

# V-There™ 2000, 2100, and 2200 Video Conferencing System



Installation & Operation Manual

**ClearOne®**  
You're Virtually There<sup>SM</sup>



© 2002 ClearOne Communications, Inc. All rights reserved. No part of this document may be reproduced in any form or by any means without written permission from ClearOne Communications, Inc. Printed in the United States of America. ClearOne Communications, Inc. reserves specific privileges. Information in this document is subject to change without notice.

V-There Installation and Operation Manual  
ClearOne Part No. 800-170-101  
June 2002 (Rev. 2.0)



---

# V-There Installation and Operation Manual

## Table of Contents

<b>CHAPTER 1. Introduction</b> .....	<b>1</b>
Features .....	1
Professional Services Group .....	2
Technical Services .....	2
Sales and Customer Service .....	2
ClearOne Communications EuMEA .....	2
Product registration .....	2
Product returns .....	2
Using this manual .....	3
Scope of the manual .....	3
Terminology .....	3
<b>CHAPTER 2. Getting Started</b> .....	<b>5</b>
Unpacking .....	5
North American users .....	6
Positioning the V-There .....	6
Before you install .....	6
Hardware setup .....	7
Connector description .....	7
Power supply .....	9
Composite monitor .....	9
AccuMic II microphone setup .....	9
<b>CHAPTER 3. Controlling V-There</b> .....	<b>13</b>
Using the remote control .....	13
Navigating with the remote control .....	13
Using the keyboard .....	15



---

## CHAPTER 4. Camera .....17

About the camera .....	17
Detaching the camera .....	17
Camera control .....	18
To manually control the main camera .....	18
To manually control the far-end camera .....	19
To use an auxiliary camera .....	19
Camera presets .....	19
To create a camera preset .....	19
To name a camera preset .....	20
To select a preset .....	20

## CHAPTER 5. Configuration .....21

Configuring V-There .....	21
LAN setup .....	22
Optimal settings for LAN calls .....	22
Video quality on the first call .....	22
Required information .....	23
To configure LAN (DHCP) .....	23
To configure LAN (non-DHCP) .....	24
Gatekeeper (H.323) setup .....	25
To set up the gatekeeper .....	25
ISDN setup .....	26
Required information .....	26
ISDN settings .....	27
Phone directory .....	28
To configure the phone directory .....	28
To place a call .....	29
To add a phone number to the directory .....	29
To edit a directory entry .....	29
To delete a directory entry .....	29
Presentation settings .....	30
To add a presentation .....	30
To edit a presentation .....	30
To delete a presentation .....	31



---

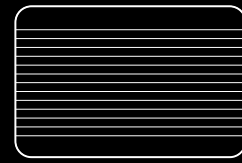
Audio settings . . . . .	.31
To adjust audio preferences . . . . .	.31
To set compression . . . . .	.32
To adjust gain . . . . .	.33
Video settings . . . . .	.33
Adjust video preferences . . . . .	.34
PIP . . . . .	.37
Various advanced settings . . . . .	.37
Setting advanced preferences . . . . .	.38
Troubleshooting . . . . .	.39
Download . . . . .	.40
<b>CHAPTER 6. Making Calls . . . . .</b>	<b>.43</b>
Express Mode . . . . .	.43
Placing a call . . . . .	.43
DTMF tones . . . . .	.45
<b>CHAPTER 7. Sending Data and Images . . . . .</b>	<b>.47</b>
Preparing a file . . . . .	.47
PCMCIA cards . . . . .	.47
To install a PCMCIA card . . . . .	.47
Sending and receiving images . . . . .	.48
Annex D images . . . . .	.48
Presentations . . . . .	.49
V-There Application Conversion Wizard . . . . .	.49
Sending presentations . . . . .	.51
About the web browser . . . . .	.52
<b>APPENDICES . . . . .</b>	<b>.53</b>
Appendix A: Specifications . . . . .	.53
Appendix B: ISDN error codes . . . . .	.54
Normal causes . . . . .	.54
Resource unavailable causes . . . . .	.56
Service or option unavailable causes . . . . .	.57
Service or option not implemented causes . . . . .	.58



---

Invalid message causes . . . . .	.58
Protocol error causes . . . . .	.59
Other causes . . . . .	.59
Appendix C: Re-programming V-There via serial line . . . . .	.59
Appendix D: Compliance statements and warranty . . . . .	.60
North American users . . . . .	.60
FCC Part 68 requirements . . . . .	.61
Canadian users . . . . .	.61
European users . . . . .	.62
Australian and New Zealand users . . . . .	.63
End user warranty . . . . .	.63
Appendix E: Upgrading to V-There 2.0 . . . . .	.65
Glossary . . . . .	.67
Index . . . . .	.73

# CHAPTER 1: Introduction



The V-There™ video conferencing system developed by ClearOne comprises a set-top unit with a user-friendly software interface. Each screen in the V-There software can be easily navigated using the specially designed handheld remote control or keyboard.

V-There's main function is the making and receiving of video conference calls. V-There supports the H.320 (2100 and 2200 models only) and H.323 standards, enabling you to make the following call types: Integrated Services Digital Network (ISDN), 56K Restricted ISDN (ISDN-R, line rates in 56K multiples), local area network (LAN), local area network-wide area network (LAN-WAN), and voice.

During H.320 ISDN and H.323 LAN calls, you can use V-There's integrated web browser to access Internet access and to exchange images or a sequence of images with the person on your video call. This enables you to share web pages and documents and make presentations while in a call.

The included AccuMic™ II delivers clean, high-quality conferencing audio with Gentner® Distributed Echo Cancellation®, noise cancellation, and wide-bandwidth digital audio technology.

## Features

- High-quality audio—data transfer rates to 768kbps for H.323 and 384kbps (2200 model) or 128kbps (2100 model) for H.320 calls (V-There 2000 does not support H.320).
- AccuMic II delivers award-winning audio. A second mic can be added for larger venues.
- Graphics display support—VGA-SVGA display of video and graphics.
- XGA input for sharing PC graphics during presentations.
- Integrated web browser for viewing HTML documents.
- Easy-to-use user interface includes phone book with memory locations for frequently-called numbers.
- Picture-in-picture provides viewing flexibility.
- Convenient control via infrared handheld remote and keyboard
- Wireless 802.11b support via optional PCMCIA card



## Professional Services Group

For additional help on how to install, set up, or operate the V-There, please contact ClearOne Technical Services Group at the number below. We welcome your comments so we can continue to improve our products and serve your needs.

If you need to return your V-There unit to ClearOne for service, please call the Technical Services Group to obtain a return authorization number.

ClearOne Communications ~ 1825 Research Way ~ Salt Lake City, Utah 84117

## Technical Services

Telephone: 1.800.283.5936 (USA) or 1.801.974.3760  
Fax: 1.801.977.0087  
E-mail: [tech.support@clearone.com](mailto:tech.support@clearone.com)  
Web site: [www.clearone.com](http://www.clearone.com)

## Sales and Customer Service

Telephone: 1.800.945.7730 (USA) or 1.801.975.7200  
Fax: 1.800.933.5107 (USA) or 1.801.977.0087  
E-mail: [sales@clearone.com](mailto:sales@clearone.com)

## ClearOne Communications EuMEA GmbH

Leonhardstr. 16-18, D-90443 Nuremberg, Germany  
Telephone: +49 911 955159-0  
Fax: +49 911 955159-10  
E-mail: [global@clearone.com](mailto:global@clearone.com)

## Product registration

Please register your V-There online by visiting ClearOne Technical Support at **[www.clearone.com](http://www.clearone.com)**. When your product is registered, ClearOne Communications is better able to serve you should you require technical assistance. Registration information is also used to notify you of upgrades and new product information.

## Product returns

All product returns require a return authorization (RA) number. Please contact the ClearOne Technical Services Group before attempting to return your V-There unit.





## Using This Manual

To find information on a particular topic, consult either the table of contents or the index. To obtain the definition of a term used in this manual, consult the glossary at the back of this manual. To begin using V-There immediately, consult the Quick Start Guide supplied with your V-There.

## Scope of the manual

This manual deals with the operation of the V-There unit and its associated software.

## Terminology

This section lists some of the terminology used in this manual and defines how these terms are used within the context of the V-There.

### Icon

The word icon always refers to an element on the V-There interface that you can highlight and select.

### Highlighting

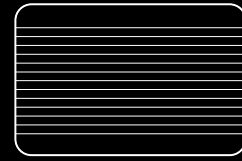
Highlighting an icon or option on a drop-down list involves using the arrow buttons to move the white box on the screen to the field, check box, or drop-down list that you want to edit. Once you have highlighted the item you want, you usually have to select it as well. For example: To add a new entry to the Phone Book, highlight and select the Add icon.

### Selecting

Pressing the Enter remote control button confirms the option or icon you have highlighted and executes the required action. For example: Highlight and select the Place a Call button in the interface. The Place a Call screen is displayed.



# CHAPTER 2: Getting Started



## Unpacking

When you unpack the V-There box contents, you should have the items below. If any item is missing, please contact your supplier.



**V-There main unit**



**Power supply unit**



**Power cord (Part 699-150-006 for US)**



**Camera extension cable (830-170-132)**



**AccuMic II microphone**



**ISDN cables (1 for 2100 model, 3 for 2200, 0 for 2000; 830-170-011, 830-170-012, 830-170-013)**



**Black Ethernet (LAN) cable (830-170-001)**



**S-video camera extension cable (830-170-136)**



**Remote control and batteries**



**Yellow/black dual phono cable (830-170-124)**



**SCART adapter block (European customers only)**



**Gray serial cable (830-170-123)**



**Keyboard remote and batteries**



**S-video 6-ft (1.8 meter) cable (830-170-020)**



**Audio/Video Products CD (includes an electronic version of the V-There Installation and Operation Manual)**



**AccuMic II XFMR mini-DIN 10-pin (2) cable (830-156-002)**



**VGA extension cable (830-170-133)**

**End user software license agreement and Installation and Operation Manual (not shown)**

**Figure 2.1 Items included with V-There**



ClearOne is not responsible for product damage incurred during shipment.

You must make claims directly with the carrier.

Before using the V-There, please read the enclosed end user license agreement—it contains important information concerning your use of the V-There software. If you have the 2100 or 2200 model, please read the section on ISDN.

## North American users

This equipment uses an S/T interface and is designed to connect to an external NT-1 terminal adapter (or optionally an NT-3, if you are using all three ISDN lines with a V-There 2200). If your ISDN switch supplies a U interface, an external NT-1 terminal adapter must be used. Please contact your ClearOne distributor for information about acquiring an external NT-1 or NT-3.

## Positioning the V-There

Place the V-There main unit on a flat hard surface that allows adequate airflow through the ventilation holes. Do not place the main unit in direct sunlight or near sources of direct heat.



The difference between the V-There 2100 and 2200 is that the 2200 features a higher H.320 data rate (64-384kbps vs. 64-128kbps). The 2000 model supports only H.323, not H.320.

We recommend that you place the V-There on top of the video monitor. This gives a more natural appearance to a video conference, since you will remain in the line of sight of the camera. You will also be able to view the video image of the person you are calling, without adjusting your position.

You can position the camera up to five meters (16.5 feet) away from the V-There unit. Refer to page 17 for information about installing the camera remotely.

## Before You Install

Before you can begin using your V-There, you must connect the V-There to the following:

- Power supply
- Monitor
- Microphone
- Audio speakers
- LAN and/or ISDN (w/ISDN interface)
- Camera w/infrared receiver (if the camera is being installed remotely)



V-There uses an S/T ISDN interface, requiring an NT-1 or NT-3 adapter if your network uses a U interface. You can purchase an NT-1 or NT-3 through your ClearOne dealer.



You can also connect other devices to the V-There. For more information, see the connection information on the following pages.

## Hardware Setup

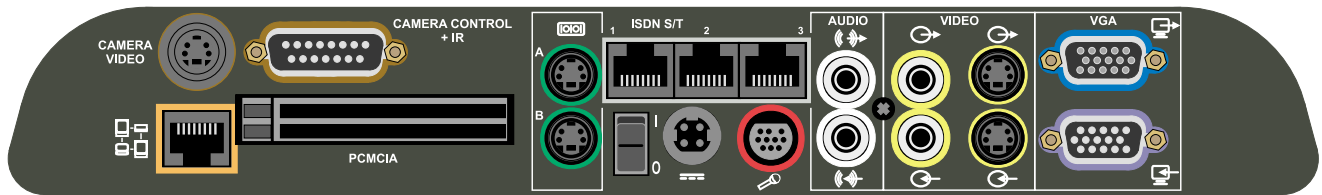



Figure 2.2 Rear panel (2200 model shown)




All connections are made at the back of the V-There. The diagram above shows the rear panel connections for the V-There 2200 model. For the 2100 model, the only difference is that there is only one ISDN connector. The 2000 model has no ISDN connector.

Before you begin to connect your V-There, ensure that the on/off switch is in the Off state (down) and that the power supply has been connected to V-There.

The table below describes the purpose of each of the connectors on the rear panel.

 The cable connectors are color-coded to facilitate straightforward connection.

### Connector Description

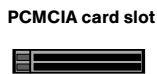
<b>Camera Video</b>	This connector provides video input from the V-There camera.
	
<b>Camera Control IR</b>	This connector provides power and PTZ capabilities for the main camera and connection to the IR receiver.
	
 <b>Ethernet</b>	If you want to use your V-There to make or receive calls over your local area network (LAN), connect the gray Ethernet cable to this connector.



## Connector Description



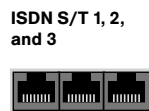
If you want to connect external devices to the V-There—for example, a PC to upload a software update—use the gray serial cable to connect the device to the serial port.



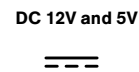
If you want to use flash cards to upload information to your V-There, remove the cover over the slot and insert the flash card.



This is the main on/off switch for your V-There.



Connect the ISDN cables labeled 1, 2, and 3 to the appropriate connector. (The 2100 model has one ISDN cable and connector; the 2000 model does not support ISDN.)



Connect one end of the power supply unit to the DC 12V & 5V connector.



Connect the AccuMic II microphone to the Mic connector.



Connect the powered audio speakers to this connector using the 3.5 mm phono cable. If the monitor has internal speakers, connect directly to the monitor using the black connector on the yellow/black dual phono cable.



If you want to use a line audio device such as a tape player, connect the device to this connector.



If you are using a composite monitor, connect the yellow part of the yellow/black dual phono cable to this connector. Then connect the other end of the cable to the composite monitor.



If you want to use an auxiliary camera, connect the camera to this connector.



If you are using an S-video monitor, attach the S-video cable to this connector. Connect the other end to the monitor.



If you want to use an S-video-capable auxiliary camera, connect the camera to this connector.



If you are using a VGA monitor, connect your monitor cable to this connector.



VGA Monitor

Connect a computer to this XGA input to use presentations saved on the computer.



Computer In

## Power supply

The V-There must be operated only with the power supply unit provided and must be connected to a grounded power socket.

## Composite monitor

V-There can be connected to a composite monitor. Depending on the V-There model, you will need to connect it to either a National Television Standards Committee (NTSC) monitor or a Phase Alternating Line (PAL) monitor.

If you are not sure how to connect external devices, see the instructions supplied with your television or monitor.

European users can use the SCART block if the television comes with a SCART connector. Using the supplied yellow/black dual phono cable, connect one end of the cable with a yellow connector to the Video Out (yellow) connector on the V-There and the black connector to the Audio Out (white) connector on the V-There. Connect the other end of the cable with a yellow connector to the yellow video connector on the SCART block and the black cable connector to the Audio (L/Mono) connector of the SCART block. Connect the SCART block to the SCART connector on the television.

## AccuMic II microphone setup

The AccuMic II mic pad features three microphone elements positioned to pick up sound in a 360-degree pattern. Each mic element features noise cancellation, automatic gating control, PA adaptive mode, adaptive ambient mode, and ClearOne's proprietary Gentner® Distributed Echo Cancellation® to make communication among several people a natural, seamless experience. All of these functions operate automatically and require no user adjustments.

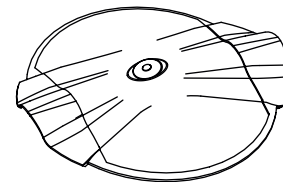
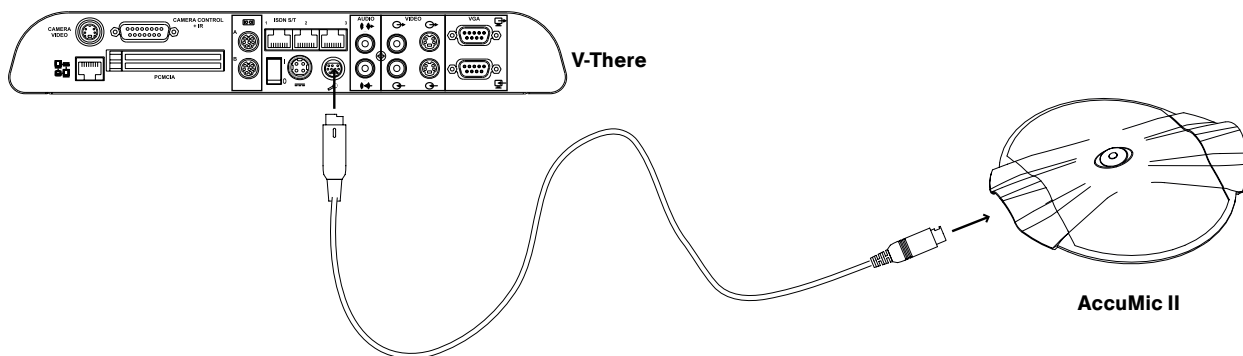


Figure 2.3 AccuMic II

**!** If a replacement power supply is needed, it must be obtained from an authorized supplier of V-There systems. Use of an unauthorized power supply can be dangerous and invalidates all warranties.

## To install the AccuMic II

1. Plug the red connector on the supplied AccuMic II cable into the Mic connector on the rear of the V-There unit (see Figure 2.4).
2. Attach the other end of the cable to the 10-pin connector on the AccuMic II. Note that the AccuMic II receives its power from the V-There system; no external power supply is needed.
3. Place the mic pad on a table or desk in the middle of your conference area, away from walls and corners, for best acoustical performance.



**Figure 2.4** Microphone installation

The Mute button on the top of the microphone pad mutes all three mic elements. Press the button once to mute the mic pad system; press it again to unmute and resume the conference.

Optionally, you can connect a second AccuMic II pad to increase the capacity of the video conferencing system (see page 11).





### To install a second AccuMic II

The optional AccuMic II kit includes the mic pad and cable required to connect a second AccuMic II to the system.

1. Connect the included cable to the 8-pin connector on the rear of the second AccuMic II (see Figure 2.5).
2. Connect the other end of the cable to the 8-pin connector on the first V-There mic pad.
3. Place the mic pads as far apart as possible on a table that is located in the center of the conference area, away from walls and corners, for best acoustical performance.

When two mic pads are used, they share mic gating information for optimum audio clarity. Pressing the Mute button on either mic pad will mute both mic pads.



The second AccuMic II receives power through the first one, eliminating the need to connect a separate power supply.

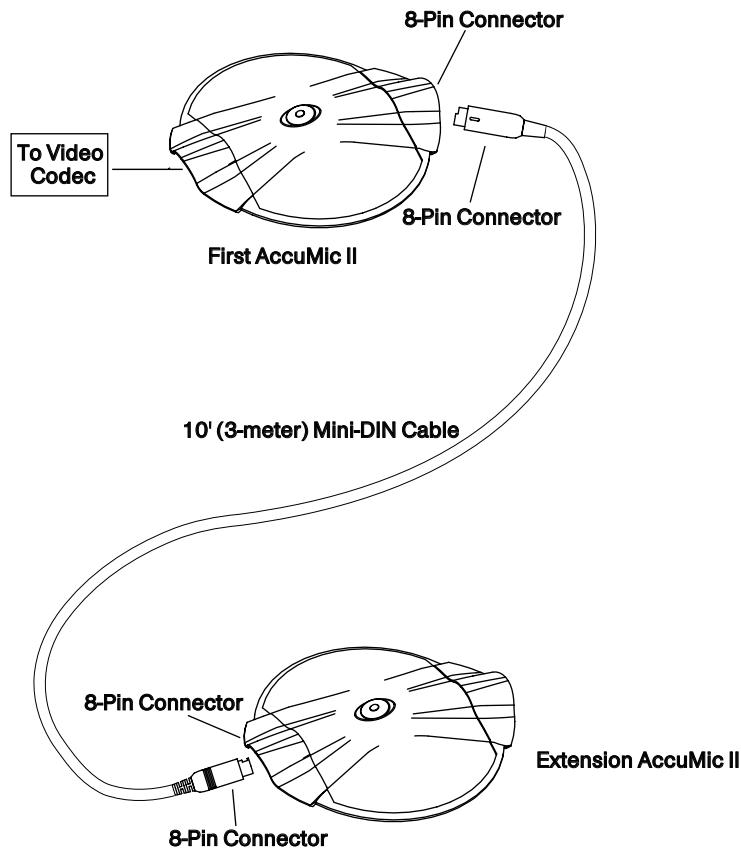
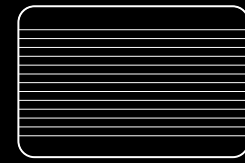


Figure 2.5 Connecting a second mic pad





The V-There interface is designed to be operated with the remote control and keyboard.

To begin using your remote control and keyboard, open the panel at the back of each and insert the two AA batteries supplied for each. Take care to insert the batteries in the correct direction, as illustrated by the line drawings in the battery compartment.

When replacing batteries, ensure that the new batteries are AA non-rechargeable and always replace the entire set. If you mix used and fresh batteries, you might damage your remote control or keyboard.

## Using the Remote Control

### Navigating with the remote control

The handheld remote (see Figure 3.1, page 14) control is factory programmed to work with the V-There system. No user programming is necessary.

Navigating the onscreen interface with the remote control is easy; press the arrow buttons and the Enter button.

You can also use the keyboard to navigate the V-There screens. For more information on navigating with the keyboard, see the Using the Keyboard section on page 15.

When you navigate the screen, a white box indicates your position on the screen. When you have highlighted a field, icon, or drop-down list, press the Enter button to select your choice.



You must highlight the screen item and press the Enter button before the V-There will execute an action.

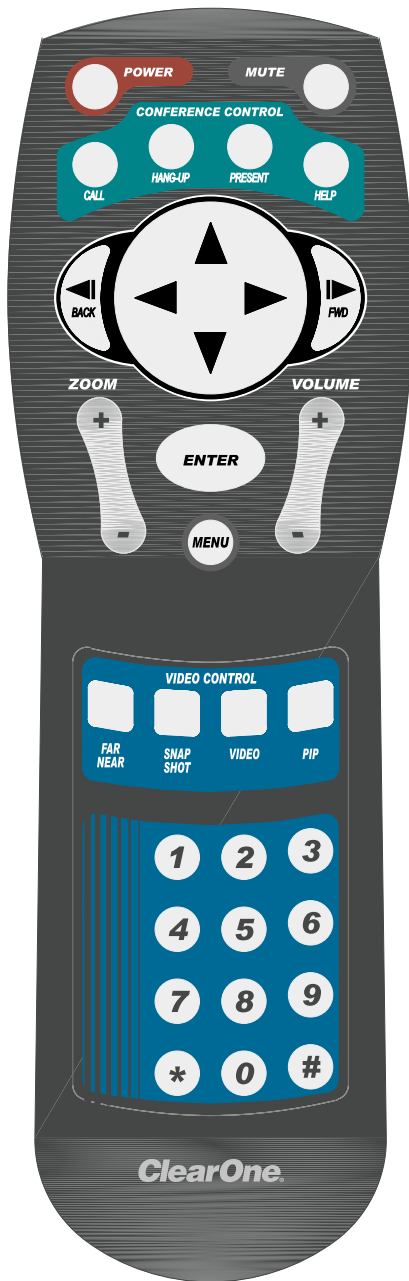


Figure 3.1 Remote control

## Navigation buttons

- Power** Puts V-There into sleep mode if you have selected the Power Save Mode check box in the Adjust Various Advanced Settings/ Preferences section of Expert Mode. When this feature is activated, the screen goes blank. The V-There is woken up by an incoming call or by pressing any key.
- Mute** Allows a private conversation by muting audio such that the participants at the far end cannot hear you.
- Call** Opens the Place a Call screen.
- Hang-Up** If you press Hang-Up during a call, it terminates the call.
- Present** Opens the Make a Presentation screen.
- Help** Opens the Help window.
- Back** Used as a backspace key in text fields.
- Arrows** Used for navigating the interface or moving the PTZ (pan, tilt, zoom) camera.
- Fwd** Moves the cursor forward in a text field. Also moves the browser forward to a previously-selected web page.
- Zoom +/-** Zooms the camera in and out. Pressing Zoom + makes image larger, while pressing Zoom – makes it smaller.
- Enter** Confirms choice of a selection.
- Volume +/-** Increases or decreases the volume.
- Menu** Used for toggling between the onscreen menu and video display.
- Far/Local** Used for toggling camera control between the remote and local camera views.
- Snapshot** Used for capturing a snapshot and sending a snapshot to the far end.
- Video** Allows you to switch between the main camera and other video devices connected to the system, such as a document camera.
- PIP** Allows you to switch to PIP (picture-in-picture) mode during a call. Pressing this button repeatedly moves the PIP into each of the four corners of the video image and then switches it off.
- Numbers** Used for entering numbers in the user interface.
- Star** Displays the camera presets. Navigate to the preset you want to use and click Enter. During a call, this key displays the Camera Presets list. Navigate to the preset you want to use and press Enter.



## Using the Keyboard

The V-There keyboard is a full QWERTY keyboard. Below is a description of the keyboard's buttons.



Figure 3.2 Keyboard

- A. **Power** Puts V-There into sleep mode if you have selected the Power Save Mode check box in the Adjust Various Advanced Settings/Preferences section of Expert Mode. The screen goes blank. The V-There is woken up by an incoming call or by pressing the Power key.



Figure 3.3 (A) Power, Mode, and Camera Control keys

**Mode** Selects between Express and Expert Modes. Express Mode is used for placing calls and making presentations. Expert Mode is used for configuring the system, in addition to making calls and accessing presentations.

**Far/Near** Switches the camera control between the local and far-end cameras.

**Preset** Opens the Preset window, where you select the camera preset you want to use.

- B. **Call** Opens a dialog box to select a destination to dial.

**Hang-Up** Disconnects a call.

**Present** Opens a dialog box that allows you to select a web page or presentation.

**Help** Accesses the online help for assistance.

**Menu** Toggles the view between the onscreen menu and camera video.

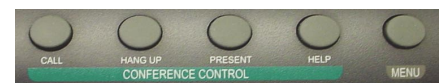


Figure 3.4 (B) Conference Control and Menu keys



Figure 3.5 (C) Video Control keys



Figure 3.6 (D) Left Select key (left side of keyboard)



Figure 3.7 (E) Navigation, Zoom, and Audio control keys

- C. **Snapshot** Displays an image sent by the far end if Auto Display Snapshot is not enabled. If a snapshot is currently displayed, pressing the Snapshot key will clear the image and return the display of conference video. The Snapshot key is also used to send images and presentations.

**Video** Toggles the view between the main camera and other video devices connected to the system.

**PIP** Places a picture-in-picture (secondary) image on the screen.

**Web** Launches the V-There web browser.

- D. **Left Select** Used with the navigation buttons to navigate and select items in the web browser. Operates like the left button on a PC mouse.

- E. **Select** Used with the navigation buttons to navigate and select items in the web browser. Operates like the left button on a PC mouse.

**Navigation** This round, gray button is used for navigating the web browser.

**Back** Is used as a backspace key in text fields.

**Zoom** Zooms the camera video in and out.

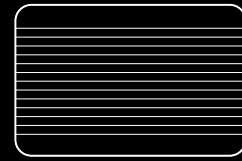
**Volume** Increases and decreases the audio level.

**Mute** Mutes outgoing audio at the local site.

## Function keys

The function (F) keys perform the following functions:

- |            |   |
|------------|---|
| <b>F1</b>  | Displays the help file  |
| <b>F2</b>  | Sleep mode  |
| <b>F3</b>  | Activates/deactivates audio mute  |
| <b>F4</b>  | Toggles between menu and video view on the monitor  |
| <b>F5</b>  | Displays the Phone Directory (Express Mode). Also dials an ISDN number in the Place a Call mode |
| <b>F6</b>  | Disconnects an ISDN or H.323 call   |
| <b>F7</b>  | Displays the Presentations screen (Express Mode)  |
| <b>F8</b>  | Captures and sends a snapshot to the far end  |
| <b>F9</b>  | Displays the Video Source list  |
| <b>F10</b> | Allows PIP on the monitor   |
| <b>F11</b> | Zooms the camera in   |
| <b>F12</b> | Zooms the camera out  |



## About the Camera

Your V-There comes complete with a high-quality detachable Canon camera.

The detachable camera is designed for use at up to five meters (16.5 feet) from the V-There. The main advantage of a non-integrated camera is that it allows you to position the V-There unit and the camera in separate locations if, for example, space is limited.

## Detaching the camera

1. Remove the cable cover by lifting up on the rear portion of the cover, as shown in Figure 4.1.




Figure 4.1 Lift off cable cover

2. If they are connected, disconnect the two camera cables from the Camera Video and Camera Control +IR rear panel connectors.
3. Remove the screw at the back of the camera housing, as shown in Fig 4.2.



Figure 4.2 Remove mounting screw at back of camera housing

 The type of camera supplied is either NTSC or PAL compatible, depending on the video standards used in your area.

4. Connect one end of the extension cable to the camera cable. Connect the other end to the rear panel, as shown in Figure 4.3.

**Figure 4.3 Plug camera extension cable into V-There**



5. Place the camera on top of the monitor, a desk, or a shelf such that the front part of the camera housing just overhangs the support surface. Route the camera extension cable as desired.

## Camera Control

The camera included with your V-There is a PTZ camera, which means you can pan, tilt, and zoom the camera.

### To manually control the main camera

1. If the onscreen interface is displayed, press Menu to hide the menu and display video full screen.
2. Using the arrow keys, position the camera in the desired location. If you are in a call, refer to the picture-in-picture as you position the camera.
3. Use the Zoom + and Zoom - keys to adjust the video magnification.



## To manually control the far-end camera

1. Press Far/Local to display the Remote Camera icon.
2. Use the arrow and zoom keys to position the far-end camera.
3. Press the Far/Local key again to return to controlling the local camera.

Please note that you will not be able to control the far-end camera until about 20 seconds after the call has connected.



This feature is available only if it is also supported by the video conferencing system of the location you are calling.

## To use an auxiliary camera

If you use a secondary camera (such as for documents) in addition to the main camera, it is known as an auxiliary camera.

The type of auxiliary camera you can use depends on the main camera delivered with the V-There. If the main camera is NTSC the auxiliary camera must be NTSC, too. The same applies for PAL cameras.

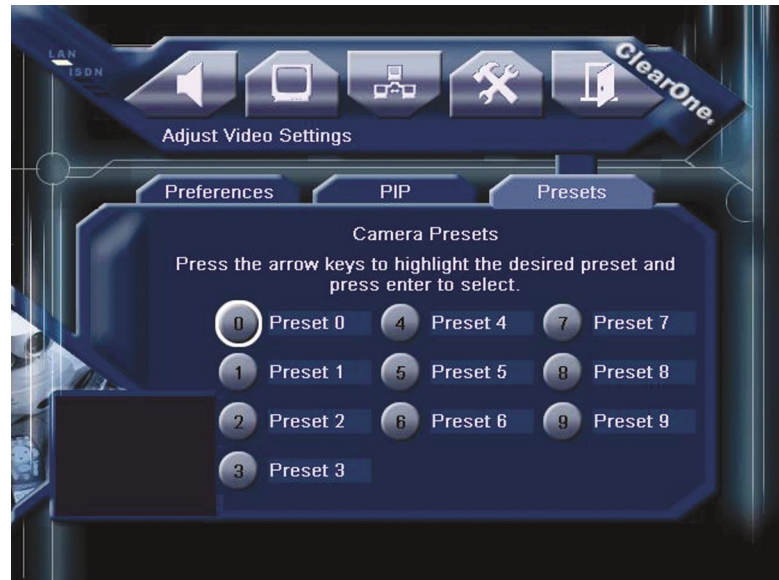
1. Press Video to display the Video Source list.
2. Navigate to the auxiliary camera source and press Enter to select the source.

## Camera Presets

You can set up a number of preset positions for your camera. Each preset position corresponds to a number between 0 and 9. When you select a preset, the camera will immediately turn to point in the corresponding direction. V-There can store 10 presets (numbered 0-9) for the main camera.

## To create a camera preset

1. Click the Presets tab in the Adjust Video Settings screen to display the Camera Presets screen. To locate the Presets tab, click the Expert/Novice Mode button on the keyboard until the Expert Mode menu is displayed (the Expert System Setup button will be highlighted). Click the Expert System Setup button, then the Adjust Video Settings button. Select the Presets tab.

**Figure 4.4 Camera screen**

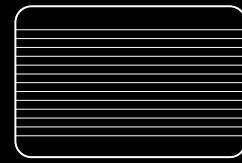
2. Navigate to the number of the preset you want to set and press Enter.
3. Point the camera in the desired direction using the arrow buttons on the remote control. Refer to the small (picture-in-picture, or PIP) video window as you position the camera.
4. Use the Zoom + and Zoom - buttons to zoom the camera in and out, until you are satisfied with the video image.
5. Press Enter to set the preset. A message will be displayed, confirming that the preset has been stored.

## To name a camera preset

1. Access the Preset screen as described previously. Select the Preset name and press Enter.
2. Type in the name of the preset.
3. Press Enter to save the name of the preset.

## To select a preset

1. Press either the \* button on the remote control or the Preset key on the keyboard. This opens the Camera Preset dialog box.
2. Using the up and down keys, navigate to the preset you want to use and press Enter. The camera moves to the selected preset.



## Configuring V-There

After you have finished making connections to the rear panel of the V-There, turn it on using the switch on the back of the unit. The first time you power on the unit (or after you reset the unit to factory defaults), it will initiate an onscreen configuration wizard that walks you through the system setup.

You do not need to complete every step to begin using your V-There. For example, if you choose to use your ISDN connection in the configuration wizard, and will not be connecting the unit to a LAN, you do not need to complete the configuration screens for network (LAN) setup.

After you complete the configuration wizard, you can make subsequent adjustments in the Expert Mode of the user interface. To enter the Expert Mode, press the Expert/Novice Mode button on the keyboard to display Expert System Setup.

There are several occasions when you will use the Expert Mode:

- When you turn on your V-There for the first time
- After a software upgrade
- After resetting the V-There to factory defaults
- To add or edit phone directory entries or presentations



The first time you turn on your V-There, it will initiate an onscreen configuration wizard that walks you through the initial system setup for the network, gatekeeper, and ISDN.



Refer to the sections on the following pages after the initial setup if you want to change settings, or if you want information about additional settings not covered in the configuration wizard.



## LAN Setup



**LAN setup is not required if you will use ISDN exclusively.**

LAN setup is required if you want to make H.323 calls, use the browser, or remotely access the unit for administration and troubleshooting.

### Optimal settings for LAN calls

The V-There requires appropriate settings on the network switches and hubs used for H.323 LAN calls. For a 384kbps LAN call, V-There will require more than 800kbps of LAN bandwidth (400kbps in each direction) due to overhead on packets. Equally important is that packets must be delivered with minimum jitter and delay. The network administrator can take several steps to optimize the performance of LAN calls:

- Proprietary bandwidth control techniques on hubs and switches should be turned off—they can reduce traffic on high usage ports.
- Use switches rather than hubs, if possible—switches increase throughput.
- Ports used for V-There should be configured as 10Mbit full duplex. Auto-sense of duplex should be disabled.
- Any proprietary packet forwarding algorithms designed to improve file transfer and conventional IP usage should be turned off—LAN video calls need simple, real-time packet delivery.
- Good quality Cat. 5 cable should be used. Poor quality cabling will not cause problems with normal operations as packets are re-sent, but on a LAN call, lost packets will show up as blocky video or audible noise.
- The network segments being used by V-There should not be heavily loaded with other network traffic.

### Video quality on the first call

During the first LAN call after initial setup, the V-There will attempt to detect the half/full-duplex setting of the connected switch or hub. It looks for errors on the Ethernet line. As errors can occur with the correct duplex setting, the V-There measures them over a period of time, switches its duplex mode, and re-measures the error rate. It then selects the best duplex setting. For this reason, the first LAN call on a new installation should be left up for three minutes if the video quality looks poor. The V-There is factory set to use half-duplex.

The unit monitors packet loss during the first call after each power-up. If packet loss is excessive, the V-There will switch duplex settings and re-check the packet loss. If the new duplex setting reduces packet loss, the new setting is retained. Under normal circumstances, the second power up on the same hub results in minimal packet loss.

## Required information

Before you begin the LAN setup, it is recommended that you connect your V-There unit to your LAN using the Ethernet (marked LAN) cable.

## Network settings

To use V-There over a LAN, you need to know if the LAN uses Dynamic Host Configuration Protocol (DHCP).

If the LAN does not use DHCP, you need the following information prior to LAN setup:

- The IP address to be assigned to the V-There
- The subnet mask
- The IP address of the default gateway
- The IP address of the Domain Name System (DNS) server, if you want to use a DNS server for name lookup
- The IP address of the Windows Internet Naming Service (WINS) server, if you want to use a WINS server for name lookup.

## To configure LAN (DHCP)

1. If you are not in the Expert Mode, press the Mode key on the keyboard to display the Expert Mode menu.
2. Click the Expert System Setup button (first menu button). This displays the configuration toolbar.
3. Click the Adjust Communications Settings button. This opens the Communications Settings window, with the Network screen displayed.

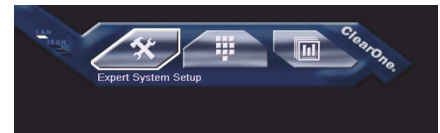




Figure 5.1 Expert Mode menu


The Network section is where you establish the network settings your unit will use.



Figure 5.2 Network screen #1

 V-There supports Lucent Technologies and Symbol Technologies wireless LAN cards.

 IP addresses must be unique on your local network. Duplicate addresses result in unpredictable and unforeseen network problems.

 To be able to place a LAN call or browse the Internet, you must enter the IP address of either the DNS server or the WINS server on this screen.

4. The LAN Adapter drop-down list allows you to select between normal and wireless LAN. If you have installed a wireless LAN card in the PCMCIA slot, the adapter type will automatically appear in the list.
5. Select the DHCP check box if your network supports DHCP.

If your network supports DHCP, you do not need to enter any other settings. DHCP automatically generates an IP address for the unit and your LAN setup is complete.

## To configure LAN (non-DHCP)

1. Enter the IP address of the unit in the IP Address field.
2. Enter the IP address of the gateway in the Default Gateway field.  
If you do not need external access from your local subnet, this field can remain as 0.0.0.0.
3. Enter the subnet mask to be used in the Subnet field. If you are using a static IP, you must use a default gateway.
4. If you use a DNS server for name lookup, select the DNS check box. The DNS Server field is enabled.
5. Enter the address of the DNS server in the DNS Address field.
6. If you use a WINS server for name lookup, select the WINS check box rather than the DNS check box. The WINS Server field is enabled.
7. Enter the address of the WINS server in the WINS Server field.
8. Enter the LAN name in the field provided. Press Enter to confirm changes.
9. Click the More button to open the second Network screen.
10. Enter the network user logon name in the Logon User ID field.



Figure 5.3 Network screen #2

11. Enter the password that you use for logging on to the network in the Logon Password field. When you enter a password in this field, a \* is used to represent each character of the password so that the password is not visible to other people.
12. Enter the network domain your password gives access to in the Domain Name field. If you do not know the domain, ask your system administrator.
13. If you are using a proxy server, select the Use a Proxy Server check box and enter the appropriate address and port information in the fields provided.

## Gatekeeper (H.323) Setup

The function of the gatekeeper is to verify the destination address of a call prior to allowing the call to proceed. It also controls bandwidth usage so the network isn't overloaded and it provides convenient address translation of the far-end conferencing system in a call.

Select the Gatekeeper tab in the Adjust Communications Settings section and press the Enter button. The Gatekeeper window opens.



 You do not need to complete the Gatekeeper settings screen unless your network uses H.323 gateways and gatekeepers.



Figure 5.4 Gatekeeper screen

### To set up the Gatekeeper

1. Select the gatekeeper mode from the Mode drop-down list. Select from None (no gatekeeper will be used), AutoDetect (the unit automatically detects and selects the gatekeeper), or Explicit (you enter the IP address of the gatekeeper).
2. If you selected the Gatekeeper Mode of Explicit, enter the IP address of the gatekeeper in the Address field.

 If using a gatekeeper, both the E164 and Alias (H.323) IDs must be entered.

3. Enter the alias (H.323) name in the Alias Name field if your gatekeeper software contains an H.323 name.
4. Enter the E164 name in the E164 Name field if your gatekeeper software contains an E164 name. This is essential to receive calls from an H.320 system via gateway.
5. Select the rate you want to use.
6. Enter the delimiter in the Delimiter field that the gatekeeper is to use when placing nx64k calls. Your system administrator sets a symbol or digit as the delimiter.
7. Enter the prefixes that your gateway uses to place specific types of LAN/WAN calls in the 128K field, 384K field, etc. for the rate you are using. If these prefixes are not configured, the LAN-WAN call type is not available when making a call.

If you do not use a gateway, these fields can remain blank.

## ISDN Setup



The V-There 2000 does not support ISDN operation.



The V-There connects to an ISDN network via an S/T interface. An optional (required for U interfaces) NT-1 or NT-3 adapter is available through your ClearOne distributor.

### Required information

Before you begin the ISDN setup, it is recommended that you connect your V-There unit to your ISDN connection using the supplied ISDN cable(s). The number of cables that you need will depend on the number of ISDN channels that are available to you and are supported by the V-There model. You will need one ISDN cable if you are using the 2100 model and up to three if you are using the 2200 (ISDN cables are included with these models).

The following section lists the information required for completing the ISDN Settings screen:

- The type of ISDN exchange (or switch type) to which V-There is to be connected
- The local ISDN numbers for the lines to be used. These must be entered in the proper order.
- Whether the ISDN network is restricted to a multiple of 56K (ISDN-R, nx56K)
- SPID information
- Any prefixes or other specialized information to access long-distance calling on ISDN lines.

This information should be available from your system administrator or telephone company.



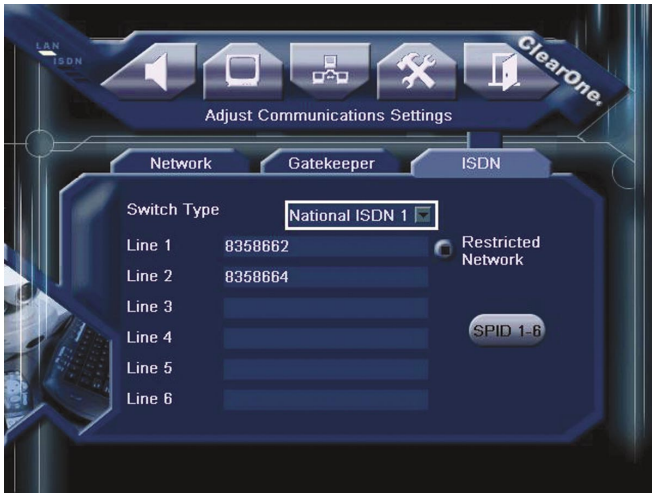


Figure 5.5 ISDN settings screen

## ISDN settings


This section describes how to configure your unit to make calls over an ISDN connection.


1. Navigate to the ISDN tab in the Adjust Communications Settings section of the user interface and click the Enter button. Select the ISDN tab to display the ISDN settings screen.
2. Select the ISDN switch type to which the unit is to be connected from the Switch Type drop-down list.
3. Enter the local ISDN line numbers in Line 1 to Line 6 fields.


The number of ISDN numbers that you need to enter depends on how many ISDN channels you are using. You need to enter two numbers for each of the one, two, or three bonded telephone lines, in order to obtain 2B (128kbps), 4B (256kbps), and 6B (384kbps) bonded calls respectively.

For National ISDN 1 or DMS100, the full 10-digit number must be entered. For other switches and localities, the area code should be omitted.

4. If the local ISDN switch is an ISDN-R 56K restricted network, select the Restricted Network check box.
5. If you selected National ISDN 1 or Nortel DMS100 from the Switch Type drop-down list, the SPID 1-6 button appears. Click it to open the SPIDs screen (see Figure 5.6 on page 28). Select the Auto Detect SPIDs check box (the unit detects your SPIDs automatically) unless you know that your SPIDs are an unusual configuration; then enter them manually. If you entered the ISDN numbers in the previous screen, you can click Auto Fill to have them automatically transferred to the SPIDs number boxes. You will need to reboot the unit to save these changes.

 A bonded call uses special hardware (IMUX) to bond the ISDN lines into a single logical channel. V-There can dial bonded calls at rates of 128kbps, 192kbps, 256kbps and 384kbps. For a bonded call, you must enter only a single destination number when making a call.

 An unbonded call treats multiple ISDN lines as single channels. Each line is 64kbps. You can dial a call with a rate of 1x64kbps, 2x64kbps, and so on, up to 6x64kbps. When making an unbonded call, you need to enter an ISDN number for each ISDN line you are using.

 An ISDN-R call is transmitted at a rate that is a multiple of 56kbps. This rate is used in some countries where channel bandwidth is limited to 56kbps. An ISDN-R call can also be bonded.


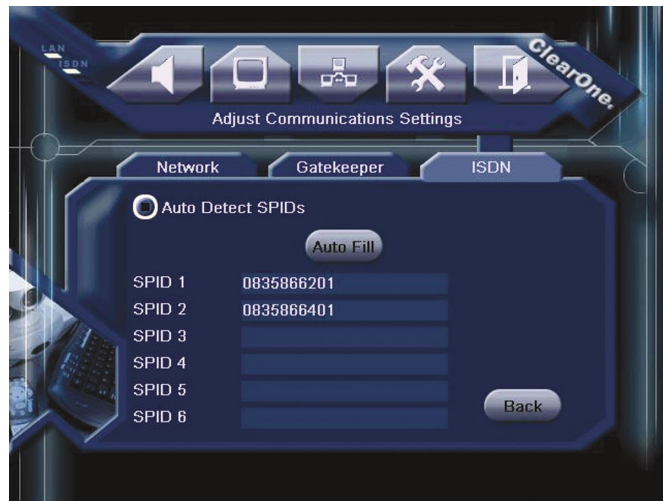
 If you know that your SPIDs are an unusual configuration, deselect the Auto Detect SPIDs check box and enter the SPIDs manually in the SPID fields.

Figure 5.6 SPIDs screen



## Phone Directory

The Phone Directory allows you to store numbers for easy retrieval when you want to make calls.

### To configure the Phone Directory

Navigate to the Place a Call button in the Expert Mode toolbar and click it. This opens the Directory screen.

Figure 5.7 Directory screen



This screen allows you to place calls, add entries to the directory, edit entries, and delete them.

## To place a call

1. Navigate to the destination you want to call (in either Expert or Express mode) in the Phone Directory screen and press the Enter key.
2. Click the onscreen Call button.  
The unit dials the call.
3. Press Hang-Up on the remote control to disconnect the call.



During a call, press the Help button and then click the onscreen Stats button to view information about call type, call time, data rate, algorithms, bit rate, and packet loss.

## To add a phone number to the directory

1. Click the Add button. This opens the Phone Book Entry window.
2. Select the call type in the Type drop-down menu. If you select ISDN-R or voice, the unit will reduce the rate in the Rate field if it is set too high for the call type you select.
3. Select the rate in the Rate window, if necessary.
4. Enter the name of the destination in the Name field.
5. Enter the phone number(s) in the Line field(s).
6. Click Save to save the settings.



Adding, editing, and deleting phone directory entries is possible only in the Expert Mode Phone Directory window.

## To edit a directory entry

1. Select the phone book entry you want to edit.
2. Click the Edit button. This opens the Phone Book Entry screen.
3. Navigate to the fields or menus you want to edit and make the changes you want to make.
4. Click Save to save changes and exit.

## To delete a directory entry

1. Select the phone book entry you want to delete.
2. Use the right arrow button on the remote control to access the buttons on the right side of the window, then navigate to and click the Call button.
3. Click Delete. A window will appear, asking you to confirm deletion of the entry.

## Presentation Settings

In the Make a Presentation screen in Expert Mode, you can add, edit, and delete presentations. This allows you to easily use online presentations during video calls.

Click the Make a Presentation toolbar button in the Expert Mode. The Presentations screen appears.

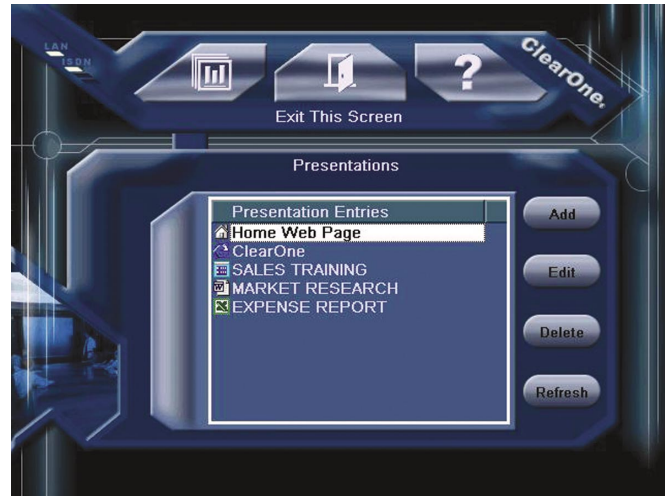


Figure 5.8 Presentations screen

### To add a presentation

For presentations located on the web or another location

1. Click the Add button. This opens a dialog box where you enter the web page address or file location of the presentation you want to add.
2. Click OK to save the addition and return to the Presentations screen.

For presentations located on a PCMCIA card

1. Insert the PCMCIA card in the rear slot of the V-There unit.
2. Click Refresh. The name of the presentation(s) you want to use will display in the Presentation Entries window.

### To edit a presentation

1. Click the Edit button in the Presentations screen. This opens a dialog box where you can change the web page address or file location.
2. After you make changes, click Save to save the changes and return to the Presentations screen.



See Chapter 7: Sending Data and Images for more information about PCMCIA cards.

## To delete a presentation

1. Highlight and select the presentation you want to delete in the Presentation Entries window.
2. Highlight the Delete button and click it. You will be asked to confirm the deletion.

## Audio Settings

The Adjust Audio Settings screen allows you to tailor the audio settings to optimize audio quality in your conferencing venue. There are three sections in the Adjust Audio Settings: Preferences, Compression, and Gain.



Figure 5.9 Audio Settings Preferences screen

## To adjust audio preferences

1. In the Preferences tab, navigate to the Audio Source drop-down list and select either Mic or Line as the input source (default is Mic). Select Mic if you are using a microphone. Select Line if you are using another audio source. Press Enter.
2. Select Auto Answer if you want the unit to automatically answer calls (default is On).
3. Select Mute on Answer if you want the unit to mute your outgoing audio whenever a call is answered. You would then use the Mute button to unmute the system when you are ready to speak. Default is Off.

4. Select Echo Canceller if you want to use the V-There's built-in echo canceller in a conferencing system that does not have any other echo canceller. The echo canceller is available only if you selected Line in the Audio Source menu (default is Off). **Do not enable the echo canceller if you are using the AccuMic II mic pad included with your V-There.** The AccuMic II already includes echo cancellation; enabling the V-There's echo canceller will result in audio problems due to conflicts between the echo cancellers.

## To set compression

Select the Compression tab to open the Compression screen.



Figure 5.10 Audio Compression screen

The H.320 Calls and H.323 Calls fields specify the compression algorithm to be used when making an ISDN or LAN call. The default setting for both fields is Auto Select.

ClearOne recommends that you do not change these settings because Auto Select enables the unit to detect automatically which compression algorithm is most suitable for a particular call type. If you select one of the other compression algorithms, the V-There attempts to use it. If the codec at the far end doesn't support the algorithm, the V-There automatically selects a compatible algorithm.

## To adjust gain

1. Select the Gain tab to open the Gain screen.



Figure 5.11 Audio Gain screen

2. The Line/Mic Input gain slider is used to adjust the degree of gain or amplification applied to the line or mic input signal. The input’s relative gain value in decibels is displayed in the box to the right of the slider.


If you are using the AccuMic II included with your V-there, ClearOne recommends that you do not change this value, since higher values make the V-There more sensitive to audio input and might adversely affect echo cancellation. If you choose to use a different microphone, you might need to adjust the input gain value accordingly.

3. Adjust the Line Output slider to set the audio level you want to use in your conference. This is best accomplished by conducting a test call and adjusting the level during the call.

Below each slider is a meter that references the level of the input or output.

## Video Settings

All of the settings on the Video Setting Preferences screen are set to optimize video transmission when using the camera supplied with your V-There. The original setting on each slider on the screen is at or near the middle of the scale. If you decide to change any of the video settings, you can return to the original settings by moving the sliders back to their original position in the middle of the scale, or by resetting V-There to factory settings. For information on how to reset V-There, see Troubleshooting on page 39.

 If you are not satisfied with the picture quality when viewing the video image of yourself on the monitor, it is better to adjust the settings on the monitor itself than to change the V-There’s video settings.

If you want to change the video settings, refer to the instructions below.

## Adjust video preferences

1. Open the Preferences tab in Adjust Video Settings.



Figure 5.12 Video settings screen

Generally, the default settings for Brightness, Contrast, Hue, and Saturation are ideal for most situations. Leave these at the factory settings unless you need to tailor them to suit your venue.

2. Click the **More** button to view the following settings in Preferences screen #2.



Figure 5.13 Video Preferences screen #2





### Dual Monitor

Dual Monitor is used if you want to use two monitors for different video sources—for example, you can route local video to a VGA monitor and far-end video to a television.

Dual monitor mode is particularly useful if you want to run the web browser, share single images, or use presentations during a call.

To use dual monitor mode, you must ensure that one VGA and one composite/S-video monitor are connected to the unit. You cannot use dual monitor mode if you have only one monitor connected to your unit.

During a call, the composite monitor displays the video image while the VGA monitor displays a graphic, presentation, or the web browser. This is a default setting and cannot be changed. You can also use the VGA monitor to access the V-There Menu screen.

When you are not in a call, the Main screen is displayed on both monitors. The text “Dual Monitor Mode” is overlaid on the picture-in-picture (PIP) display to remind you that the Dual Monitor Mode check box is selected.

During power-on, V-There detects whether or not a VGA monitor is connected. You cannot select Dual Monitor Mode unless a VGA monitor is detected.

When Dual Monitor is activated, the Adjust Video Settings screens are disabled during a call since changing the settings on these screens would disrupt the transmission.

### Auto Display Snapshot

This feature, if enabled, automatically displays video “snapshots” sent from the far end camera. If you do not have this feature selected, you can press the Snapshot button on the remote control or keyboard to display incoming images (you will be notified by an onscreen message that an image has arrived).



The unit automatically places the screen saver on both monitors when using Dual Monitor Mode.

### Shrink Web Content to Fit TV

Web content can display outside the edges of an NTSC monitor. Enable this feature to shrink web content to display properly when using an NTSC monitor.

### Call Duration Display

The Call Duration Display field allows you to enter the number of minutes (up to 30) you want the call duration to display during a call. Setting the field to 0 turns off the display.

Click the More button to view the following settings in Preferences screen #3.



Figure 5.14 Video Preferences screen #3

### Video Source

The Video Source field allows you to select among video sources, such as the local and remote cameras. When using Single Monitor Mode (Dual Monitor is not selected), you can easily swap the display system referenced to the far end video source and the local site video. For example, say your application has a projector as the sole display source; far end video is full-screen and local video is in the PIP. By selecting Swap Display, you can display local video full-screen, allowing you to toggle between remote and local site video.

### Names for Video Sources

Assign names for the local camera, composite camera, S-video camera, and VGA input in these fields.

## PIP

The PIP feature allows you to display a small, alternate image, typically your own site video, on your video screen.

### To configure PIP

1. Click the PIP (picture in picture) tab in Adjust Video Settings to open the PIP screen.

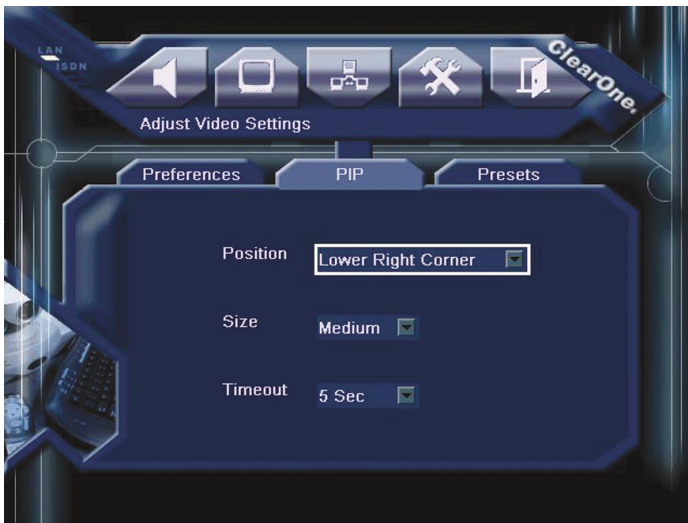


Figure 5.15 PIP screen

2. Select the position on the screen you want the PIP to occupy with the Position drop-down list.
3. Select the box size the PIP will appear in from the Size drop-down list.
4. Enter the number of seconds you want the PIP display to appear for.

## Presets

See Chapter 4: Camera for information about how to configure and use the camera and camera presets.

## Various Advanced Settings

The Adjust Various Advanced Settings screen allows you to adjust the date and time, as well as do diagnostic calls and download new firmware.

Refer to the following information to adjust these settings.

## Setting Advanced Preferences

1. Click the Preferences tab in Adjust Various Advanced Settings. The Preferences screen appears.



**Figure 5.16** Adjust Various Advanced Settings/Preferences screen

2. Select the language you want the interface to display in.
3. Navigate to the date and time fields and enter the current date and time.  
  
The unit will maintain the current date and time when the unit is turned off (the unit must still be connected to electrical power).
4. Set the Menu Timeout for the number of minutes you want the menu to display after the last keystroke you make.
5. Set the Screen Saver Wait Time for the number of minutes you want the screen to display after the last keystroke you make.
6. Set the Auto Hang-Up for the amount of time you want the unit to remain in a call. When a call reaches the designated call length, an onscreen prompt asks you if you want to continue the call (which resets the timer and begins a new countdown) or end it. If you do not respond to the prompt within 60 seconds, the unit automatically terminates the call. This feature works for both ISDN and LAN calls. Select Disabled if you do not want to use this feature.
7. Enable Power Save Mode if you want the unit to go into sleep mode when not in use. After selecting this check box, use the Power key to activate and deactivate this mode.



The unit automatically places the screen saver on both monitors when using Dual Monitor Mode.



Auto Hang-Up is useful for preventing an unterminated call from remaining active beyond a designated amount of time. It can therefore save you unintentional line or service charges that would otherwise accrue.

## Troubleshooting

The Troubleshooting section allows you to conduct a loopback call for diagnostic purposes and to reset the unit to factory defaults.

Click the Troubleshoot tab in Adjust Various Advanced Settings to open the Troubleshoot screen.



Figure 5.17 Troubleshoot screen

### Loop Back

A loop-back call is a call in which the unit calls itself. This is useful for testing if the unit is capable of receiving and transmitting voice, audio, and video data correctly.

If you are having problems with an outbound call, the problem is likely with your ISDN configuration, even though a loop-back call indicates that the unit is working correctly. You can check your ISDN settings on the ISDN Settings screen to ensure the settings are correct. If these appear to be in order, the problem might be with the ISDN network.

### To initiate a loop-back call

1. Select the Type and Rate of the call from their respective drop-down lists.
2. Click Call. The unit initiates the loop-back call.
3. Press Hang-Up to end the call.

If there are problems with any settings during the call attempt, you will be notified.



Some gatekeepers might prohibit the V-There from making a LAN loop-back call. The function of a gatekeeper is to verify the destination address of a call prior to allowing the call to proceed. Since the originating number and destination number of the loop back call will be identical, the gatekeeper might not be able to recognize a loop back call.

### Default settings

If you want to reset the unit to default settings, click Reset in the Troubleshoot window. You will be asked for confirmation.

## Download

The Download screen is used mainly for downloading updated firmware (system software) to the unit.

Click the Download tab in the Adjust Various Advanced Settings window to open the Download window.



Figure 5.18 Download screen

Below are descriptions of each field and check box.

### Download LAN Address

The Download LAN Address field is used when you want to download something from the web to the unit or a flash card. Firmware updates for the unit can be downloaded from a web server. When a new version of the firmware is released, obtain the URL for the location from your reseller or from ClearOne. Enter the URL in the Download LAN Address field. It is not necessary to enter the http:// prefix.



### **Update Firmware**

Select the Update Firmware check box if you want to update the unit firmware without downloading updates to a flash card.

### **Download to Flash Card**

Select this check box if you want to download to a flash card. When this check box is selected, the Flash Card field and Erase Flash Before Download check box appear.

### **Flash Card**

If you selected Download to Flash Card, the Flash Card field displays. Also, the Flash Card field is enabled when a flash card has been inserted in the PCMCIA slot on the back of the unit. The unit automatically detects the flash card and displays the name of the flash card in this field. V-There is compatible with Lucent Technologies and Symbol Technologies flash cards.

### **Erase Flash Before Download**

The Erase Flash Before Download check box is enabled when a flash card has been inserted in the PCMCIA slot on the back of the unit. Select this check box if you want to remove all files on the flash card prior to download.

### **Boot from Flash Card**

The Boot from Flash Card check box directs the unit to boot from a flash card. Select Boot from Flash Card if you want to run another user interface on the unit instead of the main user interface, or if you have firmware updates on the flash card. The unit checks if there is a flash card in the PCMCIA slot the next time you turn it on. If a flash card is detected, the unit searches for a file called autorun.inf and executes the instruction in that file.

If you want to return to running the main user interface, you must restart the unit without any flash cards inserted. In this instance, deselect the Boot from Flash Card check box, then turn off the unit. Remove the flash card and turn on your unit again. The main user interface reappears.

## Upgrading firmware

There are two possible procedures for updating the firmware: Updating from a web site or from a flash card.

### **To upgrade unit firmware from a web site**

1. Enter the URL in the Download LAN Address field.

2. Select the Update Firmware check box.
3. Click the Start Download button. The unit's firmware begins updating.

A series of message boxes is displayed, informing you of the progress of the download. When the download is complete and you exit the menu, you are asked if you want to reboot the unit (answer yes).

#### **To upgrade unit firmware from a flash card**



V-There is compatible with Lucent Technologies and Symbol Technologies flash cards.

1. Insert the flash card in the PCMCIA slot.
2. Select the Download to Flash Card check box.
3. If you have more than one flash card inserted, select the flash card you want to update from the Flash Card field.
4. Select the Boot from Flash Card check box.
5. Click Start Download.

A series of message boxes is displayed, informing you of the progress of the update. When the update is complete and you exit the menu, you are asked if you want to reboot the unit (answer yes).

#### **To download to flash card**

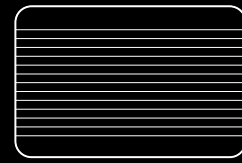
Instead of updating the unit directly you can download the firmware updates to a flash card (a PCMCIA memory card) and then boot the unit from the flash card to update the firmware.

To download to a flash card:

1. Enter the URL in the Download URL field.
2. Insert a flash card in the PCMCIA slot.
3. Select the Download to Flash Card check box. This check box is enabled when a flash card is inserted in the PCMCIA slot.
4. Click Start Download.

A series of message boxes is displayed, informing you of the progress of the download. Do not turn off your unit while downloading to a flash card. When the download is complete and you exit the menu, you are asked if you want to reboot the unit (answer yes).





## Express Mode

When you turn on your V-There, the Express Mode appears by default. This mode is used for placing calls, making presentations, and using the browser for general web browsing.

The handheld remote control is designed to operate all functions of the Express Mode.

## Placing a call

There are two ways to place a call: Use the remote control or keyboard command buttons or use the onscreen interface.

### To place a call using the Conference Control remote control buttons

1. Press the Call button. The Phone Book Directory appears.



Figure 6.1 Phone Directory screen



You can quickly navigate the phone book entries by using the Forward and Back keys on the handheld remote or the PgUp and PgDn keyboard keys. You can also enter the first letter of the name to jump to that section of the directory.

2. Navigate to the number you want to dial, then press the Enter button. (Establishing phone numbers in the Directory is accomplished in the Place a Call/Phone Directory section of Expert Mode; see page 28.)



If you are placing an ISDN call, the Call Progress screen appears during call initialization and displays a green ball that indicates the progress of each BRI you are using. When a ball is completely green, that BRI line is connected.

If a ball turns red, it means that the codecs cannot negotiate a connection. The V-There will automatically downspeed to match the speed of the codec at the far end. If at least one green ball remains, the call will go through.

When initiating a LAN call, you will see one green ball to indicate call progress. If the call attempt is unsuccessful, the ball will turn red.



A voice-only call uses a single ISDN line to call a digital or analog telephone. The call becomes a conventional audio conference.



To redial a call, press the Dial button again. The details of the last call are displayed by default.

You can also highlight Manual Dial, press the Enter button, and enter the number or numbers in the Manual Dial window, then press the Enter button. Enter two numbers if you are making a two-line ISDN call. If you select Man LAN-WAN, you can initiate a manual LAN-WAN call without the auto-addition of the Gatekeeper prefixes to the number dialed.

3. Press Enter again. The unit dials the call, and the video image of your site fills the screen.
4. Use the Far/Local, Video, and PIP (picture-in-picture) Video Control buttons on the remote control to configure how you want your monitor to display video of the far end and your site.
5. To end the call, press the Hang-Up button on the remote control.

### To place a call using the onscreen interface buttons

1. Click the Place a Call button in the Express Mode. The Phone Book screen is displayed.
2. Using the arrow buttons on the remote control, navigate to the phone number you want to call. (Establishing phone numbers in the Directory is accomplished in the Expert Mode.) Press the Enter button.

You can also highlight Manual Dial, click the Enter button, and enter the number or numbers in the Manual Dial window, then click the Enter button.

3. Press Enter again. The unit dials the call, and the video image of your site fills the screen.
4. Use the Far/Local, Video, and PIP (picture-in-picture) Video Control buttons on the remote control to configure how you want the monitor(s) to display video of the far end and your site.
5. To end the call, press the Hang-Up button on the remote control.

## DTMF tones

V-There supports DTMF tone generation during ISDN and voice calls. Specific frequencies—tones—are assigned to each touch-tone telephone button so that they can easily be identified by a microprocessor.

### To send DTMF tones

- Press the 0-9, \* and # buttons to produce tones.

DTMF tones are useful for accessing some automated video conferencing systems and also for dialing a LAN system via a gateway. If you are calling through a gateway using a gatekeeper, DTMF tones might be required to access the gateway. When using DTMF tones an automated operator lets you know which buttons to press.

### Receiving a call

If the Auto Answer check box is selected in the Adjust Audio Settings/Preferences screen, V-There will automatically answer incoming calls.

If the Auto Answer check box is deselected, V-There will not answer the call automatically. The Incoming Call dialog box is displayed.

If you don't have the Auto Answer check box selected, a dialog box will appear when an incoming call arrives, asking if you want to accept or reject the call. Use the arrow keys to select your response and press Enter.

If you accept the call using the Auto Answer function or by manual intervention, a full-screen video image of first the local end and then the far end is displayed on the V-There.

### Terminating a call

- To terminate a call, press the Hang-Up button.

The call might not terminate immediately. It might take several seconds to terminate a call. However, during this time, the audio will be muted and the video image will be frozen.



It is important to respond quickly when the Incoming Call dialog box is displayed. Otherwise, the ISDN network might terminate the call.



# CHAPTER 7: Sending Data and Images



## Preparing a File

This chapter describes how you can use V-There to access files on a PC, LAN, or PCMCIA flash card and send a single image or a sequence of images to the person you are calling. This enables you to make presentations and share documents and web pages during a call.

There are three options for sharing visual information: snapshots from the local camera, MicroSoft®-based presentations (PowerPoint®, Word, and Excel files), and web pages. Before sending a file, you must ensure it is in HTML format. V-There can access files from an intranet server, web server, or flash card using the browser. See page 52 for information about the browser.

To access files on a PCMCIA flash card, you must first install the card with the presentation(s) you want into the slot on the back of the V-There (see below).



ClearOne recommends that you set your V-There to dual monitor mode when sending data and images. Dual monitor mode allows you to display a file, web page, or presentation on one monitor, while still allowing you to view the video image of the other party on the second monitor.

## PCMCIA Cards

The PCMCIA slot at the back of the V-There has a plastic cover that can easily be removed, and put back when you have finished using the flash card.

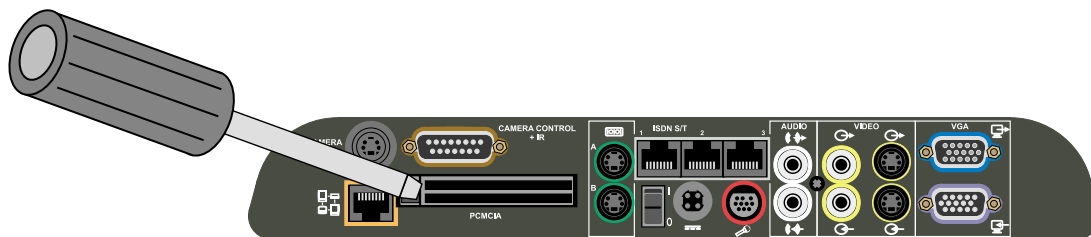


Figure 7.1 PCMCIA slot cover

## To install a PCMCIA card

1. Carefully insert a flat screwdriver approximately 4mm under the PCMCIA card cover from one side.
2. Rotate the screwdriver until the cover pops out.
3. Remove the cover by hand.
4. Insert the flash card horizontally in the direction the arrow on the card indicates. There are two slots; you can use either one when using just one card.
5. Reinstall the card cover.



V-There is compatible with Lucent Technologies and Symbol Technologies flash cards.

## Sending and Receiving Images

### Annex D images

This section describes how you can use V-There to send a single Annex D image (a video "snapshot from the main camera). All images sent using V-There use the H.261 Annex D format.

#### To send a single image of a file or web page

1. Locate and open the file or web page you want to send.
2. If you want to re-size the image, hold down **Shift** and use the arrow buttons to resize the picture. A black square on the browser window indicates the size of the Annex D image.
3. If you want to move the Annex D image window, press **Ctrl** and the relevant arrow button.
4. To cancel the Annex D image, press the **Shift+Enter** or the **Ctrl+Enter** buttons simultaneously.
5. Press the **Send** button to send the whole image. The image displays on the far-end video monitor.



It takes several seconds to send an Annex D image, especially during a low bandwidth call.

The video image remains frozen while the Annex D image is being sent. The Sending Image icon is displayed.

#### To receive an Annex D image

When V-There receives an image during a call, a message is displayed informing you that an Annex D image has been received. The Image Received icon is displayed.

If you choose to view the image, the video image of the person you are calling will freeze for a few moments while V-There decodes the Annex D image. If you choose to discard the image, the image is deleted and cannot be retrieved.

If you receive an Annex D image while using your V-There in dual monitor mode, the Annex D image is automatically displayed on the VGA monitor, while the video image of the person you are calling is displayed on the composite monitor. If you receive an Annex D image while using your V-There in single monitor mode, the Annex D image will temporarily replace the video image on the monitor. To return to viewing the video image, press the Snapshot button. The video image of the party you are calling is displayed again and the Annex D image is discarded.



Single images and presentations are for immediate viewing only. You cannot save an image.

## To discard an image

When you receive an image, you can choose to discard the image by pressing the Snapshot button. Once the image has been discarded, it cannot be retrieved.

Before you can receive another Annex D image, you must discard the current image by pressing the Snapshot button. In presentation mode, the image is automatically replaced when a new image is received.

## Presentations

### V-There Application Conversion Wizard

The V-There Application Conversion Wizard is a plug-in that converts Microsoft® Word, PowerPoint®, and Excel files into VTT (ClearOne proprietary compression) files, giving you the flexibility to share these files via the V-There Video Conferencing System.

This plug-in requires the following minimum system requirements:

Windows 95 OSR2/98/ME/NT: 64MB RAM

Windows 2000: 128MB RAM

Windows XP: 256MB RAM

PII 200MHz or AMD equivalent processor or higher

1MB hard disk space

### To install the V-There Application Conversion Wizard

1. Click the **Install Now** button on the Software/VTT products screen on the Audio Video Products CD.
2. Follow the onscreen instructions to complete the installation of the wizard.

### To convert files

1. Open a saved Word, PowerPoint, or Excel file.
2. From the **File** menu, select Send To, then **V-There Conversion Wizard**. The conversion wizard opens and displays the Select File window (see Figure 7.2).

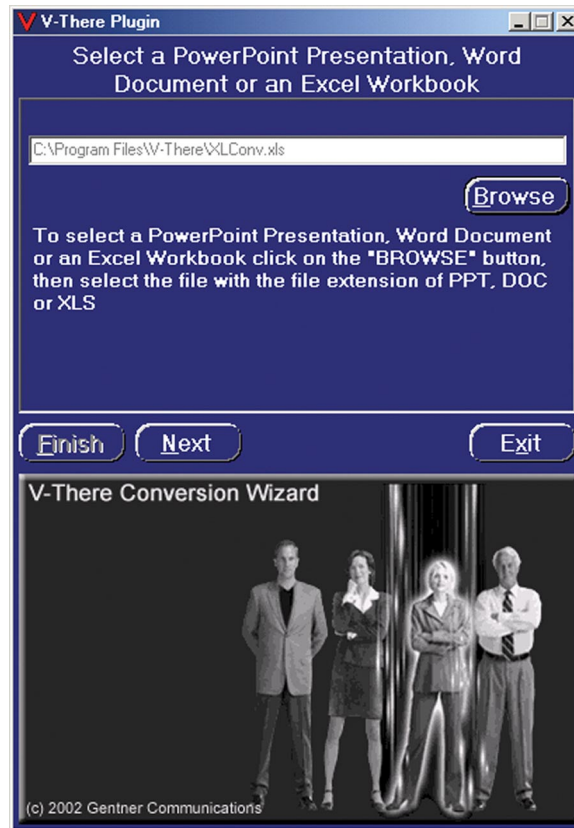


Figure 7.2 Select file window

3. Use the **Browse** button to select the file you want to convert. If you opened the desired presentation when you launched PowerPoint, this file should already be selected.
4. Click **Next**. The conversion wizard converts the file to VTT format and displays the Save File window (see Figure 7.3).



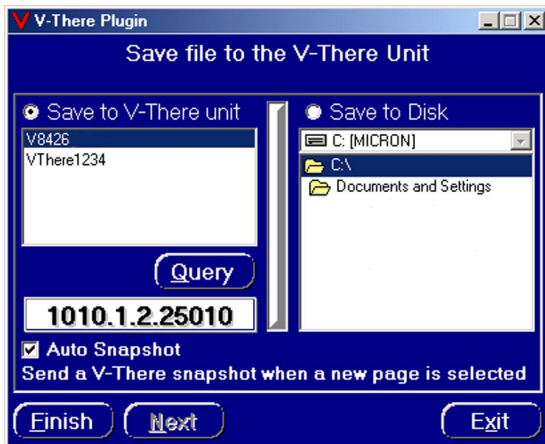


Figure 7.3 Save File window

5. Select where you want to save the converted file—a PCMCIA card installed in the V-There unit or a disk. The wizard will automatically detect any V-There units on the PC network. Click the Query button to query the network manually.
6. Select the **Auto Snapshot** check box if you want a snapshot of each slide in the presentation automatically sent to the far end as you move through the presentation (default is On).
7. Click **Finish** to save the new VTT file. The Successful File Transfer window displays (see Figure 7.4).

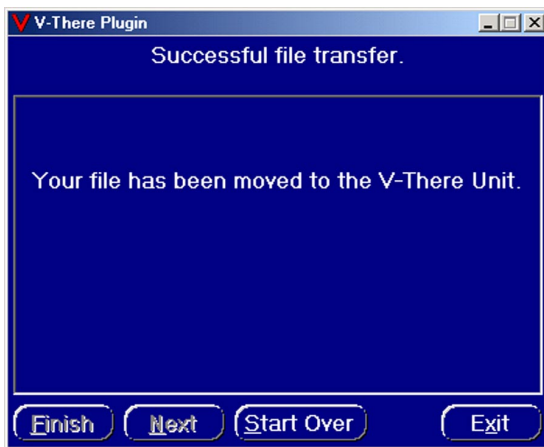


Figure 7.4 Successful File Transfer window

8. Click **Exit** to close the window or click **Start Over** to convert another file.

## Sending presentations

The V-There allows you to send presentations during conference calls. Presentations must be saved in HTML format.



If you have inserted a PCMCIA card with the presentation you want to send, the presentation's name might not appear in the Presentation Entries window. Click Refresh to update the Presentation Entries window with the presentation(s) saved on the flash card. See V-There Application Conversion Wizard, page 49, for information about saving presentation files to PCMCIA cards.

### To send a presentation

1. Select the Make a Presentation button in the Express Mode screen and press the Enter button.
2. Use the arrow buttons to navigate to the Presentation Entries window and select the presentation you want to open. This launches V-There's browser.
3. Click the Open icon to browse for the appropriate file or enter the address of the web page in the Address field.
4. Press the Enter button.

Each page is automatically sent as soon as the presentation completes loading. The video image remains frozen while the presentation is being sent.

When you receive a presentation or image, it is for immediate viewing only. You cannot save it.

Use the Refresh button to refresh the screen as necessary.

## About the Web Browser



The web browser cannot be used during LAN calls.

If you have set your V-There to use dual monitor mode, you can use the browser during a call to share a web page with the person you are calling, or to send a single image or presentation. The person receiving the call does not have to have his V-There in dual monitor mode. Any teleconferencing unit that supports the Annex D format can share web pages and receive images sent by V-There.

The V-There browser can display the majority of web sites. However, it does not support sites containing Java or VBScript or multimedia plug-ins.

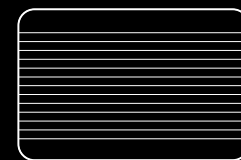
### Navigating the web browser

The V-There web browser is very similar to most browsers and consists of a menu bar, an Address field, and a toolbar. You can navigate with the browser in the same way you would with any web browser—by pressing the arrow buttons to move the cursor around the screen.

To select a hyperlink or press a button, simply point the cursor at the hyperlink or button and press the Select key.

#### Menu bar

The toolbar contains four buttons: Forward, Backward, Stop, and Refresh. Each menu contains several menu options. To select a button, point the cursor at the button and press the Select key.



## Appendix A: Specifications

### Standards Support

H.320 (2100 and 2200 models only) and H.323

### Bandwidth

H.320: 56–384kbps (2200 only); 56–128kbps (2100 only)

H.323: 64–768kbps

### User Interface

Express mode for efficient conference control  
Expert Mode for advanced conference features  
Phone Book holds hundreds of entries  
Microsoft Internet Explorer browser  
PowerPoint plug-in for simplified presentations  
Auto Snapshot for simplified presentations  
Context-sensitive online help  
Language Supported: English

### Additional Features

2 x PCMCIA 2.0 slots (V-There is compatible with Lucent Technologies and Symbol Technologies flash cards)  
2 x external RS-232 connectors  
IR handheld remote  
IR keyboard  
Remote software upgrade  
Sleep Mode  
V-Meeting<sup>1</sup> scheduling using Microsoft Outlook  
Remote management via V-Console<sup>1</sup>

### Graphic Image Format

JPEG, web content, Microsoft Office documents via HTML  
PowerPoint via plug-in or HTML  
Web presentations via built-in browser  
Annex D on H.320 (2100 and 2200 only) and H.323

### Video Standards

H.261  
H.263

### Picture Resolution

FCIF, QCIF  
SQCIF decode

### Video Input

1x Main PTZ camera input  
1x Camera 2: S-video  
1x Camera 3: composite  
1x XGA auto detect

### Video Output

1x Composite  
1x S-video  
1x VGA/SVGA:  
640x480, NTSC  
720x576, PAL

### Video Format

NTSC/PAL, auto detect

### Picture-In-Picture

Auto on, auto off, moveable

### Video Features

Far-end camera control (H.281/H.224 FECC) for H.320 (2100 and 2200 only) and H.323  
Single or dual monitor support  
VCR support

### Camera Presets

10 Local camera presets

### Audio Standards

G.711, G.722, G.728 (H.320 for 2100 and 2200 models & H.323), G.723.1 (H.323 only)

### Audio Input/Output

1x AccuMic II input  
1x Line level input (RCA)  
1x Line level output (RCA)  
Optional second AccuMic II connects to first AccuMic II

### AccuMic II

Three microphone elements  
Full-duplex Gentner<sup>®</sup> Distributed Echo Cancellation<sup>®</sup>  
Noise Cancellation  
Automatic microphone gating

PA adaptive mode  
Ambient adaptive mode  
First mic priority  
NOM

### Network Interface

10 Base-T Ethernet Port Supporting TCP/IP, DHCP, DNS, WINS, SNMP, ARP, WWW, Telnet  
Wireless via 802.11b<sup>2</sup>  
For 2100: S/T BRI Interface: Built-in 1BRI IMUX  
For 2200: S/T BRI Interface: Built-in 3BRI IMUX  
Auto-SPID detection (2100 and 2200 only)

### ISDN Protocols (2100 and 2200 only)

1TR6, 5ESS, DMS100, ETSI, NI-1, NTT/INS, VN3, Australian

### Main PTZ Camera

Integrated or can be detached  
Field of View: 47.5°  
Zoom: 16X  
Focal Length: 4-64mm, F1.4 to 2.8  
Min Lux: 6 lux  
Auto Focus, Auto White Balance

### Electrical

Auto-sense power supply  
Power Requirements:  
100-240VAC, 50-60Hz, 36W, 1A max

### Physical

Dimensions  
12.57" x 10.69" x 6.45" (LxDxH)  
(31.93 cm x 27.16 cm x 16.39 cm)  
Weight  
5.57 lb/2.08 kg

### Warranty

2 years parts and labor

<sup>1</sup>V-Meeting and V-Console available as future upgrades.

<sup>2</sup>Optional.

## Appendix B: ISDN Error Codes

When a call fails to connect or it terminates, V-There generates an error. The error codes are specified in ITU-T specification Q.850 as "cause codes." V-There displays a brief summary of the information in Q.850. The following paragraphs expand on the summary displayed on screen. Possible remedies are suggested.

Whenever V-There returns an error in trying to connect a call, two checks should be made before referring to the detailed messages:

- Check that the number dialed is correct and includes any required PBX prefix, international or long distance access codes and, for international numbers, omits the foreign long distance prefix.
- Check that the switch setting in the ISDN Settings screen matches the switch to which the V-There is connected. In the case of US switches, ensure the SPIDs are correct. After changing the switch type, it is sometimes necessary to power down V-There—this depends on the vendor of the ISDN PBX or telecom supplier.

The cause codes are divided by the ITU-T into classifications to assist understanding of the seriousness of the cause. These classifications are used below. All cause codes not listed are invalid and should never be returned. If they are, V-There displays "Invalid Cause Code (xx)" where xx is between 0 and 255.

### Normal causes

These occur in normal operation and are usually capable of being remedied by user actions.

#### **Cause 01: Unallocated number (Cause 01)**

This indicates that, although the number is a valid format, it has not been allocated by the telephone company. Either the person being dialed has been cut off or the number is incorrect.

#### **Cause 02: No route to specified transit network (Cause 02)**

This means that the call was placed by specifying a routing of networks. The most likely reason is that V-There is attached to a local PABX, which attempts to route calls using a "cheapest" route method, which is currently unavailable.



### **Cause 03: No route to destination (Cause 03)**

This means that the destination number is not supported by the PABX/Telephone system connected to V-There. The most likely reason is that there is a mistake in the dial string (forgetting a PABX prefix for an outside line).

### **Cause 06: Channel unacceptable (Cause 06)**

This means that the local PABX/ISDN provider does not accept the channel that V-There has attempted to dial on.

### **Cause 07: Call awarded and being delivered (Cause 07)**

This means that the call has been delivered on an existing channel at the far end. As this is highly abnormal in ISDN environments it suggests a configuration problem with the far end.

### **Cause 16: Normal call termination (Cause 16)**

This is a normal situation. If the termination is not what is expected, then the network is providing no additional information. Check the ISDN settings carefully as well as the numbers dialed.

### **Cause 17: User busy (Cause 17)**

Some long-distance carriers require a prefix for the ISDN number you are dialling. If it isn't entered properly, you'll get a busy tone. This means the far end system is in a call. Simply try again later. If it is known that the far end is NOT in a call, then the far end unit should be power cycled as it might be holding the line open for some reason.

### **Cause 18: No user responding (Cause 18)**

There are two common reasons for this: the far end is switched off or it is in a "manual answer" mode and there is no one to answer the call.

### **Cause 19: No answer from user (Cause 19)**

This is almost the same as Cause 18. The major difference is that Cause 18 is more commonly returned when the far end is switched off whereas this message is more commonly a case of a "manual answer" system with no one to take the call.

### **Cause 21: Call rejected (Cause 21)**

This means either that the user has deliberately rejected the call (V-There systems do not do this – they return a "normal termination" when a user rejects a call). Or, this occurs when the far end network has rejected the call—for example, when a PABX rejects incoming calls.

**Cause 22: Number changed (Cause 22)**

This means that the telephone company has changed the far-end number; you need to find the new number for the system.

**Cause 26: Non selected user clearing (Cause 26)**

This is an unusual cause, which means that the network cannot connect the call but cannot give any more information.

**Cause 27: Destination out of order (Cause 27)**

This means that the final connection to the far end was malfunctioning. It might be as simple as the equipment being switched off or there might be a line fault.

**Cause 28: Invalid number format (Cause 28)**

The number dialed is an invalid format. This is always caused by dialing the wrong number. Check the number and prefix(es) and try again.

**Cause 29: Facility rejected (Cause 29)**

This means that the far end cannot accept the ISDN call correctly – maybe the number dialed is a voice line or a dedicated FAX machine instead of a video conferencing system.

**Cause 30: Response to status inquiry (Cause 30)**

This should never occur, as it implies an invalid sequence being sent by V-There to the local switch. Check carefully that the V-There ISDN settings are correct as setting up the wrong switch type can cause this.

**Cause 31: Unspecified reason for termination (Cause 31)**

This indicates a normal call termination but no other message seems appropriate. This has been seen on some PABX systems when terminating a voice call to a non-ISDN line.

## Resource unavailable causes

These occur when the ISDN network does not supply some required resource. None of these can be directly resolved by user action.

**Cause 34: No circuit/channel available (Cause 34)**

This usually means that there are not enough lines to connect the call – often seen in H0 calls when the last line cannot be dialed. Remedy is to try again later.

### **Cause 38: Network out of order (Cause 38)**

This means that the ISDN network is not functioning and that this is likely to be the case for some considerable time. After checking the dialed number, consult the local ISDN service provider.

### **Cause 41: Temporary failure (Cause 41)**

This means that the ISDN network is not functioning correctly but it should not last for long. Retry the call after a few minutes and it should work.

### **Cause 42: Switching equipment congestion (Cause 42)**

This means that the major ISDN trunk lines are very busy. The distinction between this and Cause 34 is that Cause 34 is usually generated when the local ISDN switch is busy whereas Cause 42 is generated when the major trunk lines are busy.

### **Cause 43: Access information discarded (Cause 43)**

This means that the network could not deliver all required information to the far end. Usually indicates the far end is not on a true ISDN line or it is not properly configured.

### **Cause 44: Requested circuit/channel not available (Cause 44)**

This indicates that the local ISDN network could not supply what V-There requested. This indicates either that V-There was not properly configured or there is a problem in the V-There ISDN interface.

### **Cause 47: Resources unavailable (Cause 47)**

This means something was not available but no other message adequately describes the problem.

## **Service or option unavailable causes**

These occur when the V-There is requesting an option that the ISDN network cannot provide. V-There does not make use of any advanced optional features of ISDN. These errors are usually caused by incorrect configuration of V-There or the ISDN line. Simply re-trying the call is unlikely to resolve the problem (unlike the previous the category, where it might).

### **Cause 49: Quality of service unavailable (Cause 49)**

This would occur when the call is being routed through a non-ISDN link, which is experiencing problems. Try again later.

### **Cause 50: Requested facility not subscribed (Cause 50)**

### **Cause 57: Bearer capability not authorized (Cause 57)**

### **Cause 58: Bearer capability not presently available (Cause 58)**

Cause 63: Service or option not available (Cause 63)

All of these suggest one of two problems. The most likely problem is with the ISDN service provider (PABX or telephone company), but before calling them, you should carefully check the switch type in the ISDN Settings screen as well as the restricted setting on the same screen.

## Service or option not implemented causes

These errors occur when V-There is requesting something not implemented on the ISDN line. This is either incorrect configuration of the V-There or the ISDN line.

Cause 65: Bearer capability not implemented (Cause 65)

Cause 66: Channel type not implemented (Cause 66)

Cause 69: Requested facility not implemented (Cause 69)

Cause 70: Only restricted bearer capability available (Cause 70)

Cause 79: Service or option not implemented (Cause 79)

These cause codes are very similar to the service or option unavailable codes above except they imply a more permanent problem with the ISDN service provider.

## Invalid message causes

These occur due to a problem in low-level communication between V-There and the ISDN service provider. After checking the V-There settings, power cycle the V-There and try again.

Cause 81: Invalid call reference value (Cause 81)

Cause 82: Identified channel does not exist (Cause 82)

Cause 83: A suspended call exists but not this identifier (Cause 83)

Cause 84: Call identity in use (Cause 84)

Cause 85: No call suspended (Cause 85)

Cause 86: Call with this identity already been cleared (Cause 86)



Power cycling the V-There should solve problems related to Causes 81-86.





### Cause 88: Incompatible destination (Cause 88)

The most likely cause is dialing the wrong number—for instance, trying to place a video call to a FAX machine. Check numbers carefully.

### Cause 91: Invalid transit network selection (Cause 91)

This means that somewhere along the routing an invalid network was selected. If the final dialed number is correct, this is either a temporary problem resolved by re-dialing or a local PABX is incorrectly configured.

### Cause 95: Invalid Q931 message (Cause 95)

This is either a very temporary condition or the ISDN settings for V-There specify the wrong switch type.

## Protocol error causes

These are a result of either a bug in V-There or of the unsuccessful configuring of the ISDN switch type. They are listed for completeness.

Cause 96: Mandatory information element missing (Cause 96)

Cause 97: Message type non-existent (Cause 97)

Cause 98: Message not compatible with call state (Cause 98)

Cause 99: Information element non-existent (Cause 99)

Cause 100: Invalid information element contents (Cause 100)

Cause 101: Message not compatible with call state (Cause 101)

Cause 102: Recovery on timer expires (Cause 102)

Cause 111: Protocol error (Cause 111)

## Other causes

Cause 127: Internetworking (Cause 127)

This means an error occurred somewhere on a network which does not provide error reporting. Try again or consult your ISDN provider.

## Appendix C: Reprogramming V-There Via Serial Line

This procedure is required in either of the following circumstances:

- A web-based download has failed during the copy to flash, rendering the V-There inoperable.
- For some reason the V-There cannot access the Internet via the built-in Ethernet port.

The following steps need to be performed.

1. Consult the Technical Support section at [www.clearone.com](http://www.clearone.com) for the location of latest release. Download the required file—this contains a single file called nk.bin. Unzip the file to get the nk.bin file.
2. Connect a serial cable to port A (upper connector) of V-There and a PC running HyperTerminal. Set the communications settings on the PC to 57600 baud, 8 data bits, 1 stop bit, no parity, no flow control. Switch on V-There and simultaneously hit any button on HyperTerminal to bring up the V-There loader menu. If the text does not stop at the loader, switch off V-There and try again.
3. Press the 4 button (Download over Serial, copy to Flash and Run). On HyperTerminal, start the Transfer/Send File dialog. Select NK.bin as the file and 1K Xmodem as the protocol. When finished, V-There will be running the new version.

## Appendix D: Compliance Statements and Warranty

### North American users

1LXUSA-32757-XD-N



The Federal Communications Commission warns the users that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the users authority to operate the equipment.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that where the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



## FCC Part 68 requirements

The Federal Communications Commission (FCC) has established rules that permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.

1. If this device malfunctions, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not true, the Telephone Company may temporarily disconnect service.
2. The Telephone Company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the Telephone Company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- A. The telephone number to which it is connected.
- B. The USOC jack required.
- C. The FCC registration number.

In the event of equipment malfunction, an authorized agent should perform all repairs.

This equipment is an S/T interface and is designed to connect to an external NT-1 terminal adapter. The user must supply an approved NT-1 terminal adapter in order to connect to the public network.

## Canadian users

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur la brouillage radioélectrique édicté par le ministère des Communications du Canada.

Notice: The Industry Canada identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and equipment safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.



Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or if equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

### European users



This Information Technology Equipment has been tested and found to comply with the following European Directives:

- i. EMC directive 89/336/EEC
- ii. Telecommunications R&TTE directive 1999/5/EC
- iii. Low Voltage directive (SELV) 73/23/EEC

This Equipment 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.

This equipment has been found to comply with the requirements for ISDN BRI, Europe. Routes to approval have been EC Type Examination in addition to Production Quality Assurance (Annex I Annex III). Compliance means that this equipment can be connected to the public telecommunications infrastructure either directly or indirectly.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.



## Australian and New Zealand users

N11567



This equipment has been tested and found to comply with the requirements for Australian/New Zealand EMC standard AS/NZ 3548.

This equipment meets or exceeds requirements for safety in Australia (TS001/AS3260).

The telecommunication module in this equipment has been tested and found to comply with the Australian Telecommunications standard TS013.

### General Notices

With exception to the power block and the Telecommunication ports all user interconnection points have SELV safety status as defined in EN60950 and IEC950.

This equipment is intended to be used with a Class 2 power supply UMEC  
Model # UP0403A-01P  
Rating: 5V @ 3A, 12V @ 2A

### Safety Information

The V-There contains a lithium battery.

- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instruction.

The V-There consists of an internal ISDN interface card. This card has been assembled to a specific configuration in the V-There so as to maintain optimal operation.

## End user warranty

ClearOne Communications, Inc. (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this product be defective, the Manufacturer agrees, at its option, to:

- A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date the end user is invoiced for the product, provided the end user returns the product to ClearOne Communications or an authorized ClearOne dealer according to the Product Return and Repair Policy set forth below;

- B. Furnish replacement for any defective parts in the product for a period of one year from the date the end user is invoiced for the product, provided the end user provides proof of purchase that demonstrates that the product is still within the warranty period. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by the Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

### Product Return and Repair Policy

1. Return to Seller if Purchased Through an Authorized Dealer
  - a. Proof of purchase date from reseller within warranty period must be provided by the end user.
  - b. Seller may, at its discretion, provide an immediate exchange or repair or may return the unit to the Manufacturer for repair.
2. Return to Manufacturer
  - a. An RMA (return merchandise authorization) number must be issued to the end user from ClearOne technical support.
  - b. The end user must return the product to ClearOne with proof of purchase (showing purchase date) for a warranty claim, and display the RMA number on the outside of the shipping package.

#### THIS WARRANTY IS VOID IF:

- A. The product has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,
- B. The product has been altered or repaired by other than the Manufacturer or an authorized service representative of the Manufacturer; or,
- C. Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the product which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the product; or,
- D. The product's original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES



TO THE PRODUCT. MANUFACTURER'S MAXIMUM LIABILITY HEREUNDER SHALL BE THE AMOUNT PAID BY THE END USER FOR THE PRODUCT. No person or entity authorized to assume any obligation or other liability in connection with the products. No action, regardless of form, arising out of or relating to the product or this Warranty, may be brought by end user more than one (1) year after the cause of action has accrued.

Manufacturer shall not be liable for punitive, consequential, or incidental damages, expenses, or loss of revenue or property, inconvenience, or interruption in operation experienced by the end user due to a malfunction in the purchased product. No warranty service performed on any product shall extend the applicable warranty period.

In case of unsatisfactory operation, the end user shall promptly notify the Manufacturer at the address set forth below in writing, giving full particulars as to the defects or unsatisfactory operation. Upon receipt of such notice, the Manufacturer will give instructions respecting the shipment of the product, or such other matters as it elects to honor this warranty as above provided. This warranty does not cover damage to the product during shipping and the Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by the customer.

This warranty extends only to the original end user and is not assignable or transferable. This Warranty is governed by the laws of the State of Utah, without regard to the conflicts of interests provisions thereof.

ClearOne Communications, Inc.  
1825 Research Way  
Salt Lake City, Utah 84119

## Appendix E: Upgrading to V-There 2.0

This upgrade includes enhancements to further improve the performance, functionality, and usability of V-There. New features include a configuration wizard, Microsoft Word and Excel document support for presentations, auto hang-up, and enhanced language support; French, German, or Spanish can be set as the language default for the onscreen user interface.

The V-There must be connected to an IP network capable of accessing the Internet to perform this upgrade. The upgrade takes about 10 minutes to complete.

1. Power on the V-There if it isn't already on.

2. Press the Expert/Novice Mode key on the keyboard until "Expert System Setup" is displayed on the toolbar.
  3. Select Expert System Setup.
  4. Navigate to the Adjust Various Advanced Settings button and press Enter.
  5. Select the Download tab.
  6. In the Download LAN Address field, type  
`www.clearone.com/downloads/VThere2_0.vmb`  
  
The LAN address is case sensitive. Type the address exactly as shown above.
  7. Select the Update Firmware check box. Make sure the Download to Flash Card and Boot from Flash Card check boxes are not selected.
  8. Click the Start Download button.
  9. A Download in Progress message displays the status of the upgrade. The V-There will download the 11.2MB file. When this is complete, a message stating the download is complete will appear. Click OK.
  10. Press the Menu button on the keyboard.
  11. Select Yes when prompted to reboot the unit.
  12. After the V-There reboots, the unit will operate with the upgraded software.
- Installation upgrade is complete.



## Glossary

### A

**Adaptive Ambient** Monitors the varying ambient noise level in the room and changes the threshold level at which a mic element in the AccuMic II gates on.

**Annex D image** A still, high-resolution image in an H.320 or H.323 video stream. Enables remote presentations in which images appear separately from the live video stream, typically on a second monitor.

**Audio Rx** Received audio modes.

**Audio Tx** Transmitted audio modes.

**Automatic gating** Automatically gates microphones on or off.

### B

**Baud** The number of signaling elements that occur each second during data transfer.

**Bonded call (2B, 4B, and 6B)** Each ISDN channel consists of two lines. The first 64K of the first line are used for voice transmission and the rest for data transmission. Each line has a separate ISDN number, which you would normally have to enter when making a call. Therefore, if you want to make a call using three ISDN channels, you have to enter six ISDN numbers on the Dial screen. However, for a bonded call, you would enter only one destination number. The IMUX software will then work out the numbers of the other ISDN channels from the number dialed. See also Unbonded calls.

### C

**Channel** The term channel refers to a communications path between two computers or devices. In this manual the channels are the wires in the ISDN cables.

**Com** An interface on a computer to which you can connect a device.

**Composite monitor** Television monitor. See also NTSC and PAL.

**CRC** Cyclic redundancy check is a technique for detecting data transmission errors.



## D

**Delimiter** A character that is used to indicate that a gateway prefix is being used. For example, if \* is the delimiter and P is the gateway prefix, you enter \*P and the V-There automatically connects at 128K. See also Gateway and Gateway prefix.

**DHCP** Dynamic host configuration protocol is a protocol for assigning dynamic IP addresses to devices on a network. With dynamic addressing, a device can have a different IP address every time it connects to the network. DHCP also supports a mix of static and dynamic IP addresses.

**DNS server** Domain name system (or service) is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember.

**DTMF tones** Dual tone multi-frequency assigns a specific frequency, or tone, to each button on, for example, a remote control so that it can easily be identified by a microprocessor.

## E

**E164** A numeric name that is assigned to your gatekeeper. See also H.323.

**Echo cancellation** A system for applying echo cancellation to an input.

**Ethernet** A local-area network protocol. See also LAN.

## F

**Far-end** The location at the other end of the video conference.

**Firmware** Firmware is software embedded in a device.

**Flash card.** See PCMCIA card.

## G

**Gatekeeper** The gatekeeper verifies the destination address of a call prior to allowing the call to proceed. It also controls bandwidth usage so the network isn't overloaded and it provides convenient address translation for the far-end conferencing system in a call.

**Gateway** A gateway is a combination of hardware and software that links two different types of networks together.



**Gateway prefix** The gateway prefix lets you enter a prefix for the connection speed you want to use. For example, if P is the prefix for a 128K connection, you enter P before the gateway IP and the gatekeeper automatically connects at 128K speed.

**Gentner Distributed Echo Cancellation** Technology that places an echo canceller on each mic element in the AccuMic II for outstanding echo cancellation performance.

## H

**H.323** The H.323 name is an alphanumeric name that the Gatekeeper can recognize as an IP address. For example, ADAM3. The gatekeeper recognizes that it belongs to the IP address of Adam Smith and routes the call to the address. Since the H.323 name is not an IP address, the V-There can keep this name even if it is moved within the network. See also E164.

The H.323 standard is an audiovisual conferencing standard that defines how data is transmitted across networks. In theory, H.323 should enable users to participate in the same conference even though they are using different video conferencing applications.

**HTML** Hyper Text Markup Language. It is the authoring language used to create documents on the World Wide Web.

## I

**IP** Internet Protocol specifies the format of packets, also called data grams, and the addressing scheme on the Internet. IP works like the postal system; you send a package to an address without a direct line between you and the receiver.

**IP Address** An identifier for a computer on a network. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255. For example, 1.160.10.240.

**ISDN** The Integrated Services Digital Network is a set of standards that support the transmission of voice, video, and data over a single network. An ISDN call is a call that is made over the ISDN network using the H.320 protocol. See also ISDN-R.

**ISDN number** A phone number for the ISDN connection. Ask your system administrator for your ISDN number.

**ISDN-R** Integrated services digital network that is limited to 56kbps. It is sometimes used in the USA and in Saudi Arabia. See also ISDN.



## J

**Java** A high-level programming language for the World Wide Web.

## L

**LAN** A computer network that spans a relatively small area. LANs are capable of transmitting data at very fast rates, much faster than data can be transmitted over a telephone line; but the distances are limited, and there is also a limit on the number of computers that can be attached to a single LAN.

**LAN call** A call made over your local area network using the H.323 standard for video conferencing. H.323 is a protocol approved by the International Telecommunication Union (ITU) as a standard for the transmission of audio and video data. H.323 allows different teleconferencing devices to communicate.

**LAN-WAN call** A LAN-WAN call is a call made from a local area network to an H.320 wide area network (WAN), via a gateway. See also LAN and WAN.

**LED** Light emitting diode is an electronic device that lights up when electricity is passed through it. LEDs are usually red.

**Line input** Anything with an audio output can be attached. For example, you can connect a CD player, so that when you are showing a PowerPoint® presentation you can play audio that goes with it.

## N

**Near-end** The local site of the video conference.

**NT-1** An interface box that converts ISDN data into a format the V-There can understand (and vice-versa). Each ISDN line requires one NT-1. An NT-3 handles three ISDN lines (V-There 2200 only). An NT-1 (or NT-3) is required for North American V-There users to use ISDN; these interfaces are available through your ClearOne distributor.

**NTSC monitor** The national television standards committee is responsible for setting television and video standards in the United States. See also PAL Monitor.

## P

**PA Adaptive Mode** The AccuMic II recognizes how much loudspeaker audio is picked up by the microphone and then uses this level as the new ambient level. This prevents loudspeaker audio from gating on a microphone, while still allowing people in the room to gate on microphone elements as they speak.



**PAL monitor** Phase alternating line is the dominant television standard in Europe. See also NTSC Monitor.

**PBX** Private branch exchange, a private telephone network used within an enterprise. Users of the PBX share a certain number of outside lines for making telephone calls external to the PBX.

**PCMCIA card** Personal Computer Memory Card International Association. A standard for small, credit card-sized devices, called PC cards.

**PIP** Picture-in-picture, a function that makes it possible to display one or more images of different origin on one screen.

**Proxy server** A server that sits between a client application, such as a web browser, and a real server. It intercepts all requests to the real server to see if it can fulfill the requests itself. If not, it forwards the request to the real server.

## Q

**QCIF** Quarter common intermediate format is a video conferencing format that specifies data rates at 1/4 the resolution of CIF. QCIF support is required by the ITU H.261 video conferencing standard. Sending QCIF (176 x 144 pixels) will increase the frame rate sent on a low bandwidth call. See also CIF.

**QWERTY keyboard** The arrangement of buttons on a standard English computer keyboard or typewriter. The name derives from the first six characters on the top alphabetic line of the keyboard.

## S

**SCART** An industry standard means of connecting a variety of audio-visual equipment together. The connection consists of a 21 way female socket (pin 21 being the metal shield of the connector) that is fitted to most videocassette recorders (VCRs) and television sets.

**SPID** Service profile identifier is a number that identifies a specific ISDN line. When you obtain ISDN service, your telephone company assigns an SPID to your line. Most telephone companies in the U.S. use the generic SPID format, which is a 14-digit number. The first 10 digits identify the telephone number, called the Directory Number (DN). The remaining four digits identify a particular ISDN device, in the case where multiple devices share the same Directory Number.

**Subnet mask** A filter that selectively includes or excludes certain values. It determines which part of a net the device should consider to be local.



## T

**T.120** T.120 comprises a series of protocols approved by the International Telecommunications Union (ITU-T) for document conferencing and application sharing during a teleconference.

## U

**Unbonded calls** An unbonded call is a call that treats multiple ISDN lines as single channels. You need to enter all the numbers of the receiving end. If there are numbers missing, the V-There will not establish a call. If a channel goes down during a call, the call will be terminated. If a line goes down, the call will gradually terminate.

**URL** Uniform Resource Locator is the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

## V

**VBScript** Visual basic scripting edition enables web authors to include interactive controls, such as buttons and scroll bars, on their web pages. See also Java.

**VGA monitor** Video graphics array is a graphics display system for PCs. All PCs made today support VGA. See also Composite monitor.

**V-There network name** This machine name takes the format V-There`nnnnnnnnnn` where `'nnnnnnnnn'` is the 9-digit serial number of V-There.

## W

**WAN** Two or more local-area networks (LANs) connected via telephone lines and radio waves is called a wide-area network (WAN).

**WINS server** Windows Internet Naming Service is a system that determines the IP address associated with a particular network computer. This is called name resolution. WINS supports network client and server computers running Windows and can provide name resolution for other computers with special arrangements. Determining the IP address for a computer is a complex process when DHCP servers assign IP addresses dynamically. For example, it is possible for DHCP to assign a different IP address to a client each time the machine logs on to the network. WINS uses a distributed database that is automatically updated with the names of computers currently available and the IP address assigned to each one.



## Index

### A

- Annex D format 48
- audio in 8
- audio out 8
- audio speakers 6

### B

- baud 60, 67
- bonded calls 67

### C

- camera
  - auxiliary 8
  - preset 19
- CIF 71
- composite monitor 9, 67
  - NTSC 9

### D

- DHCP 68
- DNS 24, 68
- DTMF tones 68
- dual monitor mode 47

### E

- E164 25, 68
- echo canceller 32
- Ethernet 5, 7, 59, 68
- Expert Mode 14, 15, 21, 23, 28, 30, 43, 44
- Express Mode 15, 16, 43, 44, 52

### F

- flash card
  - inserting 47

### G

- gatekeeper 25
  - delimiter 68
  - IP address 24
- gateway
  - prefix 68

### H

- H.323 22, 25, 26, 32
- HTML 47, 69

### I

- IMUX 67
- ISDN
  - connecting 8
- ISDN-R 69

### L

- LAN
  - connecting 7
  - subnet mask 71
- LAN Settings
  - network 24
- LAN-WAN 70

### M

- microphone 8

### N

- navigating
  - arrow keys 13
  - keyboard 13, 15

### O

- other devices 7



## P

PBX 54, 71  
PCMCIA 71  
PIP 14, 71  
power supply 6, 8, 9, 63  
presentations 47

- dual monitor mode 47
- presentation mode 49
- sending 47

proxy server 71

## Q

QCIF 71

## R

remote control 5

## S

SCART 5, 9, 71  
snapshot 14, 16, 35  
SPID 71

## U

URL 72

## V

VGA monitor 9, 72  
video

- out 8

## W

web browser 52, 71  
WINS 24, 72