

Tech Note: Why Headsets Are Essential For Opal

Comrex Opal is a breakthrough device that allows you to take calls from guests that use browsers as their calling device. It provides wideband, low delay audio in both directions, and is extremely simple for the guest. But there's one thing to suggest as strongly as possible when guests call into Opal:

Use a headset! Why? There's lots of reasons, but let's start with mobile phones:

1. The microphone capability of mobile phones varies dramatically. Using a wired or wireless headset almost always sounds better than the built-in mic.
2. If you connect with Opal using the phone's mobile browser, the browser is using a set of protocols to capture your phone's microphone and speaker. This protocol can be somewhat unreliable on some phones with some versions of browser and OS. To avoid troubleshooting why the speaker volume doesn't work well or why the microphone level is low, just use a headset. It will almost always work better.
3. On iOS, it's not possible for the Safari browser to deliver audio to the phone's earpiece. Output audio will always be delivered to the speaker, meaning you can't hold the phone to your ear. You must hold the phone awkwardly in front of you to speak. Headsets remove this issue. Note: This limitation is present on some Android phones as well.

Finally, whenever you have a loudspeaker running alongside a microphone, it's likely that the browser will engage an acoustic echo canceller in order to prevent feedback and echo.. This will "color" your audio as it is sent through Opal, often resulting in a sound described as "phasey". The only way to assure that no echo canceller is engaged by your system is to use a headset. **A headset will always sound better when using Opal.**

Which headset should I use with Opal?

Computer and phone headsets vary greatly in terms of cost, quality and comfort. Many are designed to maximize intelligibility at the expense of overall audio quality, especially on the microphone. They do this by incorporating a high-pass filter, removing the lower registers of your voice. This is fine for conferencing, but not for producing quality audio content. We recommend trying a headset on Opal before committing to it, especially checking the microphone quality.

We can recommend one brand of USB headset that seems like a good balance between price and quality: Koss CS-300 (dual headphone) and CS-295 (single-sided headphone) can be purchased for under \$50 at many retailers and don't employ a high-pass filter on the microphone. Since Opal doesn't inherently add the guest's local audio to the headphones, many users prefer the single-sided version in order to hear their own voice through the other ear.