

HOME STUDIO RECORDING SETUP

Welcome. Today we are going to talk about techniques for recording clear audio at home. I will also be giving some advice for setting up a simple home studio depending on necessity and budget. Now let me deflate your bubble before we go too far. When people think about recording studios they usually imagen dark, windowless padded rooms with expensive consoles and boards filled with blinking lights and switches. If you have access to this kind of setup then by all means use it. The studio we will be setting up will look a little more like a child's pillow fort.

We will start off with talk about the first thing that comes to mind when taking about setting up a studio and discuss equipment options. We will go through the full range from cheap to expensive and look at the benefits of each option.

- Next, we will go over something arguably more important which is how to find a good location and how to control the environment.
- Then we will go over the recording process and insure you are getting the sound you want.
- Last, we will go over a couple tracking techniques to make your voice stand out.

Microphones:

Microphones and Equipment an area where most people get excited thinking that more professional gear will make them sound better. The gear in many cases is the least important part. Many great reports have been recorded in a coat closet into the butt of an iPhone. It is true that you want to use the best gear at your disposal but it is just as important the gear is easy to use and set up. Many times, you will have a better out come with simple adequate equipment over complicated expensive equipment. Below are three tiers from Every day recording devices, to moderate gear, to Simi-pro and pro rigs.

Simple and Cheap

First, we will start off with the simple and cheap. Tracking using the Earbuds microphone is about as economic and as simple as you get. We suggest the iconic white apple earbuds because they are in abundance and we know the quality they deliver but any pair of earbuds with an inline mic should work. You can always tell if the headphones have an attached microphone if you see the 3.5 mm jack has three stripes on the plug. These won't deliver the same quality as some of the microphones listed below but it will still sound pretty good and it will help isolate the speakers voice from the background. In a pinch if you don't have any earbud or if you are conducting an interview you can use the regular smartphone microphone and record using a voice memo app. This is custom installed on iPhone but android will have to download a third-party app from the google play store. Just hold the phone like a microphone, end up, and make sure to hold it 4 to 6 inch's a way just off to the side of your mouth. We will go over more of this later when we talk about mic positing



Mid-range

Next option is a USB Microphone. These Microphones plug directly into your computer via a USB Cable. These deliver good sound for a fraction of the price compared to the studio microphones and are the bog-standard for Youtubers. They are usually around 80- to 150 dollars and are also essentially Plug and Play.

For simple setup in home or on the road these are a great option. This should mainly be used for tracking because if you want to conduct in interview you will need to buy an extra microphone. You can use 2 USB microphones on one computer but there is quite a bit of setup in the computer settings to get it to work properly. Also be aware these USB Microphones will have a shelf life and when the USB 2.0 standard gets put out to pasture so will our microphone. At that point you will probably need to retire your Microphone to the shoe box of corded mice and yellow plastic webcams in your closet.



High end

The best and thus most expensive and complicated setup is a USB interface with a studio mic. This setup will cost anywhere from around 400 to 1500 dollars and is the equivalent of a true podcast setup. This might seem quite steep but a good XLR studio or field microphone will last you a life time and might be worth it for people really interested in producing content.

This setup consists of studio microphones connected to the USB interface through XLR and then the interface is conned to your computer by USB. All recording is done on your computer in programs like Audition or Audacity. We recommend a Focusrite Scarlett 2i2 or larger. These start at \$150 are very versatile for a small podcasting setup. The 2i2 has two mic inputs so it is easy to set up an interview. Other Scarlett models have more inputs but the more inputs mean more money and you have the more mic you also need to buy



If you don't want to use your computer to record and want a little more portability you can use an audio field recorder like the Tascam DR100 mk3. These come in around 300 if you want to buy your own but they are available for checkout at the Annenberg equipment room. The benefit to these is you get two XLR inputs, you won't have to deal with your computer fan noise, it is relatively simple albeit less versatile.

Now when it comes to choosing a Mic with this setup recommend an Electro-Voice RE50B starting at around 150 dollars. It is robust and can double as a field mic when needed. I know people who have had the same RE50B for over 30 years.



If price is no issue and you are setting up a full studio then you can choose a studio mic like the Shure SM7B or Electro-Voice RE20. These will cost you around 400 dollars each. Also remember that with this setup you also need to buy an XLR cable to each mic, a mic stands and a Pop filter is recommended

Last thing we will talk about with the gear is the Headphones. A good pair of headphones are crucial when it comes to both Recording and Editing. You want to find head phones that fully cover your ears and give a true representation of the sound. Ear buds will work if you are recording on an iPhone but should not be used for monitoring sound or editing. Beats headphone are OK but artificially boost the base giving you a false representation of the recording. If you are looking to buy new headphones we recommend the Sony MDR-7506. These are fantastic studio headphone but any quality Sony, Shure or Bose headphone should work great.



LOCATION:

A good location will really improve the quality of your recording and Picking the right location all comes down to your ability to control your environment. Remember smaller the space you more you can control.

Simple and Cheap

Let's start off with the cheapest option. One of the best and simplest home studio you can setup is using the same method kids use to hide from monsters and throw an oversized thick blanket over your head. This sounds silly but this really works well isolating your voice and giving the recording much more warmth. The problem with this is you will sacrifice your posture and you will get tired holding up the blanket. You can always make it more stable by rigging it with some string or broom handles to help secure the blanket around a set position. Get creative. You can drape a blanket over a high dining room table or two barstools. Just make sure you don't sacrifice your posture too.



Stacey Vanek Smith, a host of the podcast "The Indicator," rebuilds her "studio" every day. Stacey Vanek Smith



Another Great location that most houses have available is using a coat closet or walk in closet. The added benefit here is that all the hanging clothes and coats act as a great sound deadening device. If it is an especially small closet take out half of the cloths, enough for you to comfortable hold a mic and a script. A quick side note.... The show This American Life had a great story where a professional voice actor, Carin Gilfry, gets locked in a hotel closet while recording pickups for an audio book. It is in the first act of Episode 528 and if you have time I recommend looking it up.

Choosing a room

Now if you are setting up an interview or a more permeant space to record and using a closet or blanket is too cumbersome, here is a few things to keep in mind when choose a location.

First thing you want to control are your surfaces

- Simply Soft surfaces are your Friend, Hard surfaces are your enemy.
 - o You should avoid tiled room or rooms with a lot of glass like the Kitchens and bathrooms
 - o Instead choose smaller Bedrooms or office with things like carpets bedding, window drapes.
- Try to choose a suitable surface to record on. I am on a currently recording this on a desk made of a piece of plywood strung between two saw horses. This is not an ideal surface to record on and if I put my hand down the table... you will hear a deep boom. This has ruined many takes.

Next thing you want to control are all the constant noises and un expected sound

- Constant noises are things like TVs, Traffic, Fans, AC,
- Un expected sounds are things like, Phones, Dog barking, Refrigerator, ice makers,
- So, whenever you start recording do the following
 - o Turn off TVs
 - o Turn of Fans
 - o Put your phone on Silent.
 - o Also put all smart devices like Watches on silent
 - o Turn your computer sound down
 - o Turn off AC units
 - o Close all windows
 - o Close all door
 - o Let everyone in your area know you are recording

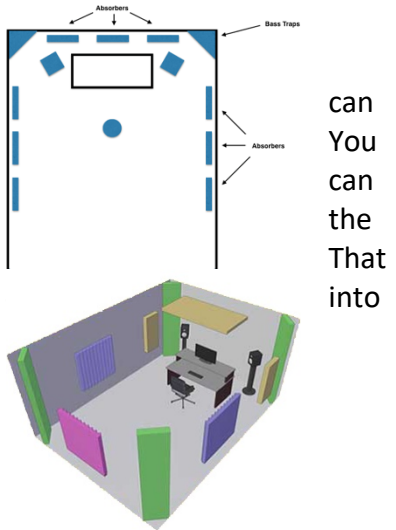
PERMANENT STUDIO

Now if you want to set up a more permanent recording location or build a podcast studio we will use a lot of the same techniques used above. Remember, the smaller the better and make sure it’s in a location where you know or can control the sound outside the room like traffic and barking dogs, roommates and AC.

Industrial sound proofing material can get expensive but luckily there are some cheaper alternatives. First you can always go to good will and buy some big heavy blankets and drape them on the walls. If that’s too tacky you can buy a roll of egg crate foam for a padding mattress. The pointer the better. can also buy them in 1 or 2 foot panels used for packing. If you use these you save some money and place these tiles on walls or surfaces perpendicular to microphone. This is usually right in front of you and directly to the sides. way it will reduce the sound of your voice bouncing off the wall and back the mic

Cover window any windows with curtains if you have them. Heavier the better. If not try to cover it with a comforter or a beach towel.

Remember you still need to let other people around you know that you are recording and make sure to turn off Fans and AC, and TV’s. During this work from home pandemic I have been relegated to record these workshops in my stifling hot attic with three fans blowing on me at all times. As much as I dread it, every time I need to record a take I make sure to turn off all fans and close all window and sweat it out as I track. Once I hit stop all fans go back on and all windows open and I start editing.



RECORDING TECHNIQUES

Now that we have picked out our equipment and found a good our location, we need to start recording. Every time we are recording we need to keep three things in mind.

1: MONITOR YOUR SOUND:

The first is that we are monitoring our sound. This is extremely important because if there are any issues with our setup we will hear it instantly, diagnose it and fix the issue before we lose a take. Same way that you would never take a picture without looking through your view finder, you should never record audio without listening to it. You will hear things in your headphones that you tune out without. I live on a hill in the returning flight path of the Torrance airport and even though I don't hear the approaching planes in my normal life, when I am recording it sounds like I am on the LAX Runway. At that point I pause, let the plane pass and then continue.

2: CHECK YOUR LEVELS:

Next you need to monitor your levels. Always look down at your recording equipment and make sure that your levels are averaging around -6 db. This usually shows around the 75% mark on the DB scale and is usually indicated when green goes to yellow on our meters. If you see it recording around the 50% mark or the meters are only bouncing in the green, it's too low and you need to slowly adjust the volume up. If it is in the red it is possibly clipping and you need to turn the volume down.

3: MAKE SURE ITS RECORDING:

Last important note. you need to make sure you are recording. Many times, you find yourself starting the recording only to look down after a couple minutes and seeing the time code saying 00:00. Click Record on your device and start counting with the time code. Only start when you see it click over a couple times. Throughout the recording look down every 10 seconds to make sure you see the timecode ticking up. Then you can be confident its recording and continue with your tracking or interview.

Make sure to always check these three golden. Monitoring will insure it sounds good, checking levels will insure you are getting the maximum quality and making sure its recording insures that it will actually be recorded. Following these rules won't make your recording prefect but it will make sure it is the recording you are expecting.

MIC POSITION:

Your recording position is just about as important as your recording location. A good recording position all comes down to proximity. When you are tracking you want to be between 4 to 6 inches away from the microphone, this is about a fist's length away, and you want the microphone slightly to the right or left of your mouth. Note that the microphone is still in front of the face but just off center so it is out of your stream of breath. This will help mitigate P popping and heavy mic breathing. As an added bonus, because it is out of your direct line of site this will help when you are reading your scrip.

It is ok to sit while recording but make sure to sit straight with your head looking forward. Slouching ill block your diaphragm and looking down will constrict your airway both adversely affect your voice so just remember to use good posture while recording. If you printed your script hold it out in front so you don't need to look down yet your arms don't get tired. If you are reading off a computer ty to elevate it with some books or a box.

Having access to a mic stand is really helpful. If you don't have a stand or if you have a short stand, get creative and use a box or books to elevate the mic to your face. Use a clamp, tape or a chip clip to hold it in an angle so the mic head it not touching any surfaces.

If you are using the earbuds just make sure they are away from all clothing and any obstructions. You don't need to hold it in front of you mouth but just make sure it won't bump into anything during the recording

Reading:

When you are ready to track, stretch your mouth wide and wiggle your jaw. Take a deep breath and let it out. This will help loosen you up. Count down "three... two... one" and then start reading. This will help even you out from take to take. Every time you mess up just pause, take a breath, count down "three... two... one" and start again from the begging of the sentence or paragraph.

It's important not to string words and sentences together. It better to leave a very small quarter second pause between sentences for editing. However, to many pauses or reading too slow will be a nightmare to edit.

During your tracking I recommend just leaving it record throughout the whole session. It's easier to edit out bad takes later and you don't have to worry about pausing, stopping or re-recording. If you want to identify good takes while you are recording, you can press the "M" key to place a marker if you are using Audition. This way you can easily jump to the good takes when it comes time to edit.

Conclusion

OK That's it for this workshop. I know that is a lot of information to ingest but I hope you have some good tools moving forward. Just remember the basics of location, position and recording and regardless of the equipment you are using.

Good luck and happy recording