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## INTRODUCTION

Studio One is a relatively new player in the field of digital audio workstations (DAWs). PreSonus has entered the game with a fresh DAW built from the ground up. It's always exciting to me when something like this comes along. Products like these tend to push the envelope and bring something new to the table. They're forced to be innovative to attract new customers and to get customers to switch over from competing products.

I have been using DAWs since the mid-1990s. Along the way, I have used every single digital audio production product on the market. As you'll discover throughout the rest of this book, Studio One does not come up short in any way when compared to the other products on the market. Studio One is an amazing music creation and production product. Studio One has all the features necessary to compose, edit, record, mix, and master your project.

*Teach Yourself Studio One* is an entry-level book for people new to recording in general and using Studio One in particular. It is designed to cover the basic concepts you need to understand about your computer, recording practices, choosing an audio/MIDI device, selecting microphones, and more.

We'll cover some fairly complex ideas in a simple-to-understand way that hopefully will leave you ready to turn your song ideas into great recordings. There is also a DVD that comes with this book. Using the book and the DVD together will help shed some additional light on the software and give you some visual cues to understanding some of the concepts, tips, and tricks we talk about in this book. By the time you complete this book and watch the included DVD, you should have a solid foundation of knowledge to build upon when you begin using Studio One.

# AUDIO INTERFACES AND STUDIO ONE

*Audio interfaces* take sound from an analog source and convert it to a digital signal. Whether it's the sound of your voice through a microphone or the sound of your guitar plugged directly into an input, the sound starts out as analog, and the audio interface's job is to convert it to a digital signal so that it can be played back and manipulated by a computer, software application, or stand-alone digital recording device.

With Studio One, you have a couple of choices for getting sound into the application. The most basic options are to plug into your computer's on-board audio input or use the built-in microphone on your computer (if it has one). For audio-quality reasons, I don't recommend either of these options. A better choice is to use an audio interface, which will allow you to directly connect a microphone or an instrument and create a digital file from an analog source at a much higher quality than using the built-in audio interface on most computers. Audio interfaces take the audio signal you create with your instrument or microphone and convert that analog signal into a digital signal, which in simple terms means they take the sound you hear and put it into your computer.

It is really important that you verify your audio interface works with your operating system before you buy it. For instance, on the Mac side of things, Studio One doesn't work with anything lower than OS X Leopard 10.5.2, which means you need the second-released update of the Leopard OS version 10.5 (as in, 10.5.2) to run it. If the audio interface doesn't work with Leopard, don't buy it! The same holds true if you are using a Windows operating system. At the time of this writing, 64-bit operating systems are hitting the market, and most audio interface manufacturers have updated drivers for use with 64-bit operating systems. Just be sure to read the technical specifications carefully when choosing your audio hardware.

## **Choosing the Right Audio Interface, and a Word about USB v1.1 vs. USB 2**

How many audio tracks do you want to record at the same time? One? Two? More? You'll want to think about that before you purchase your audio interface. If you're a guitar player and you plan to record stereo guitar mics and a vocal at the same time, you'll need at least three inputs that can be simultaneously sent to Studio One. You need to consider this on the front end so you buy the appropriate audio interface for the number of tracks you plan on recording.

If you want to record your voice only, guitar only, or any other sound into one mono track at a time, then a simple stereo audio interface will get you started with Studio One just fine. If you want to record a set of drums and get the input from each microphone onto a separate track, you'll have to step up from a USB v1.1 interface to a USB v2, Firewire, or PCI interface, which allow for more than two tracks to be recorded at once, each to a separate track.



## CHAPTER 6 SETTING UP YOUR FIRST PROJECT IN STUDIO ONE

It's now time to get Studio One open and ready to record something. We'll take a step-by-step approach to make sure everything is working as it should before we get into capturing your musical creations. Let's start with getting everything physically connected.

### Physical Connections

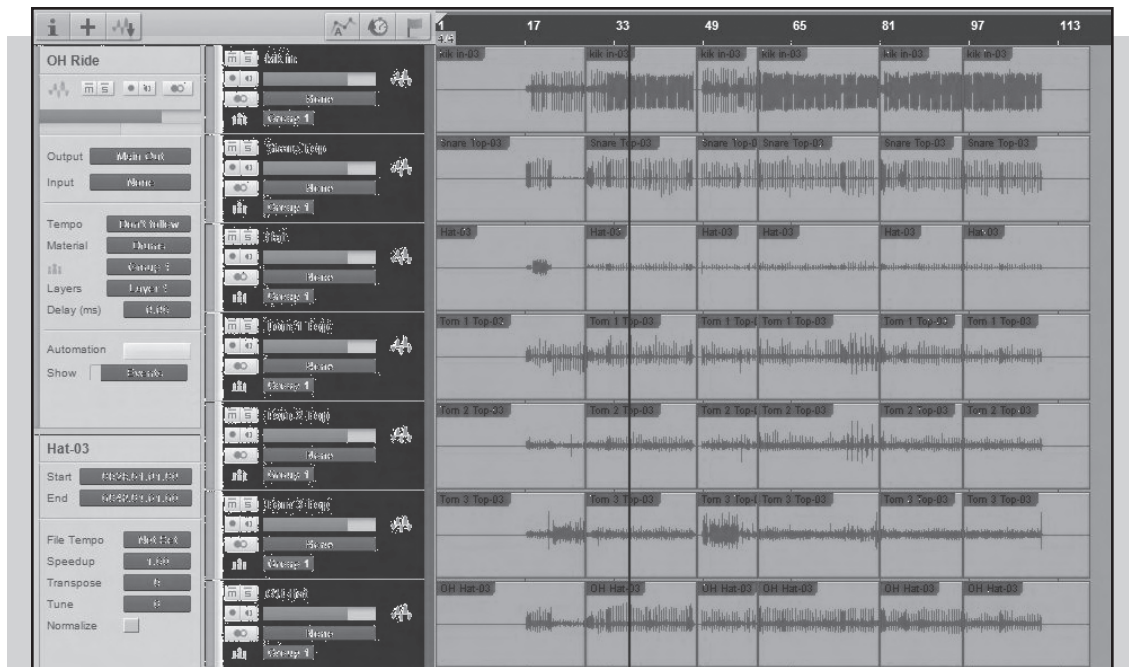
For everything to work well, you should take your time making the necessary physical connections between your audio interface, MIDI interface, microphones, speakers, headphones, MIDI controllers, and any other peripherals you have at your studio. For this example I will keep everything pretty simple and basic. But if you are using a more complex setup, the same principles will apply.

Let's start with audio. The first thing you need to do is make sure your audio interface is turned on and connected to the computer by whatever means it uses (USB, Firewire, etc.). Then, using an XLR mic cable, plug the female end into your mic and the male end into Channel 1 on your audio interface. If you are using a condenser mic, make sure you have 48V phantom power turned on for Channel 1 of your audio interface. Next take the Analog Outputs 1 and 2 of your audio interface and use the appropriate cables to plug Output 1 into your left speaker and Output 2 into your right speaker. Make sure your speakers are turned on! If your interface has a dedicated headphone output, plug in your headphones to that jack now as well.

Now we will set up our physical MIDI connections. For this I'll assume you have a dedicated USB MIDI interface and a MIDI keyboard controller. You should have already completed the installation procedure for your interface. For this example there are only two connections to make, one from your keyboard to your interface and a second one from your interface to your computer. So plug one end of a MIDI cable into the MIDI Out jack of your controller and the other end into the MIDI In port on your interface. Then plug your MIDI interface into your computer and power it on. Alternately, some MIDI interfaces have built-in USB connections, in which case, just plug a USB cable from your MIDI keyboard into an open USB port on your computer. If you are using a USB hub, make sure it has an external power source. Most bus-powered audio and MIDI devices require quite a bit of power to run properly, so either plug directly into a USB port on your computer or use a powered USB hub.

Once you have selected the tracks you want to be in the group, right-click on any of the tracks that you have selected and choose Group Selected Tracks from the pop-up menu. You'll notice that the words Group 1 will appear in the Edit Group window after you have created a group (Fig. 42).

After you have created your edit group, you can move, cut, copy, paste, and do whatever else you need to do to get the performance to sound the way you want. Now any edits you make to ANY of the drum mics will affect ALL of the drum mics. This will ensure that everything stays in perfect phase. Take this same approach to any multi-miked instrument.



▲ **Fig. 42: Multi-tracked drum kit grouped together. Notice the Group 1 label under the track name for each track. This shows that they are part of the same edit group.**

## Bounce Selection

*Bouncing*, or consolidating multiple regions to form one new contiguous audio file, is a handy way to archive files, share files with other DAWs or clean up your edits. In our previous exercise of recording multiple takes for a lead vocal, you may have ended up with one vocal performance consisting of 30 or more separate audio files. Every time you punch in, you are creating a new audio file. After you have completed all your edits, you may choose to bounce those 30 audio files comprising the perfect vocal performance into a single audio file. To do this all you need to do is select the Range tool and then click + hold + drag from the end of your comped vocal performance all the way back to the beginning. Be sure to include the entire performance!