

A Practical Preparation Guide for Musicians
Entering the Recording Studio

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Introduction

The recording studio represents a location of possibility for any musician. It provides an opportunity to capture the perfect version of a song that will last forever. In order to help prepare you capture the best sound and the best performance of your songs, we have prepared this guide to help with advance preparation in some areas that you may not consider. These are bits of practical knowledge gathered from a decade spent recording musicians. Specifically, this guide will discuss practicing for tracking, preparing your instruments for the studio, and mentally preparing for the recording process.

Practicing for Tracking

When going into the recording, it is a given that you will practice the songs that you will record for both precision of notes played during the tracking as well as the feeling of the song. However, when you practice for recording, there are some added considerations that you should incorporate into your rehearsal routine.

Beginnings and endings – A recorded song requires a purposeful beginning and ending. How long will the song ring out at the end? Do you want the stick clicks or count included at the beginning of the song for all eternity? These are the types of questions you need to consider as you think about your song as a recorded piece of art rather than a live performance.

Silent counts – Silent counts are required in two portions of a song, beginnings and portions of songs with silence (for example, vocals may go here later, but the instrumentation cuts out for a specified count). The beginning of a song requires an audible count with the last two counts silent. For example, a song in 4/4 would most likely have an eight count with the last two silent, “One, Two, Three, Four, One, Two” and then the “Three” and “Four” would be mouthed or head nodded. The count could be replaced by stick clicks and the silence would remain. Every song, regardless of how it starts (ex: solo guitar, drums and bass, etc.) requires this type of count. This silence allows for analog mixing. Silent counts are also used in portions of a song where the instruments go silent for a specified count. It is crucial that you determine the specific count on any of these breaks so that everyone stops together, everyone starts together, and that all subsequent overdubs are not a mess of guessing. These silent counts can be done by mouthing or body language.

Visual cues – As you may have inferred, much of what happens in tracking requires communication without using sound, or else it would be on the track forever. We have already discussed silent counts, but many musicians rely on vocals in order to know where they are at in a song and when to change parts. Recording sessions record instruments separate from vocals and scratch vocals (vocals as a place holder run through headphones) are generally strongly discouraged as they greatly detract from the instrument being played and will generally pick up in

another room microphone. Therefore, silent cues are required between musicians in order to anticipate changes and to ensure that each passage has the proper number of counts.

Controlling dynamic range – The human ear is an amazing listening device. When a sound source gets quieter or louder, our ears adjust without us recognizing that they have adjusted. With sound recording, peaks in level above the rest of the track can result in the ruining of a take. Every instrument must be sure to maintain a consistent level, but bass and drums are the most crucial. While steps in the recording and mixing process are used to control dynamic range, ultimately it is up to the musician to play at a consistent level. When musicians get excited, they often play louder. When a bass player slides to a note, they get louder. Drummers have difficulty in hitting the snare at a consistent level (too quiet and too loud). No amount of compression and processing can fix an inconsistent take. It is your responsibility to play the take at a consistent level and this can only be accomplished through practice. Many devices have a built-in mic and VU meter. Play your song and watch the VU, it never lies. The key to consistency lies in playing your instrument in the same ideal manner throughout the entire take (over the same pickup, the same part of the head, crossing cymbals).

Preparing Instruments

While live performances require basic attention to tonality and intonation, much time in the recording process is dedicated to maximizing the tone of a properly tuned instrument and minimizing stray noises. Many hours of recording time have been devoted to tracking down odd squeaks on a drum set, rattles on a cabinet, or why two instruments sound out of tune with one another. Recording time is best spent on capturing the best sound possible and focusing on the best performance possible. Be sure to troubleshoot your instruments in advance as the microphone will only exacerbate any and all issues. We will now break down some preparation techniques by instrument.

Electric guitar – An electric guitar should have its strings changed no more than a few days before the recording. Consider the strings the lifeblood of tone as they feed your pickups, which in turn feeds your amp. In addition to this, the guitar should have a proper set up, especially with regard to setting intonation (of course adjusting truss rods, nut slotting, and setting action is important as well). Intonation setting is crucial for getting a good recording if you plan on using chords or playing with another person. In addition to this, electronics should be gone through (avoiding intermittent jacks and scratchy pots) and pick up height should be adjusted to get the desired balance between pickups and get the most out of the amp. This is adjusted by the ear of the player or guitar technician. With regard to amplification, address any intermittent issues or stray electronic noises of the amp. Also, pay particular attention to rattling in the cabinet. This can be anything from a part that is loose to a voice coil rubbing on a speaker. It is essential to address these

as live you may not notice them, but any unwanted noises are magnified greatly by the microphone.

Electric bass guitar – Follow the above advice for electric guitar preparation with a few small exceptions. The bass must be intonated properly and free of any string rattle or buzz. Part of the elimination of this buzz/rattle is the proper technique of the player, but part is also technical. String changing is not as essential as electric guitar as new strings have a less “mellow” sound. Ideally, they would be changed about a month before recording to allow for the top end of the string to be tamed a bit. Strings should be wiped free of dirt/rust/skin with isopropyl alcohol if they are not changed. Rattles and other odd cabinet noises are especially important to find on bass amplification as the electric bass should be a clean signal. Be especially diligent in tracking down cabinet and speaker issues from loose hardware to rubbing voice coils.

Electronic instruments – This can include synthesizers, organs, theremins, and any electronically-based instrument. The key to preparing your electronic instrument is to track down weird buzzes, hums, whirrs, and other electronic noises. These can arise from issues with the circuit, ground loops and polarity issues, and dirty electronics. Also, you should ensure that all patch cables have no intermittent problems and are of a high quality.

Other stringed instruments – We lump together acoustic guitar, mandolin, banjo, etc. here. Although they all have their own special types of maintenance (ex: the resonator head on the banjo, the octaves of a mandolin), the same maintenance logic applies with string-changing and intonation being of utmost concern.

Drums – We have included drums next to acoustic stringed instruments because they are indeed an acoustic instrument. A drum kit is the most difficult instrument to track on recording and exceptional care must be taken to prepare the kit for the scrutiny of microphones. The most important piece of maintenance is a well-tuned snare drum. Always change the batter head. There is no replacement for changing this head. Always use a high quality head. Inspect the resonant head to ensure that it is not dimpled. If it has many dents, change the head as it can lead to weird phase issues. Upon changing the head, tune the snare properly and dampen it to avoid unpleasant ring. The goal is to get a good healthy “crack” sound. This requires the batter head and resonant head to be in tune, proper damping to occur, and the snares set up to rattle just enough. This will take time, but is worthwhile. With regard to kick and toms, replace any damaged heads. If replacing, we suggest using single ply heads as they record better than the double ply ones. Additionally, unless you have very nice drums with resonant heads that are impeccably tuned, remove the resonant heads on your kick drum (essential, and preferred even if meeting the previous two conditions) and your toms. Some engineers suggest tuning your toms to the key of a song, we are fine with them being tuned to a fifth. With regard to your hardware, now is the time to lubricate your kick drum pedal and hi hat stand (we recommend tri-flow. It's used on bikes and it works wonders.

Avoid WD-40 as the “WD” stands for water displacement and does not properly lubricate). Consider lubricating and desqueaking your throne as well. Additionally, use this time to replace all necessary felt pieces, nuts, and washers. Additionally, clean your cymbals. The grime on them removes their chime. Finally, use sticks of good quality. The quality of wood of the stick does make a difference in the sounds of your drums.

Vocals – Vocals must be stretched out and prepared for singing. One of the best ways to do this is through talking. Talk to everyone in the days leading up to recording. Additionally, avoid strenuous vocal activities that can damage your vocal chords, hydrate with plenty of room temperature water, and avoid excessive salt, caffeine, and alcohol. Additionally, as you prepare, we suggest singing and recording into a microphone of any type. What you hear while singing is drastically different than what the microphone tracks as your skull is actually a flattering acoustic device.

Mental Preparation

We have discussed preparing songs for recording via practice as well as preparing instruments for the scrutiny of tracking, in the final portion of this guide we will discuss mentally preparing for the recording process.

Duration – Be prepared to spend far more time than you ever imagined in the tracking, overdubbing, and mixing processes. The assumption of many bands entering the studio for the first time is “Our four songs are three minutes a piece, and we might need two takes, so we will be done in 24 minutes.” This is absolutely not the case as every instrument must be individually checked, performances must be heard back, and pieces of the song must be figured out. To give some perspective, finding the right drum sound is a three to four hour process of matching microphone to player, room position to kit, and preamp and signal chain to band. Any other instrument requires a fair amount of time as well as do vocals. The microphone that sounds perfect on one voice will sound awful on another. The same applies to pre-amplifiers and dynamic processing. The point is to be prepared for the proceedings to take a while as there are no shortcuts in the recording process.

Flexibility – Crazy things will happen during a recording session. Sometimes a song that a band has played for a year is heard back on tape, and the musicians hear that it is actually not ready for recording. Sometimes an instrument breaks or a piece of studio gear is intermittent. Sometimes singers don't know how to record or the words to a song (two elements that do not matter in a live setting nearly as much). These scenarios will happen. However, it is important to be mentally prepared for them to happen and to be supportive of everyone in the process. Everyone involved (the musicians, the engineer, the producer), all want the same thing, a fantastic recording of your song. The key is to be flexible toward figuring out solutions to the problems that will inevitable arise.

Focus – As previously mentioned, everyone involved in the process wants to make a fantastic record. In order to do so, everyone must focus on this goal. This means mutual support, talking through difficult situations, honesty about the songs, and even when to take a break. This also means that digital devices (ex: phones) are not welcome in the studio as they remove musicians from the task and they can introduce digital noise in to the sensitive recording equipment.

Conclusions

While this guide is certainly not exhaustive, following its suggestions will almost certainly increase your productivity in and enjoyment of the recording process. Following its suggestions will allow you to focus on the artistic and symbolic portion of music-making rather than the technical troubleshooting. We all have the same goal, to make a great record. Following this guide is an important step in this process.