

JWALKER

PRODUCTION

Thanks to [Lasse Lammert](#) & [LSD Studio](#) for the guide template.

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JWP Guide to Recording and Delivering Files for a Mix

These are guidelines, not strict rules, for best practices. The microphones I list here are often relatively expensive, but generally standard for professional engineering. However, there are many suitable alternatives that can work. *SEE THE END OF THIS DOCUMENT* for a list. If you have any questions, please feel free to contact me about any part of this process.

Miking, Tracking, etc :

Drums (Ideally, recorded drums would be engineered by an experienced pro)

For metal, I prefer the overhead mics to be fairly close to the cymbals, preferably with good SDC (small diaphragm condenser) mics like Neumann KM184s, or Telefunken M60s (which I actually prefer, and they cost less) aiming at the edge of the cymbals at approximately 1.5 - 2 feet distance, in a spaced pair configuration.

If you find that you're getting a swirly, swooshy sound with the mics that close, you might need to move them a bit closer to the side of the cymbal that is not swinging as far, therefore not creating as much air flow. (If you picture a clock, and the stick hits the clock at 6:00, the biggest movements will be 6:00 and 12:00, so miking closer to 9:00/3:00 will result in less of that swirling sound from the air blowing into the mic).

For non-metal genres, more traditional configurations, like XY, or simply a spaced pair that is more like 4 feet distance, can sometimes work better for capturing the whole kit.

Also I prefer to have as little hi hat bleed as possible into the overhead mics, by trying to place a cymbal between the mic and the hi hat to obstruct the direct line. Sometimes if that's not enough, you might add some foam between the hats and the OH mic.

If there's too much snare in the overhead mics, it can sometimes be helpful to slightly angle the overhead mics away from the kit.

Also, place the overhead mics at an equal distance from the snare, using a tape measure.

Next I'd like the splashes, ride, hi hats and china to be miked separately, if possible, with SDC spot mics, or SM7B for HH. These can be quite close, aiming for about 8-10 inches for the china, 6-8 inches for the splashes, and usually miking the ride from underneath with an LDC (large diaphragm condenser - AKG c414, etc) close to/aiming at the bell at about 4-8 inches distance.

In general, you should try to persuade the drummer to set the cymbals as high as possible, in order to avoid bleed from the toms and snare. (I tell them that the further away from the kit they are, and the less bleed there is, the louder I can make them in the mix later without ruining the direct sound of the snare, kick, and toms - which is true, and quite crucial.)

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Room mics: Every room is different, however, typically, a spaced pair of ribbons, or good LDCs about 10-15 feet distance in front of the kit will work well enough. Snare centered.

Snare: Don't get fancy here, the good old Shure SM57 on top and bottom does the job. If mic selection allows, another SDC on top/side, can sometimes be useful.

Kick: Shure Beta 91 or similar inside, Audix D6 or similar in port, and maybe an LDC or Subkick outside against the head - but the 91 would be the key ingredient.

Toms: I don't really care for 421s, but if that's what you have, go for it. I prefer the less expensive CAD M179, 4-5 inches distance. Audix D-Series are okay also.

When recording, I'm mainly looking for power, consistency, and attitude in the playing...so every snare and tom has to be hit HARD and consistently. (I want to rely on the mic sounds as much as possible before I start thinking about samples.) When recording in sections I usually ask the drummer to play a few bars before and after the punch in so one can find a perfect place for the edit/crossfade, which might be a bit before or after the desired punch.

Also I'm asking the drummer to make sure to always play the same cymbal in the same part on the next take. Few things are worse than having a cymbal hit on the left side in one part, and then have it cut off and ring out on the right side in the next part because two different takes were edited together, and he played it on different cymbals on both takes.

My head preferences (for metal) would be:

Snare: Evans ST Dry on top, Ambassador or similar on bottom

Toms: Evans G2/Remo Emperor for batter, Ambassador (clear) or similar for reso.

Kick: Remo PS3 or similar.

If you have different preferences that you feel strongly about, that's fine, the most important aspect is for the heads to be NEW. Top snare head might need to be replaced during the recording, depending on the amount of takes, etc, the Evans usually lasts longer than the coating on Remo.

Drum Tuning:

Kick: As low as possible. Of course, the drummer still has to be able to play (rebound), but the lower, the better.

Snare: Steel/Brass/Copper snares will almost always sound better for metal and heavy rock, wooden snares for other genres. Tuning the snare to a frequency between 250-275 Hz usually works best. This is the frequency for the whole snare - not an individual head. The reso head should be higher pitched than the batter head to accomplish this.

Toms: Batter - not too high, reso - quite a bit higher than top

I won't force you into the specific intervals I prefer to use, but make sure they are tuned accurately. (A Tune Bot can make this quick and easy.)

Alternatively, Programmed Midi for drums is also acceptable. Please have a clear mapping scheme.

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Bass

New strings are absolutely crucial. I like to replace the strings roughly every 2 songs or 2-3 hours of tracking. If budget becomes a factor, I sometimes replace every 4 hours of use only, but I'd rather have them replaced more often, as that's a key ingredient to the sound. (If they were put on yesterday, they are already NOT new anymore.)

I recommend stainless steel strings for metal, they have a much deeper growl and more high mid snarl and definition than nickel strings. This can be key, if you want to be able to actually hear the bass in a dense mix.

Make the bass player hit HARD (picking hand) while still watching out for that fretting hand to be gentle in order not to pull notes sharp.

Alternatively, Programmed Midi for bass is also acceptable.

Guitars

For the guitars I put some fretwraps or foam on the headstock to dampen the string noise there. If the guitarist uses a trem system, I put some foam or similar in the spring cavity to mute the ringing from those. If the guitar has a stop tail piece, I also dampen the portion of the strings between the tail piece and the bridge. New strings are also mandatory for the guitars (for my definition of "new," please refer to the section about the bass).

Then of course all the usual: bass and guitars should be PERFECTLY tuned (every couple takes!) and intonated; no buzzing, rattling etc. New batteries on active instruments.

Also, please **record DI tracks** for all guitar and bass tracks!

Vocals

Memorize the distance to the mic and stay there. Nothing sounds more unprofessional than inconsistent vocal recordings. (I'm not talking about moving the head back a little on higher/louder notes, I mean the average distance for the same style of singing). Mics really vary by vocalist, but a Shure SM7B almost always works.

Mic Preamp Gain in General:

Adjust the mic pre gain to the loudest section/hit/scream and still leave some headroom (4-6dB to 0dBFS on the LOUDEST hit/part), once you have set that gain Knob, please DO NOT touch it again until the recordings for that particular instrument are finished for ALL the songs. This is important for consistency throughout the record. Adjusting the preamp gain on the lead vocals between songs, for example, will not only result in unnecessary fixing on my end, but also in a less consistent sound throughout the record.

Labeling, exporting etc.

Please create a separate folder for every song. The name of the folder should be the name of the song.

The naming for all the tracks has to clearly reflect the instrument and has to be IDENTICAL for ALL the songs. I can't stress that enough.

Here is an example of how the tracks could be labeled:

Kick In/Kick Out/Kick Sub

SnT; SnB

T1; T2; T3

HH; Ride; China

OHL; OHR

BassDI; BassAmp

RGL (Rhythm Guitar Left, etc)

RGLDI

RGR

RGRDI

LdVox; LdVoxDBL

BGV; BGHarm

etc....

Note how the DI tracks for the rhythm guitars specify which tracks belong to which stereo pair. That is important, naming them Guit1, Guit2, Guit3, Guit4 is not clear (for some Guit1 and Guit2 could be the main stereo pair, and for some Guit1 and Guit2 are the left guitars, making Guit1 and Guit3 the main stereo pair, etc)... it can be confusing. So please label all the tracks in a way that there can be no doubt about the function of the track in the song. If you label room or overhead mics Left/Right, please make sure to specify if you're talking about drummer's perspective or audience perspective.

Please export all your files without any sample rate conversion or printed effects as WAV audio files and from the BEGINNING of the session. All tracks should be consolidated into one continuous file each (no bits and snippets), all starting from the very same point in the project: its very beginning.

Also please export a MIDI file alongside the wavs, if there is any midi programming, OR any tempo/time signature changes, so that can be imported accurately.

Again: ALWAYS make sure to bounce every single file from the very beginning of the song. (It doesn't matter if the solo comes in later, bounce the file from the very beginning!)

Examples of Exporting Consolidated Tracks:

Cubase: <http://www.lasselammert.com/sonstiges/ExportCubase.mov>

Pro Tools: <https://www.youtube.com/watch?v=k11NWFdfGT8>

Reaper: <https://www.youtube.com/watch?v=KCIN0PI-PWs>

Studio One: https://www.youtube.com/watch?time_continue=149&v=CMJAbdlrwUk

Logic: <https://www.youtube.com/watch?v=JKWM-zM1J8M>

If you need any help doing this correctly, for any DAW, feel free to contact me.

So, now you should have individual folders for every song with raw mono (or stereo, if they are actually stereo) wav files in them. Every file should be the same length (beginning of the song) and clearly labeled (same for each song).

Those individual folders can then be zipped and uploaded via file transfer, e.g., Wetransfer, Filepass, or any other reliable way. (I often just use Google Drive, or Dropbox.)

Here are links to all the microphones mentioned, with options for less expensive alternatives, as well as other gear/tutorials likely to be useful for musicians/bands tracking themselves:

Interface: Best bang for the buck is Audient. An [iD22](#), or even [iD14](#) will suffice for everything except drums, and also save you from needing a separate DI box (otherwise a DI box like the [Radial J48](#) is good). If you are equipping for drums, the [iD44](#) is expandable to 20 channels, with 2 ADAT preamp expansions (and is what I personally use).

[Neumann KM 184 Pair](#)

Alternatives: [Telefunken M60 Pair](#); [AKG C214 Pair](#) (LDCs that work great for OH); [Shure SM81](#) (Will need a pair); [Rode NT5 Pair](#) (Inexpensive, and not bad)
[AKG C414](#)

[Shure Beta 91A](#)

[Telefunken M82](#); [Audix D6](#); [AKG D112](#)

[CAD M179](#); [Audix D4](#); [Shure SM57](#)

[Shure SM7B](#)

Of course, feel free to contact me with any questions at all! Let's make sure your songs have the sound they deserve. Thanks, J Walker.

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