

## Macintosh: Using Audacity to Record Any Audio Your Computer Is Playing...

There are times when you'd like to be able to record the audio coming out of your Macintosh and save it. You may need to add a piece of streaming audio to a PowerPoint presentation. Or you may be doing one of a hundred other audio projects. The good news is that you can do this inexpensively and easily. This article will walk you through the process. This article assumes you are using Macintosh OS X. However, you could do this in OS 9, too.

First, if you haven't already, you'll need to download the free Audacity audio editor...

Link: <http://audacity.sourceforge.net>

Be sure also to download the Lame.lib file so you can export your audio as MP3 from Audacity.

Link: <http://spaghetticode.org/lame/LameLib-Carbon-3.91.sit>

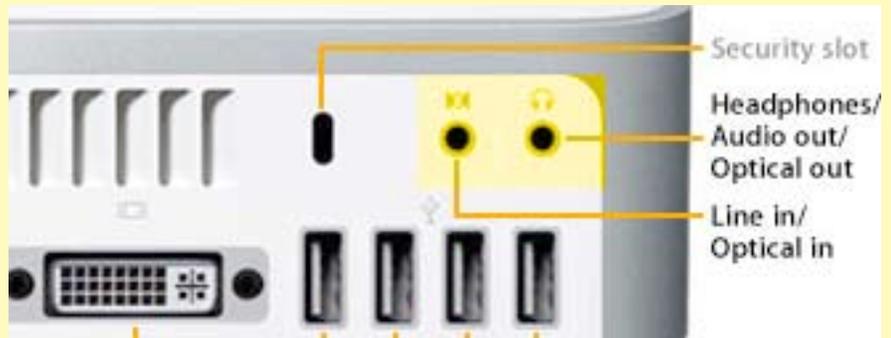
Save the lame.lib file inside your Audacity program folder. You'll need this file later on.

Once you have Audacity installed on your computer, you'll need one more component. You'll need an inexpensive cable that has a 1/8 inch stereo mini jack on both ends. This is the same mini jack your headphone set uses - the kind you'd plug into an iPod or other portable MP3 player. Use this cable to connect the headphone plug into the line-in plug on the back of your Macintosh. (Please note that Apple sold some models of Macintosh without a line-in plug - but most of the recent models do have this hardware feature.)

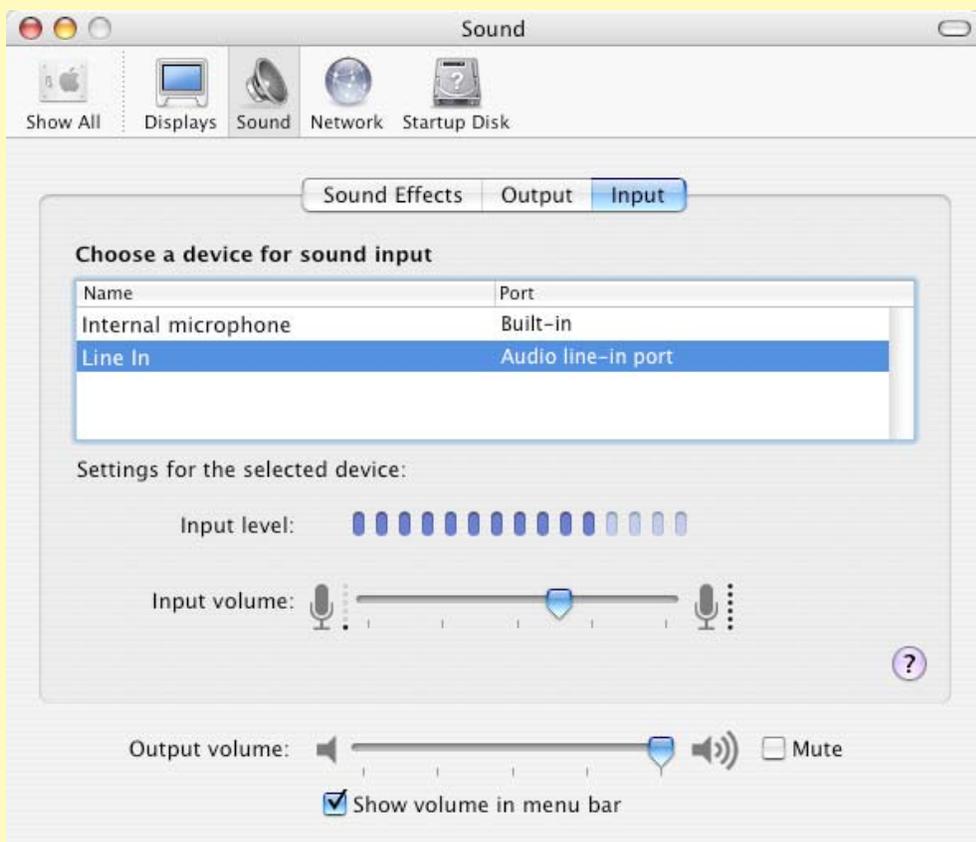
Now we're almost set. There are a couple of software settings we need to set. You'll need to go into your System preferences and set the input to Line-In (see the first illustration on the next page). Start an application playing audio through your Macintosh's speakers (which are now plugged from the headphone port to the Line-In port, so you won't hear any audio), such as going into iTunes and doing a streaming radio station, or into Safari or Firefox and doing a streaming audio from NPR. Once it's playing make sure your computer's volume is turned about half way up. Now go back to the System preferences and adjust the input volume slider until you see it averaging about 3/4 volume (again, see the first illustration on the next page).

Now you are set to actually begin recording. This will involve having two applications running at the same time, the one that will be playing the audio and Audacity, which will be recording the audio.

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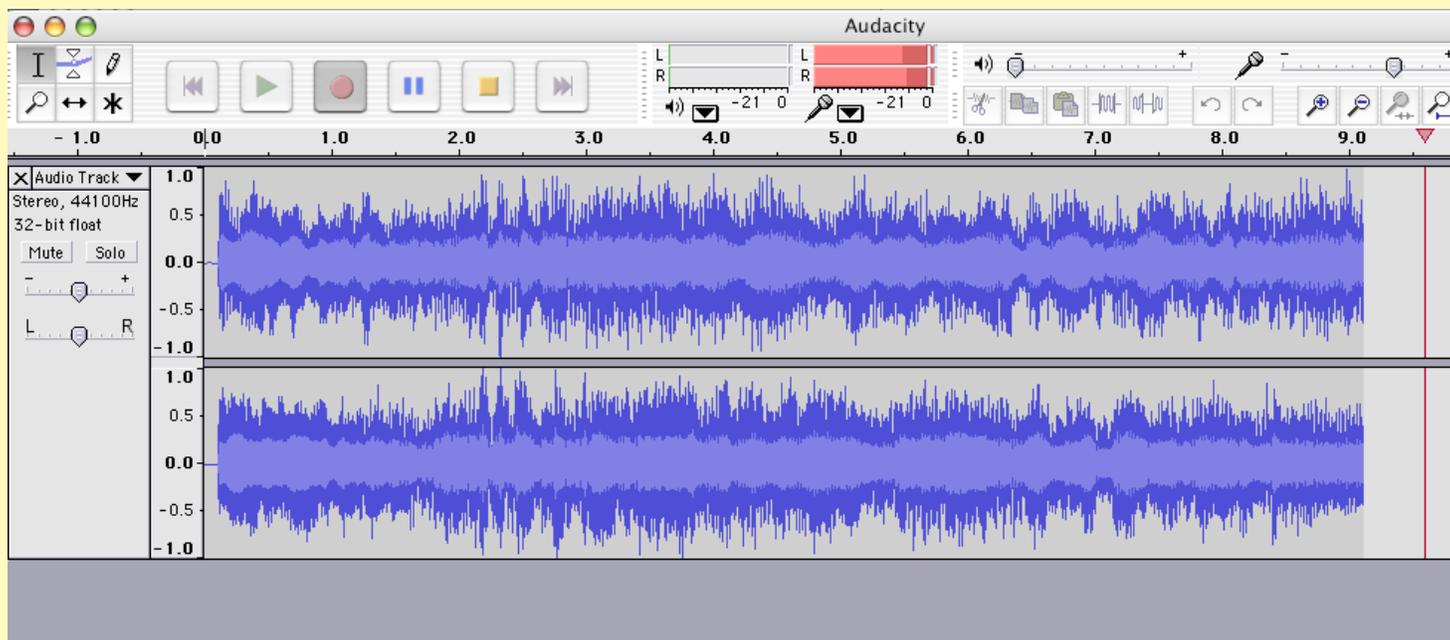


Pull up Audacity and click on the record button (the button with the red circle). Switch to your other application, let's say - Safari - and begin playing your streaming audio. Now switch back to Audacity, and you should see it recording your audio stream (see illustration at the bottom of this page). The audio recording in Audacity should be giving you a graph like the one below, which is almost touching the top and bottom of the scale. If it is exceeding that, your audio is too loud, and is clipping. Go back to your system preferences and turn the input volume down. On the other hand, if your volume is too low, you'll see only a small waveform on the graph. Adjust the Input Volume accordingly. If you had to make adjustments, stop the recording and close the file. Then try it again. Once you've completed recording your audio, click the yellow stop button.



After you've recorded the file, you can edit out anything you didn't want by highlighting that audio section with your mouse and hitting the delete key on your keyboard. Audacity comes with filters to fade in, fade out, remove noise, and many other effects. It's quite easy to use.

Once you've edited your audio piece, it's time to save it. In Audacity, you can save your audio as a Windows WAV file (large file size, uncompressed), an MP3 file (much smaller file size, compressed), and an Ogg Vorbis file (a free open-source method of compressing audio that's less well known than MP3). Let's choose to save as an MP3. Audacity will ask you where that Lame.lib file you downloaded is located. Go select it within your Audacity program folder (after this first time, Audacity will remember where the lame file is and not ask anymore). Then you have the option of adding MP3 tag information such as artist, title, etc. Then your MP3 file will be created. Hopefully you found this tutorial helpful. You'll find documentation and tutorials for Audacity in the website's help tab.



## Windows: Using Audacity to Record Any Audio Your Computer Is Playing...

You'll want to read the Macintosh version of this on the previous pages first. The same method described there basically works on a Windows PC, too. Plug the jack into the line-in plug on the back of your PC (usually color coded blue) and the other end into the headphone plug (usually color coded green). NOTE: Don't plug it into the microphone plug (color coded pink or red)! The microphone jack is too sensitive (has a high gain) and you'll just get distorted audio. Double click the volume symbol in your system tray to bring up the volume control panel. Adjust the line-in volume to about half way and make sure the mute checkbox is unchecked. Other than that, the process is basically the same for the PC as it was for the Mac.

However, if your sound card supports it, there is an easier way for the PC that eliminates the need for the cable described in the Macintosh article. Pull up Audacity, In the drop down shown in the illustration (above right), choose Wave Out Mix. This is going to route anything going through your sound card into Audacity. Be sure to open up your volume controls panel (double click on the volume icon in your system tray at the bottom right of your desktop) and make sure the wave volume is turned up about halfway to three-quarters. Also make sure the mute box is unchecked.

In Audacity, click on the record button. Then go into whatever program you're going to play the audio in and start it playing. I'm using iTunes in the illustration below. One nice feature about this method is that you can hear the audio through your speakers as you're recording in Audacity. So when you switch back to audacity, you'll see the program recording your audio as you listen to it.

Once your audio is done, click the yellow stop button in Audacity. You can then edit your recording. You can use your mouse to drag anywhere along the audio graph to highlight a section. You can press the delete key on your keyboard to delete a highlighted section. You can use the filters in the Effects menu to fade a selection in or out. There is a noise removal tool that it quite good. If you have a consistent hiss or hum in the background, highlight just a short piece of

only that hiss or hum (you're trying to get just an isolated piece of hum or hiss with no other audio going on). Go into the effects menu and choose noise removal. In that dialog, click the button that says "Get Noise Profile." Then click OK. Now highlight the entire audio piece and choose Noise Removal again. You can listen to a preview and adjust the amount of removal to use. Once you're satisfied with the preview, click "Remove Noise," and Audacity will remove that from your file. Audacity is a powerful, free audio editor. Enjoy!

Link for lame\_enc.dll file you'll need for MP3 encoding:

<http://www-users.york.ac.uk/~raa110/audacity/lame.html>

