

CHAPTER 8

Troubleshooting the CTS 1300

Revised: March, 2011, OL-21845-01

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 CTS 1300 hardware and software.

Before You Begin

1. Obtain your IP address from the CTS Cisco Unified IP phone by touching 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.

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 1300 Hardware Setup, page 8-2](#)
- [Managing Log Files, page 8-62](#)
- [Testing Audio, page 8-67](#)
- [Testing the Network Connection, page 8-68](#)
- [Managing Configuration Issues, page 8-68](#)
- [Initiating System Restart, page 8-69](#)
- [Troubleshooting Video Quality Settings, page 8-70](#)
- [Troubleshooting Network Cabling, page 8-71](#)
- [Where to Go Next, page 8-72](#)

Managing CTS 1300 Hardware Setup

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

- [Configuring the CTS 1300 Table, page 8-3](#)
- [Managing Displays, page 8-5](#)
- [Testing Cameras, page 8-7](#)
- [Testing Speakers, page 8-48](#)
- [Testing Microphones, page 8-50](#)
- [Testing the External Presentation Display, page 8-53](#)
- [Testing Presentation Devices, page 8-54](#)
- [Testing Other Devices, page 8-59](#)

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.

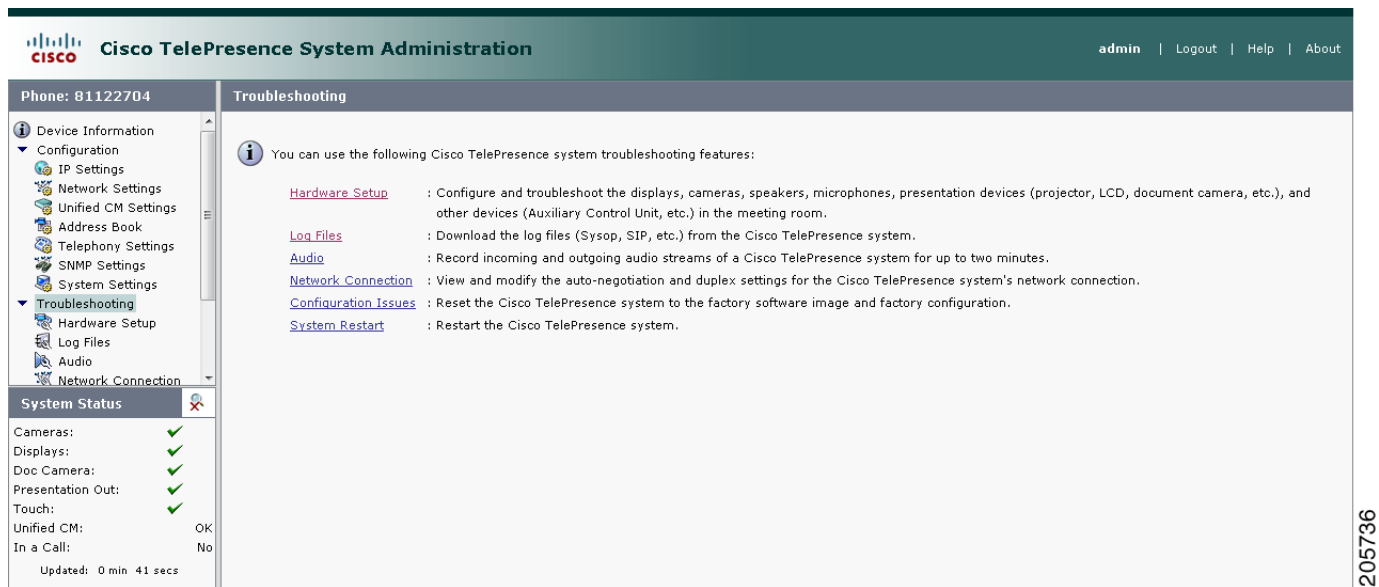


Note

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 8-48](#).

Figure 8-1 shows the Cisco TelePresence System Hardware Setup troubleshooting window.

Figure 8-1 Troubleshooting Window



Note

CTS initial setup is also performed using the Hardware Setup fields. For information on how to configure CTS for the first time, see the *Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide*.

Configuring the CTS 1300 Table

Before you can set up the cameras in a Cisco TelePresence System 1300 (CTS 1300) conference room, the Cisco TelePresence System (CTS) software needs to know the size and shape of the table in the room. A drop-down menu is provided that allows you to specify the shape of the table in the room and where participants will be seated.



Note

The CTS 1300 is designed to be used in any type of multipurpose room. However, to ensure that you have the best conferencing experience, Cisco recommends that you optimize your room by using the guidelines and recommendations in *Cisco TelePresence System 1300 Room Recommendations* chapter in the *Cisco TelePresence System 1300 Assembly, First-Time Setup, and Field-Replaceable Unit Guide*.

Specifying the Table Size and Shape

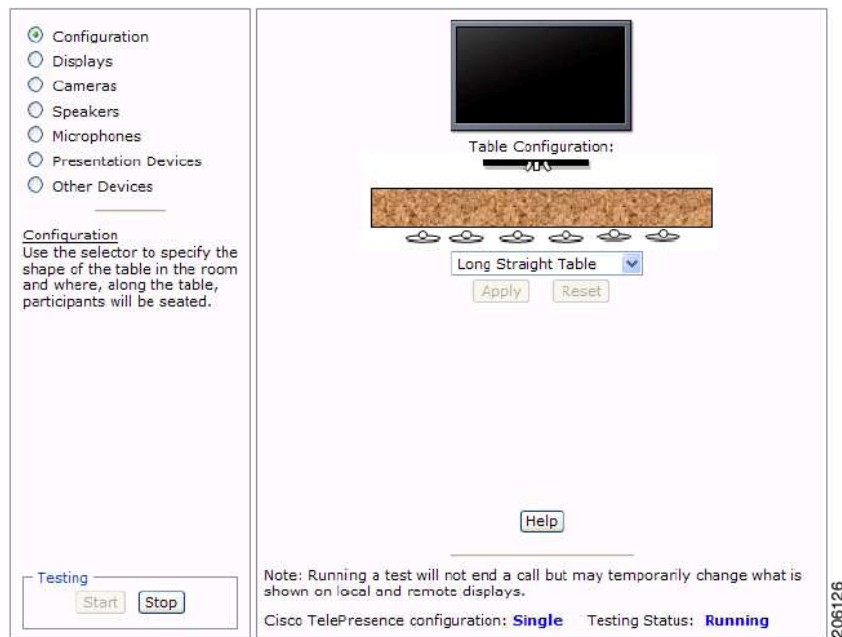
Figure 8-2 shows the CTS 1300 table configuration menu.

**Note**

You must specify the table shape before you can perform camera and microphone testing on the CTS 1300.

The table must be a minimum of 7 feet wide and 9 feet long.

Figure 8-2 Cisco CTS 1300 Table Configuration Menu

**Note**

If you log out of the Cisco TelePresence System Administration interface at any time during the camera testing procedure, you must re-select the table type.

See the following sections to configure your table type:

- [Configuring the CTS 1300 for Use With a Long Straight Table, Wide Rectangular Table, or Long Racetrack table, page 8-13.](#)
- [Configuring the CTS 1300 for Use With a Short Racetrack Table, page 8-33.](#)

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 8-5](#)
- [Adjusting Your Display, page 8-6](#)
- [Troubleshooting Displays, page 8-7](#)
- [Related Information, page 8-7](#)

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 as *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.

Proceed to [Adjusting Your Display](#).

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 8-3](#).



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 8-3 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:

<select color temperature>

▼

Apply

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**

-
- 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 8-1](#) to troubleshoot problems with the images on the displays.

Table 8-1 *Troubleshooting Displays*

Problem	Possible Cause	Action
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 Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide.</p>

Related Information

- For more information about setting up and testing displays, see the [Cisco TelePresence System 1300 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.

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

- [Testing the CTS 1300 Cameras, page 8-8](#)
- [Configuring the CTS 1300 for Use With a Conference Room Table, page 8-12](#)
- [Arranging the Seat Alignment Guides, page 8-45](#)
- [Understanding Camera Setup Choices for Room Lighting, page 8-47](#)
- [Troubleshooting Cameras, page 8-47](#)
- [Related Information, page 8-48](#)



Note

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

Testing the CTS 1300 Cameras

The CTS 1300 supports three cameras and various room configurations and table types. Use the procedures in this section to troubleshoot the cameras depending on your table type.

**Note**

You must first configure the table size before you can test the camera. See the [“Configuring the CTS 1300 Table” section on page 8-3](#). For more information about the supported table types, see the [Supported Table Types and Minimum Room Dimensions](#) section of the *Cisco TelePresence System 1300 Assembly, First-Time Setup, and Field-Replaceable Unit Guide*.

**Note**

If you log out of the Cisco TelePresence System Administration interface at any time during the camera testing procedure, you must re-select the table type. To select the correct table type, complete the steps in the [“Positioning the Table and Starting the Calibration Procedure” section on page 8-13](#).

Use the information in the following sections to set up the CTS 1300 camera for testing:

- [Removing the Camera Cover and Leveling the Cameras, page 8-8](#)
- [Attaching the Large Camera Target to the Easel, page 8-11](#)
- [Configuring the CTS 1300 for Use With a Long Straight Table, Wide Rectangular Table, or Long Racetrack table, page 8-13](#)
- [Configuring the CTS 1300 for Use With a Short Racetrack Table, page 8-33](#)
- [Saving Your Settings, page 8-44](#)

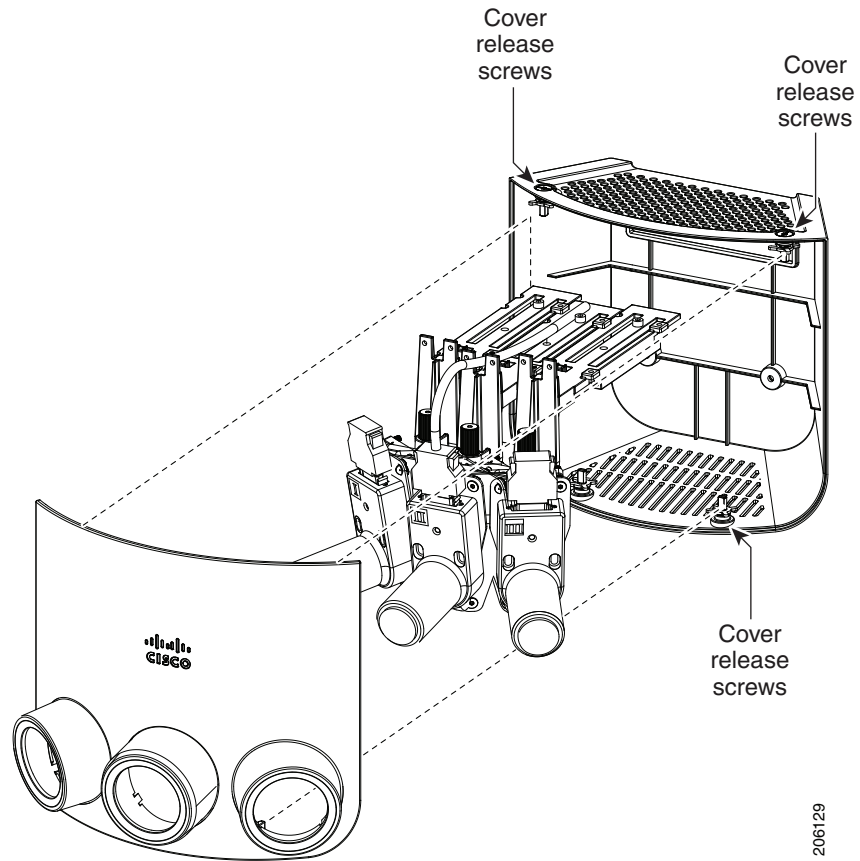
Removing the Camera Cover and Leveling the Cameras

The camera cluster must be perfectly level for you to properly test the camera. To remove the camera cover and level the camera:

Step 1

Remove the camera cover by removing the four black plastic screws on the top and bottom of the camera assembly, as shown in [Figure 8-4](#).

Figure 8-4 **Removing the Camera Cover**



- Step 2** Place the small [spirit level](#) on top of the camera assembly and adjust the leveling screws behind the camera cluster until the camera assembly is level, as shown in [Figure 8-5](#).

Figure 8-5 *Leveling the Camera Assembly*

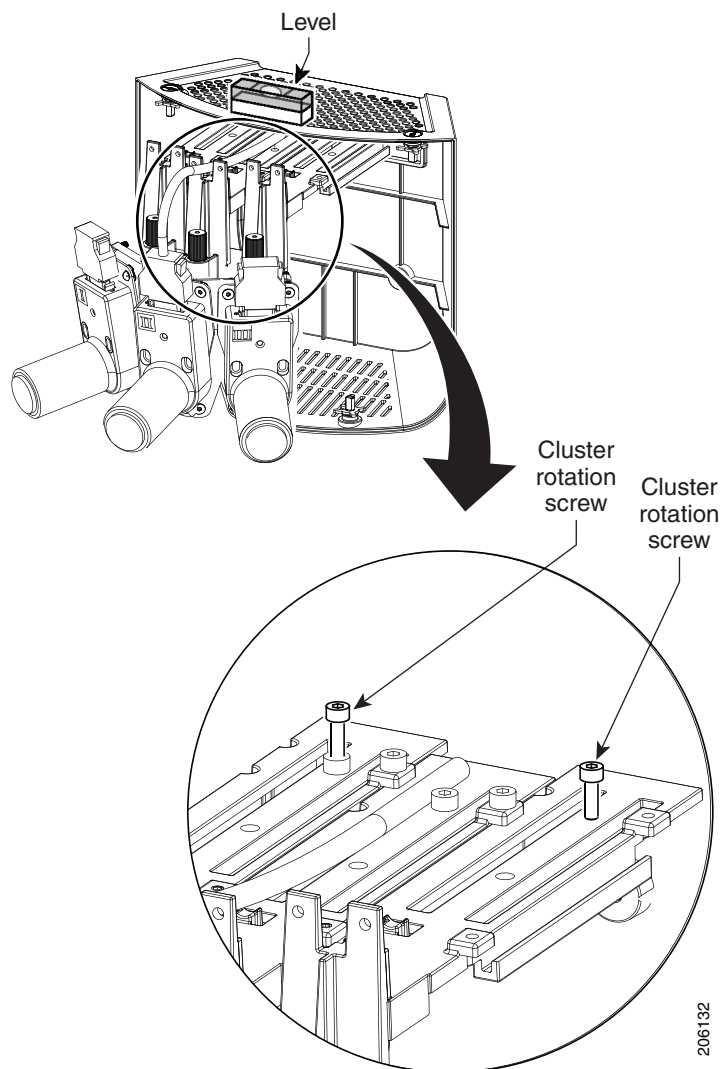
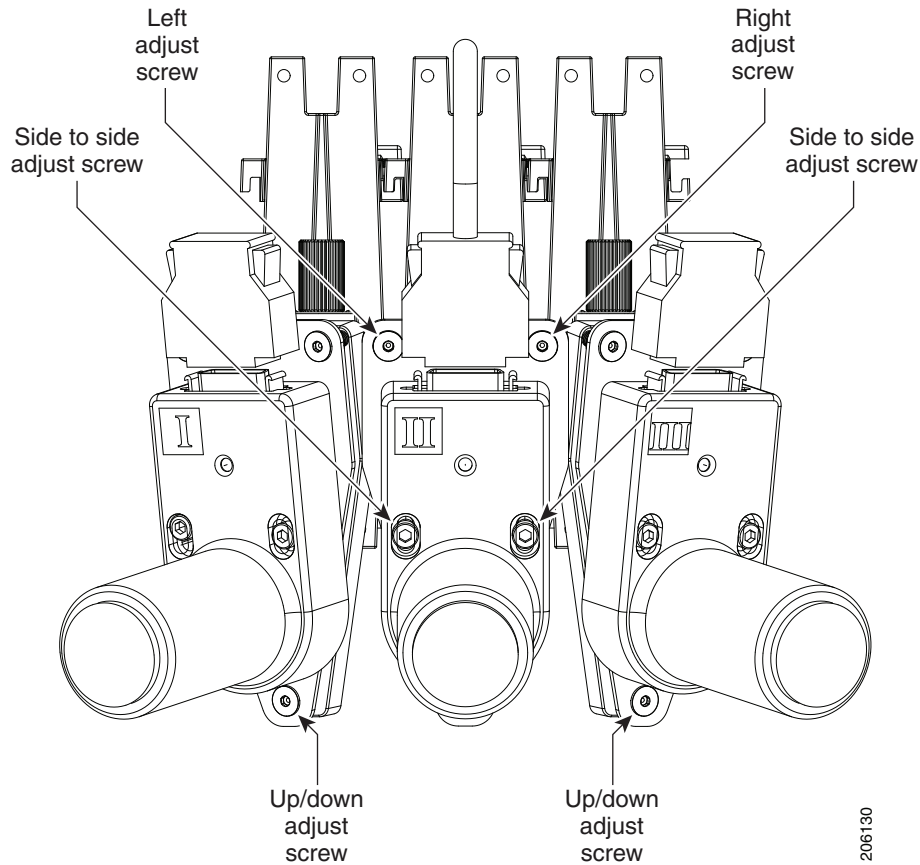
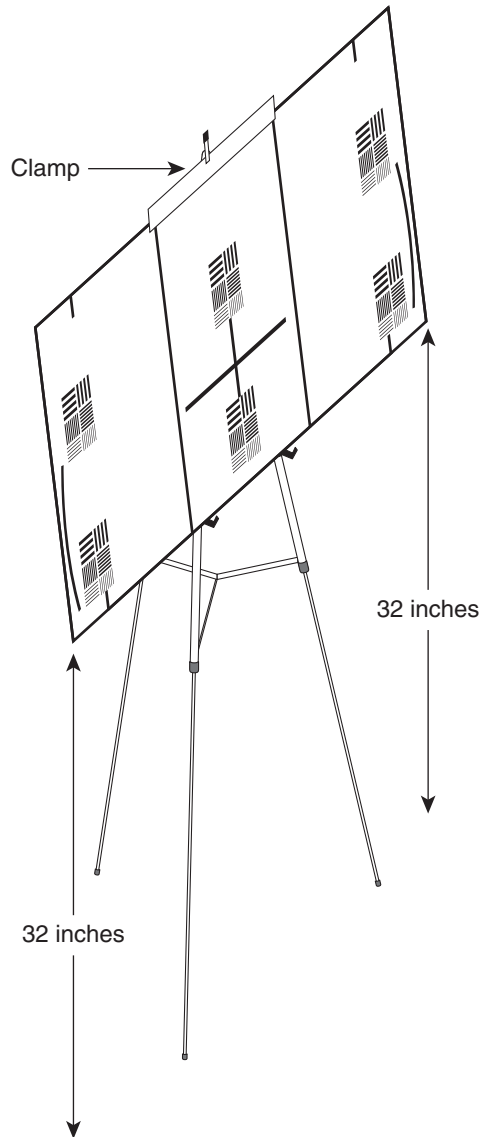


Figure 8-6 Camera Rotational Adjustment Screws

Attaching the Large Camera Target to the Easel

To unpack and build the easel and large camera target:

-
- Step 1** Remove the easel, large camera target, and small camera target from their packaging.
 - Step 2** Unlock and slide the telescoping legs of the easel until the legs are at their full height.
 - Step 3** Separate the three legs.
 - Step 4** Raise the front legs until they are 29 inches (74 cm) high.
 - Step 5** Raise the rear leg until it is 31 inches (79 cm) high.
 - Step 6** Lock the legs into place using the leg locks.
 - Step 7** Attach the large camera target to the clip on top of the easel.
 - Step 8** Raise the target supports on the front legs until they touch the lower part of the large camera target.
 - Step 9** Raise and lower the front legs until the bottom of the camera target is 32 inches above the ground. [Figure 8-7](#) shows the completed camera target and easel.

Figure 8-7 Easel and Target After Assembly

Configuring the CTS 1300 for Use With a Conference Room Table

You can configure the CTS 1300 to use the existing table in your conference room. Perform the tasks in the section that describes your table type:

- [Configuring the CTS 1300 for Use With a Long Straight Table, Wide Rectangular Table, or Long Racetrack table, page 8-13](#)
- [Configuring the CTS 1300 for Use With a Short Racetrack Table, page 8-33](#)

**Note**

Use the short racetrack camera procedure when two of the six participants directly face the display, and the other four participants sit at an angle to the display.

If four or more of the six participants directly face the display, follow the procedure in the [“Configuring the CTS 1300 for Use With a Long Straight Table, Wide Rectangular Table, or Long Racetrack table”](#) section on page 8-13

Configuring the CTS 1300 for Use With a Long Straight Table, Wide Rectangular Table, or Long Racetrack table



Note

If you log out of the Cisco TelePresence System Administration interface at any time during the camera testing procedure, you must re-select the table type. To select the correct table type, complete the steps in the [“Positioning the Table and Starting the Calibration Procedure”](#) section on page 8-13.

This section includes the procedures you perform to configure the CTS 1300 software and cameras for use with a room that has a long straight table, wide rectangular table, or wide racetrack table, and includes the following topics:

- [Positioning the Table and Starting the Calibration Procedure](#), page 8-13
- [Calibrating the Center Camera](#), page 8-20
- [Calibrating the Right Camera](#), page 8-24
- [Calibrating the Left Camera](#), page 8-26
- [Focusing the Center Camera](#), page 8-28
- [Focusing the Right Camera](#), page 8-30
- [Focusing the Left Camera](#), page 8-30

Positioning the Table and Starting the Calibration Procedure

To correctly position the table and configure the Cisco TelePresence software for use with the CTS 1300 cameras:

- Step 1** Position the table so that there is a minimum of 44 inches between the display and the front of the table, and make sure that the sides of the table are evenly positioned on each side of the CTS 1300, as shown in the following examples:
- Long, straight table, [Figure 8-8](#)
 - Wide rectangular table, [Figure 8-9](#)
 - Long racetrack table, [Figure 8-10](#)
- Step 2** Make sure that the farthest edge of the table is no farther than 110 inches away from the lower bezel of the display.



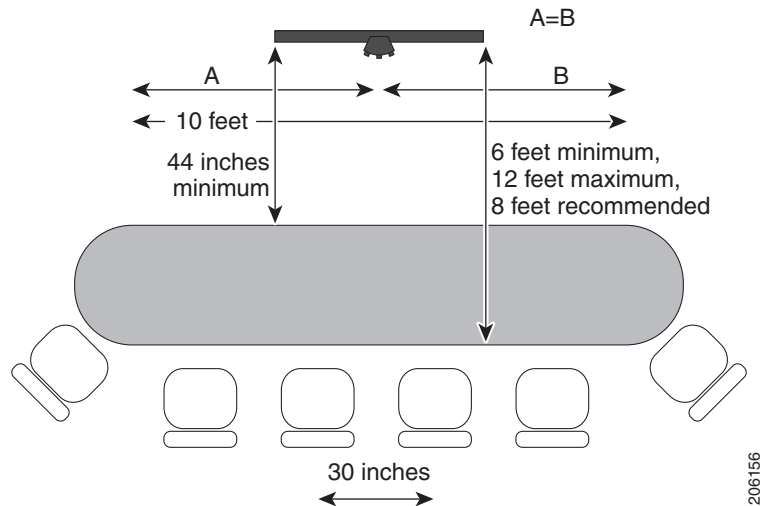
Note

The table must be 28 to 32 inches high. 30 inches is the optimal height.

Diagram illustrating the required dimensions for a wheelchair accessible table:

- Clearance from the side of the table to the center of the wheelchair: 7.5 feet minimum.
- Clearance from the front of the table to the center of the wheelchair: 15 feet minimum.
- Clearance from the side of the table to the front edge of the wheelchair: 44 inches minimum.
- Clearance from the side of the table to the back edge of the wheelchair: 6 feet minimum, 12 feet maximum, 8 feet recommended.
- Table width: 30 inches.

A diagram of a rectangular table with chairs. The table is represented by a gray rectangle. Four chairs are shown along the bottom edge, each with a 30-inch wide seat. A hanging light fixture is positioned above the table. The distance from the table to the light fixture is labeled as 44 inches minimum. The distance from the light fixture to the wall is labeled as A=B. The distance from the wall to the table is labeled as B. The distance from the table to the wall is labeled as 6 feet minimum, 12 feet maximum, 8 feet recommended.

Figure 8-10 Long Racetrack Table Positioning

- Step 3** Make sure that the camera assembly is level by completing the steps in the [“Removing the Camera Cover and Leveling the Cameras”](#) section on page 8-8.
- Step 4** Build the easel, and attach the large camera target to the easel, by completing the steps in the [“Attaching the Large Camera Target to the Easel”](#) section on page 8-11, making sure that the bottom of the target is 32 inches above the ground.
- Step 5** Log in to the Cisco TelePresence System Administration interface.
- Step 6** Select the table type by completing the following steps:
- Choose **Troubleshooting > Hardware Setup**.
 - Click the **Configuration** radio button. The table configuration window appears, as shown in [Figure 8-2](#).
 - Click the **Start** button to start testing.
 - Select the type of table you have from the drop-down menu:
 - **Long Straight Table** ([Figure 8-11](#))
 - **Long Racetrack Table** ([Figure 8-12](#))
 - **Short Straight Table** ([Figure 8-13](#))

Figure 8-11 Long Straight Table

Specify Table Configuration:

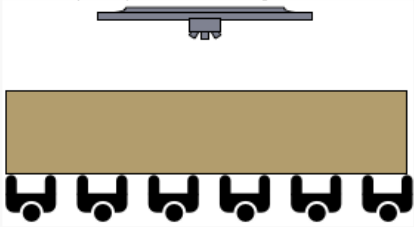


Table shape

Distance from rear of table to display feet

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**

278643

Figure 8-12 Long Racetrack Table

Specify Table Configuration:

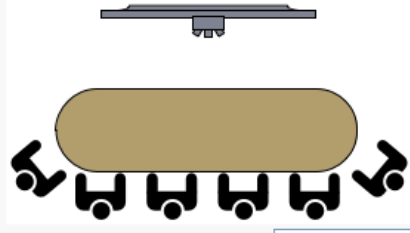


Table shape Long Racetrack Table ▾

Distance from rear of table to display 8 ▾ feet

Apply Reset

Help

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](#)

278642

Figure 8-13 **Short Straight Table**

Specify Table Configuration:

Table shape: Short Straight Table

Distance from rear of table to display: 8 feet

Apply Reset

Help

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**

278646

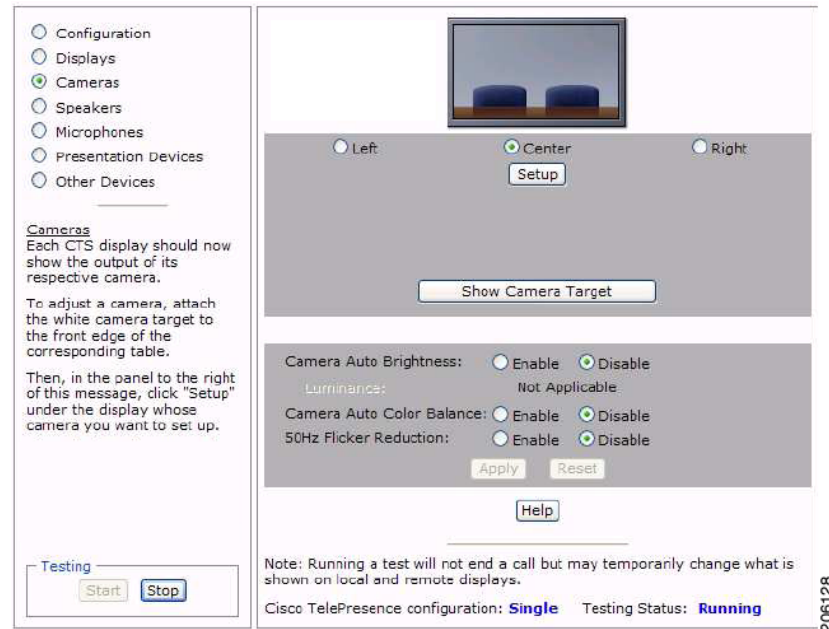
e. Click **Apply**.

Step 7 Choose **Troubleshooting > Hardware Setup**.

Step 8 Click the **Cameras** radio button. The Camera testing page appears.

Step 9 Click **Start** to start the camera test.

Step 10 Click **Show Camera Target**. The camera target menu appears, as shown in [Figure 8-14](#).

Figure 8-14 Camera Target Menu

Step 11 Automatically adjust the cameras by completing the following steps:

- a. In the **Auto Brightness** field, perform one of the following actions:
 - If the room uses outside lighting, or has any other conditions that could cause variable room lighting, click the **Enable** radio button.
 - If your room lighting is not variable, leave the default value.
- b. In the **Auto Color Balance** field, perform one of the following actions:
 - If the room uses outside lighting, or has any other conditions that could cause variable room lighting, click the **Enable** radio button.
 - If your room lighting is not variable, leave the default value.
- c. In the **50 Hz Flicker Reduction** field, click the **Disable** radio button.

**Note**

If you are in country that uses a 50 Hertz (Hz) power frequency (a country other than the USA, Canada or Mexico) and there is a noticeable flicker on the screen, click the **Enable** radio button in this field. If you enable the flicker reduction feature, the flicker is reduced or eliminated, but the image quality is reduced.

To eliminate the flicker at its source, you can use an electronic ballast instead of a magnet ballast for the fluorescent lights at your installation. After you change the ballast for the fluorescent lights, you can click the **Disable** radio button in the **50 Hz Flicker Reduction** field.

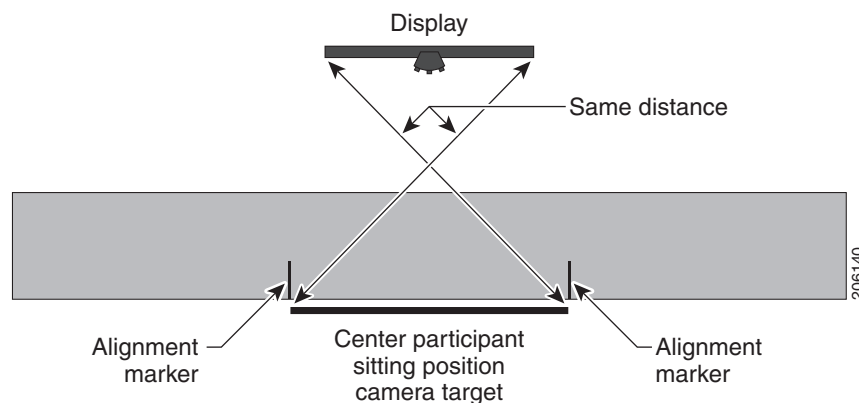
Step 12 Click **Apply** to apply your changes.

Calibrating the Center Camera

To adjust the zoom and initial focus for the center camera:

- Step 1** Place the large camera target with the easel in the position where the center two participants will sit, with the front legs of the easel touching the edge of the table.
- Step 2** Measure the distance between the corners of the easel and the corners of the display to make sure that the target is parallel to the display, as shown in [Figure 8-15](#).

Figure 8-15 *Measuring the Distance between the Easel and Display*



- Step 3** Return to the Cisco TelePresence System Administration interface and choose **Troubleshooting > Hardware Setup**.
- Step 4** Click the **Cameras** radio button.
- Step 5** Click the **Center** radio button.
- Step 6** Click **Show Camera Target**. The camera targets appear, as shown in [Figure 8-16](#).

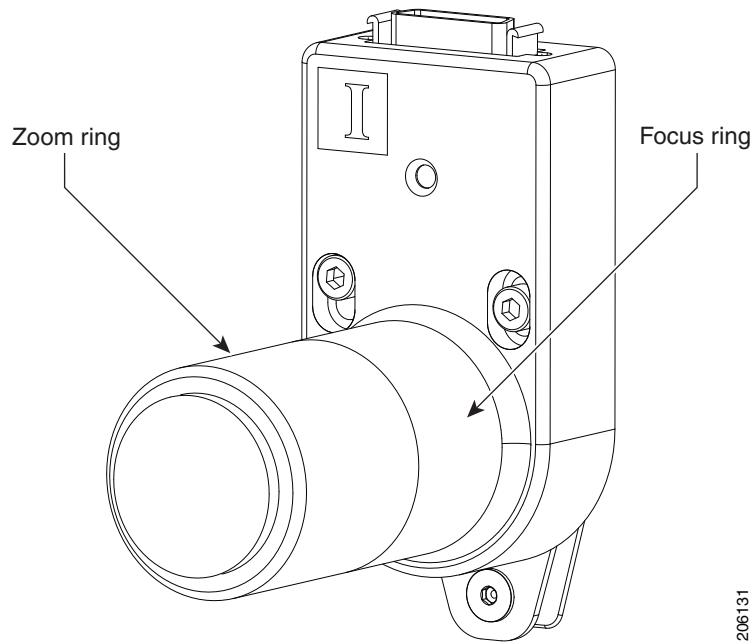
Figure 8-16 **Camera Targets**

Step 7 Focus the center camera by completing the following steps:

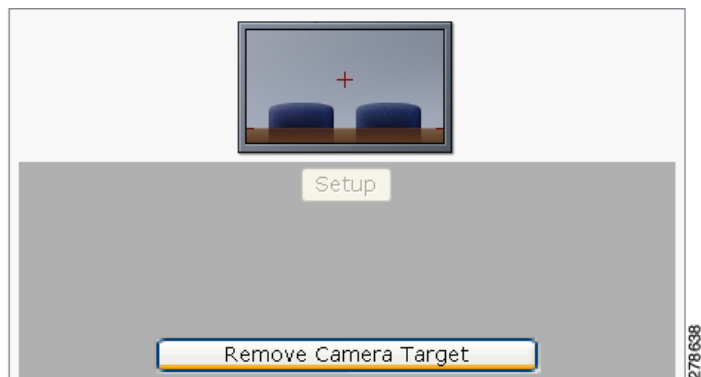
- a. Loosen the focus ring thumbscrew on the lens of the center camera.
- b. Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

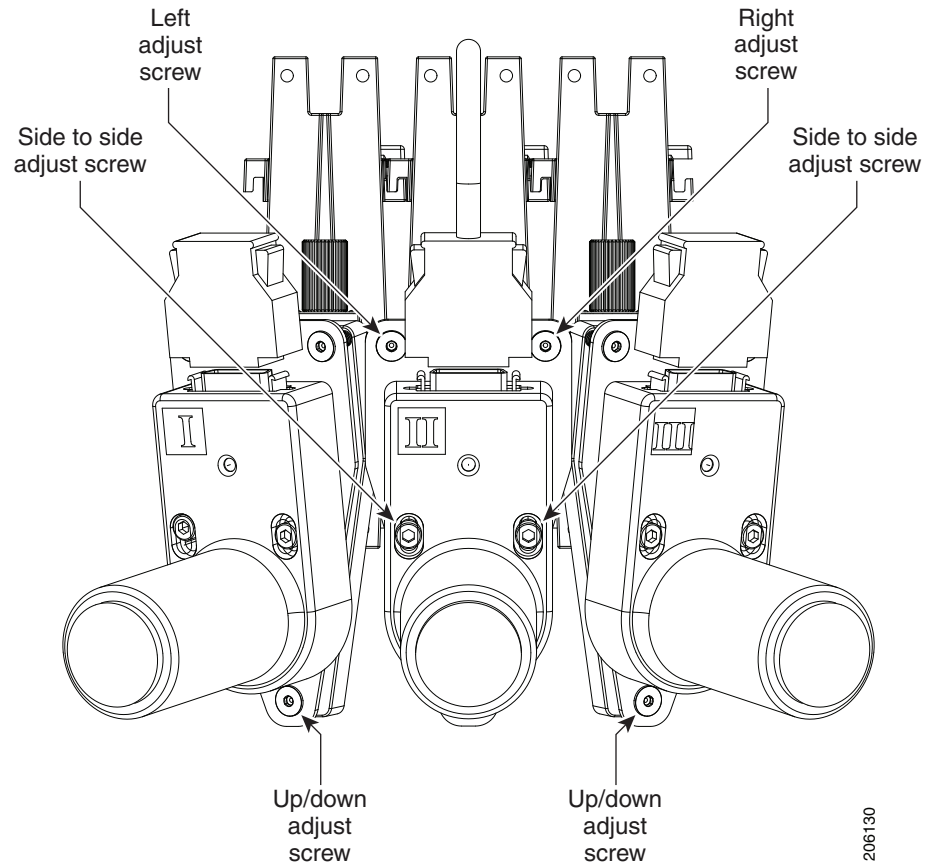
Figure 8-17 Location of Focus and Zoom Ring

Step 8 Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target, as shown in [Figure 8-18](#).

Figure 8-18 Remove Camera Target

[Figure 8-19](#) shows the screws that you use to adjust the camera. Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

Figure 8-19 Camera Adjustment Screws

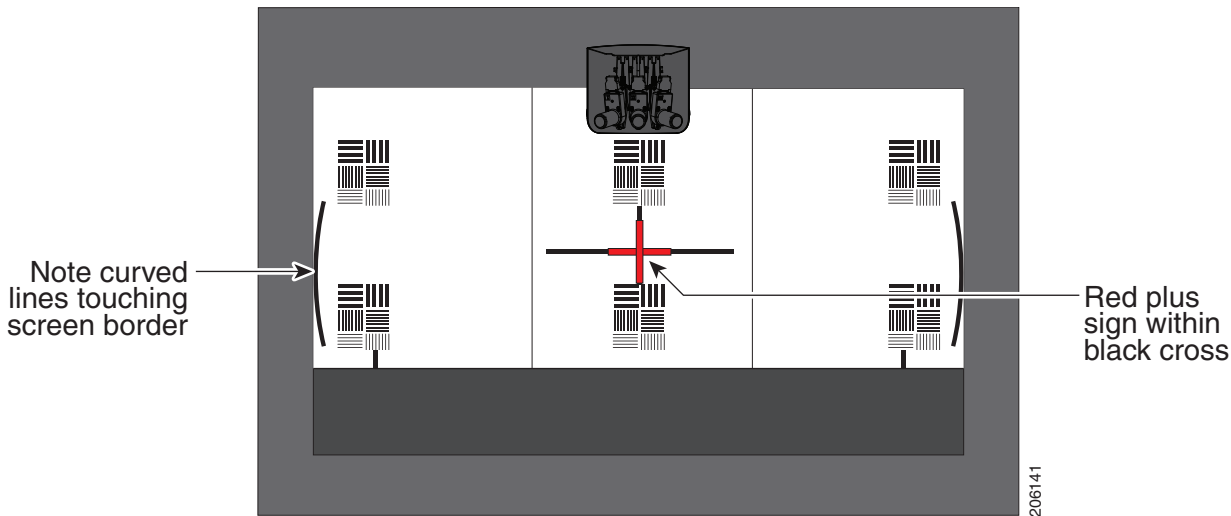
Step 9 Adjust the camera zoom by completing the following steps:

- a. Loosen the thumbscrew for the zoom ring on the camera lens.



Note The zoom ring is labeled “W-T.”

- b. Adjust the camera zoom so that the black curved lines on each side of the target touch the edge of the display screen, as shown in [Figure 8-20](#).
- c. After you adjust the zoom, make any required adjustments to the focus with the focus ring.

Figure 8-20 **Adjusting the Camera Zoom**

- Step 10** Tighten the thumbscrews for the zoom and focus rings.
- Step 11** Click **Hide Camera Targets** to remove the alignment images.
- Step 12** Click the **Setup** button, then click the **Auto Adjust** button. The auto adjust procedure completes. This procedure takes several seconds.

**Note**

If there is sufficient light for the system to operate, the gain will be greater than 1 and less than 7 and the process completes normally. If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room to bring the gain value below 7. Then repeat the auto adjust procedure.

- Step 13** Click **Done**.
- Step 14** To determine the edge of the target when you calibrate and configure the left and right cameras, mark the edges of the large camera target on the table with tape or a marker.

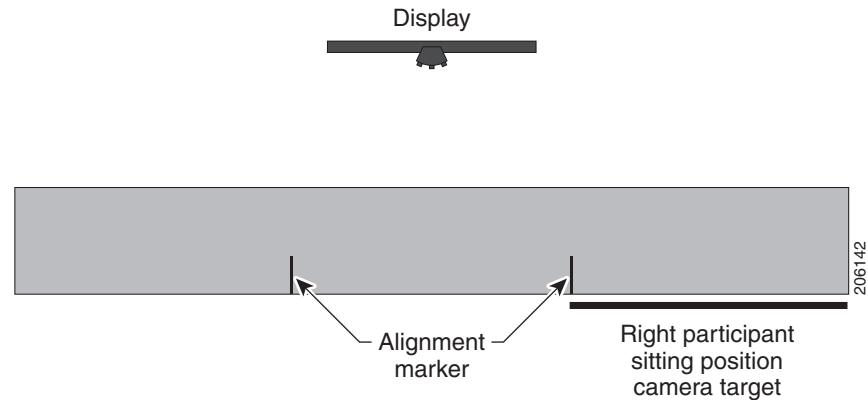
Calibrating the Right Camera

To adjust the zoom and focus the right camera.

**Note**

The directions *left* and *right* refer to the assembly as you face the display.

- Step 1** Slide the large camera target to the right five feet so that the left edge of the target is lined up with the tape marker that you placed on the table in the [“Calibrating the Center Camera”](#) section on page 8-20.

Figure 8-21 Positioning the Right Target

Step 2 Click the **Right** radio button in the Cisco TelePresence Administration interface.

Step 3 Click **Show Camera Target**.

Step 4 Focus the right camera by completing the following steps:

- a. Loosen the focus ring thumbscrew on the lens of the center camera.
- b. Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

Step 5 Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target.

[Figure 8-19](#) shows the screws that you use to adjust the camera. Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

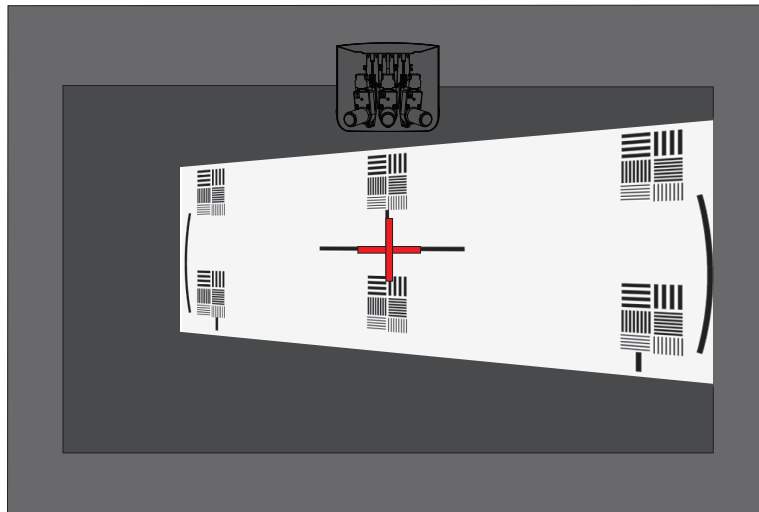
Step 6 Adjust the camera zoom by completing the following steps:

- a. Loosen the thumbscrew for the zoom ring on the camera lens.



Note The zoom ring is labeled “W-T.”

- b. Adjust the camera zoom so that the black curved line on the right of the target touches the right edge of the display screen, as shown in [Figure 8-22](#).
- c. After you adjust the zoom, make any required adjustments to the focus with the focus ring.

Figure 8-22 *Adjusting the Camera Zoom*

- Step 7** Tighten the thumbscrews for the zoom and focus rings.
- Step 8** Click **Hide Camera Targets** to remove the alignment images.
- Step 9** Click the **Setup** button, then click the **Auto Adjust** button. The auto adjust procedure completes. This procedure takes several seconds.



Note If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room and repeat the auto adjust procedure.

- Step 10** Click **Done** to complete the procedure.

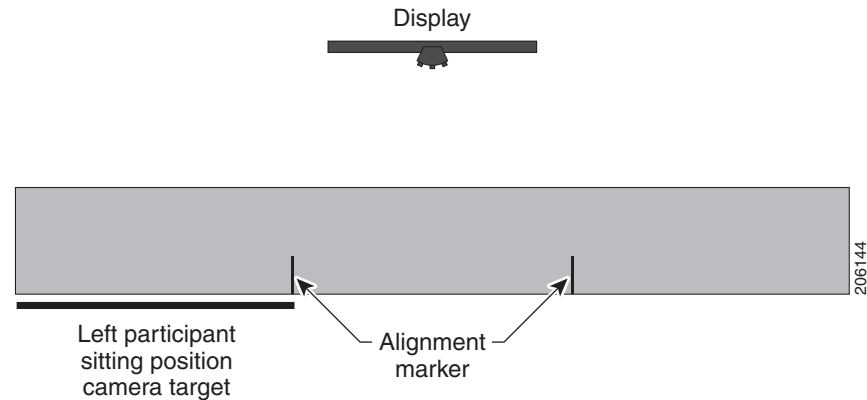
Calibrating the Left Camera

To adjust the zoom and focus the left camera.



Note The directions *left* and *right* refer to the assembly as you face the display.

- Step 1** Slide the large camera target to the left 10 feet so that the right edge of the target is lined up with the tape marker that you placed on the table in the [“Calibrating the Center Camera”](#) section on page 8-20. [Figure 8-23](#) shows placement of the left camera target.

Figure 8-23 Positioning the Left Target

- Step 2** In the Cisco TelePresence Administration interface, click the **Left** radio button.
- Step 3** Click **Show Camera Target**.
- Step 4** Focus the left camera by completing the following steps:
- Loosen the focus ring thumbscrew on the lens of the center camera.
 - Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

- Step 5** Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target.

[Figure 8-19](#) shows the screws that you use to adjust the camera. Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

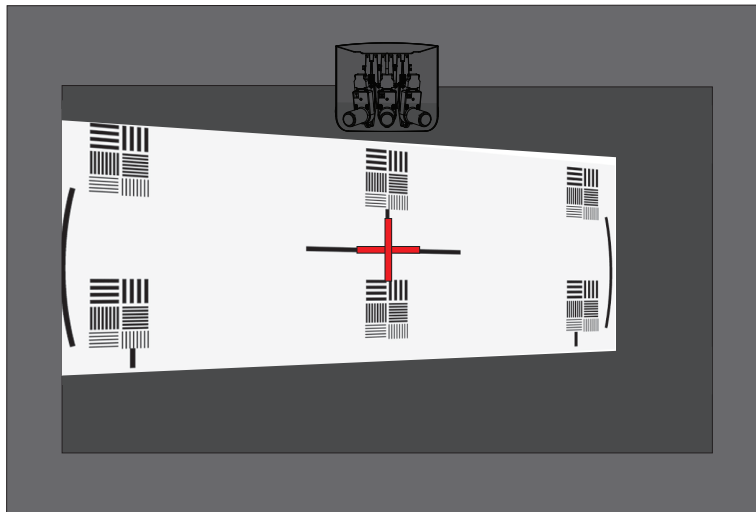
- Step 6** Adjust the camera zoom by completing the following steps:

- Loosen the thumbscrew for the zoom ring on the camera lens.



Note The zoom ring is labeled “W-T.”

- Adjust the camera zoom so that the black curved line on the left of the target touches the left edge of the display screen, as shown in [Figure 8-24](#).
- After you adjust the zoom, make any required adjustments to the focus with the focus ring.

Figure 8-24 *Adjusting the Camera Zoom*

- Step 7** Tighten the thumbscrews for the zoom and focus rings.
- Step 8** Click **Hide Camera Targets** to remove the alignment images.
- Step 9** Click the **Setup** button, then click the **Auto Adjust** button.
- The auto adjust procedure completes. This procedure takes several seconds.

**Note**

If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room and repeat the auto adjust procedure.

- Step 10** Click **Done** to complete the procedure.

Focusing the Center Camera

To focus the center camera.

- Step 1** In the Cisco TelePresence Administration interface, click the **Center** radio button.
- Step 2** Click the **Setup** button located below the center screen icon.
- Step 3** Click **Show Focus Targets**.
- Red and green outline boxes display on the screen, and red and green horizontal bars display on the bottom of the screen, as shown in [Figure 8-25](#). The horizontal bars indicate the sharpness of focus in the boxes that use the corresponding color. Longer bars indicate a sharper focus.
- Step 4** Position the small camera target by completing the following steps:
- Place the target on the table one foot from the edge where the participants sit.
 - Position the target so that the patterns on the target are enclosed in the green box.
- Step 5** Position the large target by completing the following steps:
- Remove the large focus target from the easel.
 - Rotate the target 90 degrees.

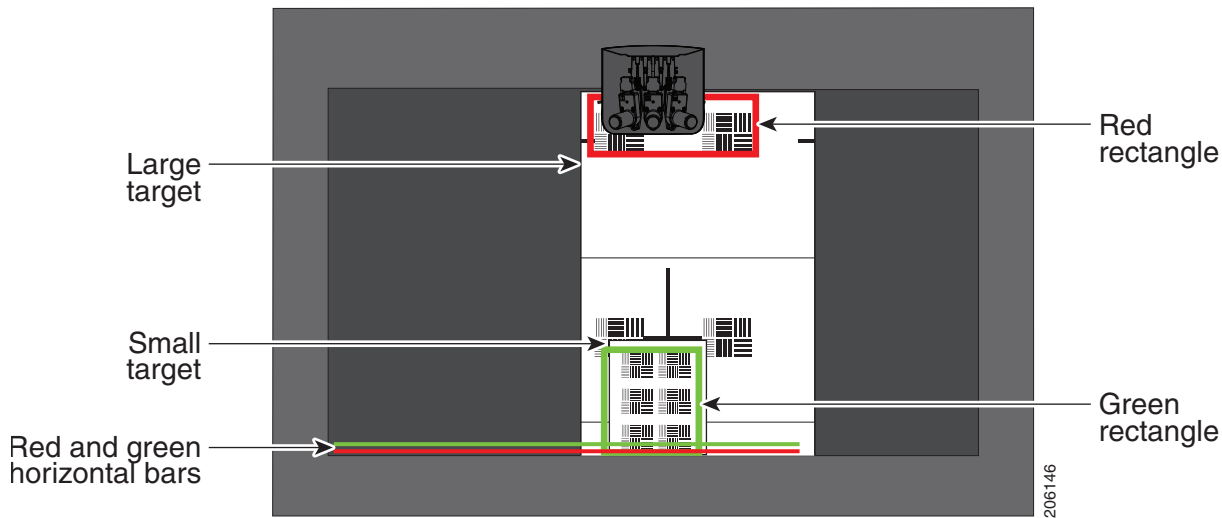
- c. Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- d. Place the top of the easel five feet behind the top of the small target.
- e. Position the target so that the topmost patterns are enclosed in the red box.

Figure 8-25 Positioning the Small and Large Targets



Step 6 Adjust the focus on the left camera by completing the following steps:

- a. Loosen the thumbscrew for the lens focus ring.
- b. Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



Note [Figure 8-25](#) shows a mirror image of the horizontal bars.

- c. Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- d. Continue to twist the focus ring until the red and green bars are approximately the same length. See [Figure 8-25](#) to view the approximate horizontal bar alignment.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

When the bars are roughly the same length, the camera is focused.

- e. Without moving the focus ring, tighten its thumbscrew.

Step 7 Click **Done** to complete the right camera focusing procedure.

Focusing the Right Camera

To focus the right camera:

Step 1 In the Cisco TelePresence Administration interface, click the **Right** radio button.

Step 2 Click the **Setup** button that is located below the center screen icon.

Step 3 Click **Show Focus Targets**.

Step 4 Position the small camera target by completing the following steps:

- a. Place the target on the table one foot from the edge where the participants sit.
- b. Position the target so that the patterns on the target are enclosed in the green box.

Step 5 Position the large target by completing the following steps:

- a. Remove the large focus target from the easel.
- b. Rotate the target 90 degrees.
- c. Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- d. Place the top of the easel five feet behind the top of the small target.
- e. Position the target so that the topmost patterns are enclosed in the red box, as shown in [Figure 8-25](#).

Step 6 Adjust the camera focus by completing the following steps:

- a. Loosen the thumbscrew for the lens focus ring.
- b. Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



Note [Figure 8-25](#) shows a mirror image of the horizontal bars.

- c. Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- d. Continue to twist the focus ring until the red and green bars are approximately the same length. See [Figure 8-25](#) to view the approximate horizontal bar alignment. When the bars are roughly the same length, the camera is focused.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

- e. Without moving the focus ring, tighten its thumbscrew.

Step 7 Click **Done** to complete the right camera focusing procedure.

Focusing the Left Camera

To focus the left camera:

Step 1 In the Cisco TelePresence Administration interface, click the **Right** radio button.

Step 2 Click the **Setup** button that is located below the center screen icon.

Step 3 Click **Show Focus Targets**.

Step 4 Position the small camera target by completing the following steps:

- a. Place the target on the table one foot from the edge where the participants sit.
- b. Position the target so that the patterns on the target are enclosed in the green box.

Step 5 Position the large target by completing the following steps:

- a. Remove the large focus target from the easel.
- b. Rotate the target 90 degrees.
- c. Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- d. Place the top of the easel five feet behind the top of the small target.
- e. Position the target so that the topmost patterns are enclosed in the red box, as shown in [Figure 8-25](#).

Step 6 Adjust the focus on the left camera by completing the following steps:

- a. Loosen the thumbscrew for the lens focus ring.
- b. Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



Note [Figure 8-25](#) shows a mirror image of the horizontal bars.

- c. Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- d. Continue to twist the focus ring until the red and green bars are approximately the same length. See [Figure 8-25](#) to view the approximate horizontal bar alignment. When the bars are roughly the same length, the camera is focused.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

- e. Without moving the focus ring, tighten its thumbscrew.

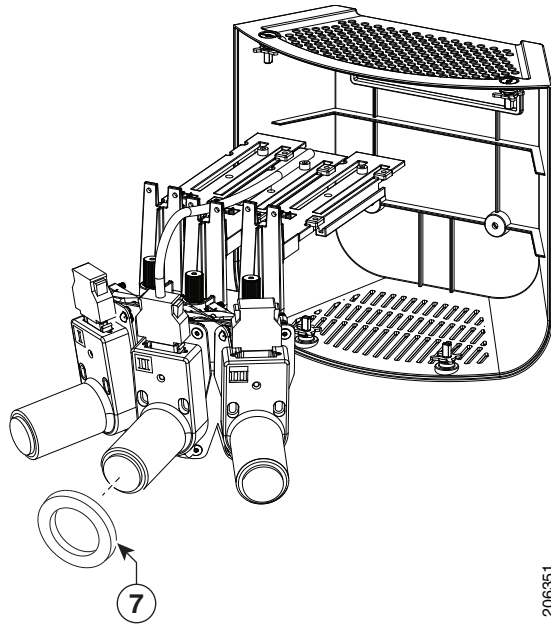
Step 7 Click **Done** to complete the right camera focusing procedure.

Replacing the Camera Cover

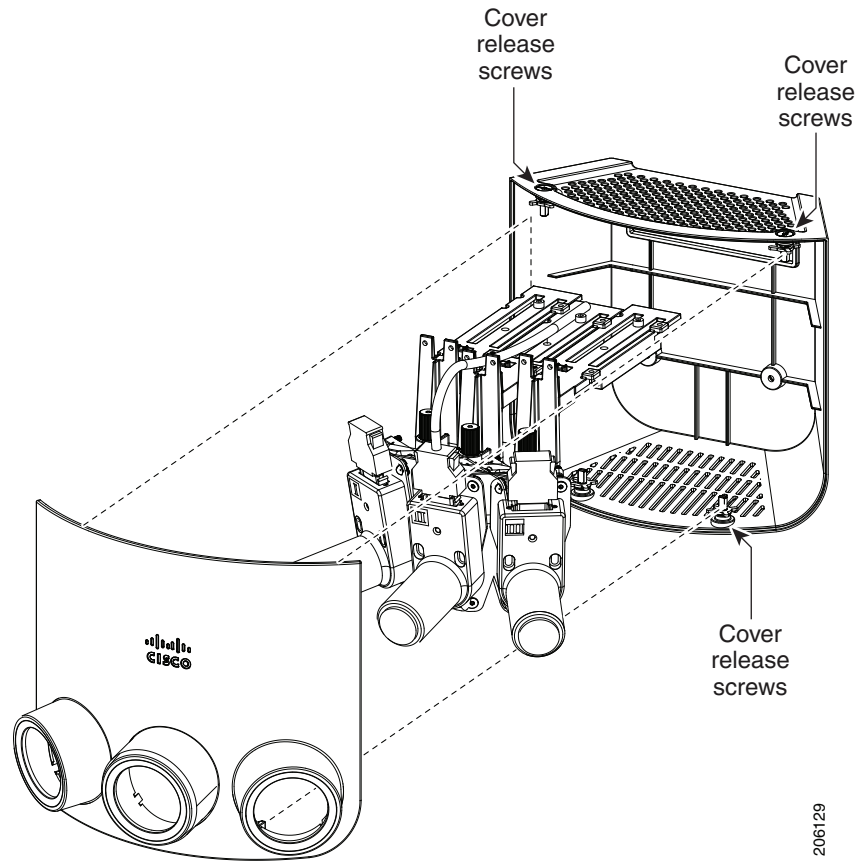
To replace the camera cover:

Step 1 Place the foam lens covers onto the camera lenses, as shown in [Figure 8-26](#).

Figure 8-26 *Attaching the Foam Lens Covers to the Camera Lenses*



- Step 2** Replace the camera cover onto the camera cluster, then tighten the cover release screws to secure the cover to the camera, as shown in [Figure 8-27](#).

Figure 8-27 *Replacing the Camera Cover*

Configuring the CTS 1300 for Use With a Short Racetrack Table

**Note**

If you log out of the GUI, you must re-select the correct table type after you log in; otherwise, you could configure your system for the incorrect table type. To select the correct table type, complete the steps in the [“Positioning the Table and Starting the Calibration Procedure”](#) section on page 8-13.

This section contains the following CTS 1300 configuration tasks:

- [Positioning the Table and Starting the Calibration Procedure](#), page 8-34
- [Calibrating the Center Camera](#), page 8-36
- [Calibrating the Right Camera](#), page 8-37
- [Calibrating the Left Camera](#), page 8-39
- [Focusing the Center Camera](#), page 8-41
- [Focusing the Right Camera](#), page 8-42
- [Focusing the Left Camera](#), page 8-43

Positioning the Table and Starting the Calibration Procedure

To correctly position the table and configure the Cisco TelePresence software for use with the CTS 1300 cameras:

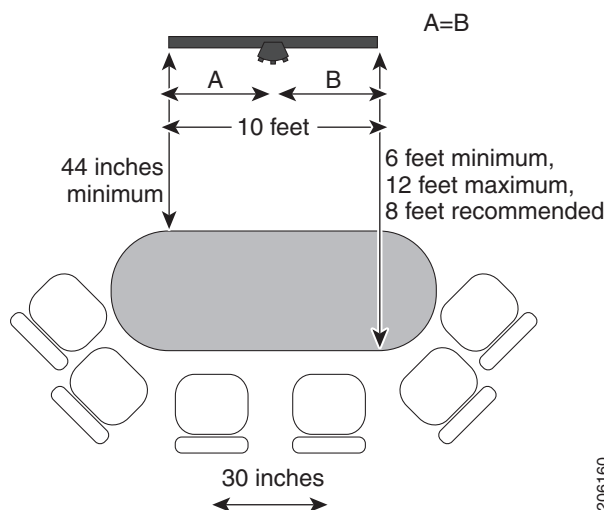
- Step 1** Position the table so that there is a minimum of 44 inches between the display and the front of the table, and make sure that the sides of the table are evenly positioned on each side of the CTS 1300.
- Step 2** Make sure that the farthest edge of the table is no farther than 110 inches away from the lower bezel of the display. [Figure 8-28](#) shows recommended table positioning.



Note

The table must be 28 to 32 inches high. 30 inches is the optimal height.

Figure 8-28 Short Racetrack Table Positioning



- Step 3** Make sure that the camera assembly is level by completing the steps in the [“Removing the Camera Cover and Leveling the Cameras”](#) section on page 8-8.
- Step 4** Build the easel, and attach the large camera target to the easel, by completing the steps in the [“Attaching the Large Camera Target to the Easel”](#) section on page 8-11, making sure that the bottom of the target is 32 inches above the ground.
- Step 5** Log in to the Cisco TelePresence System Administration interface.
- Step 6** Select the table type by completing the following steps:
- Choose **Troubleshooting > Hardware Setup**.
 - Click the **Configuration** radio button.
 - Click the **Start** button to start testing.
 - Select **Short Racetrack Table** from the drop-down menu, as shown in [Figure 8-29](#).

Figure 8-29 Short Racetrack Table

Specify Table Configuration:

Table shape: Long Racetrack Table

Distance from rear of table to display: 8 feet

Apply Reset

Help

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

278642

- e. Click **Apply**.
- f. Click **Stop** to stop the test.

Step 7 Choose **Troubleshooting > Hardware Setup**.

Step 8 Click the **Cameras** radio button.

Step 9 Click **Start** to start the camera test.

Step 10 Click **Show Camera Target**. The camera targets appear, as shown in Figure 8-16.

Step 11 Automatically adjust the cameras by completing the following steps.

- a. In the **Auto Brightness** field, perform one of the following actions:
 - If the room uses outside lighting, or has any other conditions that could cause variable room lighting, click the **Enable** radio button.
 - If your room lighting is not variable, leave the default value.
- b. In the **Auto Color Balance** field, perform one of the following actions:
 - If the room uses outside lighting, or has any other conditions that could cause variable room lighting, click the **Enable** radio button.
 - If your room lighting is not variable, leave the default value.
- c. In the **50 Hz Flicker Reduction** field, click the **Disable** radio button.

**Note**

If you are in country that uses a 50 Hertz (Hz) power frequency (a country other than the USA, Canada or Mexico) and there is a noticeable flicker on the screen, click the **Enable** radio button in this field. If you enable the flicker reduction feature, the flicker is reduced or eliminated, but the image quality is reduced.

To eliminate the flicker at its source, you can use an electronic ballast instead of a magnet ballast for the fluorescent lights at your installation. After you change the ballast for the fluorescent lights, you can click the **Disable** radio button in the **50 Hz Flicker Reduction** field.

Step 12 Click **Apply** to apply your changes.

Calibrating the Center Camera

To adjust zoom and focus of the center camera.



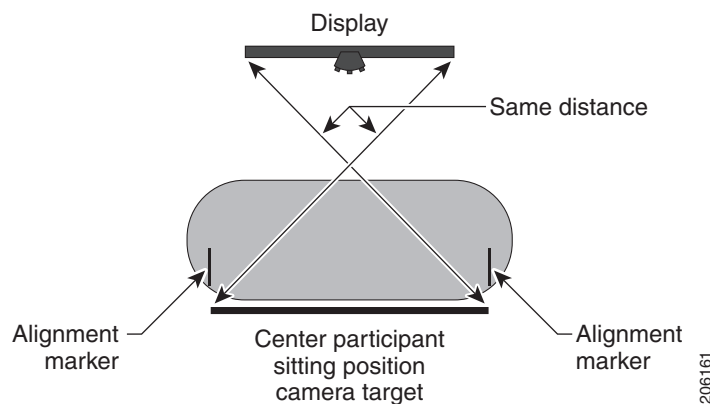
Note

The directions *left* and *right* refer to the assembly as you face the display.

Step 1 Place the large camera target with the easel in the position where the center two participants will sit, with the front legs of the easel touching the edge of the table.

Step 2 Measure the distance between the corners of the easel and the corners of the display to make sure that the target is parallel to the display, as shown in [Figure 8-30](#).

Figure 8-30 Measuring the Distance between the Easel and Display



Step 3 Return to the Cisco TelePresence System Administration page and choose **Troubleshooting > Hardware Setup > Cameras**.

Step 4 Click the **Center** radio button.

Step 5 Click **Show Camera Target**. Red targets appear on the center display.

Step 6 Focus the center camera by completing the following steps:

- a. Loosen the focus ring thumbscrew on the lens of the center camera.
- b. Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note

The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

Step 7 Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target.

The screws that you use to adjust the camera are shown in [Figure 8-19](#). Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

Step 8 Adjust the camera zoom by completing the following steps:

- a. Loosen the thumbscrew for the zoom ring on the camera lens.



Note The zoom ring is labeled “W-T.”

- b. Adjust the camera zoom so that the black curved lines on each side of the target touch the edge of the display screen, as shown in [Figure 8-20](#).

- c. After you adjust the zoom, make any required adjustments to the focus with the focus ring.

Step 9 Tighten the thumbscrews for the zoom and focus rings.

Step 10 Click **Hide Camera Targets** to remove the alignment images.

Step 11 Click the **Setup** button, then click the **Auto Adjust** button.

The auto adjust procedure completes. This procedure takes several seconds.



Note If there is sufficient light for the system to operate, the gain will be greater than 1 and less than 7 and the process completes normally. If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room to bring the gain value below 7. Then repeat the auto adjust procedure.

Step 12 Click **Done**.

Step 13 Mark the edges of the large camera target on the table with tape or a marker.

Use these marks to determine the edge of the target when you calibrate and configure the left and right cameras.

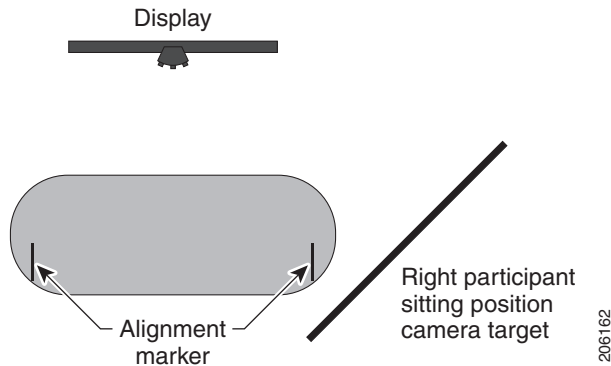
Calibrating the Right Camera

To adjust the zoom and focus of the right camera.



Note The directions *left* and *right* refer to the assembly as you face the display.

Step 1 Move the large camera target to the far corner of the racetrack table, as shown in [Figure 8-31](#).

Figure 8-31 Placement of Easel and Target for Small Racetrack Table

Step 2 In the Cisco TelePresence Administration interface, click the **Right** radio button.

Step 3 Click **Show Camera Target**. Red targets appear on the display.

Step 4 Focus the right camera by completing the following steps:

- a. Loosen the focus ring thumbscrew on the lens of the center camera.
- b. Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

Step 5 Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target.

The screws that you use to adjust the camera are shown in [Figure 8-19](#). Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

Step 6 Adjust the camera zoom by completing the following steps:

- a. Loosen the thumbscrew for the zoom ring on the camera lens.

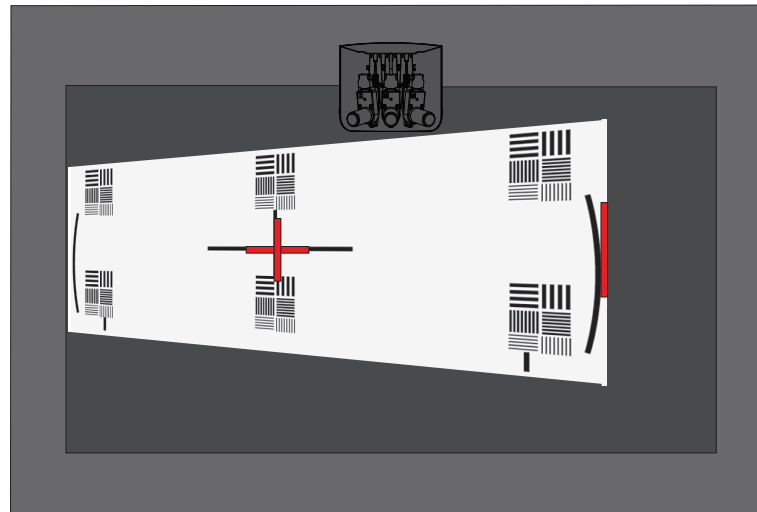


Note The zoom ring is labeled “W-T.”

- b. Adjust the camera zoom so that the black curved line on the right of the target touches the right edge of the display screen, as shown in [Figure 8-32](#).
- c. After you adjust the zoom, make any required adjustments to the focus with the focus ring.



Note Because of the position of the target, the target appears smaller and not parallel to the camera. This view is normal. Participants will appear lifelike after you complete the testing procedure.

Figure 8-32 **Adjusting the Camera Zoom**

- Step 7** Tighten the thumbscrews for the zoom and focus rings.
- Step 8** Click **Hide Camera Targets** to remove the alignment images.
- Step 9** Click the **Setup** button, then click the **Auto Adjust** button.
- The auto adjust procedure completes. This procedure takes several seconds.



Note If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room and repeat the auto adjust procedure.

- Step 10** Click **Done** to complete the procedure.

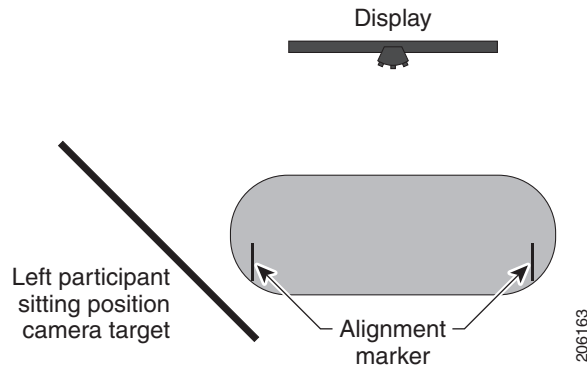
Calibrating the Left Camera

To adjust the zoom and focus the left camera.



Note The directions *left* and *right* refer to the assembly as you face the display.

- Step 1** Move the large camera target to the far left corner of the table, as shown in [Figure 8-33](#).

Figure 8-33 Positioning Easel and Target for Small Racetrack Table

Step 2 In the Cisco TelePresence Administration interface, click the **Left** radio button.

Step 3 Click **Show Camera Target**.

Step 4 Focus the left camera by completing the following steps:

- a. Loosen the focus ring thumbscrew on the lens of the center camera.
- b. Rotate the focus ring until the black plus sign (+) on the target is clearly in focus.



Note The camera lens has two adjustment rings, one for focus and one for zoom, as shown in [Figure 8-17](#). The focus ring is the one that is nearest to the wall.

Step 5 Adjust the camera mounting plate to center the red plus sign (+) on the display inside the black plus sign (+) on the target.

The screws that you use to adjust the camera are shown in [Figure 8-19](#). Use a 2.5 mm Allen wrench.

- Use the top two screws for left and right adjustment.
- The lower screw for up and down adjustment.
- The screws in the middle for adjustments on the horizontal plane (rotational).

Step 6 Adjust the camera zoom by completing the following steps:

- a. Loosen the thumbscrew for the zoom ring on the camera lens.



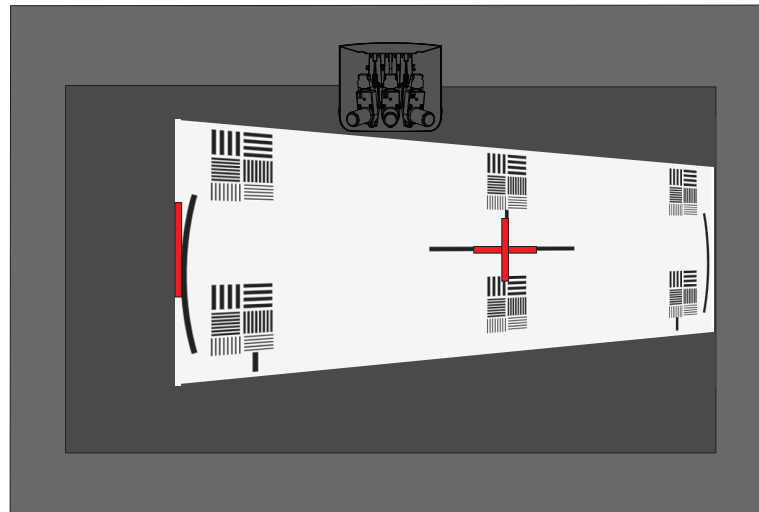
Note The zoom ring is labeled “W-T.”

- b. Adjust the camera zoom so that the black curved line on the left of the target touches the left edge of the display screen, as shown in [Figure 8-34](#).



Note Because of the position of the target, the target appears smaller and not parallel to the camera. This view is normal. Participants will appear lifelike after you complete the testing procedure.

- c. After you adjust the zoom, make any required adjustments to the focus with the focus ring.

Figure 8-34 *Adjusting the Camera Zoom*

- Step 7** Tighten the thumbscrews for the zoom and focus rings.
- Step 8** Click **Hide Camera Targets** to remove the alignment images.
- Step 9** Click the **Setup** button, then click the **Auto Adjust** button.
- The auto adjust procedure completes. This procedure takes several seconds.



Note If there is insufficient light, the auto adjust procedure terminates. In this case, add more light to the room and repeat the auto adjust procedure.

- Step 10** Click **Done** to complete the procedure.

Focusing the Center Camera

To focus the center camera.

- Step 1** In the Cisco TelePresence Administration interface, click the **Center** radio button.
- Step 2** Click the **Setup** button that is located below the center screen icon.
- Step 3** Click **Show Focus Targets**.
- Red and green outline boxes display on the screen, and red and green horizontal bars display on the bottom of the screen. The horizontal bars indicate the sharpness of focus in the boxes that use the corresponding color. Longer bars indicate a sharper focus.
- Step 4** Position the small camera target by completing the following steps:
- Place the target on the table one foot from the edge where the participants sit.
 - Position the target so that the patterns on the target are enclosed in the green box.
- Step 5** Position the large target by completing the following steps:
- Remove the large focus target from the easel.
 - Rotate the target 90 degrees.

- c. Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- d. Place the top of the easel five feet behind the top of the small target.
- e. Position the target so that the topmost patterns are enclosed in the red box.

Step 6 Adjust the focus on the left camera by completing the following steps:

- a. Loosen the thumbscrew for the lens focus ring.
- b. Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



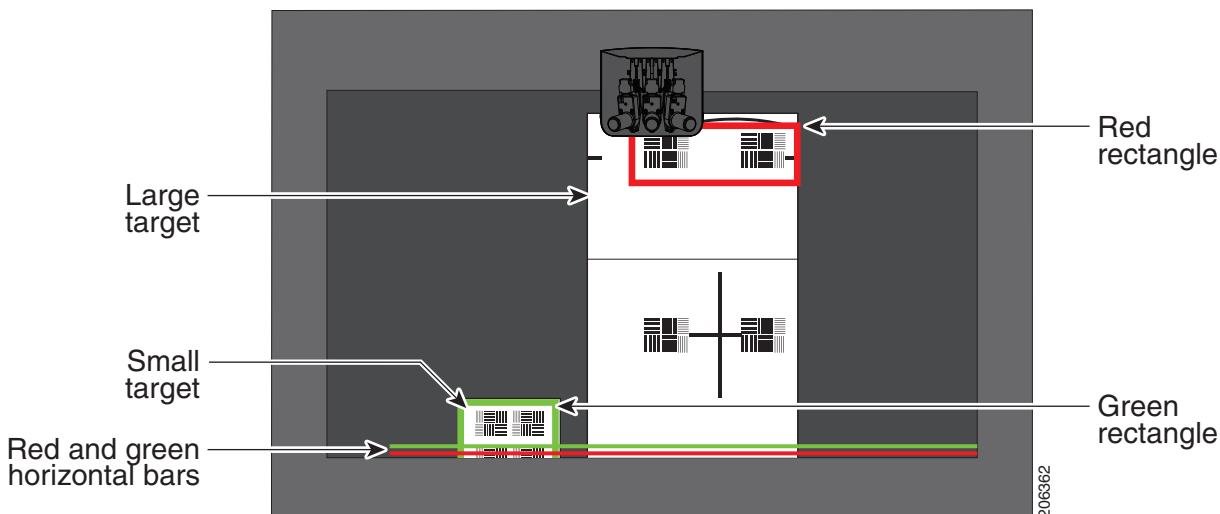
Note Figure 8-35 shows a mirror image of the horizontal bars.

- c. Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- d. Continue to twist the focus ring until the red and green bars are approximately the same length. See Figure 8-35 to view the approximate horizontal bar alignment. When the bars are roughly the same length, the camera is focused.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

Figure 8-35 Horizontal Bars and Focusing Targets



- e. Without moving the focus ring, tighten its thumbscrew.

Step 7 Click **Done** to complete the right camera focusing procedure.

Focusing the Right Camera

To focus the right camera.

-
- Step 1** In the Cisco TelePresence Administration interface, click the **Right** radio button.
- Step 2** Click the **Setup** button that is located below the center screen icon.
- Step 3** Click **Show Focus Targets**.
- Step 4** Position the small camera target by completing the following steps:
- Place the target on the table one foot from the edge where the participants sit.
 - Position the target so that the topmost patterns on the target are enclosed in the green box.
- Step 5** Position the large target by completing the following steps:
- Remove the large focus target from the easel.
 - Rotate the target 90 degrees.
 - Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- Place the top of the easel five feet behind the top of the small target.
 - Position the target so that the topmost patterns are enclosed in the red box.
- Step 6** Adjust the camera focus by completing the following steps:
- Loosen the thumbscrew for the lens focus ring.
 - Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



Note [Figure 8-35](#) shows a mirror image of the horizontal bars.

- Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- Continue to twist the focus ring until the red and green bars are approximately the same length. See [Figure 8-35](#) to view the approximate horizontal bar alignment. When the bars are roughly the same length, the camera is focused.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

- Without moving the focus ring, tighten its thumbscrew.
- Step 7** Click **Done** to complete the right camera focusing procedure.
-

Focusing the Left Camera

To focus the left camera.

-
- Step 1** In the Cisco TelePresence Administration interface, click the **Left** radio button.
- Step 2** Click the **Setup** button that is located below the center screen icon.
- Step 3** Click **Show Focus Targets**.

- Step 4** Position the small camera target by completing the following steps:
- Place the target on the table one foot from the edge where the participants sit.
 - Position the target so that the topmost patterns on the target are enclosed in the green box.

- Step 5** Position the large target by completing the following steps:

- Remove the large focus target from the easel.
- Rotate the target 90 degrees.
- Have another person hold the target upright.



Note If another person is not available, clamp the top of the target into the clamp at the top of the easel.

- Place the top of the easel five feet behind the top of the small target.
- Position the target so that the topmost patterns are enclosed in the red box.

- Step 6** Adjust the focus on the left camera by completing the following steps:

- Loosen the thumbscrew for the lens focus ring.
- Twist the focus ring clockwise until the red and green horizontal bars on the bottom of the screen are reduced to very short lengths on the left.



Note [Figure 8-35](#) shows a mirror image of the horizontal bars.

- Twist the focus ring counter-clockwise until the red and green bars extend all the way to the right.
- Continue to twist the focus ring until the red and green bars are approximately the same length. See [Figure 8-35](#) to view the approximate horizontal bar alignment. When the bars are roughly the same length, the camera is focused.



Note The red and green bars do not have to be exactly the same length, but get them as close as you can.

- Without moving the focus ring, tighten its thumbscrew.

- Step 7** Click **Done** to complete the right camera focusing procedure.
-

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.

For more information about testing and troubleshooting the CTS 1300, see the [Setting Up the Camera](#) section in the [First-Time Setup](#) chapter of the *Cisco TelePresence 1300 Assembly, Use & Care, and Field-Replacement Unit Guide*.

Arranging the Seat Alignment Guides

Conference participants should be seated in an area that is completely within the field of view of one of the three cameras. To ensure this requirement, Cisco provides you with Seat Alignment Guides. After you set up the cameras, you place these guides on the table; these guides show the field of view for each camera.

To place the seat alignment guides on the table:

-
- Step 1** Using a supported Internet browser, log in to the Cisco TelePresence System administration interface.
- Step 2** Select the correct table type by completing the following steps:
- Step 3** Navigate to **Troubleshooting > Hardware Setup**
- Step 4** Click the **Cameras** radio button.
- Step 5** Click **Start** to display the image of the cameras in the displays.
- Step 6** Note the field of view for each camera.
- Step 7** Using non-marking tape (for example, masking tape), tape a mark on the table that denotes the edge of the field of view for each camera.

Place this mark approximately 18 inches (46 cm) from the edge of the table, and point the line of tape at the camera.

**Tip**

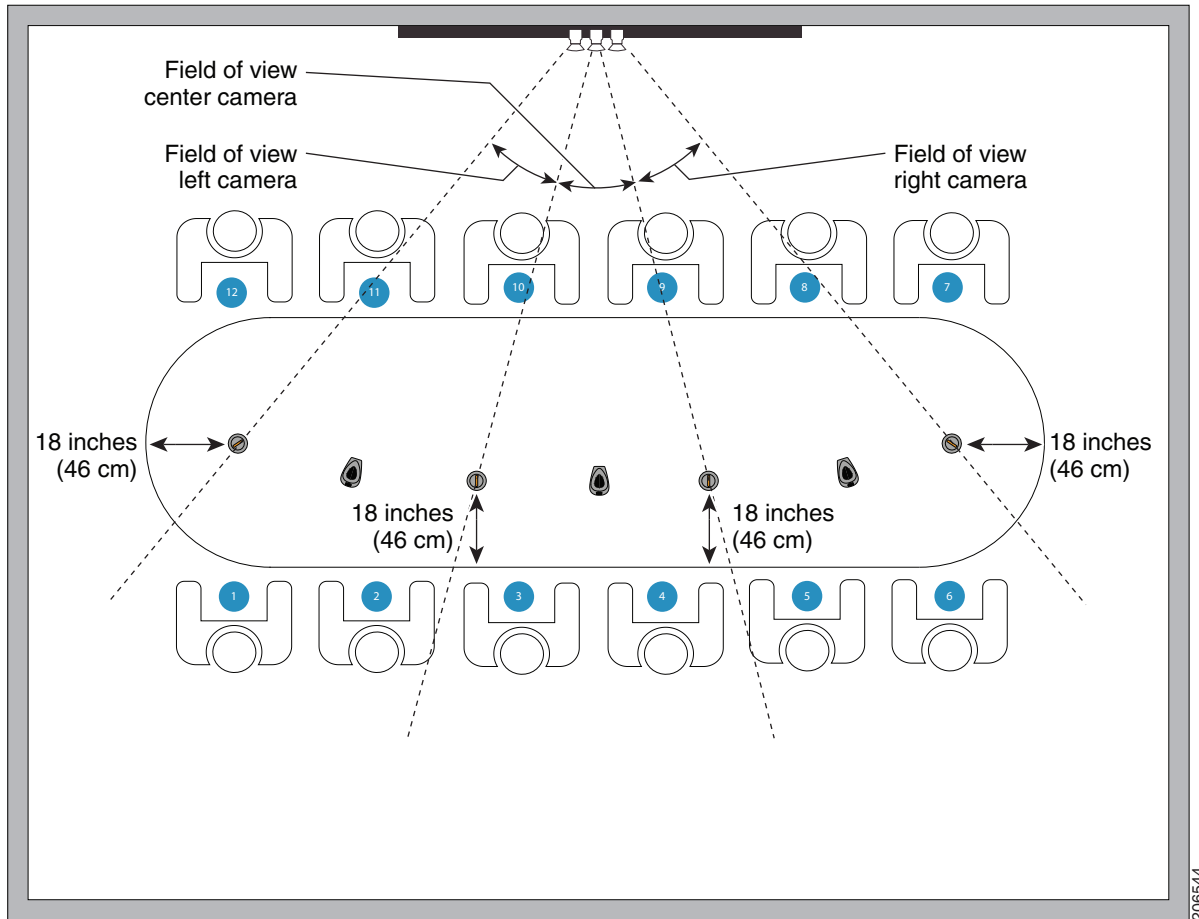
If you cannot determine the camera range, use this guide for marking the table: The focal range of the center segment is approximately 5 feet (152 cm) wide from where the participants sit. The focal range of each side segment is approximately 4 feet six inches (137 cm) wide.

Mark the table in four places:

- Edge of camera view, left camera
- Edge of view between left and center camera
- Edge of view between center and right camera
- Edge of camera view, right camera

**Note**

If your table is narrow, omit the two markings on the outer edges.

Figure 8-36 Measuring and Installing the Seat Alignment Guides

- Step 8** Place another piece of tape 18 inches (46 cm) from the edge of the table where the participants sit to form a tape cross on the table.
- Step 9** Remove the seat alignment guides and (if required) anchors from their packaging in carton 14.
- Step 10** Place the seat alignment guides on each of the crosses on the table. See [Figure 8-36](#) for more information.
- Step 11** Arrange the seat alignment guides so that the line on top of the guides point directly toward the camera.
- Step 12** Fasten the guides to the table using one of the following methods:
- Remove the adhesive backing from the underside of the guide and stick it to the table, making sure that the line on the guide points directly at the camera.
 - Attach the seat alignment guide anchor to the table, and place the guide on the anchor, by completing the following steps:
 - a. Using a 1/4-inch drill bit, drill a 1.125 inch deep hole into the center of each tape cross.
 - b. Remove the tape.
 - c. Screw the seat alignment guide anchor into the hole that you drilled, using the key that is included with the anchor.

- d. Place the seat alignment guide on top of the anchor.
- e. Rotate the anchor until the line on top of the seat alignment guide points directly at the camera.

Understanding Camera Setup Choices for Room Lighting

If your room has windows that contribute a significant amount of natural light, you can set your CTS to automatically compensate for variable lighting conditions. This compensation is an average adjustment and will not be as accurate as the color settings you select for a room that uses fixed, artificial room lighting.

[Table 8-2](#) contains recommendations for desirable display and camera settings when you set up the display and camera. See the [“Testing the CTS 1300 Cameras” section on page 8-8](#) for more information.

Table 8-2 Room Configuration and Camera Setup Choices

Physical Room Configuration	Camera Auto Brightness and Camera Auto Color Balance Setup Choices
No windows	Disable
<ul style="list-style-type: none"> One window Two adjacent windows (corner office configuration) Two opposing windows Windows on three sides Windows on four sides 	Enable

Troubleshooting Cameras

Use the information in [Table 8-3](#) to troubleshoot problems with cameras.

Table 8-3 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.

Table 8-3 **Troubleshooting Cameras (continued)**

Problem	Possible Cause	Action
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 <i>Cisco TelePresence System 1300 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.
Cameras do not switch normally to the active speaker during point-to-point or CTMS meetings.	Audio is on from a presentation source, such as a laptop. Background audio can be heard in the conference room.	Turn off presentation sources or background audio during meetings.
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 [Cisco TelePresence System 1300 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 8-48](#)
- [Troubleshooting Speakers, page 8-49](#)
- [Related Information, page 8-50](#)

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 8-4](#) to troubleshoot problems with speakers.

Table 8-4 *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.	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 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 speakers, see the [Cisco TelePresence System 1300 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.



Note

The number of audio meters that are shown on the test screen is determined by the number of microphones that have been configured in Cisco Unified CM and the version of Cisco Unified CM that you are running.

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

- CTS 1300—3 “fixed” table-top microphones, 3 “positional” microphones that are mounted behind the top front cover above the display screen: left, right, and center. These microphones establish where the person who is speaking is seated to determine voice-activated camera switching.

By default, Cisco TelePresence uses 3 microphones for a conference that uses video. If you install more than three microphones, Cisco TelePresence uses those microphones for audio conferences only. Each microphone has a corresponding number of audio meters displayed on a single test screen. You can install up to 6 microphones on a CTS 1300.

Testing Microphones

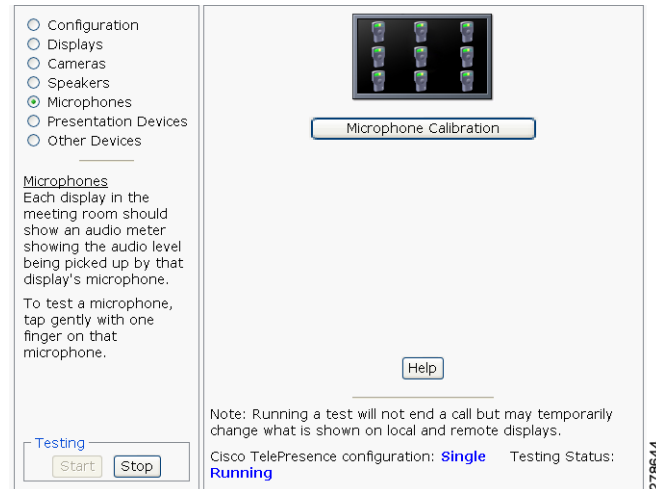
Go to the following sections to test microphones:

- [Testing Microphones on the CTS 1300, page 8-50](#)
- [Troubleshooting Microphones, page 8-52](#)
- [Related Information, page 8-53](#)

Testing Microphones on the CTS 1300

To test microphones on the CTS 1300:

-
- Step 1** Place the microphones around your table. See the [Cisco TelePresence System 1300 Room Recommendations](#) chapter in the [Cisco TelePresence System 1300 Assembly, First-Time Setup, and Field-Replaceable Unit Guide](#) for the correct microphone placement.
 - Step 2** Log in to the Cisco TelePresence System Administration interface.
 - Step 3** Choose **Troubleshooting > Hardware Setup**.
 - Step 4** Click the **Microphones** radio button.
 - Step 5** Click **Start** in the Testing box to begin the test. The Microphone Calibration screen appears, as shown in [Figure 8-37](#).

Figure 8-37 Microphone Calibration

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.

Each display in the meeting room should show an audio meter showing the audio level being picked up by that display's microphone.

- The center display should show three microphones. A microphone that is not connected has a red slash.
- The left and right displays should show three microphones unless the room is configured for seven microphones. If microphones at the far left or right are connected, they appear on the display with a yellow question mark.

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

Step 8 Test each microphone by tapping gently with one finger.

Step 9 Click **Stop** to end the test.

Troubleshooting Microphones

Use the information in [Table 8-5](#) to troubleshoot problems with microphones.

Table 8-5 **Troubleshooting Microphones**


Problem	Possible Cause	Possible Solution
Sound is muffled.	Something near or on the microphone is distorting the sound.	<ul style="list-style-type: none"> • Move objects away from the microphone. • Confirm the laptop is not open and in-between the user and 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.
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 8-5 **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 1300” section on page 8-50 .
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 presentation devices, see the [Cisco TelePresence System 1300 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 [Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide](#) for more information.



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 1300 supports, see the release notes for your CTS software version on Cisco.com.

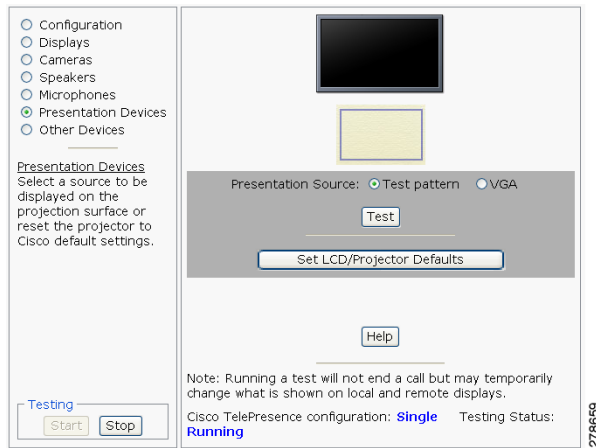
A PiP softkey will be displayed on the phone only if a PiP is active. Pip is not available for audio-only calls.

To test an external presentation device:

- Step 1** Log in to the Cisco TelePresence System.
- Step 2** Navigate to **Troubleshooting > Hardware Setup**

Step 3 Click **Presentation Devices**. The presentation devices test screen appears, as shown in [Figure 8-38](#).

Figure 8-38 *Presentation Devices Test Screen*



Step 4 Proceed to [Testing Presentation Devices](#).

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).



Note

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

[Table 8-6](#) contains supported presentation devices listed by system.

Table 8-6 *Supported Presentation Devices*

Presentation Device		
	Included in Cisco TelePresence System	Optional in Cisco TelePresence System
Projector	<ul style="list-style-type: none"> CTS 1300 	—

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 document camera input tests as necessary.

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

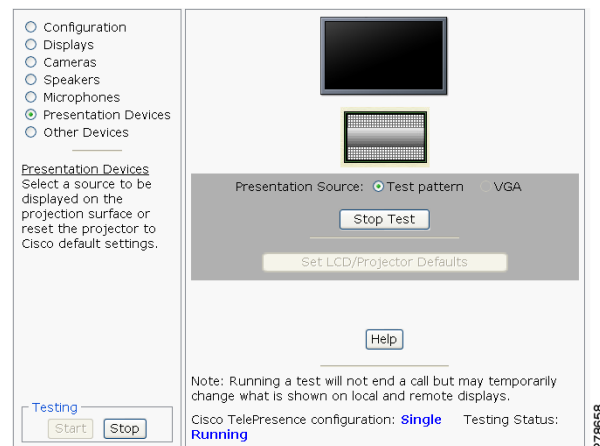
- [Checking the Test Pattern, page 8-55](#)
- [Checking the VGA, page 8-56](#)
- [Resetting the Projector, page 8-56](#)
- [Troubleshooting Presentation Devices, page 8-56](#)
- [Related Information, page 8-53](#)

Checking the Test Pattern

To check the test pattern:

-
- 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**. The test pattern screen appears, as shown in

Figure 8-39 Test Pattern



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 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:

- Click **Stop Test** to end the test. The Set LCD/Projector Defaults button is activated.
- Click **Set LCD/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:

- c. **Picture adj: Overscan** should be set to **0**
- d. **Screen: Normal**

Step 6 Click **Set Projector Defaults** to reset the projector to the default settings.

Step 7 Click **Stop** in the Testing box to end all testing.

Checking the VGA

To check the [VGA](#):

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 LCD/Projector Defaults** to reset the projector to the default settings, if necessary.

Step 8 Click **Stop** in the Testing box to end all testing.

Resetting the Projector

To reset the projector:

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 Click **Set Projector Defaults** to reset the projector to the default settings.

Step 6 Click **Stop** in the Testing box to complete the task.

Troubleshooting Presentation Devices

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

- [Multiple Input Devices, page 8-57](#)

- [Presentation Devices, page 8-57](#)

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


Presentation Devices

Use the information in [Table 8-7](#) to troubleshoot presentation devices.

Table 8-7 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.	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 Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide

Table 8-7 **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 Cisco 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.
There is no image and a Bulb icon appears on the CTS main display. 	The projector bulb has burned out.	Replace the projector bulb.

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 Cisco 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 presentation devices, see the following documentation:

- [Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide](#)
- [Cisco TelePresence System Troubleshooting Guide](#)

Testing Other Devices

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

- [Auxiliary Control Unit, page 8-59](#)
- [Verifying CTS 1300 Light Function, page 8-60](#)
- [Digital Media Player, page 8-60](#)
- [Troubleshooting Other Devices, page 8-61](#)
- [Related Information, page 8-62](#)

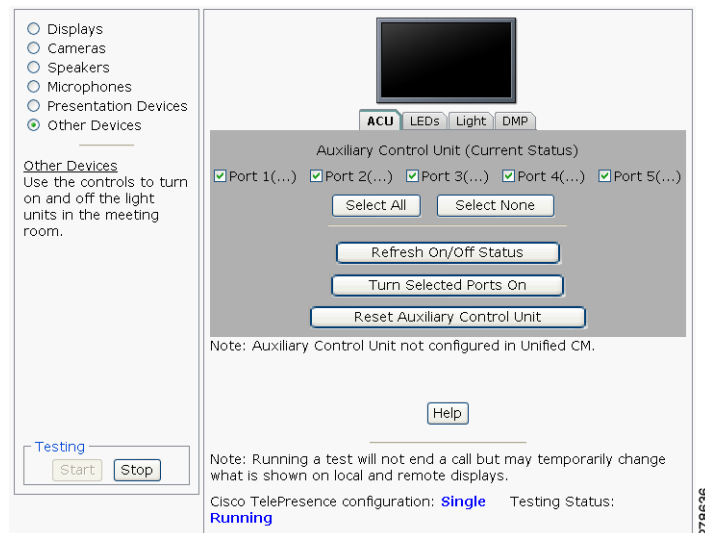
Auxiliary Control Unit

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, as shown in [Figure 8-40](#). Individual light units correspond to the five port numbers of the Auxiliary Control Unit, Ports 1 through 5.

Figure 8-40 Testing the ACU



- 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.

Verifying CTS 1300 Light Function

Each CTS 1300 has a built-in light fixture. This troubleshooting feature lets you see or change the status of the light.

To test the light fixture, perform the following procedure:

-
- Step 1** Navigate to **Troubleshooting > Hardware Setup**.
 - Step 2** Click the **Other Devices** radio button.
 - Step 3** Click the **Light** tab.
 - Step 4** Click the **Start** radio button to begin testing the light. If the light feature is enabled, the **Light State On** button is highlighted. If the light feature is disabled, the **Light State Off** button is highlighted. Click the **Light State On** or **Light State Off** button to change the current state of the light.
 - Step 5** To end the test, click **Stop**.

When you end the testing, the state of the light reverts to its default setting as specified in Cisco Unified Communications Manager.

Digital Media Player

If present on your system, the Digital Media Player (DMP) feature lets you select a secondary audio input source when you are not in a Cisco TelePresence call.

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.



Tip

Setting the DMP to PC in Cisco Unified CM allows you to hear DMP audio.

- 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 Cisco 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 8-8](#) to troubleshoot problems with Other Devices.

Table 8-8 *Troubleshooting Other Devices*

Problem	Possible Cause	Possible Solution
Digital Media Player <ul style="list-style-type: none"> • DMP audio is 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 PC, the audio input is active while the presentation source is active, both in and out of a call.
<ul style="list-style-type: none"> • DMP audio is not playing. 	The configuration settings in Other Devices > DMP > Audio to DMP is incorrect.	Setting the DMP to PC allows you to hear DMP audio.
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.

Table 8-8 **Troubleshooting Other Devices (continued)**

Problem	Possible Cause	Possible Solution
<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 Cisco 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 [Cisco TelePresence System 1300 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 8-62](#)
- [Log Files, page 8-63](#)
- [SIP Messages, page 8-65](#)

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:
- 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.
- Or
- 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)
 - Phone
 - Recording
 - Other/Unknown
- Step 3** Choose from one of the following options:
- **None** —Default. No log files will be captured unless a download option is selected. [Figure 8-41](#) 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 8-41 Downloading Log Files

Troubleshooting > Log Files

Sysop Log Log Files SIP Messages

Log Files

Log Capture Status:

Previous Logs Captured At:

Problem Type:

☒ None

☐ Download existing log files

☐ Capture new log files --Select Problem Type--

Capture New Log Files

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Step 4 If you select “Download existing log files” or “Capture new log files,” 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

Figure 8-42 shows the problem types that you can select when downloading log files.

Figure 8-42 Select Problem Type Drop-Down Menu

--Select Problem Type--

--Select Problem Type--

Audio (Speakers, Microphones)

Video (Displays, Cameras)

Projector, LCD, Document Camera

Phone

Recording

Other/Unknown

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Step 5 Select the **Download existing log files** radio button. The following message appears:

“A WinZip download will start within several minutes.
Please wait...”

Or

Step 6 Select the Capture new log files **Capture New Log Files** radio button. The following message appears:

“Collecting Cisco TelePresence system log files. This may take several minutes.
Please wait...”

Step 7 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 8-9](#) and [Table 8-10](#) 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 8-66](#)
- [SIP Response Categories, page 8-66](#)

SIP Requests and Methods

[Table 8-9](#) 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 8-9 **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.
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 8-9 .
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 8-9](#) using the response categories described in [Table 8-10](#).

Table 8-10 **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 8-43](#).



Note

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

Figure 8-43 Auto Negotiate On

Troubleshooting > Network Connection

Auto Negotiation:	<input checked="" type="radio"/> On <input type="radio"/> Off
Duplex:	Full
Speed:	1000

Apply Reset

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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 8-11](#) to solve problems that may occur with the video picture on the displays.

Table 8-11 **Troubleshooting Cisco TelePresence Screen Resolution Problems**

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 1300—The following cameras are connected to the primary unit:
 - Left
 - Right
 - Center
- An Ethernet cable (RJ-45) connects the primary codec to the user network.



Note

For detailed cabling information, see the Routing Power and Signal Cables section in the *Cisco TelePresence System 1300 Assembly, First-Time Setup, and Field-Replaceable Unit Guide*

Table 8-12 contains troubleshooting solutions for network cabling.

Table 8-12 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. For cabling information, see the <i>Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide</i>. • Log into the Cisco Unified Communications Manager administration interface. Click on the IP address and verify phone registration Restore network operation. See the <i>Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System</i> 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.
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. For cabling instructions, see the <i>Cisco TelePresence System 1300 Assembly, Use & Care, and Field Replacement Unit Guide</i>. • Restart Cisco Unified Communications Manager. See the <i>Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System</i> for Cisco Unified Communications Manager configuration instructions. • Restart the network.

Table 8-12 **Troubleshooting Cisco TelePresence Network Cabling (continued)**

Problem	Possible Cause	Actions
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 <i>Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System</i>.

Note For more system troubleshooting information, see the *Cisco TelePresence System Troubleshooting Guide* on Cisco.com.

Where to Go Next

See [Chapter 11, “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.