**VoIP Audio Device Recommendations**

When using VoIP for your Webinar, audio quality can vary based on your audio software/hardware manufacturer as well as your operating system.

<table>
<thead>
<tr>
<th>Listed in order from best quality to poor quality.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="USB headset" /></td>
</tr>
<tr>
<td>USB* headset connected to your computer</td>
</tr>
<tr>
<td><img src="image2" alt="Headphones and USB microphone" /></td>
</tr>
<tr>
<td>Headphones and USB* microphone connected to your computer</td>
</tr>
<tr>
<td><img src="image3" alt="Analog headset" /></td>
</tr>
<tr>
<td>Analog** headset connected to your computer</td>
</tr>
<tr>
<td><img src="image4" alt="External speakers and USB microphone" /></td>
</tr>
<tr>
<td>External speakers and USB microphone</td>
</tr>
<tr>
<td><img src="image5" alt="External speakers and analog microphone" /></td>
</tr>
<tr>
<td>External speakers and analog microphone</td>
</tr>
</tbody>
</table>
VoIP Audio Setup - PC

To select and test your Mic & Speakers settings

1. Right-click the system tray icon and select Preferences.
2. Select Audio.
   
   o **Microphone Setup**: It is recommended that you test your microphone. To test, select your microphone device from the drop-down menu and speak into your microphone; if it is connected correctly, the sound meter will light up green. If the green meter does not light up, select another device listed in the drop-down menu and repeat this test.
   
   o **Speakers Setup**: It is recommended that you test your speakers. To test, select your speaker device from the drop-down menu and click Play Sound; if connected correctly, you will see the sound meter light up.
green and hear a soundtrack through your speaker device. If you do not hear sound after clicking **Play Sound**, select another device listed in the drop-down menu and repeat this test.

- **Advanced**: GoToWebinar automatically adjusts audio levels. We recommend you keep this checked. If you uncheck this selection, you must manually configure your audio settings through Windows Sounds and Audio Devices. If your attendees can't understand you because your voice is distorted, try unchecking "Microphone boost.”

3. Click **OK**.

### VoIP Audio Setup - PC

**To select and test your Mic & Speakers settings**

1. Right-click the 📲 system tray icon and select **Preferences**.
2. Select **Audio**.
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   - **Advanced**: GoToWebinar automatically adjusts audio levels. We recommend you keep this checked. If you uncheck this selection, you must manually configure your audio settings through Windows Sounds and Audio Devices. If your attendees can’t understand you because your voice is distorted, try unchecking "Microphone boost.”

3. Click **OK**.

### Avoiding Call Echo

- A USB headset is recommended (see **VoIP Audio Device Recommendations**).
- Built-in or external speakers can cause echo. We recommend reducing the speaker volume to a low level.
- Webcams with microphones can pick up additional noise and cause echo. Using a Webcam for your audio is not recommended.
- Laptops with built-in microphones: Built-in microphones can pick up noise and cause echo. Using a built-in microphone for your audio is not recommended. If you know how to turn off your laptop’s built-in microphone, turn it off for your presentation (check your laptop’s owner manual).
- Echo from an attendee: If you suspect echo from an attendee, check who is talking at the bottom of the Audio pane and mute that attendee or ask the attendee to lower his or her speaker volume.
If you join your meeting via telephone make sure the audio setting in your control panel is not set to *User Mic & Speaker*.

Reduce background noise (see next section).

See also VoIP Organizer Tips and Best Practices in this section.

**Avoiding Background Noise**

- A Webinar is best presented from a quiet location.
- If using a microphone, move the microphone closer to your voice and away from competing sounds (i.e.,; computer fans).
- Avoid moving or touching the microphone during your presentation.
- A good quality headset is recommended. Webcams and built-in microphones can pick up noise and are not recommended.

**Dropped Words, Delay, Robotic Sound**

Dropped words, delay or robotic sound is often due to poor network performance, lack of memory or high CPU usage.

- Close all applications you are not using for your presentation.
- A dial-up Internet connection can cause poor performance. For optimum performance when using VoIP, we recommend a broadband Internet connection. (See [System Requirements](#).)

**If No One Can Hear You**

**Start Broadcast**

GoToWebinar Audio Service: If you are using GoToWebinar's audio service, you must click Start Broadcast in the Organizer Control Panel or *1 on your telephone keypad to start the conference.

**Check Sound Device Settings**

- Are the correct sound devices selected in the GoToMeeting/GoToWebinar Preferences menu? See VoIP Audio Setup in this section.
- If using a microphone: Does your microphone have a physical mute/unmute button on it? Check that your microphone is not muted.
- If an attendee can’t hear you, his or her speaker volume may be off or set too low.
- Analog microphones are sometimes too quiet; we recommend using a USB headset or USB desktop microphone instead.
- If you are using a desktop microphone, avoid touching the microphone since it may cause a reduction in the volume of your voice.
- Speaking very loudly can affect the volume; try speaking at a lower level.

**Internet Connection**
- The speed of your Internet connection can affect one-way sound. For optimum performance when using VoIP, we recommend a broadband Internet connection. See [System Requirements](#).

**File Sharing**
- Uploading a file while using GoToWebinar can sometimes affect VoIP sound quality. It is recommended that you close all file sharing applications before you start your Webinar.
- Streaming music or video while using GoToWebinar can sometimes affect VoIP sound quality. It is recommended that you close all streaming music or video before you start your Webinar.

**VoIP Organizer Tips and Best Practices**

**Pre-Webinar**
- As with any Webinar, it is important to test your sound quality and audio settings before your live event. In addition to testing your audio settings, it is recommended to start your Webinar in Practice mode with other organizers or panelists to provide feedback on your voice quality.
- If you plan to record your Webinar, be sure to test the recording feature while in Practice mode.

**In-Session**
- It is a best practice to keep attendees muted during your presentation and unmute individual attendees as necessary.
- Attendees who join the audio portion of your Webinar are joined muted by default. Up to 25 attendees can be unmuted at any one time (this is a combination of VoIP and phone attendees).
**Manage Attendee Audio**

Attendee, joined via VoIP, muted (default)  

Attendee, joined via telephone, muted (default)  

Attendee joined via telephone, unmuted  

Attendees who join the Webinar via telephone must enter their Audio PIN so that you have full audio controls through the Organizer Control Panel. If not entered, you can right-click the person’s name and select Send Audio PIN. This will send a pop-up message with the Audio PIN to that person.

<table>
<thead>
<tr>
<th>Attendees</th>
<th>Organizers and Panelists</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Icon]</td>
<td><strong>Telephone: Muted by default. Only an Organizer can un-mute.</strong></td>
</tr>
<tr>
<td></td>
<td>*<em>Telephone: Un-muted by default. Can mute/un-mute self through Control Panel or telephone keypad (<em>6).</em></em></td>
</tr>
<tr>
<td>[Icon]</td>
<td><strong>Telephone: Un-muted by organizer. Can mute/un-mute self through Control Panel.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Telephone: Muted</strong></td>
</tr>
<tr>
<td>[Icon]</td>
<td><strong>Telephone: Muted by default, but did not enter Audio PIN. Organizer cannot un-mute until Audio PIN is entered. Right-click this attendee's name and select Send Audio PIN</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Telephone: Did not enter Audio PIN. Cannot mute/un-mute until Audio PIN is entered.</strong></td>
</tr>
<tr>
<td>[Icon]</td>
<td><strong>VoIP: Muted by default. Only an Organizer can un-mute.</strong></td>
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</tr>
<tr>
<td></td>
<td><strong>VoIP: Muted</strong></td>
</tr>
<tr>
<td><strong>No icon</strong></td>
<td><strong>Not connected to audio (cannot hear audio or speak).</strong></td>
</tr>
<tr>
<td><strong>No icon</strong></td>
<td><strong>Not connected to audio (cannot hear audio or speak).</strong></td>
</tr>
</tbody>
</table>
Error Messages

An audio device (speakers or headset) is necessary to join a Webinar using VoIP. When an audio device such as microphone or speakers is not detected, some of the following errors may occur:

- **No Speakers Detected**
- **No Sound Detected**
- **No Microphone Detected**
- **Microphone Disconnected**
- **Virtual Operating System (VMware, Parallels, etc.)**

**No Speakers Detected**

An error message will appear if speakers (or headset) are not present or are not connected properly, or if there is no sound card installed in your computer. You will not hear audio at this time and will not be heard in the conference.

- Check that your speakers (or headset) are properly connected and click **Try Again** in the Audio pane of the Control Panel. See [VoIP Audio Setup – PC](#) or [VoIP Audio Setup – Mac](#).
- If you have the option to join the Webinar via telephone, you will automatically be switched to Telephone mode. Dial in to the conference using the number and Audio PIN provided in the Audio pane of your Control Panel.

**No Sound Detected**

After the first minute of a session, GoToWebinar looks for microphone input from attendees who are using a microphone, have speaking rights and are un-muted.
If no input is detected, you may get a Trying to speak? error message. This error may appear under the following conditions:

- You have not spoken or made any sound during the first minute of joining the Webinar, or
- The microphone device was incorrectly selected. You can click the Audio Setup link if you are trying to speak but can't be heard. See VoIP Audio Setup – PC or VoIP Audio Setup – Mac.

**No Microphone Detected**

An error message will appear if a microphone (or headset) is not present or is not connected properly. You will still be able to hear the Webinar but will not be able to speak.

- Check that your microphone (or headset) is properly plugged in.
- If you have the option to join the Webinar via telephone, you can switch to Telephone mode. Then dial in to the conference using the number and Audio PIN provided in the Audio pane of your Control Panel.

**Microphone Disconnected**
An error message will appear if your microphone fails or is unplugged after joining a Webinar. When this happens, you will no longer hear audio nor be heard by others.

- Check that your microphone is properly plugged in. If it is, test your microphone device and click Try Again in the Audio pane of the Control Panel. See [VoIP Audio Setup – PC](#) or [VoIP Audio Setup – Mac](#).

- If you have the option to join the Webinar via telephone, you can switch to Telephone mode. Then dial in to the conference using the number and Audio PIN provided in the Audio pane of your Control Panel.

![Audio setup](image)

**Virtual Operating System (VMware, Parallels, etc.)**

An error message will appear if you are attempting to join a Webinar using VoIP through a virtualized operating system, such as VMware, Parallels, etc. In this instance, to connect to audio, please choose one of the following:

- Rejoin the Webinar through a non-virtual operating system.

- If you have the option to join the Webinar via telephone, you can switch to Telephone mode. Then dial in to the conference using the number and Audio PIN provided in the Audio pane of your Control Panel.

![Audio setup](image)

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