

How to mix Surround in Soundtrack Pro

Jay Rose February, 2006

Apple's Soundtrack Pro [STP] is a breakthrough—a loop music editor that's also a multitrack editor/mixer and waveform editor, integrated nicely with Final Cut Pro. But while STP does some things very well, its multi-channel capability is rudimentary at best: it can handle multi-channel i/o, but chokes on multitrack files, and puts the user through all kinds of grief when attempting to mix surround. This article will help you navigate that last function. It isn't covered at all in Apple's docs.

This accompanies my review of STP in the February 2006 issue of DV Magazine, available at DV.com. It assumes you already know how to use STP.

If you're unsure how to do the basic program operations described here, you'll find them in the manual. Please don't ask me for additional explanations: normally, I'm glad to help... but while STP is a fun program, it's not the one I use in my daily work.

Getting Started

Hook your computer up to a multi-channel i/o device, and make sure the system recognizes it properly (see manufacturer's docs). I tried both MOTU's PCI 2408 and M-Audio's FireWire Project Mix, others should work as well.

Hook the i/o device's outputs up to the individual inputs of a surround monitoring system. I'm not going to let you mix without monitoring.

Launch STP and start a new multitrack project. In the multitrack view, create enough stereo and mono output channels [ctrl-click] to support the format you're mixing. I was planning a 5.1 mix, so I chose stereo mains, stereo surrounds, mono center, and mono LFE.

Using the pulldown (fig 1), route the outputs to individual mono or paired outputs of your i/o device.

Start building your project (or import elements from your NLE). Generally, dialog is mono and goes to the center channel. If you have music or effects in a multi-channel surround audio format, you'll have to split them to mono or stereo AIFFs before importing them to STP. You can do this in Audacity¹ as well as many other audio programs.

If you have music or effects in stereo, see the next two sections.

How to pan surround for effects

I wanted to add a *woosh* which would pan in a circle (front left, then front right, then rear right, etc). I put a nice stereo woosh² on track 2, assigned to the main outputs. Then I copied it a little later to track 3, assigned to the surrounds.

To create the panning effect, I opened the rubberbands (or volume and pan automation lines), as shown in figure 2 on the next page.

Adding keyframes with the mouse, I panned the track going to the mains from left to right. Then I brought that track's volume down, while

bringing up the volume for the track that held the going to the surrounds.

Then I panned that track it to the left... completing the circle.

If you don't need a moving pan, of course you can position

the effect in the surround field by using both tracks' volume and pan controls.

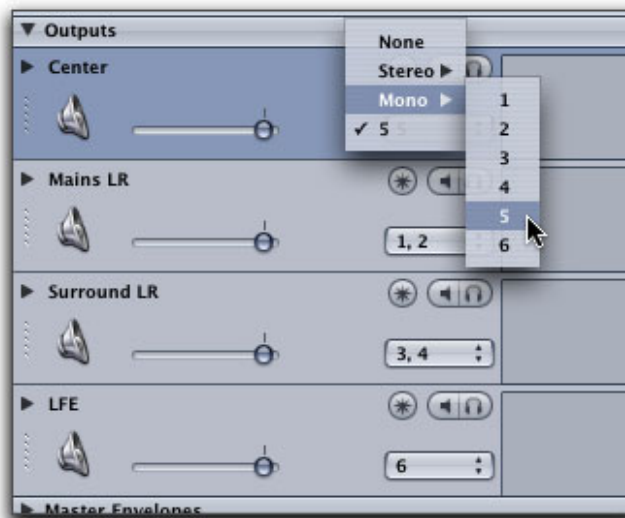


figure 1

¹ Opensource free program for Mac / Windows / Linux. See audacity.sourceforge.net.

² I did it on a synth. You can also make one in Audacity; see my June '05 column at DV.com.

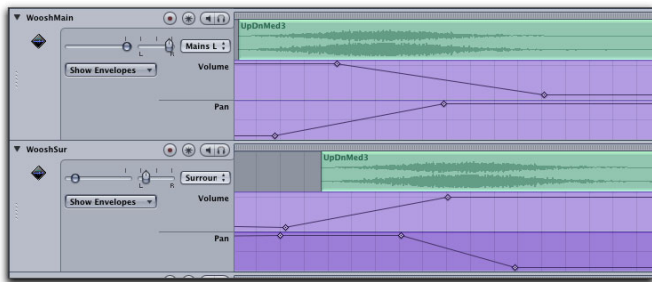


figure 2

Even if your setup has a control surface with faders and pan pots, this is easier in STP using multiple rubberbands. More powerful programs, like Nuendo (fig 3), have surround joysticks that can be activated by mouse or from a hardware controller.

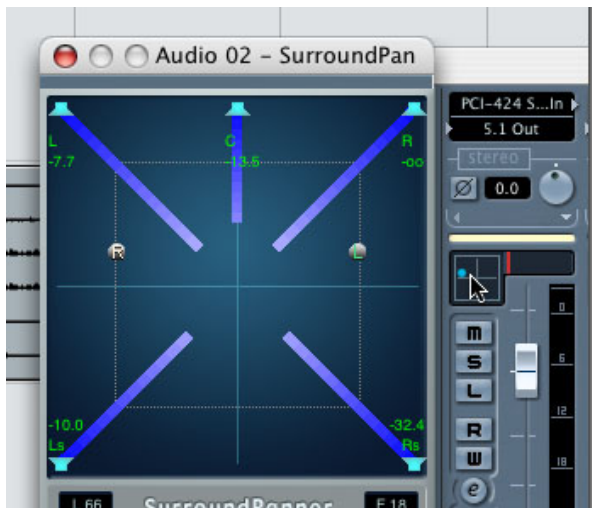


figure 3. Note also the small joystick above the fader

A true circular rotation of a stereo effect in surround requires intermediate steps, such as sourceL going to mainsR and sourceR going to surroundR (that is, the source is in stereo, but as front-to-back on your right), which can be done with additional tracks. But that gets so convoluted I do it in realtime DSP instead.

What to do with stereo music

The most common arrangement for stereo music mixes in a surround track is to keep the original mix in front, and send reverb as a kind of ambience to the rear.

To do this, create a new Send on the multitrack view. I called mine BackVerb. Route it to surrounds. Assign a reverb and any other ambience processors you want to this send. In the processor control panels, set the MIX to 100% wet... unless you prefer some of the original stereo mix to come from the surrounds along with the reverb.

In the Mixer, feed the stereo music track to this new send. In figure 4's meters you see dia-

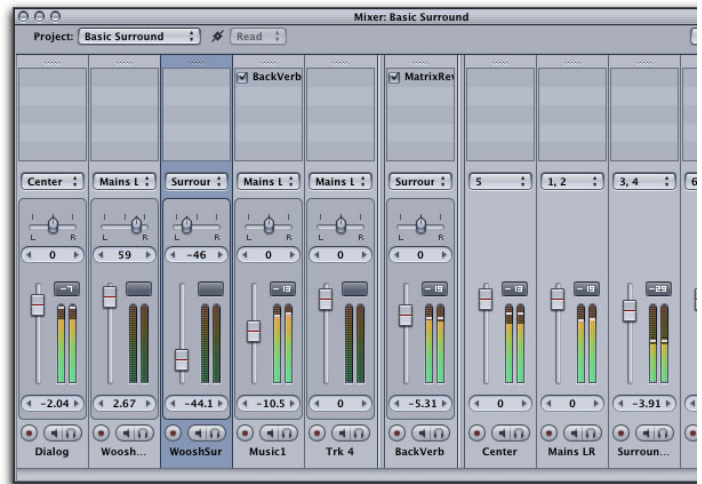


figure 4

going to the mains, and a slightly softer, echoey version of the music coming out the surrounds.

Output

Once your project is mixed, you can play it in realtime using the multi-channel i/o device.

You'll need Compressor (another component of Final Cut Studio) to save the mix as a multi-channel file. Use STP's File:Export:With Compressor command. Choose an appropriate Compressor preset (there are ones for DVD and similar uses, or you can build your own in that program). Edit STP's channel layout (fig 5) so the file's channels match the outputs you assigned when you started the project. Then save.

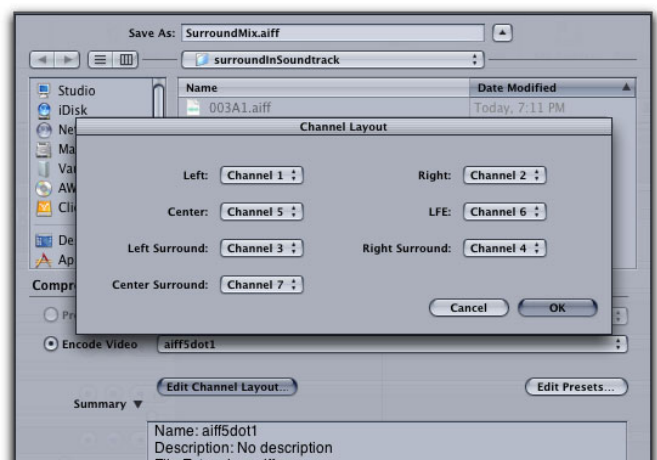


figure 5

STP won't be able to open the resulting file, but you can import it to other programs, including Audacity.