# The Home Recording Handbook

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Chapter 1: The Gear

So you'd like to start recording vocals, perhaps some vocal percussion, and maybe some body percussion - what do you need? I have great news: you can achieve high-quality results with minimal equipment, and in my professional opinion, you should always keep your setup as minimal as possible (more on that later). Let's jump straight into the list of components that will make up your recording rig!

1. A Room

What? Yeah, no, seriously - the room you use can DRASTICALLY affect the way your recordings sound. The highest priority when choosing a room (if you have a choice, that is) is to find a place that's quiet. Loud cars, trains, and even air conditioning units can really compromise a project, so it's paramount to start with an environment you can control. You'll also want to make sure the room sounds *good*. A lot of the time, that means it doesn't have too much obvious reverb or echo (especially if that reverb or echo sounds *bad*).

So what the heck do I do if my room sounds BAD? There are still workarounds, and fortunately, they do NOT have to be expensive. If you're in the United States, it's super easy to find one of my favorite acoustic treatment materials: heavy blue furniture moving blankets. The heavier, the better. Get at least 2 or 3 and clamp them to anything that'll hold them up in a shape that looks like the following figure (the view is from   above):
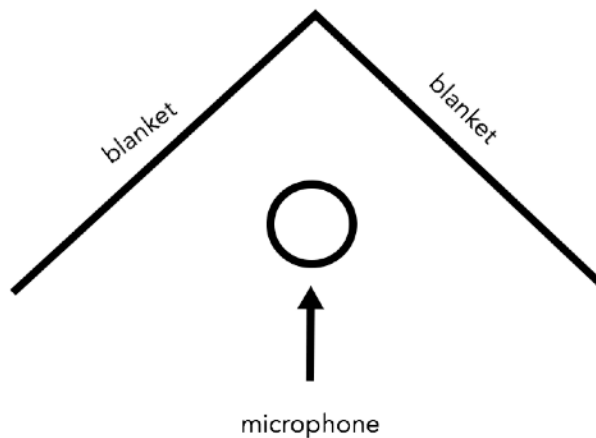
2. A Computer

Honestly, *whatever you have*. Recording isn't too taxing (compared to stuff like video editing) on your machine, to the extent where you can make it work on just about anything reasonably modern. The type of computer you have will dictate which software products will work, but there's something available for mostly everyone.

3. Headphones

You can make almost anything work in a pinch (as long as they're wired), but it's nice to have a set of decent studio headphones - this way, you can review the takes you've recorded with a lot more accuracy and fidelity. If you're recording with another person, you'll need two sets and maybe even a splitter or headphone amp (see the section below on audio interfaces)!

Recommendations: anything you already own (must be wired, must have 1/8" female to 1/4" male stereo adapter), AKG K240 Studio ($69, comes with adapter)

4. A Microphone

Your mic (or mics) is the next most important tool in making sure your recordings sound great. The overall variety of mics on the market might be overwhelming, so I'll simplify things a whole lot. Most people use condenser microphones (very sensitive, very detailed sound) for vocal recording. If you have a dynamic mic (think the typical handheld on-stage mic), that'll work too, but it might sound a little less detailed. I could go on for days about the nuanced differences between microphones, but we're not here for that - we're here to make the technology so simple that we forget about it and *focus on the music*.

Recommendations: MXL V67G ($58-70), Warm Audio WA87 ($499), Slate Digital VMS One ($799). There are many excellent choices over $1000, but these three represent reliable options at reasonable price points.

5. A Mic Stand, Mic Cable, and Pop Filter

A more expensive microphone stand usually means a higher quality microphone stand - you do get what you pay for. If you're gentle and don't abuse your mic stand, you can get away with using a cheaper one. Most anything will work,

and if you want to save money, monoprice.com has some of the least expensive decent stands available.

Your mic (XLR) cable won't affect your sound unless it's 1000 feet long or broken, so either buy one that won't break, or buy a few cheap ones. When I worked in a music gear retailer, I learned that store cost for most mic cables (even those costing $60-$80 each) was usually less than $10. Just use whatever - it'll be fine.

Pop filter quality does differ, and amazingly, my favorite ones are the dual-layer cloth filters from monoprice.com - they're super cheap, durable, and work as well as the best you can get.

6. An Audio Interface

You may have noticed that your circular XLR cable doesn't fit into any of the holes in the side of your computer. Oh, heck.

To amplify your mic's signal and get it into your computer, you'll need an audio interface. Choose one that matches the type of inputs your computer has - USB is the most popular overall. Also, choose one that has the right amount of mic preamps - if you will only ever use one microphone at once, you only need 1 mic preamp. It's easy to get hung up on the details and features. Focus on finding one that will be reliable, stable, and have the right amount of inputs/outputs. Sound doesn't vary NEARLY as much between interfaces as it does between microphones; most listeners would not notice the difference between a variety of decent modern interfaces.

Want a simple interface but need to use two pairs of headphones at once? The interface takes complete control of your computer's audio, so plugging headphones into both the interface and the computer's built-in jack won't work. For full functionality, you'll need a headphone amp or splitter (inexpensive is fine) to split the signal. If you want to go super-low-budget, you don't have to buy anything - just plug the second set of headphones into one of the main speaker outputs on the back of the interface. It won't be particularly loud, but as long as everything important is panned to the center it can work just fine.

Recommendations: anything from the Focusrite Scarlett product line ($110-$499). Look up the system requirements and make sure your computer meets them. Make sure you have the proper type of USB port or an adapter to suit the interface you're buying.

7. Recording Software (A Digital Audio Workstation or DAW)

The final piece of your home recording puzzle! When you're just starting out, don't spend any money on a DAW. Many popular choices offer free versions, trial versions, or both! A free version of a high-quality DAW can present a simplified variant of a tried-and-true workflow - perfect for you if you're just getting your feet wet in the recording world. I recommend trying more than one and picking whichever you find intuitive, but there are also some notable strengths and weaknesses between the different options that you may only discover with many hours of experience. I own quite a few for the sake of receiving sessions from other producers, so I'll list what I've noticed below:

Pro Tools (free version is "Pro Tools First")
- The industry standard. Easy to transfer sessions from person to person. Fastest and most accurate for audio editing. Audiosuite effects make it easy to apply an effect to individual clips, and normal plugin functionality works on entire tracks. Extensive keyboard shortcuts - less reliance on mouse for tedious editing tasks. This is my favorite.

Studio One (free version is "Studio One Prime")
- Lots of features that work fairly well, better suited for songwriting and mixing/mastering. Editing feels clunky, slow, and less accurate than Pro Tools. Busier layout can be more intuitive to beginners; more of a drag-and-drop workflow.

Logic Pro (free version is Garageband)
- Mac only. Great virtual instruments, presets, and songwriting tools. Included effects are good. Editing is OK, I prefer it slightly over Studio One, but not as quick or accurate as Pro Tools. Garageband isn't really the same as Logic, but it's the closest thing Apple offers to a free version.

Reaper (trial version is unlimited, licensed copies are inexpensive)
- Most customizable, macros and such. Workflow is weird to me but some people find it intuitive. Includes some really unique tools.

Chapter 1 Wrap-Up

Assuming you already own a computer, you can acquire everything you need to get started for less than $250 (and honestly much less than that if you're truly restrained by budget). If you already own any of these components, try using what you have before buying something new. You may find that the *techniques* outlined in chapter 3 can make your budget gear seem way more "pro" than you would expect.

Your instrument (voice), musicality, and room will make a way bigger difference than a new piece of gear. Keep your setup simple and stable so that you're spending more time singing and less time troubleshooting!