

Suggested Recording Hardware - A guide for Sound Studio 3

Entry Level (aka Budget Recording)

For those of you out there who are looking to play around with recording, but don't want to dish out mucho dinero, here are some gear suggestions:

[iMic from Griffin Technology](#)

Some sort of external mic



The iMic makes the sound you record into your Mac much clearer because it sends the audio over USB. The standard 1/8 inch jacks on all computers are notoriously noisy, as they pick up interference from inside your machine.

As far as microphones go, Radio Shack sells some decent ones, and you can check out [Zzounds.com](#) as well. For vocal work you'll most likely want a unidirectional mic. This means it only picks up what it is pointed at.

If you're willing to spend extra dough on more high quality gear, keep reading. You will also find an article on setting up the optimal recording environment at the bottom of this page.

Record Vocals like a Pro

Note: This setup will allow for a professional sounding Podcast / vocals, but it may be overkill for a beginner.

Ingredients for 1 person:

- 1 high quality microphone
- 1 stand
- 1 pop filter
- 1 mixer
- Sound dampening stuff
- Sound Studio 3



For the microphone, an [AKGC3000B](#) is a good place to start (\$299) One step down from there is the [AKGC1000S](#) (\$199).



Get a [microphone stand with a boom](#) (\$20)

For close-up miking (a la "radio DJ voice"), a [pop filter](#) is a must (\$20). This will make it so your "P's" don't sound like you're punching the mic. (unless that is the intended effect)



It's best to use a mixer before going into the mac. [Behringer](#) makes affordable mixers (\$89).

Mackie makes much better boards in my opinion, so it might be worth spending the extra money for something that will take a beating. Another option that is becoming very popular is audio interfaces. These use a USB or Firewire port (or even a PCI slot) to input and output audio, allowing for a much cleaner sound. They're [worth a look](#).

Lastly you'll want an [XLR microphone cable](#). Buy one that suits you. They may also be found in Radio Shack and other electronics stores.

Recording

The most important thing that distinguishes good voice recordings from bad ones, aside from the quality of the equipment, is the room. Walls reflect sound waves and affect the way the voices are laid down to tape (or hard drive, as it were). Because of this phenomenon, many listeners can tell if the person is in a closet, a bathroom, or a concert hall. what we want to do is control that environment, so that we can use digital effects, in essence, to "put" the voice in any environment. The way to do this is by eliminating the reflection of sound waves bouncing off the walls. To do this, you want to put sound-absorbing material around the performer and around the microphone. since we don't have a dedicated room to turn into a vocal booth, we can go for the ghetto route.

Good material to use is acoustic foam, but that costs money. A cheaper method is to use blankets or u zipped sleeping bags. You want to clip or tie this stuff up on the walls, or at least create a "booth" around the performer, so that the sound reflections from behind and around the performer won't pick up as much (it's never really eliminated). You'll want to do the same thing behind the microphone as well. this way, the projected sound waves don't reflect as much, and the reflected sound waves are reduced.

When recording narration, close-miking is preferred. This has a good voice to ambience ratio (more voice, less room). The proximity of the mouth to the microphone will also add body, or bass, so you get more of a radio dj sound. for close-miking, a pop filter is a must. This eliminates plosives, or the booming sound that happens when a blast of air caused by words that start with B or P hits the microphone.

For more situational recording, like dialog between two or more people, it's best to stand a little further from the microphone, to get a more natural sound. This is tricky, because the further away the people are from the microphone, the more ambience is picked up (less voice, more room). This is where sound absorption is most important. A pop filter is not so necessary for this kind of recording.

For multiple person recording, you can do it two ways. One is to have the actors doing their lines in real time. They should ideally be no further than 2 feet from the microphone. The mikes i listed above are uni-directional, which means they pick up sound from one side of the mike, and cancel sound out from the opposite side. Have the actors standing side by side and make sure their facing the "pickup" side of the microphone. Better yet, get a two microphone setup.

Another way to record dialog is to track each voice separately. This is how they do it in animations like Shrek. The actors read their lines and the voices are assembled in post. This gives the engineer control over each voice.

When recording, use a mixer for the AKGC3000B microphone. This is necessary because that microphone requires phantom power, which most studio mixers (including the one mentioned above) provide. The other microphone (C1000S), uses phantom power also, but it takes batteries in lieu of that. Do some tests to be sure the audio going into the mac doesn't get overloaded and distorted. It's better to record quiet than too loud. You can raise volume without adding much noise, if any, but you can't get rid of distortion caused by too much volume.

If your Mac has an audio input, you can go directly from the mixer into this jack. Make sure you have the proper connections. The left and right outputs of the mixer should go to a single "balanced," or stereo plug, also known as a TRS (tip ring sleeve). This keeps the signal in stereo, instead of "summing" the left and right tracks to a mono composite.

When recording a single voice, record a mono signal in the software. When recording two voices with two mikes, record in stereo and pan the voices hard left and hard right, so that you can control the sound of each channel independently.

Practice makes perfect, and try recording with different setups to see what ends up being the best solution for you. Good luck and Have fun!

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