Home Recording Setup For Singer/Songwriters

Introduction

My name is Keith Livingston and I'm a singer/songwriter who's been playing music for, let's just say decades, shall we?

I'm also probably just like you – someone who wants to get good recordings of songs at home. I've put together this guide to help you get started doing that.

This guide is for folks who have songs and want to record them. It's not a treatise on esoteric audio techniques or a shootout between thousand dollar microphones or about the latest piece of gear nobody knows how to run. It's a guide on how to start with a basic home studio setup so singer/songwriters can get decent sounding demos of songs, or even release professional sounding recordings.

Why listen to me? Because I have extensive recording studio and live sound experience. I've been producer or engineer on hundreds of recordings and dozens of albums and CDs. I've worked in many of the top studios in the Seattle area and mixed in rooms all the way up to Seattle Center Arena (that's what they used to call it) and the Tacoma Dome. I literally have thousands of hours of studio time under my belt.

I've taught audio engineering and production at the college level, worked for a record company and run a radio station too (in Russia — it's a long story).

FYI, you can hear demos of some of the gear I talk about here, online at KeithLivingston.com.

Let's go!

Keith

Basic Studio Setup

The basic pieces of recording gear you need will vary depending on what you need. Most home recording setups will need the following though. You'll need...

1) Computer or stand-alone recorder

You'll need something to capture your recordings. You can either use your computer and some recording software, or a device designed specifically for recording. I use a computer. Most people have computers these days, so we'll focus on that end of things.

2) Microphone(s)

If you sing, or play an acoustic guitar (one that doesn't plug in) or any other non-electric instrument, you'll need one or more microphones. Two mics is nice if you want to record in stereo but voice is recorded mono, so many singer/songwriters can get by with one.

You need about as many mics as you're going to record live sound sources. In other words, if you want to record a drum set or big band, you'll need a bunch of microphones. If you're going to record three acoustic guitars and three singers live, you'll likely need a few mics (typically, 9 or more mics for a drum set, alone). But, with just one mic, you can record each singer and each guitar part separately (it's called overdubbing) and combine the sounds later in a process called mixing.

We're going to focus on simpler recording situations where you just need one or two mics at a time.

3) An audio interface

An audio interface turns your guitar/keyboard/voice etc., into the type of signal your computer can handle. They have one or more inputs (places where you plug in microphones or instruments). Each input has a preamp (pre-amplifier). Preamps boosts the tiny electrical signals from microphones and instruments up to a level your computer can work with.

You'll need an interface that has as many inputs as you'll need at one time. In other words, if you're going to have one singer and an acoustic guitar playing/singing live, you'll need two or three inputs (3, if you're going to record the acoustic guitar in stereo).

I'd recommend an audio interface with at least two inputs, so you can record in stereo.

You interface will also have a way to get the signals to your computer, usually via USB.

If you buy a stand-alone recorder, it will probably have inputs and preamps, so you won't need to buy a separate audio interface.

4) Recording software

Recording software, allows you to organize and work with your tracks (individual instruments that you've recorded separately). You can overdub new instruments while listening to previously recorded instruments, add effects such as reverb and delay and blend the sounds (mix) for the final version of your recording.

The good news is that really, really good recording software can be had inexpensively.

You may see the term DAW thrown around. It means Digital Audio Workstation. That's a fancy-pants term for either your computer with some recording software on it or your stand-alone recorder.

5) Plugins

Plugins are little pieces of software you can add to your recording software. They can be used to

process audio (add compression, model guitar amplifiers) add effects (reverb, delay, flange, chorus etc.) or create virtual instruments (drums, orchestras etc.).

Plugins come in a few standard formats which means they *should* work regardless of what recording software you use.

6) Other gear

You'll need...

- Headphones
- Monitors (speakers)
- Patience

So, here's how a session might work...

Scenario 1: Acoustic guitar and vocals

Most pieces of recording software have a function where you can tap a tempo in. So you tap in your tempo and then have your software create a click track for you (a timing track that you can play along with).

You plug your acoustic guitar into the audio interface, adjust the level with a knob and set a track to record. You plug headphones in so you can listen to the click track when you're recording. Now, you record along to the click track. You screw up, so you record again – this time it's perfect! You turn off the record function for that track.

Now, you plug your microphone in and set a different track to record. You record the vocals to go along with your guitar.

You decide your acoustic guitar needs a little reverb and your vocal needs a little compression (compression keeps the volume more constant). So, you add a reverb plugin to your guitar track and a compression plugin to your vocal track.

You fiddle with the volumes until it sounds good to you. Since that's all you need for this song, you tell the software to make an mp3 file of your mix. You're done!

Scenario 2: Full band sound

Most recording programs include what's called MIDI (Musical Instrument Digital Interface). We can use MIDI to tell your recording software what notes to play and plugins to tell it what sounds to play. For instance, we can program drum sounds through MIDI.

There are some pretty awesome drum, choir and orchestra plugins out there, as well as just about any other instrument you can imagine. In this scenario, let's suppose you're one person who has written a song and wants a full band for a demo.

Drums

You start by telling your recording software the tempo of the song. Then, you add a "virtual track" of drums. You add various drum beats and fills according to your liking and according to the arrangement of the song.

Bass

You borrow your friend Rod's bass guitar, plug in into your audio interface and record a bass track.

Guitars

You have a guitar amp but you live in an apartment, so you can't turn it up loud enough to sound good. So, you decide on a different approach. You're going to record the guitar straight into the recording software and add the sound later with a plugin! So, you plug your guitar into your audio interface and lay down two mean rhythm tracks and a scorching lead track – but they don't sound that way, yet.

Keyboards

You've got a nice keyboard, so you plug it into your audio interface and record some stereo keys to fill out the choruses.

Vocals

Your mic now goes into your audio interface and you record lead vocals and then some backing vocals on the bridge.

Mixing

You adjust your levels, add effects, make the guitar sound like it's going through a Marshall stack and mix down for your demo.
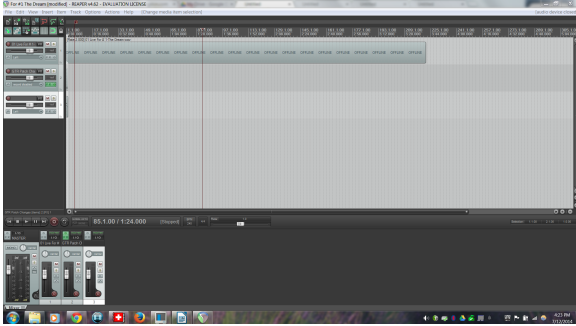
Gear List

Recording Software

Reaper

I'm currently using Reaper as recording software. I really like it and I'd recommend it. As of the time of writing this, individuals earning less than $20,000/year from their music can get Reaper for only $60! It's an unbelievable price for a great piece of software.

http://www.reaper.fm/

Pro Tools

Pro Tools is the industry standard in recording software. There are various versions with the standard version selling for around $600.

http://www.avid.com/US/products/pro-tools-software

FL Studio

Fruity Loops has a good piece of software, with the basic version running about $100. It's more oriented toward MIDI than Reaper.

http://www.image-line.com/flstudio/

Audio Interface

There are a few things to consider when you're buying an audio interface...

1. The quality of the preamps
2. The number and type of inputs
3. Phantom power
4. Direct monitoring

… let's go over those one-by-one.

Preamps: Top-level recording studios have very expensive mic preamps that sound incredible ($1,000/ mic channel). Audio interfaces in the $100-$200 range have preamps that sound good. If You're really in need of a pro-level sound, preamps, mics and the room you record in can make the difference.

But, you can get pretty darn close to that without breaking the bank. That's what we're going to talk

about here.

Number and type of inputs: Think hard about how many instruments you're going to record at once. You're going to need about that many inputs. For me, two will do. I rarely record instruments acoustically but if I need to, I've got a two-channel audio interface with two decent mic preamps.

I can always overdub other instruments later. If you want to record six musicians, all playing acoustic instruments at once, go to a recording studio to do it. They'll have the ten or twelve mics and the big recording console (with lots of mic preamps) to do it.

These days, most audio interfaces have inputs that will take either microphone (XLR) or instrument (1/4") cables. Check though.

Phantom power: There's a type of microphone that needs to be powered. It's called a condenser microphone and the special type of power it needs is called phantom power. Most of the good vocal and acoustic guitar microphones are condenser mics so, make sure your audio interface has phantom power.

Direct monitoring: The acoustic and electrical sounds that our voices and guitar (and other instruments) make have to be turned into digital signals so we can capture them on computer. That takes processing power and a little bit of time. That time is called "latency" and it can be a problem. Why? Because if you're trying to listen to yourself sing or play and the sound you hear is delayed slightly from the sound you're producing, it makes it almost impossible to do well.

We can solve that with direct monitoring. Direct monitoring means that we can listen to the signal *before* it gets computerized. You need an audio interface that has direct monitoring capabilities.

I'm using a [Focusrite Scarlett 2i2 USB Audio Interface](#) for my audio interface. It's has two inputs which will accept either microphones or instruments, phantom power and direct monitoring capabilities. If you need to record more than two things at once, you'll need something bigger. According to my ears, the mic preamps are solid.

Microphones: If you're a singer/songwriter who wants to record all your tracks yourself, you might be able to get by with one microphone. If you need to record in stereo, you might want a matching pair of microphones.

One, high-quality mic can go a long way though. You can use it to record both vocals and acoustic instruments. I'd suggest a condenser mic, I'm using an Octava MK-319. It sounds pretty good on my voice and will work well for an acoustic guitar as well. Other mic recommendations are the Rode NT1A and the Studio Projects C1.

Condenser mics have come down in price a lot since the Berlin wall fell. It turns out that some of the high-priced German mics had East German counterparts that were far less expensive. The Octava mics fall into that category

Headphones

You're going to need closed headphones rather than headphones where the sound leaks out. When too much sound leaks out, it gets captured again with whatever microphone you're singing into and it muddies up the sound.

Monitors

Monitors are speakers designed for recording. Why do you need a special set of speakers for recording? Because regular speakers lie to you, that's why. Regular speakers emphasize certain frequencies, for instance. You want your speakers to reproduce sound accurately – not emphasize bass so the tune is really thumpin'. If your speakers put out extra bass, you'll go light on the bass when you mix and it won't have the bottom end you want.

I'm currently using some Mackie MR5 powered monitors. They work just fine. If you don't get powered monitors (combined speaker and power amp), you'll have to get a power amp to power your monitors.

Plugins

Plugins are little pieces of software that you add to your tracks to process them. They can take the place of a lot of the gear you used to see in recording studios such as compressors, delays and guitar amps. There are also virtual instruments plugins that can be used to emulate drums, symphony orchestras and many other instruments.

You will have a plugin folder, and each plugin you get will go in that folder. You can find lots of free plugins on the Internet and lots of paid plugins too. They're usually in zip file format. You download them and unzip them into your plugins folder. Whenever you start up your recording software, it will look in that folder to see what plugins you have available.

Those plugins will then be able to be added to specific tracks, or even your whole mix. The procedure to add them varies, depending on your recording software. But once you add them, you'll see a little software interface with controls on it. The interface usually look like something you'd find in a studio – knobs and everything.

If you want a particular instrument or effect but are on a budget, search for "free _____ plugin". Make sure to do a virus scan when you download. You can also sometimes find earlier versions of plugins for a lot less than the latest and greatest versions.

Here are some plugins I use or have heard about.

Virtual Instruments

Addictive Drums: Addictive drums is a great resource to create drum tracks without a drummer. It's got tons of beats and even full songs. You can get a basic setup for about $150. I use it.

http://www.xlnaudio.com/addictivedrums/

Addictive Drums Interface

Orchestra Sounds: I've used the Miroslav Philharmonik (Classic Edition) on some projects. It sounds pretty good if you're looking for some strings or even a full orchestra.

Effects & Processors

Delays: Lexicon PSP 42 (paid) and Kjaerhus Classic (free).

Compressors: Kjaerhus Classic (free)

Guitar amp modelers: Guitar amp modelers mimic the sounds of various guitar amplifiers. There are some free ones (LePou Plugins) and others that are not so free (Line 6 Pod Farm, OverLoud TH2, Peavey Revalver, IK Multimedia Amplitube). I've used LePou, Line 6, Revalver and Amplitube with reasonable results. I'm now using Chris Lord-Alge's CLA Guitars plugin quite a bit.

Lexicon PSP 42

PodFarm

Kjaerhus Classic compressor

OK, that's a good, basic idea of how you might set up a home recording studio if you're a singer/songwriter. OK, that's a brief overview. Make sure to check out my music and hear my recording setup in action @ KeithLivingston.com.

Sincerely,

Keith Livingston