

## WCSU Audio Production Teaching Demo - Barry Hartglass

If you would like to apply the information presented today about basic audio filters, I invite you to do the following EQ Exercise. Please follow the instructions below and send me your work to evaluate as soon as you can, in the next week or two if possible (step 14 below explains how to submit files). If there are any issues with what you send or if you leave anything out, I'll let you know so you can revise your work and resubmit. You can keep revising until you have completed everything successfully. Sometimes it takes a few tries to fully learn something. If you need any help with the assignment or if you would like me to clarify how to do any of the steps, please email any questions to [barry@barryhartglass.com](mailto:barry@barryhartglass.com) and I will respond within a day.

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### EQ Exercise - Bo Bester (Ableton)

1. Download Bo Bester Project (Ableton) from [barryhartglass.com/eq](http://barryhartglass.com/eq). This is a recording of a short, original instrumental piece I created in 2003.
2. Rename the Ableton Live session folder like this, but with your name: EQ\_HartglassB Project
3. Rename the Ableton Live session inside the folder like this, but with your name: EQ\_HartglassB.als
4. On one of the tracks (you decide which one), use the EQ Eight (Audio Effect) set to a single High Pass Filter or Low Pass Filter, clearly removing frequencies below or above a cutoff frequency that you choose. The tonal alteration you make can be subtle (but audible) or drastic. Listen to the effect of using different slopes (48 or 12 db/octave) and choose one. You can also experiment with Q (quality factor). In this plug-in the Q controls resonance.
5. On one of the tracks (you decide which one), use the EQ Eight (Audio Effect) set to a single High Shelf Filter (cut or boost) or Low Shelf Filter (cut or boost). You choose the frequency (sometimes called the cutoff frequency, corner frequency or turnover frequency) to create a subtle (but audible) or drastic tonal alteration of the sound. You can also experiment with Q; in a Shelf Filter the Q controls the slope steepness and resonance of the transition between the filtered and unfiltered frequencies
6. On one of the tracks (you decide which one), use the EQ Eight (Audio Effect) set to a single Peak Filter (cut or boost). You choose the frequency (sometimes called the center frequency) and Q (bandwidth) to create a subtle (but audible) or drastic tonal alteration of the sound. A Peak Filter is sometimes referred to as a Peak/Dip or Bell Filter.
7. On one of the tracks (you decide which one), use the EQ Eight (Audio Effect) with a combination of at least 3 bands of EQ: a High Pass Filter and/or Low Pass Filter, a High Shelf Filter and/or Low Shelf Filter and at least one Peak Filter. Set all parameters in each filter to create a subtle (but audible) or drastic tonal alteration of the sound.
8. OPTIONAL: On one or more of the tracks (you decide which), use the Channel EQ (Audio Effect) and/or the EQ Three (Audio Effect) however you like. Set all parameters to create a subtle (but audible) or drastic tonal alteration of the sound.
9. OPTIONAL: On one or more of the tracks (you decide which), use any 3rd Party EQ (Plug-ins) in the Studio A computer (from iZotope, Native Instruments, Waves, etc.) however you like. Set all parameters to create a subtle (but audible) or drastic tonal alteration of the sound.
10. OPTIONAL: Add a little Reverb (A send) and/or Delay (B send) to one or more tracks.
11. Balance the levels of the tracks making sure that the Glue Compressor on the Main track does not compress too much. When mixing, try to only show 4dB or less on the meter (gain reduction) in a compressor or limiter.

12. Select from a little before the beginning to a little after the end of the edited audio and select Export Audio/Video from the File menu.

13. Use the following Export settings:

- Rendered Track: Main
- Sample Rate: 48000Hz
- Encode PCM: On
  
- File Type: WAV
- Bit Depth: 24 Bit
- Dither Options: No Dither
- File Name format (with your name): EQ\_HartglassB (save inside the Project folder)

14. Check that your WAV file plays correctly and that your Ableton Live session opens with no missing files. Make a zip file out of your Ableton folder (right-click and select Compress) and send it via [www.wetransfer.com](http://www.wetransfer.com) or [www.transferrnow.net](http://www.transferrnow.net) to [barry@barryhartglass.com](mailto:barry@barryhartglass.com) as soon as possible, but no later than 5/1/26, so I can evaluate your session and mix.

**Grading Criteria:**

Successful use of a High Pass Filter or Low Pass Filter

Successful use of a High Shelf Filter or Low Shelf Filter

Successful use of a Peak Filter

Successful use of a combination EQ

Exported WAV file is included and plays correctly from beginning to end