



Managing Audio Quality in iCollaborate

If you are using iCollaborate in a “Hands-Free” mode then the last thing you want in your video meeting is acoustic echo or a poor audio connection. But what can you do? First you have to determine who in the meeting is CAUSING the echo. If the echo you hear is yourself, then you are **not** the problem. The one person on the call who says "What echo are you talking about?" is the source.

Here are several possible ways to **eliminate echo on your next iCollaborate video call**:

- 1. Reboot--** If you are having issues, a good start is to reboot your PC with any external devices (Camera, microphone, speakers) attached. Right click on the speaker icon and make sure Windows default setting is using the correct mic and speakers. Then immediately enter an iCollaborate meeting without detaching and reattaching the external device you are using.
- 2. Windows Setting Changes-** If you make any changes to your Windows settings exit your browser and then re-open your browser and enter the meeting.
- 3. iCollaborate Device Settings--** When you enter a iCollaborate meeting, make sure the default audio and camera devices shown on the meeting entry screen are set to the devices you wish to use for the meeting.
- 4. Acoustic Echo Cancellation (AEC) Software** - The Windows operating system has echo cancellation technology built in and most video calling software either uses what Windows provides or builds on it. Our experience is that Win 7 and Vista do a better job than XP, so if you are relying on the Operating System to do your AEC, you'll have better luck with the newer platforms.

Many newer computers have an Realtek sound card with built-in AEC. In your computer's Control Panel, in the “Hardware and Sound” section you can enable it by opening [Realtek HD Audio Manager](#) , and selecting the “Noise Suppression” and “Acoustic Echo Cancellation” options.

However, AEC only has a chance to work when the mic input and speaker output go through the same central point. If your mic input is a USB webcam, and your speaker output comes from the integrated sound card, it is virtually impossible for AEC software to tell what is echo and what is "good" input. Also, some rooms just have too

many inputs, outputs and bouncing sound waves for the software to "read" and adjust properly, so you need another solution.

- 5. Use an external Echo Cancelling Microphone and Speaker Device (ECM)** -- An ECM is actually a microphone and speaker built into one unit. ICollaborate recommends the Logitech BCC950 which is a USB device that contains the camera, mic and speakers all in one unit. It also includes a nifty remote control. Other hands free devices work well too from manufactures such as Polycom or Clearline.
- 6. Use Headset / Ear Buds** – Using a headset takes your speaker output and feeds it directly to...your ears. No sound coming out of the speakers, means no feedback into microphone and no echo on your call.
- 7. Adjust input/output levels or location** -- I was on a call with an associate who was generating echo. We took his mic level down a few notches and the echo went away. Similarly taking the speaker volume down can mean the speakers aren't loud enough to feed back into the mic and thus no echo. In both cases, you have to balance the person's ability to communicate on the call with the echo they are introducing. Another similar strategy, if you have a mic that can be moved relative to where the speakers are, is changing the physical distance between speakers and mic. Moving a boom mic away from the speakers, turning external speakers outward, or pulling speakers in front of a mic can mean getting the mic out of pickup range and eliminating echo.
- 8. Adjust Flash AEC** - While in a vChat if you right click, a Flash menu will appear. Make sure the AEC option is set to On.
- 9. Windows Listen Option**-- Under the microphone properties in Windows 7 on the Listen tab there is an option "Listen to this device". Try turning that off and the echo might go away.
- 10. Bandwidth** – If you are experiencing issues such as delayed video images or delayed speech, then your router may be having an issue. An associate who works out of his home with a Comcast internet connection occasionally needs to reboot his router to restore optimum speed.