

Home Recording versus Paying a Recording Studio

by Brandon Drury

Back in the old days (around 'Nam) recording at home was a new miracle. You could actually hit record on a device and capture sound in your own home. Your eyes would light up just like Thomas Edison did when he first invented audio recording.

Fast forward to 2007. It's now completely affordable to outfit a fully functional recording rig in your home for the price of a high quality, American made guitar. While the price of getting into home recording is much cheaper than it has ever been before, it's still a lot of money. Is setting up a small studio worth the price? What are the pitfalls of trying to record yourself? Would you be better off just paying a professional recording studio to do the job for you? Hopefully, I'll answer these questions and more.

What It Takes

You are going to need a lot of knowledge, gear, time, and patience before jumping into the recording studio world. I was a computer nerd half done with a degree in electronics when I jumped into the recording world. I understood electronic basics and had run live sound numerous times. I totally understood how to operate a mixer/console. So all I had to do was jump into the recording portion, right?Well, it turned out that there was quite a learning curve to go from an empty room to the creative process (which is the fun part) and walk out with a finished cd in hand.

I had no idea how much time I would spend cursing Windows audio drivers, failed hard drives, out of sync audio files, clicks and pops, unwanted distortion, etc. Truth be told, I went from an average computer user to a computer master in that couple of months it took me to work out all the kinks in my system. That's right. It took me a few months before I was ready to record my first band. It was that tough. That was in 2001. Maybe things are easier now. I'm guessing that you'll still have quite a road in front of you.

After you get your rig fully operational, you are still going to have to learn the software. I would HIGHLY recommend that you buy a DVD and a book to teach you the software that you intend to use. I could have saved myself hundreds of hours of headaches if I would have just read the stupid manual and had a little instruction. I learned a lot by tinkering (which may be your nature too) but there is no point in learning things the hard way if you don't have to. On my very first recording session, I had my manual in my lap.

You could only imagine how stressful it can be if you have 5 guys staring at you while you desperately push buttons on something you barely understand. I'd say it took me a good 3 months of everyday tinkering before I felt comfortable using the software or basic recording. Keep in mind that I wasn't trying anything advanced here. No crazy editing, no fancy automation. In fact, I had very little understanding of audio when it came down to early reflections and multi-tap delays. I'm talking about just getting the stupid song onto the computer.

Okay, so I've kind of prepped you on how the learning curve required for recording music. Let's talk about the gear.

These days, it's a waste of time to use the stand alone recorders you see in the mail order company catalogues. While these boxes promise to have everything you need to record your demo (and they usually do) the learning curve requirements are astounding. Yes, I just wrote an entire section on how tough it was to learn computer recording. However, there is a big difference between the learning curve of computer audio and the learning curve of standalone recorders. When you learn computer knowledge, that knowledge is useful on just about every computer on the planet. (I've kept myself from starving a number of times with my computer knowledge which I mostly attribute to recording). Also, computer recording software generally uses a mixer that is a fairly close simulation of the real thing. The concepts stay the same. When you are using the stand alone recorders, you end up learning to hold E1 + Function + Menu to get to Aux send page. Why do you need a page for aux send? Anyway, I've had several friends who have used these boxes and don't know anything about audio. They spent all their time learning this foreign language that will be obsolete as soon as the record is. In summary, I highly recommend that you go with a computer for your digital recordings.

Okay, so you need a computer. The good news is you don't need a very fast one by today's standards. In fact, I built my recording computer for about \$300 and it's overkill. I need a faster computer than most because I do more projects than most. It makes a difference when I'm rendering down mixes that I can do it twice as fast because I have too many songs to mix on a given day. I don't have 3 minutes to sit around and wait for the computer to think.

On top of the computer, you'll need a soundcard. I recommend a soundcard with a breakout box. This means that a cable will actually come out of the back of your computer and connect to a box where your audio connections are made. Setups with breakout boxes are almost always preferred. In fact, I only know of one professional audio company that doesn't rely on a breakout box for their computer interphases. I do not recommend Sound Blaster and those sorts. We are not playing games or watching DVDs. We are recording music. The demands are certainly not the same. You will find many Firewire and PCI soundcards in the mail order catalogues that work great.

Pay special attention to the number of inputs and optional preamps. This is important. You may only need 2 inputs for your recording. In fact, most projects I do seldom use more than 2 channels 90% of the time. Of course, the other 10% of the time we may be using 19 or 20 channels. If you are recording electronic music and only plan on doing a few overdubs with vocals or the occasional instrument, 2 channels will probably work fine. If you plan on recording your entire 4 piece rock band live with rock drums you are going to need at least 10 inputs (maybe more). So plan ahead and figure out how many microphones you plan to use at once.

Next, you need preamps. Preamps boost the signal of a microphone up to line level and are pretty much required. Preamps are usually the top knob on the mixer of your PA. You'll need one preamp for every microphone you plan on using at one time. You'll want to have the same number of preamp channels as you do inputs on your soundcard. There are many soundcards that come with preamps. There are many

many external preamps that CAN improve your sound quality just slightly. If all else fails, use the preamps in your PA mixer. If your mixer uses inserts you can split the signal right off the preamp by only pushing in the cable half way. I'm referring to the cable that goes out of your preamp and into your soundcard.

Next you'll need microphone stands. There aren't too many cases where you don't need a microphone stand. You have to be very very careful with microphone stands. If you buy a super cheap microphone stand, you may have problems with the microphone changing its position in the middle of a session. The results can be absolutely horrible. So buy decent microphone stands. \$30 per stand is a reasonable low budget stand. I would not recommend that you spend any less on a microphone stand.

Next is microphones. This is where it gets fun. There are so many to choose from and there are so many tonal options. You'll want as many microphones as you have preamp channels and soundcard channels (or you went overkill on preamps / soundcards). Choosing microphones is beyond the scope of this article. You can spend \$50 on a microphone or you can spend \$3000 on a microphone and you have no way of knowing which will sound better on a given source. This is a severely big deal when it comes to recording and it's one major area that separates the men from the boys, so to speak. Home recording studios usually have terrible microphone selections to choose from.

The most important piece of gear in your studio is your studio monitors. If you try to use a boom box you will be very disappointed when you burn a cd and try to show off your work on another stereo system. Of course, you'll probably be disappointed even if you have a \$10,000 set of studio monitors because your acoustics will be all wrong in your room and even still you probably haven't mixed enough songs to be any good at actually mixing.

Okay, I've outlined what goes into recording your cd. Guess what - any decent studio has all of this taken care of you. Do you know about audio latency in XP? Do you know anything about room nodes? The studio guy probably does. That's how he makes his living.

So when you walk into a professional recording studio ran by a serious engineer who cares about your music, you can expect to focus on one thing... the recording of your music. You don't have to wonder about the specs of the computer, the cables connecting the preamps and the soundcard. You don't have to worry about wasting huge amounts of time while the bass player stares at a mess of cables. You don't have to buy the mess of cables. In fact, I've recorded entire albums cheaper than you would spend on microphone stands.

In other words, I've delayed charging a high price so that I could get tons of practice and become well known in my area. You might find a serious recording guy yourself who might work cheaper than you think.

What an experienced recording studio engineer knows that you probably don't

- 1) The value of his time - An experienced engineer isn't cheap (but could be much cheaper than trying to record yourself) but he knows that his time is worth X dollars. How is this an advantage? It's amazing how humans rise to meet a challenge. When you go in knowing that you are about to spend \$20, \$30, or \$50 an hour on recording all of a sudden you take the time to get your guitar set up beforehand. You make sure your songs are mega tight and ready to go. You get your butt in gear because you are about to spend some money. When your guitar player tells you that he thinks he has the recording device working right, you don't jump up and get busy. You get frustrated while he tries to figure out the problems on channel 1 and 5.
- 2) Advanced knowledge of acoustics - This is one of those areas that you will entirely put off. At first, you are just trying to figure out how to turn the computer on. Have you really put any serious thought into the comb filtering effects of your room? The odds are minute. In fact, I bet most bands put no thought into their room acoustics. Guess what. Any good studio has spent thousands and thousands of dollars perfecting their acoustics. The only thing more important than acoustics in a recording is the song, the musicians, and the instruments. After that, acoustics is first. Proper acoustics are more important than microphones.
- 3) Advanced microphone selection - Having the right microphone for the job is an extremely important part of being a recording engineer. When you know that a guitar is too bright, you put a microphone on it that will reduce this brightness. When a vocalist sounds dull, you put a bright microphone on them. It goes on and on. This is what really makes the sound quality part of recording. Recording at home will make it hard to justify a \$15,000 microphone collection (or much higher). Some studios have \$15,000 microphones.
- 4) Advanced knowledge of microphone placement - Even more important than the microphone is where you put it. A seasoned pro will know what has worked on the past 10 albums he's done. He knows what he likes and what he doesn't. He doesn't have to wait until after the mixing is complete for him to figure out that the snare sound sucks. You'll be experimenting like crazy, but it will take a while before you get it right, more than likely.

When you combine all this knowledge together, it becomes quite clear that there are serious advantages to letting the pros handle the work. With that being said, if you really want to learn audio, don't mind pumping thousands into a bottomless pit, and are really that excited about taking years and years and years to learn the craft properly, go for it. I did.

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