

Recording audio from your computer.

Subject Descriptors: Audacity

Application (Version): Audacity 1.2, Macintosh OSX, Windows XP-Vista

Task Description: This lesson will demonstrate how to record any audio being played by your computer (what is usually coming out your speakers or headset) using Audacity and an audio cable. This is useful for for times when you need to use an audio clip from something for part of a presentation.

Tutorial Date: 15 May 2009, by Nathan B. Smith

Important Note: Most users will require additional equipment to do this (see step 1b for exceptions).

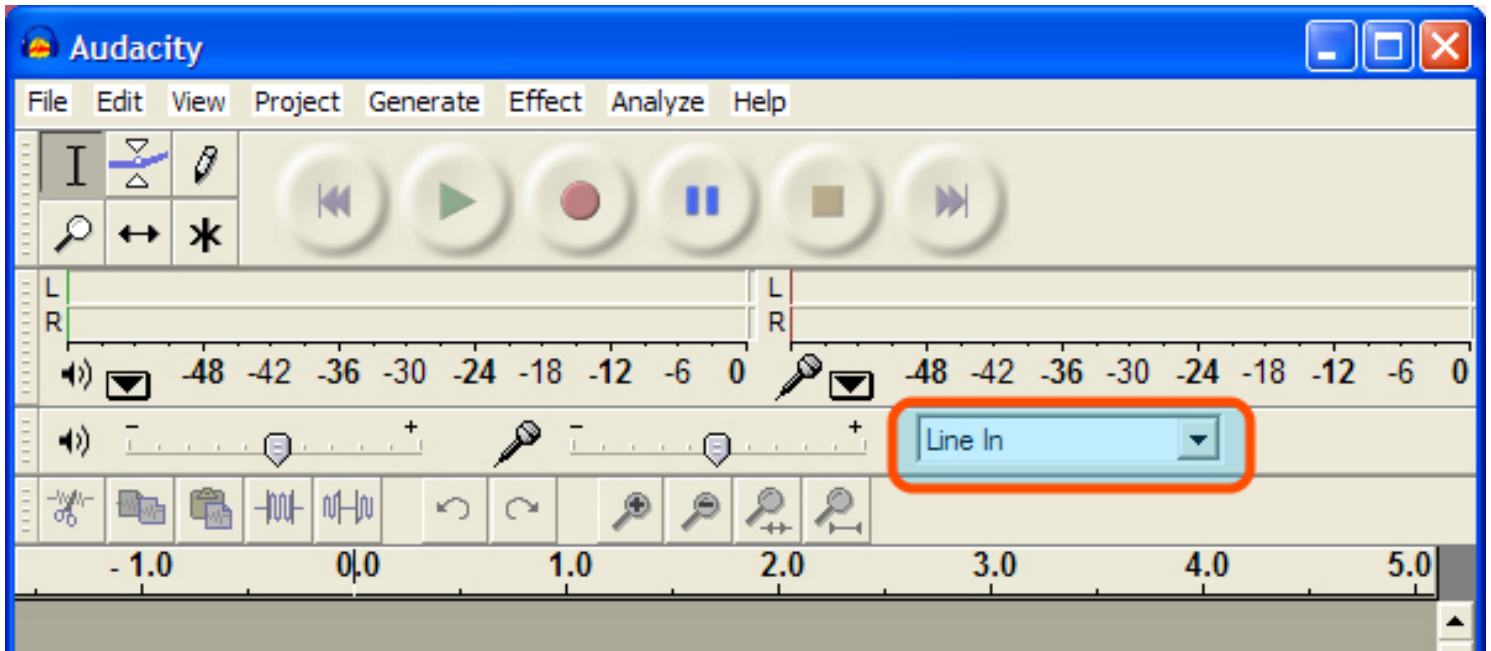
1a. Additional equipment that will be required to record your audio.



To record audio coming from your computer, you'll need to get one additional item; a cable that has a 1/8 inch stereo mini jack at both ends (the same kind of plug that standard headphones that plug into walkmans and MP3 players use). This cable should be inexpensive if you need to purchase one, and can probably be found at a store such as RadioShack.

Important Note: If you use a PC you may have a sound card that will let you record your audio-in without the need for the audio cable described above.

1b. How to see if you won't need the audio cable (PC only)

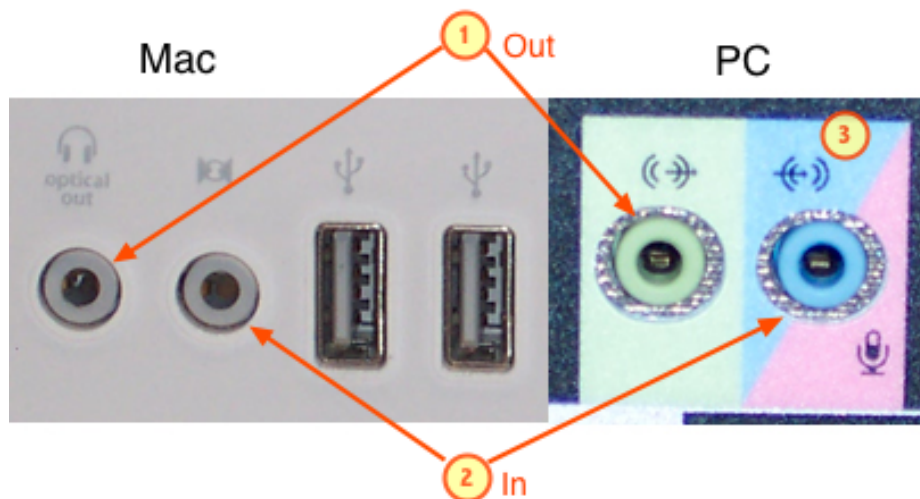


Some PCs have a sound card that supports extra functions beyond standard sound cards, allowing programs (such as Audacity) to capture audio-out without the need for extra equipment.

To check for this, open Audacity.

Towards the top of the project window, and to the right of the volume indicators should be a drop-down box. Click on the box and look through the options available, if one of the options is "Wave Out Mix" then you will not need to use cables. If available select "Wave Out Mix" and skip to step 3b; otherwise leave it at Line In.

2. Connecting the audio cable.



Take the cable that has the 1/8 inch stereo mini jack at both ends and plug one end into the audio-out jack (Headset, #1), and plug the other end into the audio-in jack (Microphone, #2).

Important Note: If you are using an older PC that has separate jacks for audio-in and microphone cables, use the audio-in jack (it should be colored blue) and ignore the microphone jack (#3 is how it will look like).

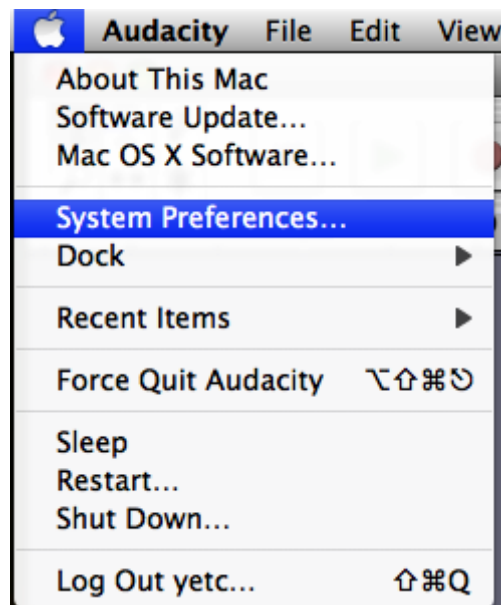
Hint: If you'd rather record audio from something else (like an iPod for example) rather than from a program on your computer, then instead of plugging one end into the audio out on your computer, plug it into the headset jack of that audio device.

3a. Set system audio preferences (Mac).

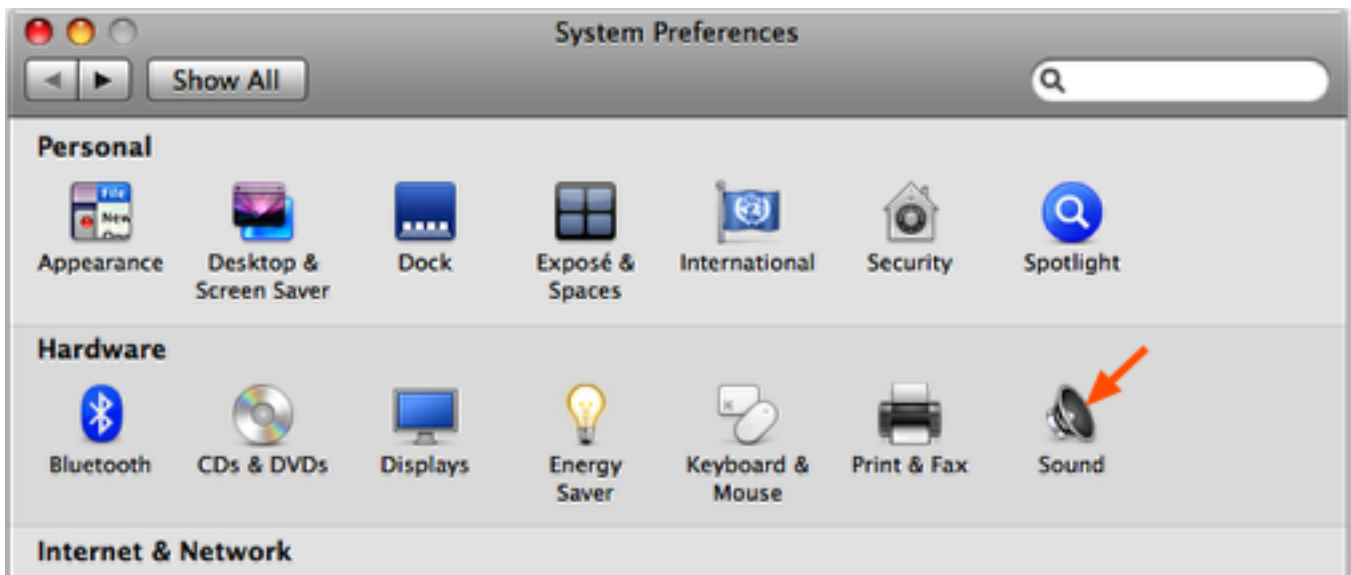
If you are using Windows, please skip to 3b.

Audacity will be using the the audio-out to record what is playing on your computer. It will be important to set both the volume level of the audio-out (what you normally hear when you play something) and also of the audio-in, so it's not too loud (causes distortion) or too quiet (makes it hard to hear when you play it back).

- Open System Preferences.

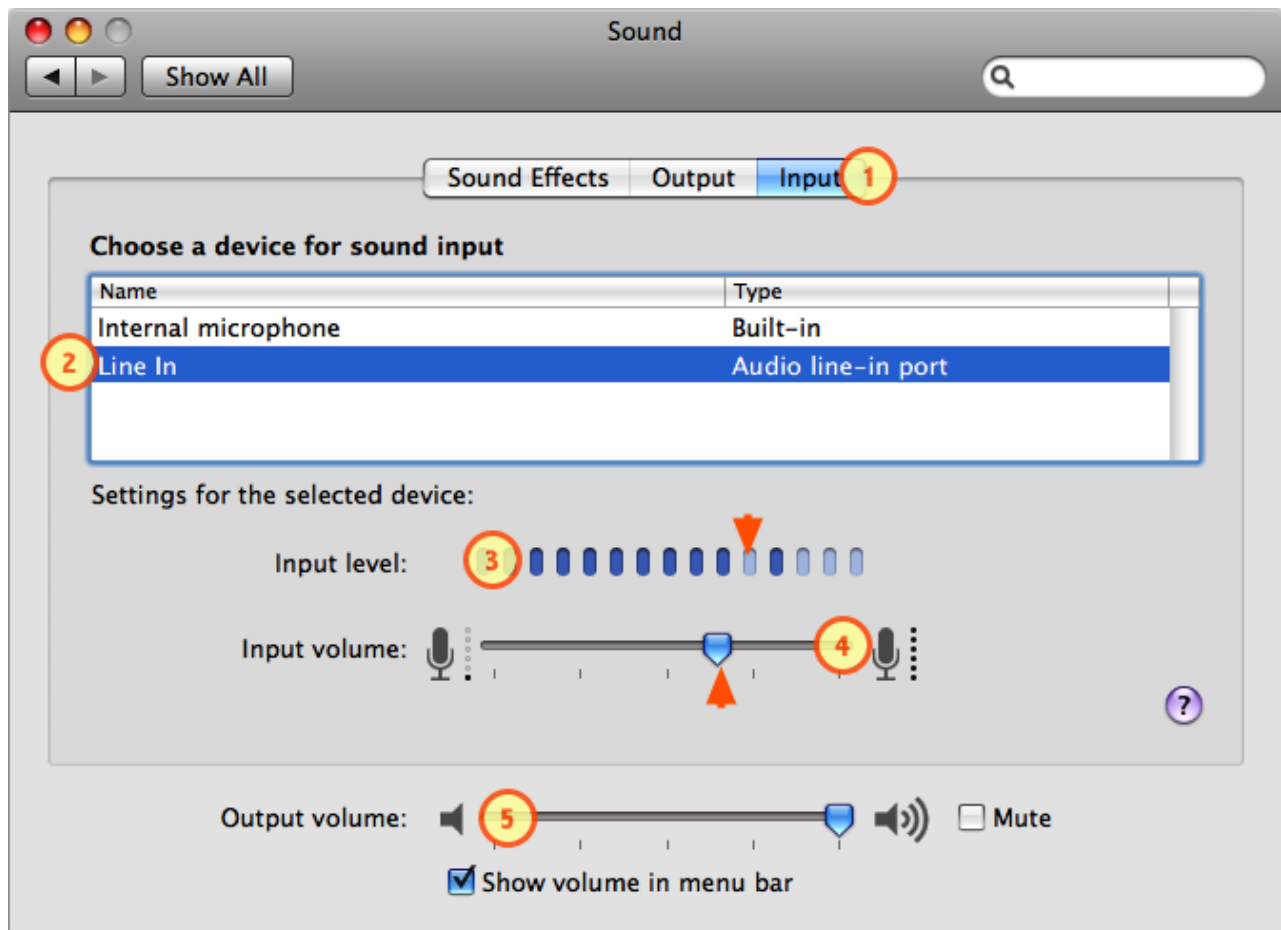


- Go to the Apple menu (the apple in the top left corner of the screen), and select "System Preferences".



- Select the "Sound" preferences which will bring you to the Sound preferences window.

- Adjust Input and Output volumes.



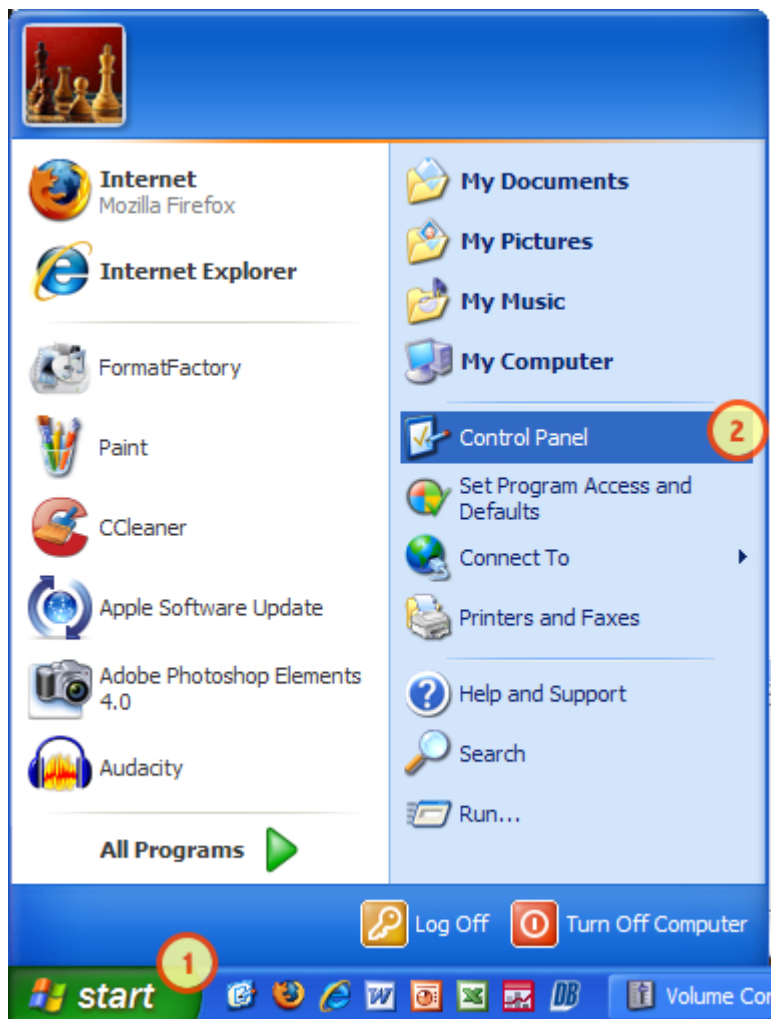
- Select "Input" (1) from the tabs at the top.
- Select "Line In" (2) in the "Choose a device for sound input" window.
- You will want the general Input level (3) at around 3/4s (where the arrow is indicating). You will likely need something playing in the background to see an indicated level.

- Adjust the Input level with the Input volume slider (4) as needed. It will most likely be in the 2/3-3/4s region (as indicated by the arrow), which seems to be the ideal level for most audio.
- Adjust the Output volume (5) between 3/4s and full. This will also affect the Input level.

3b. Set system audio preferences (Windows).

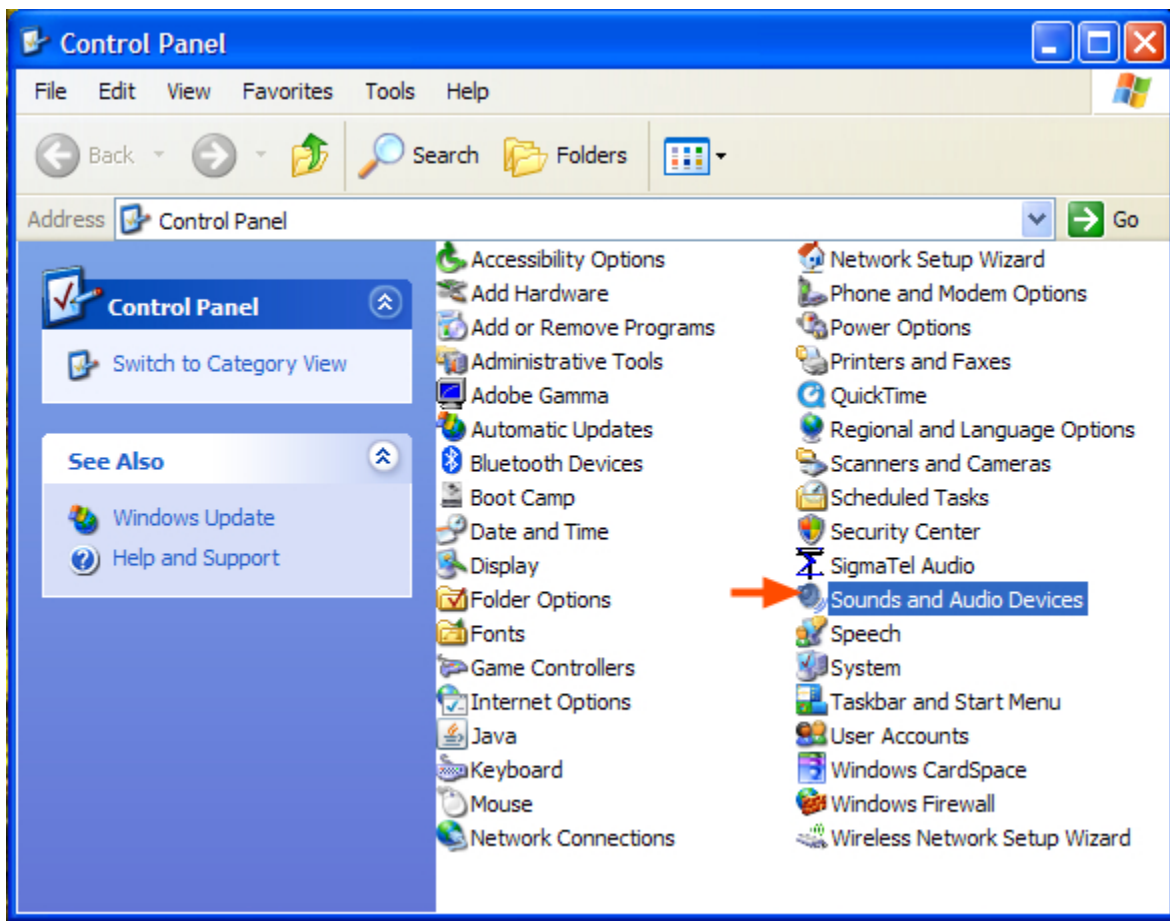
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- Start Menu.



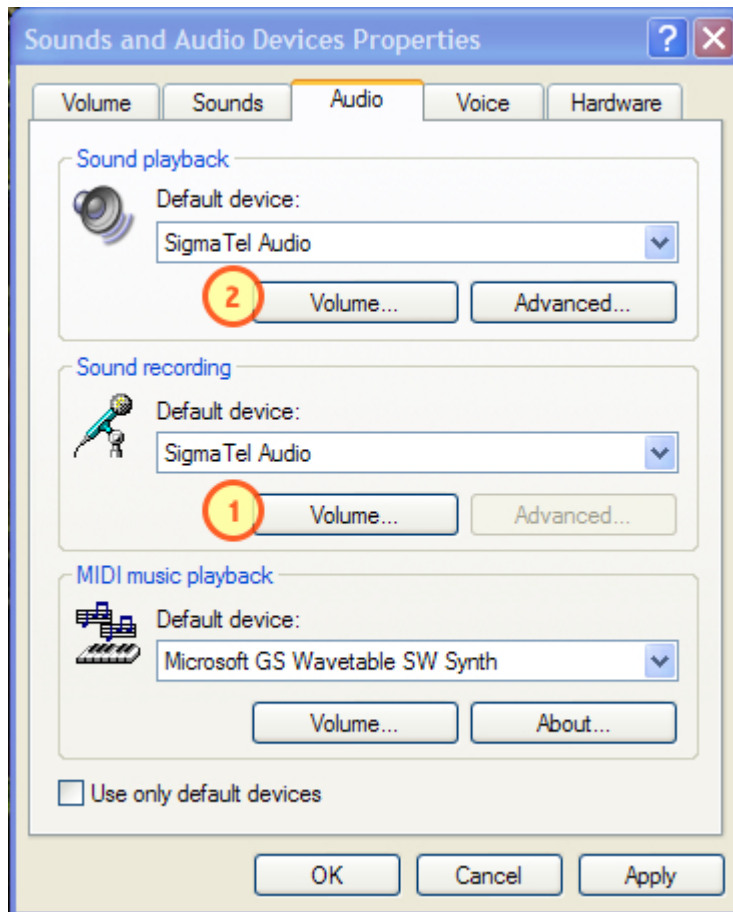
- Go to the "start" menu (1) and select "Control Panel" (2).

- Control Panel.



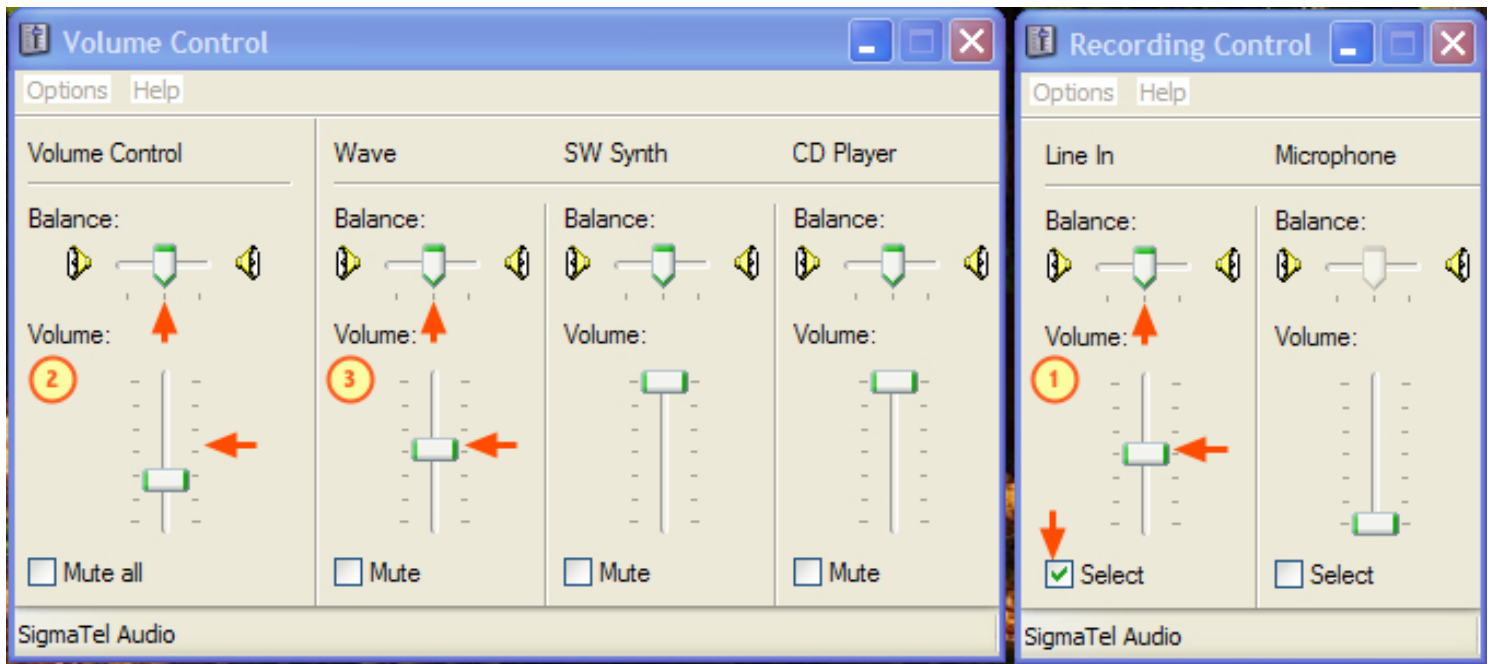
- Select "Sounds and Audio Devices".

- Open Sounds and Audio Devices.



- Click on the "Volume" button for Sound recording (1) which opens the Recording Control window.
- Click on the "Volume" button for Sound playback (2) which opens the Volume Control window.

- Adjust Input and Output volumes.



Go to the Recording Control window.

Under the "Line In" section(1), make sure that;

- Balance is in the middle.
- Volume is between 1/2 to 3/4.
- That Select is checked.

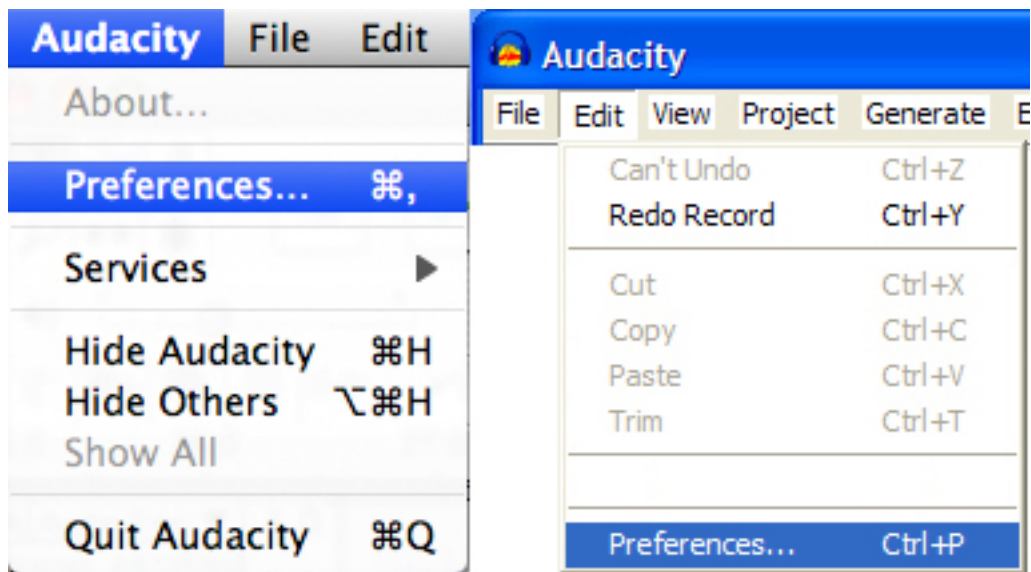
Go to the Volume Control window.

under the "Volume Control" section (2), make sure that;

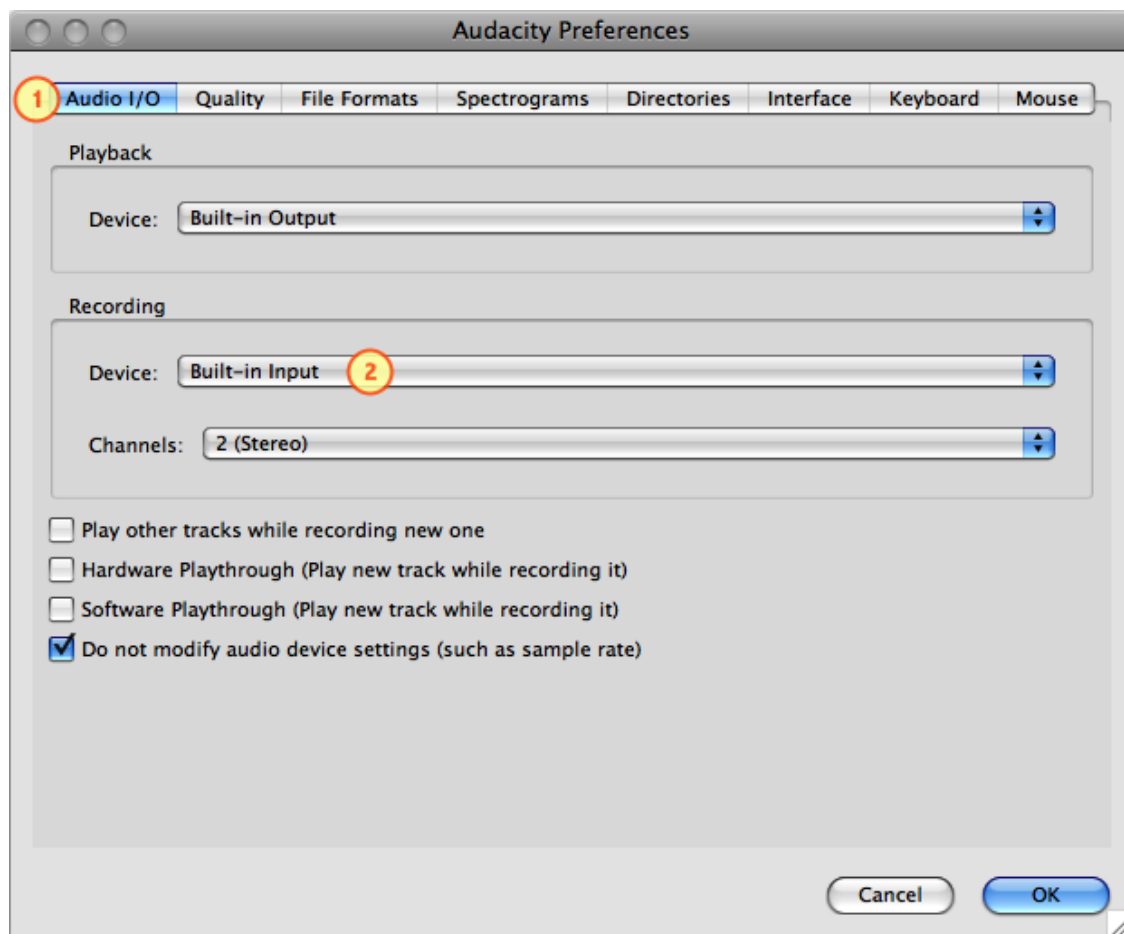
- Balance is in the middle.
- Volume is somewhere around 1/2. You may need to adjust as needed later if recording is too loud or quiet, depending on what program you're using. (for instance Youtube tends to be loud, so a good setting for the volume when recording a clip from youtube is about 1/4)

If your computer supports the "Wave Out Mix" (see step 1b), then the "Volume Control" doesn't really matter; instead go to the "Wave" section (3) and make sure that the volume is at 1/2 and the balance is at the middle.

4. Check Audacity preferences.



Open Audacity, and go to the preferences menu. On Macs it will be under "Audacity", on PCs it will be under "Edit".



Click on the "Audio I/O" tab (1).

Go to the drop-down menu by "Device" in the Recording area and choose "Built-in Input" (2)- this is how it will appear on Macs, but on PCs it can vary but the one to select should have an "Input" next to it

(such as "Microsoft Sound Mapper - Input"), and should already be selected by default.

You are now ready to start recording.

4. Record your audio.



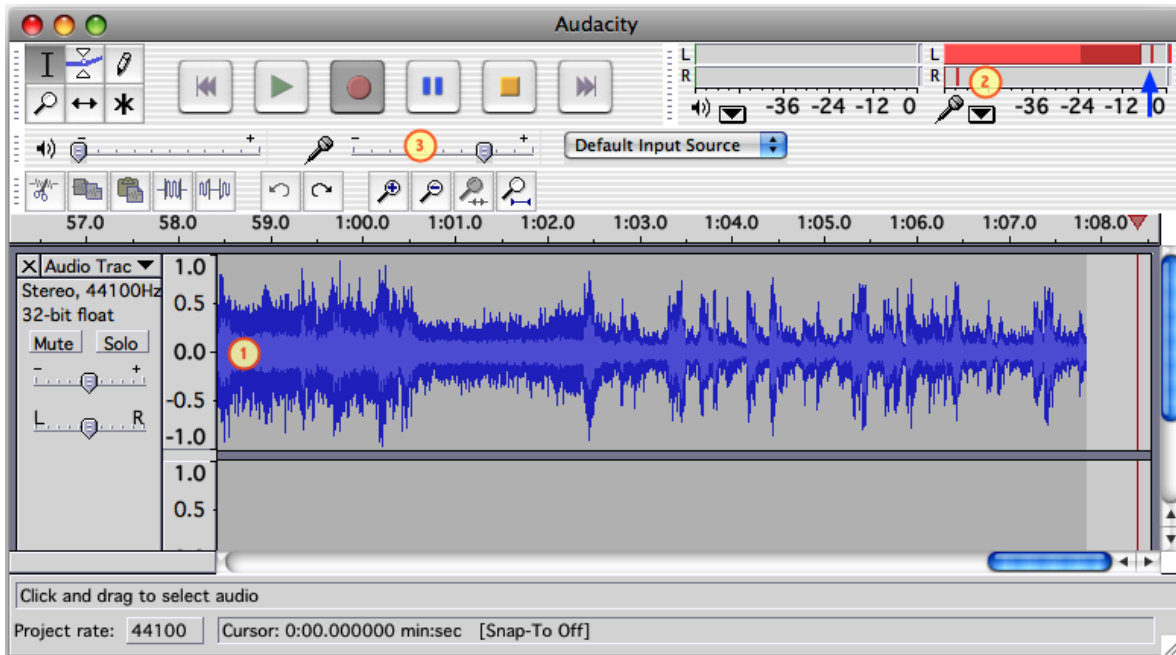
While Audacity is open, open the program you wish to record audio from (eg. iTunes podcast). Switch back to Audacity and click the Record button (1) at the top, then switch to the program you want to record audio from and start playing it. Once you've recorded what you want, switch back to Audacity and click the "Stop" button (2).

Once you have a piece of audio you can play it back by pressing "Play" (3).

Hint: While your audio-out is plugged into your audio-in, you won't be able to listen to what is being recorded (or played back for that matter).

Important Note: While recording, make sure to not adjust the volume or do other activities that can cause either interruption or cause additional sounds to occur that you do not want in your recorded piece.

5. Review recording.

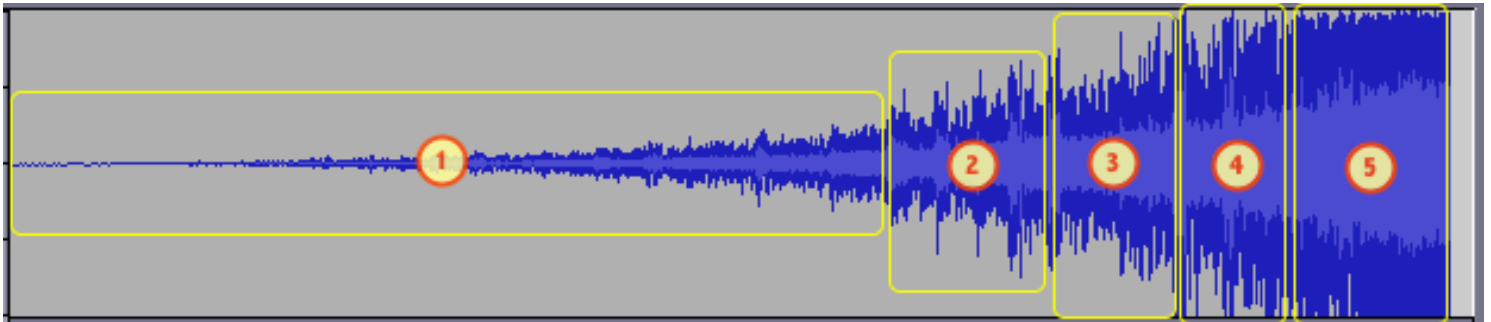


Up to the top right corner is the Input Meter (2), this shows how loud the input is. If it is filling up all the way often or most of the time chances are you have the input volume too high... You want it to be peaking out just under the edge (about where the arrow is). If you have audio playing, you can click this to show how loud whatever ever is coming through the line in before you start recording

Below the playback/record controls is a Input volume display(3), depending on the source and system you may be able to adjust the input level from here.

When Audacity starts recording, it will start drawing a waveform (1), which shows how loud any bit of sound in the recording is at any time (the more loud a part is the closer to the edges it will be). Ideally it the loud parts should be just under from touching the edges. See below for examples of different waveforms.

- Good and bad quality waveforms.



Here is an example of a wave form that has gone from too quiet to too loud (left to right);

Box 1- This is too quiet.

Box 2- This would probably be OK, although a little on the quiet side.

Box 3- This is what you want the majority of the waveform to look like.

Box 4- This would also probably be OK, but a bit on the loud side. Notice that you have the occasional spike reaching the edges. This probably has a bit of distortion.

Box 5- This is too loud; almost all of it is right up against the edges. This will cause a lot of distortion and quality loss.

If the recorded piece is too loud or too quiet, you can undo the recording by pressing "Command (the apple)-z" on the Mac keyboard or "control-z" on the PC keyboard to undo the recording you just made. Then go back and adjust the line-in or input volume accordingly (or adjust the out volume if necessary), and re-record.

Hint: An easy way of getting the volume levels right is to start recording audio and while that is recording bring up the volume controls and adjust them until you find the levels that you want, then just undo that recording (or start a new project) and then just re-record.

6. Finish

Once you've gotten a piece recorded, you can highlight (by clicking and dragging on the part you want selected) any portion which you can then either play back, modify, or delete by pressing the delete key. You'll likely have portions at the ending and the beginning that you don't want used in your recording just highlight them and delete them.

For modifying them further (such as removing hissing noises, or making them fade out or in), go to the lesson titled "Editing your audio."

Once you are done modifying them you are ready to export your audio go to the "File" menu at the top and select the "Export As X" (X meaning either WAV, MP3, OGG Vorbis, or other formats) of what format you want your piece to be saved in. For more in depth information on saving and exporting, please go to the lesson titled "Saving your audio."