

← How To Set Up A Home Studio (G-Doc)



# How To Set Up A Home Studio

*A multi-use guide on setting up both DAW-less and DAW-centric studios*

*AKA a journey of mistakes by Maya Bouldry-Morrison (Octo Octa)*

**Version 1.0**



## **A VERY EXCITING INTRODUCTION:**

When I was 15 I saw a couple friends of mine play an electronic set at a show in another friend's garage and it was a moment that changed me; it let me know that I could actually *make* electronic music. While this may not be such a surprise these days, it definitely was to me in

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route and after school kitchen job.

My friends who performed that day used a desktop computer, a Roland MC-307, and a MicroKorg. I don't remember how the set sounded but I do know that when they finished playing I excitedly asked them what I should buy so that I could make music too. That night or sometime soon after I went on eBay and used all the money I had (probably \$80) to buy a Korg Electribe ER-1. For the next 3 years of high school I saved money and scoured eBay with my friend. We tried to find any synth that would be affordable. There is more budget gear on the market today. While the search was fun and we got lots of neat synths, we never had the understanding of how to make it all work together. We would take all of our gear and daisy-chain it together, playing the best we could and recording it into a tape deck or maybe a computer (we didn't get into DAWs until we were 18 I think). The thing that I wished I had known when I started collecting gear was what to focus on to actually make a usable set-up for playing versus having a bunch of random gear. These days there's a lot of information online and the prevalence of DAWs makes writing electronic music easier than ever, but still I wanted to write a little guide that would essentially be a note to 15 year old me saying "hey girl, maybe look into these things first..."

### **FIRST DISCLAIMER!**

I made 95% of my work as Octo Octa mostly in Ableton Live with some gear here and there for the first 5 years of producing records---I was doing all sorts of music-making the 10 years prior to that. In the last 3 years I built a workable DAW-less live-set. Now I find myself doing a lot more outboard gear recording into Ableton Live and then finishing my work in a DAW. But I still have a set-up that I can use to produce whole works outside of the computer. It is something I wish I had known how to do 18 years ago when I started.

Here's a guide that shows the choices I made and why. While I am considered a "professional musician", I'm totally self-taught and still feel like an amateur everyday. For example, I don't know all the gear "deeply". But fuck it, cause vibe is what matters and use whatever you like, however you like, to whatever ends you desire. When it comes to affordability a computer and a DAW is the cheapest option to start making any music, but I know lots of people eventually like getting some gear. By no means it this a guide saying that this is how you should do it, but hopefully it will help in making choices about what you want to get.

**\*\* Extra little note: Budget gear rules! YOU DO NOT HAVE TO BUY EXPENSIVE GEAR TO MAKE VIBEY MUSIC! Almost everything I have gotten has been on the cheaper side of things. I have bought my set-up piece by piece over the past 18 years and have always looked for inexpensive options. Instead of buying that \$2000 synth that does 1000 cool things you can take that \$2000 and buy a mixer, drum machine, 2 or 3 budget synths, a cool pedal or two, and all the requisite cords needed, plus probably some other stuff. It's all in how YOU use it 🙄 \*\***

### **SECOND DISCLAIMER! ~TERMS~**

In writing this guide, it has been challenging to keep things clear and concise while at the same time personal. I don't know what your knowledge base is or how long you've been producing. Maybe you haven't been making music that long and you are interested in building up a studio. Maybe you've been doing this for years and just want to read my approach to my studio. I'm going to hopefully provide simple enough explanations of the gear I use and what I use it for. I'm using some terms in this guide that may be new to you regardless so let's go over a few of them:

**"DAW"** - A digital audio workstation. DAWs include computer programs like Ableton Live, Logic, Fruity Loops, Reason, etc. They are typically used for all of someone's computer-side production.

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**“Outboard” or “External” gear** - This is also in reference to equipment that is outside of the computer. For example, I will call my mixer that all my gear plugs into my “outboard mixer”, meaning it is a mixer that I use outside of my DAW.

**“Monitors” speakers** - Monitors are the speakers you use while “monitoring” your production while in the studio. In the DJ world the term “Monitor” refers to the speakers that the DJ listens to while mixing so they can get a sense of how the mix will sound in the room.

**“MIDI”** - This is a digital (not audio) signal used by most instruments so that they can be played, tweaked, sequenced, and synchronized by external equipment. If you’ve seen the term “MIDI” before but haven’t really understood what the heck it is here is a nice online guide that will give you a solid explanation of what it is: <https://musicianshq.com/a-beginners-guide-to-midi/>.

**“Sequence”** - is a measure or measures of music played in order. You may have seen some gear that features a “16-step sequencer” like a Korg Volca for example. That means that the gear will play 16 steps before repeating; it allows you to create a 16 step sequence. Another way to look at it if you are familiar with a program like Ableton Live, the sequence is the “grid”. Typically most grids are a 16 step sequence per measure by default. Gear like an Elektron Octatrack or Akai MPC1000 can be used as a “sequencer” which means they can send sequenced MIDI data to other things. This is a very simple explanation of the term but hopefully it gives you an idea of what I am talking about if you haven’t come across it before.

**“Master Clock”** - This signal allows one piece of gear to send a song’s timing (a.k.a. tempo) information to all the other electronic instruments (BPM or “beats per minute” is another way of saying “tempo”). For example, when I am playing a live set I have one piece of gear that determines the tempo at which all the other equipment will play so that they are all synced. That piece of gear is considered the “master clock” or “master MIDI clock”. So my Elektron Octatrack or Akai MPC1000 will send MIDI data to my drum machines and synthesizers telling them to all play at the same tempo in time with each other.

**“Synchronized” or “Sync”** - In regards to this guide this term is in reference to equipment playing in-time together.

**“Quantization”** - is the process of note data being mapped to the sequence or “grid” in perfect time with the musical step.

## HOW IS THIS GUIDE ORGANIZED?

This guide is in three parts:

- The first part is about the hardware that I use and why I use it, specifically in creating a “DAW-less” studio, meaning a studio without a computer involved.
- The second part is about using a computer and a DAW as the centerpiece of the studio with advice on setting it up so that you can expand it to add outboard gear.
- The third section provides two examples of different studio set-ups (My and Eris’s individual set-ups) and how all the gear is routed.

Let’s get into it...



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As I mentioned, it took me a long time to actually figure out what pieces of equipment I should focus on to build a full hardware set-up instead of just owning a bunch of random gear. There are plenty of ways to pick and choose different gear to get, especially if you are having a computer as the centerpiece of your studio. But if you want to go DAW-less these are my suggestions. *You do not need all of these things!*

Topics:

- 1) Get a compact mixer
- 2) Get a sequencer
- 3) Get some synths
- 4) Get a drum machine
- 5) Get some FX!
- 6) Get studio monitors?



### 1: GET A COMPACT MIXER

*Preferably one that has send/returns*



Maybe this isn't like the first thing you get because it's not necessarily as exciting as a synth or drum machine but get one soon! I waited way too long to plop down a little money to get one. The very first mixer I got was a 4-channel Behringer mixer which was actually a total piece of garbage (don't get the smallest and cheapest mixer possible). Years later I got an earlier used



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For a little home studio I think a 12, 14, or 16 channel mixer is the best option. I like the Mackie 1202VLZ4 cause it's cheap, compact, doesn't weigh too much, has three-band EQ, and has two send/returns. It costs \$299 new online and as of writing this there are like tons of older versions on eBay for around \$100. They sound good and are pretty easy to handle. I also like that the channel setup on it is 4 mono channels and 4 stereo channels so that I can just use one volume knob for gear that require a stereo output. There are tons of other compact mixers available so look for ones you like that have room for you to expand as you get more equipment.

I would suggest getting a mixer that has at least TWO send/returns on it. A send/return is a routing option on a mixer which allows you to send the audio on a channel through an additional channel. For example, I use one send to route audio from instruments to my delay pedal and the other send for my reverb pedal (because dry synths don't sound as dope without these effects in my silly opinion haha). When I was younger I always just plugged my gear directly into pedals and FX units to use them and when I finally discovered send/returns it felt so good to know that I could just assign any instrument to them on the mixer. It really opened up everything for me production-wise (also not having to re-plug in pedals to different gear all the time was really nice).



## 2: GET A SEQUENCER

*You could use your computer and DAW but here's a DAW-less option first*



Observe my absolutely thrashed Akai MPC1000. The side panels are gone, it's dented, some of the knobs are stuck in the case (but still work), and despite it's damaged nature I use it as my master clock and sequencer for my home studio set-up. A sequencer is the number one thing I wished I had known to get when I was younger. Yes, the MPC is a sampler and for way too long I thought that sampling was its only purpose, but I really just use it now as a MIDI sequencer. Like I said, when I was a teen we would buy all sorts of random gear, but we never got anything that could make it all work together and let sequences run on synths while we would noodle around on another. Get a sequencer so you don't *have* to play a lead for minutes while recording. Instead you can record in a sequence and then play it back to whichever synth you desire. This may be basic knowledge; for me it wasn't. Having a sequencer finally let me play lots of things at once and actually work on a song live instead of having to do it piece by piece.

For my live sets I use an Elektron Octatrack as the master clock and sequencer for the set, but at home I use the MPC for sequencing everything. I like it more because I find it easier to use and I want things to be easy to use. It took a couple of hours sitting down with a friend for them to teach me a few basics and I was off and running from there. There are plenty of guides online that can teach you the basics in a day (I'm sure the manual will have solid tutorials). You can still get the MPC500, MPC1000, and the MPC2000 for under \$500 on eBay. Yes it is more cumbersome to work on these little LCD displays than a computer but hey, they're cooler than a laptop and cheaper in some cases. (*\*\*side note for those curious: I do not use JJ OS on it. I think the default*

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can externally plug in a keyboard and record in the MIDI data to then be sent out to whatever gear you want it to be played on. I like the MPC1000 because it has 32 sendable MIDI channels: 16 "channels, and 16 "B" channels, so I can get a lot of gear going at once. I like to use two Quarda Thru boxes, one for the "A" MIDI output and another for the "B" MIDI output on the MPC so I can sync up to 8 pieces with the one sequencer without having to rely on the MIDI THRU on any of my synths. Note that lots of budget gear these days only provides a MIDI IN and maybe an OUT, typically not a THRU. Also budget gear often only accepts data on Channel 1, so having two MIDI OUTs allows you to sequence two of those devices at the same time.



*\*\* Note: the above paragraph may have been confusing, that picture may make no sense, and MIDI may be a mystery to you and that's ok. Just know that getting tools to make your synths sync together is important and will lead to you being able to make music with your set-up. Here is a link to a good beginner's guide to MIDI - <https://musicianshq.com/a-beginners-guide-to-midi/> \*\**

I also like playing into a sequencer because of auto-quantization for MIDI input data. Quantization is the process of note data being mapped to the sequence in time. So if I play a note a little off, the auto-quantization feature in the sequencer will push it into the right place. This is a feature of probably all sequencing equipment, but I really like how the MPC can auto-handle it without having to menu dive to quantize the input data. It feels the most natural to me.



## 3: GET SOME SYNTHS

*So many options these days, it's honestly wild...*

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So I know I said it in a note in the disclaimer, but it needs to be said again:

### *INEXPENSIVE GEAR RULES!*

I've had a lot of synths over the years and I won't be talking about everything I own, but I have never spent more than \$500 on a single synth and I've also focused on buying inexpensive gear that has fit my needs. The vibe of the machine is the most important thing. There is no universal perfect synth; it's all up to individual taste. For example, I love old yamaha FM synthesis. It does not have a low noise floor, there's always weird tones floating in the background, and half of the gear I've used has had a number of, ummm, "quirks" about them, but I love the character they have. There are much "better" synths I could buy and synths that people would like to say "sound better", but I've rarely come up against issues with my gear once I know their limitations. Also it can be good to work with equipment that has limitations unless you are purely interested in deep sound design (that can be a time to explore modular synthesis, but that gets too expensive for me). You can make a lot of gear work for you if you like what it can offer.

*A personal note: I've never been wowed by a machine because of its "possibilities". It doesn't matter to me what the potential of a synth is; I find gear that makes limitless possibilities a promise in it's selling point always means there's too much fussing about to get it to do "interesting" things. I like stuff that's straightforward (or has good presets that you can modulate easily). Once you start adding outboard effects to the synths you're using then you'll really start making interesting sounds in my opinion.*

So let's talk about the synthesizers that I am using currently in my set-up. Everyone's preferences for what they might want to get will be different and I am not saying that these are synths that you need to get, but I think it's worth explaining why I like them and why I got them as it may help in your decision making process on what synth to look for.

### Korg Volca Series



I think the Korg Volcas are really excellent pieces of gear despite what most people think about them. They're definitely not seen as professional equipment but I've played tons of large



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time changes to the knobs. I use two volca keys and a volca fm constantly in my live sets and when recording at home. Typically the only MIDI data I send to them is tempo sync from my sequencer, but you can also use any external MIDI device and send data to them. The build quality on them is fine and I've toured with them extensively. I've only had one of them poop out on my during a set in the past 4 years. Their biggest issue is how dry they can sound which is why I typically also send their audio signals to my delay and reverb pedals.

### Yamaha DX21



I got this rough looking Yamaha DX21 for \$50 at an electronics repair shop in Brooklyn probably 5 years ago (they're up on eBay right now for \$200 to \$400). It's also not considered a professional piece of equipment as it was made as a consumer level option of the DX7, but I think it rips. It's noisy as hell and I've used it on tons of recordings. I don't bring it out on tour because of its size, but that's what samplers are for :) I'll record loops with it and then put those recordings into a sampler for playback on tour. I personally love the sound of it as I love FM synthesis for it's organ, bass, and bell tones. The Korg Volca FM is a much easier to program and modify than this which is why I bring that on tour instead but for a full-sized keyboard synth the DX21 is dope and cheap. Great for making all sorts of housy sound and haunting tones.

### Korg DW-8000





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analog synth with digital control. It can be a pain to program because of how you access the parameters but it sounds great. I use it a lot for full bass tones and nice plinky sounds. The digital reverb that's built into sounds pretty good and the pitch / mod joystick is really cool to play with and feels great.

### Roland Alpha Juno 2



This is my favorite piece of gear I have right now. I was totally sold on some youtube video that called it the “the ultimate rave machine”. This is where you get your classic Hoover sound from plus tons of other great ravey sounds. I got it for \$300 I think on eBay, and I just recently bought the PG-300 programmer so I can live adjust the sounds (unwittingly bought it from Kim Ann Foxman, thanks girl!). It's great for everything; again like most cheap synths it can be a pain to program but the presets are so dope. It has chord memory so you can easily play huge leads and pretty pad sounds with it. All around It's an excellent piece of gear that I wish I had gotten years ago and will be recording with for a very long time.

Looking for the right synth can be a bit difficult unless you live in some major market that has somewhere where you can go and play around with them a bit. I would say watch youtube demo videos but sometimes they're absolutely awful (or maybe go watch them anyways and be awestruck by the wild demos people put up). If it's newer gear I would definitely suggest watching SonicState review videos. They're deeply critical and totally prefer expensive synths, but they cover lots of budget synths and have solid sound production so you can actually get a good sense of what they sound like. I like budget gear because I like getting a number of synths that are each good at performing a certain task. Since there's so much out there these days it can be cost effective to get a few things to play with versus one expensive, multi-timbral synthesizer. Again, personal opinions. 😊



## 4: GET A DRUM MACHINE

*Not totally necessary for a good set-up but live programming is really fun*

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My first piece of gear I ever got was a drum machine; the Korg Electribe ER-1. I was just trying to get anything affordable to be honest, but it was a very good first machine to get at the time. It has four modifiable analog percussion channels, plus two input channels, and then four modifiable PCM sounds (closed hi-hat, open hi-hat, clap, and crash). It taught me a lot about building percussion sounds, but was pretty limited. The bass tones do not sound great on it so getting a good kick was always hard, but whatever, it was cheap and I had to start somewhere as a kid. Jump forward 18 years and I now use a Roland TR-8S (pictured above). Not the cheapest option these days (there's lots of new machines around \$400 plus eBay finds) and I still program most of my drums in Ableton Live, but I use this a lot when doing recording at home and for playing live during live sets. It is much better sounding than the Roland TR-8 plus it has a bunch of assignable outs so I can use outboard FX on different channels. You can load it up with your own samples and build totally unique drum sets.

I don't think getting a drum machine is extremely necessary these days since it's so much easier to program in a computer, but I did get a lot of tactile skills in touching and playing a drum machine versus clicking a mouse and drawing values in a DAW. It also allowed me to make a lot of interesting mistakes which in the end sounded really cool. I also just like having a dedicated drum machine in my set-up so that I can make tracks at home without looking at my computer. There are lots of great beat production controllers available on the market now too which can be an inexpensive option for including a drum machine-esque device to play with your set-up.

For a few years of touring I would use my Akai MPC1000 as my drum machine during my live sets. I had a lot of individual pre-programmed loops in it that I would track mute live to add more dynamics to the patterns. I broke it down the 16 programs into 4 different kick patterns, 4 clap/snare patterns, 4 hi-hat/shaker patterns, and 4 tom/percussion patterns that I'd interweave over each other. That worked really well, but I wanted to be able to do a lot more on-the-fly programming hence my change to using the Roland TR-8S.

Ultimately look for a drum machine that interests you. Again, there have been a lot made over the years and depending on your budget you could probably find something that would work for you if this is a piece of gear you are interested in getting.

*\*\*side note: I got a Korg Volca Beats when it came out and I did not like it so I would stay away from it, but the Korg Volca Sample is a really cool machine that has a lot of dope drum sound pre-loaded in it. Its lack of multiple outputs is a big problem when it comes to really making a drum machine sing, but it's still a cool and cheap option that's on the market now\*\**



## 5: GET SOME FX!

*Guitar pedals are your friend*

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The second piece of gear I got as a teen was a DOD Death Metal FX86 distortion pedal. It has blood splatter paint all over it, the knobs read “RIP, GUTS, PAIN, SCREAM”, and it’s loud. I would run my Korg Electribe ER-1 into it and then to a guitar amp for fun noisy business. These days I’m not really using it but it remains with all my gear as a symbol of the creative things you can do with guitar pedals.

Pictured above is a Boss DD-7 digital delay pedal and a TC Electronic Hall of Fame 2 reverb pedal. They’re the two pedals I use as the two send/returns on my mixer for live sets and when recording at home. I have a number of other pedals that I swap in and out plus a Behringer Virtualizer Pro that’s cool, but a solid delay and reverb unit goes a really long way. Like I was saying earlier when talking about the synths I use, you can make budget gear really sing if you run their audio signal through some nice solid effects. Also again, the FX you want to use on your synths is up to you. If you’ve heard any of my music you can probably tell I use delay and reverb a lot which is why they’re in my set-up.

I really like using guitar pedals because there are so many options in the world. There are a range of options available from standard pedals by big companies (e.g., Boss) to boutique pedal makers that build wild and unique FX units. Companies like Behringer and TC Electronic also make cool multi-effect units that are cheap and easy to use—for example, the TC Electronic M100 is \$100 and can create many of the most popular standard effects like reverb, delay, phaser, flanger, chorus, etc. Again, I think it’s always more about vibe than finding the “perfect” version of a certain pedal. I think it’s definitely worth looking into finding some cool FX when building out a studio set-up.

*\*\*side note: Making your own pedals can be an inexpensive and fun “let’s learn to build electronics” project (I am not good at doing it, but I’ve had many friends who were) \*\**



## 6: GET STUDIO MONITORS?

*It’s time for a brutal confession...*

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Soooo, I didn't use studio monitors for a veeeeery long time. I even produced my first record on my computer mostly using earbuds or really crappy headphones. That was bad, don't do that. My first pair of monitors I got were Alesis M1 Actives... they were also awful speakers, so don't buy those if they even make them anymore. I also wrote a record using a free pair of UrbanEars headphones and I didn't realize they were designed to boost bass, so don't use those either. Like I wrote at the top of this document, it's a journey of mistakes.

Eventually I got a pair of Sony Studio Monitor headphones for \$100 and produced a lot of my music on them. If you do not have money to get studio monitors then specifically get a pair of headphones that have flat "attenuation." This means the headphone speaker doesn't "sweeten" the sound by accentuating certain frequencies on the recording. When producing music you really want the sound you hear to be as close to possible as it would actually sound on other speakers. For example, you might turn up the bass too much in your recording if you fail to realize that your headphones can't handle sub bass.

Two years ago I FINALLY got a pair of Yamaha HS8s for \$450 used at Guitar Center. I should have bought them a very long time ago. I produced so many records on subpar equipment which really did a disservice to the music when I would hear it in a club. My tracks would have weird resonant frequencies, muddy bass, shrill highs; all sorts of issues. Having a nice set of monitors has really allowed me to make better sounding records. There are lots of good new and used monitors on the market these days. Asking a friend who produces or DJs about what they use may help in your decision process.

Ultimately what I'm trying to say is get some monitors early when building your set-up and don't be a dummy like me and use garbage speakers. At the very least please get a good pair of studio monitor headphones 💖 Don't think, however, that you need the most expensive pro monitors to get a good studio mix. You only need solid speakers and time in front of them to get comfortable with how they reproduce recordings that are familiar to you.

*\*\*extra production advice side note: listen back to your productions on multiple speakers like monitors, headphones, a car stereo, your laptop, and even your phone speaker; it will help you adjust your mixdown a little and also help you notice frequencies that are missing that you expect to be there. For example the sub-bass in your track may sound amazing on your studio monitors but when you listen back in the car it may not be present. Therefore comparing the production in multiple ways will help you decide how to set your levels\*\**



On to Part II...



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# PART II - COMPUTER



At this point you may be like “yeah Maya, that’s all well and good about hardware and such, but I haven’t been buying shit my whole life and I don’t have time to get all that stuff”. Most likely you already have a computer or if you are interested in producing then you are getting a computer soon. Like I said at the beginning, I’ve produced most of my music in Ableton Live for the past 14 years so I get you! Therefore let’s talk about what I think you should be focusing on if you are going to set-up a studio with (1) your DAW being the brain of the whole operation and (2) the ability to expand and add gear to the set-up. I am not going to be able to tell you what to use for the “best results” because everyone’s needs are different. For example, Eris’s studio is set up totally differently from mine and it works great for her. It’s all about what you need so this is all a suggested guide. Pay attention to what works for you and ignore anything you like :)

Topics:

- 1) Get a computer
- 2) Get a DAW you like
- 3) Get an audio interface
- 4) Get studio monitors
- 5) MIDI Controllers?
- 6) Expanding your set-up



## 1: GET A COMPUTER

*I am not going to tell you which one to get...*

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For a long time I used cheap PCs when producing and recording because that was what I could afford. I would always spend from \$400 to \$800 on a new laptop every two years because I would tear through them playing live before I moved to my DAW-less live set-up. I use a Mac now because I was extremely tired of having to replace my laptop all the time but fuck me are they expensive and I was so mad in the store when buying it. It'll probably break in a year too (lol). The reason I bring it up is that you don't need a Mac to make music despite probably 95% of the people you see producing on a computer using one. If someone wants to give you side-eye for not using a Mac then they're an elitist jerk who doesn't deserve your time!

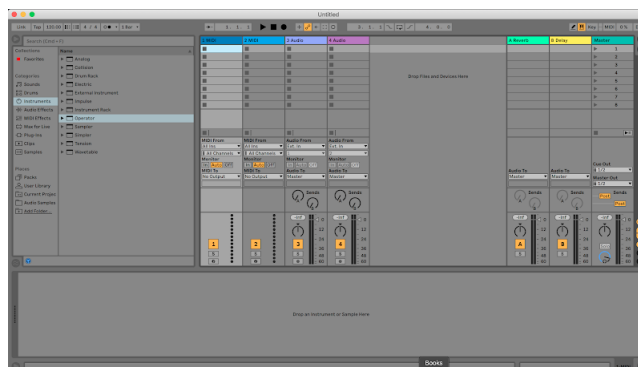
When it comes to a computer get something that's in your budget range. If you can only afford a few hundred dollars then get a computer that's a few hundred dollars. Just know I used very cheap PCs for a very long time and wrote plenty of records on them so you don't need anything fancy to get work done. CPU limitations can be an issue for certain DAWs depending on how you produce but some programs have work arounds like "track freezing" to cutdown on strain on the CPU. You will be able to make any computer work for producing as long as the DAW you want to use can run on it.

If you decide to get a laptop for live sets, maybe try to get something that reviewers online consider being durable as you shop around. If it's just for writing music at home or whatever then I say don't worry too much about durability. I ran through cheap computers because of touring constantly with them and pushing them really hard. If I had just used them for production at home then they definitely would have lasted longer.



## 2: GET A DAW YOU LIKE

*Again, I'm not going to tell you which one to get...*



I'm guessing if you are reading this then you have some understanding of digital music

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Loops, Ableton Live, Logic, Reaper, Reason, etc. A DAW is a digital studio in which you can create and produce music. Most people only work inside of a DAW these days as it's A) cost effective and B) easier than dealing with hardware.

While you can produce whole tracks in the program itself, DAWs are also designed with the intention of using them to record, sequence, and synchronize outboard gear. Some people (myself included) combine a hardware set-up with a DAW for recording and editing their work. Each program has a different way to deal with recording audio and sending MIDI data, but just know that all of them can do it. So you don't have to focus on getting a certain one if you're interested in that.

For me there is no perfect DAW. Each program is different, has different learning curves, different workflow, different costs, different sound, etc. So it's all about finding one that works for you budget-wise and also works with your workflow (I used a lot of demos to find something I liked to use). I personally have been using Ableton Live since I was 18 years old so I'm somewhat stuck in that mode of working despite having many personal issues with the program. I'm a self-taught girl and that program took me a long time to slowly discover everything I could do with it. It took me 14 years to really get proficient with it, but I still appreciated my years of "fuck the mix, let's dance" vibe I took to it and all the experimentation to get to where I am now. Whatever program you choose my number one piece of advice is *DO THE TUTORIALS!* It will save you a lot of headaches in the future and will get you on track faster than only fucking with it on the surface.



### 3: GET AN AUDIO INTERFACE

*Lots of options depending on what you need*



Audio interfaces are external soundcards for your computer. You can use them to process your audio, output it to speakers, send and receive MIDI data, and record audio into your computer. Before looking into getting an audio interface it is a good idea to know what you are going to want to use it for: How many inputs do you need? Do you require MIDI? Are you externally mixing and inputting a single signal or are you using multiple sources?

If you are just producing music in the computer, have no intention of working with external gear, and will never be using studio monitors, then you do not need an audio interface. Plug in some headphones into your computer and just go for it I say. Someone will argue that soundcard output on laptops are crap and to truly hear the production then you need an interface. I agree, they're right, but not everyone has cash to throw around and I think it's good to know that it's ok to just work with the very basics when making music at home. When I travel I work on songs only in my laptop, no external gear or monitors (same with Eris and a lot of other musicians I know).

If you are looking to have a studio set-up beyond playing around on a laptop at your kitchen table (that was me for years) then it's good to get an audio interface. You will get better sound from your computer having it externally processed and then depending on which interface you get then you can provide external inputs for your computer and also send out MIDI data from your DAW to your synths.

Quick story: I got my first audio interface in a rush after being shamed by a soundguy eight years

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system (I was trying to plug into the DJ mixer). If I had just plugged my laptop directly into the DJ mixer then we would have had to dramatically turn up the gain to get a loud enough audio signal for the club which would have sounded distorted. I felt stupid and I went and bought a cheap interface around the corner. It wasn't an ideal way to learn to get one but ultimately he was right that I should have had an interface for playing a live set. So if you are playing live sets with your computer then get an interface. You need to be able to give the soundperson two professional quality outs, not the tiny headphone jack your computer has available without a soundcard.

Let's first talk about what I choose and why: My audio interface is a Focusrite Scarlett 2i4. It's a great sounding minimal interface. I chose it because I get a solid stereo input in the front that can accept either 1/4 jack or XLR. It has two sets of stereo RCA outputs on the back plus two balanced 1/4 jack outputs. Finally it has a MIDI IN and OUT. I could plug a MIDI keyboard into it, send MIDI data to a single synth, or when pairing it with my Quadra Thru box send MIDI data to multiple synths (See the "Get a sequencer" section in hardware).

If you get an audio interface that has a MIDI OUT then you will be able to sequence your outboard gear with your DAW if you are not interested in sequencing with a different piece of gear than a computer (like my Akai MPC1000 which I talked about in the hardware section).

An audio interface can also be your mixer solution if you are not interested in having an outboard mixer. I personally like to process all my outboard gear through a mixer and then feed the master signal into the input on my interface to do all of my outboard recording. There are lots of options for interfaces that provide multiple inputs (like the MOTU Ultralite series). Recording your equipment directly into the computer will save you the hassle of having two steps of gain staging and will also probably cut down on the noise floor. If you are looking for cleaner recordings then this is probably your best option. You can also use a simpler interface that just has a single stereo input and just keep swapping different gear in and out of it if a fancier interface with multiple inputs is a budget issue.

There are lots of new and used interfaces on the market. Just think about what you need are try to purchase accordingly. Pay attention though to computer requirements when getting one and make sure you're not getting something that is too outdated and won't work with your computer. You can also look for "class compliant" (AKA Plug-and-Play) interfaces which work on the universal USB standards and does not require installing drivers (my Focusrite interface is a class compliant audio interface).



## 4: GET STUDIO MONITORS

*See Above Hardware Section*

Look at the hardware section on this. I included it as a step here in case someone just skipped down to the computer section and didn't read the hardware section. It's totally fine if you did that, it's just that I already wrote about it above. Also it is a step here because it is a step in building a computer-centric studio set-up. Go read above :)

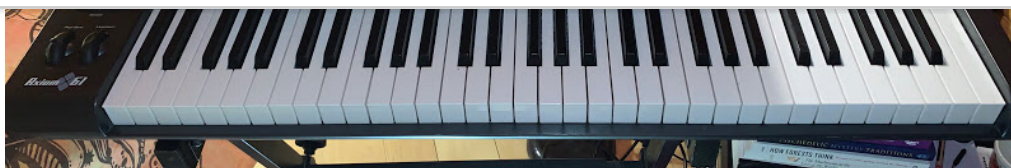


## 5: MIDI CONTROLLERS?

*They isn't necessary by any means, but very useful*



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A reason I love working with MIDI, DAWs, and hardware together is that I am not very good at playing the piano. The physical skill of making my fingers do the things I want it to do is low. So thank the goddess for MIDI because otherwise I wouldn't be able to make music the way I do. I've gotten much better over the years at playing synths but I am still too nervous to play a keyboard live in front of people. I'm much happier to sloppily input the notes and cross my fingers.

If you don't understand what MIDI is that's okay but it would be a good idea to learn a bit about it. You most likely are already working with MIDI in your DAW if you didn't know it. Again, here's a link to a beginner's guide with MIDI:

<https://musicianshq.com/a-beginners-guide-to-midi/>

You do not have to get a MIDI controller, which is why this section has a question mark. Depending on your DAW you can use the keyboard on your laptop to play musical phrases, but that can be clumsy. You can also draw in your notes, but sometimes that's laborious. Therefore getting a MIDI controller can be a nice solution to aid in production.

Let's be simple about MIDI controllers. A few reasons why you may want to get a MIDI controller is so that:

- you can play a full-sized keyboard instead of using the mapped keyboard on your laptop or draw every note.
- map CC messages to different knobs so that you don't have to use the computer mouse to change values on effects.
- or you could get a controller that provides drum pads like an MPC for beat production.

There's a lot that you can do with them, it all depends on getting something you want. Just a note to people who may not know: a MIDI controller itself does not produce sound, it is only for sending MIDI data. You will pair it with a VST, some other instrument in your DAW, or map it to a piece of outboard gear and then control it via the MIDI controller. I cannot explain setting up a MIDI controller for you as A) every program is different and B) it can be extremely frustrating to get everything synced up to work properly, but stick with it, deep dive all those audio / midi menus, install those annoying drivers, and get it working. You'll be happy you did.

*\*\*side note: most MIDI controllers can connect to your computer via USB. You could connect the controller to your computer via an audio interface, but these days new keyboards only need a USB connection.\*\**



## 6: EXPANDING YOUR SET-UP

*It all depends on what works for you!*

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You have your computer, you picked your DAW, you decided on getting a certain audio interface, there's a slick MIDI controller in your studio and you got a new set of slamming speakers rocking your house. Cool! You're more than good to go on making music at home and hopefully annoying your neighbors like Eris and I do 😊 But maybe something is missing? Did you get that gear itch yet? Is that new Behringer clone is looking pretty sweet especially at that cheap price point?! Maybe it's time to expand!

As I alluded to in the introduction, my process of learning to make electronic music was the opposite of how most people will get into it for the first time these days. I don't know for sure but I would bet that most people are starting on a computer first to produce and then adding gear if they get the itch to do that. There is no right way to go in expanding your set-up. Everything is about what you want, but I do have a few extra things for you to think about before I send you back to the hardware section to read my thoughts on certain equipment:

- 1) If you are purchasing gear for sequencing from the computer only then "desktop" synths that have no keyboard are a great cheaper option to get a more full featured synthesizers. When they don't have a keyboard attached then they cost less! Pair it with your MIDI controller and unlock that gear!
- 2) Start learning about MIDI CC messaging and find out what is mappable on your synths for automation in your DAW.
- 3) Get something that you are going to be excited to work with and try to stick with it for a bit because it will most likely be a slower workflow than just using a VST or something that's in-box in whatever DAW you are using. There's no problem with just doing stuff in the computer but there's a lot to love about working outside of the box despite it's frustrations.

If you started with the computer section now you can go read the hardware section and hopefully my years of errors will help you in building a home studio that you'll love.



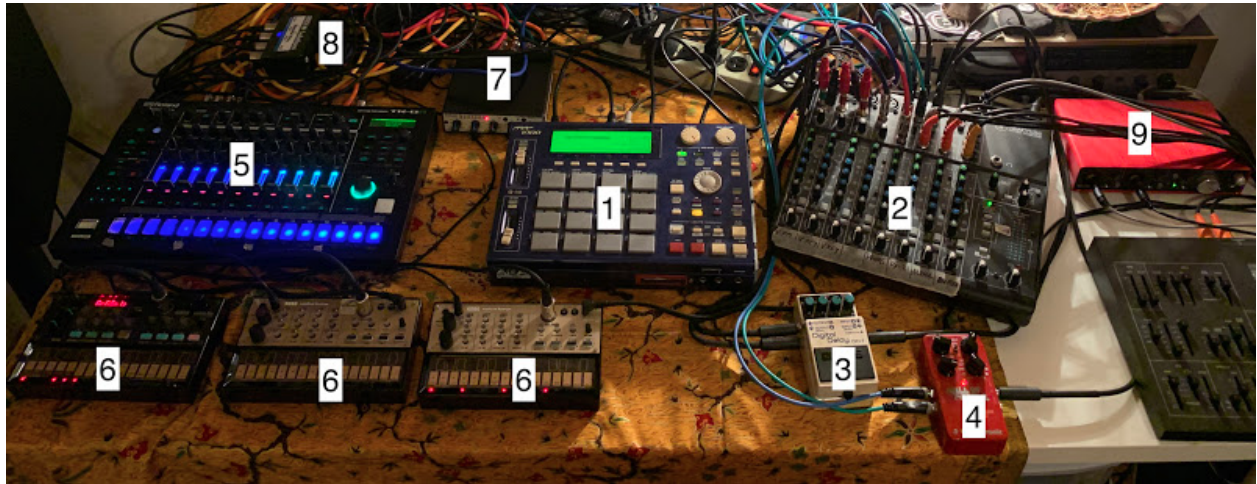
## PART III - STUDIO SET-UPS



For the final piece of this guide I figured it would be nice to see examples of my mine and Eris's studio set-ups because they're two different approaches that each work for us. These studio set-ups may not be your ideal set-up and I wouldn't claim them to be perfect, but it's what works for us right now. Building studios that work for us took a long time and they're ever-evolving projects as pieces are added and removed over the years. So what follows is labeled pictures of

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My personal studio is set-up as a DAW-less studio. I can do all of my producing outside of my computer and then record the results into my DAW (I always edit further in Ableton Live, but the intention of my set-up is that I could do everything without it except recording). Almost every piece of gear I have listed here is talked about in detail in this guide.



Pictured above gear list and general routing info:

- 1) Akai MPC1000 as the master clock and sequencer for the entire set-up
- 2) Mackie 1202VLZ4 as the mixer for all of the gear
- 3) Boss DD-7 digital delay pedal (the first send/return on the mixer)
- 4) TC Electronic Hall of Fame 2 reverb pedal (the second send/return on the mixer)
- 5) Roland TR8S as the drum machine (only tempo synced via MPC)
- 6) 1 Korg Volca FM and 2 Korg Volca Keys (only tempo synced via MPC)
- 7) FMR Audio RNC1773 compressor (outputs on drum machine routed via this to mixer)
- 8) Midi Solutions Quarda Thru box (MPC "MIDI A" output data splitter to TR8S and Volcas)
- 9) Focusrite Scarlett 2i4 (output from mixer sent into audio interface for easy recording)



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Pictured above gear list and general routing info:

- 10) Roland Alpha Juno 2 (MIDI IN via MPC)
- 11) Roland PG-300 (external programmer for the Juno for easy editing, but not necessary)
- 12) Korg DW-8000 (MIDI IN via MPC)
- 13) Yamaha DX21 (MIDI IN via MPC)
- 14) Yamaha HS8 Studio Monitor (Master Out from Mackie 1202VLZ4)
- 15) **\*\*Not pictured\*\*** (since it's on the floor) is a second Midi Solutions Quarda Thru box (MPC "MIDI B" output data splitter for synths 10, 12, and 13)

🍄🍄 **Eris Drew's Studio** 🍄🍄

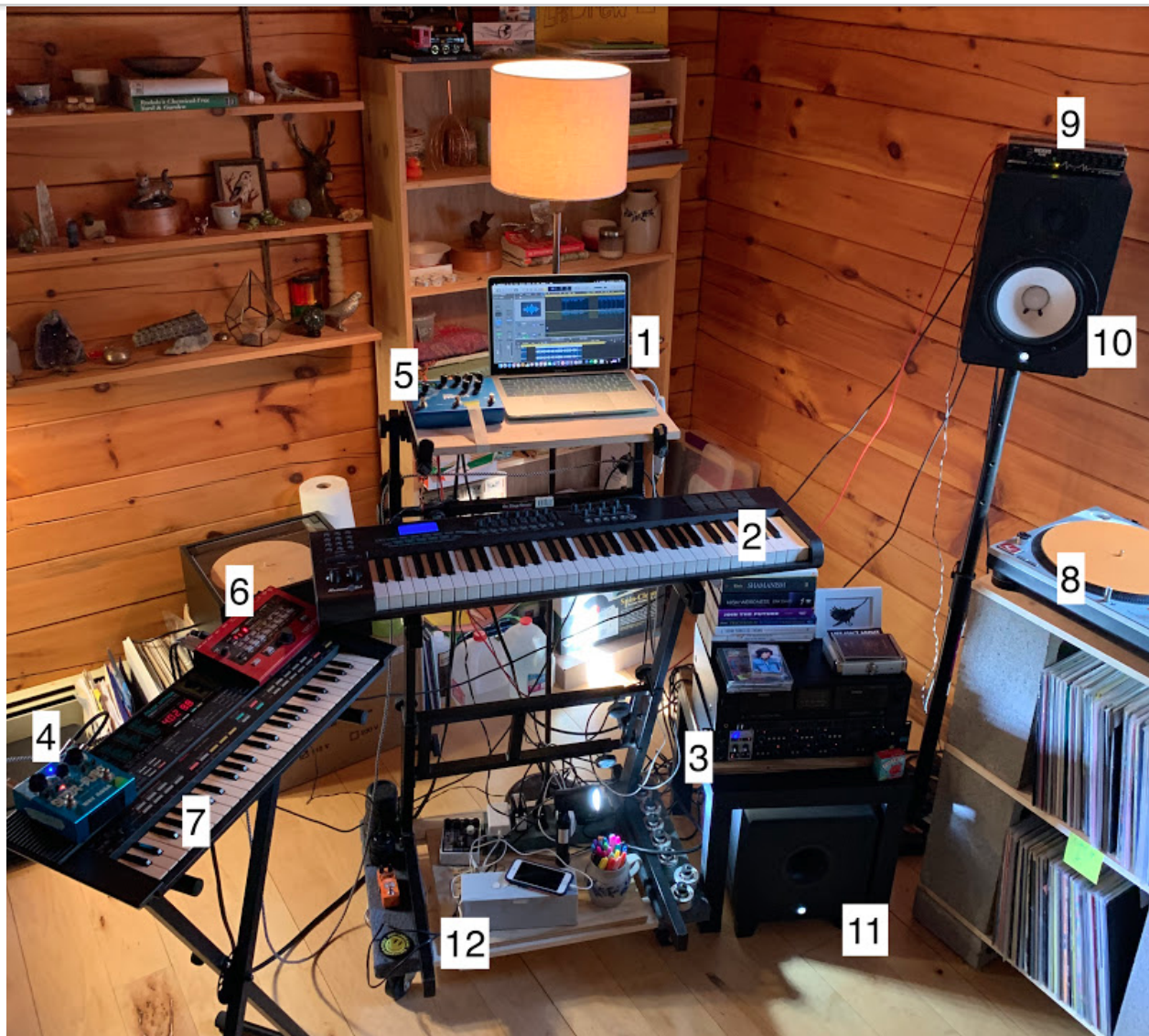


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Hi all, Eris here. Pictured above is my studio facing the lovely New Hampshire forest. My studio reflects my approach to making music. To create songs I sample records and play keyboards by hand. Everything is mounted up high so I can dance and move while I write and produce. My speakers are at ear height so I get the best and most accurate sound reproduction in the listening position. I use midi to connect my gear (not CV).

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Pictured above gear list and general routing info:

- (1) **Apple Mac Book Pro** running **LogicX** (routing: the soundcard [3] connects to the computer through a Firewire cord; the soundcard connects to the monitors [10] using 1/4 cords; the various instruments in my studio send audio to the soundcard using 1/4 cords; and the soundcard sends MIDI note data and midi clock tempo sync data through MIDI cords to the instruments).
- (2) **Axiom midi controller** I got over 10 years ago. If I want to use a plug-in synth in my computer or an outboard piece of gear without a keyboard, I route the midi signal from my Axiom MIDI controller through my computer and out to the instrument through a "midi merge [9]."
- (3) **Focusrite Liquid Saffire 56** sound card. It has many ins and outs for flexible routing and lots of outboard gear.
- (4) **Aqua-Puss** analog guitar pedal delay (currently my Porasound [7] is sending audio to the delay pedal [4]. The delay pedal then sends the mixed dry/wet audio signal to the soundcard [3]).
- (5) **Strymon Mobius** digital modulation effects box with midi sync. Great for tremolo, chorus, phase, etc. (currently I am routing my Nord drum machine [6] through it).
- (6) **Nord Drum 2** digital drum machine (controlled with midi note data through my Axiom [2] and/or computer [1]).
- (7) **Yamaha Portasound** toy 2-operator digital FM synthesiser. I bought this synth with my

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cord to the merger, which then distributes the signal to the correct synth (or other equipment) in your setup. Here the merge box is getting midi clock data from my computer and note data from my Axiom [2] and my laptop [1] which the Nexus [9] then transmits to the Strymon Mobius [5], the Nord Drum 2 [6], and my Portasound [7].

(10) These are the same great and affordable monitors that Maya uses.

(11) Subwoofer.

(12) My **Jambox**! When I am working on tunes or mastering a DJ mix I keep bouncing the audio from my computer and then uploading it to my dropbox. From there I play it on my phone, my jambox and in my car. If the recording sounds good on all these limited systems---not just my full frequency studio monitors---I know I have a good mixdown.

(13) **A&H Zone32** analog DJ Mixer (my DJ mixer gets routed to my soundcard and to my MPC for sampling).

(14) **Akai MPC2000XL** sequencer and master clock. Sometimes the MPC is the masterclock, but I usually sequence in the computer with the computer set as the master.

(15) **Waldorf Blofeld** polyphonic multi-timbral digital desktop synth (plays multiple notes and sounds at once). Both the Blofeld and the Pulse 2 [16] do not feature built-in keyboards. Therefore, the Blofeld and the Waldorf Pulse 2 [16] are played by my Axiom MIDI controller or my computer through MIDI.

(16) **Waldorf Pulse 2** monophonic analog synth (plays one note at a time and one sound at a time).

(17) My 24 year old record collection is an endless source of inspiration and samples!



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Thanks for reading 😊 Xoxo Maya

If you have any questions or suggested additions please write to: [questionst4tluvnrg@gmail.com](mailto:questionst4tluvnrg@gmail.com)