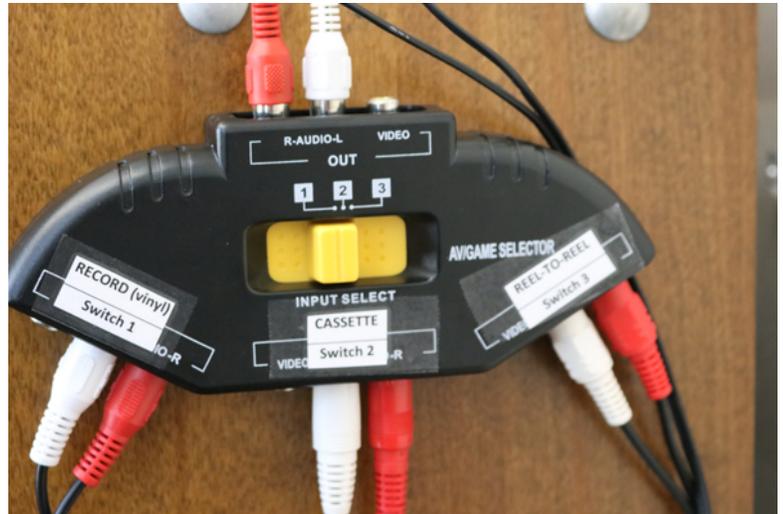


Digitizing Audio

For Records, Reel-to-Reel, Audio Cassettes & Microcassettes

Go to the side right side of the wooden cabinet and move the yellow switch to the number that corresponds with your playback device.

RECORD PLAYER (vinyl)	Switch 1
AUDIO CASSETTE	Switch 2
REEL-TO-REEL TAPE	Switch 3



For Microcassette Tapes

Do not use the switch above, but pull out the green headphone jack at the back of the computer and plug it into the MONIT (8Ω) input on the top of the microcassette player.



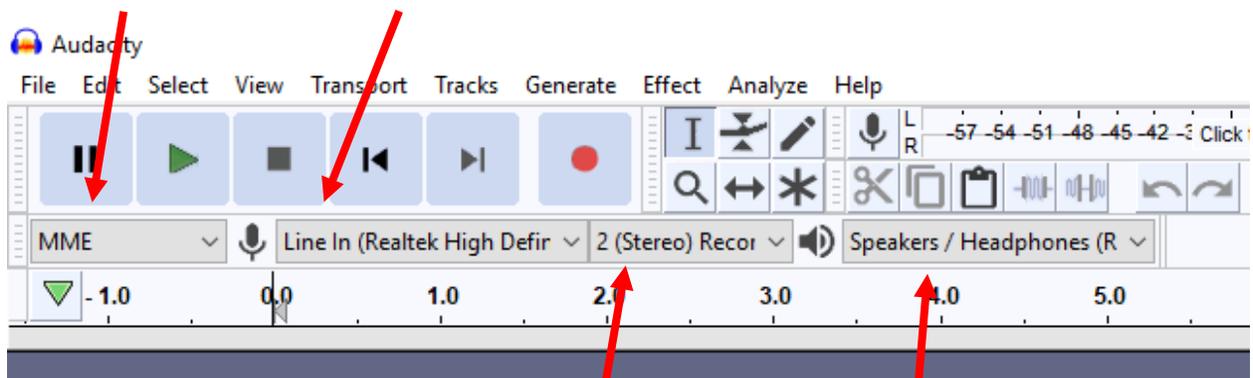
Digitizing your Audio with Audacity

The library uses a free program called "Audacity" to digitize audio. It is very versatile and can be used to convert audio to many different formats. The Audacity program also works on Windows, Mac OS and Linux operating systems, so you can use it on your own computer away from the library at no cost.

Once you have set up the hardware for your audio format, put your tape/record into the playback device and sit down at the computer, plug in your storage device (flash drive, external hard drive, SD card) and follow these instructions for converting your audio to digital.

Getting Audacity Ready

1. Open the Audacity software by clicking on the Audacity icon on the desktop
2. Once the program opens, check in the upper left corner to make sure these four recording settings are set up properly. If not, change to the labels below by clicking on the drop down arrow at the right side of the selection box and choosing the correct setting.



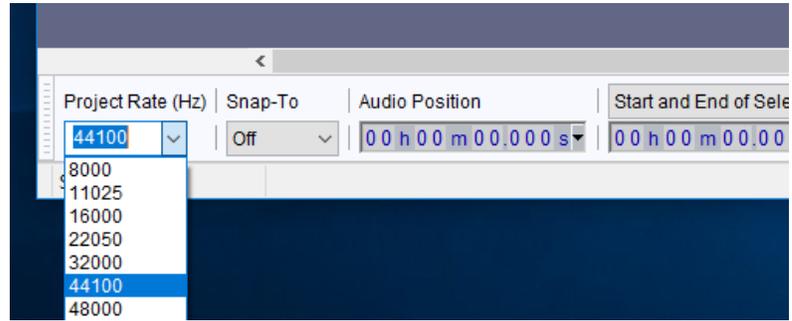
MME

Line In (Realtek High Definition)

2 (Stereo) Recording

Speakers/Headphones (Realtek)

- The next setting you want to double check is the **Project Rate (Hz)** setting in the bottom left corner of the Audacity screen. This should be set at **44100**.

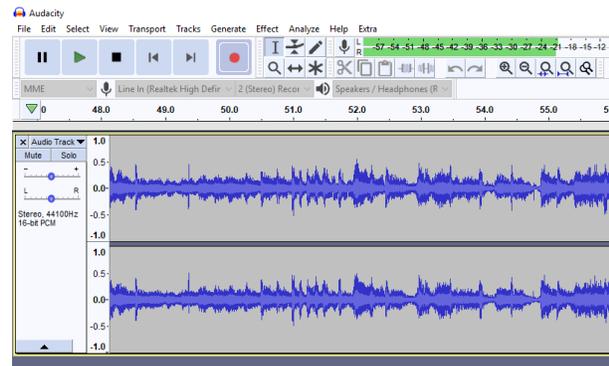


Setting Audio Levels

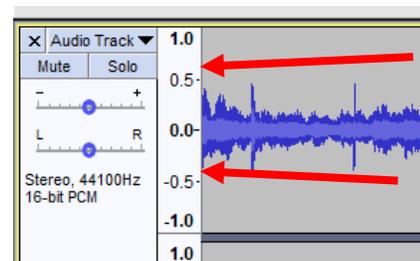
- Before you start making your actual recording, you need to make sure the audio levels are set correctly for your source audio so you get a good recording without distortion.

- Start the audio playing on your playback device. You will not be able to hear the audio in the headphones yet.

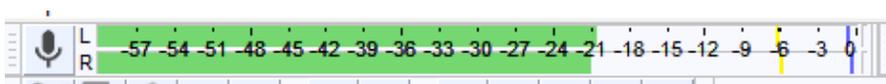
- Click on the red **Record** button (this will not be the recording you'll be using for the final product - we will discard this test recording after the levels are set). You should hear your audio in the headphones and see the monitoring meters in motion.



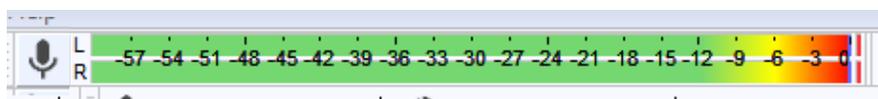
- To check the recording levels, look at the blue lines in the middle of the two tracks should be **between 0.5 and -0.5** at the loudest parts of the audio (keeping them roughly in the middle of the area). If it is louder, the recording will distort.



- Similarly, the microphone input levels at the top of the screen should stay in the green with little or no pushing into the yellow and red levels to avoid distortion.



Good Sound Level



Distorted Sound

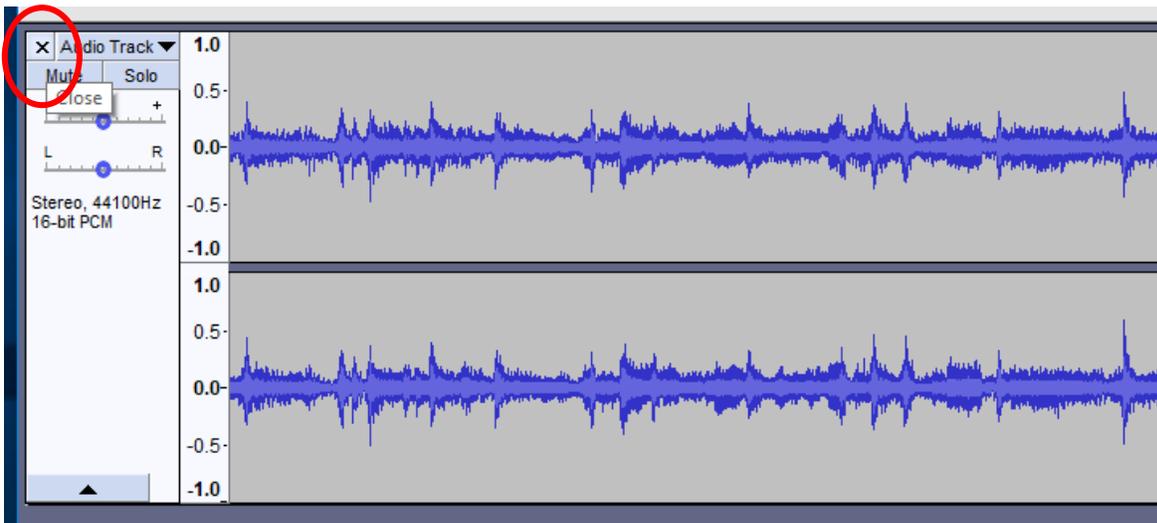
- If you are seeing yellow and red adjust the recording level from within the

Audacity program by adjusting the **Recording Volume** slider (left, below). The **Playback Volume** slider (right, below) doesn't change the volume of the recording, just the volume level in your headphones. If recording levels are too low even when the Recording Volume is all the way on the right side, you may need to turn up the output level of your playback device.



Recording volume (microphone icon)
Playback volume (speaker icon)

After you have set the audio levels set to your satisfaction, click on the **Stop** controller in the upper left of the Audacity window to stop the recording,

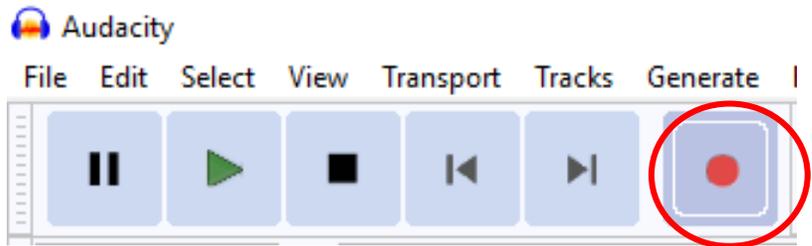


Click on the **"X"** in the upper left corner of your track to delete the test Audio Track.

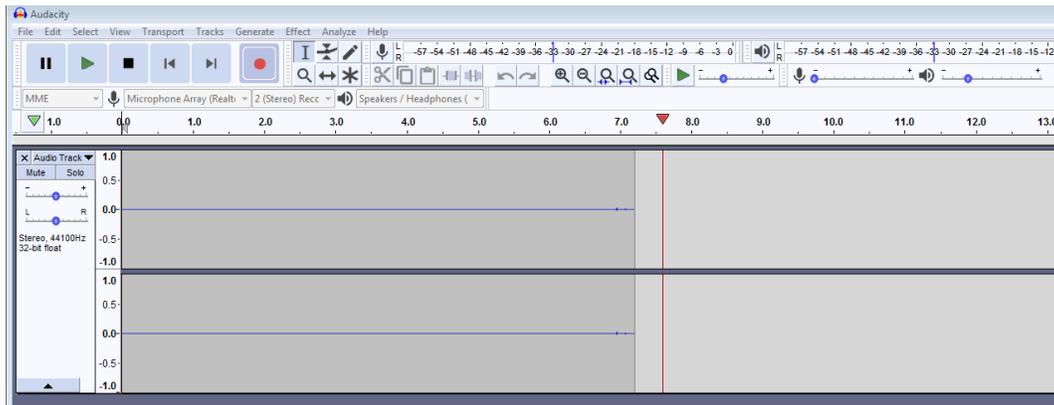
Now you are ready to make your actual recording.

Recording with Audacity

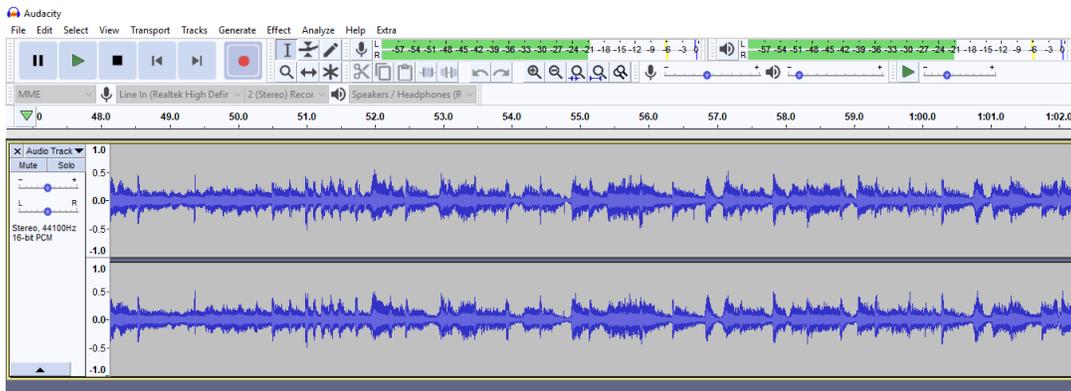
1. Get your tape/record ready to play back, but don't press play on your playback device yet.
2. Click on the red **Record** button to start recording BEFORE you start playback of your audio.



3. At this point the audio lines will be flat



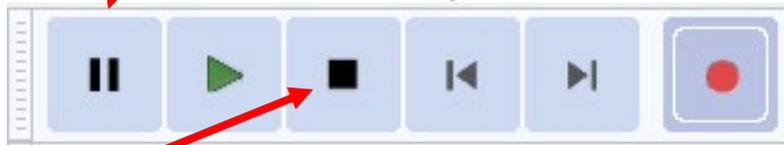
4. Press play on your audio playback device. You should be able to see the sound level represented both tracks with a blue sound wave and hear the recording in the headphones.



5. Wait until your audio source is finished playing, and then click on the **Stop** button (the black square) to stop the recording.

Pausing and Stopping the Recording

If you want to temporarily stop recording your audio, click on the **Pause** button. To resume your recording, click on the **Pause** button a second time. Repeat as necessary until you are finished with your recording.



Then hit the **Stop** button to finish recording the track. You can resume recording after you click on the **Stop** button by clicking on the record button again. You will see a black line on your Audio Track that will note the places in the recording where you used the **Stop** button.

In many cases, the easiest way to work with audio is to record your entire source and do the editing once you are finished rather than trying to time your recording to remove silences or any unneeded parts of the audio.

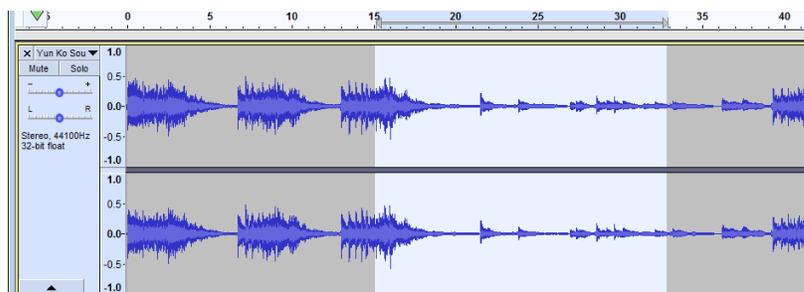
Making Basic Edits Using Audacity

Once you have your audio recorded, you may want to edit it by deleting sections or moving sections around to a new location within the file.

Deleting a section of audio

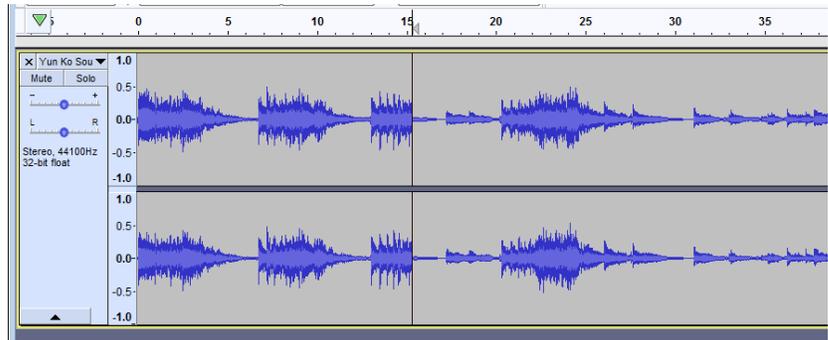
1. Find the section you want to edit by using the **Play** button to listen to the recording and note where this section occurs.
2. Find the beginning of the section you want to delete/move and do a left mouse click on it, hold down the left button on the mouse and move it right until you reach the end of the section you want to edit. You should see the section you selected highlighted in white.
3. To delete this section, use the **Delete** key on your computer keyboard. To

remove a section in order to place it elsewhere, use the keyboard shortcut **Ctrl + X**, move your cursor to the area where you want



to insert it
and use the
keyboard
shortcut **Ctrl**
+ V to
paste/insert
it.

4. If you change
your mind, use
the keyboard
shortcut **Ctrl + Z** to restore the cut.

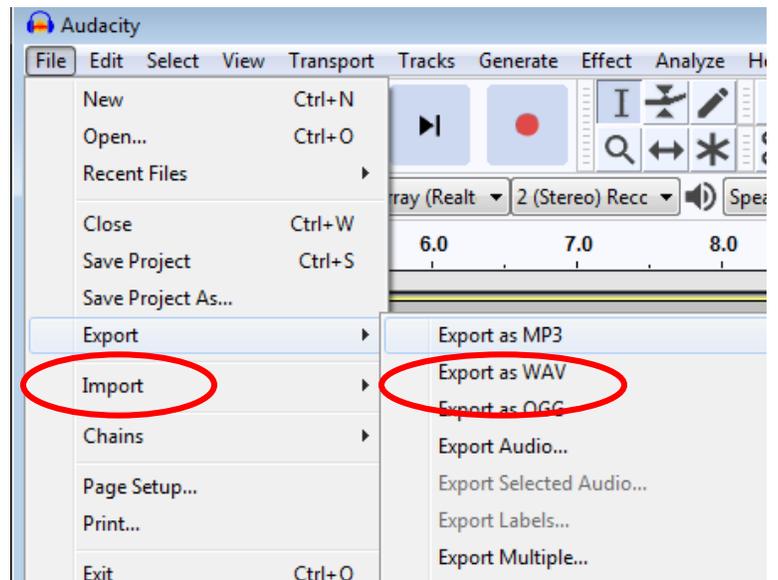


Saving your Recording

When you have finished recording, you have several options for saving the audio file onto your flash drive, external hard drive, SD card or burn it to a CD. Which file type(s) you select depends on what your intention is for the final use of your digitized version of your audio.

For Creating MP3 files (for iPod/smartphone playback)

To export the audio file to an iPod or smart phone as a compressed MP3 file, choose **File** on the top menu, then **Export** and choose **Export as MP3**.



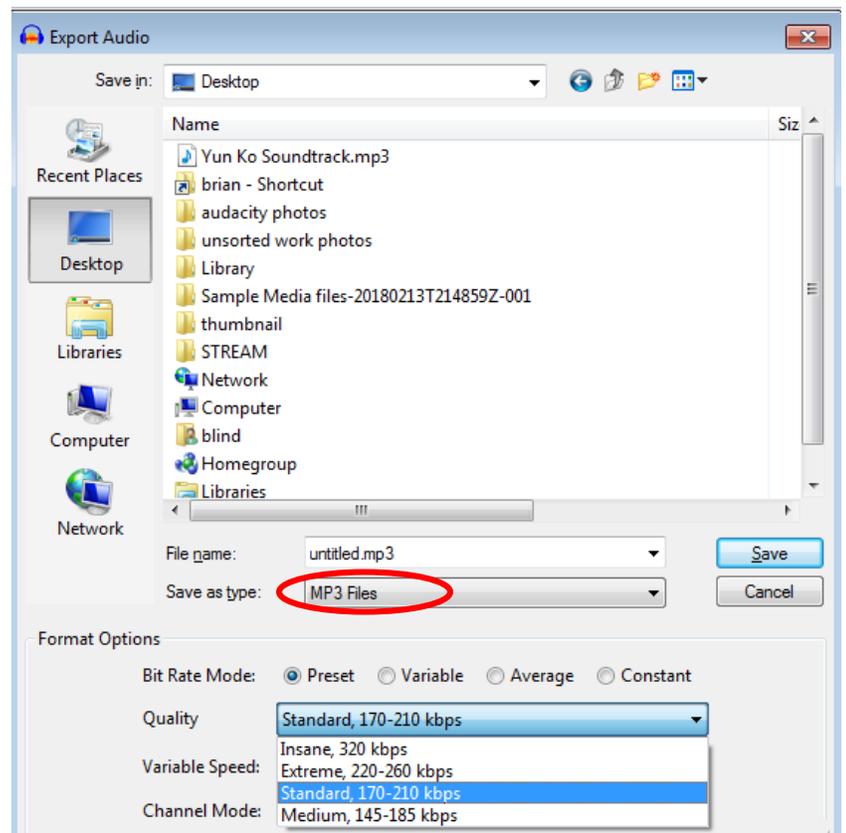
Next, choose the location to save the file in the **Export Audio** window. Your file will be labeled "untitled.mp3". This is a good time to change the file name to something more meaningful (like "Janet's High School Graduation 2018 speech", for example)

You can choose the quality of your new digital file - the file will be compressed more the smaller rate you choose, but it will take less space, too.

Leave the **Bit Rate Mode** at **Preset**

For **Quality**, most people are happy with **Standard, 170-210 kbps**, but you can choose any you like from the list.

Then click on **Save**



Editing Metadata Tags

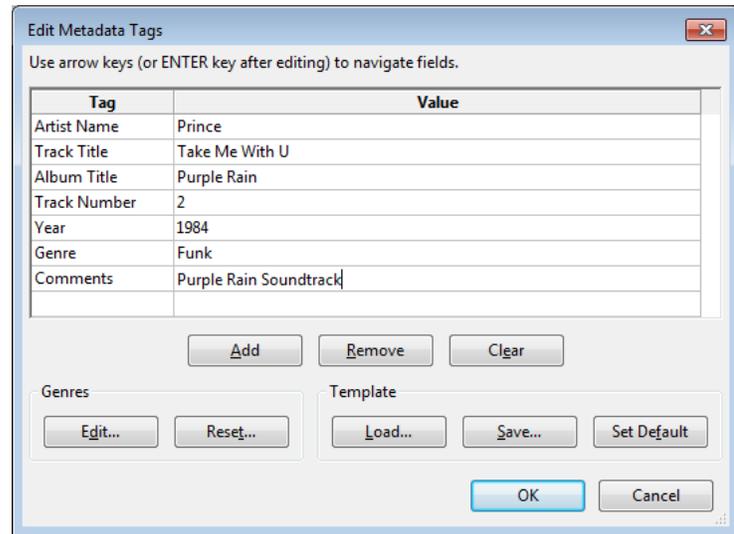
Once you click **Save**, you will be able to enter more information about your file. This will help the song title to show up on your MP3 player/iPod.

It's usually a good idea to fill this in as completely as you can for ease of identifying the file later, however you can do this at a later time using other programs (such as iTunes), too.

Once you have filled in the information you want to add, click on **OK**

Depending on how large your file is, it may take a few seconds or several minutes before the file is saved.

When you are finished, check to make sure to check and see if the file has been saved in the location you were expecting to find it.

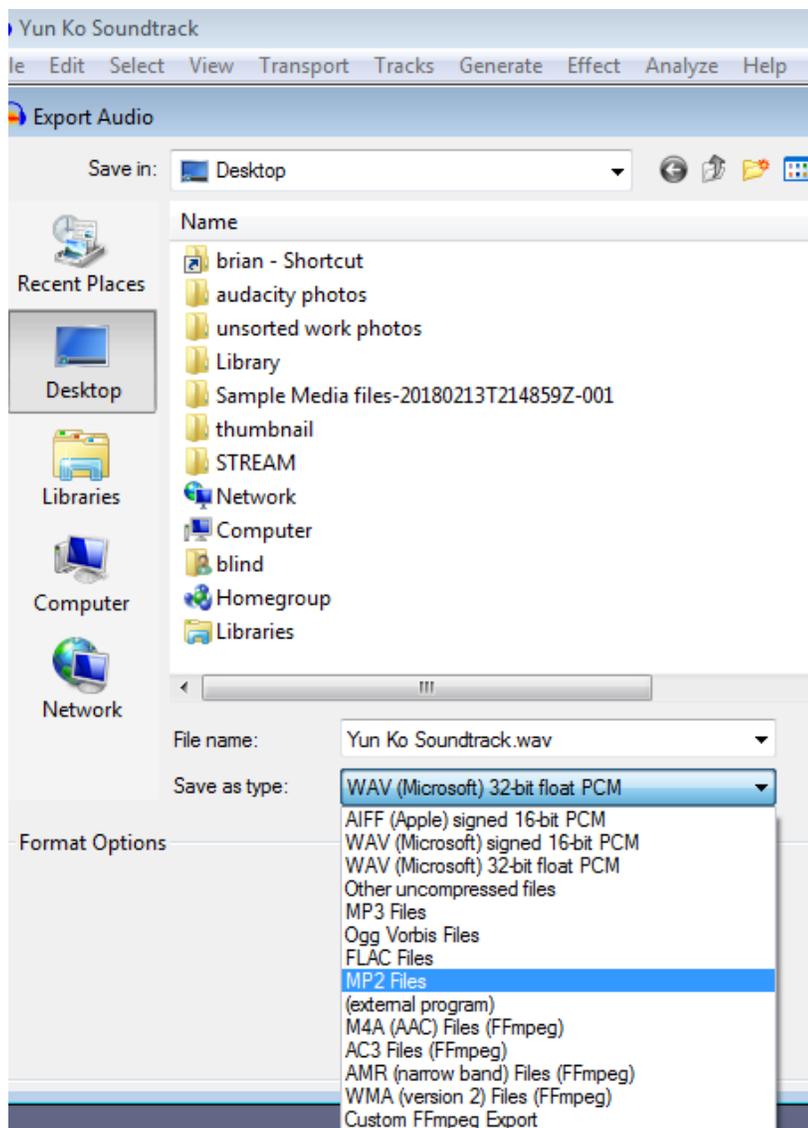


Saving Audio for Archival Purposes

If your main goal is to save the audio for archival purposes, the Library of Congress suggests saving it in an uncompressed file format such as **WAV**, **AIFF**, **WMA lossless**, or **FLAC**.

See more information about different file types in this publication:

<https://www.clir.org/wp->



[content/uploads/sites/6/pub164.pdf](https://www.clir.org/wp-content/uploads/sites/6/pub164.pdf)

The process for saving as one of these file types is the same as saving as an MP3 (except you pick a different file format)

Keep in mind that your audio file sizes will be bigger using a lossless file type, but the sound quality will be better.

For more information about Audacity visit:
<https://www.audacityteam.org/help/>