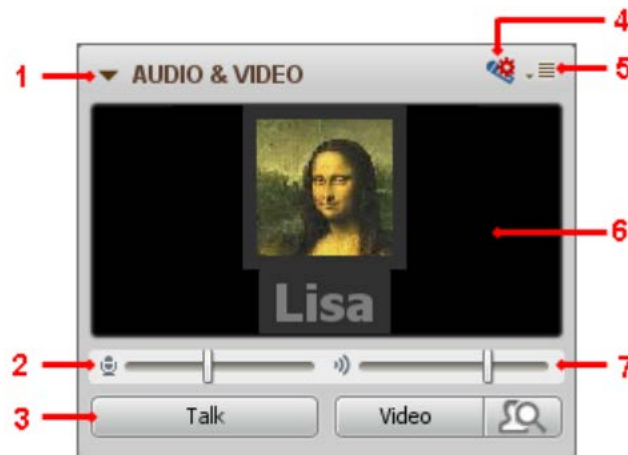


VoIP AUDIO FEATURE

The Audio feature enables you to participate in conversations during a Blackboard Collaborate Web Conferencing session using a microphone and speakers (or headset) via Voice over Internet Protocol (VoIP).

Audio shares a panel with Video in the CCC Confer interface. The panel has the following components relevant to Audio:



1. Expand/collapse button
2. Microphone Level indicator and slider
3. Talk button
4. Audio Setup Wizard
5. Options menu
6. Primary video display

You will know someone has their microphone turned on (has activated the Talk button) when the blue Audio activity indicator () appears next to their name in the Participants list.











You may see the Video transmission or the profile picture (or default profile icon) of the person currently speaking in the primary Video display. The display will also show their name. Whether or not you see this depends on the configuration of the Video display.

Moderators can use all the available Audio features and Participants a subset of those features. In the table below, a checkmark indicates which functions can be performed by Moderators and which can be performed by Participants (with the Audio permission enabled).

Feature	Moderators	Participants
Participate in a conversation (send and receive audio)	✓	✓
Adjust your microphone and speaker levels	✓	✓
Run the Audio Setup Wizard	✓	✓
Change your microphone and speaker settings	✓	✓
Change the number of simultaneous talkers allowed	✓	
Grant Participants the Audio permission	✓	

Audio Activity, Permission and Status Indicators

You can monitor the state of Audio activity and permissions through indicators displayed in the Participants list of the Participants panel. The table below describes the icons displayed in the Participant list to indicate Moderator and Participant permissions and activity while using Audio or Telephony.

Activity Indicator	Meaning
	User has turned on his/her microphone. (Using VoIP for Audio.)
	Audio permission is set globally to "on" but the Moderator has revoked Audio permission from this user.
	Audio permission is set globally to "off" but the Moderator has granted Audio permission to this user.
	User is running the Audio Setup Wizard.
	The Teleconference Bridge participant is connected and the telephone conference is available to users.
	The Teleconference Bridge participant is connected but has had its Audio permission removed and, therefore, the teleconference is muted.
	User is using Telephony mode for audio communications. (Using the phone for Audio.)
	User is using Telephony mode for audio communications (using the phone for Audio) but the teleconference is muted.

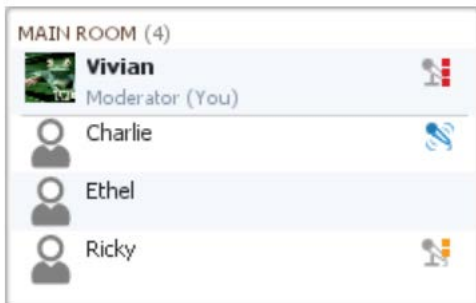
Status Indicators

Status indicators appear on the Audio activity indicator icons of Audio users in the Participants list if there are delays in the receipt of Audio or if the talker or listener is not responding to the Audio service.

All Talkers see status indicators for all listeners, Moderator listeners see status indicators for all listeners (including themselves) and Participant listeners see status indicators for themselves only. There are no status indicators shown next to Talkers. (There is one exception: if there are multiple simultaneous talkers, a person can be a talker and listener at the same time, so “talkers” may see status indicator for themselves – but only because they are also “listeners”.)

- Amber Indicator: Appears when a listener's receipt of audio is delayed.
- Red Indicator: Appears when a talker or listener experiencing a significant delay (is non-responsive) and may be offline from the session. This may indicate a problem with the network connection and often will be followed by the user getting disconnected from the session.

In the example:



- Charlie is talking,
- Ricky is experiencing a moderate delay in receiving Audio,
- Vivian is experiencing a significant delay in receiving Audio, and
- Ethel is not having any problems receiving Audio

Basic Audio Configuration

Generally speaking, it is recommended that you configure your Audio before the session begins. There are a number of Audio settings that you can configure but you will likely only need to set your microphone and speaker levels (see Using the Audio Setup Wizard) and configure simultaneous talkers.

Using the Audio Setup Wizard

To verify that your Audio is set up correctly, we recommend that you use the Audio Setup Wizard before the session begins. This wizard is comprised of a series of panels that guide you through selecting Audio input (microphone) and output (speaker) devices and setting your speaker and microphone volumes. To access the Wizard before a session, connect to the **Test Your Computer Readiness** room located on the www.cccconfer.org website **MEETINGS** page.

To open the Audio Setup Wizard, click on the Audio Setup Wizard button at the top of the Audio & Video panel.



On Windows or Linux:

1. Select your audio output device (speakers), following the instructions given in the dialog box.
2. Play the recorded audio message provided and adjust your speaker volume level.
3. Confirm whether or not your speaker was set to an appropriate level.
 - If you clicked on Yes, go to step 4.
 - If you clicked on No, you are prompted to try again or cancel. Click on Try Again to go back to step
4. Select an audio input device (microphone), following the instructions given in the dialog box.
5. Select your microphone type to get the best results when testing your microphone.
 - Single Talker: Select this option if using a headset or a microphone just for yourself.
 - Multiple Talkers: Select this option if using a single microphone to pick up multiple talkers, such as when you are in meeting room sharing the microphone with others. This is the default.
6. Press Record and adjust your microphone recording level as you speak into the microphone (audio input device). (Follow the instructions given in the dialog box.) Press Stop when you are done.
7. Press Play to listen to the recording you just made and, based on the loudness and clarity of the recording, determine if your microphone was set to an appropriate level.
8. Confirm whether or not your microphone was set to an appropriate level.
 - If you clicked on Yes, go to step 8.
 - If you clicked on No, you are prompted to try again or cancel. Click on “Try Again” to go back to step 4.
9. Read the message in the dialog box and click on OK to complete Audio setup and exit the Audio Setup Wizard.

On Mac OS X

1. Mac users cannot change their audio output (speaker) devices directly in CCC Confer; Confer uses the system default device. To change your output device, click on the speaker icon in the Select Audio Output Device dialog of the Audio Setup Wizard and make your changes in the System Preferences Sound Output panel. When done, click on OK to advance to the next panel of the wizard.
2. Play the recorded audio message provided and adjust your speaker (audio output device) volume to a suitable level. (Follow the instructions given in the dialog box.)
3. Confirm whether or not your speaker was set to an appropriate level.

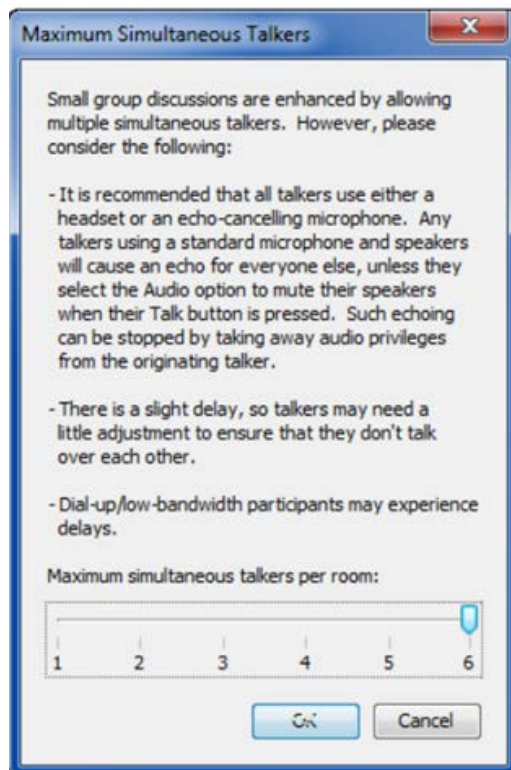
- If you clicked on Yes, go to step 3.
 - If you clicked on No, you are prompted to try again or cancel. Click on Try Again to go back to step 1.
4. Select an audio input (microphone) device from the list or select the option Use System Default Device. Follow the instructions given in the dialog box.
 5. Select your microphone type to get the best results when testing your microphone.
 - Single Talker: Select this option if using a headset or a microphone just for yourself.
 - Multiple Talkers: Select this option if using a single microphone to pick up multiple talkers, such as when you are in meeting room sharing the microphone with others. This is the default.
 6. Press Record and adjust your microphone recording level as you speak into the microphone (audio input device). (Follow the instructions given in the dialog box.) Press Stop when you are done.
 7. Press Play to listen to the recording you just made and, based on the loudness and clarity of the recording, determine if your microphone was set to an appropriate level.
 8. Confirm whether or not your microphone was set to an appropriate level.
 - If you clicked on Yes, go to step 8.
 - If you clicked on No, you are prompted to try again or cancel. Click on Try Again to go back to step 3.
 9. Read the message in the dialog box and click on OK to complete Audio setup and exit the Audio Setup Wizard.

Configuring Simultaneous Talkers

As the Moderator, you can allow up to six (6) simultaneous talkers per session. The default number of simultaneous talkers is set by the session creator when configuring the session.

If you lower the number of simultaneous talkers during a session to a value below the number of users currently talking, those users will continue to be able to talk until they release the Talk button, or you remove their permission to talk by removing their Audio permission in the Participants List.

1. Open the Maximum Simultaneous Talkers dialog in one of the following ways:
 - From the Tools menu select Audio and then Maximum Simultaneous Talkers...
 - From the Audio & Video panel Options menu, select Audio Setup Wizard.
2. Move the slider to the desired number of maximum simultaneous talkers.
3. Click OK to save your change and close the dialog, or Cancel to close the dialog box without saving your change



Using Your Microphone

You can turn on your microphone in one of two ways:

1. Click on the Talk button in the Audio & Video panel.
2. Enter the keyboard shortcut Ctrl+F2 (Command-F2 on Mac)
 - This keyboard shortcut is a "hot key", meaning you can redefine it. You are actually able to configure two hot keys for the Talk button: one to turn it on and one to turn it off.
 - Configure HotKeys from the menu: Go to Edit>Preferences>General>HotKeys

To turn your microphone off, again click on the Talk button or use the keyboard shortcut. Notice that, when activated, your Talk button displays a blue microphone.



You also may hear an audible notification when you activate or release your microphone.

If your Talk button is inaccessible (grayed out) it may be because a Moderator has removed your Audio permission, the maximum number of simultaneous talkers has been reached, or you are using the Telephony feature for audio communications.

Adjusting Microphone and Speaker Levels

The microphone level indicator (microphone icon) shows the volume levels when you are speaking and the speaker level indicator (speaker icon) shows the volume levels when someone else is speaking.

Microphone Level

There are four ways to adjust your microphone level:

1. Audio & Video panel: Grab the microphone level slider in the Audio & Video panel and drag it to the right to increase the volume and to the left to decrease the volume.



2. Options menu: From Audio & Video Options menu, select either Adjust Microphone Level Up (to increase the volume) or Adjust Microphone Level Down (to decrease the volume).
3. Tools menu: From the Tools menu, select Audio and then select either Adjust Microphone Level Up (to increase the volume) or Adjust Microphone Level Down (to decrease the volume).
4. Keyboard Shortcuts: Enter Ctrl+Shift+Up Arrow (Shift-Command-Up Arrow on Mac) to increase the volume or Ctrl+Shift+Down Arrow (Shift-Command-Down Arrow on Mac) to decrease the volume.

Speaker Level

There are four ways to adjust your speaker level:

1. Audio & Video panel: Grab the speaker level slider in the Audio & Video panel and drag it to the right to increase the volume and to the left to decrease the volume.



2. Options menu: From Audio & Video Options menu, select either Adjust Speaker Level Up (to increase the volume) or Adjust Speaker Level Down (to decrease the volume).

3. Tools menu: From the Tools menu, select Audio and then select either Adjust Speaker Level Up (to increase the volume) or Adjust Microphone Speaker Down (to decrease the volume).
4. Keyboard Shortcuts: Enter Ctrl+Up Arrow (Command-Up Arrow on Mac) to increase the volume or Ctrl+Down Arrow (Command-Down Arrow on Mac) to decrease the volume.

Advanced Audio Configuration

In most cases, you probably won't need to modify the advanced Audio configuration settings (the default settings should be adequate). However, if you wish to modify them, you can do so in the Preferences dialog.

Setting the Audio Permission for Participants

The Audio permission is included in the default set of Global permissions so all Participants are granted the permission to talk upon joining the session. (Permissions must be turned on when the session is scheduled. For more information on configuration of Global permissions during session creation, see Understanding Permissions.)

There may be times when you want to turn the Audio (talk) permission off – such as when you want to eliminate distractions and focus the Participants' attention on the information you are presenting. When you remove the Audio permission of Participants, their Talk buttons are disabled so they will not be able to use their microphones.

To remove the Audio permission from all Participants at once, deselect Audio in the Global Options menu. To remove the Audio permission from an individual Participant, deselect Audio in their Participant Options menu.

Troubleshooting Audio Delays

In general, when others are experiencing Audio delays, you can continue to talk. The audio will buffer for those who have fallen behind and ensure they are caught up to real-time. As they are catching up, they may hear the Audio in an accelerated "chipmunk" form until the backlog is cleared.