

CA 155 – Podcast Project

Lab Practice: Noise Reduction

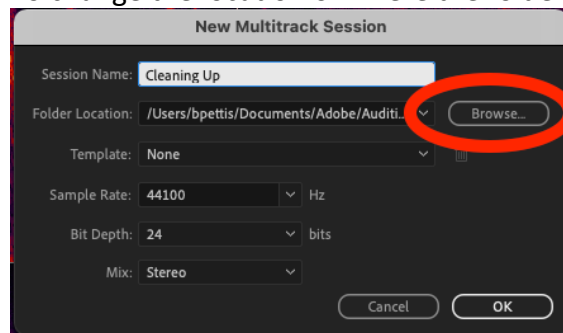
This week, we'll learn some tricks to use the EQ to help you clean up the quality of your audio files. You can download copies of the demo files mentioned in the following steps from this Box.com link:

<https://go.wisc.edu/25i280>

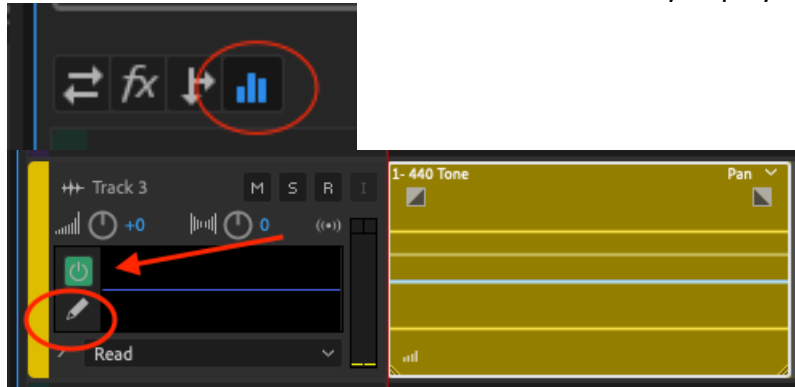
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PART ONE:

- 1) Open Audition and create a new Multi-track Session named "Cleaning Up" and save this to your Desktop.
 - To create a new Multi-Track Session: File -> New -> Multitrack Session
 - To change the location of where the folder will be saved:



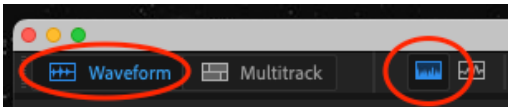
- 2) Load the sound file "440 Tone" into one of your tracks
- 3) Switch to the EQ view and watch the waveform as you play the track



- 4) Shape the EQ envelope so as to remove the frequencies associated with the sound. Don't lower the *whole* EQ—just the area around the tone
- 5) You should hear silence (or close to silence) when you play back the track.

PART TWO: Room Noise

- 1) Mute the 440 Tone Track. Import “Bad Audio – Phone and Hiss” to a new track
- 2) Listen to the track and note the hissing noise that occurs at the 7 second mark
- 3) Open the Waveform view by clicking “waveform” in the top left, or by double clicking on the clip
- 4) Open the “Spectral Frequency Display” and play the clip. Note the visuals that are associated with the various sounds.



- 5) Select a portion of the audio that contains *only* the hissing noise
- 6) Capture a Noise Print of the selection
Effects -> Noise Reduction / Restoration -> Capture Noise Print
- 7) Click anywhere else in the clip to deselect the noise portion. Select the entire portion of the audio that contains the hissing noise.
- 8) Add the noise reduction effect based on the noise print you captured
Effects -> Noise Reduction / Restoration -> Noise Reduction (Process)
- 9) Experiment with the sliders in the effect dialogue to adjust the Noise Reduction effect. Try to balance how much noise is removed with the voice not sounding “robotic”

PART THREE (if time): Automatic Audio Healing

- 1) In the same “Bad Audio Phone and Hiss” file, play the beginning portion of the audio. There is no hissing sound here, but there is a phone ringing in the background
- 2) Look in the Spectral Frequency View and locate where this phone ring is.
- 3) Use the Marquee Selection Tool to isolate *only* this portion of the audio



- 4) Play the track and notice how you hear mainly the phone, and not the voice.
- 5) Use the Auto Heal Tool to remove the ringing
Effects -> Auto Heal Selection
- 6) Repeat steps 3-5 as needed to remove all of the ringing sounds

PART FOUR: Exporting

- 1) Return back to “Multitrack” view. Make sure that you have a track with “440 Tone” and another track with “Bad Audio Phone and Hiss”
- 2) Make sure that both tracks are unmuted and that the clips are not overlapping
- 3) Export the entire session as an audio file
File -> Export -> Multitrack Mixdown -> Entire Session
- 4) Choose MP3 Audio for the Format and click “Browse...” to save the file onto the Desktop Before clicking “OK” please change the File Name to be “YourName.mp3”
- 5) Email this MP3 file to me – bpettis@wisc.edu