ELEC 1020 LAB 4:
Audio Processing with Adobe Audition 5.5 (Audio Processing – Playing with Waveforms)

Scoring Rubric For the Labs

max. 4 (100%) out of 4	4 (100%) Exceeds Standard	2 (50%) Meets Standard	1 (25%) Approaches Standard	0 (0%) Fails
Evaluation of your production in terms of design and technical effectiveness	**On top of the standard** deliverables, students showed **unusual insight, complexity, originality, or creativity** with his/her message or choice of an art form or medium to express it.	Students completed **ALL** required message and reproduced an art form or medium that expected.	Students **partially** completed the required message and reproduced an art form or medium that expected.	Students **FAILED to complete any** require message and reproduce any art form or medium that expected.
	Work shows **rich** evidence that student researched his/her **OWN** ideas, art form, and the techniques of your art form.	Work shows **full** evidence that students completed the required ideas, art form, and the techniques of art form expected.	Work shows **partial** evidence that students completed **some** required ideas, art form, and the techniques of art form expected.	Work shows **NO** evidence that students completed any required ideas, art form, and the techniques of art form expected.

Outcomes of this lab

1. Get familiar with the user interface and basic operations in Adobe Audition 5.5
2. Learn basic audio editing techniques

Preparation

1. Bring your earphones for listening
2. Bring your smartphone for recording (together with a USB cable)
3. Prepare an audio file

Lab Contents

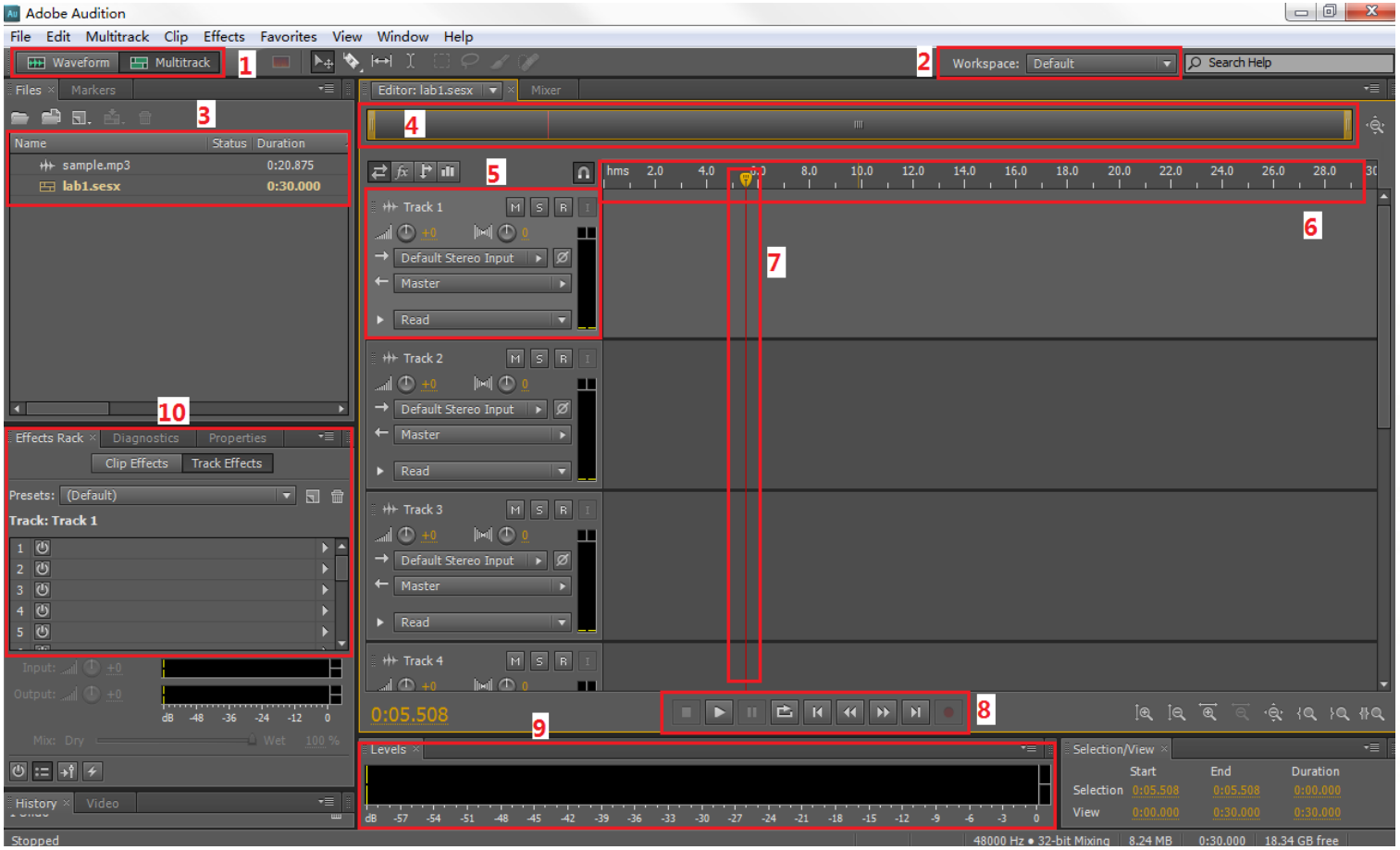
1. GUI of Adobe Audition

2. Adobe Audition Basics

3. Audio Effects and Process

4. Merging Audio and Video

1. GUI of Adobe Audition



1. GUI of Adobe Audition

1. **Waveform vs. Multitrack**: toggle multitrack and waveform;
2. **Workspace**: change the layout of the Audition;
3. **Files**: shows the files that are currently included in this project.
4. **Scrollbar**: represents the portion of project currently being shown;
5. **Track Panel**: used to control audio track.
   M(mute) is for mute the track,
   S(solo) is for only hear this track,

1. GUI of Adobe Audition

6. **Timeline**: time axis for the audio file;
7. **Play Indicator**: shows the time of the audio file is currently being played. It can also be dragged around to monitor the audio file;
8. **Play Control**: buttons which is just the same function as those buttons in music player;
9. **Levels**: shows the level of record input;
10. **Effects Rack**: applies effects to the audio track.

Lab Contents

1. GUI of Adobe Audition
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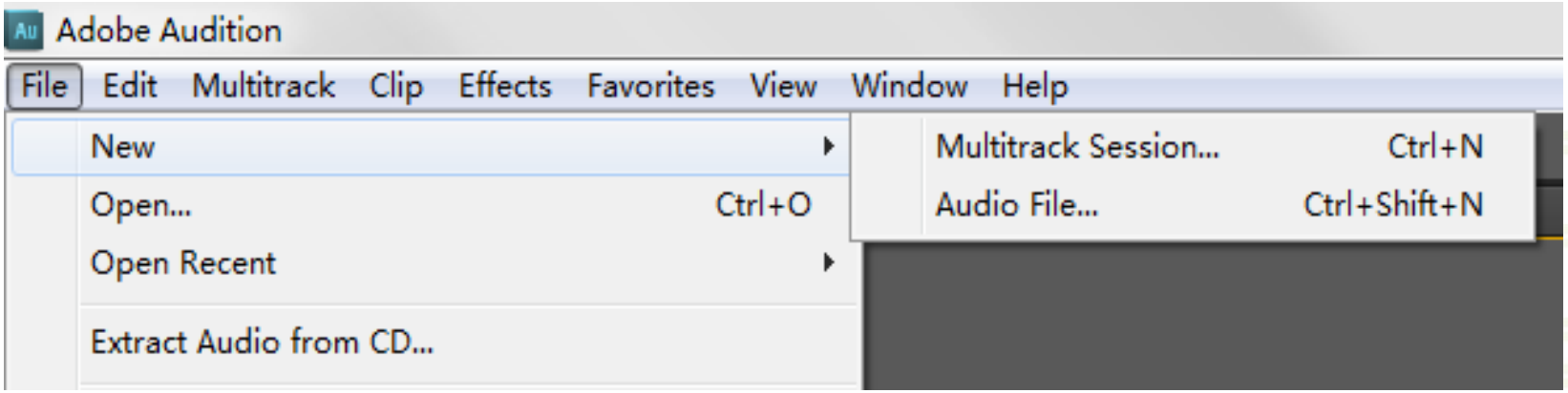
2. Adobe Audition Basics

2.1: Open/Create a session

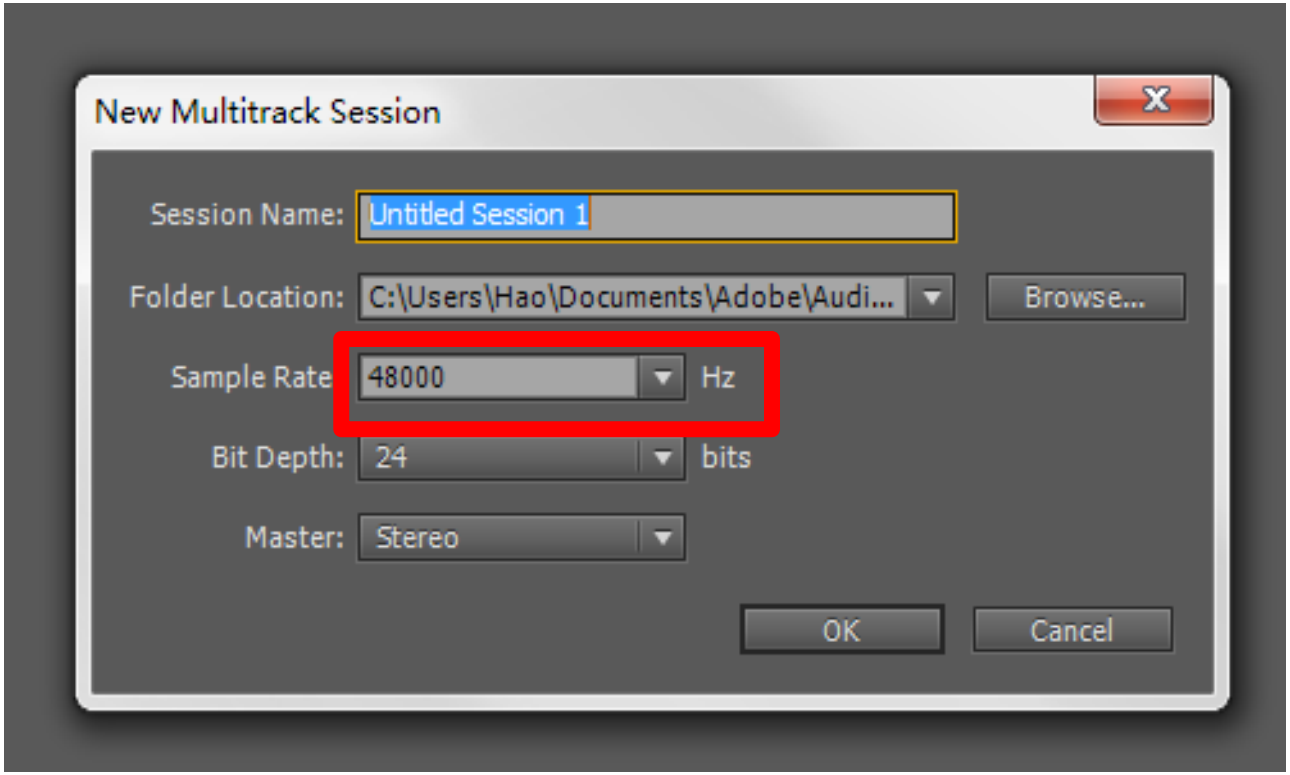


Open: **File->Open->(Select the file)**

Create: **File->New->Multitrack Session**

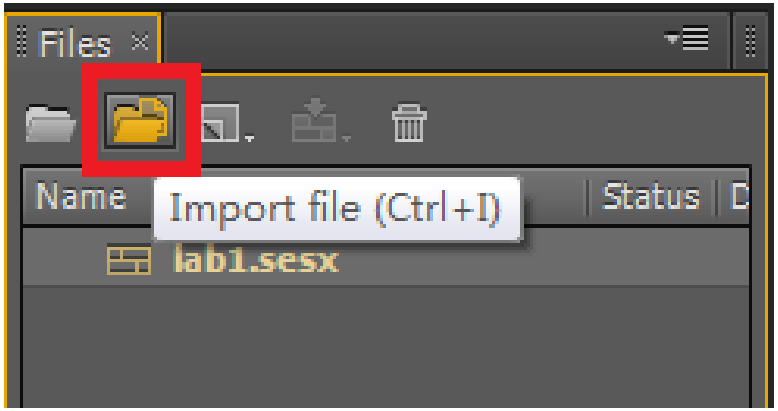
2. Adobe Audition Basics

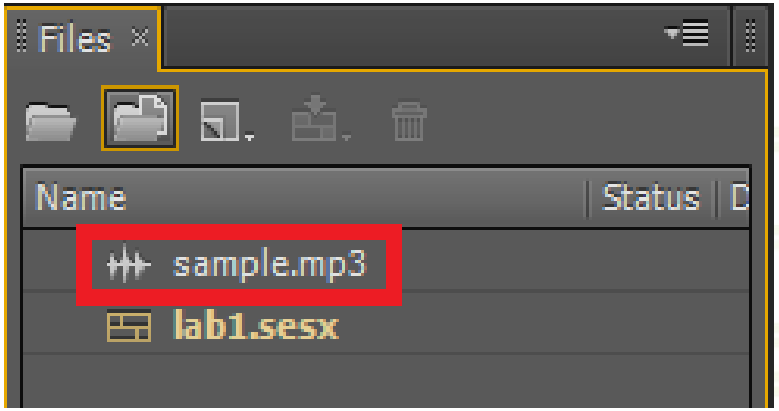
2.1: Open/Create a session



2. Adobe Audition Basics

2.2: Import an audio file

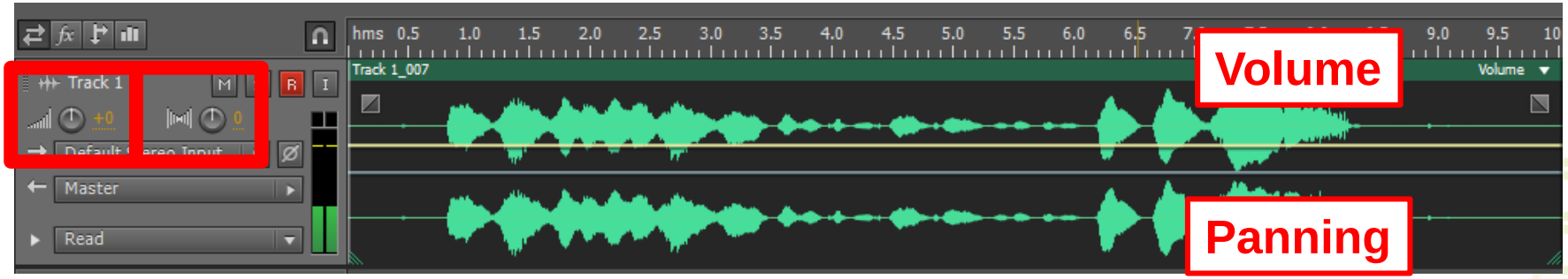




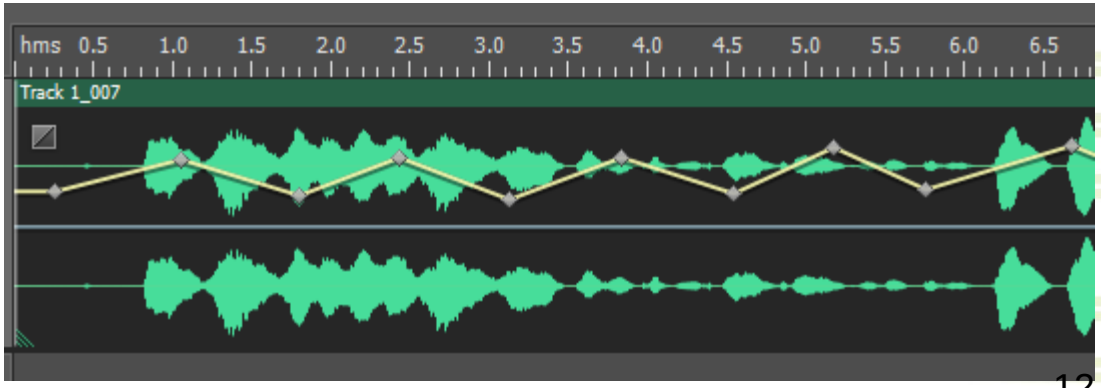
File->Import->File…->(Select the audio file)

2. Adobe Audition Basics

2.3: Volume Control (Amplitude Control)



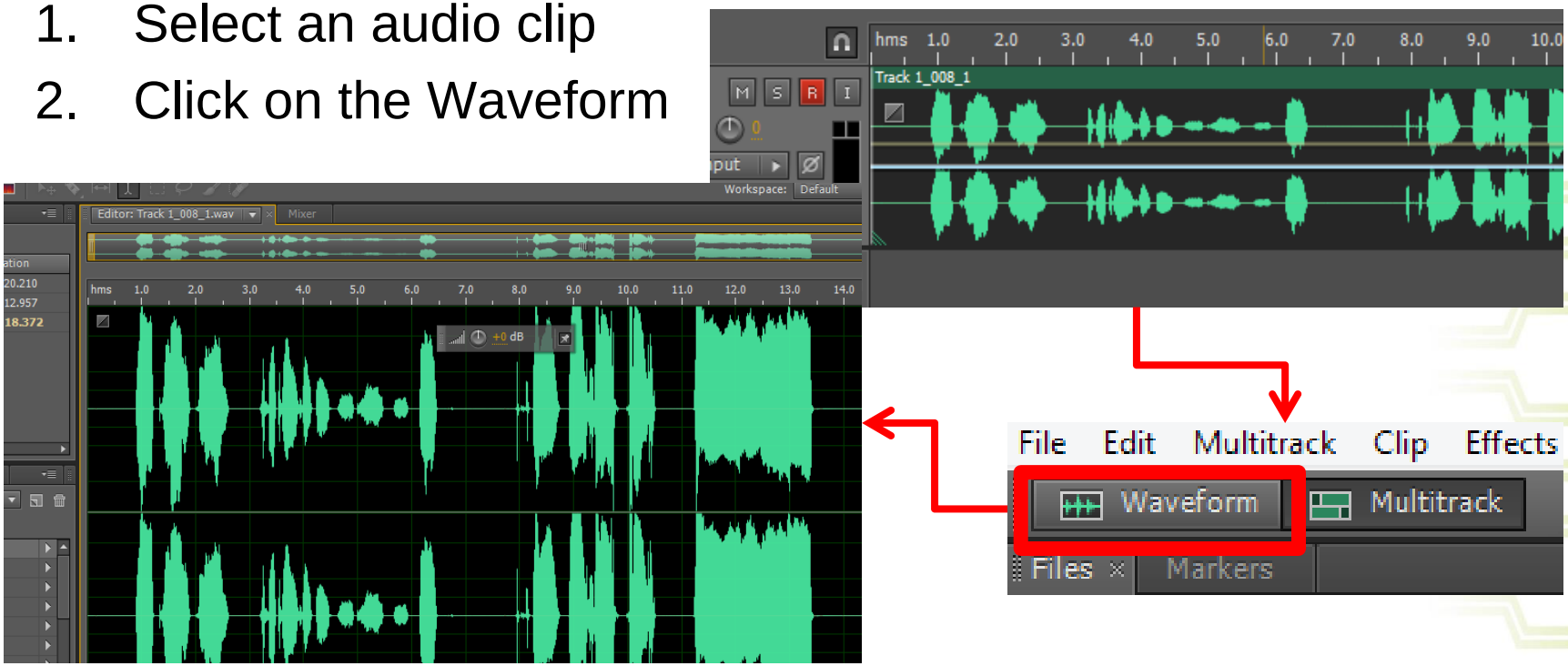
Global Control
vs.
Local Control



2. Adobe Audition Basics

2.4: Switch to Waveform View

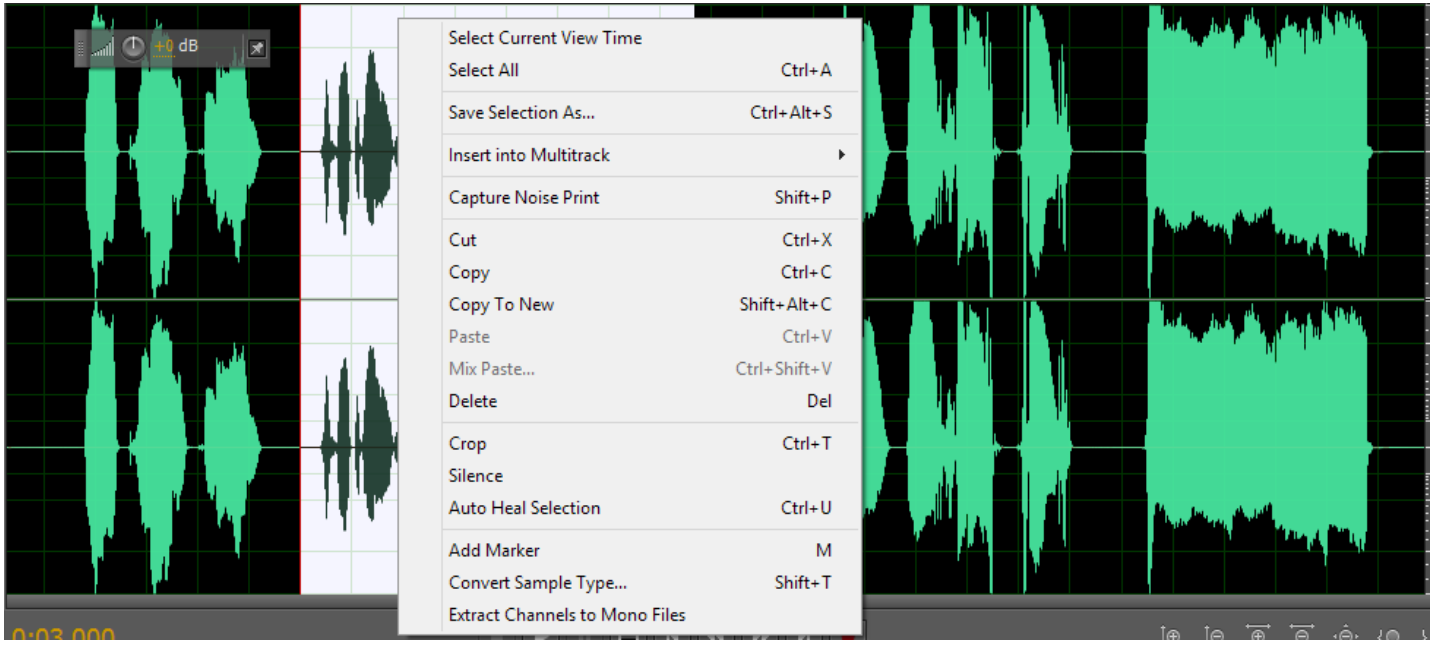
1. Select an audio clip
2. Click on the Waveform



2. Adobe Audition Basics

2.5: Cut, Paste and Delete

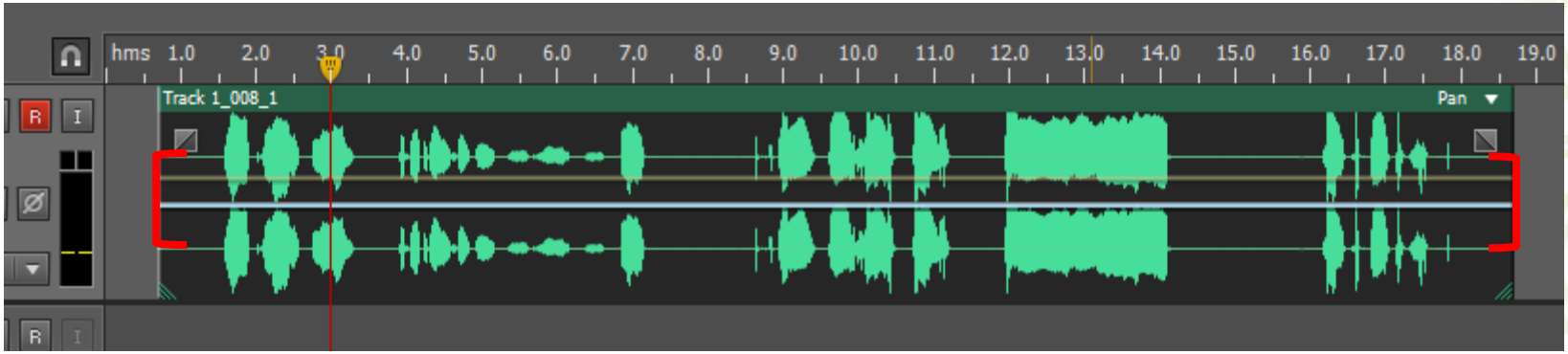
1. Select part of the waveform
2. Right click to cut, delete and so on



2. Adobe Audition Basics

2.6: Compress/stretch clip

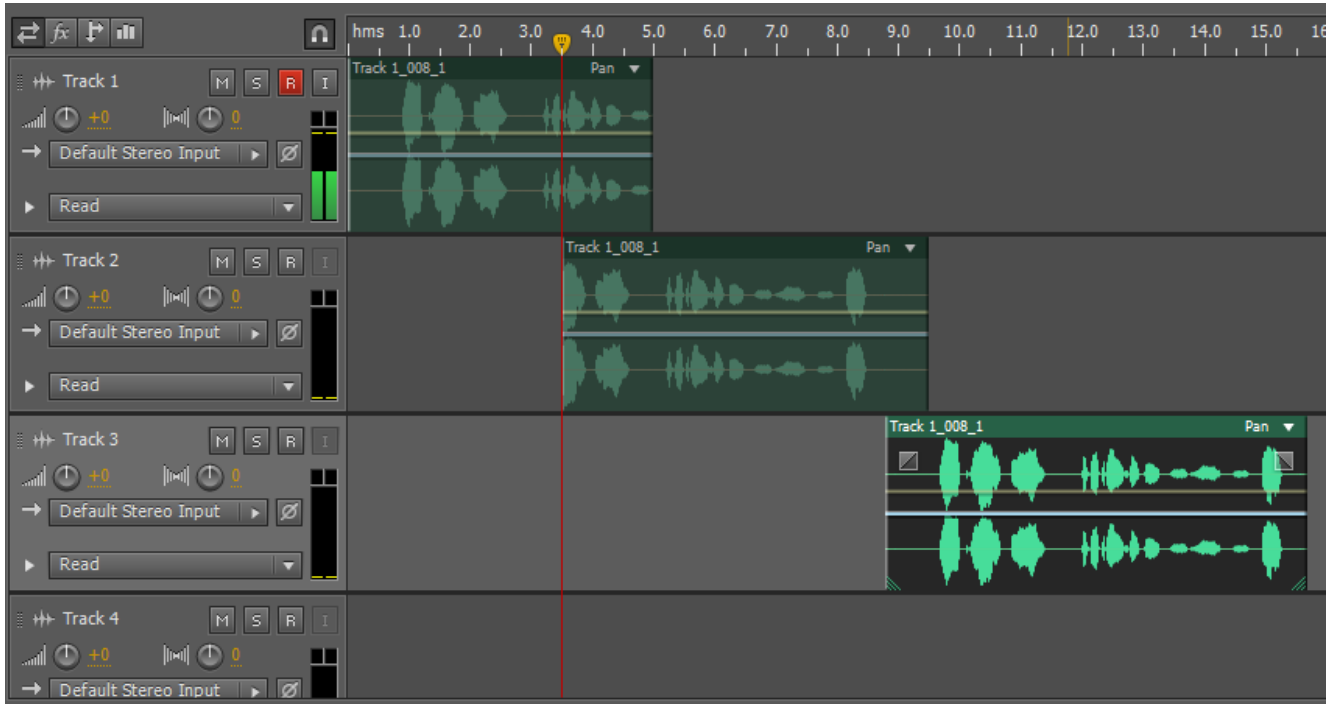
1. Switch to Multitrack view
2. Put mouse at the end at the audio clip
3. Drag left or right



2. Adobe Audition Basics

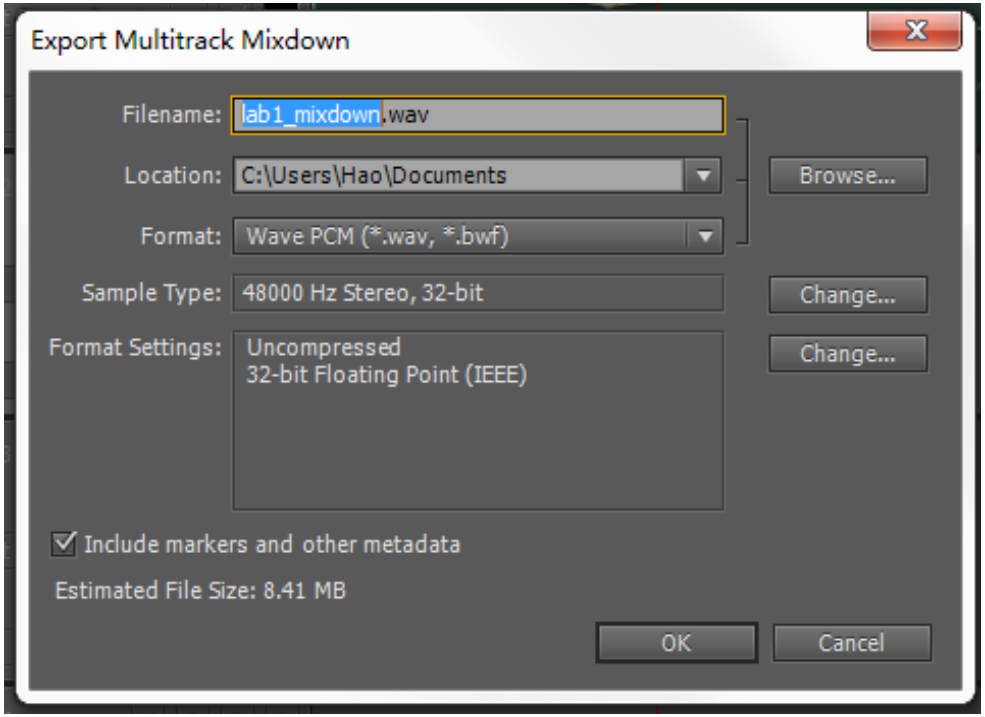
2.7: Multitrack (Superposition)

Put audio clips on multiple tracks



2. Adobe Audition Basics

2.8: Export the audio



File->Export->Multitrack Mixdown->Entire Session…

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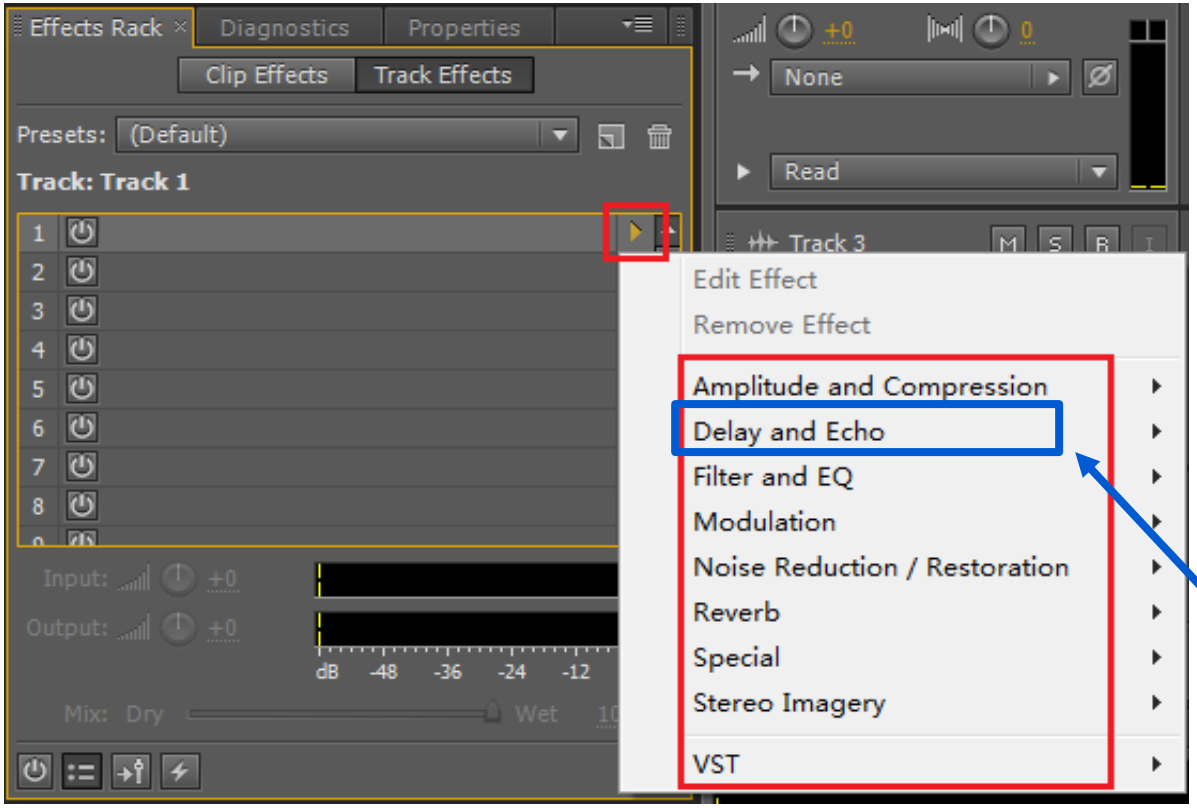
3. Audio Effects and Processes

3.1: Effect Rack

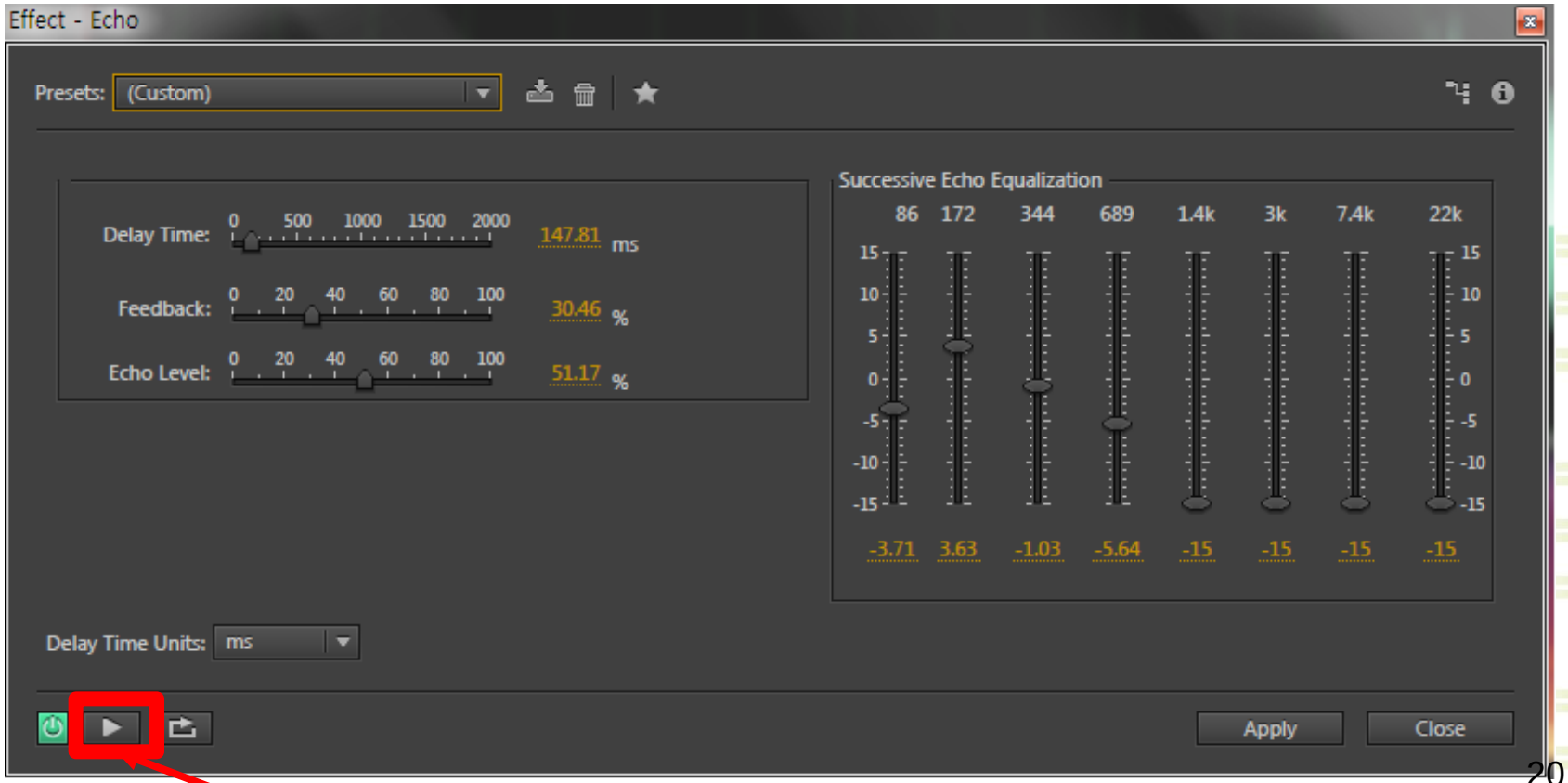


Click the arrow on the Effects Rack, select the effect you would apply to the clip, or the entire track

We learned this in class!

3. Audio Effects and Processes

3.2: Echo (Feedback)



3. Audio Effects and Processes

3.2: Echo (Feedback)

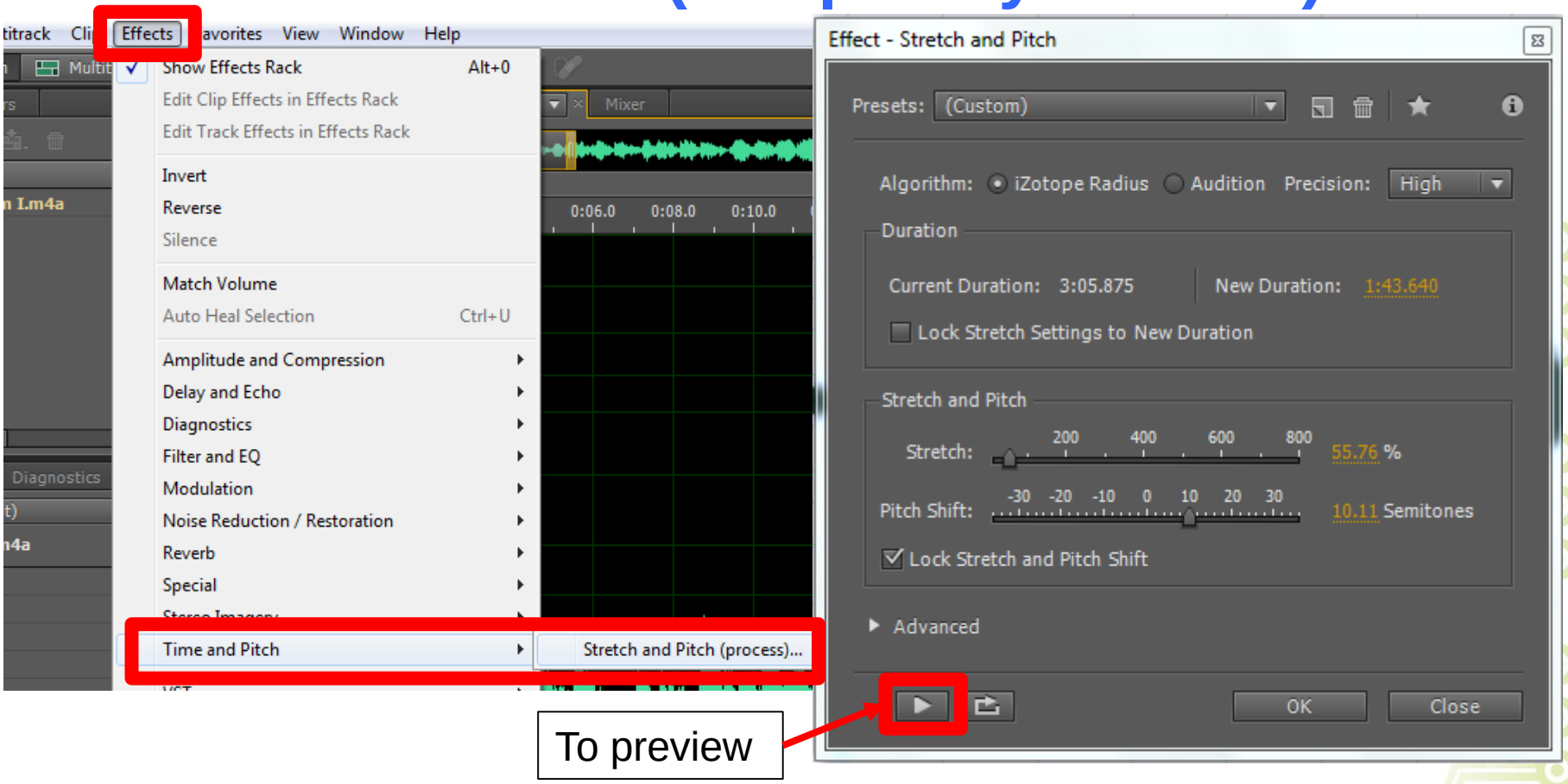
Delay Time: time delay before each echo

Feedback: rate at which volume of echo decreases

Echo level: loudness of echo

3. Audio Effects and Processes

3.3: Stretch/Shrink (Frequency Control)



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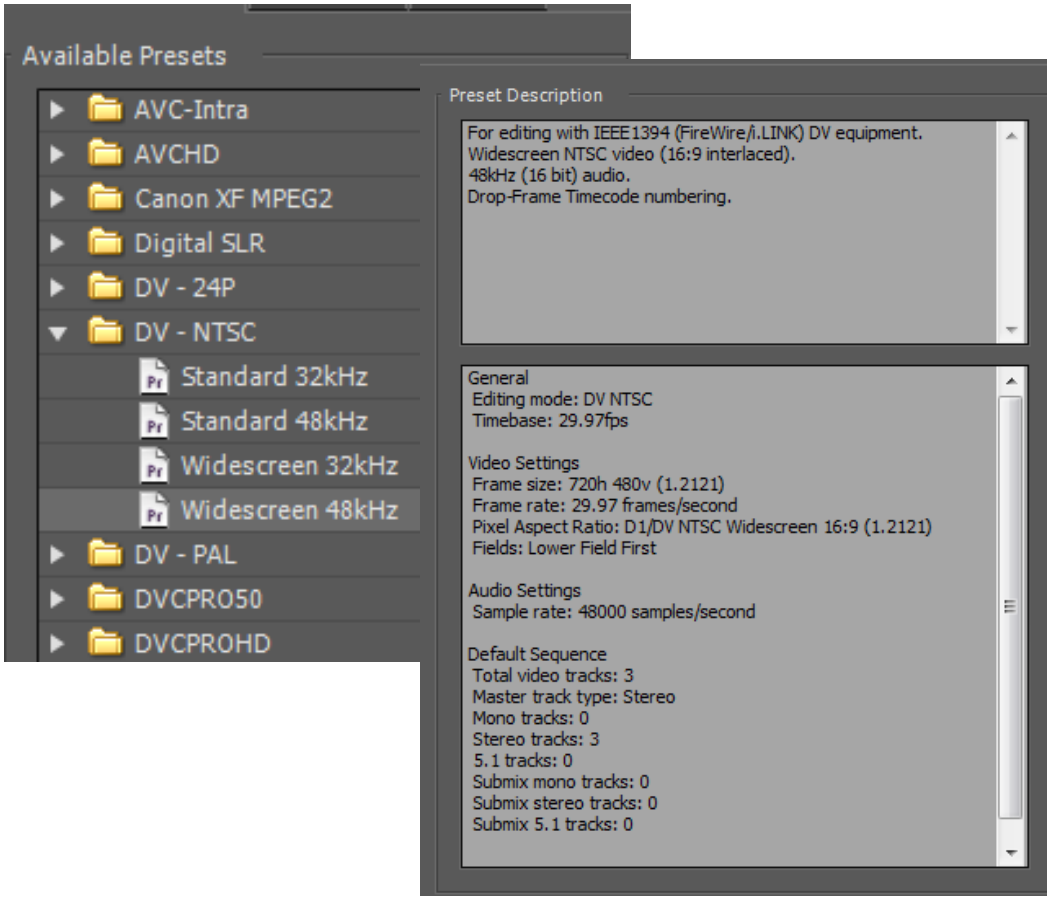
4. Merging Audio and Video

4.1: Create New Project



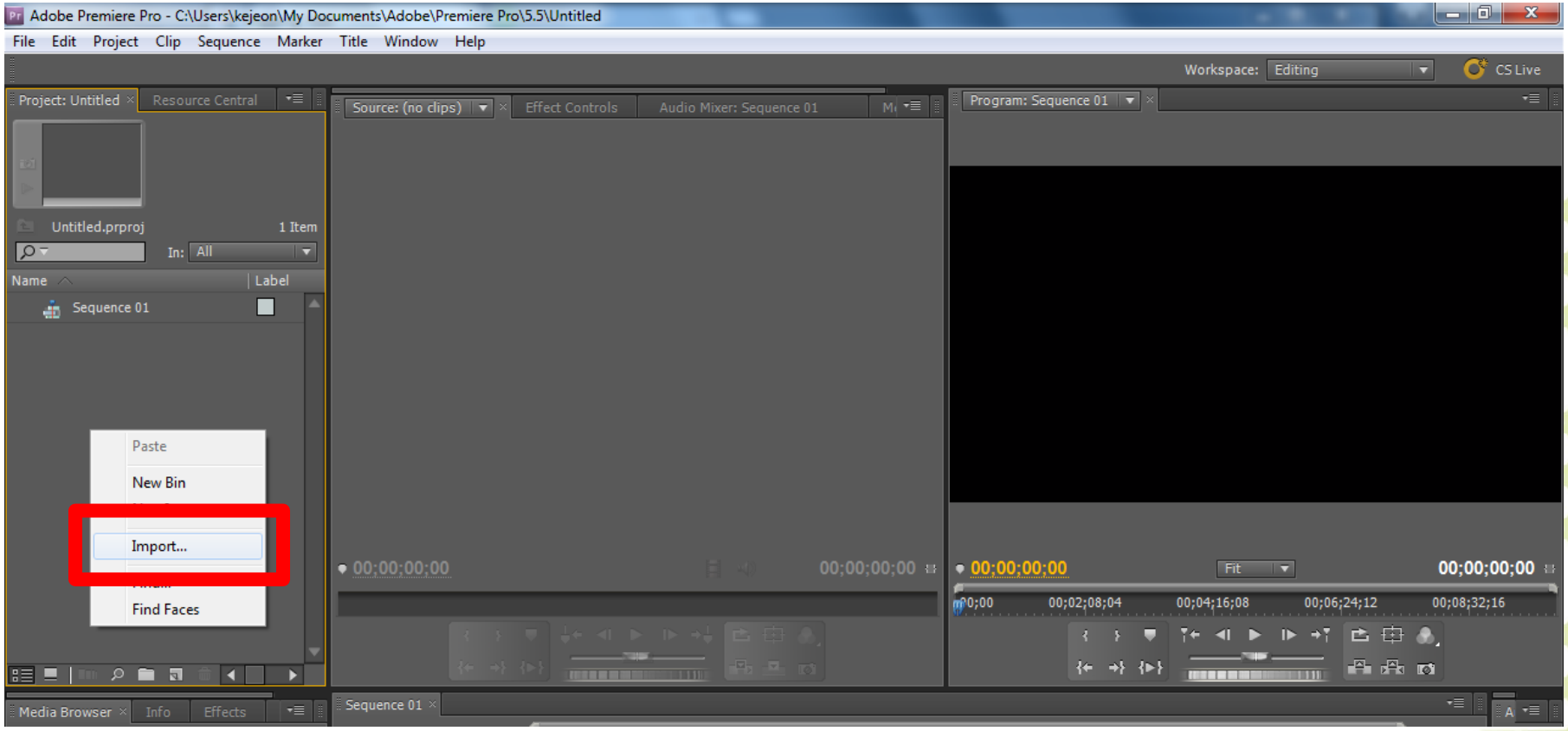
Choose Preset:

DV –NTSC →

Widescreen 48kHz

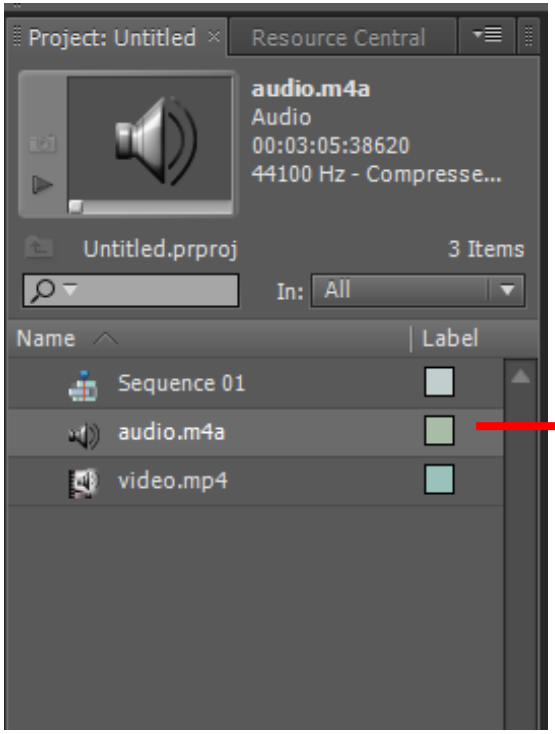
4. Merging Audio and Video

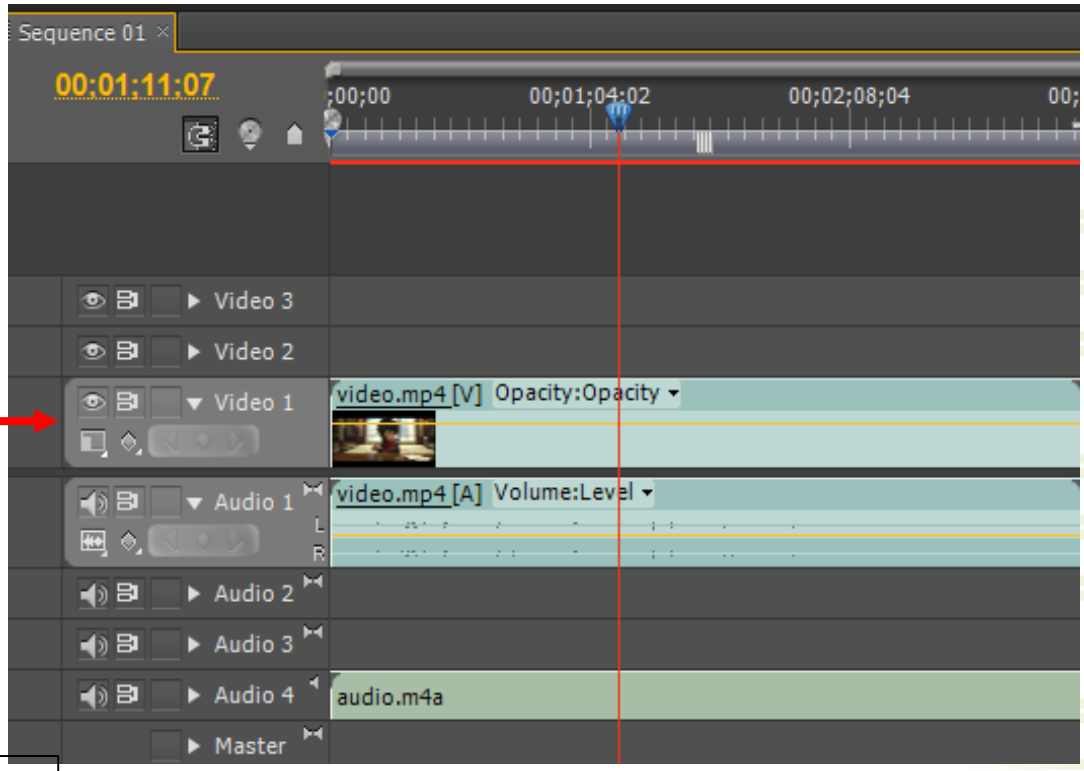
4.2: Import



4. Merging Audio and Video

4.3: Merge Video with the Audio

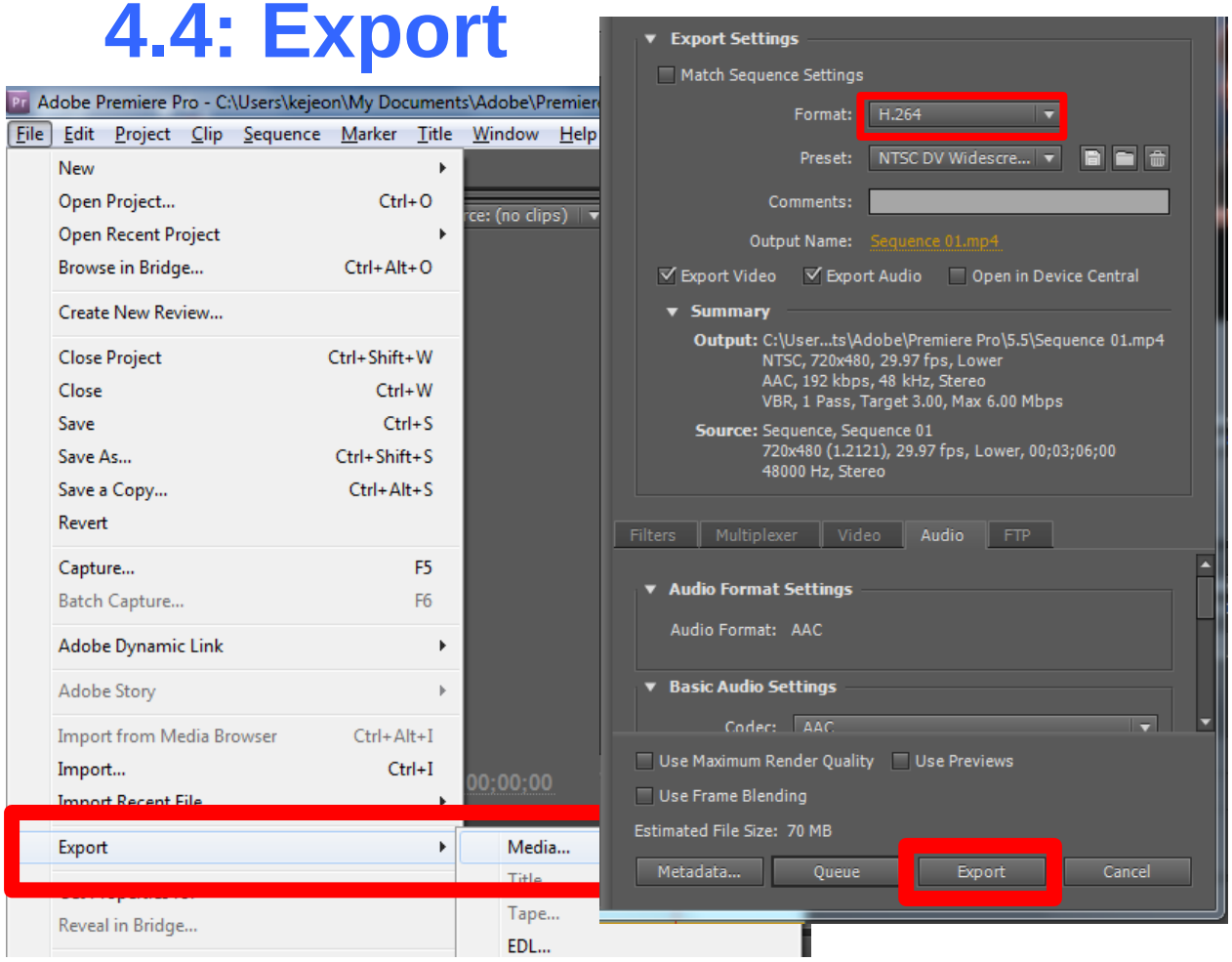




Drag and Drop

4. Merging Audio and Video

4.4: Export



File→
Export→
Media

Export Setting:
Format→ H.264→
Export

Basic Task

- **Self Introduction for your favorite fictional character(15s)**
  - Make a recording of simple self-introduction for any fictional character (from movie, animation, tv series, book, etc…)
  - Add BGM
  - Use basic audio editing skills to blend your recording with BGM
  - Combine the audio w/ image of your character using Premiere Pro
  - Show your work to TA

  Upload your work on Youtube

Please sign the attendance sheet after demo both tasks

Creative Task (max 2 + 1 bonus)

- **Create a narration or a voice over on a muted video, to tell an interesting, unexpected and creative story (Groups of two)**
  - Creative **storyline and acting** (1 mark)
  - Good use of **BGM**, and **effects and processes** (1 mark)
  - Voice overs should be in English or accompanied with subtitles

  - **Bonus:** Make **good** use of sound effects
  - Examples: https://www.youtube.com/watch?v=nGeKSiCQkPw

  Upload the video merged with the audio file on Youtube

20% penalty for submitting after TOMORROW NOON

Uploading Tasks to Youtube

ID: elec1020.2016spring@gmail.com
PW: elec1020issofun

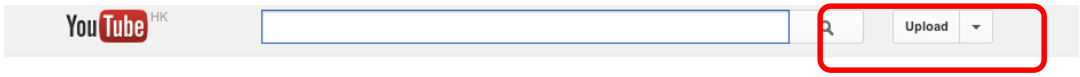
Upload your video with following naming format

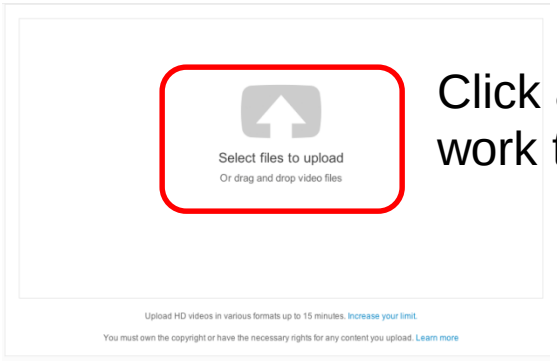
[ELEC1020_16S_LA#] CT/BT Title_of_your_video

Put CT for Creative Task and BT for Basic Task

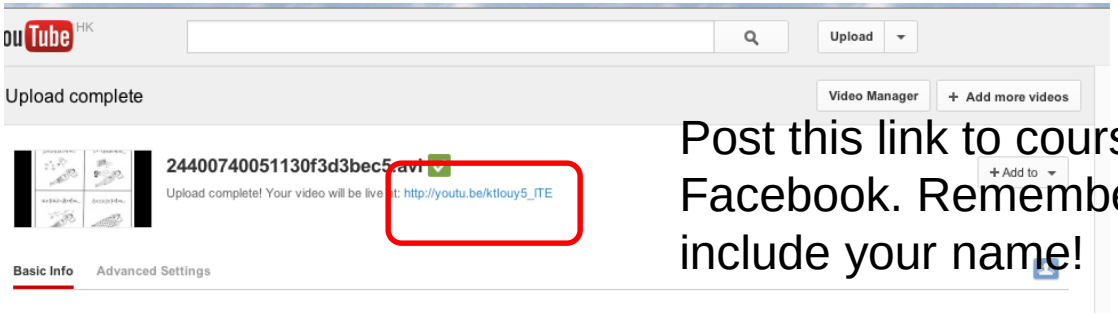
Appendix – Upload to YouTube

Click upload





Click and select your work to start uploading



Post this link to course Facebook. Remember to include your name!

Appendix – Useful links

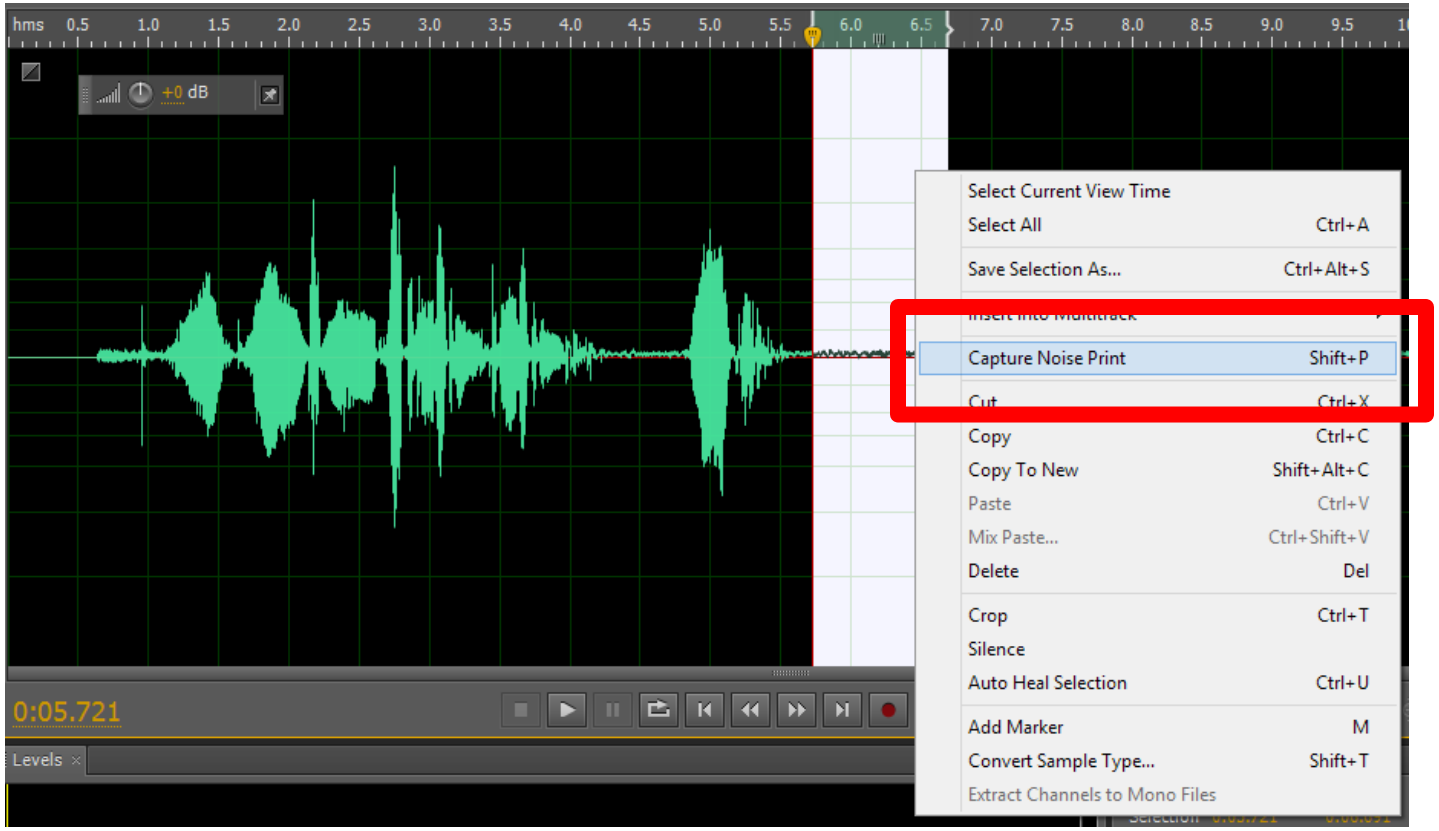
Sources of SFX:

http://www.soundsnap.com/

https://www.youtube.com/audiolibrary/soundeffects

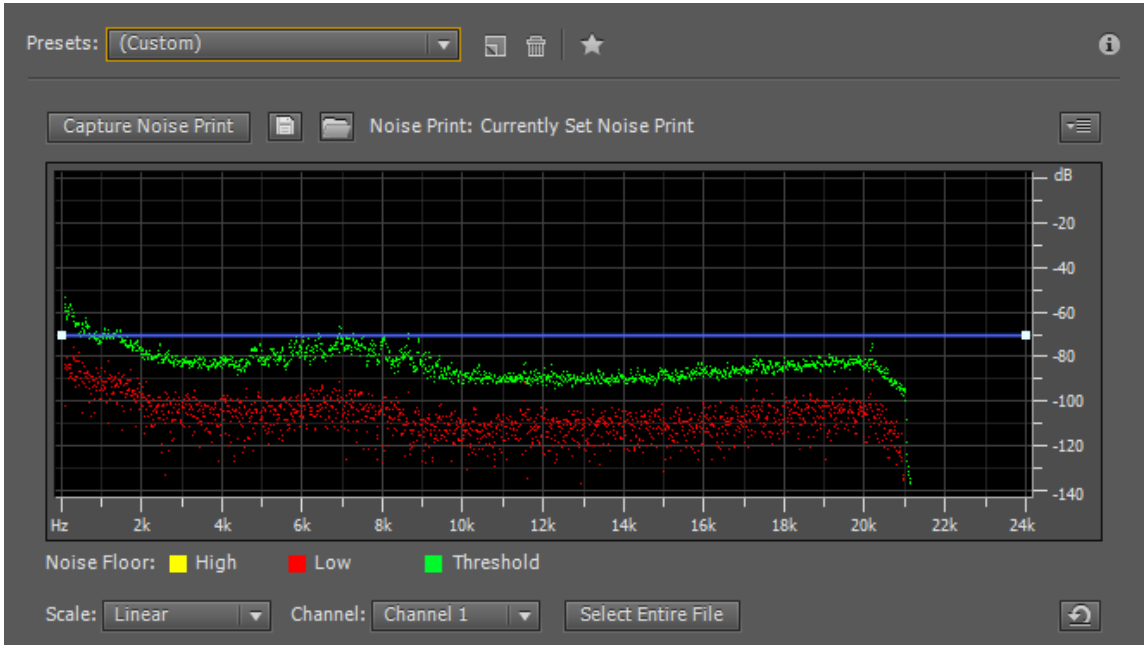
Appendix – Noise Reduction

1: Capture Noise Print



Appendix – Noise Reduction

2: Parameter Configuration



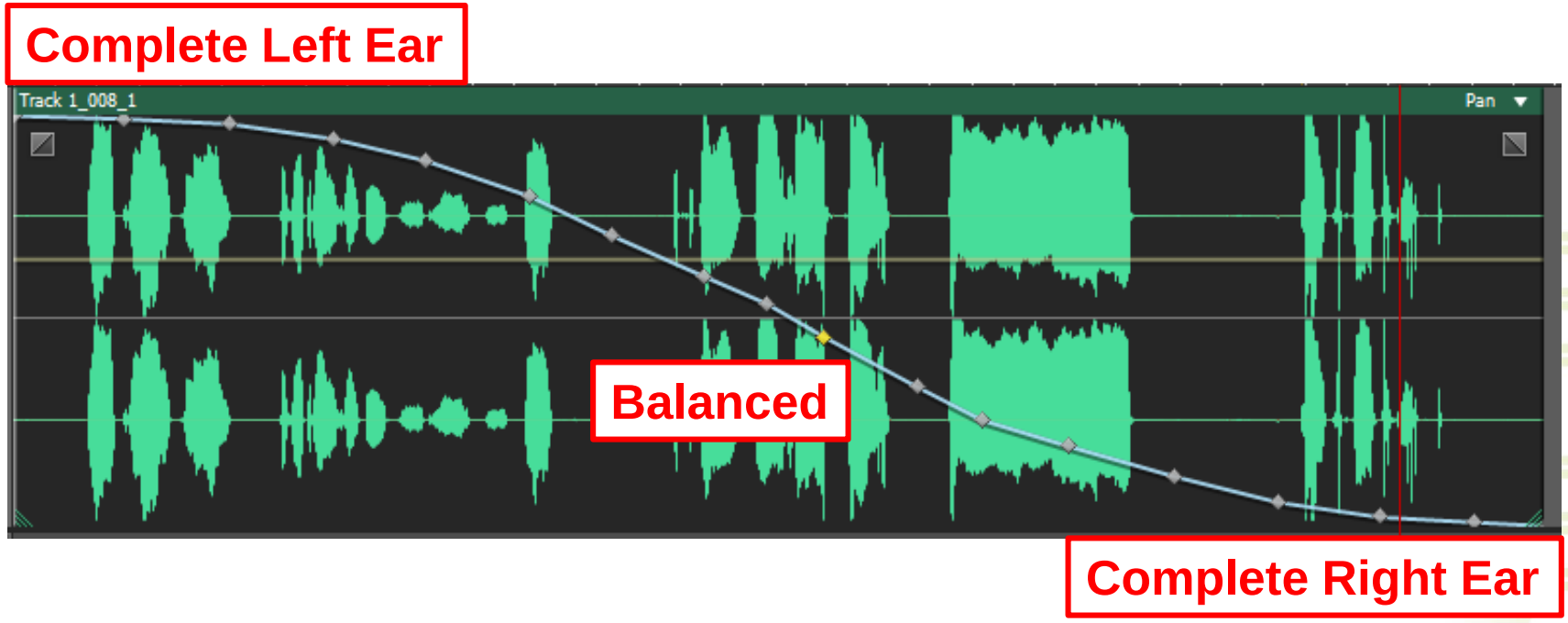
Go from Multitrack view to Waveform view
Effects->Noise Reduction/Restoration->Noise Reduction (process)

Appendix – Stereophonic sound

Stereophonic sound or, more commonly, stereo, is a method of sound reproduction that creates an illusion of directionality and audible perspective (Wikipedia). Sound Waveform superposition (amplitude & frequency)

Example: Dolby 5.1 system (demo)

Appendix – Panning Control



Only simulate amplitude stereo