

## Equipment recommendations for Video Remote Interpreting/Remote Simultaneous Interpreting (VRI/RSI)

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### Connectivity:

Hard-wired ethernet connection from computer to router is the best practice standard for VRI/RSI. WiFi, even if very fast, is frequently somewhat unstable and momentary lags in connectivity can seriously affect upload/download quality and by extension the audio quality, which will have a significant impact on the quality and smoothness of interpretation. Relying on cellular data is also strongly not recommended. **Ethernet is the (relatively!) worry-free option.** The connection should have a minimum of 1.5 MBPS upload/download capability,<sup>2</sup> although a minimum of **5 MBPS upload/download speed** with a maximum of 50 ms of ping, also referred to as latency, would probably be safer.<sup>3</sup>

Test your speed and ping: <https://www.speedtest.net/>

Below is an example of the output from a connection test of XFINITY's Gigabit package using an ethernet cable with a USB-C adapter to a MacBook Pro, from speedtest.net:



### *Connectivity equipment required:*

- Ethernet cable connecting router to computer (recommended Cat-6, which will support up to 1000 MBPS).
- USB and USB-C adapters are available for laptops that do not have ethernet ports. The adapter should also be compatible with up to 1000 MBPS/gigabit connectivity. Using an adapter may slow down a connection as opposed to WiFi or a direct ethernet connection to the computer equipment, but strong connection stability should be the top priority.

### Computer equipment:

The ideal option for an interpretation home studio is a modern desktop with an ethernet port and plenty of USB and other ports for the various peripherals that interpreters may use, and a second monitor to access documents and glossaries/dictionaries. However, most up-to-date laptops and desktops running a PC or Mac operating system will work very well. **Phones and tablets are not recommended for interpreters or presenters/meeting hosts**, though for meeting participants/service users they should be fine.

### Minimum recommended:

Dual Core 2Ghz or Higher (Intel i3/i5/i7 or AMD equivalent) and 4 GB RAM (Source: Zoom technical requirements;<sup>4</sup> VoiceBoxer suggests the roughly the same but with 1.6-GHz dual-core Intel Core i5<sup>5</sup>).

### Higher end:

8GB RAM, Intel i7 Core Processor, dedicated sound card and graphics card (Source: Kudo technical requirements)<sup>6</sup>

<sup>1</sup> Special thanks to Katty Kauffman (FCCI/AIIC/TAALS) for her invaluable feedback and advice in the drafting of this document.

<sup>2</sup> <https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux>

<sup>3</sup> <https://support.voiceboxer.com/article/technical-requirements/>

<sup>4</sup> <https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux>

<sup>5</sup> <https://support.voiceboxer.com/article/technical-requirements/>

<sup>6</sup> <https://kudo.thinkific.com/courses/take/Onboarding/texts/2669843-the-right-hardware> \*Has additional useful equipment recommendations.

## Webcam:

- The integrated webcam for most laptops and desktops should be adequate, but a separate HD webcam is preferable.
- Zoom provides an extensive list of recommended webcam models:

<https://support.zoom.us/hc/en-us/articles/201362023-System-Requirements-for-PC-Mac-and-Linux>

## **Headset: Recommended specifications for integrated mic/headset equipment**

- Light, comfortable, binaural (double-sided) headset
- Noise cancelling microphone to filter out background sound
- Wideband audio reception/transmission
- Acoustic shock protection
- In-line mute and volume controls
- Integrated microphone with rotating boom that permits the interpreter to choose the side of their head for the mic
- No active noise cancelling in the headset portion
- Hardware connection compatible with interpreter's computer: i.e., USB (or USB+adapter), USB-C, 3.5mm jack

**Acoustic shock protection:** If interpreters cannot access headphones that have acoustic shock protection, which brings the headset price point up significantly, they must be aware that acoustic shock is a serious workplace injury issue for interpreters.<sup>7</sup> Acoustic shock appears to be a complex phenomenon that is not linked exclusively to sounds above a specific decibel threshold.<sup>8</sup> However, using devices that limit incoming sound volume below certain levels is prudent to avoid sudden sound exposure at levels likely to cause pain or hearing loss. Interpreters should also inform themselves about hearing loss issues in general as a workplace injury issue that may affect them, and perhaps consult with an expert on how best to protect themselves. As a starting point, U.S. OSHA guidance indicates that “the threshold of discomfort [for sound] is between 85 and 95 dB SPL and the threshold for pain is between 120 and 140 dB SPL” (decibel sound pressure level).<sup>9</sup> [See here for a chart illustrating what decibel levels mean in practical comparative terms.](#)

**Sennheiser, Plantronics, and Jabra** are industry leaders for business/call center headsets that have features that interpreters need, and all offer models with acoustic shock protection. Sennheiser calls theirs ActiveGard (limits sound peaks to 118 decibels).<sup>10</sup> Jabra markets theirs as PeakStop (limits sudden spikes to a maximum of 118 decibels) and Safetone (integrates PeakStop and Intellitone technologies, limiting sound spikes to a maximum of 118 decibels, or 105 decibels in Safetone 2.0 models, and keeping average sound exposure levels below 85dB over a given period).<sup>11</sup> Plantronics has options it calls Sound Guard (limits sound spikes to a maximum of 118 decibels), or SoundGuard Digital (limits peaks to 102dB and keeps the user's average daily decibel level from exceeding 80-85 dB).<sup>12</sup>

## **Here are a few USB/USB-C options incorporating most or all of the functionality described above:**

**Sennheiser USB PC-8** (\$34.90) (no acoustic shock protection, but strong sound and noise cancelling on a budget)

<https://www.eposaudio.com/en/us/gaming/products/pc-8-usb-voice-over-ip-headset-504197>

**Sennheiser SC60 USB** (\$60.00) (noise cancelling microphone, ActiveGard 118 decibel peak limiter)

<https://www.voipsupply.com/senneheiser-sc-60-usb-ml-duo-headset>

**Sennheiser SC660 USB** - \$187.00 (ultra noise cancelling microphone, ActiveGard 118 decibel peak limiter)

<https://www.voipsupply.com/sennheiser-sc660-usb-ctrl-professional-dual-headset>

**Jabra Biz 1500 Duo** (\$63.00) (noise cancelling microphone, PeakStop 118 decibel peak limiter)

<https://www.jabra.com/business/contact-center-headsets/jabra-biz-1500/#1519-0157>

**Jabra Engage 50** (\$221.00) (Safetone 2.0, intelligent volume control, intelligent noise cancellation in microphone)

<https://www.jabra.com/business/office-headsets/jabra-engage/jabra-engage-50##5099-610-189>

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<sup>7</sup> <https://www.nimdzi-com.cdn.ampproject.org/c/s/www.nimdzi.com/hearing-loss-and-acoustic-shock-a-silent-threat-for-interpreters/amp/>

<sup>8</sup> A good primer on acoustic shock: Janice C. Milhinch, Acoustic Shock Injury: Real or Imaginary? (2002)  
<https://www.audiologyonline.com/articles/acoustic-shock-injury-real-or-1172>

<sup>9</sup> Franks, Stephenson, and Merry, 'Preventing Occupational Hearing Loss: A practical guide' (1996) p. 91,  
<https://www.cdc.gov/niosh/docs/96-110/pdfs/96-110.pdf?id=10.26616/NIOSHPUB96110> accessed 04/01/2020.

<sup>10</sup> [https://epi.eposaudio.com/globalassets/files/white-papers/406836858-white-paper\\_activegard-technology\\_en1.pdf](https://epi.eposaudio.com/globalassets/files/white-papers/406836858-white-paper_activegard-technology_en1.pdf)

<sup>11</sup> <https://www.jabra.com/blog/peakstop-safetone-intellitone-what/>; <https://www.jabra.com/support-page/hearing-protection>

<sup>12</sup> <https://www.poly.com/us/en/innovations/soundguard>