



CHAPTER 10

Troubleshooting Cisco TelePresence System Audio and Video

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- [Related Information, page 10-7](#)

CTS Audio and Video Troubleshooting Quick Reference

The following audio and video issues may be found on the CTS:

- [Resource Issues, page 10-2](#)
- [Environmental Issues, page 10-2](#)
- [Audio Port Issues, page 10-2](#)
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Troubleshooting CTS Audio and Video

Use the information in [Table 10-1](#) to troubleshoot audio, speaker, and video issues.

Table 10-1 *Troubleshooting Your CTS Audio and Video*

Problem	Possible Cause or Description	Action
Reverb: Room A hears Room B's voice multiple times.	Resource Issues High CPU or resource starvation causes audio missed-interrupts leading to reverb.	A system-level issue. Perform a a hold/resume or re-dial.
Echo: Room A hears its own voice back.	Environmental Issues Room acoustic environment. Audio Port Issues CTS audio port issue. See Microphone Issues See also Speaker Issues .	1. Check the Microphone/Audio Port: a. Unplug or mute the suspected microphone. If the problem persists, it's either that microphone or that audio port. b. Swap the “bad” microphone with a “good” one and see if the problem follows the microphone or the codec. c. Plug only one microphone into one audio port at a time and continue through your microphones and audio ports to find the problem. 2. If it is determined not to be a microphone or audio port issue, make sure that the audio volume is set to medium, not too loud. 3. Make sure the room passed Cisco TelePresence Experience (CTX) audio certification for the CTS 3000 and CTS 3200 rooms. For other type of rooms, a Room Readiness Assessment (RRA) acoustics measurement is advised. 4. Do offline audio captures to analyze the acoustic effects 5. Install acoustic panel or put in some plants to mitigate the issue. See the Cisco TelePresence System Administration Guide for information about managing the CTS.

Table 10-1 **Troubleshooting Your CTS Audio and Video (continued)**

Problem	Possible Cause or Description	Action
- Sound is muffled. - No sound registers: - Microphone icon with red pipe displays:  - Sound registers at the wrong microphone. - Microphone switches to a segment that has no one talking.	Microphone Issues - Something near or on the microphone is distorting the sound. - Microphone cable is not connected or is only partially connected. - Microphone is not connected: One of the microphones is unplugged. - Microphone cable is not connected to its corresponding codec. - Phantom switching.	- Move objects away from the microphone. - Confirm the laptop is not open and in-between the user and the microphone - Verify that the system is plugged in and power is on. - Verify 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. - If your system supports it, run the microphone calibration procedure in the “Testing Microphones” section of the Cisco TelePresence System Administration Guide. - 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.
Cisco Unified CM Troubleshooting—CTS 32x0 only. Orange question mark appears in the Administration interface Troubleshooting > Microphones page for the two outside microphones of the second row table.	The second row was configured for a “reduced configuration” second row that seats eight people rather than 12. The two outside microphones are not recognized by the CTS system.	Change the Second Row Capacity setting from 8 to 12. See Product Specific Configuration Layout to update your Second Row Capacity settings.
No audio from microphones or microphone errors on graphic user interface (GUI) for CTS 3000 or CTS 3200 rooms with an A/V expansion box.	Cabling Issues Audio cable might be wired incorrectly.	- Check error codes from the Web UI: 0—Microphone is unplugged 1—Microphone is plugged in. - Make sure that the microphones are inserted into the correct audio ports based on the wiring diagram for your system. See the “Related Information” section on page 10-7 to find the correct CTS guide for specific wiring information.

Table 10-1 **Troubleshooting Your CTS Audio and Video (continued)**

Problem	Possible Cause or Description	Action
- No sound is heard. - Sound heard at wrong speaker. - Sound is not synchronized with video.	Speaker Issues - Speaker cable is not connected or is only partially connected. - Speaker cable is not connected in the correct connector.	- Verify that the red and black pronged ends of the speaker cable are securely fastened under their corresponding connectors on the speaker. - Verify that the speaker cable is plugged into the correct receptor on the primary codec. Plug all speakers into the primary codec. - Gently tug on the plug to see if it is fully plugged in. Press the plug in firmly until a click is heard. - Contact Cisco technical support if necessary.
During a point-to-point or multi-point call on a CTS 3000: - One way audio/video - Only one screen is active in a multi-screen CTS configuration	Firewall Issues Firewall is blocking Real-Time Transport Protocol (RTP) packets. Network Delay Issues Multiplexor (MUX) negotiation timeout is caused by network delay or firewall issues. Routing Issues Network Address Translation (NAT)/routing issues. Payload Type Issues Wrong payload types are negotiated.	- Identify the network components that delay or drop RTP or MUX RTP Control Protocol (RTCP) packets. - Perform network captures at critical network locations to narrow down the issue. - Contact TAC for assistance if necessary.
Degraded audio/video quality, frozen image or call drops are experienced.	Codec Issues Codec may experience packet loss or jitters that exceeds the predefined warning thresholds for an extended period of time.	- Check packet loss and jitters through sysop logs or live call statistics from the admin CLI or Web GUI. See the Cisco TelePresence Administration Software Command References home page on Cisco.com for information about CLI commands. - Check on the network path to see if jitters or packet loss is observed. Run IP Service Level Agreements (IPSLA) or Video SLA Assessment Agent (VSAA) tools end-to-end if needed. - Verify whether QoS and packet shaping is configured properly based on Cisco TelePresence Solution Reference Network Design (SRND) recommendations. See the Cisco Unified Communications SRND Based on the Cisco TelePresence System for more information about design recommendations.

Table 10-1 **Troubleshooting Your CTS Audio and Video (continued)**

Problem	Possible Cause or Description	Action
Video resolution is reduced.	Resolution Issues Codec negotiates downspeed to a lower resolution, possibly due to one of the following: • A lower resolution endpoint joins the meeting. • A satellite connection or extended reach endpoint joins the meeting. • There is not enough bandwidth configured in the Cisco Unified CM Region settings.	1. Check to see if a lower resolution endpoint or satellite connection endpoint has joined the meeting. 2. Check your bandwidth settings in Cisco Unified CM by doing the following: a. Log onto Cisco Unified CM admin page. b. Navigate to your Region configuration to see if enough bandwidth has been given and assigned to the codec. Minimum is 16000; the Cisco recommended value is 32000. See the Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System on Cisco.com.
“Resolution not supported message” is seen on the CTS Cisco Unified IP Phone.	The MacBook Pro resolution defaults to 832x624 when the MacBook Pro is connected to the CTS.	When using a Mac to present during a CTS meeting, set your screen resolution to 1024x768 before plugging in the VGA cable.
• Local presentation audio is not playing during a call. • Digital Media Player (DMP) audio is playing during a call.	System Setting Issues • The Secondary Audio Input Source setting may be wrong. • The configuration settings in Other Devices > DMP > Audio to DMP is incorrect.	1. Verify that the Secondary Audio Input Source setting matches the physical cabling. Tip When set to DMP, audio input is only active outside of a call when the DMP is active (during Cisco Unified Communications Manager-defined business hours). Tip When set to PC, the audio input is active while the presentation source is active, both in and out of a call. Setting the DMP to PC allows you to hear DMP audio.
Choppy audio during double-talk (when both sides are talking simultaneously).	Audio Echo Cancellation Issues Audio Echo Cancellor (AEC) very briefly mistakes one of the speech patterns for noise and cancels it, resulting in choppy audio. • 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.

Table 10-1 **Troubleshooting Your CTS Audio and Video (continued)**

Problem	Possible Cause or Description	Action
Video picture is good but experiences repeated interruptions.	Video Picture Quality Issues Video quality setting is set too high.	1. Log into the Cisco Unified CM admin Web UI and 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 on Cisco.com. Note Higher bandwidth increases video quality, but may also cause packets to be dropped and video to be interrupted.
Sysop message reports pktLoss% during a call while no audio issue is noticed.	Packet Loss Issues Packet loss is detected and the video stream is terminated, but there is no mechanism to stop the audio stream. The audio code differentiates between intermittent packet loss and 100% packet loss. 100% packet loss is described as no packet received for 10 seconds.	No action is necessary. The CTS no longer reports 100% packet loss on audio, and no corrective action is taken in a call due to 100% audio packet loss. Call termination is based on video packet loss, not audio.
Note See the Cisco TelePresence Network Systems 2.0 Design Guide for more information about CTS video quality.		

Related Information

For more information about setting up, testing, and troubleshooting the CTS, see the following documentation on Cisco.com:

- [*Cisco TelePresence System Administration Guide*](#)
- [*Cisco TelePresence Administration Software Release Notes*](#)
- [*Cisco Unified Communications Manager Configuration Guide for the Cisco TelePresence System*](#)
- [*Cisco TelePresence Administration Software Error and System Messages*](#)
- [*Cisco TelePresence Administration Software Command References*](#)
- [*SRND Based on the Cisco TelePresence System*](#)

