



MULTIMEDIA TOOLBOX

Using Multimedia Tools for Education

RECORDING SOUND FILES ON YOUR COMPUTER

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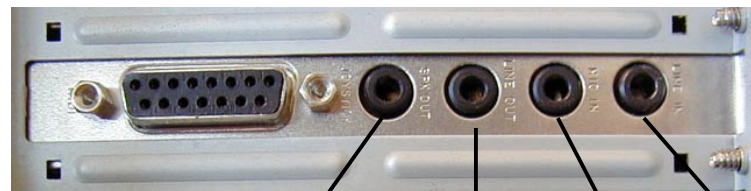
Today, virtually all computers are multimedia enabled and have audio capabilities. Most computer users are aware they can play music CDs in their CD-ROM drives. But did you know you can also record and edit sound files with your computer? Why would you want to do that? Perhaps you would like to insert an audio file into a PowerPoint presentation you are giving, or send a verbal greeting via email attachment to someone, or place an audio clip on your web site.

The Sound Card

The sound card is the piece of hardware responsible for producing any audible sounds on your computer. It decodes digital sound files into audio that can be sent to the speakers. Depending on the type and quality of the sound card, you can record audio from a microphone, CD player, or any other sound device.

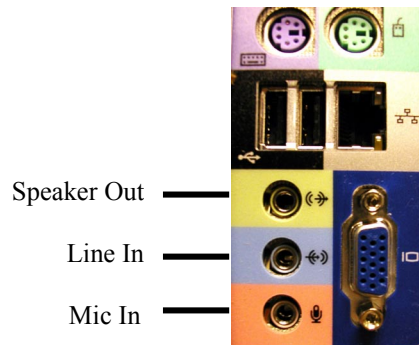
Although the sound card is inside the computer case, the input jacks are exposed, usually at the back of the computer. Most sound cards have at least 3 jacks – one for a microphone, another for the speakers, and a Line-In jack. See Figure 1. The Line-In jack is used to hook up any external devices such as tape recorders, CD players, VCRs, TVs, etc. Some sound cards have a Line-Out jack as well. Take a look at your sound card and see if you can identify all the jacks.

Typical Sound Card



Speaker Out Line Out Mic In Line In

The new Dell computers which are part of the InfoEdge initiative look slightly different. Here is a photo of the sound card jacks at the back of those computer models.



Speaker Out
Line In
Mic In

Using Sound Recorder

Sound Recorder is a Windows audio recording program that has been included with every version of the Windows operating system since Windows 3.0. It's a very basic sound recording/editing program. With a microphone, you can record your voice, or connect an external source to the Line In connection on your PC's sound card and record from it.

Start the program by clicking the Windows Start button-> Programs-> Accessories-> Entertainment-> Sound Recorder. See Figure 2.

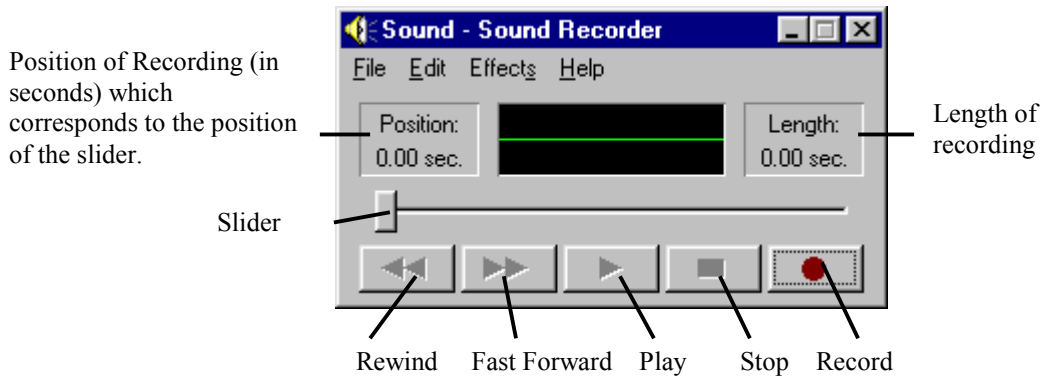


Figure 2

The Volume Control Window

Before you start recording, it's important to check the Volume Control Window. Open up this window by clicking the Windows Start button-> Programs-> Accessories-> Entertainment-> Volume Control. See Figure 3. This window controls the **playback of all audio sources**. Each source can be muted (turned off), the volume adjusted, and the balance shifted between left and right speakers. Open up your volume control window. Does it look similar to this?

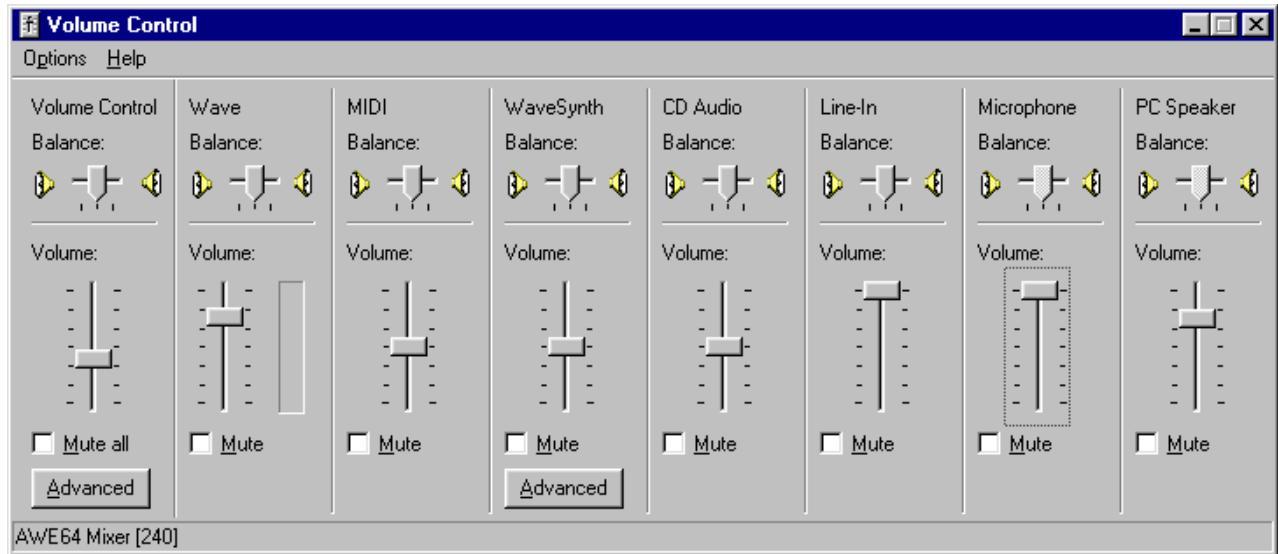


Figure 3

Don't see all the volume control sources as in Figure 3? They can be displayed. In the **Volume Control Window**, click the Options menu->Properties. The Properties window will appear. See Figure 4.

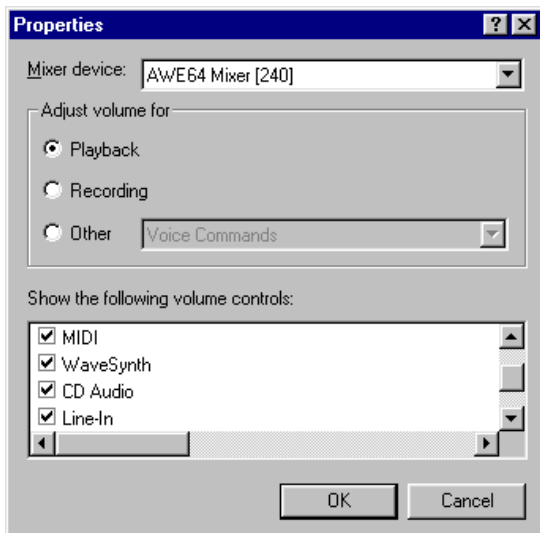


Figure 4

Simply check the volume control sources you would like displayed in the Volume Control Window.

Make sure you scroll down to see the whole list.

If ever there are any problems with your computer with regards to hearing sound, open up the Volume Control window to check if any sound sources have been muted or the volume turned right down.

The Recording Control Window

This window allows you to select the audio sources you would like to **record from**. In the **Volume Control Window**, click the Options menu->Properties. The Properties window will appear. See Figure 4. To open the **Recording Control Window**, select the “Recording” option button. Then click OK. The Recording Control Window opens. See Figure 4A.

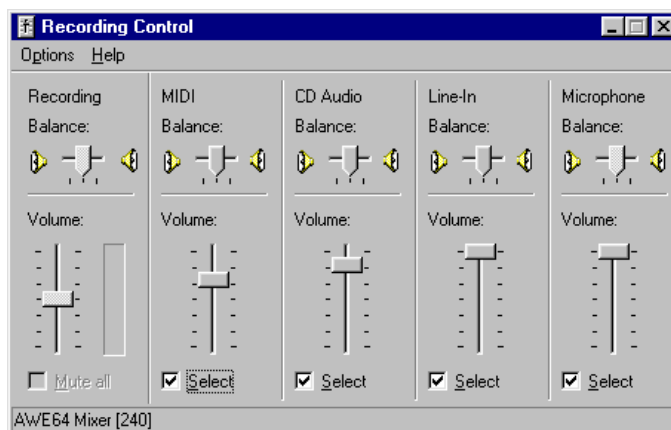


Figure 4A

Don't see all the recording control sources as in Figure 4A? They can be displayed. In the **Recording Control Window**, click the Options menu->Properties. The Properties window will appear. Select the recording sources you would like displayed. Click OK. Select the sources you would like to record from.

Recording

To record your voice using Sound Recorder, you will obviously need a microphone. Most Windows computers come with a cheap plastic microphone. The quality is very poor on this microphone but it will do if you don't have another. You can use a higher quality microphone – if the plug is too big to fit into the microphone jack, you can usually get an adapter from any local electronics store. If you don't own a microphone, you can create a makeshift microphone by using headphones that are compatible with a Sony Walkman portable radio. Plug the headphones into the sound card's microphone jack and speak into them. Again the quality isn't the best; make sure you speak clearly. If the microphone is too close to the speakers during recording, you'll get feedback.

When recording your voice (or any other sound) through the microphone, always check the recording control window to check the microphone volume and whether or not it is selected. To start recording, simply press the red record button on the Sound Recorder window and start speaking. As you speak, you should see the green line oscillate. See Figure 5. If you don't see this, the microphone recording volume is too low. Turn up the volume for the microphone in the Recording Control Window. Click on the Stop button to end your recording.

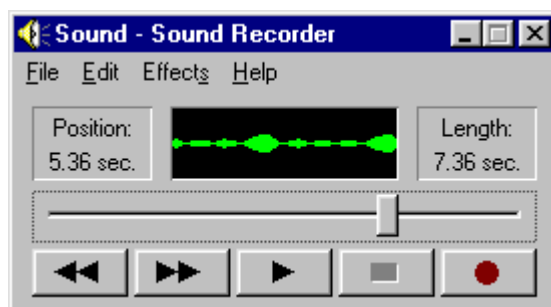


Figure 5

Press the play button to hear your recording. If you're happy with the recording, save it by selecting File-> Save on the Sound Recorder menu. If you do not want to save it, either drag the slider to the beginning and record over it or just start a new file by selecting File-> New on the Sound Recorder menu.

You can add to this recording as well. Simply drag the playback slider to the end of the recording and press the Record button again. Whatever you record will be appended to the end of the file. If you move the slider to the middle of the file and start recording, you will not append to the file, but rather record over everything from that point on. It's possible to delete portions of the audio file. Simply move the slider bar to where you would like the file clipped and select Edit->Delete Before Current Position or Delete After Current Position from the Sound Recorder menu.

There are some neat effects you can apply to your audio file. They are all listed under the Effects menu. You can increase or decrease the volume (to fade in and out), increase the speed (to sound like a chipmunk) or decrease the speed, add an echo, and even reverse playback (to listen for any hidden Satanic messages). Make sure you save the file before adding any effects – that way if you are unhappy with the result, you can use the File-> Revert option to remove the effect. You can add effect upon effect as well.

Two audio files can be combined together for a neat effect. Simply move the playback slider to the point at which you like another file to begin mixing with the first. Select Edit -> Mix with file. You will then be prompted to browse your hard drive to locate the other audio file. Audio files can also be inserted within another file. Open the first audio file (File-> Open in the Sound Recorder menu). Again, move the playback slider to the point where you would like to insert another audio file. Select Edit-> Insert File.. and you will be prompted to locate the second file on your hard drive.

Audio files can be recorded off a music CD as well. If you have a CD-ROM drive in your computer, you can use that as your recording source. In the **Recording Control window**, ensure that the CD Audio control is not muted and the volume is turned up. If the microphone is still plugged into the sound card, it is best to mute the microphone to prevent feedback. Insert the music CD into the CD-ROM drive. Often, the CD will automatically start to play. Simply click the Stop button on the CD player window. Figure 6.

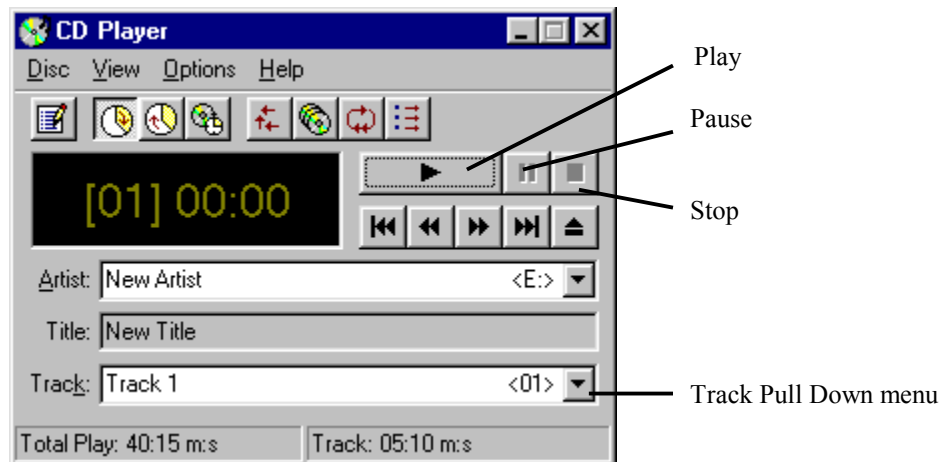


Figure 6

If the CD Player application does not open when you insert an audio CD, open the application by clicking the Windows Start button-> Programs-> Accessories-> Entertainment-> CD Player. Use the Track pull down menu or the fast forward button to select the track you would like to record. Then click the Pause button. When you are ready, hit the Record button on the Sound Recorder window and then the Play button on the CD Player window. Click the Stop button on the Sound Recorder window when you have recorded as much as you desire. Make sure to click the Stop button on the CD Player window as well.

You can also record from another external audio source through the Line-In jack on the sound card. Simply hook up an external tape recorder, stereo, etc. Your external source needs a Line Out jack. If it does not have one, use the headphone jack as your line out. You'll need a cable to connect your external source to your sound card. Usually it's a mini stereo to mini stereo cable, available at your local electronics store. One end of this cable is plugged into the Line Out of your external source and the other end is plugged into the Line-In jack in your sound card. Ensure the Line-In control is not muted in the Recording Control window.

Want to have some real fun? Record from more than one source at a time. Start your own karaoke recording – record yourself singing along to your favorite CD. Listen to yourself. Is it safe to quit your day job for a singing career?

Sound Recorder does have limitations. It records all audio in the WAV* file format. You can only record, play or make changes to WAV files. You cannot edit compressed WAV files. Other audio file formats are not supported. There is a recording limit of 60 seconds. To get around this 60 second limit – break up your recording into 60 second limits. Open up the first file and move the playback slider to the end of the file. Click Edit -> Insert File, choose the second 60 audio file and click OK. You now have a 2 minute clip. Continue adding audio files in this way until the your file is as long as you want.

Higher end sound cards often come with more sophisticated recording software than Windows Sound Recorder. There are many more effects, options, supported audio formats, recording settings, and layered audio tracks the user can control. But Sound Recorder is a good application to use for basic sound recording.

Start exploring the audio capabilities of your computer – happy recording!

* A .wav file is an audio file format created by Microsoft. It has become a standard PC audio file format.