Music Editing with a Computer

by Tiffany Mayes

I'm neither a music nor a computer expert. I'm an ice skating coach who is called on to not only teach ice skating, but to advise on costume design, sports psychology, nutrition, off ice training, choreography, boot fitting, blade sharpening, and music editing.

Music editing has always been one of my least favorite job requirements. I have found music editing to be a frustrating and time-consuming chore. However, editing music on the computer has drastically eased the process. You still have to spend hours listening for the right piece of music, but gone are the days of countless attempts to cut music at that one particular note, not to mention those annoying blips from depressing the pause button. As an added plus, all mistakes, regardless of when created, can be easily undone with the software's 'undo' function. In short, cutting music with the aid of a computer will significantly reduce the frustration of music editing.

Before cutting music on the computer first you will need to evaluate your computer or computer purchase. Most music editing software can be operated on today's current (less than two years old) systems. A current computer has a large hard drive, fast processor, lots of RAM, CD-ROM, and a sound card with speakers.

In addition to a current computer you will need a tape machine. An option you might also want to consider is a CD-ROM burner. Finally, you need music editing software. Most sound cards come with a sound wave program. The most common sound card and sound wave software is SoundBlaster.

I started out using SoundBlaster, but have since found a program called Sound Forge XP that is much easier to use. The Sound Forge XP program is available at most large software stores and it can be purchased for approximately $50.

Whatever program you use, make sure you read the system requirements. Sound Forge requires 16 MB of RAM. My computer has 128 MB of RAM and I still find it to be a little bit slow at times. When it comes to music editing, RAM is an area where you will want to invest extra money.

Now that your computer is set up and your wave program installed, you're ready to cut music. Start your sound wave program and put a music CD in the CD-ROM. You can record from tape, but your sound quality will suffer significantly. When you put the music CD in your CD-ROM, what looks like a CD player will pop up on your computer screen. Use your mouse to click on the buttons just like you would push the play, pause, stop, etc. buttons on your CD player.

Sound Forge and other wave programs have user friendly buttons on your computer screen that look like a standard stereo system. For example, when you're ready to record, click on the red dot, just like the one you've been using on your tape machine for years. You'll now have a recording window where you can monitor the record levels and your 'CD player' on your computer screen. Use these two screens like you've been using your CD and tape machines from your stereo system.

On the computer, some people like to record an entire track of music and then edit out the pieces they don't want. I find it easier and much faster to record the sections I want, plus a couple of extra second. Then I can clean up the edited sections. For instance, if I have a five minute track that I want to use to make a two minute program, and I've decided to use the first forty seconds, 2:35-3:20, and 4:20-5:00, I would record :00-:45, 2:30-3:25, and 4:15-5:00. Once you've recorded these sections,

the computer will show you a graph or a wave of the music. You can play what you've recorded by clicking on the arrow just like the arrow on your tape machine. It will now sound like three badly cut sections of music, but the clean up is easy.

Use the mouse to highlight the area you want to clean up. You may zoom in on the area by selecting View from the Toolbar; from the View Menu, select Zoom Time Selection. This will zoom in on the selection you want to edit. You can now play just this selection. A needle will track where you are in the wave. This is very helpful in identifying where you want the cut. Use your mouse to change the area highlighted until you have everything you want to cut out highlighted.

When you're confident that you've highlighted the section to be cut out, use the mouse to click on the Scissors button. The highlighted selection will disappear. You can now listen to the cut to see how it sounds. If it doesn't sound just right, no problem, simply select Edit from the Toolbar. From the Edit Menu select Undo. The selection that you cut out will reappear and you can try again.

If you want to fade in or out any of your cuts, you can do so by highlighting the section you want to fade, then from the Toolbar select the Process Menu. From the Process Menu you can select either Fade In or Fade Out. You will be able to see the wave change as the fade option is performed.

Now that your cuts are sounding great with no glitches, it's best to check the actual time of what you've edited. You can do this by using your mouse to go to the end of the wave and then selecting View from the Toolbar. From the View Menu, select Time Display. This will display exactly how long the music is. If the music is a little too long, you can either edit out some music or you can just speed it up. To speed up your music, use your mouse to highlight the entire wave. From the Toolbar select the Process Menu. From the Process Menu, select Time Compress/Expand. A window will pop up telling you how long the music is, and you can use your mouse on the arrows to make the music faster or slower.

Sound quality is key. It is best to record in mono, not stereo. This will avoid the annoying problem of only hearing the left or right channel on a rink's sound system. To do this, select the Process Menu from the Toolbar. From the Process Menu select Channel Converter. You will now have the option of making the wave Mono or Stereo. To improve your sound quality, you should perform one final step. From the Toolbar, select the Process Menu. From the Process Menu select Normalize. Music should be normalized to 16-Bits.

There's no more breaking a nail or using a pencil to advance the tape forward past the lead. From the Toolbar select the Process Menu. From the Process Menu select Insert Silence. Use the mouse on the up arrow to go to :07 seconds. Use the mouse to select Start of File. Your wave file will now have seven seconds of silence at the beginning to accommodate for the lead. This will eliminate tapes with leads that are too long or tapes that are missing the first note of the music.

Several times during the process, make sure you remember to save the wave file. This is just like saving any other file in your computer. Select the Save button and name the file. You can record your wave file to a tape while still in Sound Forge, but your sound quality will be better if you record to tape from Windows Explorer, so exit Sound Forge. Go into Windows Explorer and double click on your wave file. A player window will pop up and start playing the file. Stop the player, turn on your tape machine and insert a blank tape. It is best to use a tape no longer than C10. Press Record on your tape machine and use your mouse to start the player. Remember that ideal recording levels are between -10dB and +3dB. This range will eliminate volume adjustments on playback. When the music is over stop your tape machine; you're finished!

For peace of mind, make at least two more copies. All your tapes will now sound like masters. Remember to remove the little tabs on top of the tape to prevent accidental erasure.

Music takes a lot of space on your hard drive, so you may want to free up some space by using a CD-ROM burner to store your edited music on a CD. Most CDs will store up to 74 minutes of music. You could even use your CD-ROM burner to put an entire ice show on one CD.

This may sound complicated, but once youÕve done it a few times, you'll never want to cut music with a stereo system again. You can even use your computer to make professional looking tape labels to go along with your professionally edited music. Have fun!!!

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