

A Little Audacity

By Ann Brundige and Byron Wilkes

This freeware is a very powerful sound editor, and it works on both Mac and Windows (although you will need to download separate versions). I have only spent a short time with it and was able to load sound files, record, change the pitch so that my voice sounded like a baritone or a child's voice, convert a sound effect to match the same format as my recording, and add my sound effect after the recording to create one long track. There are many features I don't know how to use—I don't know that much about sound—but there are many useful and easy features even for the sound-ignorant 😊

At the end of this document are instructions for obtaining and installing Audacity and an optional add-on, the LAME encoder which will let you export MP3 files from Audacity. You want to do that, because Classroom Suite can load these and they are about 1/10 the file size of the same file as .wav.

Basic Controls

When you open Audacity, there is a window where the wave form will show and a standard set of Play/Record buttons above it. Hover the cursor over various controls to find out what they do. To the right of the play/Record buttons, you can turn on meters to monitor the sound input and output levels (microphone and speaker icons). Just below the Play/Record buttons are sliders to set the output and input volumes, also handy. Below that, just above the window, are a row of functions such as copy, paste, etc. There are a couple of special ones there, trim outside selection and silence selection. There are many options to customize the interface under Preferences, also.

Getting Started

Try loading in one of the files from the Media folder of Classroom Suite, or any other .wav file you might have. (Audacity actually loads quite a few file formats. See Preferences.) You will see a schematic of the wave form for the file in the window. Click the cursor at the left of the schematic and click Play to hear the entire file. Click and drag to select a portion of the schematic and click Play to hear the selection only. Edits, filters, etc. will affect the selected part of the file.

Note some information about the file down in the lower left, including the frequency in Hz. If you are combining files, this needs to be the same for both or you will get strange results.

Two Sounds Open: Making Tracks

Leave the sound effect window open. Go up to File and choose New. You now have two sound windows open at once, so you'll be able to work on both and potentially copy and paste between them. You can also go to the Project menu and add a second track, or import audio into an open sound and it will appear as a separate track. When you export the file to either .wav or MP3, all tracks are mixed together. I haven't experimented with how to align tracks, however.

Filters

Try recording a short sentence. Play it back. Select your recorded sound, and go up to the Filter menu. One filter you might often use is Amplify, which can raise or lower the sound volume for the entire sound, or for a selected section. Two more I find useful are fade in and fade out, to smooth the beginning and end of a sound. These you would use on a short selected section at the beginning and end respectively. Echo can be fun, if applied with caution.

My favorite filter is Change Pitch, which in Audacity works to make this change without changing the tempo. This means you can raise the pitch slightly to convert a woman's voice to a child's voice, or lower it to sound like a man. Think of the possibilities there for having many recorded voices in an activity!

Stringing Sounds Together

Let's try combining sounds. I opened one of the sound effects from the Media folder of Classroom Suite. It was a 11025 Hz file. I highlighted the waveform, copied, and pasted it in at the end of my recorded sentence. But when I played the entire track, the sound effect came out fast and higher pitch. Then I noticed that the recording was at 44100 Hz. Oops! No wonder it played the pasted sound effect four times faster!

I then changed the project rate (lower left) to 44100Hz in the original sound effect, and exported the file as .wav. When I opened that, it was now

44100HZ, and I was able to copy and paste it after my recorded sentence. By carefully noting the length of each section in seconds, you can construct a sound track to match events on an IntelliMation timeline. You can even insert silence of a certain number of seconds to space out sounds. You could then load the entire track as a Page Sound.

Installing Audacity

Download Audacity at: <http://audacity.sourceforge.net/>

There are versions for Windows, Mac OSX, and Mac OS 9. They do not have updated versions for OS9, however, so perhaps not all features would be in that version. Download and install the main application, and also download and install the optional [LAME MP3 encoder](#), which allows Audacity to export MP3 files.

LAME encoder: This is a separate library, so you will have to tell Audacity where it resides in order for it to function. Here are the instructions for linking the LAME encoder to Audacity:

Windows

- Download the the archive file from the site above, and open it in a utility like [winzip](#), [7-zip](#), or some versions of Windows Explorer
- Take the lameenc.dll file and extract (uncompress) it to a directory on you hard drive. The directory where you installed Audacity would be a good idea. This is probably C:\Program Files\Audacity or similar if you used the installer
- Open Audacity and go to File > Preferences.
 - Go to the 'File Formats' tab.
 - In the bottom of the window there is a section tabled 'MP3 Export Setup'.
 - Click on the link tabled 'Find Library'
 - This will ask you if you want to locate the lame encoder. Click 'yes'.
 - In the dialogue box, go to the folder where you put the lame-enc.dll file earlier, and select it.
 - Click OK.
- You should now be able to export files to the mp3 format.

Mac (OS X and OS 9)

- Download the the .sit file from the site above, and open it in Stuffit Expander
- Take the LibLame.so file and extract (uncompress) it to a directory on you hard drive. The directory in Applications where you installed Audacity would be a good idea.
- Open Audacity and go to File > Preferences.
 - Go to the 'File Formats' tab.
 - In the bottom of the window there is a section tabled 'MP3 Export Setup'.
 - Click on the link tabled 'Find Library'
 - This will ask you if you want to locate the lame encoder. Click 'yes'.
 - In the dialogue box, go to the folder where you put the LibLame.so file earlier, and select it.
 - Click OK.
- You should now be able to export files to the mp3 format.