Recording Tutorial

This tutorial is intended for people who choose our **online mixing service**. This option consists of recording your music by yourself. Then, each audio track individually has to be exported and sent in order to be mixed.

The purpose of this tutorial is to provide guidance on how to record each instrument. Mixing is not a magic step of the process; one bad recorded track can ruin the whole song! If you follow the instructions successfully, you will be able to record **perfect tracks for a perfect mix**.

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I- EQUIPMENT

You will have to set up a bedroom studio, and the following items are the absolute minimum you need to record sound into your computer.

a. Computer

The first thing you obviously need is a computer. You should eventually invest in the best one you can afford because today's DAW's can be extremely hard on processing resources and making full-use of its features requires a fast computer.

Minimum Specifications:
- CPU: Intel Core i5 (i7 recommended)
- Memory: 4Gb RAM (8 Gb RAM recommended)
- Storage: you'll need at least 5 GB per song.

b. Digital Audio Workstation (DAW)

The digital audio workstation is the primary software used to make music on your computer. **Pro Tools**, which has long-been the most famous DAW, great for studios of all levels... but it is by no means the *only* option.

Depending on your budget and style of music, the best one for you could be any one of these: **Cubase, Logic Pro, Studio One, Reaper, Sonar, Ableton Live.**

c. Audio interface and preamp

Today's modern interfaces have evolved into incorporate many features. Those include: digital conversion, mic preamps, DI boxes, headphone amps, monitor management. In pro studios, each of these items normally exist as high-end stand-alone units.

In home studios though, these "all-in-one" budget interfaces can be a great way to save money, and still get exactly what you need: **Focusrite Scarlet, Steinberg**

UR22, UAD Apollo, RME Fireface, etc. Most of these interfaces have an input level switch so you can either plug a microphone or an instrument.

If you are after a specific color to your sound, you might want to use a **stand-alone preamp** such as a API 512c, a Neve 1073 or a LA-610 which come out at a line level. In any case, using the **proper connections and gain-staging is very important** when recording. Go check your rig and make sure you're connecting everything properly. Here's a general rule of thumb: Connect microphones to microphone inputs, and connect line outputs to line inputs.

d. Microphone and pop filter

Microphones come in many different types and have a variety of uses. The two most common types of microphones are **dynamic** and **condenser**.

- Dynamic microphones are much more rugged compared to condenser microphones. They have a limited frequency response, which makes them well-suited, along with their ability to withstand high sound pressure levels, for loud guitar amps, vocals, and drums. You'll want a large-diaphragm dynamic microphone like the **Shure SM7B** to record vocals.

- Condenser microphones are generally much more expensive than dynamic microphones and they require the use of a power supply (generally 48 volt "phantom power"). They're also quite a bit more fragile than their dynamic counterparts. You might want to consider a large-diaphragm condenser microphone such as the **Neumann TLM 102** to record vocals and a pair of small diaphragm condenser mics such as the **AKG Perception 170** as overhead mics for drums.

Finally, you'll need a **pop filter**. When recording vocals, there are "popping" noises on the **plosive consonants** like 'P' and 'B', and sibilance on 'S' sounds. So, you need a pop shield designed from acoustically transparent material, to give protection from these unwanted noises, whilst not losing sound quality.

II- RECORDING

a. Drums

You can either **program MIDI drums** or go for a **multitrack drum recording**.

- **MIDI programming** is a convenient solution. Set the right tempo in your DAW and start editing your MIDI track with a virtual drum kit.

  Let us know which drum map you are using. When in doubt, just render two copies of your drum track: a MIDI and a .WAV audio version.

  ***If you are not a drummer, make it simple**. Don't spend too much time trying to humanize your drum parts with tons of velocity changes (we will be taking care of that), just focus on the part itself.*

- **Audio multitrack recording** for the lucky few with enough space and enough gear.

  A well recorded track of acoustic drums can be the difference between a song that sounds like it was done at home and one that sounds like it came from a real studio. Of course, to do this, one of the first things you'll need is a **collection of the right microphones**. Check out the following drum mic bundles: **Sennheiser e600; Audix DP7; Shure PGDMK 6; Audix FP7**.

  If you go that route, please note that we will need at least the following 10 tracks from you: **Kick IN; Kick OUT; Snare TOP; Snare BOTTOM;** each one of your toms, so typically: **Floor Tom and Rack Tom; OH Left and Right; Room Left and Right**. Optionally, mic-up your hi-hat.

  Some interfaces (such as the Focusrite Scarlett 18i20, or the UAD Apollo 8P) only have 8 preamps, so if you can't extend the number of inputs of your interface with ADAT lightpipe connexions, get rid of the Kick IN & Snare BOTTOM inputs, which we will emulate later in the process.

► **Always remember to record with a metronome** (make sure to make a tempo map before tracking if your song has tempo changes).

► **Record everything at no less than 24-bit, 48 kHz** (switch to 44.1kHz if your system can't handle it).

b. Electric guitar

We will be using the **re-amping technique**. Re-amping is where you **track a dry signal off of your guitar's pickups** alongside of your normal amped tracks. The dry signals are then exported and sent off to another facility which might have a better selection of amps/preamps/mics and the experience with mic techniques.

Most audio interfaces have at least one of the inputs designated as **"Instrument" or "Hi-Z"**, typically accompanied by a switch labeled "Inst/Line" or "Hi-Z on/off". If not, you'll need a DI (direct injection) box, such as the **Countryman DI Type 85**, to convert the high impedance, unbalanced guitar signal into the low impedance, balanced signal that the interface normally takes from mic inputs.

Plug your guitar into your Hi-Z input or your DI box and increase the gain so that the absolute loudest part of the **guitar's signal is peaking at about -3 to -4dB below the zero mark on your record meter**. A dry guitar is very, very dynamic and unpredictable. -3 to -4dB will work great.

Then, set up your DAW for live monitoring, and you can either **insert an amp simulator** or **route the signal to your rig**.

We can definitely work with real amp takes but we recommend that you also send us the DI tracks for each guitar part, just in case you don't like your tone in the final mix. This way we can still try different amps, and see which one sounds the best in the end.

► **Record everything at no less than 24-bit, 48 kHz** (switch to 44.1kHz if your system can't handle it).

► **Always remember to record with a metronome** (make sure to make a tempo map before tracking if your song has tempo changes).

► **Change your guitar strings**. New strings always produce a brighter sound and better sustain. If the instrument has been properly set up, string and fret buzz should be minimal. Ideally, every song requires a set change.

► **ALWAYS CHECK YOUR TUNING!**

‣ **Each guitar part needs to be recorded twice,** except lead guitar solo parts.

c. Bass guitar

Follow the **exact same process as for the guitars**, but here, we'll just need **one track** so you won't need to record twice.

d. Acoustic instruments

Condenser mics are often preferred when recording acoustic instruments. The type of condenser mic you use depends on the overall tonal quality that you want to capture or accentuate.

For example, if a guitar has a nice woody sound that you want to bring out in the recording, a large-diaphragm condenser mic is a good choice. On the other hand, if you're trying to capture the brightness of a banjo, a small-diaphragm mic is a better choice.

Because these are acoustic instruments, **the room plays a role in the sound** that you end up recording. Unless you have a great-sounding room, you want to minimize its impact on your instrument's sound. You can do this by recording with spot mics.

Depending on the instrument you are recording, you can position your microphone(s) in a variety of ways, and each accents certain aspects of the instrument's sound. You may have to experiment quite a bit to figure out exactly where to put a mic but anyway **we recommend looking on the internet for a good documentation on how to track your instrument the best way possible**, or simply contact us here and we'll give you some advice.

► **Record everything with a metronome at no less than 24-bit, 48 kHz.**

e. Virtual instruments

In a modern music production environment, it is very common to see MIDI tracks and audio tracks living side by side in a DAW (digital audio workstation). Unlike audio tracks, MIDI tracks contain data that must be played through a virtual instrument in order to produce sound.

While MIDI allows for easy manipulation of notes, velocities, and more, the downside is it always needs a virtual instrument to make sound so please **print any MIDI or virtual instruments to audio and export your MIDI tracks if they need sound replacement.**

f. Vocals

Recording vocals at home can be challenging depending on your room but you can improve the process and the sound by a mile if you're armed with a few tricks and tips. First, make sure you sing in a **room without any metallic reflection**.

- **Soundproofing your room**: You will have the best luck in a small carpeted room. If you have got floorboards or tiles, get a rug that covers as much of the floor as possible. You should also ensure your curtains or blinds are drawn as window glass is incredibly reflective. Slat blinds are not particularly good at blocking the reflections because of the gap between each strip, so try to hang a curtain even if only for the duration of your recording session. The thicker the better. In some recording rooms a bit of liveliness is not a bad thing when the reflective surfaces have been purpose-designed, but in a bedroom you are best of deadening as much as you can.

  Dampening the vicinity behind the singer's head can be enough to reduce reflections to decent level for recording, but if you are full of energy and have more blankets than you know what to do with, put one on every wall and maybe even lay one over your desk surface.

The singer should stand up about **a foot away from the microphone** as a general guide. Softer singers might be better off standing at half that distance.

Make sure that your recordings are **not digitally clipping**: Set your gain so that the absolute loudest vocal part is peaking at about -3dB below the zero mark on your record meter.

► **Record everything at no less than 24-bit, 48 kHz** (switch to 44.1kHz if your system can't handle it).

► Always remember to **record with a metronome**.

► Don't forget your **pop filter!**

► The vocalist needs **closed-back headphones.**

► **Each vocal part needs to be recorded twice** (harmonies too!)

III- PREPARING YOUR TRACKS FOR MIXING

a. Clean up your tracks

Comping a final take is part of the production process and should not be left for us to do, unless you are also hiring them to help you with these decisions.

Remove unwanted noises between performance parts. Sometimes you want to leave a vocalist's breathe for emotion or a guitarist or drummers noises. Let us know if that's what you want in your mix.

If you've done some comping/editing, the MOST important thing is to **create cross-fades between the clips**. This prevents pops and clicks that will ruin your song.

b. Label your tracks clearly

Short and simple is usually the best. Titles like Kick In, Kick Out, Snare Top, Lead Vocal or abbreviations like Kick O, Snare T, T 1, Vox (vocals), EG (electric guitar), RTM (rhythm) are common and help easily **define what instrument the track is**. No need to include the song title in the track name but more on creating folders for your tracks below.

Labeling your tracks clearly during recording will save you from having to rename mislabeled tracks later because most DAW's will automatically name and catalog your files according to your track titles.

c. Turn off your processing

Please **bypass all of your plugins** (amp simulator, compression, reverb, eq, delay, etc.). The reason behind not sending processed tracks is so we aren't

inhibited by the compression and EQ or other effects you have "printed" or bounced to the track you are sending.

However, in some cases, you've worked hard to define and shape a special sound and that shouldn't be ignored. In this case, render two copies of the sound, one with the effect and one without.

d. Export / bounce

Don't send DAW sessions! Export/bounce each audio track as a **WAV or AIFF file, 24bit at 44.1khz or 48khz**. These can either be **mono or stereo.**

Additionally, export your **MIDI tracks** if they need sound replacement.

Make sure each audio file is **bounced from the beginning of the session** so each track has the same starting point.

To make sure you exported your stems correctly before sending them to us, import the stems into your DAW to make sure everything is correct.

e. Compress folder and submit your song

Have all your **files saved in one folder** and zip / **compress** this folder with a file archiver software. Once the .zip / .rar file is created, **name it to the song title**. Then, login to your artist account and click here.

Please provide us with **as much written information as possible**. We also welcome a **reference mix** that you would like us to match. This will give us a better idea of your creative vision and what you are seeking for in your mix.

If the material has been sent correctly, you will receive a confirmation email.

If you need to complete a previous submission, fill out this form and upload your files.