








Use CHORALE to remember generalized STEPS for making low-latency calls

Indented steps tend not to be routinely used.

<p>CONNECT CABLES</p>		<p><i>Network equipment</i></p> <ol style="list-style-type: none"> 1. WiFi is shut OFF on computer running low-latency audio 2. Computer running low-latency audio -> ETHERNET cable directly -> Main router 3. WiFi is shut OFF on computer running low-latency video 4. Computer running low-latency video -> ETHERNET cable directly -> Main router <p><i>Audio equipment</i></p> <ol style="list-style-type: none"> 5. MIC -> [USB audio interface/adapter] -> Computer running audio 6. HEADPHONES -> [USB audio interface/adapter] -> Computer running audio
<p>HEADPHONES</p>		<ol style="list-style-type: none"> 7. WEAR your HEADPHONES (on your ears).
<p>ON</p>	<p>48V</p>	<ol style="list-style-type: none"> 8. Turn ON hardware (computer, RASPBERRY PI computer, 48 V PHANTOM POWER, mixer, etc.)
<p>REDUCE</p>	<p>[F5] + [Q]</p>	<ol style="list-style-type: none"> 9. REDUCE burden on your computer processor: QUIT unnecessary applications.
<p>APPLICATION</p>		<ol style="list-style-type: none"> 10. <i>Delete the previous version and shortcut(s) of the low-latency audio application.</i> 11. <i>Download an up-to-date version of the low-latency audio application.</i> 12. <i>Install the low-latency audio application.</i> 13. OPEN the low-latency audio APPLICATION. (This is probably already done if you turned on a Raspberry Pi computer). 14. <i>Grant permissions to run application, pass through firewall, etc.</i> 15. <i>Make a shortcut (desktop shortcut or permanent dock icon) for your low-latency application.</i>
<p>LOG IN, LOOK for settings, and look for LISTS of users, groups, and/or servers</p>	  	<ol style="list-style-type: none"> 16. If the application you are using is account-based, LOGIN to your account if needed. 17. <i>Look for settings (possibly in hidden menus).</i> 18. <i>Select audio input (ADC)/output (DAC) devices.</i> 19. <i>Set sample buffer as low as does not cause crackling (recent computing hardware should support 32 samples = 0.67 ms or 64 samples = 1.33 ms).</i> 20. <i>Set the (outbound) network buffer (128 samples = 2.67 ms if transmitting through fiber at a good hour of a good day or 256 samples = 5.33 ms if transmitting through mediocre network conditions, e.g. Comcast Xfinity).</i> 21. <i>Set default jitter buffer (if available) to manual with a duration of something like 2, 3, or 4 buffered packets or 11 ms.</i> 22. <i>Set playback channels to 2.</i> 23. <i>Set capture/send channels to 2 (mono mix) or 2 (stereo).</i> 24. <i>Set codec to OPUS 96 kbit/s.</i> 25. Look through LISTS of users, groups, and/or servers to find people with whom you'd like to connect. 26. CONNECT/call.
<p>EXTERNAL applications and files</p>		<ol style="list-style-type: none"> 27. <i>Create a bookmark for an external video platform.</i> 28. <i>Create a bookmark for your ensemble's sheet music folder.</i> 29. Open VIDEO platform (e.g. VDO.Ninja if not all users can open native video in the low-latency audio application you are using). 30. Open SHEET MUSIC folder (e.g. Google Drive folder).