Figure 4-1-**a** illustrates the most common method for ViewStation SP to PC connectivity. If both ViewStation SP and PC have LAN connectivity, no additional configuration is needed. See “Using the ViewStation SP Web Interface,” on page 99.

Connecting The ViewStation SP to a Stand Alone PC

Figure 4-1-**b** illustrates a configuration which neither the ViewStation SP nor the PC has access to an Ethernet LAN. For example: For an

ISDN configured ViewStation SP where H.323 videoconferencing is not used. This configuration is NOT recommended when connecting to an Ethernet LAN in which a DHCP server is used.

1. Connect the orange tipped RJ-45 cable connector on the LAN adapter to the orange RJ-45 port on the ViewStation SP.
2. Connect the blue tipped RJ-45 cable to the blue RJ-45 port on the LAN adapter. Connect the opposite end of the blue tipped RJ-45 cable to the Ethernet port on the PC.
3. Power on the ViewStation SP.
4. Configure the ViewStation SP DHCP setting (**System Info > Admin Setup > LAN/H.323 > LAN & Intranet**). Select SERVER in the **DHCP** field. The ViewStation SP becomes a DHCP server and provide IP addresses for up to 12 PCs.

Note If the DHCP server option is not available on your ViewStation SP, you must update your ViewStation SP through an H.320 call or connect the ViewStation SP to a LAN and run the SoftUpdate application on the ViewStation SP and check **Enable system to be a DHCP server**.

5. The ViewStation SP prompts you to save the changes.
6. Go to the **System Information** screen (**System Info**). The IP address of 1.1.1.2, which is the IP address of the ViewStation SP.
7. The following message dialog box appears:
   “The system will now issue IP addresses to other PCs in the LAN. Continue Yes or No?
   Choose **Yes** then exit the screen by selecting the **Menu** icon, the ViewStation SP automatically restarts. If you choose **No**, your changes are not saved.
8. Complete the following steps on your PC to finish configuration:

For Windows 9X/NT:

Right-click on the Network Neighborhood icon for on your Windows desktop and select Properties from the menu. The Network dialog box appears.

For Windows 2000/ME:

Right-click on the **My Network Places** icon for on your Windows desktop and right click on **Local Area Connection**.

The **Network** dialog box appears (the screen in Figure 4.2 is for Windows 2000 operating system. Your operating system my display this information differently.)

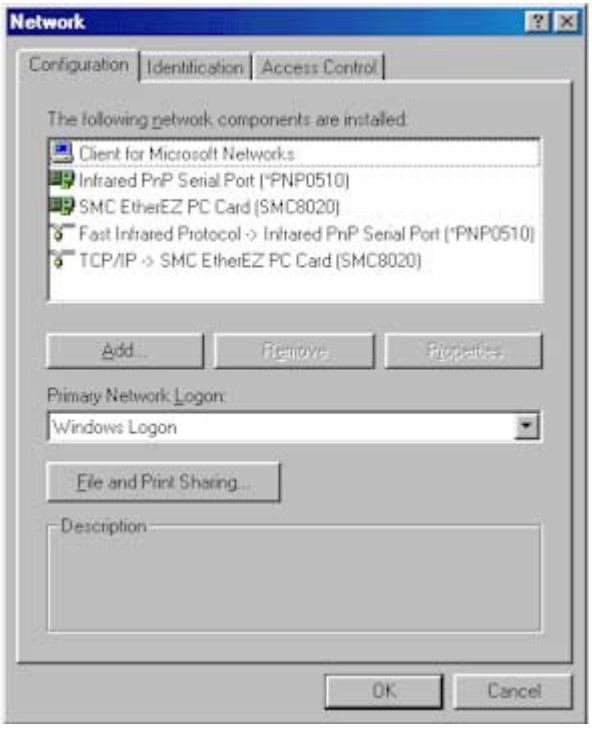

Figure 4-2. PC TCP/IP Network Screen

On the Configuration tab:

a. Select the TCP/IP component

b. Click the PROPERTIES button.

   The TCP/IP Properties dialog box appears. There might be more than one TCP/IP component. If so, choose the one for the LAN adapter, not the dial-up adapter.

For Windows 9X: The Primary Network Logon is shown in Figure 4-2: Select **Windows Logon** otherwise the ViewStation SP cannot assign an IP address to the PC.

Note Individual network configurations may vary with the topography of the network used. Check with your information systems manager for assistance.

9. On the **IP Address** tab:
   a. Select the **Obtain An IP Address Automatically** option.
   b. Click **OK**.
10. Restart the PC and launch Internet Explorer.

Using the ViewStation SP Web Interface

All ViewStation SP models come with an embedded Web interface that offer the following options to ViewStation SP users:

- Select and View a Presentation, on page 99.
- Closed Caption, on page 105.
- Using Microsoft NetMeeting, on page 106.
- System Information Remote Management, on page 108.

Select and View a Presentation

The ViewStation SP lets you view and present Microsoft PowerPoint 97 and 2000 presentation slides when it is connected to a PC (Via LAN or Direct.) You can conduct a presentation on the ViewStation SP or you can watch a presentation from a PC. All that is required is the IP address of one of the ViewStations in the videoconference.

Figure 4-3. Select a Presentation Screen

To present a slide to a ViewStation SP, complete the following steps:

On the PC:

Launch Internet Explorer 4.0/5.0 or Netscape 4.5 or higher.

Note Ensure the browser is configured to accept cookies.

1. Enter the IP address of the ViewStation SP displaying the slides. The **Welcome page** appears.
2. Click the **Select a Presentation** icon. The **Select a Presentation** for Viewing page appears.
3. Click the PRESS HERE TO SELECT A POWERPOINT PRESENTATION button. The **pcPresent** dialog box appears.

Figure 4-4. pcPresent Screen

4. Enter a name and password if one has been established for the videoconference.

Note If the security level on the Internet browser is set too high, you cannot bypass the password. If this occurs, change the security level to low or medium.

5. Click the PLEASE PRESS HERE TO SELECT A POWERPOINT PRESENTATION button. The **File Open** dialog box appears.

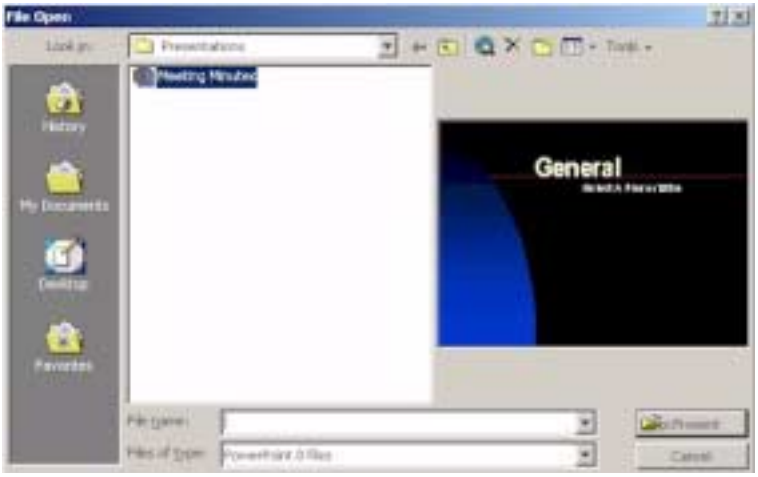

Figure 4-5. Open Presentation Screen

6. Select a presentation file and click on the PCPRESENT button. A window appears indicating that your slides are being converted to thumbnail sketches. Once this is complete, the thumbnails are loaded into the ViewStation SP flash memory.

Figure 4-6. Converting PowerPoint Slides Screen

Note This feature enables the ViewStation SP to hold the slides active in active memory if the videoconference is connection lost. The slides remain in the ViewStation SP as long as they are active on the ViewStation web interface.

Note The ViewStation SP can load up to eight presentations in memory.

On the ViewStation SP:

1. Press the SLIDES button on the remote control. The **Available Presentations** screen appears.

Figure 4-7. Available Presentations Screen

2. Select a presentation and press the SELECT button on the remote control. A password may be required to proceed.

Figure 4-8. Loading Slides Screen

The **Loading Sides** screen shown in Figure 4-8 appears when a presentation selection has been made.

3. A thumbnail of each slide provides the presenter with a to preview all the slides simultaneously. To view a slide, highlight a slide and press the SELECT button on the remote control.

Figure 4-9. Thumbnail of Slides in the Presentation Directory

Press the INFO button for additional information about the slide being viewed. The name of the presentation appears, as well as the slide number, and the viewing password. Passwords for slides may be changed on this screen. This affects the entire presentation to all viewers.

Figure 4-10. Slide Presentation Information Screen

4. Use the ARROW buttons on the remote control to move backward and forward through a presentation. Use the following table to navigate the presentation menu for the ViewStation SP:

Button	Used for
UP ARROW	Goes to the beginning of the presentation.
DOWN ARROW	Goes to the end of the presentation.
LEFT ARROW	Moves the highlight marker to the left.
RIGHT ARROW	Moves the highlight marker to the right.
MENU	Switch between view a thumbnail and viewing the full slide.
SELECT	Return to live video or select a slide from thumbnails.
SLIDES	Select another presentation.

Closed Caption

Closed Caption is a Polycom-proprietary software feature that displays text on the **Main Calling** screen of the near and far ViewStation systems.

Closed Caption is used through the ViewStation SP web interface. Closed Caption is particularly well suited to participants in a video conference who can only communicate through written messages or who need to have the verbal exchange of other participants transcribed or translated for them.

Closed Caption is also a useful tool for hearing-impaired or foreign speakers.

Accessing and Using Closed Caption

To access and use Closed Caption:

1. Establish a video call with the far site.
2. On your PC, start Internet Explorer 4.0+ or Netscape 5.0+.
3. To access the ViewStation SP web interface, enter the ViewStation SP IP address in the address field of the web browser.

4. The Polycom ViewStation SP web interface page is displayed. Select the **Closed Caption** icon.
5. The **Enter network password** dialog box is displayed, enter the user name and password (if used.)
6. The **Closed Caption** page is displayed. Type in the text in the **Current** field and press **ENTER**.

   Closed Caption supports up to 250 characters per line.

   The text entered is displayed on the ViewStation SP and in the history field. The history field retains all of the text typed during the current session.

Usage Information and Restrictions About Closed Caption

The following lists some usage information and restrictions about Closed Caption:

- Closed Caption works in a call for live closed captioning.
- Closed Caption works out of a call to assist in creation of screen shots.
- Closed Caption works over both IP and ISDN calls.
- Closed Caption is supported only with ViewStation SP system software version 6.5 or greater.
- Closed Caption is not supported in multi-point calls.
- Closed Caption requires:
  - A user name
  - A password (if required)

Note If you hang up the video call and use Closed Caption out of a call, you may have to refresh your browser.

Using Microsoft NetMeeting

Video calls may be placed using Microsoft NetMeeting. NetMeeting data is transmitted over an Ethernet LAN network and is displayed on the PC at each site.

Complete the following steps to access NetMeeting:

On the PC:

1. Open Internet Explorer 4.0+ or Netscape 5.0+

2. In the browser address field, enter the IP address of the ViewStation SP.

   The ViewStation SP web interface **Welcome** page appears on the PC.

3. Click on the **Start NetMeeting** icon.
4. Enter a name in the USER NAME field (do not use admin as the user name.)
5. If a slide-viewing password is used, enter it in the **Password** field. Forgotten passwords are listed on the **System Info > Admin Setup > Security** screen of the ViewStation SP.
6. Once a password is entered in the dialog box, click **OK** to go to the **How to Start a NetMeeting Call** web page. Follow the on-screen instructions.

Note To locate the IP address of the PC, Start NetMeeting on the PC and select **HELP > About Windows NetMeeting**. The IP address for the PC is displayed in the lower portion of the **Help** screen.

Figure 4-11. About Windows NetMeeting Dialog Box

7. Select **Call** from the NetMeeting menu on the PC connected to the ViewStation SP.

8. In the **Address field**, enter the IP address of the ViewStation SP that is connected to the PC. For easy reference, the IP address of the ViewStation SP is provided on the **How to Start a NetMeeting Call** web page.

During the NetMeeting call, the whiteboard, chat, application sharing, and file-transfer capabilities are available. Audio and video are provided via the ViewStation SP.

To add participants to a NetMeeting conference, participants must complete steps 1 through 4 (above.)

NetMeeting Application Sharing

To use NetMeeting application sharing, file transfer, and whiteboarding, a PC must be connected to your ViewStation SP directly or via the LAN. NetMeeting data is transmitted via the H.323 IP network. The bandwidth used is dynamically allocated so that when NetMeeting is not sending data, the bandwidth used returns to the video data.

Note T.120 application sharing, file transfer, and whiteboarding are supported for NetMeeting 3.0 when used with two ViewStations. You must have the same version of NetMeeting installed on both ends of the videoconference.

H.323 Video Calls with NetMeeting

H.323 video calls can be placed to and from a PC using NetMeeting 2.11 or 3.0+. The line speed of a video call from NetMeeting to a ViewStation SP depends on the bandwidth setting in NetMeeting. The maximum line speed for NetMeeting calls is:

- Cable, xDSL, or ISDN = 128 Kbps
- LAN = 384 Kbps (maximum speed of Microsoft NetMeeting.)

Calls from a ViewStation SP to NetMeeting must be at line speeds greater than 64 kbps. Application sharing with NetMeeting cannot be done in an H.323 call with a ViewStation SP.

System Information Remote Management

The ViewStation SP has an embedded web server that provides for ViewStation SP management from the convenience of a PC. Some screens appears in more than one place on the web interface. The

following tasks can be performed from the ViewStation SP web interface.

- Run diagnostic tests on a system
- Control a system
- Send messages to a system
- Change the setup of a system
- Place a call to a system or participate in an existing call.

To access the ViewStation SP Remote Management controls:

1. Launch the web browser.
2. Enter the IP address of the ViewStation SP.

   The ViewStation SP web interface **Welcome** page appears on the web browser for the ViewStation SP.
3. Click on the **System Information and Management** icon. The **System Information** web page appears.

Figure 4-12. System Information and Management Screen

To the right of the four icons is the **System Information** screen which provides key information about the ViewStation SP.

The four icons on the left provide different functions for the ViewStation SP that are similar to most of the functions described in “System Information,” on page 129.

Placing a Call From the ViewStation SP Web Interface

To place a video call from the **Manage System** page, click on the **Place a Call** icon.

Figure 4-13. Place a call from the Web Interface Screen

There are two ways to place a call from the screen shown in Figure 4-13:

- From the Local Address Book.
- Manual Dial.

From the Local Address Book: Address entries added to the ViewStation SP address book appear in the upper right side of the call screen. To place a call:

- Select a site from the upper left side of the screen.
- The selected site (as shown in Figure 4-14) appears on the right side of the screen. Select **Call this Site**. The ViewStation SP calls the selected site.

Figure 4-14. Placing a Call

- When a call is established, the far site appears in the right monitor image as shown in Figure 4-15.

Near Site **Far Site**

Figure 4-15. In Video Conference Call

Manual Dial: To place a video call manually, click on the **Manual Dial** tab on the top of the browser screen.

1. Choose the method of call type:
   - For H.323 calls: Enter the IP or DNS address of the far site in the **Video A** text area.

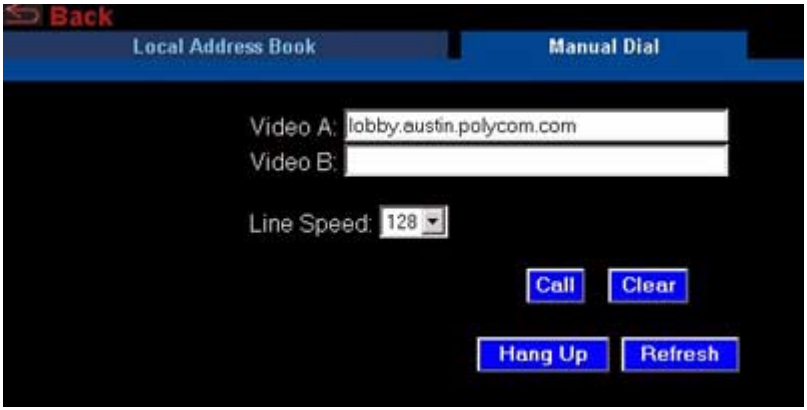

Figure 4-16. Manual Dial Screen

   - For H.320 calls: Enter the primary ISDN number in the **Video A** text area. Then enter the secondary ISDN number in the **Video B** text area.
2. Select the line speed to be used for the call.
3. Click the CALL button.
4. When a call is established, the monitor screens (as shown in Figure 4-15) appear.
5. To disconnect a call, click on the HANG UP button.

ViewStation SP Web Interface Icons

The ViewStation SP web interface contains a set of tools located in the **System Information and Remote Management** pages of the web interface. These tools are used in the remote management of the ViewStation SP. The following icons are the counterparts to the ViewStation SP **Admin Setup** screen.

Note Some icons and associated screens only apply to ViewStations with optional configurations. The following table lists icons common to all ViewStation SP models.

Web Interface Icon	ViewStation SP Counterpart
 Admin Setup	**System Info > Admin Setup**
 General Setup	**System Info > Admin Setup > General Setup**
 ISDN Video Network	**System Info > Admin Setup > Video Network**
 IMUX Setup	ViewStation SP384 only **System Info > Admin Setup > Video Network > IMUX**

Web Interface Icon	ViewStation SP Counterpart
 LAN & H.323 Setup	**System Info > Admin Setup > LAN/H.323**
 Data Conference	**System Info > Admin Setup > Data Conference**
 Telephone & Audio	**System Info > Admin Setup > Phone/Audio**
 Video & Cameras	**System Info > Admin Setup > Video/Camera**

Web Interface Icon	ViewStation SP Counterpart
 Software	**System Info > Admin Setup > Software/Hardware > Software**
 Hardware	**System Info > Admin Setup > Software / Hardware > Hardware**
 Diagnose System	**System Info > Diagnostics**
 Network Statistics	**System Info > Diagnostics > Network Stats**

Web Interface Icon	ViewStation SP Counterpart
 Advanced Statistics	**System Info > Diagnostics > Advanced Stats**
 Color Bar	**System Info > Diagnostics > Color Bar**
 Audio Tone	**System Info > Diagnostics > Audio > Generate Tone**
 Far End Loop	**This feature is only available in an H.320 call.**

Web Interface Icon	ViewStation SP Counterpart
 Near End Loop	**System Info > Diagnostics > Near End Loop**
 Remote Control	The **Remote Control** icon is a virtual remote control for the ViewStation SP. Use the virtual remote control as you would the hand held remote control.
 Send Message	From the System Diagnostics web page, click on the **Send Message** icon to send a message to a ViewStation SP. The text message may be up to 100 characters in length. When the Send a Message web page appears, type in your message and click on the SEND MESSAGE button. Your message appears on screen for 15 seconds. The message appears only on the screen of the ViewStation SP that you are managing.

Web Interface Icon	ViewStation SP Counterpart
 Restart System	The **Restart System** icon is used to reboot the ViewStation SP after changes are made to the configuration settings.
 ISDN Numbers	ViewStation SP384: **System Info > Admin Setup > Video Network > IMUX > Numbers** ViewStation SP128: **System Info > Admin Setup > Video Network > ISDN Video Network**
 SPIDs	ViewStation SP384: **System Info > Admin Setup > Video Network > IMUX > SPIDS** ViewStation SP128: **System Info > Admin Setup > Video Network > ISDN Video Network**
 Audio Quality	H.323 and ViewStation 128: **System Info > Admin Setup > Audio** ViewStation SP384: **System Info > Admin Setup > Video Network > IMUX > Audio Quality**

Web Interface Icon	ViewStation SP Counterpart
 Dialing Speeds	H.323: **System Info > Admin Setup > LAN/H.323 > H.323 > Dialing Speeds** ViewStation SP384: **System Info > Admin Setup > Video Network > IMUX > Dialing Speeds** ViewStation SP128: **System Info > Admin Setup > Video Network > Dialing Speeds**
 Call Preference	**System Info > Admin Setup > Video Network > Call Preference**
 ISDN Trace	The **ISDN Trace** icon is used to diagnose the condition of each ISDN line.
 Advanced Dialing	**System Info > Admin Setup > Video Network > IMUX > Advanced Dialing**

Web Interface Icon	ViewStation SP Counterpart
 LAN/Intranet	**System Info > Admin Setup > LAN/H.323 > LAN/Intranet**
 H.323	**System Info > Admin Setup > LAN/H.323 > H.323**
 GMS Setup	**System Info > Admin Setup > Global Management**
 Global Address Book	**System Info > Admin Setup > Global Address > Global Address**

Web Interface Icon	ViewStation SP Counterpart
 GAB Server	**System Info > Admin Setup > Global Address > Global Address > Server**
 GAB Preferences	**System Info > Admin Setup > Global Address > Global Address > Preferences**
 Private Numbers	ViewStation SP384: **System Info > Admin Setup > Global Address > Global Address > Private NET**
 Gateway Number	ViewStation SP384: **System Info > Admin Setup > Global Address > Global Address > Gateway Number**

Web Interface Icon	ViewStation SP Counterpart
 Dialing Rules 1	ViewStation SP384: **System Info > Admin Setup > Global Address > Global Address > Dialing Rules 1**
 Dialing Rules 2	ViewStation SP384: **System Info > Admin Setup > Global Address > Global Address > Dialing Rules 2**
 GMS Info	**System Info > Admin Setup > Global Management > Info 1**

Web Interface Icon	ViewStation SP Counterpart
 SNMP	**System Info > Admin Setup > LAN/H.323 > SNMP**
 Home	Click on the **Home** icon to go to the main ViewStation SP web interface page.

ViewStation SP Software

Downgrading Software

ViewStations operating on version 7.0+ software can downgrade to software version 5.5. This may be done to allow a ViewStation with older software with communicate to another ViewStation. Upgrading both ViewStations to software version 7.0+ is strongly recommended.

Note PC software applications such as Visual Concert PC only operates on ViewStation SP software version 7.0.

Upgrading Software

The two methods for updating the ViewStation SP software are:

- Using an H.320 call.
- Using the Polycom SoftUpdate application over a PC connected to a LAN.

Upgrading Software over ISDN

The software on the ViewStation SP can be upgraded using an H.320 video call only from another ViewStation SP. Upgrading software over ISDN can only be done with a ViewStation of the exact model.
You can perform a software upgrade to the far site over your ISDN line during a call. Upgrading works best at 384 Kbps.

Caution Do not power off the ViewStation SP during the software update process. If you power off a ViewStation SP during the download process, the ViewStation SP reverts to its original software version.

The ViewStation SP automatically restarts, once the software upgrade process is complete.

Complete the following steps to upgrade a system:

1. Place a video call to the far site ViewStation SP.
2. Select **System Info > Admin Setup > Security** and write down the passwords that appear on the **Security** screen of the site you want to upgrade.
3. On the site sending the software, select **System Info > Admin Setup > Software/Hardware > Software Update** to access the **Software Update** screen.
4. Highlight the **Start** icon and press the SELECT button on the remote control.
5. Enter the passwords that you wrote down in Step 2, highlight the **Start** icon, and press the SELECT button on the remote control to begin the upgrade process.

Upgrading Software over the LAN

You can use the SoftUpdate application to upgrade your software over the LAN.

Complete the following steps to upgrade your ViewStation SP software:

1. Download the latest software from **www.polycom.com** and save it on your PC. If you do not have internet access, your reseller can supply you with the application.

2. Double-click on the software zip file and select a directory in which you want the files extracted. If you are prompted for a password, contact your network administrator.
3. Once the application is extracted, double-click on the **SoftUpdate.exe** file. The SoftUpdate dialog box appears.

Figure 4-17. Software Update Screen

4. Click on the SOFTUPDATE button. The **IP Address** dialog box appears.
5. Enter the IP Address of the ViewStation SP you want to update and an administrator password, if one is required. Click OK. A **System Info** dialog box appears.

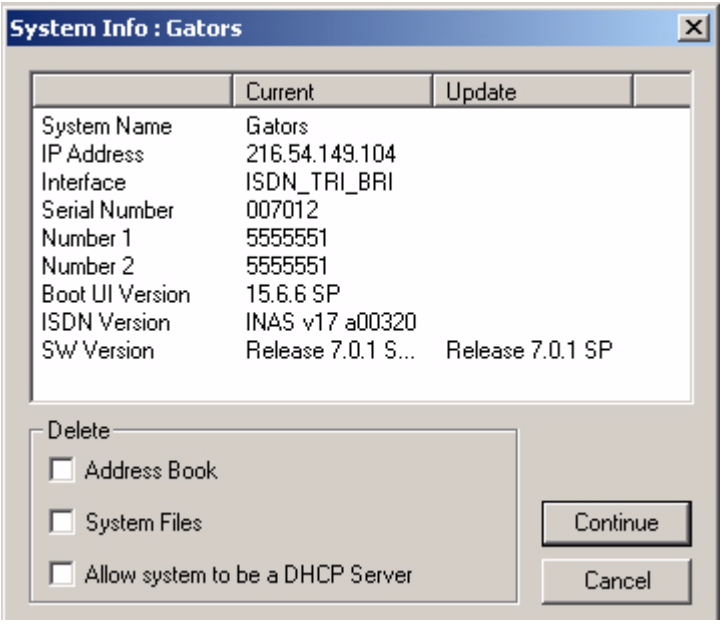

Figure 4-18. System Information Dialog Box

6. Click on the CONTINUE button to start the update process. During the update, complete the following:
   a. Print and read the **Read Me First** file.
   b. Periodically look at the progress of the update. See “Network and Communications,” on page 140 if this process appears to be inactive after 10 minutes.
   c. When the SoftUpdate is complete, click OK to close the SoftUpdate application.

Using PolySnap

Polycom SNAP! takes snapshots of the PC screen and displays the snapshots on a Polycom ViewStation SP.

You can take snapshots of the entire PC screen or specific windows or areas of the PC screen and display the snapshots on one or more Polycom ViewStations.

Polycom SNAP! enhances your company's videoconferencing capabilities and people's productivity.

For example, you can have a single, point-to-point videoconference with another site and display the snapshot on your ViewStation SP and the other site's ViewStation SP at the same time. You can also have a videoconference with multiple sites and display the same snapshot on all of the ViewStations simultaneously.

When you start Polycom SNAP!, image in Figure 4-19 is displayed.

Figure 4-19. Polycom Snap

Polycom SNAP! uses a camera interface because using Polycom SNAP! is like taking a snapshot of someone or something and showing the snapshot to others. Using the camera, you can connect your PC and ViewStation SP, define what type of snapshot you want

and how often you want to take it, and take a snapshot to display on the ViewStations.

With Polycom SNAP!, you can:

- Display snapshots from a PC on a local ViewStation SP for viewing during a meeting.
- Conduct a videoconference with another site and display snapshots of your PC on the near and far sites at the same time.
- Conduct a multi-point videoconference with multiple sites and display snapshots of your PC to all of the participating ViewStations simultaneously. Polycom SNAP! operates during calls to both Polycom and other video conferencing systems.
- Present snapshots for up to fifteen participants simply by accessing the ViewStation SP web interface and view the snapshots.

Polycom SNAP! may be downloaded from the ViewStation SP web interface or at **www.polycom.com**.

Using Visual Concert PC

The ViewStation SP384 and ViewStation SP128 are capable of receiving dual-streamed video from ViewStations with software version 7.0+ using Visual Concert PC.

For more information about Visual Concert PC, please see the *Visual Concert PC User Guide.*

5

System Information and Diagnostics

System Information

The **System Information** screen (shown in Figure 5-1) contains key information about the ViewStation SP.

Figure 5-1. System Information Screen

On the **System Information** screen, the following information is provided. The information cannot be changed from this screen.

- **System Name:** The system name is the name assigned to the ViewStation SP by the LAN Manager or the ViewStation SP administrator. To change this information to **System Info > Admin Setup > General Setup**.
- **Video Numbers:** video numbers are the ISDN numbers assigned to the ViewStation SP. The ISDN numbers are set in **System Info > Admin Setup > Video Network > IMUX > Numbers** on the ViewStation SP384 and **System Info > Admin Setup > Video Network > ISDN Video Network** for the ViewStation SP128.

- **LAN Host Name:** The LAN host name is the name assigned to the ViewStation SP for TCP/IP configuration. To set the LAN host name, go to **System Info > Admin Setup > LAN/H.323 > LAN/Intranet**.
- **IP Address:** The IP address assigned to the ViewStation SP is assigned automatically through a DHCP server or is set manually (static). To manually set the IP address, go to **System Info > Admin Setup > LAN/H.323 > LAN/Intranet**.
- **Software Version:** This displays the software version and the date of the software release. Additional information about the ViewStation SP software version is located at **System Info > Admin Setup > Software/Hardware > Software**.
- **Serial Number:** The ViewStation SP serial number is unique to each ViewStation SP. This number is also located on a bar code sticker on the bottom of the ViewStation SP unit. This number cannot be modified.
- **Model:** The **ViewStation SP** model type is displayed.

The **User Setup**, and **Admin Setup** icons are covered in User Setup, on page 23.

Diagnostics

The **Diagnostics** screen is used to check network statistics and perform various diagnostic tests. The **Diagnostics** screen is located at **System Info > Diagnostics**. The following eight icons can be accessed through the **Diagnostics** screen:

- Network Statistics *on page 131*
- Advanced Statistics *on page 131*
- Call Status *on page 131*
- Color Bar *on page 131*
- Audio *on page 132*
- Near End Loop *on page 132*
- Far End Loop (in H.320 call only) *on page 132*
- Reset System *on page 132*.

Figure 5-2. System Diagnostics Screen

Network Stats

The **Network Statistics** screen displays the network protocols and transmit and receive data rates for video calls.

Advanced Stats

The **Advanced Network Statistics** screen displays detailed information about the status of your call. Transmit and receive speeds are displayed for both audio and video during a video call.

Call Status

The **Call Status** screen allows you to determine if one of the far site's ISDN channels consistently fails to connect. If you highlight any of the call progress indicators, the corresponding ISDN number appears. You can then compare this number to the number you need to dial. Check the status code for each line if you need to troubleshoot ISDN problems. See ISDN Errors, on page 153.

Color Bar

The **Color Bar** screen is used to test the color setting on the television monitor. Highlight the **View Color Bars** icon and press the SELECT button on the remote control. Color bars appear full screen. Use the controls on the television monitor to adjust the color settings. Press any button on the remote control to return to the **Color Bars** screen.

Audio

The **Audio Screen** is used to generate a tone and view the audio levels of the ViewStation SP.

To generate a tone:

- Highlight the **Generate Tone** icon and press the SELECT button. Adjust the volume controls on the ViewStation SP and television monitor to comfortable levels.
- Press any button to stop the tone. If the system is in a call the far site also hears the tone.

To view audio levels:

- Highlight the **Audio Meter** icon and press the SELECT button on the remote control.
- The **Audio Meter** screen indicates the audio level of all audio inputs connected to the ViewStation SP. Speak into the microphone to test the audio level.

Near End Loop

The **Near End Loop** screen allows you to test the encoder/decoder on the ViewStation SP. This can help you diagnose a problem with an H.320 video call. Press any button on the remote control to stop the loop.

Far End Loop

The **Far End Loop** screen only appears during an H.320 call and allows you to test the encoder/decoder on the ViewStation SP. This can help you diagnose a problem with an H.320 video call. If you perform a far-end loop test during a call, the far site sees its own loop. Press any button on the remote control to stop the loop.

Reset System

To reset the system, enter the ViewStation SP serial number and select the RESET button. The **Reset System** screen clears existing system configurations. Use the reset system function to erase your system settings and/or your address book entries. Once you have reset the system, your system walks you through the system configuration screens as it did when you powered on the ViewStation SP for the first time.

Note Be sure to copy system information before resetting a system. All settings are lost when you reset the system.

6

Troubleshooting

General Problems

Symptom	Cause	Solution
Slow blinking green light appears on the front of the ViewStation SP.	The system is sleeping.	System is in sleep mode. This is normal. The system wakes up on any action from the remote control or on an incoming call.
Amber light appears on the front of the ViewStation SP.	The system is in a call.	This is normal.
Green light appears on the front on the ViewStation SP.	The system is not in a call.	This is normal.
Cannot enter the System Setup menus.	System is password protected. Password has been forgotten.	Go to Diagnostics menu and perform a system reset. This erases all your system settings except for your address book. You may then enter a new password in the Security menu.
System starts in the **Software Update** screen.	System software is corrupt or not loaded properly.	Load system software on the ViewStation SP from your PC.

Audio

Symptom	Cause	Solution
Not enough volume during a call.	Volume set too low on the ViewStation SP.	Turn up the ViewStation SP volume using the remote control.
	Volume set too low on the monitor.	Turn up the volume on your monitor or external amplifier.
	Microphone pod is too far from the speaker.	Move the microphone pod closer to the meeting participants.
No audio in a call.	Monitor audio inputs not connected properly.	Check audio output on the **Generate Tone** screen under Diagnostics. You should hear a 400 Hz tone emitting from the speaker.
	ViewStation SP connected to the wrong audio input on the monitor.	Make sure the ViewStation SP audio output lead(s) are connected to the same input connector(s) that have been selected on the monitor.
	Far site is muted.	Look for the **Far Site Mute** icon. Ask the far site to unmute their microphone pod.
	Too many network line errors.	Disconnect call and reconnect later.
ViewStation SP startup music plays through the built-in ViewStation SP speaker, but not through monitor speakers.	Monitor speakers or audio amplifier not properly connected.	Check audio connections and volume level on your monitor.
Incoming call ring and other sound effects too loud or too soft.	Sound effects volume not set at desired level.	Adjust the sound effects volume on the **Phone/Audio** screen. If you do not want to hear sound effects, set the volume to zero.

Symptom	Cause	Solution
An echo is heard at the near site when speaking.	Far site microphone pod is too close to the audio speaker.	At the far site, make sure the microphone pod is placed away from the audio speaker.
	The far site audio volume may be too loud.	Turn down the audio volume at the far site.
Near site or far site cannot hear VCR audio or see the VCR video.	VCR input is not selected.	Turn on the VCR input by selecting the NEAR key twice and selecting the **VCR** icon.
Local audio can be heard when speaking in the microphone.	The monitor or audio amplifier is not connected to the audio out of the ViewStation SP.	Connect the monitor or audio amplifier to the monitor audio out of the ViewStation SP.

Video

Symptom	Cause	Solution
The monitor is blank.	The ViewStation SP goes to “sleep” mode after four minutes of inactivity.	Pick up the remote control to wake up the ViewStation SP
Picture slow or jerky.	Only one 64 Kpbs channel is connecting in your call.	Check the ISDN number of the far site. Ask the far site to call your site. Verify network under the Network Status menu (**System Info > Diagnostics > Network Stats**.)
	Excessive motion in the picture you are receiving.	A background with less motion provides a better, smoother video picture.
Near site camera does not pan or tilt.	You are attempting to move a camera that does not have pan/tilt/zoom capabilities.	Make sure you have selected a pan/tilt/zoom camera.
Blue screen in the PIP window.	No video input.	Check that there is a video source present on the selected input.
	Camera selection is incorrect	Check camera selection on the **Camera** screen.
	The VCR input is selected and the VCR is idle or not running. Most VCRs generate a blue screen when the tape is not playing.	Select a different input on the ViewStation SP or play a tape on the VCR.

Symptom	Cause	Solution
Camera voice tracking does not work properly.	Camera tracking was turned off by near or far site.	Camera tracking is turned off when the near or far site moves your camera. Press the AUTO button to restore tracking.
	The far site is speaking.	The camera stops tracking when the far site speaks to prevent the camera from pointing to your monitor speaker. Wait for the far site to stop speaking.
	The far site is very noisy.	The camera stops tracking when the far site is too noisy. Try setting the ViewStation SP to track to camera presets.
	Near site is on mute.	The near site camera does not track when the near site is on MUTE. Toggle mute function with the MUTE button.
	Near site is noisy or too many people are talking at once.	Reduce the noise in the room.

Network and Communications

Symptom	Cause	Solution
ISDN: Error Message when dialing a video call.	ISDN error code received from the ISDN line.	See “ISDN Information,” on page 151.
ISDN: When placing a call, progress icons do not turn green.	**Call Progress** icons indicate that the video call did not complete.	The **Call Progress** icons indicate the call state when placing or receiving a video call on each ISDN channel: 1/4 Blue - Ringing. 1/2 Yellow - Call connected to the CO and is ringing at the far site. 3/4 Orange - Negotiation. Full Green - Connected. Go to the **Call Status** screen. Highlight each of the circles for each of the channels dialed. The numbers dialed for each channel are displayed as you highlight the corresponding circle. Make sure that the far site has entered the number for each ISDN line correctly. See “ISDN Errors,” on page 153.
System is waiting for an IP address. **System Info** screen shows “waiting” in IP address field.	LAN or DHCP server is not operating.	Check connections to the LAN. Contact your network administrator.
ISDN: **Line Status** icons do not go away so video calls cannot be made.	ISDN line is not present.	Check the ISDN line connections.
	ViewStation SP is directly connected to a U interface.	Install an NT-1 between your ISDN line and the ViewStation SP ISDN connection.

Symptom	Cause	Solution
ISDN Line errors when using SPID configuration	For ViewStation SP384: Go to the **Numbers** screen **(System Info > Admin Setup > Video Network > Numbers**) and check the ISDN numbers are entered correctly. For ViewStation SP128: Go to the **ISDN Video Network** screen **(System Info > Admin Setup > Video Network**) and check the ISDN numbers are entered correctly.	Enter corrent SPID numbers Note: The AT&T point-to-point protocol does not require SPIDs.
Error Message occurs when dialing a video call.	The first line did not connect. It cannot make a call if the first line does not connect.	Check that all network cables are properly connected. Restart the system.
	If H.323 call, IP Gateway/ Gatekeeper is not operating or is not configured correctly.	Contact your network administrator.

IMUX

Symptom	Cause	Solution
Cannot dial remote system in BONDING 384 Kbps calls.	Call progress circles only displays blue or yellow.	Start by calling the far-site at 1x64 or 2x64 Kpbs. This verifies if the primary number is correct. If these calls complete, try 256 Kbps then 384 Kbps.
Dialing a remote site in calls above 128 Kbps does not work.	Call progress circles do not turn green, or remain blue after the first channel connects.	Go to the **Call Status** screen. Highlight each of the circles for each of the channels dialed. The numbers dialed for each channel are displayed as you highlight the corresponding circle. Make sure that the far site has entered the number for each ISDN line correctly. The numbers for Line 1 - Line 4 should correspond with connections 1 - 4 on the IMUX. See “ISDN Errors,” on page 153.
Cannot select 112 or 128 speeds for BONDING calls from the **Speed Selection** icon on the Video Phone.	Speeds do not show when selecting the **Speed** icon.	Add line speeds by going to the **IMUX Dialing Speeds** screen.

LAN / Intranet

Symptom	Cause	Solution
Cannot access ViewStation SP web interface from the PC web browser.	ViewStation SP DHCP is set to CLIENT and no DHCP server is available.	Change your IP address to static. Contact your network administrator.
	Ethernet LAN cable is not connected to the Ethernet LAN port on the ViewStation SP.	Connect the Ethernet LAN cable to the Ethernet LAN port. Contact your network administrator.
	Failed LAN cable.	Check the light on the back of the ViewStation SP. You should have a steady green light to indicate a connection to the LAN and a flashing orange light to indicate LAN traffic.
	There is a firewall between your PC and your ViewStation SP.	Consult your network administrator.
	Your PC is on a different subnet and there is no router between you and your ViewStation SP.	Change your PC or ViewStation SP Subnet mask and IP address so that they are both on the same LAN or subnet.
System does not allow management via the web.	Wrong password.	Enter the correct password. Note: The default password is “admin.”
	Too many managers logged into the system.	Only two system managers are allowed at any one time. To log everyone out, restart your ViewStation SP.

Presentations

Symptom	Cause	Solution
Web browser does not allow displaying PowerPoint presentations from the PC to the ViewStation SP.	Wrong version of web browser.	Presenting PowerPoint slides works with Microsoft Internet Explorer version 3.02 or higher on Windows 95/98/ME and Windows NT/2000 Workstation. Presenting PowerPoint slides also works with Internet Explorer 5.5 on Windows 95/98/ME/2000. You may need to load service packs to your browser. This function does not work with Netscape Communicator or Netscape Navigator.
Cannot connect to the PC from the ViewStation SP for presentation. The PC name is there but the PC presentation cannot be accessed when the SLIDES button is pressed.	Incorrect password.	Enter correct password that was entered on the PC.
	Firewall between the ViewStation SP and the PC.	Consult your IT manager.
	Too many presenters. The ViewStation SP allows a maximum of eight presenters or PCs to be logged on at one time.	Have extra presenters disconnect.
Snapshots and presentations cannot be accessed though the PC has access to the main web page of the ViewStation SP.	Too many viewers logged in. The ViewStation SP supports up to 15 viewers via the web browser in a point-to-point call, up to10 viewers in a 3-way call, and up to 8 viewers in a 4-way call.	Have extra viewers disconnect. Change the slide-viewing password on the **Security** screen to allow only authorized viewers.

Symptom	Cause	Solution
Cannot view presentation or snapshots from the web.	Security level set to “High” on web browser.	Lower the security level on the web browser to “Medium” or “None.”
	Wrong version of web browser.	For viewing snapshots or slides from the Web, the ViewStation SP supports Internet Explorer 3.02 or higher. The ViewStation SP supports Netscape 4.0 or higher.
	Incorrect viewing password.	To check the slide and snapshot viewing password and other information about your presentation, press the INFO button on the remote control during a presentation. The viewing password may be changed on the **Security** screen.
PowerPoint presentation does not export.	Wrong version of Microsoft PowerPoint.	Use Microsoft PowerPoint 97 or 2000.
	Insufficient disk space.	Slides are converted to JPEG files and are stored in the Windows/Temp directory on your PC. Create more disk space on your PC.
	There are too many presentations on the ViewStation SP. Only eight presentations are allowed.	Delete some presentations from the ViewStation SP and restart the system.
	Presentation is too large.	Separate large presentations into two smaller presentations.

System Control

Symptom	Cause	Solution
System does not respond to the hand-held remote control.	No batteries in the remote control.	The green light at the front of the ViewStation SP should blink with each button pressed on the remote control.
	Batteries installed incorrectly.	Insert batteries with correct +/- position.
Low battery icon on the screen.	Low battery in the remote control.	Replace the batteries in the remote control with three AAA batteries.

A

Network Address Translation

Network Address Translation (NAT) lets home office or small network environments use internal IP addresses for the devices within the network, while using one external IP address to communicate with the outside world (Wide Area Network). However, many Small Office Home Office (SOHO) routers provide NAT services that are not fully H.323 compliant.

Therefore, this solution is provided to enable the user make calls *outside* the internal network.

Note At this time, it is not possible to make video conferences calls within the internal network when using the NAT setting.

To make video conferencing calls within the network when using this solution, simply de-select the **System is behind a NAT** option and make the call. Re-select the **System is behind a NAT** option to re-activate this feature and make external calls.

Before you Start Configuring NAT

1. Determine your NAT's external (WAN) IP address. This is the address assigned to your NAT's external interface (connected to the Internet).
2. Determine the IP address of your ViewStation SP. This can be found in the **System Information** screen.

Setting up NAT

1. Go to the **Quality of Service and Firewalls** screen (**System Info > Admin Setup > LAN/H.323 > H.323 > QOS**).
2. Select **Use Fixed Ports**.
3. Select **System is behind a NAT.**

4. Enter the NAT's external IP address into the **NAT outside (WAN) address** field.

   Write down the Fixed TCP and UDP port numbers displayed on this screen. These numbers are typically the following default numbers:

   TCP: 3230 to 3231

   UDP: 3230 to 3235

5. In your NAT, reset the fixed ports from step 4 to be permanently open, and redirect them to the IP address of your ViewStation SP.
6. To accept incoming calls, open and redirect port 1720 to the IP address of your ViewStation SP.

B

Video and Audio Input and Output Levels

Video Levels

This information applies to all Polycom videoconferencing products.

Video Output Levels

Composite and S-video outputs:

- 75 ohm output typical
- NTSC or PAL video standard waveform
- 1.0 Vpp typical per NTSC/PAL standard
- All video outputs are DC coupled.

Video Input Levels

Composite and S-video inputs:

- 75 ohm input termination
- NTSC or PAL video standard waveform
- 1.0 Vpp typical per NTSC/PAL standard expected input
- All video outputs are DC coupled.

Audio Levels

Audio Output Levels

RCA audio output connectors:

- 800 ohm maximum output impedance
- 1.0 Vpp full scale output typical
- All audio outputs are AC coupled.

Audio Input Levels

RCA audio input connectors

- 10 K ohm minimum input impedance
- 1.0 Vpp full scale input expected
- All audio inputs are AC coupled.

C

ISDN Information

If you are not connected to an internal phone system, called a PBX, you need to connect the ISDN cables from your ViewStation SP IMUX module to the NT-1 device. An NT-1 device is used with the North American ISDN U interface.

The lights on the IMUX indicate whether or not the ISDN lines are connected properly. The lights, however, do NOT indicate that the SPIDs, switch type, and ISDN numbers have been correctly entered into the ViewStation SP.

The following are sample NT-1 settings. For more detailed diagnostic information, see the manual that was shipped with your particular NT-1 device.

Sample NT-1 Settings

On an ADTRAN NT-1 ACE ISDN termination unit, you should see the following status lights when your ISDN lines are properly connected.

Status		
Ready	Error	Power
ON	OFF	ON

The dip switches should be set as follows:

Switches	
Configuration	**Termination**
SHORT	NONE
LONG	50
	100

On a Motorola NT1D, you should see the following status lights when your ISDN lines are properly connected.

Status					
SC	ACT	LB	LP	RP	RPR
ON	ON	OFF	ON	OFF	OFF

The dip switches should be set as follows:

Switches			
1	2	3	4
ON	ON	ON	ON

On an Alpha Telecom (AT1) UT620F, you should see the following status lights when your ISDN lines are properly connected.

Status		
Power	ST&U	Back
ON	OFF	OFF

The dip switches should set as follows:

Switches			
1	2	3	4
ON	ON	OFF	ON

ISDN Switches

Depending on the type of ISDN lines you are using, your service provider may assign zero, one, or two SPIDs per line.

Switch Type	SPIDs Allocated
AT&T 5ESS Custom	None
AT&T 5ESS NI-1	1 per B-channel
NT DMS-100 NI-1	1 per B-channel
NI-2	1 per device
Siemens EWSD NI-1	1 per B-channel
Siemens EWSD NI-2	1 per device
International (outside United States or Canada)	None

ISDN Errors

The following table describes ISDN standard cause values that indicate ISDN call status. Although the cause values are standardized, each ISDN service provider phrases the cause differently. Therefore, the causes shown in the table might not be the exact messages that appear on your television monitor.

Code	Cause	Definition
1	Unassigned number	The switch received the sent ISDN number in the correct format; however, no destination equipment uses the number.
2	No route to specified transit network	The ISDN exchange can not recognize the intermediate network through which to route the call.
3	No route to destination	The destination address is not serviced by the intermediate network through which the call is routed.
6	Channel unacceptable	The specified channel does not provide sufficient service quality to accept the requested connection.
7	Call awarded and delivered	The user is assigned an incoming call that is being connected to an already-established call channel.
16	Normal call clearing	Normal call clearing has occurred.
17	User busy	All B channels are in use; the called system acknowledges the connection request, but is unable to accept the call.

Code	Cause	Definition
18	No user responding	The destination does not respond to the call so the connection cannot be completed.
19	No answer from user (user alerted)	The destination fails to complete the connection within the prescribed time after responding to the connection request. The problem occurs at the remote end of the connection.
21	Call rejected	The destination rejects the call for an unknown reason, although capable of accepting the call.
22	Number changed	No system has been assigned the ISDN number used to set up the call. (The diagnostic field of the message may return an alternate address assigned to the called equipment.)
26	Non-selected user clearing	The destination rejected the call, although capable of accepting it, because the call was not assigned to the user.
27	Destination out of order	A signaling message can not be delivered because the interface is not functioning correctly, and therefore the destination can not be reached. This condition might be temporary, though of extended duration; for instance, remote equipment might be turned off.
28	Invalid number format	Destination address presented in an unrecognizable format or an incomplete destination address prevented the connection from being established.
29	Facility rejected	The network cannot provide facility requested by the user.
30	Response to STATUS ENQUIRY	The prior receipt of a status inquiry message generated the status message.
31	Normal, unspecified	A normal has occurred with no standard cause applying. No resulting action is required.
34	No circuit/channel available	The call cannot be taken because no appropriate channel is available to establish the connection.
38	Network out of order	The network is not functioning correctly and this condition may persist for an extended period. The call can not reach the destination and an immediate attempt to reconnect will probably fail.
41	Temporary failure	The network is not functioning correctly and an error occurred. The problem will be resolved shortly.

Code	Cause	Definition
42	Switching equipment congestion	The network switching equipment is temporarily overloaded and the destination can not be reached.
43	Access information discarded	The requested access information can not be provided by the network.
44	Requested circuit/channel not available	An unknown reason prevents the remote equipment from providing the requested channel. This might be a temporary problem.
47	Resource unavailable, unspecified	An unknown reason prevents the remote equipment from providing the requested channel. This might be a temporary problem.
49	Quality of service unavailable	The network can not provide the requested quality of service (as defined by CCITT recommendation X.213). This might be a subscription problem.
50	Requested facility not subscribed	The remote equipment supports the requested supplementary service, but only by subscription.
57	Bearer capability not authorized	The caller has requested a bearer capability that the network can provide, but the user is not authorized to use. This might be a subscription problem.
58	Bearer capability not presently available	The network normally provides the requested bearer capability, but not at the present time. This might be due to a temporary network problem or to a subscription problem.
63	Service or option not available, unspecified	An unspecified reason prevents the network or remote equipment from providing the requested service option. This might be a subscription problem.
65	Bearer capability not implemented	The network cannot provide the bearer capability requested by the user.
66	Channel type not implemented	The requested channel type is not supported by the network or the destination equipment.
69	Requested facility not implemented	The supplementary service is not supported by remote equipment.
70	Only restricted digital information bearer is available	The network is unable to provide unrestricted digital information over bearer capability.
79	Service or option not available, unspecified	The network or remote equipment is unable to provided the requested service option for an unspecified reason. This might be a subscription problem.
81	Invalid call reference value	The remote equipment received a call with a call reference that is not currently in use on the user-network interface.

Code	Cause	Definition
82	Identified channel does not exist	The receiving equipment is requested to use a channel that is not activated on the interface for calls.
83	A suspended call exists but this call identity does not	The network received a call resume request. The call resume request contained a call identify information element indicating that the call identity is in use for a suspended call.
84	Call identity in use	The network received a call resume request that contained a Call Identify information element indicating that it is in use for a suspended call.
85	No call suspended	The network received a call resume request when there was not a suspended call pending. This might be a transient error that will be resolved by successive call retries.
86	Call having requested call identity has been cleared	The network received a call resume request. The call resume request contained a call identity information element, which once indicated a suspended call. However, the suspended call was cleared either by timeout or by the remote user.
88	Incompatible destination	Indicates that an attempt was made to connect to non-ISDN equipment. For example, to an analog line.
91	Invalid transit network specified	The ISDN exchange was asked to route the call through an unrecognized intermediate network.
95	Invalid message, unspecified	An invalid message was received, and no standard cause applies. This is usually due to a D-channel error. If this error occurs systematically, report it to your ISDN service provider.
96	Mandatory information element is missing	The receiving equipment received a message that did not include one of the mandatory information elements. This is usually due to a D-channel error. If this error occurs systematically, report it to your ISDN service provider.
97	Message type nonexistent or not implemented	The receiving equipment received an unrecognized message, either because the message type was invalid or because the message type was valid but not supported. Cause 97 is due to either a problem with the remote configuration or a problem with the local D channel.

Code	Cause	Definition
98	Message incompatible with call state or message type nonexistent	The remote equipment received an invalid message, and no standard cause applies. Cause 98 is usually due to a D-channel error. If this error occurs systematically, report it to your ISDN service provider.
99	Information element nonexistent or not implemented	The remote equipment received a message that includes information elements which were not recognized. This is usually due to a D-channel error. If this error occurs systematically, report it to your ISDN service provider.
100	Invalid information element contents	The remote equipment received a message that includes invalid information in the information element. This is usually due to a D-channel error.
101	Message not compatible with call state	The remote equipment received an unexpected message that does not correspond to the current state of the connection. This is usually due to a D-channel error.
102	Recovery on timer expiry	A timer expiry initiated an error-handling (recovery) procedure. This problem is typically temporary.
111	Protocol error, unspecified	An unspecified D-channel error when no other standard cause applies.
127	Interworking, unspecified	An event occurred, but the network does not provide causes for the action that it takes. The precise problem is unknown.
145	ISDN layer 1 and/or 2 link not established	User needs to check cabling, ISDN adapter status and network connections.
146	ISDN layer 3 connection to the ISDN switch/network inactive	A switch protocol error exists, or (in the United States or Canada) a SPID assignment problem. There is either a switch protocol error,.
255	ISDN command processing error	The ISDN signaling code has encountered an error processing an ISDN action. ISDN adapter busy-wait and retry.

Glossary

ABC

Annex D	The second frame relay standard extension dealing with the communication and signaling between customer premises equipment and frame relay network equipment for the purpose of querying network status information.
ATT 4ESS	AT&T's large toll telephone switch. It will handle 100,000 trunks and over 500,000 attempts at making a call each hour.
ATT 5ESS	AT&T Class 5 digital central office.
ADSL	Asymmetrical Digital Subscriber Line. A communications technology used to transmit digital data over telephone wires. It is expected to transmit up to six megabits per second and be used for video-on-demand services to telephone company customers.
Analog Line	A telephone line that transmits and receives signals in variable, continuous waveforms that are generated by telephones, fax machines, models, etc. The signal transmitted is a true electrical representation of the original source audio, as opposed to a "coded" digital signal which must be "decoded" at the far end.

ARJ	Admission Reject Message. In an H.323 environment, the ARJ is the message from the Gatekeeper to an endpoint rejecting the endpoint's request to connect to another endpoint.
ARQ	Admission Request Message.In an H.323 environment, the ARQ is the message to the Gatekeeper from an endpoint requesting a connection to another endpoint.
Audio Bandwidth	The audio frequencies a device can handle. This refers to the range of sound (treble and bass or voices for speakerphones.)
Automatic Voice Tracking	A feature on Polycom ViewStations that allows the camera to point towards the person speaking.
Bandwidth	The "data-carrying" capacity of a network connection, used as an indication of speed. For example, an Ethernet link is capable of moving 10 million bits of data per second. A Fast Ethernet link can move 100 million bits of data per second – 10 times more bandwidth.
Bits per second (bps)	The amount of information which passes through a transmission line in a second. A bit is one-eighth of a byte.
Bonding Calls	In ISDN BRI transmissions, bonding refers to joining the two 64 Kbps B channels together to get one channel of 128 Kbps
BRI	The ISDN Basic Rate Interface, or BRI, provides two B channels and one 16 Kbps D

	channel (2B+D) for a total of 144 Kbps. (128K for Video)
Bridge	A device that passes packets between multiple network segments using the same communications protocol. If a packet is destined for a user within the sender's own network segment, the bridge keeps the packet local. If the packet is bound for another segment, the passes the packet onto the network backbone. Also, in videoconferencing, a Multipoint Control Unit. See MCU.
CIF	Common Intermediate Format. An intermediate video format. CIF resolution is 352x288 pixels. QCIF (quarter CIF) is 176x144 pixels.
Client	A networked PC or terminal that shares "services" with other PCs. These services are stored on or administered by a server.
Conference Call	Any voice or data call that establishes contact with two or more endpoints, such that each endpoint is able to communicate to the others. Conference calls require some type of service that links all the endpoint together, and transmits all voice/data to each endpoint. This service can be provided by a PBX (typically by using the flash key), or by contacting a conference bridge.
Cookie	A cookie is a text file that is placed on the users hard-drive. This file is unique to a web site and contains information such as user name and email address to ease web navigation.

DEF

Data Conferencing	Enables people in different locations to work on the same document via networked computers. Also referred to as collaborative computing.
DHCP	Dynamic Host Configuration Protocol. DHCP servers permit multiple devices to share a group of IP addresses, assigning one to a specific device as needed.
Digital Line	A telephone line that carries signals in discontinuous streams of on and off pulses. The audio source must be “coded” into on and off pulses, and “decoded” into an analog signal at the far end destination. PBX telephone systems, and ISDN are examples of systems which use digital signaling. PBX and digital Centrex systems use proprietary non-standard signaling, forcing customers to purchase proprietary phones.
Digital or Proprietary Device	Telephone equipment designed specifically for connection to a particular brand and model of PBX.
DSL	Digital Subscriber Line. Uses existing copper telephone lines and connects to the phone company’s Central Office (CO). DSL transforms these phone lines into multi-megabit data pipes for digital video and data.

DB-25	The standard 25-pin connector used for RS-232 serial data communications. In a DB-25 there are 25 pins, with 13 on the top row and 12 on the bottom. DB-25 connectors are available in male and female.
DVD	Digital Video Disc.
Endpoint	A terminal, site, gateway, conferencing system or MCU.
Ethernet	10 Mbps or 100 Mbps LAN technology based on CSMA/CD. The Ethernet standard is called 802.3 and was ratified by the IEE. Ethernet was one of the first LAN technologies and has been very popular for workgroups.
Far End	The party or parties connected to a call.
Fast Ethernet	100 Mbps LAN technology based on CSMA/CD used for both high bandwidth users in workgroups and for backbones.
Firewall	A network node set up as a boundary to prevent traffic from one segment to cross over into another.
fps	Frames per second. A measure of quality of a video signal. NTSC TV standard in North America uses 30 fps. European standards are 25 fps.
FTP	File Transfer Protocol. A part of the chief Internet protocol "stack" or group (TCP/IP)

	used for transferring files from Internet servers to your computer.
Full Duplex	Transmission in two directions simultaneously (bi-directional communication). Full-duplex speakerphones allow for both sides of the call (or multiple sides) to be talking simultaneously without any clipping of words or loss or volume.

GHIJK

Gatekeeper	An H.323 device that provides address translation, control access, and bandwidth management to the LAN.
Gateway	An H.323 entity that provide real-time, two-way communication between dissimilar (h.323 and H.320) endpoints operating across dissimilar networks by reformatting data and protocols.
GUI (Graphical User Interface)	A graphics-based user interface that incorporates icons, pull-down menus and a mouse. The GUI has become the standard way users interact with a computer. The three major GUIs are Windows, Macintosh and Motif. In a client/server environment, the GUI resides in the user's client machine.
H.320	The most common family of ITU-T videoconferencing standards. These standards allow ISDN BRI videoconferencing systems to communicate.
H.323	Serves as the umbrella for a set of standard defining real time multimedia communications for packet based networks otherwise known as IP telephony. H.323 is comprised of the following standards: H.225, H.245, G.711, G.722, G.723.1, G.728, G.729
Intranet	A new network model based on the idea of making information and communications as accessible on internal corporate networks as it is on the public Internet.

ISP	Internet Service Provider.
IMUX	Inverse Multiplexer. Equipment that combines 64Kbps channels and presents them to the user's terminal equipment as if they were a single larger bandwidth channel.
IP	Internet Protocol. An IP address is a number that identifies a computer connected to the Internet. Every computer that is connected to the Internet must have unique IP address. Currently, an IP address consists of four sections separated by periods. Each section contains an 8-bit value represented as a number ranging from 0 to 255. The allocation of these IP addresses follows a two-level architecture that assigns IP numbers to a network and the hosts on that network.
IP Precedence	IP precedence tells downstream networking equipment (mainly routers) to give priority to audio and video data. It marks each audio and video packet with a user defined precedence (the default is 4). Only audio, video and far end camera control packets are marked. Control packets (such as opening and closing of connections, channels, etc.) are not marked with precedence. The user may specify any one of 8 levels (0-7) of precedence with 0 signifying no priority and 7 signifying the highest priority. It is recommended by networking equipment vendors to use 4 for multimedia data. By default, IP precedence is disabled by most routers and is not enabled on the Internet.
ISDN	Integrated Services Digital Network. Fully digital telephony service, available at 128

Kbps (BRI), 1.544 Mbps (PRI), and Broadband ISDN (2 Mbps - 600 Mbps). ISDN usually consists of 2 B channels of 64 Kbps, and one D channel of 16 Kbps on one RBI (basic rate interface). The D channel is used for out-of-band signaling which does not interfere with the flow of information going through the B channels.

LMN

LAN	Local Area Network. A communications network that serves users within a confined geographical area. It is made up of servers, workstations, a network operating system and a communications link.
MCU	Multipoint Conferencing Unit or Multi Control Unit. Hardware at a central site in a videoconferencing network that allows 3 or more videoconferencing systems to participate in an interactive multi-way conference.

Multicast is a one-to-many transmission that implies sending to several designated recipients, whereas broadcast implies sending to everyone connected to the network.

Near End	Your end or local end site of the videoconference.
NT1	Network Termination type 1. The device that converts the ISDN BRI "U" interface from the telecommunications service provider to the "S/T" interface used by ISDN products and systems.

OPQ

PTZ	Pan/Tilt/Zoom. Pan – rotating camera to the left or right. Tile – rotating camera up or down. Zoom – making image larger (telephoto) or smaller (wide angle).
POTS or PSTN	Plain Old Telephone Service or Public Switched Telephone Network. The basic service that supplies a single analog telephone unit with access to the public switched network (via the local telephone service provider). Refers to the worldwide voice telephone network accessible to all those with telephones and access privileges.
Private Branch eXchange (PBX)	A private telephone switching system, usually located on a customer's premises with an attendant console. It is connected to common group of lines from one or more central offices to provide service to a number of individual phones. Most PBXs allow analog extensions on the system, allowing access to special features such as conferencing and transferring to analog devices. A PBX connects to the telephone lines supplied by the CO (Central Office).
QCIF	Quarter CIF. A quarter of the Common Intermediate Format = 176 X 144 pixels
QoS	Quality of Service. This allows guaranteed bandwidth and packet delivery between endpoints over a packet network.

RST

RJXXX	Registered Jack XXX
RJ-9	Four conductor telephony jack, commonly used for telephone handsets. Polycom uses RJ-9 connectors for all of the Extension microphone connections.
RJ-11	A six conductor modular jack that is typically wired with four conductors (four wires). Polycom uses RJ-11 modular jacks for access to the analog telephone network. RJ-11 is used on all standard telephones in the US for connecting to a PSTN.
RJ-45	An eight conductor modular jack commonly used for data communications over standard telephone wire.
Router	An networking device with ports for connection to hubs and switches. It provides central connectivity for multiple workgroups and LANs. It also provides security by examining each packet and comparing its addressing to a central access list. Often used for connectivity to the LAN because of its security features.
Server	A computer or even a software program that provides services to clients – such as file storage (file server), programs (application server), printer sharing (print server), fax (fax server) or modem sharing (modem server). See also client.

Streaming	The term streaming is a common internet technology pioneered by Netscape and Real Networks, rather than waiting for an entire file to download to your computer, portions of the file in buffered into memory then begins playing. Streamed content can be pre-recorded or live.

UVW

UI or User Interface	See GUI.
WAN	Wide Area Network. Business with multiple LANs geographically dispersed locations will use the public carrier network to carry data between these locations. Typical WAN services provided by the pubic carrier are Frame Relay, X.25, and ISDN for carrying data.
Whiteboard	Software that allows you to share images and to annotate on those images.

XYZ

Zulu Time	Also known as Greenwich mean Time. Now called Coordinated Universal Time (UTC.)