G VASSY AUDIO

SHORT RECORDING GUIDE (FOR BEGINNERS)

INTRO

This short guide contains the essential and useful elements for recording yourself in the best possible conditions.

This will help our communication during the mixing process of your songs.

Musically,

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GENERALITIES

BIG PICTURE

Recording music isn't solely dependent on the quality or quantity of equipment you own. It's possible to achieve fantastic results on a small budget, provided you know what you're doing and are thoroughly familiar with your instruments, tools, the recording environment, and your own strengths and weaknesses (your limitations) as a musician.

In general, try to be as critical as possible. If the take is bad or even just passable, if it's not in rhythm, if it "doesn't sound right" on the recording, it won't be any better after mixing/mastering. Your ears are your best analytical tool. There's no magic bullet. Mixing isn't about correcting arrangements and/or production errors or problems. It's about enhancing and improving what already exists. Keep in mind, though, that "if it sounds good, it sounds good!" (If you're happy with the result). It doesn't matter whether you followed the recommendations in this guide or not. Your journey and experimentation as a producer will only benefit you!

A quick word about gain staging. Make sure the signal you're recording is never too hot. It shouldn't be too quiet either. You need to find the sweet spot. Some audio interfaces are equipped with red/orange/green lights to give you an indication (red often indicating that you're feeding too much into the preamp).

Preparing for a recording takes time and a certain amount of attention to detail. Microphones capture even the smallest details. The task, therefore, is to minimize any imperfections you might not notice during rehearsals. A good exercise is to record yourself while rehearsing. This way, you can listen back and focus on areas for improvement.

Knowing your equipment (whatever it may be) is also important. Don't record through an equalizer (EQ) or compressor if you don't know exactly what you're doing.

As a first step, when recording your band for example, I recommend recording the instruments one by one. This will give you more flexibility and freedom to correct any potential mistakes. Start by recording the drums, then the bass and rhythm guitars, piano/synths (if there are any), and finally the vocals and backing vocals...

Before rushing into a recording session, **be sure the key of the song suits the singer**! If the key is too high or too low, there will be no choice but to re-record the bass, guitars, etc. (Pitch editing often introduces its share of artifacts, especially if the recording is far from the original key). Also, be absolutely sure about the tempo of your song (fixed or variable tempo).

SAMPLE RATE, BIT DEPTH

I recommend recording your audio sessions in 44.1kHz, 24-bit WAV format, or possibly 48kHz 24-bit. This is still the standard today. Furthermore, your computer's CPU will perform better and you'll save some disk space.

Be sure to keep the same format throughout the recording process. It is important to check this setting before each session begins!

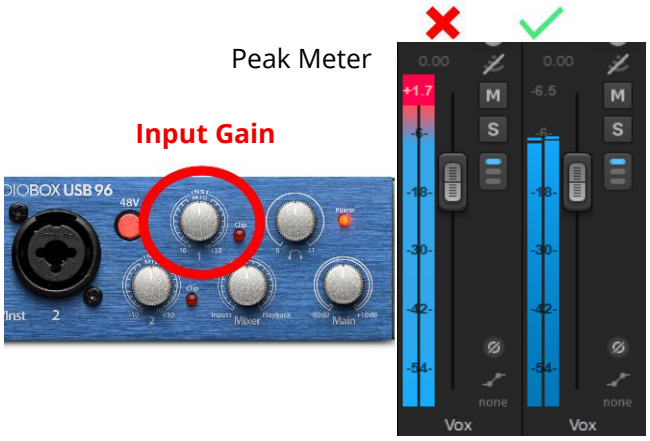
RECORDING

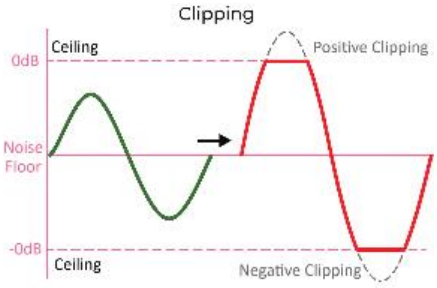
RECORDING, BIG PICTURE

On the following pages, you will find some recommendations for each instrument to be recorded. You will see, for example, which microphone can be used, how to position it (or them), and some tips for recording your guitar or bass.

Before recording your final takes, I recommend sending me a few samples. If you have any doubts, I can make sure the levels are healthy and "standard," so I can deliver the best possible mix. You'll find the necessary information in this guide. Here are a few things to check before you begin:

- That the background noise level for your guitar, bass, vocals... is acceptable
- That no audio signal "clips." "Clipping" means causing a signal to "saturate" (in this case, unintentionally). This is also referred to as clipping. In our situation, this means entering the audio interface above the maximum possible level, that is, "above 0dBFS" (the ceiling). Generally speaking, and to ensure a safe recording, the peak value should never exceed -6dBFS





- Ensure that the microphones you are going to use are properly installed and positioned
- That your drum elements (heads) are properly tuned/tensioned
- That the files are in the correct format...

Upon request, I can provide you with examples of good and bad vocal takes, and DI recordings of electric guitar and bass.

Don't have a DAW (Digital Audio Workstation)? Try REAPER! The trial version is free and unlimited. There's no demo version of this software; you're installing the full version.

RECORDING DRUMS

LIVE KIT

The first question that will arise is, "How many microphones do you have available?" to record your drums. In order of priority, I would suggest the following: 1x Kick (In), 1x Snare (Top), 2x Overheads, Xx Toms (Top), 2x Room, then, if you have additional microphones, 1x Snare (Bottom), 1x Mono Room, Xx Spot (Hi-Hat, Crash...), 1x Kick (Out).

Ideally, you want to use the best microphones you have available. Let's face it, recording a drum kit is a bit expensive. Especially since you'll need a sound card with as many inputs as microphones. The Scarlett 18i20 could be a good choice. Here's a possible starting point: Shure SM57s for the snare. It's perfectly possible to use these same microphones for the toms, or even Sennheiser e604s. For the kick drum, an SM7B, a Behringer BA 19A. For the overheads, a pair of Rode NT5s, or, if you have a slightly larger budget, a pair of Shure SM81s. It's perfectly possible to use these same microphones for room mics. And if you want a single room mic (i.e., mono), why not an Audix i5.

Micing drums is an art form, and I won't go into detail here (that will be covered in a future version of the guide), but here are a few recommendations. It's essential to use high-quality cymbals. Poor-quality cymbals are immediately noticeable and can ruin a mix. Spend enough time tuning the heads at the beginning of your session (TuneBot is a tool that can help). If you're recording several songs, check the tuning over time. Often, investing in new heads can make all the difference to the sound (REMO brand, for example). It all depends on the sound you want to achieve.

If you find your snare drum is too resonant, don't hesitate to use Moongel damper pads (left photo). Be careful not to overuse them, or you risk killing the snare's sound. Similarly, for the kick drum, if you want a more impactful, controlled, and shorter sound (for rock/metal, for example), try placing a blanket or pillows inside the drum shell.

Keep in mind the type of sound you want to achieve is crucial. All the work to be done will revolve around it.

The room where you want to record your drums should have a certain acoustic treatment or sound quality to avoid reflections that could ruin the recordings, especially if the room is small. The "room ambiance" is very important when recording drums.

For those who prefer egg cartons, be aware that this treatment only affects a small portion of the frequency spectrum. It's clearly not the most suitable solution for correcting an acoustic problem.

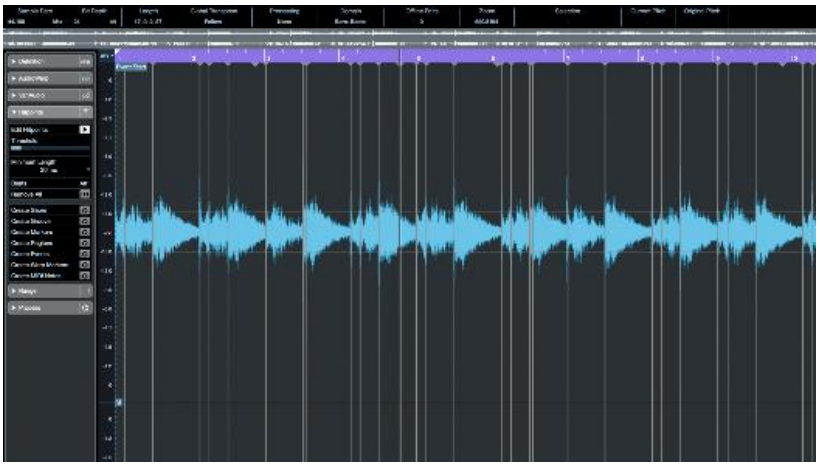
If you want to record drums in a small room with a lot of hard surfaces (concrete walls, for example), use as few microphones as possible and focus on close mics. We'll use alternative methods to bring your kit to life (room simulation, for example).

Preparing a drum kit recording is time-consuming and meticulous. Sometimes it's best to think twice before starting and ask yourself if the result is truly worth the effort (versus using a VST drum kit). A golden rule applies: "If it doesn't sound good, don't record it."

Be careful with phases when placing microphones!

EDITING LIVE KIT

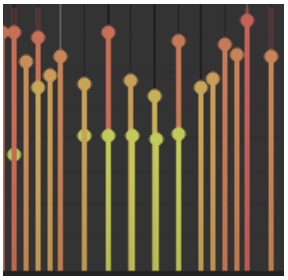
After a drum recording session, there's often a step called editing. Roughly speaking, this involves correcting any slight (or significant) delays or advances in timing relative to the tempo. This isn't always necessary, depending on the style of music or the desired sound. However, if this step is required, feel free to contact me so I can handle it. If you choose to do it yourself, be sure to do it properly, otherwise you risk transforming your initial performance into a result unusable for mixing (truncated transients, botched fade-ins/outs, clicks, pops, etc.)



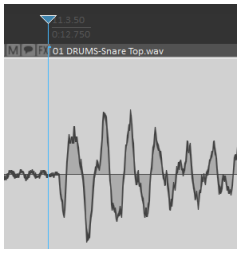
PROGRAMMED DRUMS (VST)

Regardless of the drum software/library you want to use (Toontrack, GetGoodDrums, Native Instruments, etc.), you'll need to pay particular attention to certain elements. What you generally want is to create the most natural and realistic performance possible.

- Velocity. Consider the velocity (range from 1 to 127 in MIDI). For a percussive element, this is the "force/power" with which a drum component will be hit. Not all hits can be played at maximum velocity. This is impossible in real-world situations, and the result can sound "robotic" (like a machine gun). Another example: ghost notes (soft hits) are generally played below half the velocity range (depending on the software).



- Timing. You don't have to be perfectly aligned with the grid, but it's perfectly acceptable in certain situations. Being very slightly off-beat adds a certain realism to the performance, a groove (the "Humanize" function in some DAWs/software). Don't go too far, though, or you'll be completely out of time.



- Remember that a drummer is a human being with four limbs (two arms, two legs maximum!). In theory, they can never normally hit more than four at a time! But again, if the performance isn't meant to be realistic, there are no limits to your imagination.

If you don't have a drum library, here are some free ones to help you compose and write down your ideas:

[Krimh Metal Free](#)

[Steven Slate Drummer 5.5 FREE](#)

[LABS Vintage Drums](#)

This will provide a solid foundation for using the libraries I already own.

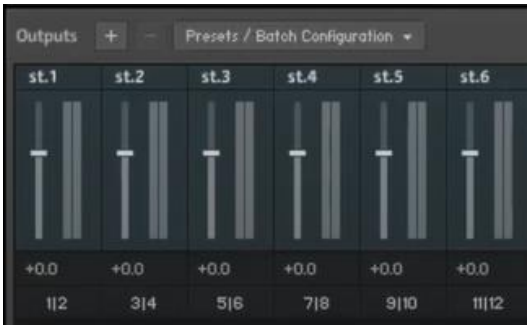
If you're not comfortable with this kind of software and more familiar with composing on Guitar Pro, for example, no problem, a MIDI file can be enough (followed with the MIDI Drum Map, a small text file that specifies which MIDI note corresponds to each drum element. Example: Kick 36, Snare 38...).

Ideally, you should also provide a stereo audio file, exported as a .wav file, so I can get an idea of the desired sound.

For converting a "home demo" (recorded with handy recorder, or smartphone) to multitrack, feel free to contact me as well.

If you are comfortable using these programs and would like to send me the audio tracks from your preferred software, no problem, but please also send me the MIDI file of the performance.

Check the routing between your drum VST (Virtual Studio Technology) and your DAW. When exporting your drum kit, make sure to export each element to a separate track. That is, one track for the kick drum, one for the snare, one for each tom, one (or two) for the overheads, room amps, etc.



I suggest you export all your tracks "at once," "in a single Render/Bounce." For simplicity, please export your tracks in stereo*(1). (Unless your DAW allows you to export both mono and stereo files simultaneously).

(1) Reason explained at the end of the guide

(Bonus: There are a multitude of high-quality, free virtual instruments that you can find on the Spitfire Audio website, in the LABS section. Or, on the Pianobook community platform. Some require the full version of Kontakt, but others can be used with the free Decent Sampler!)

GUITAR AND BASS (ELECTRIC) RECORDING

There are 3 crucial aspects when it comes to recording guitar and bass: New strings, the tone, and a well-prepared instrument (your intervention or that of a guitar tech).

GUITAR STRINGS

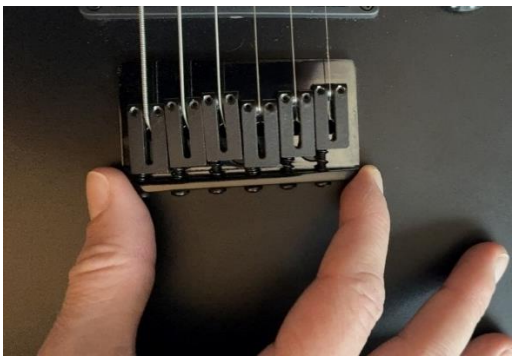
For strings, here are some examples of brands:

Ultimately, regardless of the brand, you probably have your own habits, but **it's important to have new strings before starting a recording session**. "Dead strings" have no brightness and will make your playing sound dull.

If you tend to have sweaty hands while playing, plan to change your strings more regularly. The brightness of new strings fades even more quickly (some after just a few hours of playing!).

Perfect tuning is crucial and must be checked throughout the recording, even after several takes. I recommend adding this small tuner plugin to your track: GTune. It's free, very precise, and very lightweight. It will allow you to check your tuning at any time.

Tuning must be done at several points. On the open strings of course, but also on the 12th fret (adjustment possible via the bridge screws of your instrument).



Also check that your guitar holds the chords well; otherwise, finer tuning will be necessary.

For those who wish to avoid these "detuning" problems, I recommend taking a look at the Evertune bridge brand (or looking at guitars already equipped with this type of bridge).

GUITAR RESONANCES (MUTE)

Muting the strings is important when recording electric guitar parts. There's nothing worse than a string buzzing (unintentionally) while playing.

Here are some examples and techniques for dampening these resonances:

- Mute the treble strings when playing only the bass strings (of course, you can do the opposite). You can use foam, paper towels, etc.


- Mute the strings above the nut (if using tape, wrap it well around the strings, don't just place it on top).)



- Also dampen the area below the bridge (this can be done with foam)

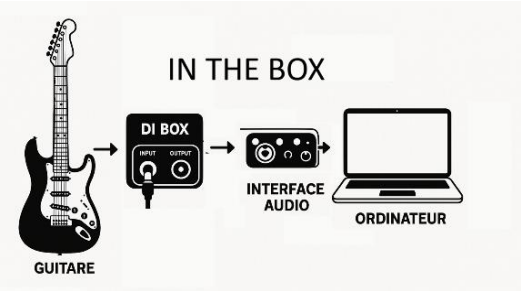
- If your guitar has them, dampen the "springs" (foam, tape, etc.)

- Finally, if you're playing solos, remember to mute the strings "above" the frets you intend to play

Note: these muting methods are also applicable to your bass (even though the latter is relatively less sensitive to resonance)

RECORDING/MONITORING (IN THE BOX)

In this section, we'll cover recording guitar/bass "In The Box," meaning your instrument plugged directly into your audio interface or via a DI box. "Hardware" recording (amp + cab + mic/room) will be covered in a future version of this document.



When recording, always play in a tone that accurately represents the desired result. Choosing the right amp simulator is essential for those working with VSTs. You must be able to hear exactly what you're playing. (There's no room for "close enough").

On your amp simulator, remember to disable the noise gate (if it has one). If there are any ambient noises (hiss, buzz, etc.), you should be able to hear them. Move your guitar/bass as far away from your computer as possible. Sometimes (especially with tower PCs), you can pick up electromagnetic interference from the power supply through the guitar's pickups. Adjust the guitar's orientation and your positioning to mitigate this.

Be wary of certain LED lamps, as they can generate unwanted frequencies.

Of course, the DI (Direct Injection) signal should be recorded first! That is, the raw sound of your guitar/bass, without any effects on it... To get the best possible signal quality, please record through a DI box.

It's a worthwhile investment (and you only have to make it once). You can even find used ones.

Note: if you do not have a DI box, it is possible to connect directly to the audio interface.

Below are some free guitar amp simulators:

[ML SoundLab - Amped Roots](#)

[STL Tones - Emissary](#)

[Neural Amp Modeler](#)

[ML SoundLab - Amped Stevie T](#)

[AmpliTube 5 CS](#)

Are you looking for a free IR (Impulse Response) loader: [STL Tones NadIR](#)

For those with a slightly larger budget, you're probably already familiar with the brands: Neural DSP, Bogren Digital, IK Multimedia...

If you wish to provide WET tracks (recorded via your own VSTs or hardware amps), they are welcome. Ideally, the DI tracks should already be edited beforehand. Please provide them nonetheless.

BEWARE OF "CLIPPING"

Capture your DIs without clipping or noise. Always check the quality of your DI signal before recording. It's important to maintain the best possible signal-to-noise ratio.

Upon request, I can provide you with various DI examples to demonstrate the different levels of background noise (bad, fair, and good). The examples also include different riffs to illustrate the importance of consistency/regularity in rhythmic playing, and what a solo DI should look like.

Keep a close eye on your input gain level; the peak signal should never be above -6dBFS! The (raw) guitar signal is observed on the track's "VU meter" (which is actually a peak meter).

Note that with some DAWs, when you add an amp simulator plugin, it might monitor the amp's own signal. This means the signal at the input point is no longer monitored! Most DAWs are configured so that, when recording, the signal at the input point is monitored. So, be sure to check this.

GAIN STAGING

There are thousands of tutorials online, and for those who have heard about recording at "-18dBFS," it's both true and not entirely true. On the one hand, it's important to understand that the -18dBFS mentioned is the **RMS** value, not the peak value.

On the other hand, the -18dBFS that we usually try to match with the VU meter at 0VU depends on the converter.

Note: +4dbu = 0VU = 1.23V = "-18dBFS"

So, for example, for an Audient ID14 audio interface, the manual states that 12dBu = 0dBFS. This means that 0VU = -8dBFS (and not -18dBFS).

This calibration ensures that the input converter does not clip or saturate.

Simple thing: record your takes "with the highest possible gain" without ever exceeding -6dBFS peak.

CONSISTENCY IN BASS PLAYING AND TUNING

When playing bass, pay close attention to consistency and dynamics. The playing should be at a steady volume.

Regarding tuning, always monitor your tuner during recording. Again, you can use the small GTune tuning plugin.

Upon request, I can provide examples of correct bass DIs.

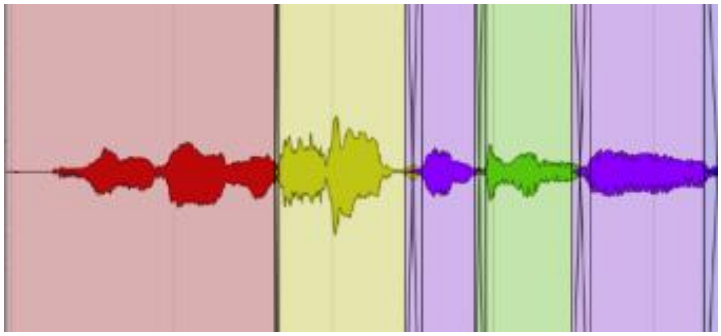
Below is a free bass amp simulator:

TSE Audio – BOD

COMPING

For guitar and bass, don't be afraid to record small sections (sometimes even note by note!). This is very common, even in the professional world. For example: you want to place a harmonic pinch in the middle of your chord progression, but you're not comfortable playing everything in one take. It's perfectly acceptable to record the harmonic on a separate track, detached from the riff.

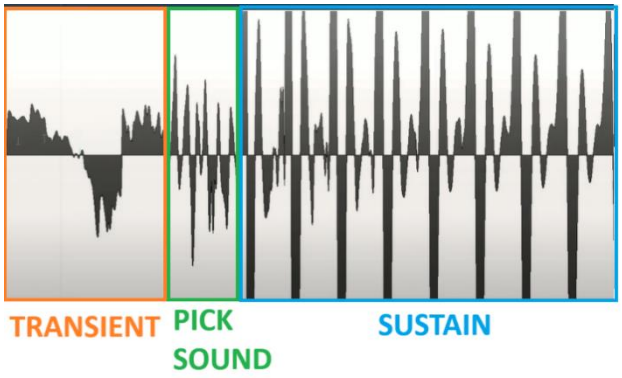
Perfect takes can be difficult to achieve, which is why we use "comping." This involves creating the ultimate take by piecing together several sections. If you're not comfortable with this editing technique, feel free to contact me to provide this service.



TIMING

Obviously, timing is crucial (play to a click track or with a drum kit perfectly aligned with the tempo!)

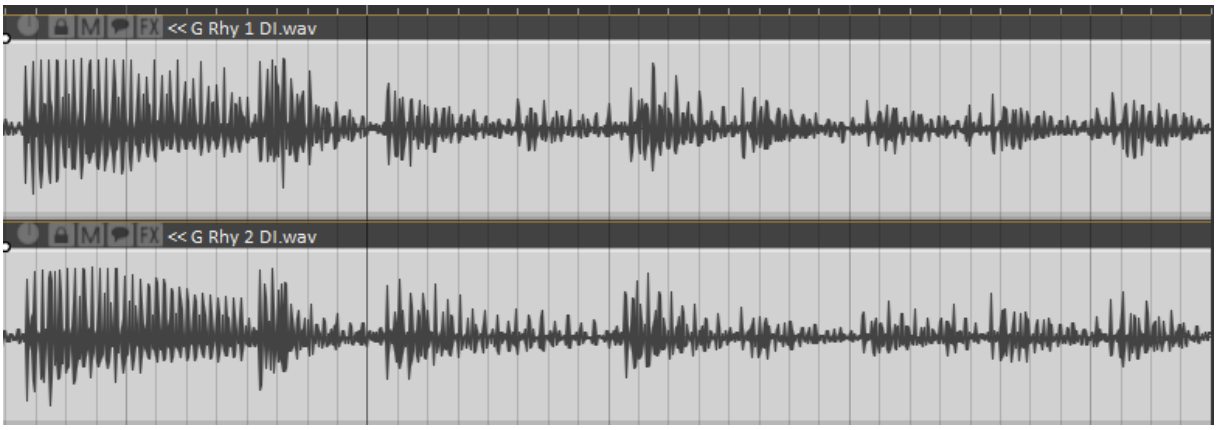
For your information, an electric guitar signal is divided into 3 phases: The transient / The pick attack / The sustain (note).



STEREO IMAGE

When recording guitar riffs, in most cases, you want them to occupy a certain "width" in the listening field. That is, mostly on the left and right, to leave as much space as possible in the center (for the vocals, for example).

To achieve this wide sound effect on guitars, the method involves recording the same performance twice and panning one recording to the left and the other to the right. This creates a stereo recording. These two recordings must be almost identical. Consistency, precision, and timing are paramount to achieving the desired result. It's the slight "imperfections" that will create this wide sound.



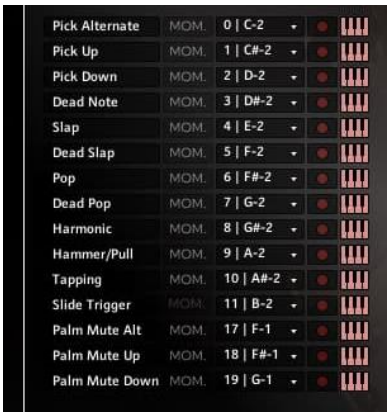
What you shouldn't do is take only one shot and duplicate it to get the left and right shots.

All we'll get is a volume increase, with two mono tracks that are exactly the same.

PROGRAMMED BASS AND/OR GUITAR

It is perfectly acceptable and understandable to see bass and/or guitar parts programmed in MIDI appearing in today's productions. Ex : SubMission Audio, Toontrack, Native Instruments, Solemn Tones...

Here too, during the programming phase, pay attention to velocity, articulations to make the performance as realistic as possible.



In all cases, please provide the MIDI files with your WAV tracks.

VOCALS

GOOD PRACTICES

You should use the best microphone and preamp (if you have one) you own. But ultimately, it's your vocal performance that truly matters. Your comfort and confidence will reflect the best of yourself.

You can record short takes if you feel the need. Experiment by cutting your lyrics into sections, then combine them to achieve the most natural performance possible. Pay close attention to the timing!

If you need a click track/metronome, go for it. Of course, using closed-back headphones (or in-ear headphones) to play your backing track is essential. Don't hesitate to check out the drummers' section (Vic Firth brand); they're excellent at blocking out bleed and click noise.

Warming up is very important; good preparation is necessary to be able to handle the takes you're recording. Don't forget to stay well hydrated either.

REFLECTIONS

It's essential to minimize reflections in your room, especially in a home studio setting. I recommend recording in the room with the least echo, and then covering the area around your microphone with blankets or heavy clothing. Consider using heavy furniture and covering it with blankets as well. If you have acoustic panels, place them around your recording area. Be creative; the goal is to reduce these reflections. Feel free to share photos for guidance.

To find out which room resonates the least, there's a simple test: a clap in your hands. The more resonant the room, the longer you'll hear your clap. You'll hear a sort of "metallic" sound; these are flutter echoes. It's the sound bouncing off all the surfaces before fading away.

We will therefore look for the room where this phenomenon is least present. Furniture such as beds and sofas greatly helps to reduce these reflections.

GAIN STAGING (VOCALS)

When gain staging your vocal takes, it's important to set the level for the loudest part of the song (or for specific sections of the song). If you set the gain level for quieter passages, you'll send a huge (perhaps too much) signal to the preamp during louder passages, potentially causing unwanted clipping.

Here too, to avoid clipping, ensure that the peak value on the peak meter never exceeds -6dBFS. You can even be a little more cautious by aiming for a maximum peak of -9dBFS.

Upon request, I can again provide examples of vocal recordings that meet expectations, and others that do not.

STEREO IMAGE AND MONO DOUBLING

The method we saw earlier for guitars, to gain panning and width, can also be applied to vocals. If, for example, you want a chorus to be more epic, you can imagine the following configuration, with lead, backing vocals, and harmonies:

The only limit will be your imagination!

Looking above, you'll notice a "Lead Vox Double" track, centered on the pan. Having our lead vocal doubled—that is, an almost identical take (with its slight imperfections)—in the center will help to thicken, widen, and enhance the singer's performance.

RAW TAKES

Please send your raw tracks. However, if you have a good preamp and compressor (like the 1176), adding a little compression and/or a touch of EQ can make a difference! Be sure to use it correctly; a recording captured with too much compression, for example, cannot be "decompressed" without introducing unwanted artifacts.

RECOMMENDED MICROPHONE(S)

The Shure SM7b works very well because it doesn't pick up too many reflections and has a good built-in pop filter. It's very comfortable for singers who are used to holding their microphone during rehearsals and concerts. Of course, it could be another model, or sometimes even the only microphone you own (like an SM58, for example).

MICROPHONE POSITIONING

Microphone placement is crucial. Depending on the technology chosen (dynamic, condenser, etc.), the recording will vary depending on the distance from the microphone.

In all cases, it will be essential to use a pop filter to reduce potential plosives during your recordings ("ppeuuhhh").

For example, for a dynamic microphone (left) and for a condenser microphone (right), a good distance might be this one:


Contrariwise, too great a distance could be this:


Or, too close a distance could be this:


In any case, experimentation is key. Everything also depends on the context and the desired sense of “proximity effect”.

Be careful not to cover the microphone (unless you want to create a specific effect), if you don't want to lose interesting frequencies during recording.

Avoid cupping the microphone in these ways.:

However, for those who are used to holding their microphone, it is possible to hold the SM7B this way:

POST PRODUCTION

Nowadays, bands are increasingly incorporating post-production elements into their songs; such as shakers, sub-drops, synthesizers, orchestral ensembles, drum loops, etc.

As you can see, there are countless bookstores. Depending on which ones you want to buy, this can significantly impact your budget. However, there are often sales (Black Friday, summer sales, spring sales, etc.), which is the best way to save money.

STEREO VS MONO

It's important to export these tracks correctly. If a synth is meant to be in stereo, export it in stereo. If a sub-drop is meant to be in mono, export it in mono.

CONTACT FORM

CONTACT

If you have any questions, or if you would like us to work together on your project, please feel free to contact me.

✉ : gvassyaudio@outlook.com

📞 : +33686185694 (WhatsApp)

🌐 : https://gvassyaudio.com

See you very soon for a great collaboration!

Musically,

G VASSY AUDIO / Gaëtan VASSY

If you found the content of this document helpful, please let me know.

If you wish, you can make a small donation on this website: Buy Me A Coffee

TO GO FURTHER

APPENDIX

*(1) The reason for the single export for drum tracks is as follows: today's drum software/VSTs are programmed so that if you play a MIDI note of the same velocity (e.g., 127) twice in a row, it won't be the same sample (WAV audio file) that is played. This is called Round Robin. It will be a virtually identical sound, a sample of the same velocity but with its own unique differences. This is to bring even more realism to the performance (and avoid the "machine gun effect").

If we take the example of the snare drum, and consider its relationship to the entire drum kit, this snare drum is present in the direct Top and Bottom tracks (obviously), but it is also present in the Overheads and Room tracks, for example. If we want to be sure that the "audio sample played" is the same in all elements of the kit (assuming that the VST is programmed correctly), the simplest way is to make a single export, and therefore in stereo (because the overheads, rooms are almost always in stereo).

Snare / Caisse Claire

Render once

	Note Midi 1, Velocité 127	Note Midi 2, Velocité 127	Note Midi 3, Velocité 127
Sample Snare Top	RR6 Top	RR3 Top	RR5 Top
Sample Snare Bottom	RR6 Bot	RR3 Bot	RR5 Bot
Sample Snare OH	RR6 OH	RR3 OH	RR5 OH
Sample Snare Room	RR6 Room	RR3 Room	RR5 Room

Render twice

Premier Render	Note Midi 1, Velocité 127	Note Midi 2, Velocité 127	Note Midi 3, Velocité 127
Sample Snare Top	RR6 Top	RR3 Top	RR5 Top
Sample Snare Bottom	RR6 Bot	RR3 Bot	RR5 Bot

Second Render	Note Midi 1, Velocité 127	Note Midi 2, Velocité 127	Note Midi 3, Velocité 127
Sample Snare OH	RR4 OH	RR1 OH	RR5 OH
Sample Snare Room	RR4 Room	RR1 Room	RR5 Room