Going Mobile

Creating A Laptop-Based Studio For Drummers

by Michael Dawson



Thinking about setting up a personal studio where you can record tracks, build loops, and create sequences in your bedroom, at the hotel, or even on the gig? Well, there are essentially three pieces of gear—aside from your drums and a few decent mics—that you'll need to get going: a high-powered laptop, versatile music software, and a professional audio interface.

Apples And Oranges

The first thing you have to decide in order to get your mobile studio up and running is the type of laptop you're going to use. There have been countless arguments over which is better, a Mac or a PC. But it really comes down to preference. If you have limited computer experience, then you should probably go with what you're most familiar with. That way you don't frustrate yourself by having to learn too many things at once. Figuring out how to work new recording software and audio devices, while *also* having to get used to a new computer platform, is a recipe for disaster.

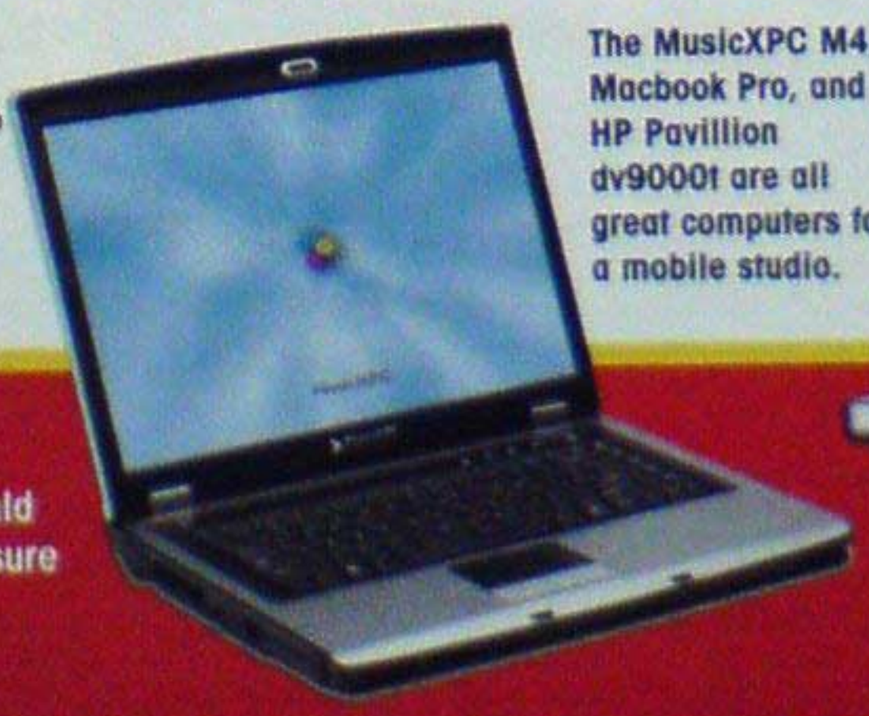
If you have a decent amount of computer skill, and you're not partial to one platform over the other, then you should spend some time researching the options for Macs and for PCs. There are benefits to each. You just have to figure out which one best fits your interests and your budget.

In the Mac world, you have a couple of options. If you have the cash (around $3,000), you can buy a brand-new 17" MacBook Pro that'll handle most of your music making needs with minimal fuss. If you want to save some bread, you can usually find a refurbished MacBook Pro or PowerBook at a considerable discount from www.apple.com. Just be sure to check that the specs on these machines are adequate for what you need. (See sidebar: Get The Specs.) Also consider purchasing an extended warranty, just in case the computer decides to fail after a year or so.

The strength of Macs is in their power, reliability, and ease of use. They're very stable computers, which is crucial, especially if you plan to use them on gigs. For those reasons, most audio professionals prefer them in the studio and on stage. Plus, all Macs with the OSX operating system come with a software bundle called iLife, which includes the surprisingly powerful and versatile audio program GarageBand. This program has everything you'd need to get started. So even if initially you only have enough money to buy the computer, you can still do a lot of cool things, like recording live tracks using the Mac's built-in mic, creating layers of percussion and sound effects using GarageBand's extensive loop library, or producing original music with the included software instruments.

On the PC side, you have a lot more options to explore. Not only are there a variety of major brands that offer great multimedia laptops (like Dell, HP, Gateway, etc.), there are also several custom manufacturers whose computers have been specially configured for recording and other audio applications, like MusicXPC and Rain.

If you decide to go with a custom machine, or even one from a major manufacturer, do a little research to be sure that the company has a good reputation for customer support. There's nothing







The MusicXPC M4, Macbook Pro, and HP Pavillion dv9000t are all great computers for a mobile studio.

GET THE SPECS

Here are some important details you should look for when shopping for a laptop to ensure the best performance.

1) 2.0 GHz (or higher) processor speed
2) 7,200 RPM hard drive with 100 GB or more of storage space
3) At least 1 GB of RAM (2-3 gigs is preferred)
4) At least two USB 2.0 ports (for peripheral devices and dongles)
5) A FireWire 400 port for your audio interface, and a FireWire 800 port if you want to record to an external hard drive (recommended).

program. This means that an interface for Pro Tools M-Powered won't be able to run LE, and vice versa. (More on interfaces later.) Also, many of the program's effects require an iLok key, which is a small USB device (called a "dongle") that contains all of the plug-in's serial numbers.

Putting those slight deterrents aside, Pro Tools is very powerful and relatively easy to learn. But it isn't your only choice. If you go with a Mac, you can do a lot of the same things with GarageBand, including editing, looping, and mixing multi-track drum recordings. Both GarageBand and its big brother, Logic Pro, are owned by Apple, so they'll work seamlessly on your system. Another highly regarded Mac-based program is MOTU's Digital Performer.

Other multi-purpose DAWs include Steinberg's Cubase, Cakewalk's Sonar (PC only), and Ableton Live. Each of these has comparable features to Pro Tools, as well as some unique functions of their own.

Of those three, Ableton Live is especially noteworthy. It's designed to serve double-duty as a high-powered multi-track recorder *and* as an intuitive real-time "performance" instrument that allows you to record and improvise arrangements of loops and sequences on the fly. It also has a "Tap" function that helps you keep your backing tracks in sync with your live performance by playing a MIDI controller or by pressing one of the laptop's keys along with the tempo of the song. For these reasons, Live is an ideal program for those of us who want to use their laptops in the studio and on the gig.

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Pro Tools (top) and Ableton Live (middle) are two of the most powerful and versatile DAWs on the market. But Apple's GarageBand (bottom) is no slouch either.

worse than having your system crash an hour before a session and not being able to get any help.

You should also consult a PC audio professional regarding ways to optimize your system for best performance. There are a lot of tweaks that can be made, like shutting off certain CPU-intensive services, that'll minimize problems as you're working with your music.

In addition to having a variety of brand choices, you also have a good chance of finding a powerful PC laptop at a decent price. For instance, a brand new HP Pavilion dv9000t, with appropriate upgrades (including an internal dual hard drive that allows you to record and store your work directly on your system), costs about $1,800. But there's no music production software included. So you'll have to spend a couple hundred extra bucks on a third-party audio program before digging in.

To Pro Tools, Or Not To Pro Tools?

Once you've decided on a laptop, the next thing you have to determine is what you want to be able to do with your system and which software is best suited for those applications. There are several great digital audio workstations (DAWs) out there that can do everything from multi-track recording to advanced MIDI sequencing. But for high-powered recording and editing, Pro Tools is the standard. Also, if you plan to do a lot of session work with your mobile studio, it's likely that the artists you're working with will have recorded their material in Pro Tools. If you have the same program on your system, you can simply load their session file onto your computer and start tracking.

One hang-up with Pro Tools is that you need to have one of Digidesign's specified audio interfaces connected to your laptop in order to open your sessions. There are basically two versions of Pro Tools for home studio owners, LE and M-Powered. Both versions can share session files. But each has its own specific group of audio interfaces that you'll need to use in order to open the

ADD TO YOUR ARSENAL

Once you've put together a basic laptop studio, you might want to consider adding some of the following items to your system.

1) An external 7,200 RPM FireWire 800 hard drive for recording and storage, so you can keep your laptop's system disc from getting bogged down with huge session files.



LaCie All-Terrain 80GB external hard drive.

2) A drummer-specific USB MIDI controller, like M-Audio's Trigger Finger or Alesis's Control Pad, so you can program rhythm tracks in real-time.

3) A USB MIDI interface, like the MIDISport 4x4, so you can control multiple MIDI devices at once (keyboards, electronic drums, etc.).

4) A pair of high-quality headphones (like AKG's 271 Studio) or in-ear monitors (like Shure's E or M-Audio's IE series), so you can work on projects in any environment.





Digi 003 Rack

M-Audio 1814



PreSonus FireStudio



Finding Your Face

Basically stated, an audio interface is a piece of gear that converts analog signals (from microphones, electronic instruments, etc.) into digital information within your computer's audio software. It's also what turns the digital info from your computer into what you hear in your monitors or headphones. While most laptops come with a simple built-in interface (usually as $^1/_8$" inputs and outputs), their analog-to-digital and digital-to-analog converters are not adequate for professional audio applications. And they don't allow you to do multi-track recordings. So a high-quality FireWire audio interface is essential to a professional-grade laptop studio.

If you've decided to go with Pro Tools, then you only have a few interface options that will suit your mobile drumming needs. For Pro Tools LE, you can get their Digi 003 Rack, which allows you to record up to eight tracks at once (four balanced XLR mics and four unbalance $^1/_4$" inputs). Or, if you choose Pro Tools' M-Powered software, you can use one of several interfaces from M-Audio, like the FireWire 1814. This interface has two balanced mic inputs and eight line inputs.

Obviously, neither the 003 nor the 1814 provide enough balanced mic channels to allow you to record a complete drumkit. Most multi-track drum sessions use at least six mics. So you'll also have to pick up a digital mic preamp, like M-Audio's Octane, in order to get all the tracks you need. The Octane gives you eight additional inputs, and links up with your interface via ADAT optical cable (known as "light pipe").

If you choose a DAW other than Pro Tools, you have more variety for audio interfaces, like PreSonus's FireStudio. The FireStudio allows you to record up to eight tracks of balanced XLR signals at once. If you need additional inputs, you can link up to two of PreSonus's DigiMax FS preamps (via light pipe) to get a total of twenty-four channels. PreSonus also throws in their software bundle ProPak, which includes a copy of Cubase LE and several virtual instruments and effects plug-ins, with each FireStudio interface.

Aim High

As you're considering which computer, software, and interface is best for you, keep in mind where you might want to go in the future. Even though a particular piece of gear may be good enough for now, as you gain more experience incorporating your laptop into your music, you'll likely want to expand your setup down the road. So even if you have to save up a little extra cash, it'll be worth it in the long run to have as powerful a system as you can afford. That way, the only limitation is your imagination.