

CHAPTER 10

Troubleshooting the CTS 3000 and CTS 3200

Revised: November 2011, OL-21845-01



Note

Cisco announces the end-of-sale and end-of life dates for the [Cisco TelePresence System 3000](#) and [Cisco TelePresence System 3200](#).

Contents

You may want to periodically test system components using the hardware and software tests available in the Cisco TelePresence System (CTS) Administration Troubleshooting window. This chapter contains information about troubleshooting hardware and software on the following CTS devices:

- CTS 3000
- CTS 3200

Before You Begin

1. Obtain your IP address in one of the following ways:
 - From the CTS Cisco Unified IP phone touch the following softkeys:
Manual > more > Info



Note

If you have more options on your phone, touch the **more** softkey until you reach the end of the selections.

- From the Cisco TelePresence Touch 12 tap the following:
More > Status > System Status
2. Make a note of the IP address.
3. Enter the IP address in your laptop's browser window.
4. Click **Yes** to accept all security connection messages.



Note

You cannot perform diagnostics during an active Cisco TelePresence system call.

Proceed to the following sections to troubleshoot system components:

- [Managing CTS 3000 and CTS 3200 Hardware Setup](#), page 10-2

- [Managing Log Files, page 10-37](#)
- [Testing Audio, page 10-42](#)
- [Testing the Network Connection, page 10-42](#)
- [Managing Configuration Issues, page 10-43](#)
- [Initiating System Restart, page 10-44](#)
- [Troubleshooting Video Quality Settings, page 10-45](#)
- [Troubleshooting Network Cabling, page 10-46](#)
- [Where to Go Next, page 10-47](#)

Managing CTS 3000 and CTS 3200 Hardware Setup

You can manage and test the following Cisco TelePresence System components:

- [Managing Displays, page 10-3](#)
- [Testing Cameras, page 10-7](#)
- [Testing Speakers, page 10-15](#)
- [Testing Microphones, page 10-17](#)
- [Testing the External Presentation Display, page 10-20](#)
- [Testing Presentation Devices, page 10-21](#)
- [Testing Other Devices, page 10-34](#)

Before You Begin

Before you begin testing and troubleshooting your system, check the system displays. All of the Cisco TelePresence System Administration interface Hardware Setup features require the use of the displays in the meeting room. Therefore, we recommend the following:

1. Verify that the displays work by using the **Hardware Setup > Displays** tests in this section.
2. If the displays are showing the correct images, you can proceed to testing the cameras, speakers, and microphones, as needed.

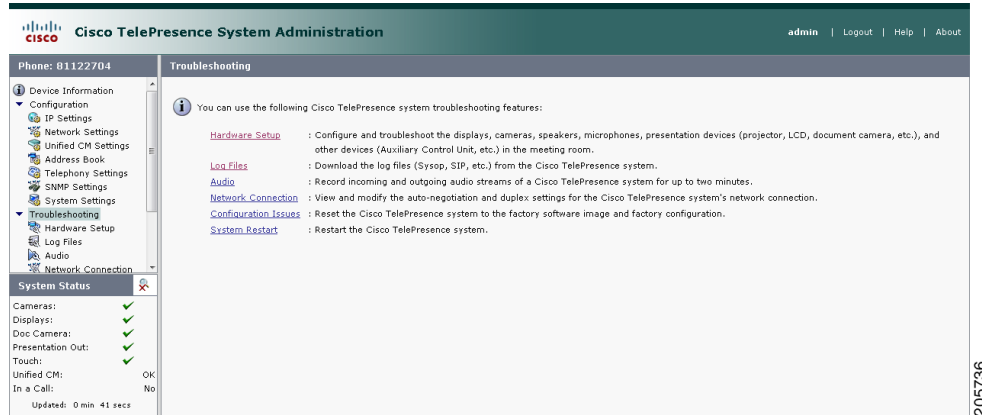


Note

You must test the speakers before testing the microphones because the microphone test depends on speakers that are functioning properly. See the [“Testing Speakers” section on page 10-15](#).

Figure 10-1 shows an example of the Cisco TelePresence System administration tools available to assist you with troubleshooting tasks.

Figure 10-1 Troubleshooting Window



CTS initial setup is also performed using the Hardware Setup fields. For information on how to configure CTS for the first time, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)

Managing Displays

A display is set up successfully when the color on the display has been adjusted for the lighting in the meeting room.



Note

Each display must be adjusted individually.

Use the information in the following sections to adjust the display for your system:

- [Selecting the Light Level, page 10-3](#)
- [Adjusting Your Display, page 10-5](#)
- [Troubleshooting Displays, page 10-6](#)
- [Related Information, page 10-6](#)

Selecting the Light Level

When adjusting the images on the CTS display screens, you must take the color temperature of the ambient light in the room into consideration.

Sources of light in most rooms are produced by fluorescent fixtures or incandescent light bulbs that use tungsten filaments. Each of these light sources, and the amount of light in terms of lumens or watts, produces a different color temperature. This color temperature is sometimes expressed using terms such *cool*, *warm*, or *daylight*, but can be expressed more precisely in kelvins (K) as a numeric value.

The following temperatures can be selected for adjusting the image on the Cisco TelePresence display screens:

- 3500 K
- 4000/4100 K (recommended)
- 5000 K
- 6500 K
- 7500 K

**Tip**

In many cases, the color temperature is printed on the light bulb. If you are unable to ascertain the type and color temperature of light bulbs in the meeting room, experiment with color temperature settings until the color and images on the display screen look lifelike.

**Tip**

It is OK to try a few different color temperatures to see what looks best in the room. Remember, the Color Temperature setting only effects how the local participants see the display, it does not effect the way the room looks to remote participants.

Adjusting Your Display

To adjust a display:

- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Displays** radio button. A test image appears on the screen.
- Step 4** Click **Start** in the Testing box to start the adjustment process. The Current Color Temperature test screen appears, as shown in [Figure 10-2](#).



Note

Each display in the meeting room should be showing a set of horizontal grey bars and that display's relative position. The current color temperature setting is displayed.


Figure 10-2 Color Temperature Test Screen

☒ Displays
☐ Cameras
☐ Speakers
☐ Microphones
☐ Presentation Devices
☐ Other Devices

Displays
 Each CTS display should now show a set of horizontal grey bars and that display's relative position.

Select Manual to select the color temperature of the lighting in your room from the color temperature selector. Select Auto to have the display's color adjusted automatically according to the camera.

Testing


 Current Color Temperatures
 4000/4100K

Specify the color temperature of the lighting in the meeting room:

Note: Running a test will not end a call but may temporarily change what is shown on local and remote displays.

Cisco TelePresence configuration: **Single** Testing Status: **Running**

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- Step 5** Select the color temperature of the lighting in the meeting room from the drop-down menu. The Apply button is activated.
- Step 6** Click **Apply**.
- Step 7** Click **Stop** to stop the test.

Troubleshooting Displays

Use the information in [Table 10-1](#) to troubleshoot images on the displays.

Table 10-1 **Troubleshooting Displays**

Problem	Possible Cause	Action
Power-on test indicates the displays turn on in the wrong sequence. The normal power on sequence is the left, center, then right display screen.	<ul style="list-style-type: none"> Video cable is not connected to its corresponding codec connector. Ethernet cable from secondary codec is not plugged into the correct port on the primary codec. 	<ul style="list-style-type: none"> Check that the cable from each display is plugged into the correct connector on its corresponding codec. Plug the video-to-video cable into the display connector on the correct codec, as follows. <ul style="list-style-type: none"> Plug the center display into the primary codec. Plug the participant's left display into the left secondary codec. Plug the participant's right display into the right secondary codec.
No image.	<ul style="list-style-type: none"> Power cable is not plugged in. Power switch on the back of the display is off. 	Check power connections and switches on each display.
	The display has no image when you are between calls.	No image expected. Enable a display test from the Web user interface to place the displays in test mode.
	Video cable is not connected.	<p>Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system, but no image is seen on the display.</p> <p>See the Routing Power and Signal Cables section in the see the following documentation:</p> <ul style="list-style-type: none"> Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide

Related Information

For more information about setting up and testing displays, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing Cameras

The cameras are set up successfully when images are centered and in focus on the display screens and the white balance has been configured. The hardware setup software provides a camera Auto Adjust feature and a way to use targets to fine-tune the camera's focus.

**Note**

You must use the camera Auto Adjust feature before you can auto focus the camera. See the [“Auto Adjusting the Camera”](#) section on page 10-8.

Use the information in the following sections to test and troubleshoot the camera for your system:

- [Testing the CTS 3000 and CTS 3200 Cameras](#), page 10-7
- [Troubleshooting Cameras](#), page 10-14
- [Related Information](#), page 10-15

**Note**

The camera hood comes off. It should be removed and left off until these procedures are complete.

Testing the CTS 3000 and CTS 3200 Cameras

The cameras are set up correctly when images are centered and in focus on the display screens and the white balance has been configured. The hardware setup software provides a camera Auto Adjust feature and a way to use targets to fine-tune the camera's focus.

The following sections describe how to set up the CTS 3000 and CTS 3200 cameras for testing:

- [Attaching the Camera Targets and Removing the Camera Cover](#), page 10-7
- [Testing the Camera](#), page 10-8
- [Auto Adjusting the Camera](#), page 10-8
- [Aligning the Camera](#), page 10-8
- [Showing All Camera Targets](#), page 10-11
- [Focusing the Camera](#), page 10-11
- [Saving Your Settings](#), page 10-12
- [Attaching the Camera Hood Assembly](#), page 10-12

Attaching the Camera Targets and Removing the Camera Cover

Two camera targets are provided with the Cisco TelePresence system:

- Large camera target
- Smaller target

To attach the targets:

-
- Step 1** Attach the large camera target to the table with the clamps matching the counterbore feature under the table.
- Step 2** Center the target on the edge of the table and position it vertically with the clamps underneath the table holding it tight. The target pattern should face the camera.

- Step 3** Place the small camera target on the table.
- Step 4** Remove the camera cover. See the [“Attaching the Camera Hood Assembly”](#) section on page 10-12 to see the removal and replacement directions.

Testing the Camera

To begin the camera testing process:

- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Cameras** radio button.
- Step 4** Click **Start** to begin the camera test. You should see output from each camera in the appropriate camera display area.
- Step 5** Click **Setup** under the image of a display screen to begin adjustments for the camera focused on that screen.



Note

Make sure that the table edge is between the hash marks on both sides of the display.

If you need further information about testing or adjusting this device, click **Help** in the content area or see the troubleshooting tables in this section.

Auto Adjusting the Camera

To auto adjust the camera, click **Auto Adjust**. This allows the CTS software to adjust the camera settings automatically. You will see various images and colors on the displays during the adjustment. Auto Adjust takes approximately 20 seconds.

Aligning the Camera

To align the camera:

- Step 1** Choose **Troubleshooting > Hardware Setup**.
- Step 2** Click the **Cameras** radio button.
- Step 3** Click **Show Camera Target**.
- Step 4** Using the zoom ring on the camera lens, and the left/right, up/down, and rotation adjustment screws on the camera, make the following adjustments:
- Manually adjust the camera that is focused on the target by aligning the red plus sign (+) to the center plus sign (+) on the target, as shown in [Figure 10-4](#).
 - Align the center display. Zoom and align the camera so that the curved lines on each side of the target touches the sides of the display.
 - Align the left display. Zoom and align the camera so that the curved line on the right side of the display touches the red adjustment line at the right edge of the display to corresponding lines on the target, as shown in [Figure 10-5](#).

On both sides of the display, you will see two small red hash marks. Adjust the camera so that the edge of the table is positioned vertically exactly between the hash marks on either side of the display.

See [Figure 10-3](#) for the location of the adjustment screws on the camera.

**Note**

If one of the left/right screws is covered by the camera cable, do not disturb the cable but instead use the other screw to make all left/right adjustments.

Figure 10-3 **Camera Mounting Plate**

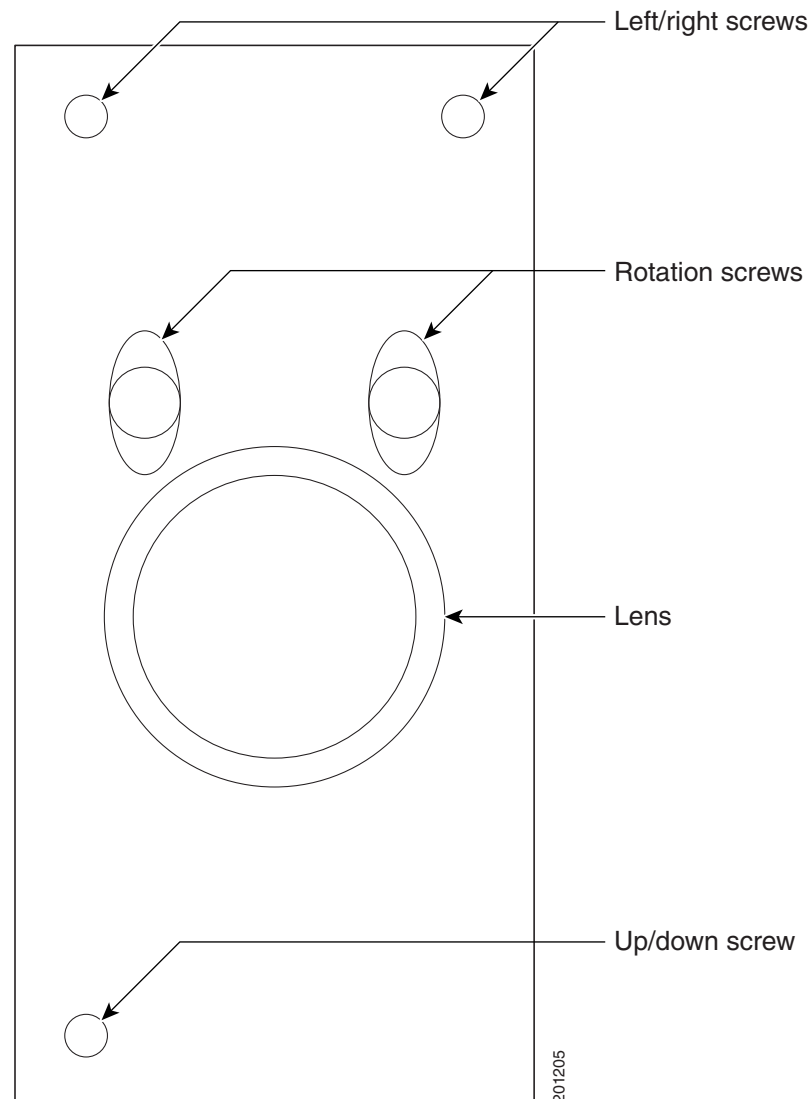


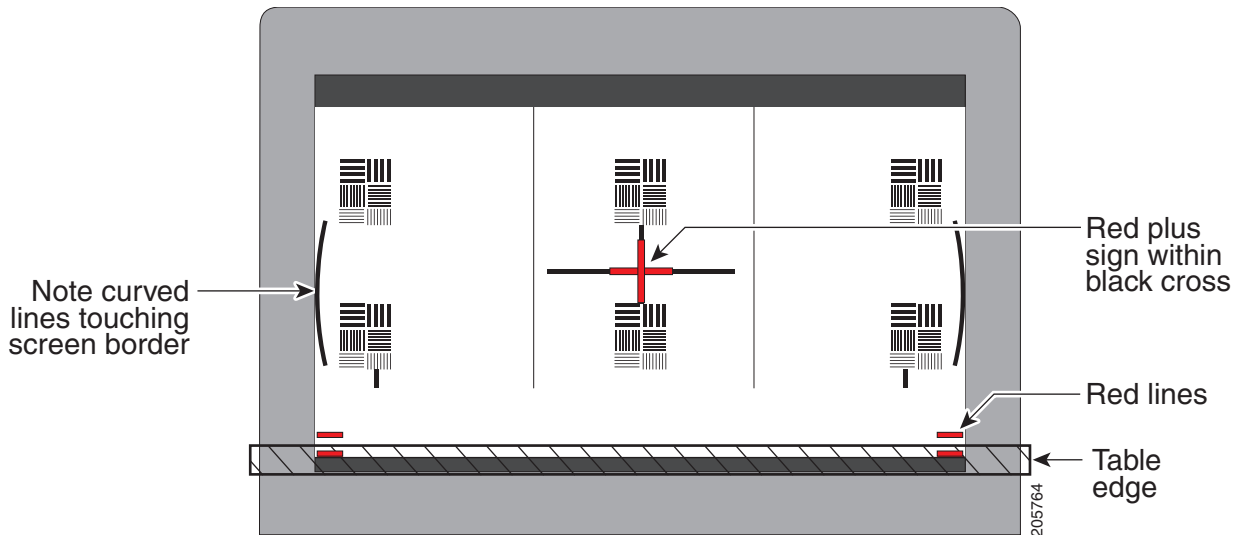
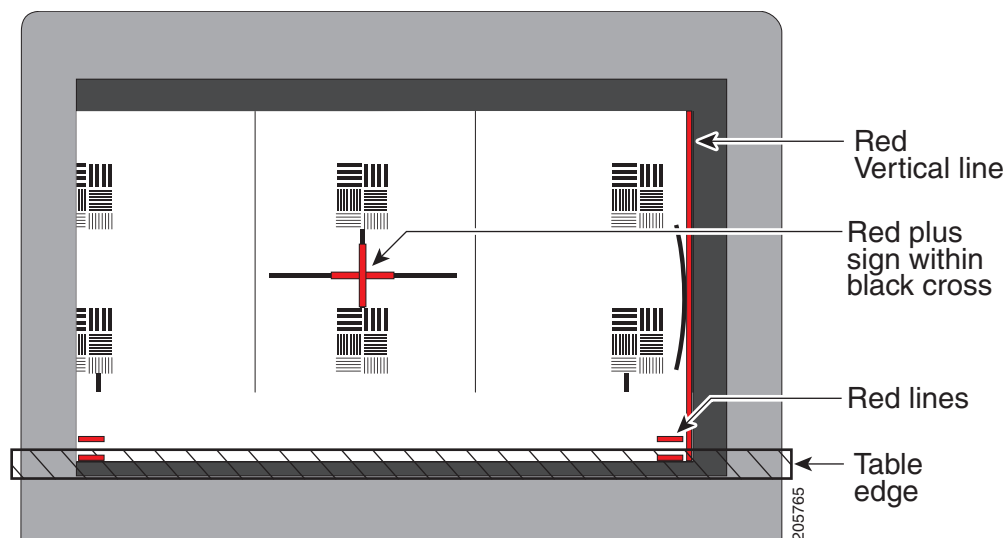
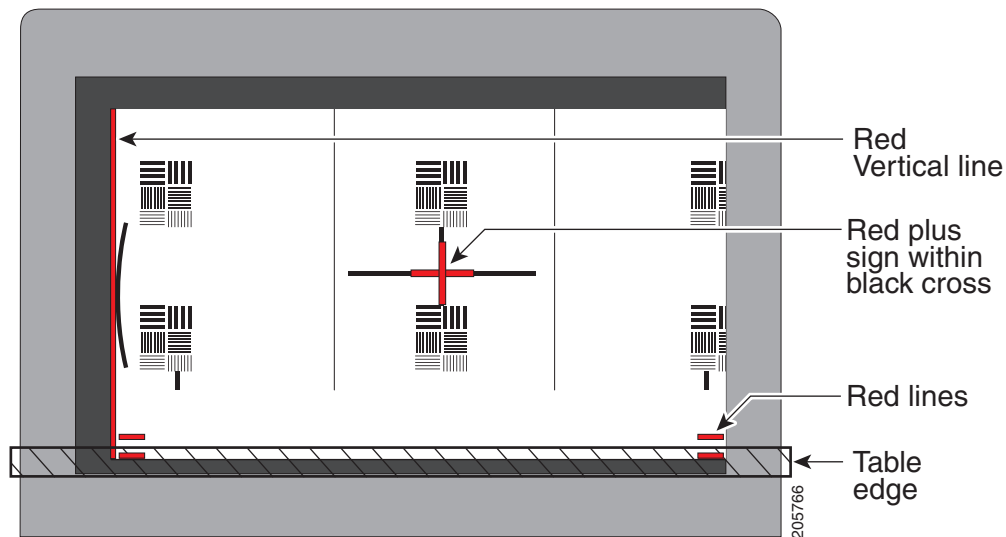
Figure 10-4 Camera Target Alignment—Center Display**Figure 10-5** Camera Target Alignment—Right Display

Figure 10-6 Camera Target Alignment—Left Display

- Step 5** Click **Hide Camera Target** to remove the alignment images.
- Step 6** Click **Done** when you complete the adjustment.

Showing All Camera Targets

Click **Show All Camera Targets** to align each camera independent of the other cameras.

Focusing the Camera

To focus the camera:

- Step 1** Choose **Troubleshooting > Hardware Setup**.
- Step 2** Click the **Cameras** radio button.
- Step 3** Place the small camera target on the table as described in the [“Attaching the Camera Targets and Removing the Camera Cover”](#) section on page 10-7.
- Step 4** Click **Setup**, then click **Show Focus Target**.
- Step 5** Adjust the small target so that the green box encloses some of the patterns on the small target.
- Step 6** Adjust the focus ring on the camera lens so the lines on the target are in focus. The ring is labeled “N – 8.” The thumbscrew (or 0.9 mm Allen wrench) is used to unlock the focus ring.
- Step 7** Click **Hide Focus Targets** to remove the alignment images.
- Step 8** Click **Done** when you complete the adjustment.

Saving Your Settings

When you have configured all your settings:

-
- Step 1** Click **Apply** to register new or modified settings.
- Step 2** Click **Reset** to restore the original settings.
-

Attaching the Camera Hood Assembly

After you complete the camera adjustment, attach the camera hood assembly. See [Figure 10-7](#).



Note

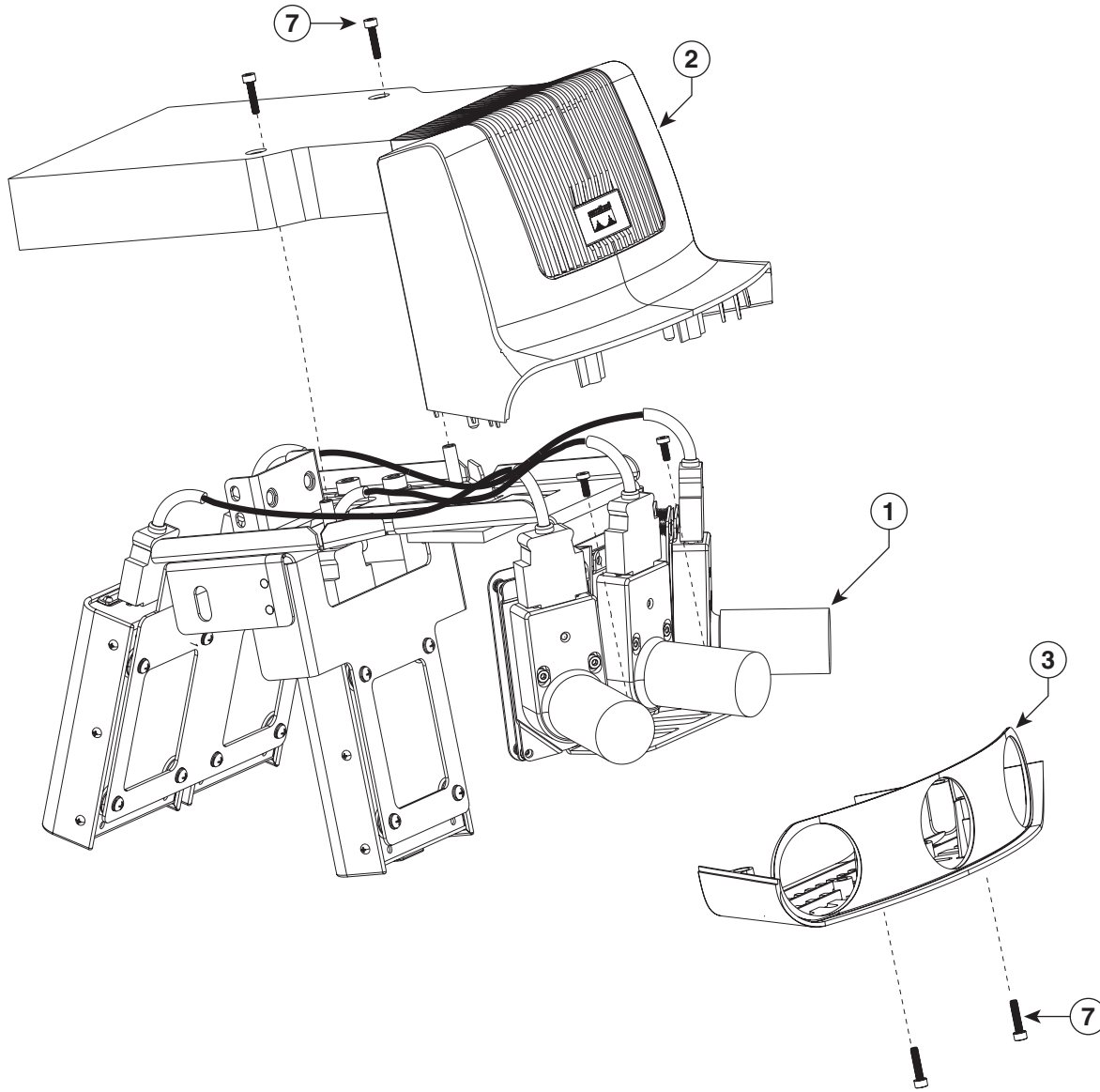
Attach the top hood before attaching the bottom hood.



Caution

Do not overtighten the screws, or use a power screwdriver to tighten the screws. In addition, make sure that you use screws of the correct length (20 mm). Overtightening the screws, or using a screw that is too long, can cause the plastic hoods to break.

Figure 10-7 Attaching the Camera Hood Assembly



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Troubleshooting Cameras

Use the information in [Table 10-2](#) to troubleshoot cameras.

Table 10-2 **Troubleshooting Cameras**

Problem	Possible Cause	Action
Camera image appears on the wrong display.	Cables are plugged into the wrong connector ports.	<ul style="list-style-type: none"> Check that the cables from each camera are plugged into the correct connector on its respective codec. Two connections are made for the camera, an RJ-45 cable plugs into the large connector and a video-to-DVI-I cable plugs into the small connector. Connect them as follows: <ul style="list-style-type: none"> Plug the center camera into the primary codec. Plug the participant's left camera into the left secondary codec. Plug the participant's right camera into the right secondary codec.
Image not positioned correctly.	Camera is not aligned correctly.	Adjust and focus the camera using the targets.
Image colors are incorrect.	<ul style="list-style-type: none"> Video cable is only partially connected. Color settings are not correct. 	<ul style="list-style-type: none"> Tug on the plug to see if it is fully plugged in. See the Routing Power and Signal Cables section in the following documents: <ul style="list-style-type: none"> <i>Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide</i> <i>Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide</i>
No image.	<ul style="list-style-type: none"> Lens cap is in place. Camera is not plugged in or is plugged in incorrectly. 	<ul style="list-style-type: none"> Remove the lens cap. Check power connections and switches on each display. Verify that the video and Ethernet cables from each camera are plugged into the correct connectors on their respective codecs.
	Camera or display is broken.	Contact Cisco technical support if you are certain that the cabling is correct, power is applied, and a display and camera test has been run, but no image is seen on the display.
Camera top-to-bottom switching discontinuity.	Image may take up to 1 second to normalize when the camera switches to the active speaker.	This is normal DSP behavior. Can also occur during audio addin. Contact Cisco technical support.

Related Information

For more information about setting up and testing cameras, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing Speakers

The speakers are set up successfully when sound can be heard clearly from each one. When running a test, you can choose whether to cycle through the speakers automatically or manually.

Use the information in the following sections to test the speakers for your system:

- [Testing the Speakers, page 10-15](#)
- [Troubleshooting Speakers, page 10-16](#)
- [Related Information, page 10-16](#)

Testing the Speakers

To test the speakers:

-
- | | |
|---------------|---|
| Step 1 | Log in to the Cisco TelePresence System Administration interface. |
| Step 2 | Choose Troubleshooting > Hardware Setup |
| Step 3 | Click the Speakers radio button. |
| Step 4 | Click Start to begin the speaker test. |
| Step 5 | Click Cycle Through Speakers to have sound cycled automatically for 5 seconds on each speaker. |
| Step 6 | Click Manually Step Through Speakers to test sound on each speaker. |
| Step 7 | Click Next Speaker to progress to the next speaker. |
| Step 8 | Click Stop to end testing. |
-

Troubleshooting Speakers

Use the information in [Table 10-3](#) to troubleshoot speakers.

Table 10-3 **Troubleshooting Speakers**

Problem	Possible Cause	Possible Solution
No sound is heard.	Speaker cable is not connected or is only partially connected.	<ul style="list-style-type: none"> Check that the red and black pronged ends of the speaker cable are securely fastened under their corresponding connectors on the speaker. Check that the speaker cable is plugged into the correct receptor on the primary codec. Tug on the plug to see if it is fully plugged in. Push the plug in firmly until a click is heard.
Sound heard at wrong speaker.	Speaker cable is not connected in the correct connector.	<ul style="list-style-type: none"> Check that the speaker cable is plugged into the correct receptor on the primary codec. Plug all speakers into the primary codec.
Sound is not synchronized with video.	—	Contact Cisco technical support.
Choppy audio during double-talk (when both sides are talking simultaneously).	<p>Audio Echo Cancellation (AEC) very briefly mistakes one of the speech patterns for noise and cancels it, resulting in choppy audio.</p> <ul style="list-style-type: none"> The audio from the remote side is slightly attenuated before it is played out the of the speaker. The echo cancellation feature removes some of the sound from the talkers during the double talk. 	Check whether there has been a change in the echo path (someone has moved the speaker or microphone, or maybe a laptop directly in front of a mic). Otherwise, this is expected behavior. The existing filter parameters should be enough to cancel out the sound from the speaker. However, during double-talk, echo cancellation will always remove some sound from the talker.

Related Information

For more information about setting up and testing speakers, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing Microphones

The microphones are set up successfully when each microphone registers sound. You must supply sound at each microphone to complete this test. The number of audio meters that are shown on the test screen is determined by the number of microphones that have been configured in Unified CM and the version of Unified CM that you are running.

The Microphone Troubleshooting screen displays the number of microphones available for testing:

- CTS 3000—3 microphones. 1 audio meter is displayed per microphone, one on each of 3 test screens.
- CTS 3200—6 to 9 microphones, depending on your configuration. 2 or 3 audio meters are displayed on each of 3 test screens:
 - The top microphone icons represent the microphone in the front row of participants seated in the room.
 - The bottom microphone icons represent the microphones in the back row of participants seated in the room.

Go to the following sections to test microphones:

- [Testing Microphones on the CTS 3000, page 10-17](#)
- [Testing Microphones on the CTS 3200, page 10-18](#)
- [Troubleshooting Microphones, page 10-19](#)
- [Related Information, page 10-20](#)

Testing Microphones on the CTS 3000



Note

The effect of this calibration is applied only on CTS 3000 systems. Do not use this tool on CTS 3200 systems.

To test microphones on the CTS 3000:

- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Microphones** radio button.
- Step 4** Click **Start** in the Testing box to begin the test. The Microphone Calibration button is activated.
- Step 5** Lightly tap each microphone and watch the audio meter on the corresponding display screen to see that sound registers.
- Step 6** Click the **Microphone Calibration** button. A dialog box appears:

“Microphone Calibration will last approximately two minutes. Please ensure the room remains quiet during the test. Proceed?”



Note

The room must be completely quiet to calibrate microphones. You may want to leave the room and close the door to carry out the calibration process to ensure complete silence in the room.

- Step 7** Click **Ok** to proceed with the calibration.

Step 8 Click **Stop** to end the test.

Testing Microphones on the CTS 3200

To test microphones on the CTS 3200:

- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Microphones** radio button.
- Step 4** Click **Start** in the Testing box to begin the test.
- Step 5** Lightly tap each microphone and watch the audio meter on the corresponding display screen to see that sound registers.
- Step 6** Click **Refresh Microphones Status** to update the connection status of all microphones.

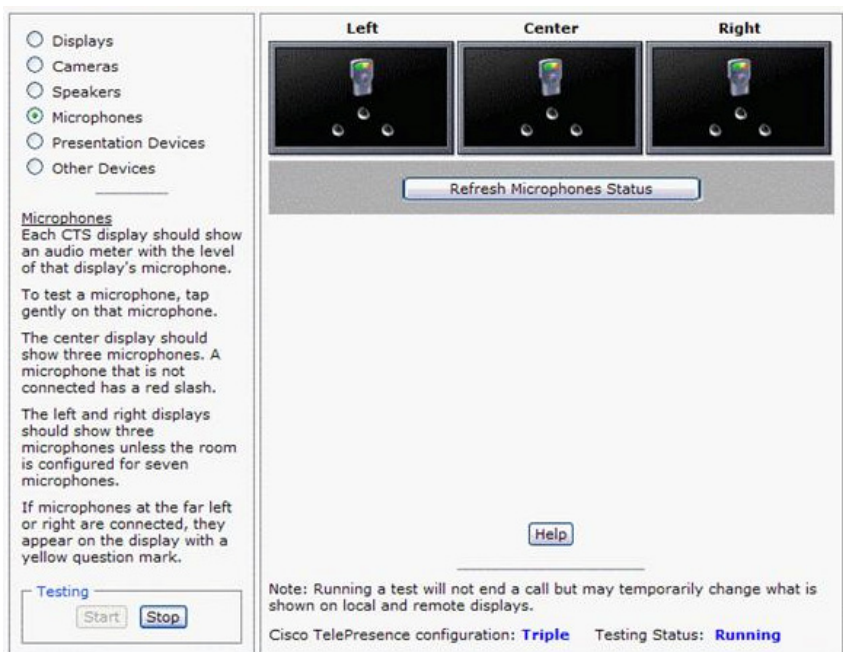


Note

If you have a Cisco TelePresence 3200, there are six microphones for the second row table. In a reduced configuration, the second row table has just four microphones, and a yellow question mark will appear in the test screen where the two end microphones would be in the full configuration.

Figure 10-8 shows an example CTS 3200 microphone troubleshooting screen with the Refresh Microphone Status window activated.

Figure 10-8 Troubleshooting Microphones on the CTS 3200



Step 7 Click **Stop** to end the test.

Troubleshooting Microphones

Use the information in [Table 10-4](#) to troubleshoot microphones.

Table 10-4 *Troubleshooting Microphones*


Problem	Possible Cause	Possible Solution
Sound is muffled.	Something near or on the microphone is distorting the sound.	Move objects away from the microphone.
No sound registers.	Microphone cable is not connected or is only partially connected.	<ul style="list-style-type: none"> • Check that the system is plugged in and power is on. • Check that the microphone plug is firmly seated in the correct connector on the primary codec. • Check that the mute light on each microphone is lit. An unlit light indicates that the microphone is not plugged in. • Lightly tap the microphone to see if sound registers. • Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system, but no sound registers on the microphone.
Microphone icon with red pipe displays. 	Microphone is not connected. One of the microphones is unplugged.	Check that the microphone is properly plugged in.
Microphone icon with question mark displays.	One of the microphones is unplugged.	Check that the microphone is properly plugged in.
Sound registers at the wrong microphone.	Microphone cable is not connected to its corresponding codec.	<ul style="list-style-type: none"> • Check that the cable from the microphone is plugged into the correct receptor on the codec. • Plug all microphones into the primary codec.

Table 10-4 **Troubleshooting Microphones (continued)**

Problem	Possible Cause	Possible Solution
Microphone switches to a segment that has no one talking.	Phantom switching.	Run the microphone calibration procedure in the “Testing Microphones on the CTS 3000” section on page 10-17 or “Testing Microphones on the CTS 3200” section on page 10-18.
Choppy audio during double-talk (when both sides are talking simultaneously).	<p>Audio Echo Cancellor (AEC) very briefly mistakes one of the speech patterns for noise and cancels it, resulting in choppy audio.</p> <ul style="list-style-type: none"> The audio from the remote side is slightly attenuated before it is played out the of the speaker. The echo cancellation feature removes some of the sound from the talkers during the double talk. 	Check whether there has been a change in the echo path (someone has moved the speaker or microphone, or maybe a laptop directly in front of a mic). Otherwise, this is expected behavior. The existing filter parameters should be enough to cancel out the sound from the speaker. However, during double-talk, echo cancellation will always remove some sound from the talker.

Related Information

For more information about setting up and testing displays, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing the External Presentation Display

By default, presentations are displayed as presentation-in-picture (PiP) on the center screen of multi-screen main display systems. You can optionally add an external presentation display screen that displays the presentation instead of displaying it as PiP on the main display screen. This display is attached to the External Presentation Display HD video connection on the codec. See the following documentation for more information:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)



Note

If the video works for a few minutes and then stops working, your presentation device might use an unsupported video protocol. To see the list of displays that the CTS 3000 and CTS 3200 supports, see the release notes for your CTS software version on Cisco.com.

A PiP softkey will be displayed on the phone only if a PiP is active. PiP is not available for audio-only calls.

To test an external presentation device:

-
- Step 1** Log in to the Cisco TelePresence System.
- Step 2** Navigate to **Troubleshooting > Hardware Setup > Presentation Devices**.
- Step 3** Click the **Test Pattern** radio button.
- Step 4** Click **Start** to begin the test.
- The test pattern should display on the external presentation display.
- Step 5** Click **Stop** to end the testing.
-

Testing Presentation Devices

The output for presentations is handled by projectors or auxiliary [LCD](#) displays. Input to the projector can be delivered through a Video Graphics Array ([VGA](#)) input device (such as a laptop computer) or through a document camera.



Note

You should run this test only if you have presentation display devices installed.

[Table 10-5](#) contains supported presentation devices listed by system.

Table 10-5 *Supported Presentation Devices*

Presentation Device		
	Included in Cisco TelePresence System	Optional in Cisco TelePresence System
Projector	<ul style="list-style-type: none"> CTS 3000 CTS 3200 	—
Document Camera	—	—
Auxiliary Display—40" LCD	—	<ul style="list-style-type: none"> CTS 3000 CTS 3200

The projector is set up successfully when the test pattern is displayed on the projection surface in the meeting room while running the test.



Tip

When troubleshooting presentation devices, start with the projector test pattern to see if the projector is set up correctly and then proceed through VGA and other tests as necessary.

Use the information in the following sections to test presentation devices:

- [Checking the Test Pattern, page 10-22](#)
- [Checking the VGA, page 10-23](#)
- [Checking the Document Camera, page 10-23](#)
- [Testing the Projector, page 10-23](#)

- [Troubleshooting Presentation Devices, page 10-31](#)
- [Related Information, page 10-33](#)

Checking the Test Pattern

To check the test pattern on the CTS 3200:

-
- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Presentation Devices** radio button.
- Step 4** Click **Start** in the Testing box. The Presentation Source buttons are activated.
- Step 5** Select **Test Pattern** and click **Test**.
- Step 6** Turn on the projector by turning the projector power rocker switch to the **ON** position.
- The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.
- If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.
- If the green border is not visible, for systems with an Auxiliary Control Unit, do the following:
- a. Click **Set Projector Defaults**. A dialog box opens alerting you that setting projector defaults may take up to 45 seconds. A menu will appear from the projector to select settings.

For systems without the Auxiliary Control Unit, use the projector remote control to change the following settings on the projector:
 - b. **Picture adj: Overscan** should be set to **0**
 - c. **Screen: Normal**
- Step 7** Click **Set Projector Defaults** to automatically configure the projector for use with the CTS 3200.
- Step 8** Click **Stop Test** to end the test.
- Step 9** Click **Stop** in the Testing box to end all testing.
-

Checking the VGA

To check the [VGA](#) on the CTS 3200:

-
- | | |
|---------------|--|
| Step 1 | Log in to the Cisco TelePresence System Administration interface. |
| Step 2 | Choose Troubleshooting > Hardware Setup . |
| Step 3 | Click the Presentation Devices radio button. |
| Step 4 | Click Start in the Testing box. The Presentation Source buttons are activated. |
| Step 5 | Select VGA and click Test . It may take up to 15 seconds before you begin to see an image on the projection surface. The image should be fully formed after approximately 45 seconds.

If the input image is displaying correctly, you should see an image projected on the projection surface. If the image is out of focus, use the projector focus ring to focus the image. |
| Step 6 | Click Stop Test to end the test. |
| Step 7 | Click Set Projector Defaults to reset the projector to the default settings. |
| Step 8 | Click Stop in the Testing box to end all testing. |
-

Checking the Document Camera

To test input from the document camera (if available):

-
- | | |
|---------------|--|
| Step 1 | Log in to the Cisco TelePresence System Administration interface. |
| Step 2 | Choose Troubleshooting > Hardware Setup . |
| Step 3 | Click the Presentation Devices radio button. |
| Step 4 | Click Start in the Testing box. The Presentation Source buttons are activated. |
| Step 5 | Select Document Camera and click Test . It may take up to 15 seconds before you begin to see an image on the projection surface. The image should be fully formed after approximately 45 seconds.

If the input image is displaying correctly, you should see an image projected on the projection surface. If the image is out of focus, use the projector focus ring to focus the image. |
| Step 6 | Click Stop Test to end the test. |
| Step 7 | Click Set Projector Defaults to reset the projector to the default settings. |
| Step 8 | Click Stop in the Testing box to end all testing. |
-

Testing the Projector

This section contains projector tests for the following devices:

- [Testing the CTS 3000 Projector - With an Auxiliary Control Unit, page 10-24](#)
- [Testing the CTS 3000 Projector - Systems Without an Auxiliary Control Unit, page 10-25](#)
- [Testing the CTS 3200 Projector, page 10-29](#)

Testing the CTS 3000 Projector - With an Auxiliary Control Unit

If your system has an Auxiliary Control Unit, test the projector by following these steps:

-
- Step 1** Make sure that a serial cable is connected from your projector to the Serial 1 output of the auxiliary control unit. See the “Options for the Cisco TelePresence System 3000” chapter of the [Cisco TelePresence Hardware Options and Upgrade Guide](#) for information about cabling your system with an Auxiliary Control Unit.
- Step 2** Start a test pattern display for the projector by completing the following steps:
- Open a browser that is connected to the network.
 - Enter the IP address of the primary codec to log in to Cisco TelePresence System Administration.
 - Choose **Troubleshooting > Hardware Setup**, then click the **Presentation Devices** radio button.
 - Select the **Test Pattern** radio button.
 - Click **Start** to begin the test.
- Step 3** Turn on the projector by turning the projector power rocker switch to the **ON** position.
- The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.
- If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.
- Step 4** From Cisco TelePresence System Administration, click **Set Projector Defaults** to automatically configure the projector for use with the CTS 3000.
- Step 5** Set the group, number, and data settings by completing the following steps:



Note

Changing these settings allows a projector to be monitored by Simple Network Management Protocol (SNMP) when the projector is in an inactive state. If a projector lamp fails, SNMP does not properly report the failure from an inactive projector until you complete these steps.



Tip

Use the projector remote control or press the buttons on the projector to complete these steps.



Note

If your system uses a Sanyo PLV-Z700 projector, skip this step.

- Press the **Menu** key for 20 seconds.
The letter S displays in the upper left corner of the screen.
- Press the **Screen** key for 3 seconds.
The service menu displays.
- Press **OK** until the group number setting changes to **100**.
- Press the **Down Arrow** key until the No. setting changes to **4**.
- Press the **Left Arrow** key until the Data setting changes to **0**.
- Press the **ON-OFF** key to end the service menu.

- Step 6** Center the projector display within the screen by completing the following steps:
- Locate the lock switch and two dials on the side of the projector.
 - Move the switch to the unlock position.
 - Rotate the vertical dial to position the top of the image 1 inch below the bottom of the wood surface.
 - Rotate the horizontal dial to position the sides of the image 15 inches from each of the seams on the table segments.
- Completing this step should center the image in the screen. If the image is not centered, adjust the image until the distance is equal from each table segment seam.
- Move the switch to the lock position.

- Step 7** Aim the remote control at the lens of the projector.

**Tip**

You can use the screen to reflect the signal back to the projector if you are sitting at the table.

Leave the projector in this state. When the video signal is turned off or disconnected, the projector will go black for 30 seconds. Then it will count down for 5 minutes and then turn off the lamp.

If a video signal is applied during this 5 minute and 30 second countdown the video will reappear immediately. If the countdown completes, the projector goes into a cool-down mode which will ignore a video signal for 30 seconds. It will then stay in a standby mode and will power back up when a video signal is connected. It will take 15 seconds for the projector to light back up.

- Step 8** To check either VGA or document camera input, perform the following steps:

- Click **Presentation Devices** on the **Hardware Setup** window.
- Perform one of the following steps to test the video input:
 - Click the **VGA** radio button to test input from a VGA device
 - Click the **Document Camera** radio button to test input from the document camera

If the input image is displaying correctly, you should see an image projected on the projection surface.

- Step 9** If the image is out of focus or is too small, use the projector focus ring to focus the image and use the zoom lever to create the largest possible image.

- Step 10** Click **Stop** in Cisco TelePresence System Administration to remove the test pattern and complete the projector test.

Testing the CTS 3000 Projector - Systems Without an Auxiliary Control Unit

To test a projector for a CTS 3000 system that does not use an auxiliary control unit:

- Step 1** Start a test pattern display for the projector by completing the following steps:
- Open a browser that is connected to the network.
 - Enter the IP address of the primary codec to log in to Cisco TelePresence System Administration.

**Note**

If you need to obtain the IP address, complete the following steps:

- On the CTS Cisco Unified IP phone, locate **Manual** at the bottom of the screen and touch the **Manual** soft key.



Note If you cannot locate the **Manual** button, proceed to [Step 2](#).

2. Locate **Info** at the bottom of the screen and touch the **Info** soft key.
 3. Scroll down to the **IP Address** listing and copy the address.
-

- c. Log in to the system by entering the following information:
 - Username: **admin** (case sensitive)
 - Password: **cisco** (case sensitive)
- d. Select **Troubleshooting > Hardware Setup**, then click the **Presentation Devices** radio button.
- e. Select the **Test Pattern** radio button.
- f. Click **Start** to begin the test.

Step 2 Turn on the projector by turning the projector power/rocker switch to the **ON** position.

The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.



Note The image is upside down and reversed since the projector is mounted upside down under the table.

If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.

Step 3 Set the display to display right-side up by completing the following steps:

- a. Press the **MENU** key on the remote control.

Note The menu screen will appear upside down and reversed. If the image is right-side up, continue to [Step 4](#).

- b. Use the Up Arrow and Down Arrow keys and highlight **Setting**.
- c. Press the Right Arrow key and select **Setting** to enter the Setting submenu.
- d. Press the Up Arrow and Down Arrow keys and select **Advanced Menu**.
- e. Press the Right Arrow key and select **ON**.
- f. Press the Up Arrow and Down Arrow keys and highlight **Mounting**.
- g. Press the Right Arrow key and select **Mounting** to enter the Mounting submenu.
- h. Press the Up Arrow and Down Arrow keys and select **Ceiling**.
- i. Press the Left Arrow key and select **Ceiling**.

The image should now display right-side up.

Step 4 Set the background color by completing one of the following procedures:

- For PLV-Z4 projectors, perform the following procedure:
 - a. Press the Up Arrow and Down Arrow keys to highlight **Blue Back**.
 - b. Press the Right Arrow key and select **Blue Back** to enter the Blue Back submenu.

- c. Press the Right Arrow key and select **Off**.
- For PLV-Z5 projectors, perform the following procedure:
 - a. Press the Up Arrow and Down Arrow keys and highlight **Background**.
 - b. Press the Right Arrow key and select **Background** to enter the Background submenu.
 - c. Press the Right Arrow key and select **Black**.

Step 5 Set the display by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and select **Display**.
- b. Press the Right Arrow key and select **Off**.

Step 6 Set the logo by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and select **Logo**.
- b. Press the Right Arrow key and select **Off**.

Step 7 Select the image mode by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and highlight **Image**.
- b. Press the Right Arrow key and select **Image** to enter the Image submenu.
- c. Press the Up Arrow and Down Arrow keys and highlight **Vivid**.
- d. Press the Right Arrow key and select **Vivid**.
- e. Press the Left Arrow key to confirm your selection.

Step 8 Select the screen size by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and highlight **Screen**.
- b. Press the Right Arrow key and select **Screen** to enter the Screen submenu.
- c. Press the Up Arrow and Down Arrow keys and highlight **Normal**.
- d. Press the Right Arrow key and select **Normal**.
- e. Press the Left Arrow key to confirm your selection.

Step 9 Eliminate overscan by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and highlight **Picture adj.**
- b. Press the Right Arrow key and select **Picture adj.** to enter the Picture Adjustment submenu.
- c. Press the Right Arrow key and select **Overscan**.
- d. Press the Left Arrow key and reduce the Overscan value to zero.
- e. Press the **OK** key to complete the Overscan setting.
- f. Press the Left Arrow key to confirm your selection.

Step 10 Set the lamp iris by completing the following steps:

- a. Press the Up Arrow and Down Arrow keys and highlight **Image adj.**
- b. Press the Right Arrow key and select **Image adj.** to enter the Image Adjustment submenu.
- c. Press the Up Arrow and Down Arrow keys and highlight **Advanced menu**.
- d. Press the Right Arrow key and select **Advanced menu**.
- e. Press the Up Arrow and Down Arrow keys and highlight **Lamp iris**.
- f. Press the Right Arrow key and select **Lamp iris**.
- g. Press the Right Arrow key and select **Open**.

- h. Press the **OK** key to complete the selection.
- i. Press the Left Arrow key to confirm your selection.
- j. Press the Up Arrow and Down Arrow keys and highlight **Store**.
- k. Press the Right Arrow key and select **Store**.
The first of four icons should be highlighted.
- l. Press the **OK** key.
An arrow should point to **Yes**.
- m. Press the **OK** key.
The icons for an open door should be highlighted.
- n. Press the **OK** key.
Store should be highlighted.
- o. Press the Left Arrow key to complete the Image adj. function.
- p. Press **Menu** to exit the menu.

Step 11 Set the lens iris by completing the following steps:

- a. From the main menu, use the Up Arrow and Down Arrow keys to highlight the **Image Adj** function. Press the Right Arrow key to select the Image Adj sub-menu.
- b. Use the up and Down Arrow keys to select **Lens Iris**.
- c. Press the Right Arrow key to display the lens value setting tool. Press the Right Arrow until you reach 0, then press **OK** to return to the Image Adj submenu.
- d. Press the Left Arrow key to return to the main menu.

Step 12 Select the screen size by completing the following steps:

- a. From the main menu, use the Up Arrow and Down Arrow keys to highlight the **Screen** function. Press the Right Arrow key to select the Screen sub-menu.
- b. Use the up and Down Arrow keys to select **Normal**, then press OK.
- c. Press the Left Arrow key to return to the main menu.

Step 13 Select the video source by completing one of the following procedures:

- a. Press the H1/H2 key on the remote control until **HDMI 1** appears on the screen.
- b. If the correct video image does not appear, use the Up Arrow and Down Arrow keys to select **Input**. Use the Right Arrow to select the **Input** sub-menu.
- c. Use the Up Arrow and down keys to select either **HDMI** (for the PLV-Z4 projector) or **HDMI 1**(for the PLV-Z5 projector).
- d. Press the Left Arrow key to exit the **Input** function.

Step 14 Set the group, number and data settings by completing the following steps:



Note

Changing these settings allows a projector to be monitored by the System Network Management Protocol (SNMP) when the projector is in an inactive state. If a projector lamp fails, SNMP does not properly report the failure from an inactive projector until you complete these steps.

- a. Press the **Menu** key for 20 seconds.
The letter S displays in the upper left corner of the screen.

- b. Press the **Screen** key for 3 seconds.
The service menu displays.
- c. Press **OK** until the group number setting changes to **100**.
- d. Press the **Down Arrow** key until the No. setting changes to **4**.
- e. Press the **Left Arrow** key until the Data setting changes to **0**.
- f. Press the **ON-OFF** key to end the service menu.

Step 15 Aim the remote control at the lens of the projector.



Tip

You can use the screen to reflect the signal back to the projector if you are sitting at the table.

Leave the projector in this state. When the video signal is turned off or disconnected, the projector will go black for 30 seconds. Then it will count down for 5 minutes and then turn off the lamp.

If a video signal is applied during this 5 minute countdown the video will reappear immediately. If the countdown completes, the projector goes into a cool-down mode which will ignore a video signal for 30 seconds. It will then stay in a standby mode and will power back up when a video signal is connected. It will take 15 seconds for the projector to light back up.

Step 16 To check either VGA or document camera input, perform the following steps:

- a. Click **Presentation Devices** on the **Hardware Setup** window.
- b. Perform one of the following steps to test the video input:
 - Click the **VGA** radio button to test input from a VGA device
 - Click the **Document camera** radio button to test input from the document camera

If the input image is displaying correctly, you should see an image projected on the projection surface.

Step 17 If the image is out of focus or is too small, use the projector focus ring to focus the image and use the zoom lever to create the largest possible image.

Step 18 Click **Stop** in Cisco TelePresence System Administration to remove the test pattern and complete the projector test.

Testing the CTS 3200 Projector

To test the CTS 3200 projector:

Step 1 Make sure that a serial cable is connected from your projector to the Serial output of the auxiliary control unit. See [Chapter 9, “Routing Power and Signal Cables”](#) in the *Cisco TelePresence System 3200 Assembly, Use & Care, and Field-Replaceable Unit Guide* for information about cabling your system with an Auxiliary Control Unit.

Step 2 Start a test pattern display for the projector by completing the following steps:

- a. Open a browser that is connected to the network.
- b. Enter the IP address of the primary codec to log in to Cisco TelePresence System Administration.
- c. Select **Troubleshooting > Hardware Setup**, then click the **Presentation Devices** radio button.
- d. Select the **Test Pattern** radio button.
- e. Click **Start** to begin the test.

Step 3 Turn on the projector by turning the projector power rocker switch to the **ON** position.

The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.

If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.

Step 4 From Cisco TelePresence System Administration, click **Set Projector Defaults** to automatically configure the projector for use with the CTS 3200.

Step 5 Set the group, number and data settings by completing the following steps:



Note

Changing these settings allows a projector to be monitored by the System Network Management Protocol (SNMP) when the projector is in an inactive state. If a projector lamp fails, SNMP does not properly report the failure from an inactive projector until you complete these steps.



Tip

Use the projector remote control or press the buttons on the projector to complete these steps.



Note

If your system uses a Sanyo PLV-Z700 projector, skip this step.

- a. Press the **Menu** key for 20 seconds.
The letter S displays in the upper left corner of the screen.
- b. Press the **Screen** key for 3 seconds.
The service menu displays.
- c. Press **OK** until the group number setting changes to **100**.
- d. Press the **Down Arrow** key until the No. setting changes to **4**.
- e. Press the **Left Arrow** key until the Data setting changes to **0**.
- f. Press the **ON-OFF** key to end the service menu.

Step 6 Center the projector display within the screen by completing the following steps:

- a. Locate the lock switch and two dials on the side of the projector.
- b. Move the switch to the unlock position.
- c. Rotate the vertical dial to position the top of the image 1 inch below the bottom of the wood surface.
- d. Rotate the horizontal dial to position the sides of the image 15 inches from each of the seams on the table segments.

Completing this step should center the image in the screen. If the image is not centered, adjust the image until the distance is equal from each table segment seam.
- e. Move the switch to the lock position.

Step 7 Aim the remote control at the lens of the projector.



Tip

You can use the screen to reflect the signal back to the projector if you are sitting at the table.

Leave the projector in this state. When the video signal is turned off or disconnected, the projector will go black for 30 seconds. Then it will count down for 5 minutes and then turn off the lamp.

If a video signal is applied during this 5 minute and 30 second countdown the video will reappear immediately. If the countdown completes, the projector goes into a cool-down mode which will ignore a video signal for 30 seconds. It will then stay in a standby mode and will power back up when a video signal is connected. It will take 15 seconds for the projector to light back up.

Step 8 To check either VGA or document camera input, perform the following steps:

- a. Click **Presentation Devices** on the **Hardware Setup** window.
- b. Perform one of the following steps to test the video input:
 - Click the **VGA** radio button to test input from a VGA device
 - Click the **Document camera** radio button to test input from the document camera

If the input image is displaying correctly, you should see an image projected on the projection surface.

Step 9 If the image is out of focus or is too small, use the projector focus ring to focus the image and use the zoom lever to create the largest possible image.

Step 10 Click **Stop** in Cisco TelePresence System Administration to remove the test pattern and complete the projector test.

Troubleshooting Presentation Devices

Use the information in the following sections to troubleshoot presentation devices:

- [Multiple Input Devices, page 10-31](#)
- [Presentation Devices, page 10-31](#)

Multiple Input Devices

The Cisco TelePresence System can display information from multiple input devices during a meeting. If multiple input devices are sending information, the projector displays the input from the last presentation device sending information. If an input device image is not being seen on the projector screen, try the following:

- VGA devices—Unplug the device from the VGA cable, wait 5 seconds, and then plug the device back in.
- Document cameras—Turn the camera off, wait 5 seconds, and restart the device.


Presentation Devices

Use the information in [Table 10-6](#) to troubleshoot presentation devices.

Table 10-6 **Troubleshooting Presentation Devices**

Problem	Possible Cause	Possible Solution
Test pattern is not displayed.	Projector power switch is off.	<ul style="list-style-type: none"> Check projector power switch. Switch the projector on/off rocker switch to the ON position.
	Power cable is not connected.	<ul style="list-style-type: none"> Check to see if the LED on the top of the projector is illuminated. It can be either green or yellow. If the LED light is not illuminated, make sure that the power cable is plugged in.
	Video cable is not connected to the projector or to the CTS primary unit.	<ul style="list-style-type: none"> Check that the video cable is plugged into the projector and into the correct connector on the CTS primary unit. Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system but no image is displayed.
	Projector is set up to receive PC input instead of input from its video cable connector.	<ul style="list-style-type: none"> Use the projector remote control to configure the projector for HD Video input. If your system includes an Auxiliary Control Unit, click Set Projector Defaults.
	Object is blocking the path of the projector.	Remove any objects blocking the projector lens.
	HD Video connector is not securely seated in the projector.	Seat the HD Video connector securely.
	HD Video connector is not securely seated in the CTS primary codec.	Seat the HD Video connector securely.
	HD Video connector is not inserted in the correct port on the CTS primary codec.	<p>The HD Video cable connector should be connected to auxiliary video out. Check the cabling diagrams in the Routing Power and Signal Cables section in the following documentation:</p> <ul style="list-style-type: none"> Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide
Projector image is dim.	Lamp iris needs to be set to open.	<p>See the Setting Up the Camera section in the following documentation:</p> <ul style="list-style-type: none"> Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide

Table 10-6 **Troubleshooting Presentation Devices**

Problem	Possible Cause	Possible Solution
System Status window shows unexpected Document Camera status.	Document camera settings may need to be adjusted in Unified CM.	Cisco recommends setting the Digital Visual Interface (DVI) resolution to XGA/60 at 1024 x 768/60 Hz. See the Optional Hardware section of the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System for more information.
<p>There is no image and a Bulb icon appears on the CTS main display.</p> 	The projector bulb has burned out.	Replace the projector bulb.
<p>CTS 3000 and CTS 3200 system projector alarms:</p> <ul style="list-style-type: none"> • Operation Status: Failed to connect to presentation device • XML/RPC failure • Operation Status: ERROR 	<p>The projector serial port is not functioning properly</p> <p>On CTS 3000 and CTS 3200 systems that use a Z60 projector to display external presentations, the system pushes default values to the projector every night. During these updates, the system can fail to connect to the projector. This failure creates syslog messages and can cause spurious SNMP alarms.</p>	<p>Power cycle the projector by turning the power switch on the back of the projector to the Off position, then turn back to the On position. If this problem recurs, perform another power cycle.</p> <p>Note Projector functionality is not affected by the alarms.</p>
<p>Note The Cisco TelePresence System can display information from multiple input devices during a meeting; if multiple input devices are sending information, the projector displays the input from the last presentation device sending information. If you do not see an image being projected on the screen, try the following:</p> <p>For VGA devices, unplug the device from the VGA cable, wait 5 seconds, and then plug the device back in.</p> <p>For document cameras, turn the camera off, wait 5 seconds, and then restart the device.</p>		
<p>Tip Presentation devices automatically shut off when there is no longer a video signal to that presentation device. An on-screen timer counts down the remaining time to shut-down. The amount of time that it takes a device to shut down depends on your Unified CM configuration. Most CTS devices that support PiP shut down in 10 to 15 seconds after the video signal is removed. Devices on the CTS 3000 and CTS 3200 series that have black boxes associated with the auxiliary control take 5 minutes to shut down. See the Product Specific Configuration Layout section of the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System for more information about controlling presentation devices and associated displays.</p>		

Related Information

For more information about setting up and testing presentation devices, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing Other Devices

Use the **Other Devices** Tab to check the following additional devices:

- [Auxiliary Control Unit, page 10-35](#)
- [Digital Media Player, page 10-35](#)
- [Troubleshooting Other Devices, page 10-36](#)
- [Related Information, page 10-37](#)

Auxiliary Control Unit

The auxiliary control unit (**ACU**) controls the individual light units surrounding the displays in CTS conference rooms and enables the CTS to get more complete projector status information and to restore projector defaults.

To test the ACU:

-
- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **Other Devices** radio button.
- Step 4** Click **Start** in the Testing box. The Auxiliary Control Unit (Current Status) is displayed. Individual light units correspond to the five port numbers of the Auxiliary Control Unit, Ports 1 through 5.
- a. Check a box to select a specific port number.
 - Or
 - b. Click **Select All** to select all ports (and all light units) or **Select None**.
 - c. Click the **Refresh On/Off Status** button to update the on/off status of each port.
 - d. Click the **Turn Selected Lights On/Off** to test the selected light unit(s).
 - e. Click the **Reset Auxiliary Control Unit** to power cycle the Auxiliary Control Unit.
- Step 5** Click **Stop** to end the test.
-

Digital Media Player

The Digital Media Player (DMP) feature lets you select a secondary audio input source when you are not in a TelePresence call.

For more information about the DMP, see the [Cisco Digital Media Players](#) home page on Cisco.com.

To test the DMP:

-
- Step 1** Log in to the Cisco TelePresence System Administration interface.
- Step 2** Choose **Troubleshooting > Hardware Setup**.
- Step 3** Click the **DMP** tab.
- Step 4** Click **Start** in the Testing box to begin testing the secondary audio input.
- If you have a PC attached, the **Secondary Audio Input Source PC** button is highlighted. When **Secondary Audio Input Source** is set to **PC**, the audio input is active while the presentation source is active, both in and out of a call.
 - If you have a DMP attached, the **Secondary Audio Input Source DMP** button is highlighted. When set to **DMP**, audio input is only active outside of a call if DMP is active (during business hours defined by Unified CM).

**Note**

The DMP settings should match how the secondary auxiliary audio input is physically connected to the codec.

Step 5 Click **Stop** to end the test.

Troubleshooting Other Devices

Use the information in [Table 10-7](#) to troubleshoot problems in Other Devices.

Table 10-7 Troubleshooting Other Devices

Problem	Possible Cause	Possible Solution
Digital Media Player DMP audio is playing during a call.	Secondary Audio Input Source setting may be wrong.	<ul style="list-style-type: none"> Check to see that the Secondary Audio Input Source setting matches the physical cabling. When set to PC, the audio input is active while the presentation source is active, both in and out of a call.
Presentation Devices <ul style="list-style-type: none"> Local presentation audio is not playing during a call. 	The Secondary Audio Input Source setting may be wrong.	<ul style="list-style-type: none"> Check to see that the Secondary Audio Input Source setting matches the physical cabling. When set to DMP, audio input is only active outside of a call if DMP is active (during Cisco Unified Communications Manager-defined business hours).
<ul style="list-style-type: none"> Presentation fails to display in some resume scenarios. 	This is expected behavior.	<p>In early CTS software releases, a CTS with its presentation device plugged in would always ask to present when it did a resume.</p> <p>Presentation device functionality is changed. When a CTS goes on hold, the presentation device takes note whether or not it was the active presenter:</p> <ul style="list-style-type: none"> If the presentation device was the active presenter when it went on hold, it will ask to present again when taken off hold and the presentation will be shown when the meeting resumes. If it was not the active presenter, it will not ask to present and the presentation will not be shown when the meeting resumes.
<ul style="list-style-type: none"> Administration login can be slow when presenting during point-to-point secure calls. 	This is expected behavior.	Administration CLI login can take as much as 60 seconds during point-to-point secure calls when a hold/resume is performed while presenting.
Tip Other devices automatically shut off when there is no longer a video signal to that device. An on-screen timer counts down the remaining time to shut-down. The amount of time that it takes a device to shut down depends on your Unified CM configuration. Most CTS devices that support PiP shut down in 10 to 15 seconds after the video signal is removed. Devices on the CTS 3000 and CTS 3200 series that have black boxes associated with the auxiliary control take 5 minutes to shut down. See the Product Specific Configuration Layout section of the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System for more information about controlling presentation devices and associated displays.		

Related Information

For more information about setting up and testing other devices, see the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Managing Log Files

**Tip**

If you are using Internet Explorer, remember to turn off Pop-up Blocker or configure Pop-up Blocker to allow the IP address before capturing system log files.

Use Log Files to view system operation (sysop) log files, Session Initiation Protocol (SIP) messages and log files from the Cisco TelePresence system. Click the appropriate tab at the top of the window to view the following information:

- [Sysop Log, page 10-37](#)
- [Log Files, page 10-37](#)
- [SIP Messages, page 10-39](#)

Sysop Log

To manage sysop messages:

-
- | | |
|---------------|--|
| Step 1 | Choose Troubleshooting > Log Files . |
| Step 2 | Select the Sysop Files tab to view system operation (sysop) messages, including call information, call statistics, and call errors for the Cisco TelePresence system. There can be up to 20 individual files saved on the CTS, and each file can contain up to 100,000 characters. |
| Step 3 | Click the Download Sysop Files button at the bottom of the page to download the sysop log files. CTS Administration software then prompts you to do one of the following: <ul style="list-style-type: none">a. Open to view the sysop log files—The last 100,000 bytes of the log are shown. When you download Sysop Files, all available Sysop files will be downloaded.<li style="text-align: center;">Orb. Save the sysop log files. |
-

Log Files

Use Log Files to retrieve log files from the Cisco TelePresence system. Log files can be retrieved from the CTS or from the phone.

To manage log files:

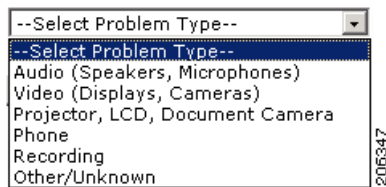
Step 1 Choose **Troubleshooting > Log Files**.

Step 2 Select the **Log Files** tab. The following fields are displayed:

- **Log Status**—Shows the status of the log capture, including the percentage completed.
- **Time Generated**—Shows the time of the most recent log file capture.
- **Problem**—Problem Type drop-down menu contains the following:
 - Audio (speakers, microphones)
 - Video (displays, cameras)
 - Projector, LCD, document camera
 - Phone
 - Recording
 - Other/Unknown

Figure 10-9 shows the problem types that you can select when downloading log files.

Figure 10-9 Select Problem Type Drop-Down Menu



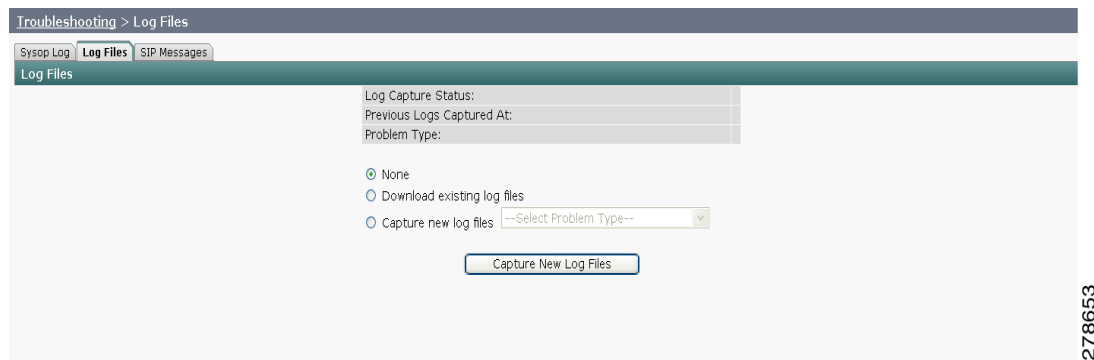
Step 3 Choose from one of the following options:

- **None** —Default. No log files will be captured unless a download option is selected. Figure 10-10 shows the log download radio button options.
- **Download existing log files**—You must select this radio button to download logs.
- **Capture New Log Files**—The system will capture but not download the log files.



Note You must disable Internet Explorer Pop-up Blocker to capture new log files with the Capture New Log Files button.

Figure 10-10 Downloading Log Files



- Step 4** Select the “Download existing log files” radio button and then select a problem from the Select Problem Type drop-down menu:
- Audio (speakers, microphones)
 - Video (displays, cameras)
 - Projector, alternate display, [LCD](#), document camera
 - Phone
 - Recording
 - Other/Unknown
- Step 5** Click the **Download Existing Log Files** button. The following message appears:
- “A WinZip download will start within several minutes.
Please wait...”
- The File Download window appears prompting you to open or save the file. Click **Save** to send the [gzip](#) file to Cisco technicians to help solve the problem.
- Or
- Step 6** Select the “Capture new log files” radio button and then click the **Capture New Log Files** button. The following message appears:
- “Collecting Cisco TelePresence system log files. This may take several minutes.
Please wait...”
- The File Download window appears prompting you to open or save the file. Click **Save** to send the [gzip](#) file to Cisco technicians to help solve the problem.
-

SIP Messages

Use SIP Messages to view the current Session Initiation Protocol (SIP) messages log file. SIP request and response methods are used to establish communications between components in the network and ultimately to establish a call or session between two or more endpoints. [Table 10-8](#) and [Table 10-9](#) describe the SIP requests and message types.

To manage SIP messages:

-
- Step 1** Choose **Troubleshooting > Log Files**.
- Step 2** Select the **SIP Messages** tab. The SIP Messages window appears.
- Step 3** View a specific type of message in the SIP log file by doing the following:
- a. Enter the filter where the SIP Message Type is by typing the name in the field provided. The Filter button is activated.
- Or
- b. Select the message type from the drop-down menu. The Filter button is activated.
 - c. Click the **Filter** button to view the SIP messages of the type you specified.

- Step 4** Choose the number of messages to view at one time from the Rows Per Page drop-down menu. You can use the First, Previous, Next, and Last buttons to navigate through the message list with the [Navigating Long Lists](#) option. You can also [Generate Detailed Message Reports](#).

Generate Detailed Message Reports

To see additional details associated with a SIP message:

- Step 1** Double-click on a SIP message from the list to open the SIP Message Details dialog box. The SIP Message Details dialog box opens containing the message details and [Related SIP Messages](#).
- Or
- Step 2** Highlight the SIP message and click the **Details** button. The SIP Message Details dialog box opens containing the message details and [Related SIP Messages](#).

Related SIP Messages

The bottom portion of the SIP Message Details window lists SIP messages that are related to the SIP message that was selected at the top of the window.

To view related SIP message details:

- Step 1** Double-click a message in the [Related SIP Messages](#) window to see details for that message. [SIP Requests and Methods](#) and [SIP Response Categories](#) are explained below.
- Step 2** Click **Close** to dismiss this window.

Use the information in the following sections to initiate SIP requests and responses:

- [SIP Requests and Methods](#), page 10-40
- [SIP Response Categories](#), page 10-41

SIP Requests and Methods

[Table 10-8](#) summarizes the SIP requests and methods supported by the Cisco TelePresence System Administration software. The first column lists the RFC that describes the SIP request messages or method.

Table 10-8 *Supported SIP Requests and Methods*

RFC	Request/Method	Description
3261	ACK	Confirms that the client has received a final response to an INVITE request.
3261	BYE	Terminates a call. Can be sent by either the caller or the called party.
3261	CANCEL	Cancels any pending searches but does not terminate any call currently in progress.
2976	INFO	Allows session-related control information generated during a session to be carried along the SIP signaling path.

Table 10-8 *Supported SIP Requests and Methods*

RFC	Request/Method	Description
3261	INVITE	Indicates that a user or service is being invited to participate in a call session.
3265	NOTIFY	Immediately upon successful accepting or refreshing of a subscription, a NOTIFY message is sent to communicate the current resource state to the subscriber. This NOTIFY message is sent in the same dialog as that created by the SUBSCRIBE message.
3261	OPTIONS	Queries the capabilities of servers.
3262	PRACK	Provides reliability for 1xx type messages; see Table 10-8 .
3515	REFER	Provides a mechanism allowing the party sending the REFER message to be notified of the outcome of the referenced request.
3261	REGISTER	Registers the address listed in the To header field with a SIP server.
3265	SUBSCRIBE	Requests current state and state updates from a remote node.
3311	UPDATE	Allows a client to update parameters of a session, but has no impact on the state of a dialog. This request can be sent before the initial INVITE has been completed, thereby making it useful for updating session parameters within early dialogs.

SIP Response Categories

SIP replies to the requests in [Table 10-8](#) using the response categories described in [Table 10-9](#).

Table 10-9 *SIP Response Categories*

Response Category	Response Type
1xx	Informational messages
2xx	Successful responses
3xx	Redirection responses
4xx	Request failure responses
5xx	Server failure responses
6xx	General failure responses

Navigating Long Lists

The log file can hold up to 2 MB worth of SIP messages. To navigate long lists:

-
- Step 1** Choose the number of rows that you wish to see on one page from the Rows Per Page drop-down menu.
 - Step 2** Double click to select and open single message details. The SIP Message Details window appears.
 - Step 3** If there are multiple pages listing log files, click the **First**, **Previous**, **Next**, or **Last** button to navigate to the desired page.
 - Step 4** Click the radio button to the left of the table entry, and then click **Clear** to delete a single error message.
 - Step 5** Click **Clear All** to delete all error messages displayed.
-

Related Information

For more information, see the following documentation:

- [Session Initiation Protocol \(SIP\) home page](#) on Cisco.com.
- [Cisco TelePresence System Message Guide](#)

Testing Audio

You can test the system audio in your meeting room and send the results to Cisco Systems technical support for analysis.



Note

Audio recordings can be made only while the CTS system is in a call.

To record audio:

Step 1 Choose **Troubleshooting > Audio**.

Step 2 Click **Start Recording Audio** to start recording all audio in the local meeting room including audio from remote meeting rooms. Recording will continue up to a maximum of two minutes unless you manually stop recording.



Note

Both endpoints will beep periodically during the recording process and when audio add-in participants join the call.

Step 3 Click **Stop Audio Recording** to stop recording.

Step 4 After you complete the recording and download the results, send the results to Cisco Systems technical support.

Related Information

For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Testing the Network Connection

Use the Network Connection window to view and modify the duplex and automatic negotiation settings for the Cisco TelePresence system Ethernet connection. Auto negotiation is set to Off by default.

You can change the following network connection settings:

- Auto Negotiation on
- Auto Negotiation off

To manage Auto Negotiation:

Step 1 Choose **Troubleshooting > Network Connection**.

Step 2 Click the **On** or **Off** radio button to enable or disable auto negotiation. The Apply and Reset buttons are activated, as shown in [Figure 10-11](#).



Note

When Auto Negotiation is enabled, the Duplex and Speed settings are read-only.

Figure 10-11 Auto Negotiate On

Step 3 Click **Apply** to save your settings or click **Reset** to restore the original settings.

Related Information

For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Managing Configuration Issues

Use the Configuration Issues window to view hardware and software versions and to reset the system to use the factory default software image and the default configuration.

To view hardware and software versions and active images, choose **Troubleshooting > Configuration Issues**. The Hardware/Software Versions page appears listing the current hardware and software versions and active images.

Resetting the System



Caution

Once the system is reset, you will have to reconfigure the system. You will be asked twice to confirm your choice to revert to the factory image before software will carry out this request.

Resetting the system can take over two hours to complete.

A system reset results in the following:

- The CTS is reset to the software image as originally shipped.
- All configuration settings are reset to the factory defaults.

If you select to reset the system to use factory defaults, check the Cisco IP telephone for messages during the reset procedure:

- Data in bold **blue** text indicates where the current system image is located for each codec in the system.
- Locations of the factory image are listed.

To reset the system image to the factory default:

-
- Step 1** Choose **Troubleshooting > Configuration Issues**. The Hardware/Software Versions page appears listing the current hardware and software versions and active images.
- Step 2** Click the **Reset to Factory Image and Factory Configuration...and Restart Cisco TelePresence System...** button. The system image location is changed and the system is restarted.

**Note**

If a Cisco TelePresence call is in progress, the changes will be made after the call ends.

Related Information

For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Initiating System Restart

**Caution**

The system will restart immediately, even when a Cisco TelePresence call is in progress.

To restart the system:

-
- Step 1** Choose **Troubleshooting > System Restart**. The System Restart page appears and the current call status is displayed.
- Step 2** Click the **Restart Cisco TelePresence System** button. The system immediately restarts.
-

Troubleshooting Video Quality Settings

Use the information in [Table 10-10](#) to troubleshoot the video picture on the displays.

Table 10-10 *Troubleshooting Cisco TelePresence Screen Resolution*

Problem	Possible Cause	Action
Video picture is good but experiences repeated interruptions.	Video quality setting is set too high.	<ol style="list-style-type: none"> 1. Log into the Cisco Unified CM Administration interface. 2. Verify that the required settings have been made for configuring the video quality. See the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System. <p>Note Higher bandwidth increases video quality, but may also cause packets to be dropped and video to be interrupted.</p>

Note See the [Cisco TelePresence Network Systems 2.0 Design Guide](#) for more information about CTS video quality.

For more system troubleshooting information, see the [Cisco TelePresence System Troubleshooting Guide](#) on Cisco.com.

Troubleshooting Network Cabling

For all Cisco TelePresence systems, the Cisco Unified IP phone is connected to the primary codec using an Ethernet cable (RJ-45 connector). An RJ-45 connector is also required for the following additional network connections:

- CTS 3000 and the CTS 3200—The following codecs are connected to the primary unit:
 - Left
 - Right secondary
 - Presentation
- An Ethernet cable (RJ-45) connects the primary codec to the user network.

For detailed cabling information, see the Routing Power and Signal Cables section in the following documentation:

- [Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide](#)

Table 10-11 contains problem scenarios and troubleshooting solutions for network cabling.

Table 10-11 Troubleshooting Cisco TelePresence Network Cabling

Problem	Possible Cause	Actions
Cisco Unified IP Phone is off.	<ul style="list-style-type: none"> • Power to the primary unit is off. • Phone is not connected to the phone port on the primary unit. • The system does not recognize the phone or it is unregistered. • The network is down. 	<ul style="list-style-type: none"> • Check the power connection to the Cisco TelePresence System, and verify that the system is turned on. • Check the cable connection from the primary unit to the Cisco Unified IP Phone. See the assembly guide for your Cisco TelePresence system for correct cabling: <ul style="list-style-type: none"> – Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide – Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide • Log into the Cisco Unified Communications Manager administration interface. Click on the IP address and verify phone registration. Restore network operation. See the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System for more information.
Cisco IP Phone does not register with the IP network.	<ul style="list-style-type: none"> • The network cable is not connected to the primary unit. • The network configuration has not been done or has been done incorrectly. 	<ul style="list-style-type: none"> • Log into the Cisco Unified Communications Manager administration interface and verify that the required settings have been made for configuring the Cisco TelePresence system and Cisco Unified IP Phone.

Table 10-11 **Troubleshooting Cisco TelePresence Network Cabling (continued)**

Problem	Possible Cause	Actions
Cisco IP Phone does not register with the IP network.	<ul style="list-style-type: none"> • Cisco Unified Communications Manager is down or disabled. • The network is down. 	<ul style="list-style-type: none"> • Check the cable connection from the primary unit to the network. See the assembly guide for your Cisco TelePresence system for correct cabling: <ul style="list-style-type: none"> – Cisco TelePresence System 3000 Assembly, Use & Care, and Field Replacement Unit Guide – Cisco TelePresence System 3200 Assembly, Use & Care, and Field Replacement Unit Guide • Restart Cisco Unified Communications Manager. See the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System for Cisco Unified Communications Manager configuration instructions. • Restart the network.
Cisco Telepresence phone idle screen does not appear.	Device configuration has not been done or has been done incorrectly.	<ul style="list-style-type: none"> • Log into the Cisco Unified Communications Manager administration interface. • Verify that the required settings have been made for configuring the Cisco TelePresence system and Cisco Unified IP Phone. See the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System.
Note For more system troubleshooting information, see the Cisco TelePresence System Troubleshooting Guide on Cisco.com.		

Where to Go Next

See [Chapter 12, “Monitoring the Cisco TelePresence System.”](#)

For information about system messages that may appear on the Cisco TelePresence system, see the [Cisco TelePresence System Message Guide](#) on the [Cisco TelePresence Administration Software Error and System Messages](#) home page on Cisco.com.

For information about upgrading hardware in an existing CTS 3000 Series installation, including removing the projector and adding new speakers, speaker covers, and LCD display, see the [Removing the Projector and Adding a Presentation Display for CTS 3000 and CTS 3200 Systems](#) Guide on Cisco.com.

