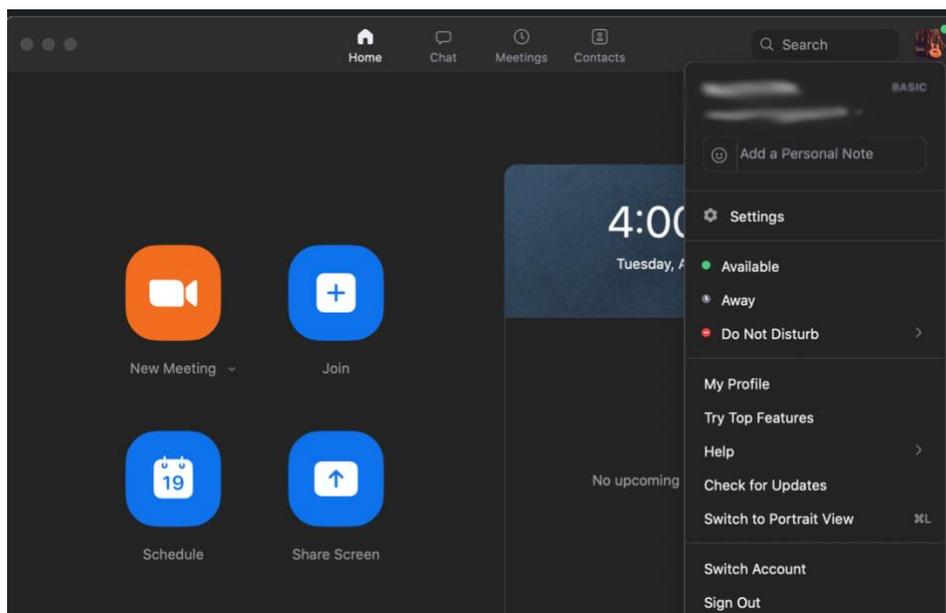


# Setting up for Zoom Teaching and/or Performance

## 1. DEVICE AND NETWORK PREPARATION

Device and network preparation is critical to ensure that your audio and video stays connected and does not slow down, stop or 'lock-up' in the middle of your session. It is critical for FAMI that your teaching session be as technical error-free as possible, although we do recognize that things happen, despite all the preparation.

- Connect your device to a power source as video work drains the batteries very quickly,
- Close all applications that you will not be actively using during the Zoom session (multiple applications slow down your device / computer and can affect the quality of the Zoom connection,
- Ensure you have downloaded the latest version of the Zoom App. To do this open the zoom app and click on the image in the top right-hand corner and select *"Check for Updates"*



- Have a solid internet connection – FAMI greatly prefers a WIRED connection to a desktop or laptop computer. A wired connection will be faster and more stable than Wi-Fi,
- Test your network speed – a upload speed greater than 5 Mbps is the ideal. Below that number creates a greater likelihood of connection problems. Download speed is of less importance. The speed of your network can be tested by using either [FAST.COM](https://www.fast.com) or [SPEEDTEST.NET](https://www.speedtest.net) – other sites are also available by Googling speed test,
- If using Wi-Fi, to the extent possible, limit other usage within your home or session space (e.g., not having multiple gaming or video on another device).

## 2. AUDIO

### Audio Capture

Music is FAMI's reason for being. Therefore, we aim for you to have the best sound possible in this learning environment. Poor sound negatively affects the listeners and the students.

- If all you have is the built-in microphone do your best to place it in a decent location where the microphone is not being obstructed and try to position yourself reasonably close to the microphone (understanding that you also have to be visible on the video),
- If you have an audio interface and some decent microphones at home, make use of those,
- One condenser microphone placed between the voice and an instrument can sound great,
- You can connect each source into your interface independently for more control but be aware that most video conferencing software can only receive signal from the first two channels. If you want to get really fancy, you can run all of your audio sources through:
  - a DAW (Digital Audio Workstation – such as GarageBand or Audacity – both free) for processing / mixing, then use a piece of software for internal audio routing to send that mix to zoom,
  - An external mixer, either analog or digital for mixing and effects then connect to an audio interface to computer or directly to computer via USB if available,
- Laptop fans can start to get very loud when your computer is working hard. Elevate the laptop with a couple of books to increase airflow so the fan doesn't run as fast,
- Remove all pings, hums, buzzes, and vibrations from your environment. Put all of your devices (including a computer) on "do not disturb" mode or the next best option. If you're using a built-in microphone and an alert goes off on the same device, it will be extremely loud for your audience.

### Audio Monitoring (Hearing Yourself)

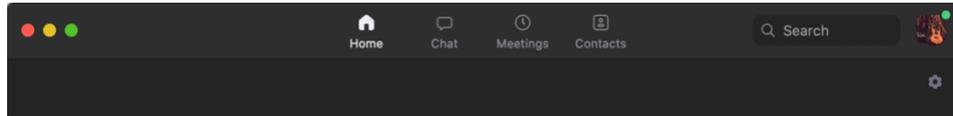
The ability to hear yourself and not have feedback will be critical to your confidence as you deliver your session. In addition, feedback or echo caused by not using earbuds or headphones, makes for a difficult experience for your listeners / students.

- ***We strongly suggest the use earbuds or headphones!!!!***
- If you do not use earbuds or headphones, your device has to process your audio to prevent sound played through a speaker from feeding back into a microphone. This processing has a massively detrimental effect on your sound. In some cases, the feedback – often heard as a high-pitched whistle – will be heard by your listeners / students. Another negative consequence can be an echo that will be heard by your listeners / students making it very difficult for them to pay attention to your session.
- The audio improvement using earbuds / headphones instead of speakers is far greater even than the difference of using a nice microphone versus your device's built-in mic,
- Zoom will not play your own sound back through your earphones. If you need to hear yourself better, the simplest thing to do is remove one earphone. Alternatively, you can use the direct monitoring capabilities of an audio interface or DAW.

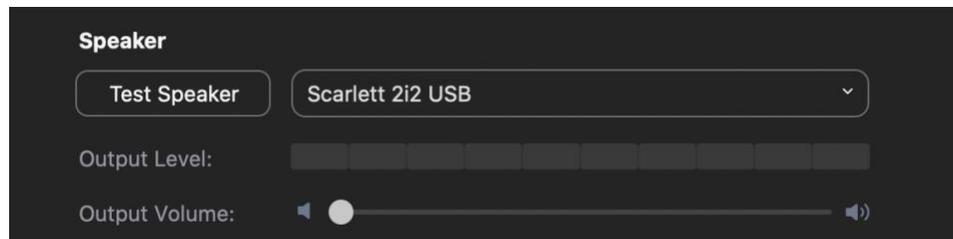
## Settings for Zoom on a Computer – Audio

Zoom was developed for conference calling, not musical instruction or performance. The information below has been developed and tested by many musicians as a work-around that really works.

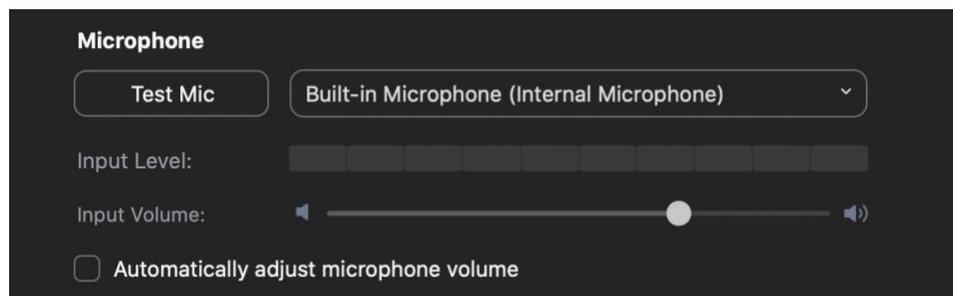
- In Zoom, open *Preferences* or *Settings* (open the Zoom App and click on the gear icon in the top right corner) then select Audio,



- Use the *Test Speaker* function to verify that you will be able to hear other people speak. Change your output device and output volume if necessary,

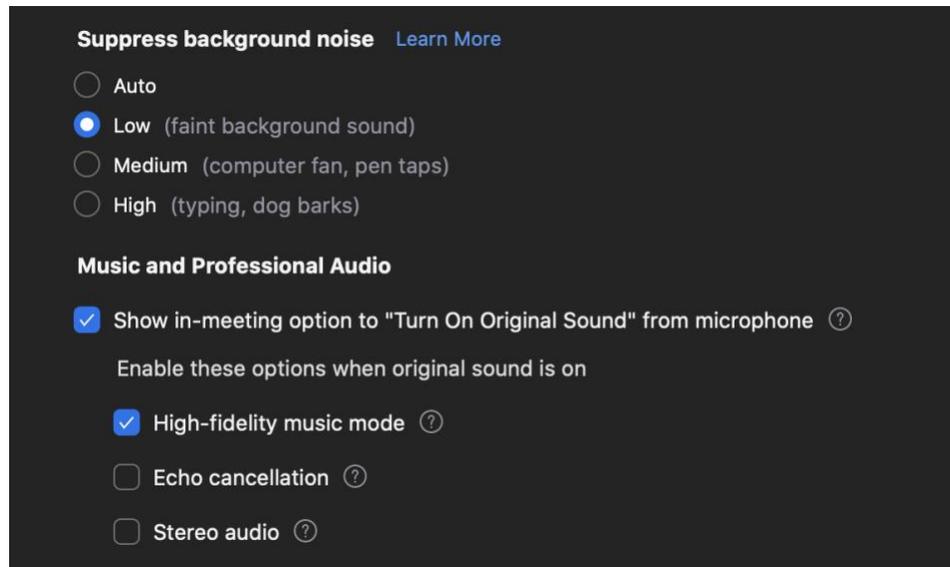


- Use the *Test Mic* function to verify that other people will be able to hear you. Click *Test Mic*, play/sing a brief passage at a realistic volume, then click the *Recording* button to stop. Your test audio will be played back to you. Change your input device and input volume if necessary,

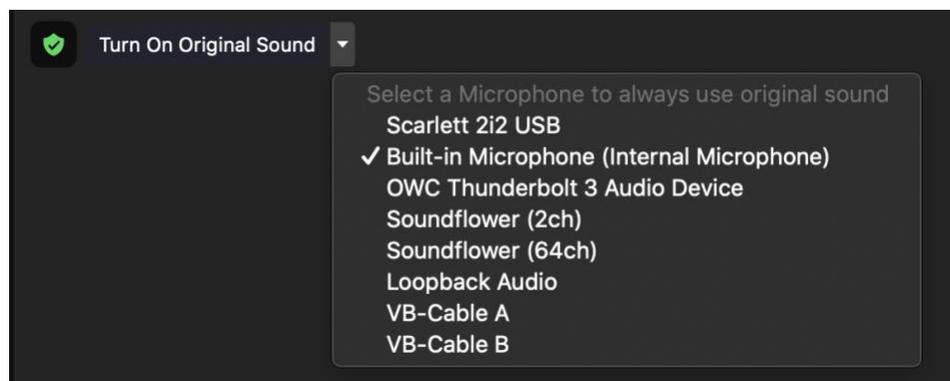


- Other audio optimizations include:
  - Uncheck *“automatically adjust microphone volume”* and use the slider to set the input volume level,
  - Suppress background noise – check *Low* (faint background sound),
  - Music and Professional Audio:
    - Check *“show in-meeting option to “Turn On Original Sound” from microphone”*,
    - Check *“High-fidelity music mode”*,
    - Uncheck others,

- Under Advanced set Echo Cancellation to Auto.



- Once you have joined a meeting you will need to click the button labeled *Turn On Original Sound*. **NOTE: THIS MIGHT HAVE TO BE DONE EACH TIME YOU USE ZOOM!** This bypasses all of the functions that would suppress background noise and prevent audio feedback but would also make your audio sound awful. **Don't do this until you have connected your earphones.**



## Room Sound

- Consider how reflective your space sounds. Less reflection / reverberation / echo is better for this context.

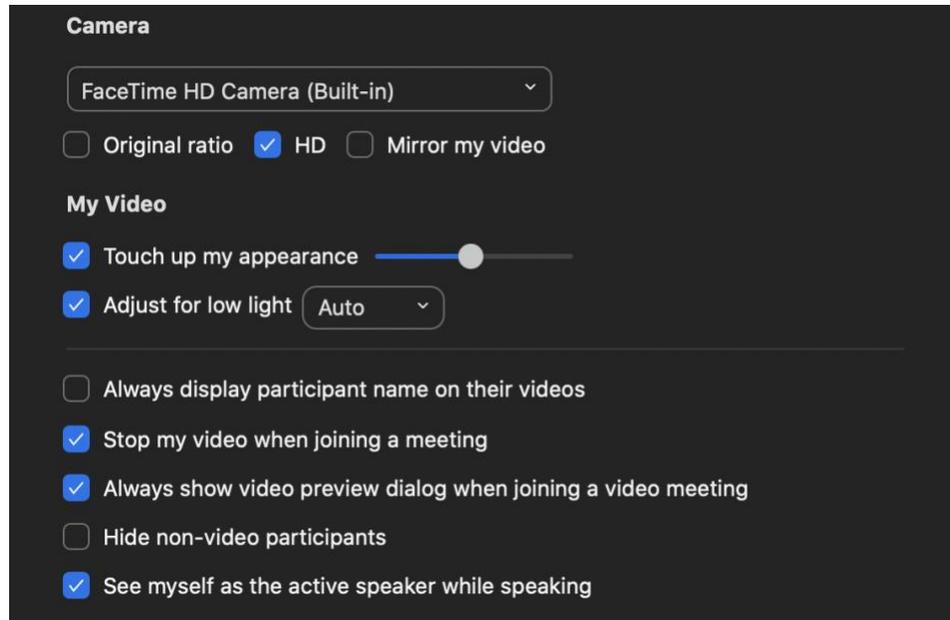
## 3. VIDEO

As an instructor, it is critical that your listeners / students can see what you are doing. This may mean seeing your hands, watching your diction, looking at prepared teaching materials etc. Any musical performance is typically enhanced by good visuals

### Settings for Zoom on a Computer – Video

- In Zoom, open *Preferences* or *Settings*. Select Video,
- Check the box labeled “*Enable HD*”. If your internet connection can handle this increased bandwidth requirement it can make your camera look better,

- Check the box labeled “*See myself as the active speaker while speaking*”. This will allow you to see yourself on screen when you are speaking or performing.



## Staging / Framing the Shot

- Find a space that looks nice or at the least tidy. The simpler the background the better – the key is to stand out in front of and apart from the background. Some of this can be accomplished by making sure your clothing is a different color than the background,
- Resist the use of “virtual” backgrounds as parts of your person or instrument tend to disappear into those fake backgrounds. At best, they are distracting to your listeners / students,
- Place computer / camera on something solid, so things like foot tapping will not shake the image,
- Best if the camera is level with or slightly higher than your head. This tends to be a more flattering perspective rather than being photographed from below,
- Camera focused on your performance space. Is everything that matters in the shot? Head, shoulders, instrument, fretboard, strumming hand, etc.,
- Make sure that it works for both talking and playing (if you lean in to read your screen, does your head get cut off).

## Lighting

- Good lighting is far more important than a fancy camera,
- Get lots of light on yourself. Cameras are generally happier when things are brighter,
- If you don’t own video lighting, move some lamps around until things look good,
- Place lighting behind the camera so that your face comes out clearly and is not dark. Avoid having a lot of light from behind you. If you’re in front of a window or other bright light, your camera may compensate by making the whole image (including you) darker. For example, do not have your back to a window, even if it has a drape. Rather, if you have to use that space, face the window so the light shines on your face.