How to Record Custom Audio Speech Samples for Audiological Testing

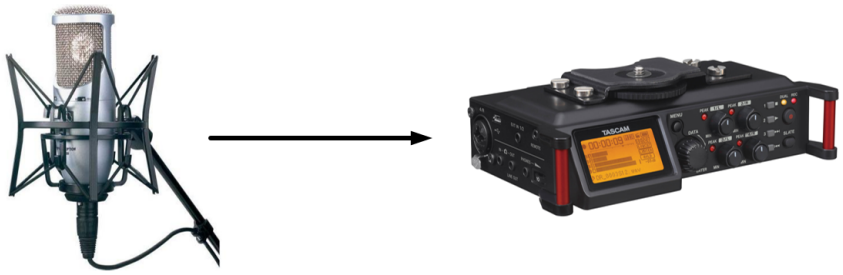
This document addresses several methods of performing audio recording of the human voice for narration, audilogical testing, books on tape, etc. While aimed at researchers in our CSD program, these instructions could be used for recording voice interviews or narration for a film.

The workflow below outlines several methods for recording a series of long audio files followed by editing techniques. Finally, the workflow identifies a method of using markers to batch export a series of audio files from the 1 long master audio file. These individual audio files could be a single word, a sentence, a chapter, etc. Since all editing is performed on the 1 long master audio file, this workflow ensures consistency between all the individual output files.

Sections of this Document

Overview

1. Choose a Recording Method & Record your Audio

Fast & Easy: Use CMA 4.140 Voice Booth blocked URL Listen to Sample	blocked URL This is the fastest method and requires no setup time. Refer Instructions: How to record audio in the CMA 4.140 Radio Room Note that microphones in the voice booth have light (radio DJ-style) compression and EQ applied to them which may not meet your research objectives. Student proctors are available most hours to provide assistance. Room can be reserved online.
Highest Fidelity in any location: Check out mic & recorder blocked URL Listen to Sample	 This method requires more effort since you have to check out and set up equipment but it allows you to record anywhere and at any time.
Highest Fidelity near your computer: Check out USB Mic	**illustration USB mic > Laptop** This method tethers you to your computer for recording, but produces very high fidelity

2. Edit & Export Audio Files

Audio will be recorded as a single (or a very few) long take.

Any necessary processing will be applied uniformly to all samples.

Using markers to identify start & stop points in the long take, audio will be exported as individual files.

Option A: Record your Audio in CMA 4.140 Voice Booth

Skip this section if you are going to check out recording equipment

Refer to Instructions: How to record audio in the CMA 4.140 Radio Room	

When presented options for New Audio File settings, choose: Sample Rate: 44100 Hz Channels: Stereo Bit Depth: 16	
When presented options for export format, choose .WAV.	
Save your files to a fileserver location, USB stick, or portable harddrive.	

Option B: Check out Studio Mic & Field Recorder to Record your Audio

Skip this section if you are going to record in CMA 4.140 Voice Booth.

Refer to Instructions: How to record narration audio using the Tascam DR-70D with phantom-powered AKG studio microphone	

Option C: Check out USB Studio Mic to Record your Audio to your comptuer

Skip this section if you are going to record in CMA 4.140 Voice Booth.

Refer to Instructions: **xxxxx**	

Edit your Audio

This workflow identifies how to edit your audio using Adobe Audition or Audacity. Both of these programs are available on most PC & Mac lab workstations in the Moody College of Communication. If you wish to edit using your own computer, Audacity is the more cost effective solution as it is free, open-source software.

	Adobe Audition

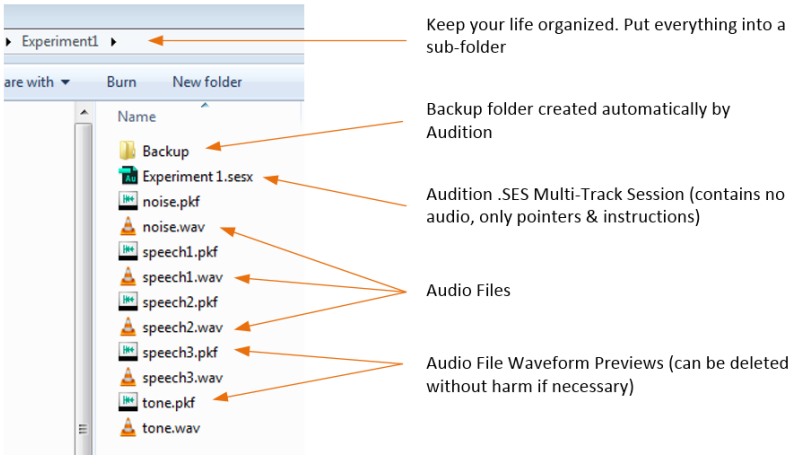
Collect your audio files for your project into 1 folder.

To access the audiology library, navigate to: L:\Classmedia\CSD_Audiology. Copy the files you need from the library to your experiment sub-folder. This will ensure that your experiment is portable and will be playable at offsite locations.

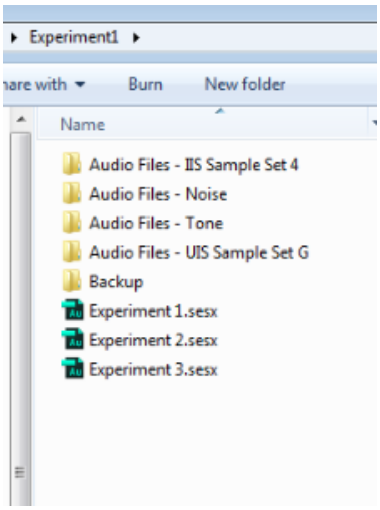
To make your research project easily portable, you need to collect all your digital assets into 1 folder. Create a new sub-folder for your experiment in your research folder on fileserver (refer Using the COMM Shares Server) (if you need a new research folder on fileserver, refer Moody College File Server and Shares).

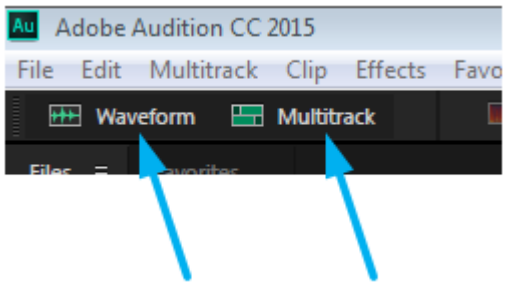
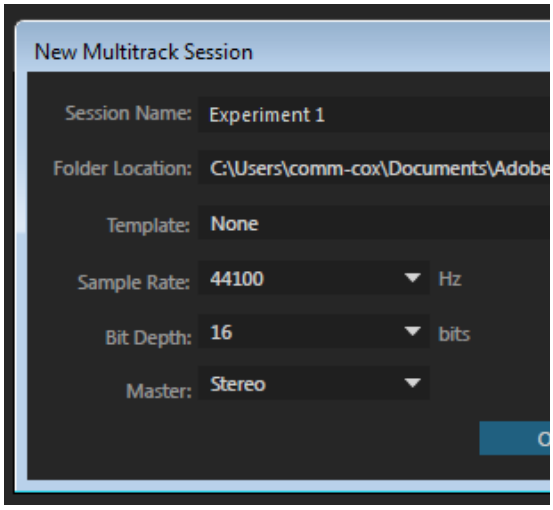
Your new sub-folder will hold a variety of files including the audio files (typically .WAV, .MP3, or .FLAC extension) as well as the Multi-track Session file (.SES or SESX extension). The session file doesn't contain any audio data – only pointers and instructions to the audio files.

Simple Adobe Audition Project Folder



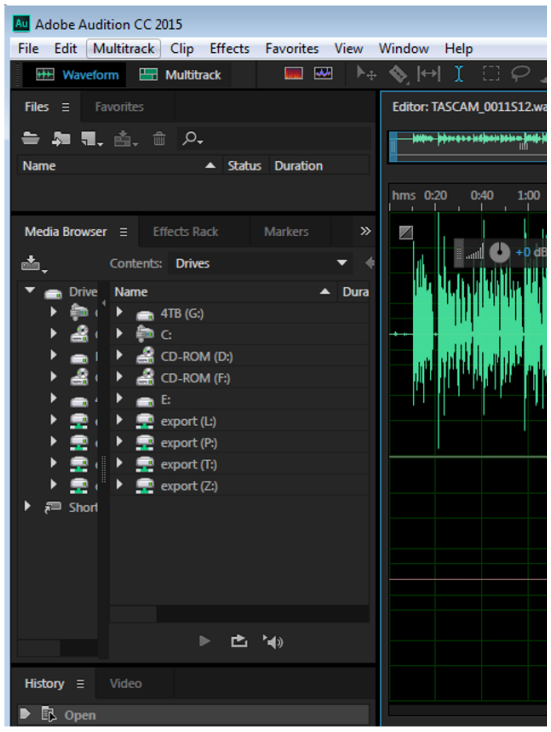
If you have lots of digital assets, feel free to organize using subfolders.



Open your file(s). Navigate to the folder containing your audio files.	Adobe Audition is an audio editing tool which has 2 views: waveform (aka ste When Audition is opened initially, you will see the stereo view. To switch between wafeform and multi-track views, click the appropriate buttc  Switch to the waveform view then click File > Open. Navigate to the folder coı
Save Project	Switch to the Multitrack view. When prompted to make a new Multitrack Session, Type a name, navigate to 44100 Hz, Set Bit Depth to 16 bits, Set Master to Stereo. 
Copy Left Channel to Right Channel	

Switch to the Waveform view.

Toggle off the Right Channel using the Channel Toggle Buttons

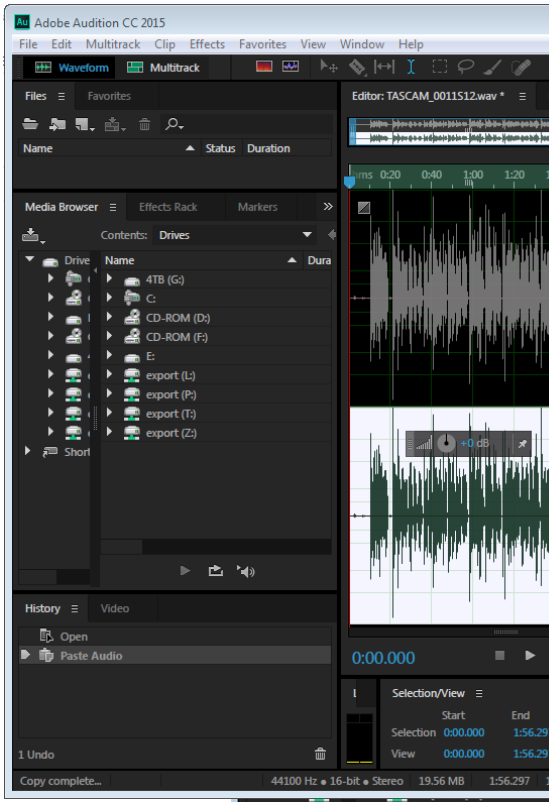


Click Edit > Select > Select All (CTRL-A).

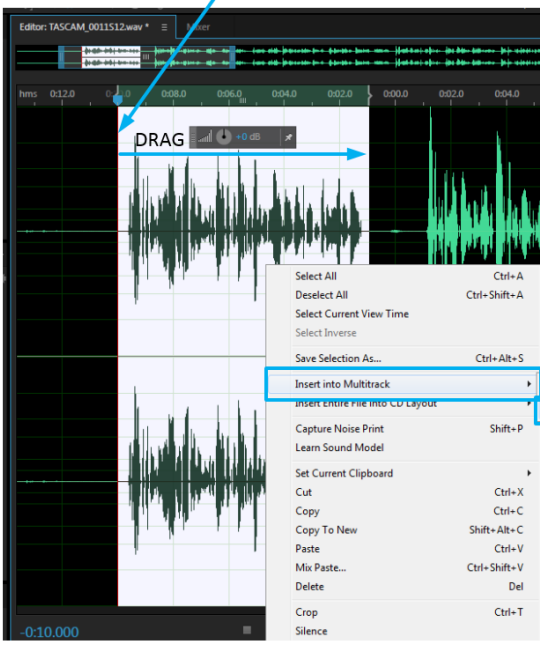
Click Edit > Copy (CTRL-C)

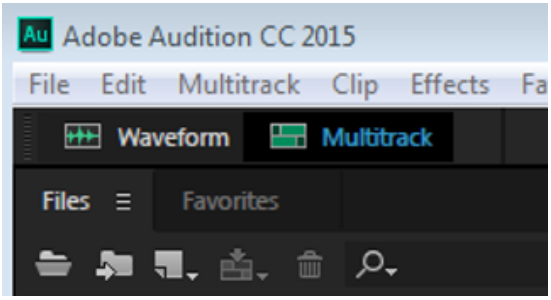
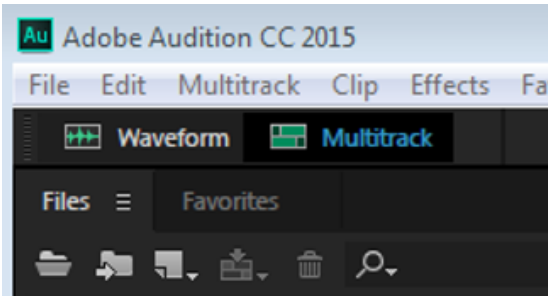
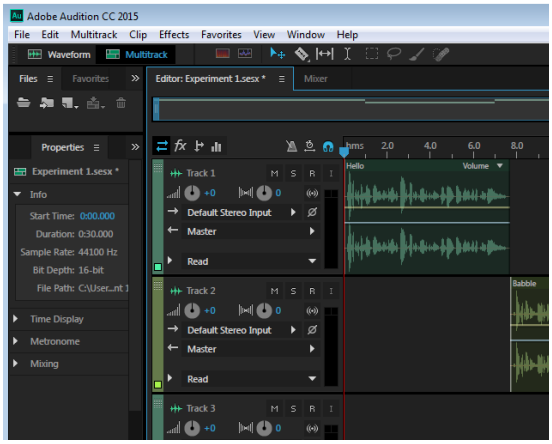
Toggle the Left Channel off and the Right Channel On using the Channel Tog

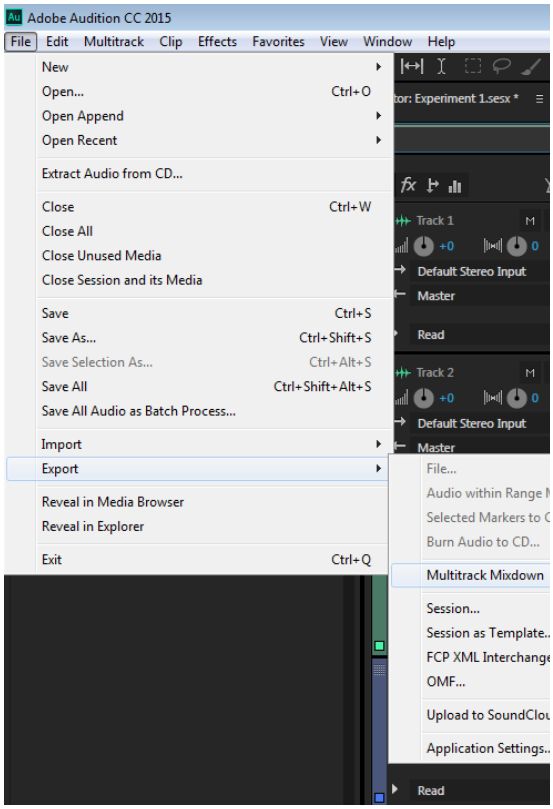
Click Edit > Paste (CTRL-V) to paste the content from the Left Channel to the



Toggle the Left Channel On

Keep Wanted Portions	Switch to the Waveform view. Click & drag to highlight a wanted section of the recording. Right-Click > Inse 1. Click & Drag to highlight a wanted section of the recording  2. Right Click > Multitrack > (y Your view will automatically switch to the multitrack. Click on a clip in the multitrack to select it. Right-Click > Rename to assign a r

Delete unwanted portions	Switch to the multitrack view. Ensure the Move tool is selected.  Position the cursor over the left or right edge of the clip. The edgedragging ic a clip. Pro-Tip: use CTRL-MouseWheel to zoom in and out of the mouse pointer's p
Move portions	Switch to the multitrack view. Ensure the Move tool is selected.  Click on a clip in the multi-track to select it. Left-Click and drag to move it in ti 
Export the Multitrack	Switch to the multitrack view. Click File > Export > Multitrack Mixdown > Entire Session



Type a name for your mixdown.

Set the folder path to your project folder.

Set the format to .WAV.

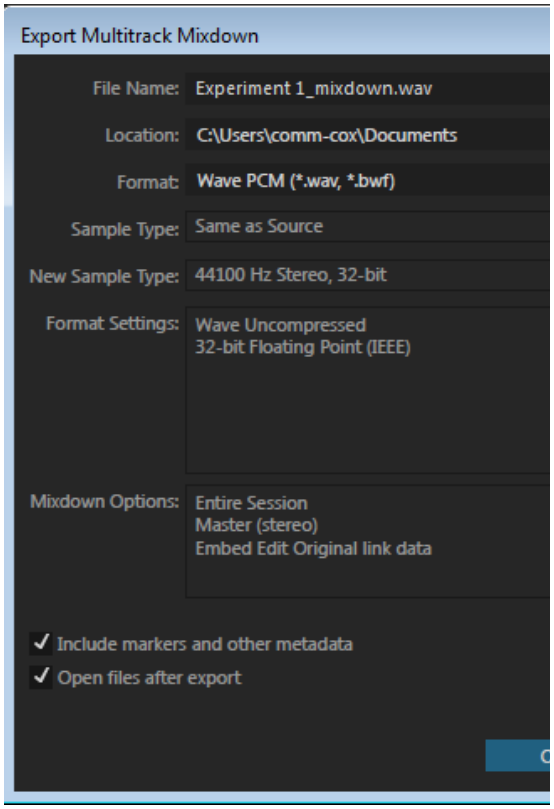
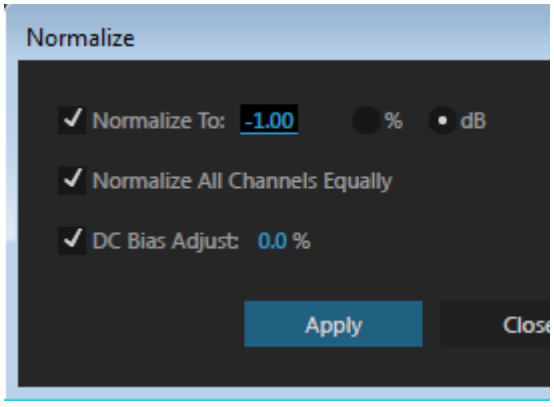
Set the sample type to Same as Source.

Set the Format Settings to Wave Uncompressed, 16-bit Integer

Ensure Include Markers & Other metadata is selected

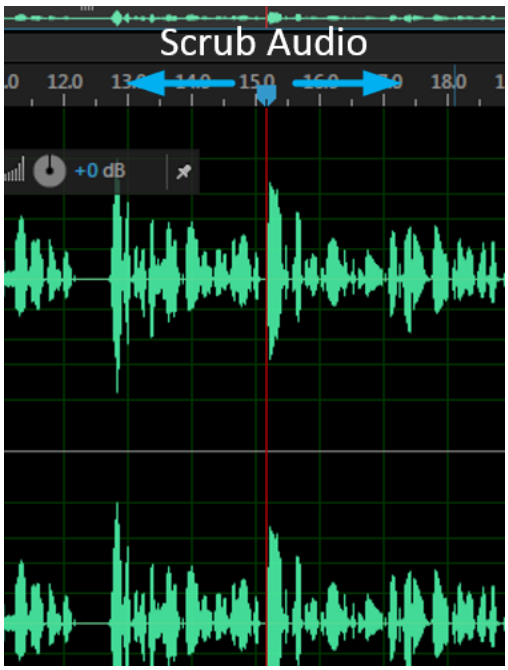
Ensure Open files after export is selected.

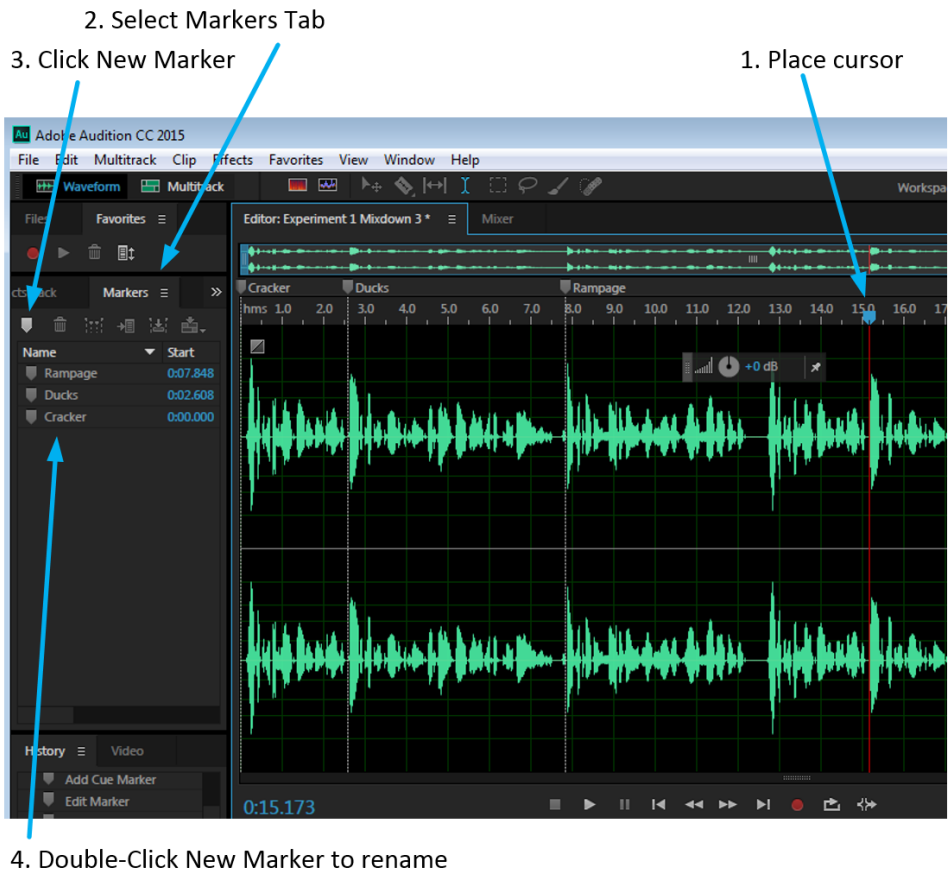
Click OK.

	
Normalize the entire timeline	Switch to the Waveform view. If it isn't open, open the mixdown you just created. Click Edit > Select > Select All (CTRL-A). Click Effects > Amplitude & Compression > Normalize Normalize to -1dB Normalize all channels equally Choose to adjust DC Bias to 0% Click Apply. 
Export/Save the edited master	Click File > Save

Optional: Set Markers & Export to Separate Files

After your long audio file is edited, you may wish to export it as many separate files (for example, 1 file per word or 1 file per sentence).

	Adobe Audition	Audacity
Set Markers	Switch to the waveform view. Open your exported multitrack file. Click to place your cursor at the beginning of a segment which should ultimately be a new file. Pro-Tip: use CTRL-MouseWheel to zoom in and out of the mouse pointer's postion. Pro-Tip: click & drag the Blue indicator at the top of the cursor line to scrub audio back & forth  Select the Markers Tab. Click the New Marker Button  or type "M" to create a marker.	



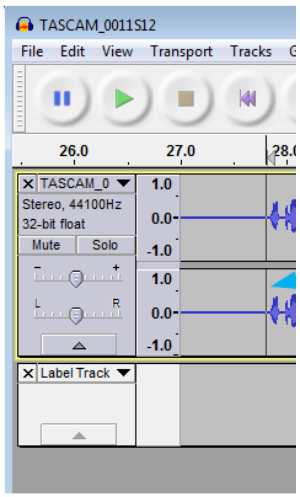
Double-click the newly-created marker in the Markers Tab to rename it.

Pro-Tip: There is no option to number your files on export so if you need the output files to be in a particular order which isn't alphabetical, be sure to number them in the marker names (ex: 1-Circus, 2-Diadem, 3-Apple).

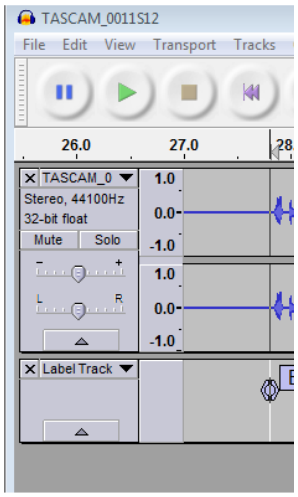
Click Tracks > Add New > Label Track

Click to place your cursor at the beginning

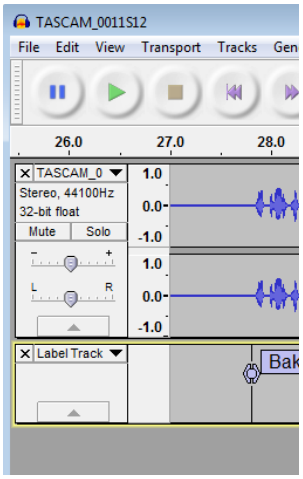
Pro-Tip: use CTRL-MouseWheel to zoom

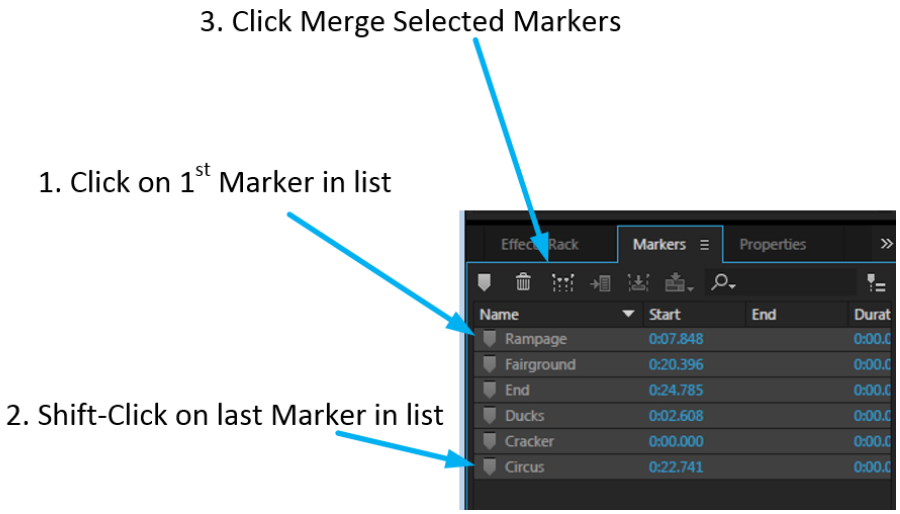
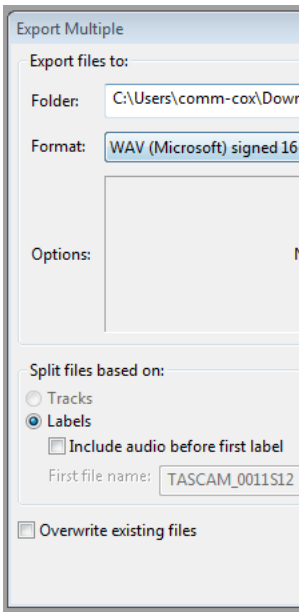


Click Tracks > Add Label at Selection (or

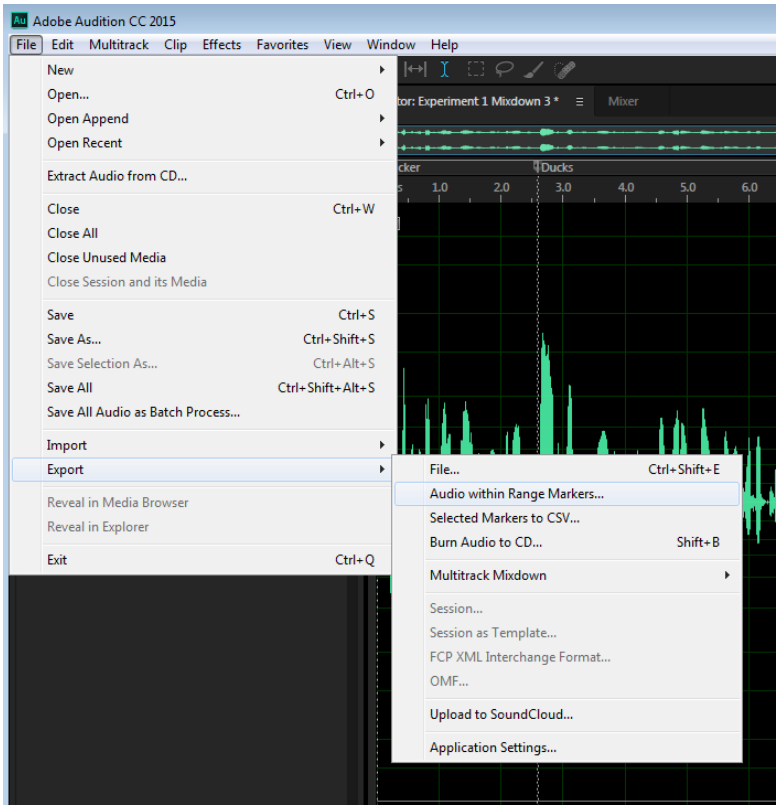


Continue adding Labels for each segment



Set End Marker & Merge Markers	Place a marker at the end of the last section. Name this marker **END**. Click on the first marker in the Markers Tab. Shift-Click on the last marker in the Markers Tab. Then click the "Merge Selected Markers" button  	
Export Files		Once all the labels are added, click File > Pro-Tip: create a new folder inside your pr Choose to split files based on Labels. If yo label. Choose to name files based upon L Pro-Tip: If the files need to stay in order at Click Export. 

Click File > Export > Audio Within Range Markers...



Choose to use marker names in filenames.

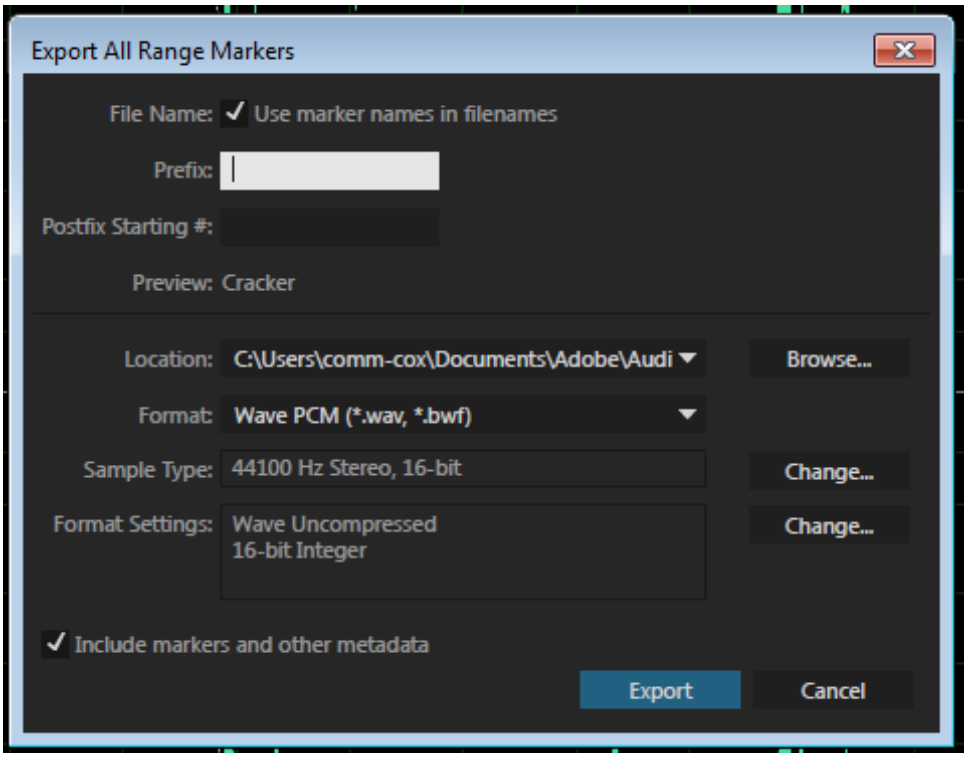
Set the folder path to your project folder.

Set the format to .WAV.

Set the sample type to 44100 Hz, Stereo, 16-bit.

Set the Format Settings to Wave Uncompressed, 16-bit Integer

Click Export.



reviewed 10/9/17 - Cox