ClearOne®

CHAT® 170 - Group Speaker Phone for Office Communicator

USER'S MANUAL

OPTIMIZED FOR
Microsoft®
Office Communicator

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CHAT 170 USER'S MANUAL

CLEARONE PART NO. 8xx-xxx-xxx - June 2010 (REV. 1.0)

**U.S. PATENTS: D539,274; D556,189; D531,999.
OTHER PATENTS PENDING.**

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CHAPTER 1: INTRODUCTION

PRODUCT OVERVIEW

Thank you for purchasing the ClearOne CHAT 170 group speakerphone.

The CHAT 170 is a high performance audio peripheral that provides rich audio for hands-free calls with Microsoft Office Communicator communication program. The CHAT 170 is completely full-duplex and contains HDConference™, the suite of audio processing technologies that includes Distributed Echo Cancellation™, noise reduction, automatic level controls, and adaptive modeling, producing crystal clear conversations.

Though designed specifically to be used with Microsoft Office Communicator, the CHAT 170 can also be used with other devices such as enterprise telephones and other applications such as VoIP softphones, web conferencing, instant messaging and PC-based gaming. This manual will provide detailed instructions on using the CHAT 170 with Microsoft Office Communicator, as well as with these additional devices and applications.

Service and Support

If you need additional information on how to set up or operate your CHAT 170 group speaker phone, please contact us. We welcome and encourage your comments so we can continue to improve our products and better meet your needs.

Technical Support

Telephone: 1.800.283.5936 (USA) or 1.801.974.3760
Fax: 1.801.977.0087
E-mail: tech.support@ClearOne.com
Web site: 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
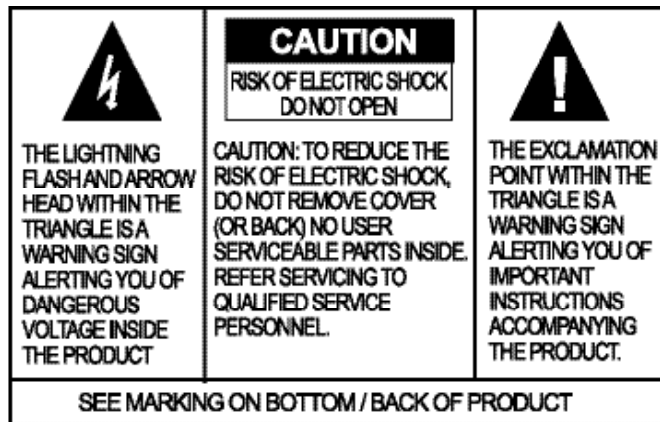E-mail: sales@ClearOne.com

Product Returns

All product returns require a return material authorization (RMA) number. Please contact ClearOne Technical Support before attempting to return your product. Make sure you return all the items that shipped with your product.

IMPORTANT SAFETY INFORMATION

Read the safety instructions before using this product. This personal speaker phone is not designed for making emergency telephone calls when the power fails. You must make alternative arrangements for telephone access to emergency services.

- Read and understand all instructions. Follow all warnings marked on the product.

- Unplug the product from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use only a damp cloth for cleaning.

- Do not use this product in or near water, for example, near a bathtub, kitchen sink, or swimming pool.

- Place this product on a flat, level, dry surface for ongoing operation.

- Never place product near heat radiators or registers. Allow adequate ventilation for heat dissipation.

- This product should only be operated using a power source specified on the product label. If you are not sure about the power source at your location, consult your dealer or local power company.

- Do not overload wall outlets and extension cords; this can cause fires or electric shock.

- Never spill liquid on or into the product.

- Do not disassemble this product. Opening or removing covers can expose you to dangerous voltages and other risks. Incorrect reassembly can cause electric shock during subsequent use. Disassembly voids the warranty.

- Unplug the product from the outlet and contact a qualified service technician under the following conditions:
    a. When the power supply cord or plug is damaged or frayed.
    b. If liquid has been spilled into the product.
    c. If the product does not operate normally by following the operating instructions.
    d. If the product has been dropped or damaged.
    e. If the product exhibits a distinct change in performance.

- Avoid telephones during an electrical storm. There is a risk of electric shock from lightning.

- Do not use this product to report a gas leak in the vicinity of the leak.

- Do not use this product near intensive care medical equipment or by persons with pacemakers.

- This product can interfere with electrical equipment such as answering machines, TV sets, radios,

- computers and microwave ovens. Do not place the product in close proximity to any of these devices.

WARNING: TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

THE LIGHTNING FLASH AND ARROW HEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF DANGEROUS VOLTAGE INSIDE THE PRODUCT

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THE EXCLAMATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF IMPORTANT INSTRUCTIONS ACCOMPANYING THE PRODUCT.

SEE MARKING ON BOTTOM / BACK OF PRODUCT

Save these instructions

The illustration below shows the parts that ship in the box with each model of the CHAT 170. Contact your dealer for replacement parts and accessories.

> **NOTE**: ClearOne is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

REPLACEMENT PARTS & ACCESSORIES

The standard CHAT 170 is used primarily as a USB-configured device connected to your laptop or PC for hands-free calls with Skype. However, additional accessories can be purchased for the CHAT 170 to make it interoperable with several enterprise telephone handsets and video conferencing systems. These accessories are designed for use with ClearOne's CHAT 170 speakerphone but are also completely compatible with the CHAT 170.

The illustration below shows all parts and accessories available for the CHAT 170 and which will also work with the CHAT 170. Contact your dealer for replacement parts or accessories.

CHAT 170 CONFIGURATIONS

ClearOne's CHAT 170 comes in several configurations, as shown below. The CHAT 170 group speakerphone itself is the same in all configurations; different accessories have been packaged with the unit to enable a variety of connections. All CHAT 170 units have a mini-USB port, so every configuration can connect to a PC.

Configuration	Usage Profile
CHAT 170 for Avaya & Cisco Telephone Handsets)	Connects to the headset jack of the Avaya or Cisco handset for full-duplex speaker phone capability.
CHAT 170 USB	Connects to the USB port of a PC (or laptop) for use with softphones, internet tele-phony applications, web conferencing, instant messaging with audio, etc.
CHAT 170 VC	Connects to any video conferencing system for full-duplex speaker phone capability.

CHAPTER 2: GETTING STARTED
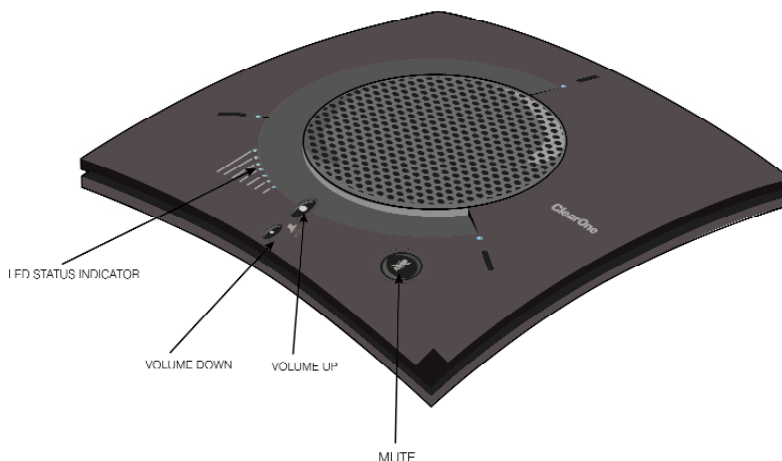
LED Indicators
Several blue LED lights show when the CHAT 170 is connected to a PC via USB or when the CHAT 170 is plugged into a breakout box. The three status indicator LEDs above each microphone are blue when the unit is operational and change to red when mute is turned on. The seven LEDs next to the volume controls illuminate blue to indicate the current volume setting—more lights indicate a higher volume level.

Once successfully connected to your computer, the CHAT 170 will automatically become the default audio device for Windows (speaker and microphone). When you run Skype, the CHAT 170 will also become the default speaker and microphone for Skype calls, replacing your computer's speakers and microphone.

Volume and Mute Buttons
Use the Volume Up/Down buttons to adjust the volume level of the CHAT 170. Use the Mute button to mute the CHAT 170's microphones until the button is pressed again.

If you are using the CHAT 170 with a PC (for Office Communicator calls), you can also use the volume controls in Windows or in the CHAT software application to make these adjustments.

> **NOTE**: If your sole purpose for purchasing the CHAT 170 is to use it with Microsoft Office Communicator and you do not intend to use it with hardware devices other than your PC, you do not need to review the rest of this manual. The remaining pages of this manual describe how to connect the CHAT 170 with other devices other than a PC and how to install and use the CHAT software in order to correctly configure the CHAT 170 for use with those devices.

Headset Button
Press the Headset button on the Phone Breakout Box to send audio from your phone to your headset connected to the CHAT 170 Breakout Box. This will also disable audio going from the Breakout Box to the CHAT 170 — it is routed strictly to the headset. The phone breakout box LED indicator illuminates indicating that the headset audio is activated and the CHAT 170 LED indicators will remain lit. The audio is no longer routed to the CHAT 170 from the Breakout Box (USB audio is still active). Press the Headset button again to disable the headset audio and reactivate the audio from the Breakout Box to the CHAT 170. The LED dims out to indicate the change.

VC Breakout Box
Once you have properly connected the CHAT 170 VC Breakout Box to your video conferencing device and TV using the included RCA Connection Cable, all settings changes such as mute, microphone and speaker level adjustments, etc., are controlled through the CHAT 170 software. The VC Breakout Box itself has no buttons and no functionality for making settings changes. The LED indicates that the device has power.

> **NOTE**: If your CHAT 170 is connected to a PC, any changes you make to volume by pressing the CHAT 170 volume buttons will also change the volume settings in Windows.

INSTALLING THE CHAT SOFTWARE FOR WINDOWS

> **>** **NOTE**: The install procedure is the same for all versions of Windows XP, Windows Vista and Windows 7 operating systems.

The CHAT 170 can be used right out of the box and there's no software to download or install if it is to be used only with a PC.

The following procedure can be used to download and install the CHAT software for the CHAT 170 if it is to be used with other devices or if the CHAT 170 firmware requires updates.

1. Download the CHAT software by accessing the following:

    http://www.clearone.com.support/downloads.php?content=main

2. Select your device from the "*BY PRODUCT*" window and click **SEARCH** and the screen will display only those downloads available for your specific device. Select the latest version of the CHAT 70/170 Software and the system will display a confirmation window for the software to be downloaded to your computer.

3. Unzip the downloaded folder and run **Setup.exe** to begin the installation process.

4. Follow the on-screen prompts to complete the software installation.

When the CHAT software installation is complete, start the CHAT software by double-clicking the

ClearOne CHAT icon that is now on your Windows desktop, or by clicking

(Start > All Programs > ClearOne Communications > CHAT > ClearOne CHAT).

 Before using the CHAT 170 for the first time, proceed with the audio settings configuration procedure located in **Chapter 4** under the **Advanced** section of this manual. This will ensure optimal sound quality for each device and application you plan to use with the CHAT 170.

CONNECTING THE CHAT 170 TO A PC

1. Using the included USB cable, connect the CHAT 170 to your PC or laptop. The blue LED indicators on the CHAT 170 illuminate, indicating that the CHAT 170 is powered and ready for use.
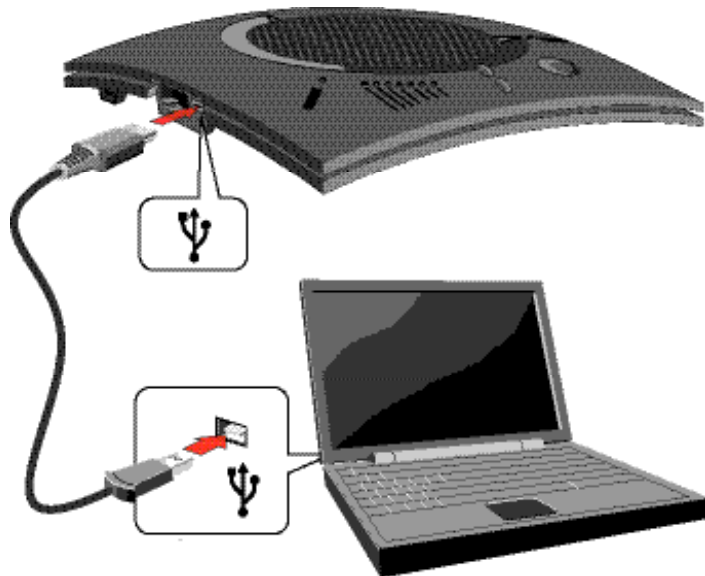
CONNECTING THE CHAT 170 TO EXTERNAL DEVICES

Connecting to a Telephone

ClearOne provides configurations of the CHAT 170 that make it possible to connect the CHAT 170 to enterprise telephone handsets from Cisco and Avaya (see **CHAT 170 Configurations** in the **Introduction** to this manual). The CHAT 170 phone Breakout Box is the interface between the CHAT 170 and the particular telephone.

1. Using the included 25' RJ-45 cable, connect the Phone Breakout Box to your CHAT 170.
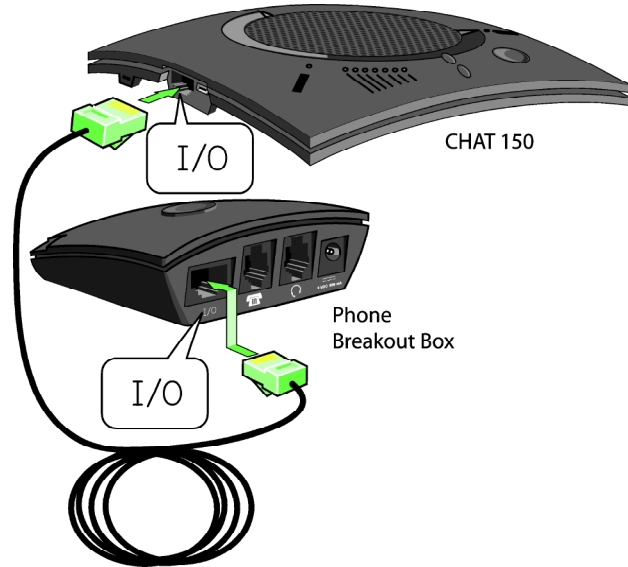
2. Using the included 2' RJ-9 telephone cable, connect the Phone Breakout Box's **phone jack** to your telephone's **headset jack**.

> ⚠️ **DO NOT** plug the cable into the telephone's line jack, handset jack, or a telephone different from that listed on the bottom of the Phone Breakout Box as damage to the telephone and/or CHAT 170 might occur.
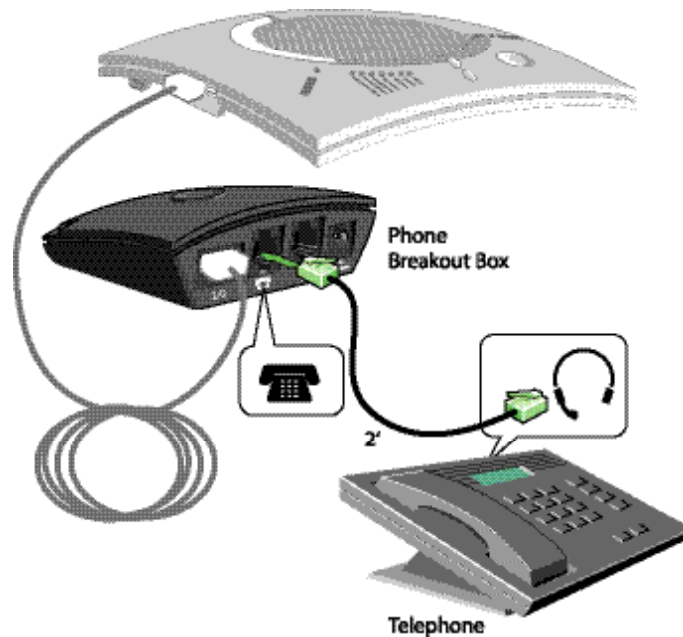
3. If you have a headset that you typically use with your telephone, connect it to the **headset jack** on the CHAT 170 Phone Breakout Box.
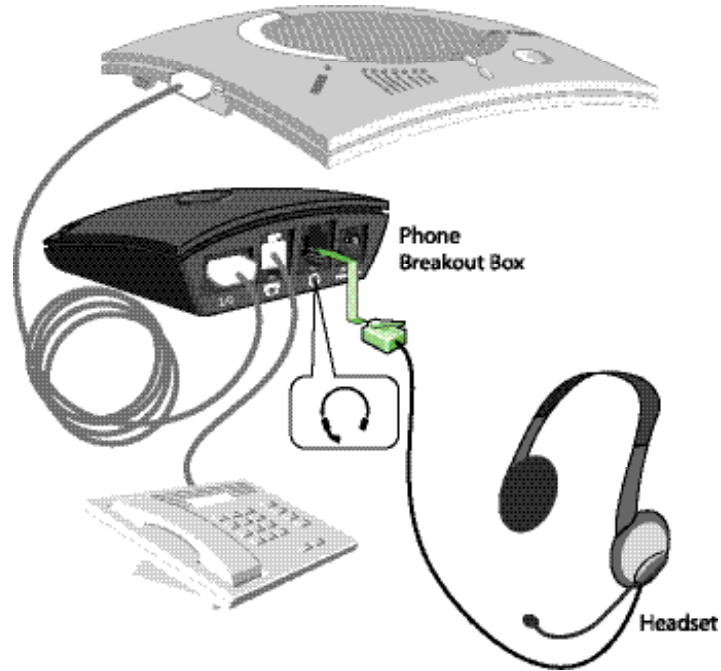
4. Slide the correct power supply clip for your country into the included power supply. The power supply may contain a plastic shield that must be removed before inserting the clip.
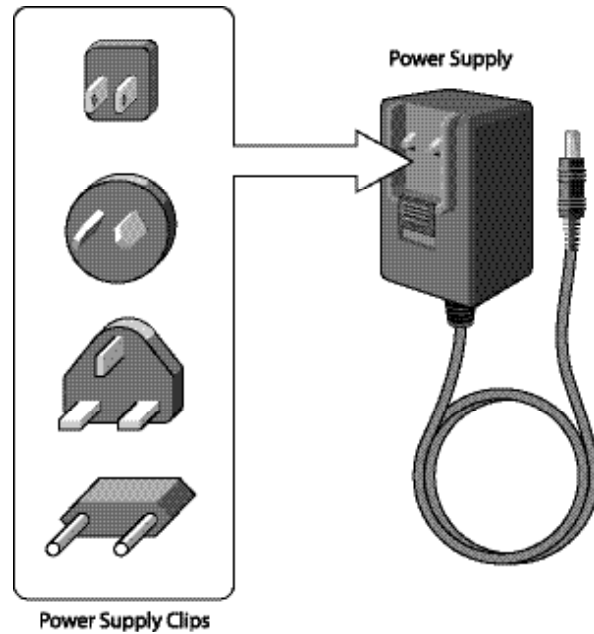
5. Using the included power supply, connect the CHAT 170 Phone Breakout Box to a power outlet.

6. The blue LED indicators on the CHAT 170 illuminate, indicating that the CHAT 170 is powered and ready for use.

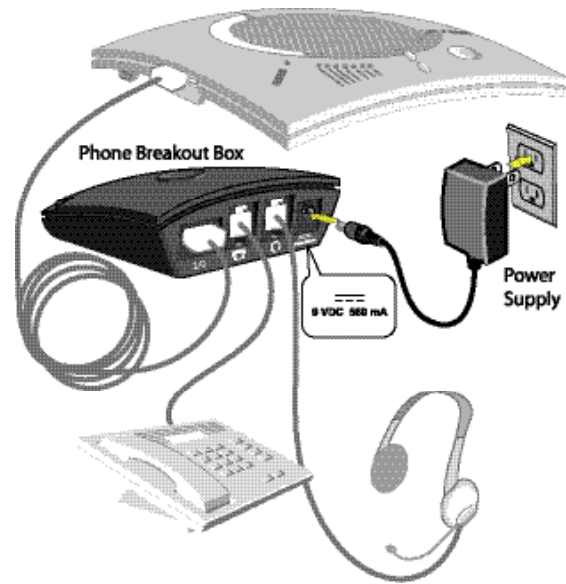7. Next, connect the CHAT 170 to your PC. This will allow you to use the CHAT software to configure the CHAT 170 for use with your enterprise telephone. Refer to **Connecting the CHAT to a PC** section at the beginning of this chapter.

> **>** **NOTE**: Press the **Headset** button on the phone Breakout Box to send audio from your phone to your headset connected to the CHAT 170 Breakout Box. This will also disable audio going from the Breakout Box to the CHAT 170—it will only be routed to the headset. The phone Breakout Box LED indicator illuminates indicating that the headset audio is activated. The CHAT 170 LED indicators remain lit, although audio is not routed to the CHAT 170 from the Breakout Box (USB audio is still active). Press the Headset button again to disable headset audio and reactivate audio from the Breakout Box to the CHAT 170. The LED dims out to indicate the change.

Connecting to a Video Conferencing Device

ClearOne provides configurations of the CHAT 170 that make it possible to connect your CHAT 170 to video conferencing systems. The CHAT 170 VC Breakout Box is the interface between the CHAT 170 and the video conferencing device. Once you have properly connected the CHAT 170 VC Breakout Box to your video conferencing device and TV (using the included RCA connection cable) all settings changes such as mute, microphone and speaker level adjustments, etc., are controlled trough the CHAT software application. The Breakout Box itself has no buttons and no functionality for making settings changes. The LED indicates only that the device has power.

1. Using the included RJ-45 cable, connect the VC Breakout Box to your CHAT 170.
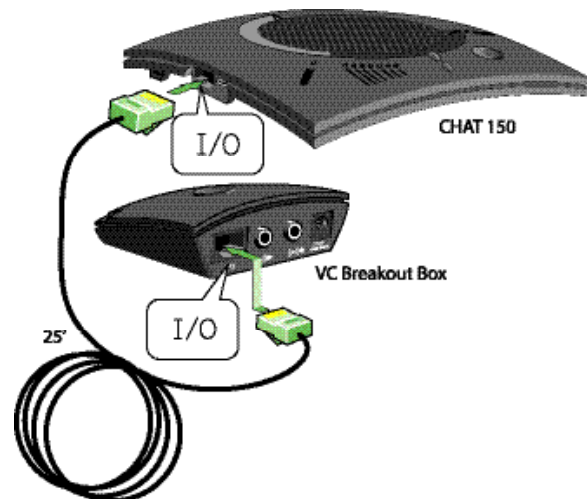
2. Using the included 6' RCA cable, connect the CHAT 170 VC Breakout Box to both your video conferencing device and/or TV/monitor, as shown in the following illustration. The cable has two RCA connectors on one end, and five on the other end, split into two groups with two and three connectors.

The end with two connectors goes to the **VC Breakout Box**. The **blue** connector connects to the **Audio In** port (identified **((•))←** by the icon), and the **black** connector goes to the **Audio Out** port (identified **((•))→** by the icon).

On the other end of the cable, the group with the **Red (Right)** and **White (Left or Mono)** connector plugs into the corresponding audio ports on your TV. This connection allows you to either use the speaker on your CHAT 170 for audio from the far end, or alternatively you can use the speakers on the TV. See **Advanced Settings: Audio Settings in Chapter 4: Using The CHAT Application** for details on using this option.

The group with three connectors goes to your video conferencing device. The **Red (Right)** and **White (Left or Mono)** connectors go to the corresponding **Audio Out** ports. However, if your video conferencing device does not have left and right audio out, but only has a single channel (mono), connect the white connector to send a mono audio signal to the CHAT 170. The **black** connector is inserted into the **Audio In** port.
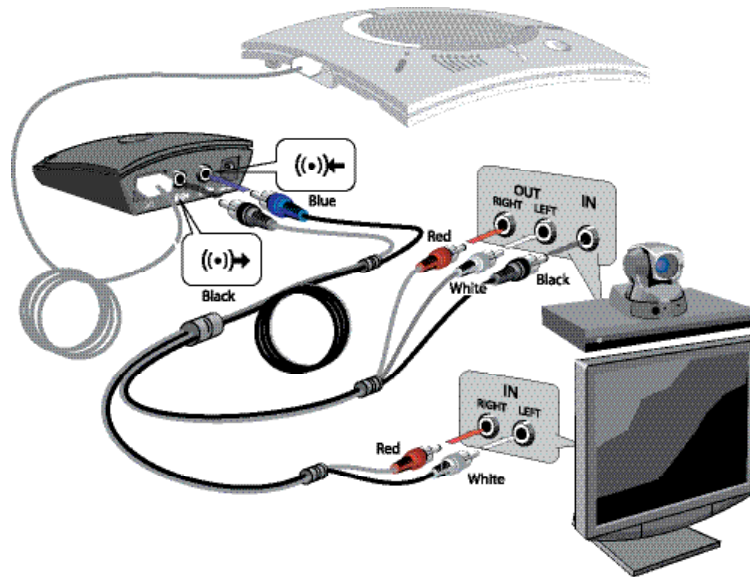
3. Slide the correct power supply clip for your country into the included power supply. The power supply may contain a plastic shield that must be removed before inserting the clip.
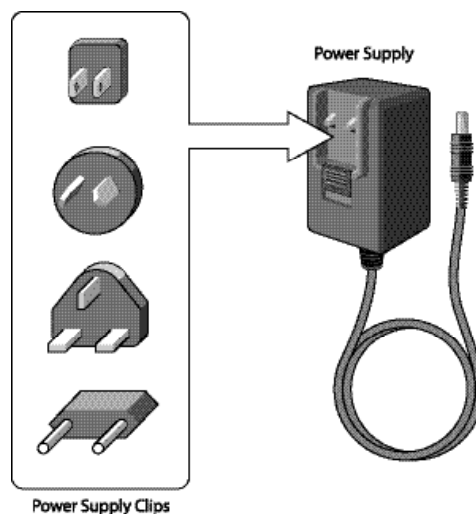
Power Supply Clips

4. Using the included power supply, connect the CHAT 170 VC Breakout Box to a power outlet.

5. The blue LED indicators on the CHAT 170 illuminate, and the LED power indicator on the VC Breakout Box illuminates, indicating that the CHAT 170 is powered and ready for use.
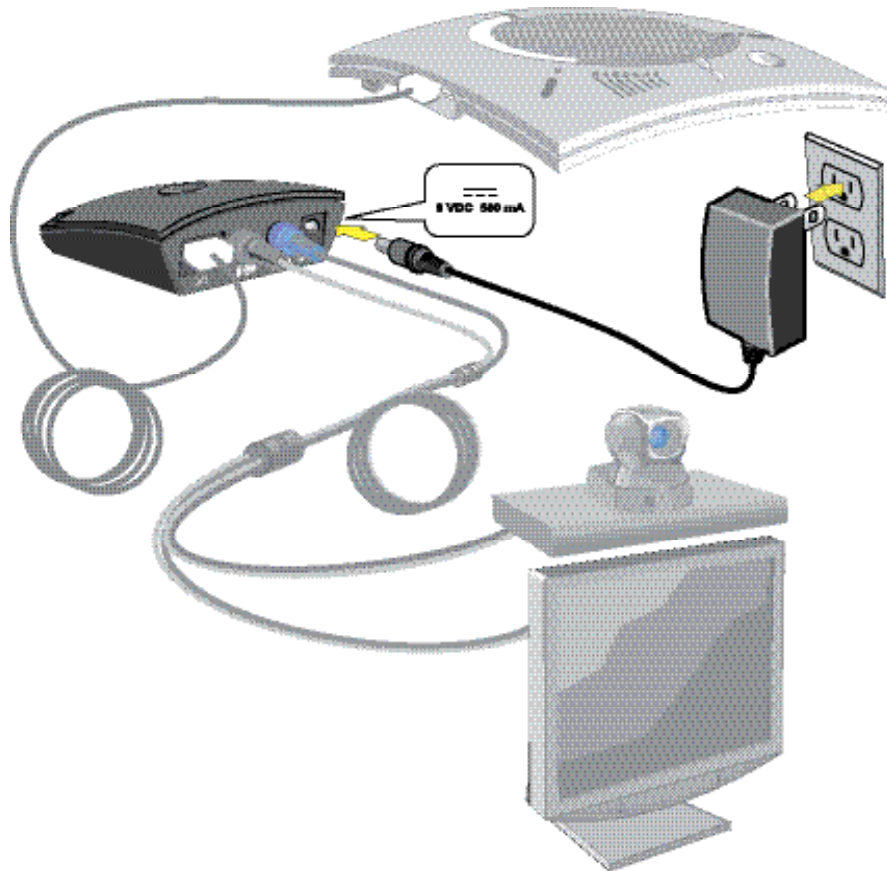
6. Next, connect the CHAT 170 to your PC (or USB device). This will allow you to use the CHAT software to configure the CHAT 170 for use with your video conference system. Refer to **Connecting to a PC** section earlier in this chapter.

The CHATAttach makes it possible to connect two CHAT devices together for larger conference settings using the CHAT-Attach accessory kit.

In order to use the CHATAttach accessory, the following criteria must be met:

1. Both CHAT devices must be the same model number - both CHAT 150, both CHAT 160 or both CHAT 170 devices - mixing CHAT models using CHATAttach is not currently possible.

2. Both CHAT devices must have identical firmware versions installed. The firmware must be CHATAttach compatible. To ensure this, download the latest version of the firmware from the Website and configure each device that will be connected to the CHATAttach accessory with the latest firmware. All older CHAT 170 devices require firmware updates in order to work with the CHATAttach accessory.

3. The CHAT device must be at least 5' apart for best performance.

Use the following steps to connect the CHATAttach accessory.

1. Connect the two CHAT devices using the keyed CHATAttach cable.

2. Position the two CHAT 170 devices so they're at least 5' apart from each other.

3. Plug in the CHATAttach power supply.
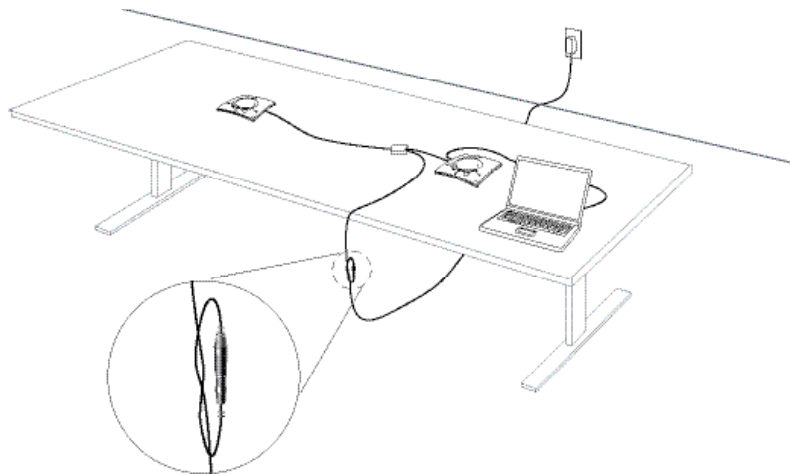
To prevent the power cable from inadvertantly becoming unplugged before, during or after meetings, it is recommended that the connector end of the cable be secured in some way. One approach is to knot the male-female connection to prevent this from occurring as shown above.
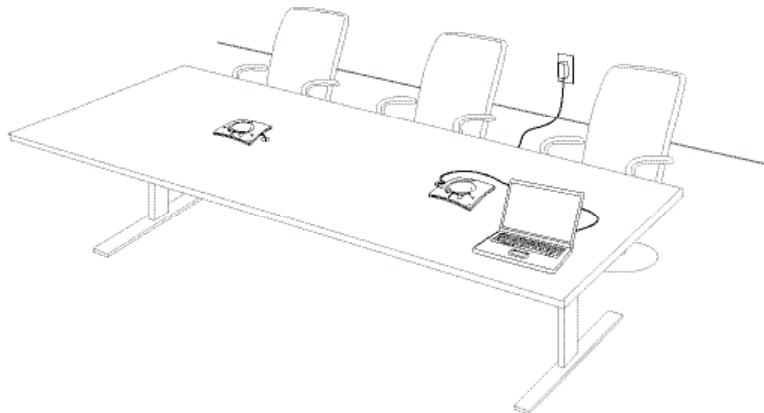
A recommended professional approach to setting up a conference room utilizing the CHATAttach accessory is to drill holes near where the CHAT devices will be placed, route the cabling through the holes and secure them underneath the conference table as shown above.

4. Follow the instructions in the CHAT 170 User's Manual to setup the CHAT device with a PC.

CHATAttach Working Modes

The following table outlines the CHATAttach working modes.

Mode #	Mode Code	Description	Condition
1	Solid Red LED on both CHAT devices	CHAT devices are in **MUTE** mode.	Normal
2	Solid Blue LED on both CHAT devices	CHAT devices are in **UNMUTE** mode.	Normal
3	Single Blue Volume light on both CHAT devices	No PC attached. CHAT devices are in **STAND-BY** mode and will **WAKE-UP** when a PC is reattached to a device. All previous CHAT device settings will be reinstated.	Normal

CHATAttach Troubleshooting

The following table describes issues that may occur and possible causes that may help identify and resolve problems when using the CHATAttach accessory.

Error #	Error Code	Cause	Resolution
1	Blinking Red LED's on both devices	Firmware on CHAT devices support CHATAttach but firmware versions are not the same.	Download and install the latest firmware onto both CHAT devices
2	Blinking Blue LED's on both devices	More than one PC connected at a time.	Connect ONLY one PC to the CHAT device
3	Blinking Red LED on a single CHAT device	1. CHATAttach Power Supply not plugged in 2. Only one CHAT device supports CHATAttach 3. Only one CHAT device connected to CHATAttach	1. Plug the CHATAttach Power Supply into an active power recepticle 2. Download and install the latest firmware onto both CHAT devices 3. Connect both CHAT devices to the CHATAttach accessory
4	CHAT devices will not synchronize	The firmware on both devices does not support the CHATAttach accessory.	Download and install the latest firmware onto both CHAT devices

CHAPTER 3: CONFIGURING THE CHAT 170

CONFIGURING YOUR CHAT 170

This section describes how you configure your CHAT 170 for the specific devices you are connecting to. The CHAT software contains a database of pre-configured device settings that allows you to instantly select and apply optimal settings for supported devices.

> **NOTE**: From time to time, ClearOne adds additional devices to the database. To update your CHAT software to include all currently supported devices, see the **Update Firmware & Database** section later in this chapter.

If the specific device you are using with the CHAT 170 is not listed in the database, you can create a custom device by following the instructions described later in this chapter.

DEVICE SETUP

To configure the CHAT 170 for your devices, perform the following steps:

1. Using the included USB cable, connect the CHAT 170 to your PC or laptop. The blue LED indicators on the CHAT 170 illuminate, indicating that the CHAT 170 is powered and ready for use.
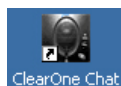
2. Start the CHAT software by double-clicking the ClearOne CHAT icon on your desktop, or by launching the application from your PC's Start menu.

The main screen of the CHAT software will be displayed.

3. Click **Device Setup** from the buttons on the left. The Device Setup screen appears displaying the general types of devices you can configure for use with the CHAT 170.
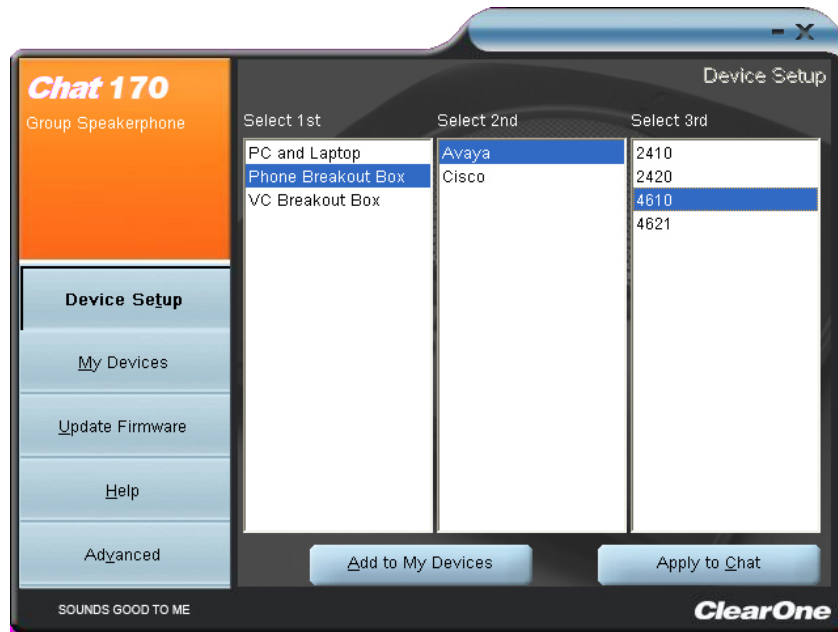

4. From the **Select 1st** column, select the type of device you are connecting to the CHAT 170.

5. In the **Select 2nd** column, select the manufacturer of your device. If you are selecting **PC and Laptop**, select **All**. If you are connecting to a VC Breakout Box and your manufacturer is not listed, select **Other**.

6. Select the model of the device from the list in the **Select 3rd** column. If you selected **PC and Laptop,** select **All**. If you selected **VC Breakout Box** and the specific model number is not listed, select Other.

7. Once all three selections have been made, the **Add to My Devices** and **Apply to CHAT** buttons at the bottom of the screen will become active.

8. When you are satisfied with your selections in all three columns, click the **Apply to CHAT** button to apply these settings to the CHAT 170. A message will appear indicating that the settings were successfully applied to your CHAT 170.

9. Click the **Add to My Devices** button and an entry containing these settings will be created in the My Devices screen allowing you to instantly select and apply this configuration in the future. A message will appear indicating that the device was successfully added.

10. Repeat steps 1 through 8 for any additional devices you will be using with your CHAT 170.

To ensure optimal sound quality, you need to customize the CHAT 170's audio settings for every application and device you will use. Refer to the tuning procedures provided in the **Optimizing Sound Quality** section that follows.

MY DEVICES

My Devices displays all of the devices that you have configured for use with your CHAT 170. This screen allows you to easily switch between settings for your listed devices, including any saved custom configurations, if you have created custom audio settings for your device (see *Advanced Settings: Database* later in this chapter for more information on saving custom settings).
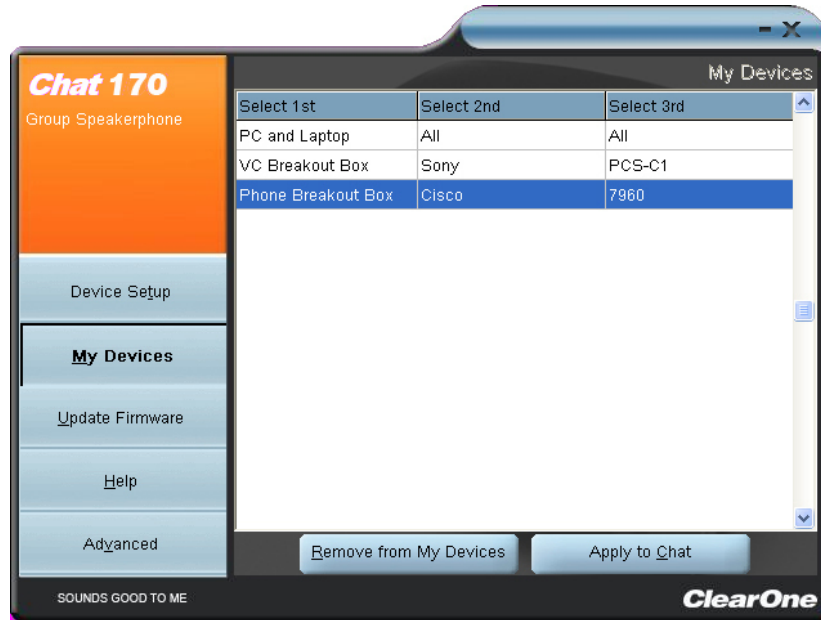
Select the device you wish to use with your CHAT 170, and click the **Apply to CHAT** button to apply the audio settings to your CHAT 170.

To remove a device from your list of **My Devices**, select the device from the list and click the **Remove from My Devices** button. Note that this only removes the device from the **My Devices** list. It does not remove it from the device database (see the **Advanced: Database** section later in this chapter for more information.)

OPTIMIZING SOUND QUALITY

For optimal sound quality, you must adjust the CHAT 170's audio settings for each device and application you will be using as described in the procedures below.

> **NOTE**: The volume settings in the CHAT software are synchronized with the Windows volume settings. Changing the volume using the CHAT software or the buttons on the CHAT 170 also changes the volume settings in Windows. Conversely, changing the volume settings in Windows will change the settings in the CHAT software.

Using with Pre-Defined Device Settings
The pre-defined device settings available in the CHAT application will provide good sound quality for many of the most popular devices used with the CHAT 170. If you used the procedure in the previous section to configure the CHAT 170's settings for one of these devices, test the sound quality before performing any additional tuning. If you are satisfied with the sound quality, no further adjustments are necessary.

Applying Audio Settings to the CHAT 170
Select the device you wish to use with the CHAT 170, then click the **Apply to CHAT** button to apply the custom audio settings.

CHAPTER 4: USING THE CHAT APPLICATION

USING THE CHAT APPLICATION

1. If not already open, start the CHAT application.

2. Click the **My Devices** button and select the device you want to tune (select the **Other** or **All** option if your device/application is not listed), then click the **Apply to CHAT** button.

3. For external hardware devices, connect the device to the CHAT 170 using the appriopriate connection diagrams located in **Chapter 2: Getting Started**.

4. Adjust the speaker and volume settings on the external device or in the application to 50% (half volume).

5. Click the **Advanced** button to display the pre-defined audio settings for the device you selected in step 2. Use the **USB Audio** section of the screen to tune applications; use the **Line Audio** section to tune external hardware devices connected to the CHAT 170 breakout box.

    > **NOTE**: In the **Advanced** screen, adjusting **Microphone Level** under **USB Audio** changes the CHAT 170 microphone volume for USB applications, while adjusting the Output Level under **Line Audio** changes the microphone volume being sent to the device connected to the CHAT 170's line audio jack. Likewise, adjusting **Speaker Level** under USB Audio changes the CHAT 170 speaker volume, while adjusting the **Input Level** under **Line Audio** changes the speaker volume being received from the connected device.

6. Place a call using the device or application. Land lines provide the best audio for tuning purposes.

7. Ask the person on the other end of the call to count from 1 to 10 in a normal voice. While the person is counting, click and move the **Input** slider in the CHAT application until the caller's voice can be clearly heard. Repeat as needed to find the optimal speaker volume for the device.

8. While the caller is still connected, count from 1 to 10 in a normal voice. Ask the caller if they can hear you clearly. Click and move the **Output** slider until the caller can hear you clearly. Repeat the test count as needed to find the optimal microphone volume for the device.

9. Click **Save to Database** to capture the optimized settings. The **Add Settings to Database** dialog appears. Enter appropriate name in the Model field, then click the **Save to Database** button.

10. The optimal audio settings for the device or application are now ready for use. Repeat steps 1 through 9 for any additional devices and applications.

To switch between audio settings for different devices and applications, click the **My Devices** button, select the desired device or application, then click the **Apply to CHAT** button. The audio settings are instantly applied for the chosen device or application.

Using A Third-Party Application
If you are using the CHAT 170 with an application other than CHAT—such as Cisco Communicator or Skype—ClearOne recommends using the tuning wizard or audio configuration controls in that application to adjust audio settings. If the application does not have a tuning wizard or audio settings, use the CHAT application to tune audio settings for optimal sound quality as explained in the previous section. Audio setup information can also be found for the CHAT Application in the next few pages.

The **Update Firmware** screen displays the current firmware version, unit name, and checks ClearOne's website for available firmware and device database updates. Update Firmware allows you to automatically update to the most recent firmware and device database using the **Check for updates** button, or you can use the **Select File** button to manually load an existing firmware file.

> **NOTE**: The computer your CHAT 170 is connected to must be connected to the Internet in order to use the **Check for updates** option.

Check for Firmware Updates
Perform the following steps to update your firmware and device database:

1. Start up the CHAT 170 software as described earlier in this manual.

2. Click on the **Update Firmware** button located along the left side of the window.

3. Click the **Check for updates** button to check the web for available updates.

4. The following series of messages appears below the progress bar:

   • "Locating website..."

   • "Website found"

   • "Click Update to load new firmware into device" (Appears only if a new firmware file is available.)

   • "Click Update to load new database information" (Appears only if a new device database file is available.)

> **NOTE**: If no new firmware or device database updates are available, the following messages will appear below the progress bar:

"Your device contains the most recent firmware"

"Your database contains the most recent updates"

This indicates that your firmware and database are current. No updates are required.

5.   Click the **Update** button to install available updates. The Update dialog box appears.
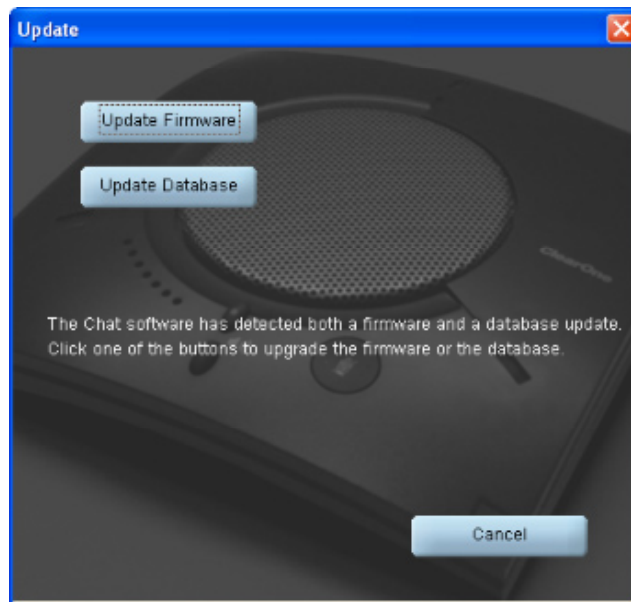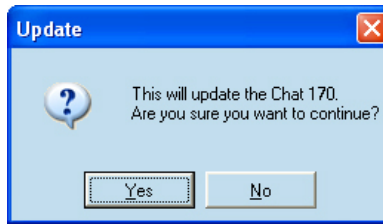

Any or all of the following actions can be performed by clicking the appropriate button:

      Click **Update Firmware** to update firmware only.
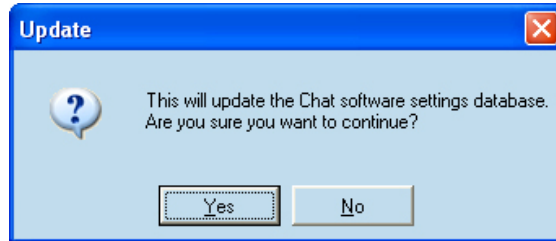
      Click **Update Database** to update the device database only.

      Click **Cancel** to cancel the update procedure and return to the Update Firmware screen.

When you click either of the update buttons, an Update dialog appears.

6. Click Yes to proceed with the firmware or device database update, or No to cancel.

7. A second Update dialog appears. Click Yes to proceed or No to cancel.

8. A series of messages appears below the progress bar indicating that the updates are in progress.

⚠ **WARNING**: Do not unplug the CHAT 170 while updates are in progress.

9. When the update is complete the following message appears below the progress bar:
    *   "Update Successful! The firmware for CHAT has been changed to <new revision level>" where <new revision level> is the new firmware revision number.
    *   "Update Successful! The database has been updated to <new revision level >" where <new revision level> is the new database version number.

10. Your CHAT 170 now has the most recent firmware and/or device database updates available.

MANUAL UPDATES

> **NOTE:** This procedure is for advanced users, technical support purposes, and corporate environments where IT security policies may prohibit automatic updates. Loading an incorrect firmware file can cause unpredictable results. In most cases, you should use the automatic update procedure by pressing the **Check for updates** button.

To manually change the firmware version or database package loaded into your CHAT 170, use the following procedure:

1. Press the **Select File** button in the **Update Firmware** screen. The **Open** dialog window is displayed.
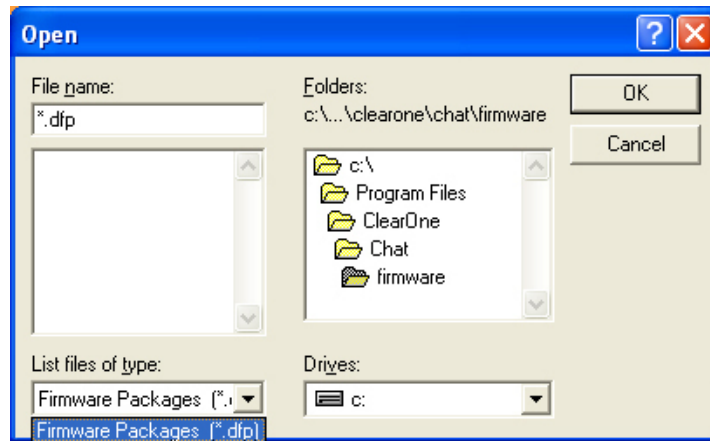
2. From the **List files of type** drop-down menu, select either the Firmware or Database package to download.

3. A list of the appropriate CHAT files available on the system appears in the left-hand scroll list. Select the file to upload and press the **OK** button. Select the **Cancel** button to cancel the update and return to the previous screen. If the update file was downloaded directly off the Website, use the Folder list in the center-right side of this window to navigate to the appropriate folder where the downloaded file was saved.

4. Once the file has been located and highlighted, click the **Update** button to update.

5. A warning dialog appears. Click **Yes** to manually load the selected firmware file or **No** to cancel.

6. A series of messages appears under the progress bar indicating the update is in progress.

⚠ **WARNING**: Do not unplug the CHAT 170 while the manual update is in progress.

When the update is complete, a message will appear below the progress bar stating that the update has been successful with the appropriate revision level information if applicable.

> **NOTE:** If firmware programming was interrupted, such as by a power loss or an accidental cable disconnection, the CHAT 170 might become unstable. In this case, refer to **Interrupted Firmware Update Recovery** in **Chapter 5** of this manual.

HELP

The **Help** button provides the following options:
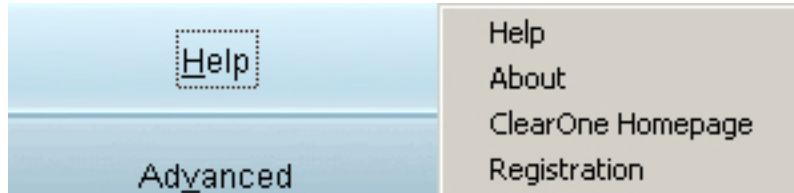
- Click **Help** to activate the online help file.
- Click **About** to get information about your CHAT 170, including software and firmware revision numbers.
- Click **ClearOne Homepage** to visit the ClearOne website using your default web browser.
- Click **Registration** to register your CHAT 170 with ClearOne using your default web browser.

ADVANCED

Advanced displays the current audio settings for your CHAT 170.
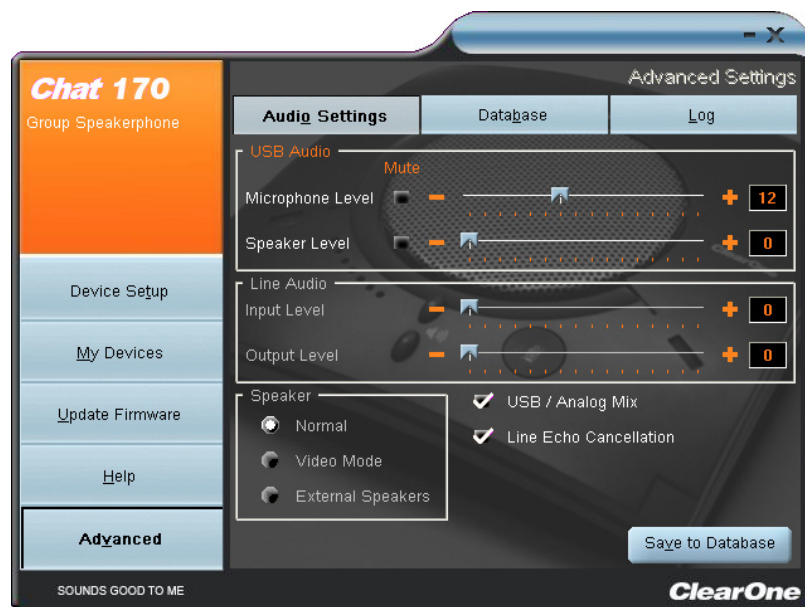
You can also use the **Advanced** screen to adjust audio settings for your CHAT 170, save your settings as a custom device, view and edit the CHAT 170 device database, and view the CHAT 170 log file. This section describes how to use each of these functions.

Advanced Settings: Audio Settings

Audio Settings displays the current audio settings and allows you to change them for the CHAT 170 currently con-
nected to your PC. You can also create custom audio settings for a device (see **Advanced Settings: Database** later in
this chapter for more information).

The audio settings are as follows:

- **USB Audio**: These controls affect the audio settings of the CHAT 170 when it is connected via USB to your com-
puter. Use the **Mute** buttons to mute either the microphone or speaker on the CHAT 170. Use the sliders to adjust
the microphone level and speaker level. Speaker and microphone level adjustments made in the CHAT software will
automatically change the speaker and microphone volume levels in Windows.

- **Line Audio**: These controls affect the audio settings of the CHAT 170 when it is connected to devices through
its I/O jack, such as handset telephones and video conferencing devices. These functions are unavailable if only
the USB is connected and appear grayed-out. Use the input slider to adjust the level of the incoming audio to the
speaker; use the output slider to adjust the level of the outgoing audio to the receiver side of the call.

- **Speaker**: These settings are only available when the VC Breakout Box is connected. The following options are avail-
able:

  - **Normal**: USB audio and line in audio from the VC Breakout Box are mixed through the CHAT 170 speaker.

  - **Video Mode**: Select this option to allow the audio from the far end of the video conference call to come
through the TV speakers instead of the CHAT 170 speaker. Ensure that the CHAT 170 RCA connection ca-
ble (included with the CHAT 170 VC configuration) is properly connected (see the section **Connecting CHAT
170 To A Video Conferencing Device** in this manual for detailed instructions). USB audio still comes through
the CHAT 170 speaker in this mode.

  - **External Speakers**: With this option selected, all audio (both USB and line in) is muted on the CHAT 170 and
routed to the line out jack on the CHAT 170 VC Breakout Box, to which you can connect external speakers and/
or an amplifier. In this mode, you are using the CHAT 170 as a microphone device only.

- **USB/Analog Mix**: Click this box to mix the audio coming into the CHAT 170 through the USB connection with the audio coming through the I/O jack. For example, if this option is selected and you are talking to a colleague via Skype on your PC connected to your CHAT 170, and you also initiated a video conference call through the VC Breakout Box, all three parties would be joined together for a bridged call. The USB/Analog Mix setting is ignored while the **Speaker** option (see above) is set to **Video Mode** or **External Speakers**.

- **Line Echo Cancellation**: Click this box to enable line echo cancellation. Line echo cancellation eliminates the echo caused when the CHAT 170 is connected to a telephone. On a telephone, audio is normally routed from the mouthpiece to the earpiece so that you can hear your own voice while talking, which causes feedback on a speaker phone.

> ⚠️ **WARNING:** Enabling line echo cancellation while not connected to a telephone may cause audio problems, so only use this option while connected to a telephone.

Any settings changes that you make on this screen are instantaneously applied to the CHAT 170. In addition, you have the option to click on Save to Database to capture the current settings and save them as a custom device as described in the next section.

Advanced Settings: Database

Database displays the devices configured for the CHAT 170 and allows you to edit them. The CHAT 170 device database includes all of the audio settings for the devices pre-programmed by ClearOne (identified by the ⌇ icon next to each device) and any custom audio settings you set up and wish to save for later use.

The 🕴 icon indicates that the device is in your **My Devices** list that can be edited.
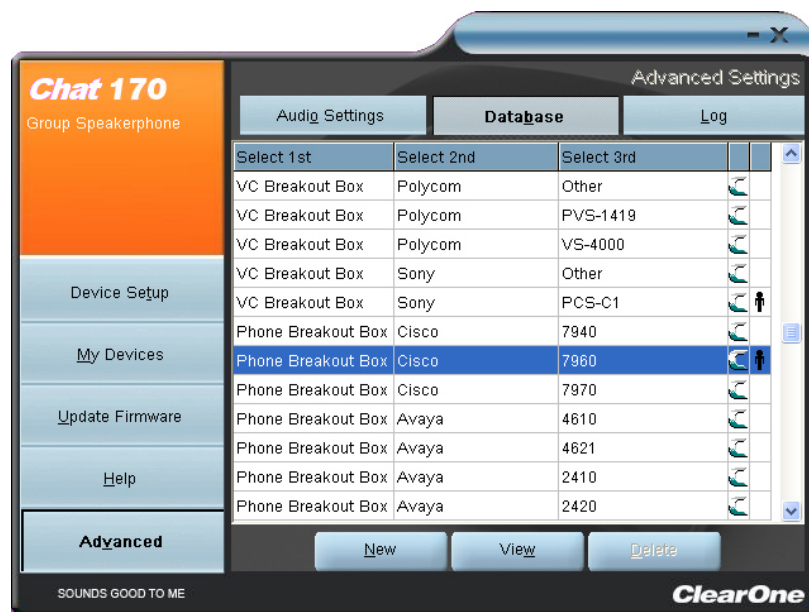
To view the settings for a particular device, select the device and click the **View** button, or double-click the device name. The **View Database Record** dialog appears.
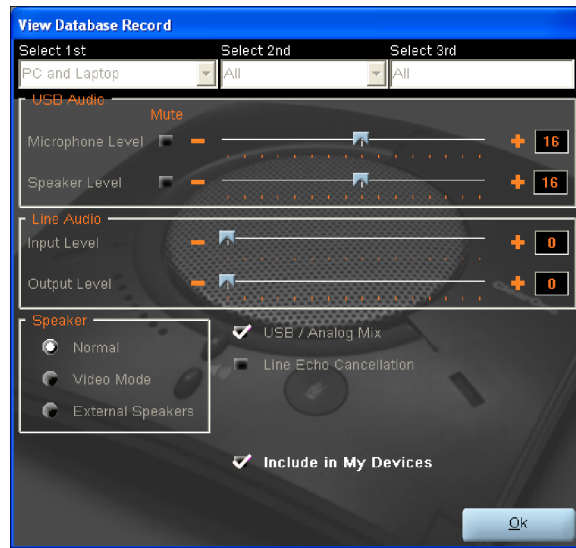
Click **Ok** to close the **View Database Record** dialog.

To create a custom audio settings for a device, perform the following procedure:

1. Click the **New** button. The **Add Settings to Database** dialog appears with the settings of the device you had selected in the database view.

2. Adjust the audio settings or click **Upload from CHAT** to upload and display the CHAT 170's current settings.
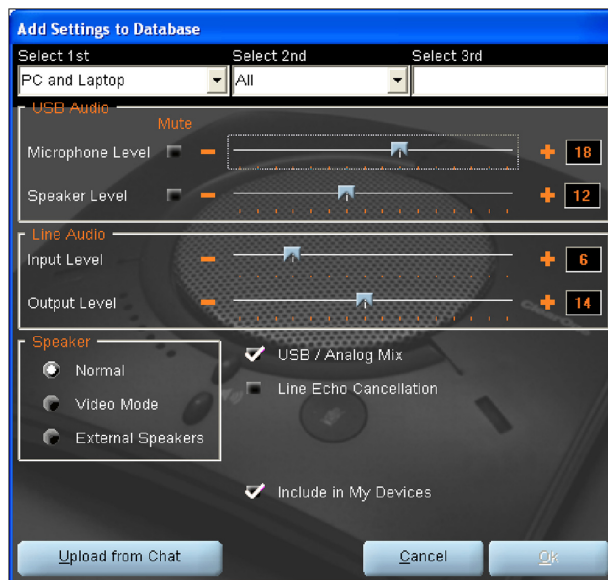
3. Click the **Select 1st** drop-down box and select the desired device type. Or, you can type a custom name, if necessary.

4. Click the **Select 2nd** drop-down box and select the desired manufacturer (or enter your own).

5.   Type a name for the model of the new device in the **Select 3rd** field. The **Ok** button will appear as soon as the first character is entered.

6.   If you do not wish to add this device to your list of **My Devices**, de-select the **Include in My Devices** checkbox. The default is to include new devices in your existing list.

7.   When all selections are made, click **Ok** to save the custom audio setting.

8.   The custom device is added to the CHAT 170 device database and is now available through **Device Setup** as an available device.

>   **NOTE**: In the device database, your custom device does not have the ClearOne icon next to it, differentiating it from a pre-programmed device.

Edit Custom Audio Setting

1.   To edit custom devices, click the **Edit** button (appears in the place of the **View** button for custom devices) after selecting the custom device you wish to edit. The **Edit Database Record** appears.

2.   Adjust the audio settings, or click **Upload from CHAT** to upload the CHAT 170's current audio settings.

3.   When you are finished editing, click **Ok**.

4.   Click **Yes** to save the device with the new audio settings or click **No** to return to the **Edit Database Record** dialog. To cancel your changes, click **Cancel**.

5.   To delete custom devices from the device database, click the **Delete** button after selecting the device you wish to delete.

You can only delete custom devices; you cannot delete pre-programmed devices (devices with the ClearOne icon next to them).

Advanced Settings: LOG

Log displays a list of actions taken by the CHAT 170, including a timestamp and a description of the action or even.
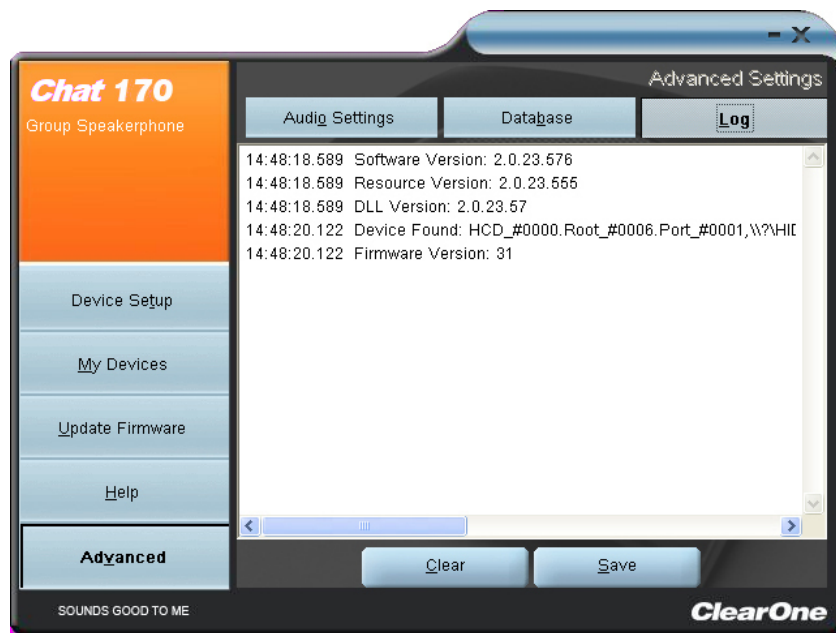
To save the log to a text file, click the **Save** button. A standard Windows save dialog appears. Name the file and choose the directory in which you wish to save the file (the default directory is the CHAT 170 Log directory).

Click **Clear** to clear all entries in the log window.

CHAPTER 5: MAINTENANCE

CARING FOR THE CHAT 170

- Follow all warnings and instructions in this manual.
- Unplug all cables from the CHAT 170 before cleaning.
- Unplug the power supply from the wall outlet (Phone/VC only) before cleaning.
- Do not use liquid or aerosol cleaners. Use a damp cloth moistened with water to clean the outside of your CHAT 170 and power supply.

TROUBLESHOOTING

If you are having trouble with the audio from your CHAT 170, it might not be optimized (tuned) for the specific hardware device you are connected to. If you have not yet optimized the sound for this device, refer to the **Optimizing Sound Quality** section in **Chapter 3**.

If you are still encountering problems, use the following procedure to troubleshoot the CHAT 170:

1. Activate the CHAT 170 software and verify the audio settings for the hardware device connected to the CHAT 170. If this does not solve the problem, then look more closely at your hardware device for the problem (refer to the hardware device's **User's Manual** or contact **Technical Support**).
2. Make sure all cables are properly and securely connected. Verify cable connections with the appropriate illustration for your hardware device (see **Chapter 2: Getting Started** for more information).
3. If the CHAT 170 is connected through a USB hub, be sure that the USB hub is connected to an external power source.
4. If another USB device such as a digital camera is connected to the computer on the same bus as the CHAT 170, the Windows error message "*USB Controller Bandwidth Exceeded*" may be displayed. If this occurs, move the other USB device to a separate USB bus. The CHAT 170 is a high-performance USB device and requires sufficient bandwidth in order to operate properly.

If you are unable to resolve the problem using this procedure, please refer to the support pages on the ClearOne Website or contact ClearOne Technical Support:

|	
Phone:	1.800.283.5936 (USA) or 1.801.974.3760
Fax:	1.801.977.0087
E-mail:	tech.support@ClearOne.com
Internet:	www.ClearOne.com

INTERRUPTED FIRMWARE UPDATE RECOVERY

If firmware programming was interrupted (such as by a power loss or an accidental cable disconnection), the CHAT 170 might become unstable. The CHAT 170 software will boot into a generic mode and the **Generic Mode** screen will be displayed.
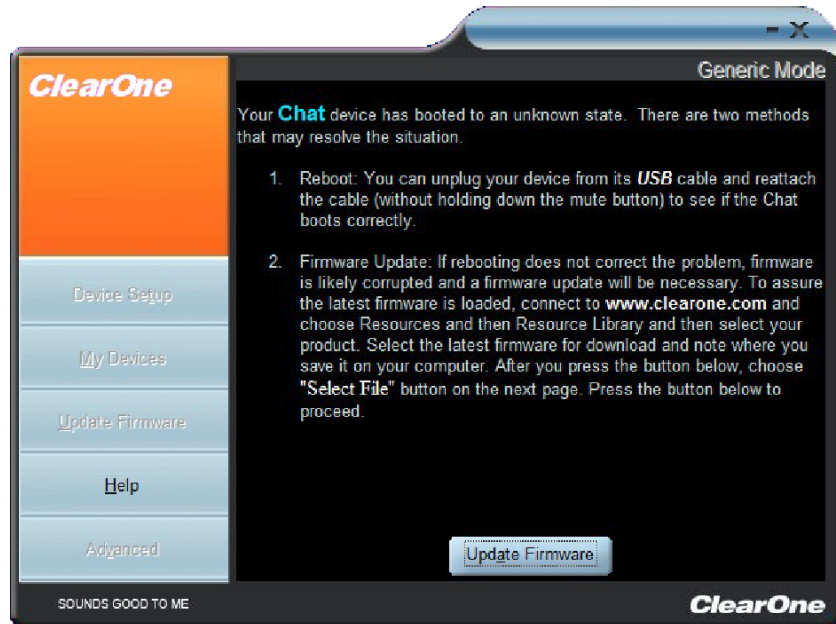
The **Generic Mode** (DFU) recovery screen appears . To perform the firmware update, click the **Update Firmware** button (see the **Update Firmware & Database** section in **Chapter 4: Using The CHAT Application** for detailed instructions). The messages "Initializing" and "Recovering" appear above the progress bar, followed by the typical messages that appear during a firmware update. The update then continues to completion.

If the CHAT 170 attempts to recover from a programming error by booting up in the Generic (DFU) mode, a series of instruction windows will be displayed. Follow the on-screen instructions to resolve this issue.

CHAPTER 6: APPENDIX

SPECIFICATIONS

Connections
USB Connector
Version 2.0 Compatible
Type: Mini B

Controls
Volume Up
Volume Down
Microphone Mute

Audio
Speaker
Bandwidth: 190Hz - 20kHz
Max Output Level: 85dB SPL @ 1 meter

Microphone
Bandwidth: 100Hz - 12kHz

Line Input through VC Breakout Box
Frequency Response: 20Hz - 20kHz +/- 1dB
Maximum Input Level: +6 dBu
Input Impedance: 10K Ohms

Line Output through VC Breakout Box
Frequency Response: 20Hz - 20kHz +/- 1dB
Maximum Output level: +6 dBu
Output Impedance: 50 Ohms

Processing
Acoustic Echo Cancellation
Noise Cancellation
Line Echo Cancellation (Selectable)

Power
USB-powered
5 VDC @ 500mA Maximum

External Power Supply
100-240 VAC Input
9 VDC @ 560mA Output

Environmental
Operating Temperature: 5-40 degrees C (41-104 degrees F)
Storage Temperature: 0-70 degrees C (32-158 degrees F)

Mechanical
Dimensions (WxDxH): 3.8" x 4.1" x 1.8" (9.7cm x 10.4cm x 4.8cm)
Weight: 0.55 lbs. (.25 kg)

Operating Systems Supported
Windows XP (All Versions)
Windows Vista (All Versions)
Windows 7 (All Versions)

COMPLIANCE

The following paragraphs present all of the required compliance and declaration of conformity information.

European Compliance

Conformity of the equipment with the guidelines below is attested by the CE mark.

$\mathsf{C}\,\mathsf{E}$

EC Declaration of Conformity

Manufacturer's Name:	ClearOne Communications
Manufacturer's Address:	Edgewater Corporate Park South Tower 5225 Wiley Post Way Suite 500 Salt Lake City, Utah 84116 U.S.A.
EU Representative Name:	ClearOne Communications Ltd. Atlantic House Imperial Way Reading Berkshire RG2 0TD United Kingdom
Model:	CHAT 170

Product Standard(s) to which Conformity of the Council Directive(s) is declared:

EMC 2004/108/EC "Electromagnetic Compatibility (EMC) Directive":

EN 55022: 2006 (Emissions)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.
EN 61000-3-2: 2004	Part 3: Limits - Section 2: Limits for harmonic current emissions.
EN 61000-3-3: 2002	Section 3: Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current up to and including 16 A.
EN 55024: 1998 (Immunity) + A1+A2	Information technology equipment - Immunity characteristics - Limits and methods of measurements.
EN 61000-4-2: 2001	Electrostatic Discharge Immunity
EN 61000-4-3: 2002	Radiated RF Immunity
EN 61000-4-4: 2004	Electrical Fast Transients Immunity
EN 61000-4-5: 2005	Lightning Surge Immunity
EN 61000-4-6: 2004	Conducted RF Immunity
EN 61000-4-8: 1993	Power Frequency Magnetic Field Immunity
EN 61000-4-11: 2004	Voltage Dips and Voltage Interruptions

Safety - 73/23/EEC "Low Voltage Directive (LVD)":

IEC 60950-1: 2001	Safety of Information Technology Equipment, Including Electrical Business Equipment.

RoHS - 2002/95/EC Restrication of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (EEE) & WEEE - 2002/96/EC Waste of Electrical and Electronic Equipment (EEE).

We herein certify that the products listed above are in compliance with the EU directive 2002/95/EC and EU directive 2002/96/EC.

We, the undersigned, hereby declare that the equipment specified above conforms to the above directives and standards.

Date of Issue: November 21, 2007

Legal Representative in Europe

/s/ Greg A. LeClaire

Signature

Greg A. LeClaire,

CFO

Waste Electrical and Electronic Equipment "WEEE" Directive 2002/95/EC"

ClearOne is compliant with the WEEE directive.

For recovery and recycling information, visit: **www.clearone.com/support/recycling.php?content=main**

FCC PART 15/ICES-003 COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

FCC PART 15.19(A) (3) COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

WARRANTY

ClearOne Communications, Inc. (the Manufacturer) warrants that this product is free of defects in both materials and workmanship. For complete warranty information including length, coverage, and limitations, visit **ClearOne** on the web @ **www.clearone.com**.

ClearOne Communications, Inc.

Edgewater Corporate Park South Tower

5225 Wiley Post Way

Suite 500

Salt Lake City, Utah 84116 U.S.A.