

The Definitive Pre-Mastering Mix Prep Guide...

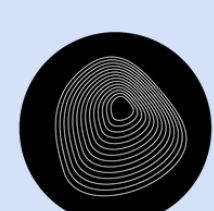
Sending your mixes off for mastering is so often riddled with uncertainties, questions and leaps of faith. But it's actually very simple - a lot more simple than we've all been told it should be. You've received this document because you're in need of a straight-forward and easy guide that doesn't enforce rules for the sake of rules. Here goes...

The most important thing...

If you love the sound of your mix then that's all that matters. As a mastering engineer I only ever want to work on the mix that connects you most to your art. Regardless of anything technical, this is the mix that will always work best, ultimately connecting your audience to your music the way you want it to. Creating music is first and foremost about channeling emotion; if your mix moves you in the ways that are needed for your music to say what it wants to say, then approach the rest of this guide as a simple 'check-list'. In other words, if the mix isn't working for you now then any 'mix prep' technicalities won't make any meaningful difference. **BUT** if the mix is working and you're loving how it sounds and feels, then the following steps will ensure you get the absolute best from your mastering engineer.

1. Level and Headroom

To put it as simply as possible, what we want here is a nice balance between not too loud and not too quiet. Bring the peaks as high as you can without causing them to hit 0dBFS and clip (**red lights**). Mix bus limiting is fine as long as it's not there solely to make things loud. If it's adding a sound to your mix that you like then there's no problem whatsoever - if your mastering engineer complains about this then I'd go find a new one... Same goes for compression. Some mixes need a lot and others need less to none at all. Trust your gut and don't start bypassing things on the mix bus just to please your mastering engineer. Always provide your favourite version and we can discuss whether bypassing certain things is needed.



If you've listened through the final mix project and you've got no red lights on any of the meters, peaks aren't wildly low (***aim somewhere above -20dBFS but try to get close to 0dBFS without clipping***), and you've left all that good mix bus processing that's adding what's needed to the mix, then you're set. Anything else regarding levels and headroom is just an 'exercise' in audio best practices and won't add anything meaningful to your music. As long as the mix isn't too low (***keep the biggest peaks somewhere above -20dBFS***) nor too high (***not clipping***) then it's going to work.

2. Sample Rate and Bit Depth

This is a very simple one... Keep the sample rate the same as the mix session. In other words, don't change anything. If you've mixed at 44.1kHz, then keep it at 44.1kHz. You gain nothing by upsampling to say 96kHz, and if anything this may actually hurt audio quality if the sample rate conversion you use isn't so great. If you're mixing in analogue and would like to capture back from the desk at a different sample rate then that's totally fine. Just avoid any digital sample rate conversions on export.

Keep the bit depth as high as possible. The internal resolution of most modern DAWs is 32-bit floating point. Even though you'll only be hearing 24-bit audio from your digital-to-analogue converter, everything inside your DAW (fader level, EQ, compression etc.) is happening at 32-bit floating point. If your DAW allows you to export 32-bit float files then this is the absolute best resolution you can give your mastering engineer. They'll be very happy.

If you can't export at 32-bit floating point, then 24-bit is still excellent. Try to avoid exporting at 16-bit, especially if your peak levels are quite low. Quiet audio at 16-bit will suffer from a higher noise floor than is needed and can reduce the audio quality quite substantially. If your levels are nice and high (***for example hitting somewhere above -6dBFS very often throughout the track***) then 16-bit isn't really an issue. But to avoid any potential problems, export at 24-bit or higher.

3. Dither?

Dither is a little more confusing. It's used whenever we move from a higher bit depth to a lower bit depth. For example, we would use dither on a 24-bit track when we want to export it at 16-bit. The reason we do this is to avoid truncation distortion, which is a pretty nasty digital artefact that you probably don't want to add to your music.



Dither is very far down the list of important pre-mastering mix prep steps. If you export your mix at 24-bit then you don't really need to worry about adding dither. Even though you're effectively still moving down in bit depth from 32-bit floating point (**internal resolution of the DAW**) to 24-bit, it's a grey area whether or not it actually makes a meaningful sonic difference. Having said that it definitely won't ruin your mix if you do decide to dither a 24-bit export. If you do, make sure to use regular triangular (**TPDF**) dither.

4. Lossy vs Lossless

Lossy audio is data compressed - data is lost (**hence the name**). Familiar examples include mp3 and AAC. Never send these...

Lossless audio is **NOT** data compressed - **NO** data is lost (**hence the name**). Familiar examples include WAV, AIFF and FLAC. Always send these...

5. Final checks

That's pretty much it. To summarise here's a quick checklist for you to go through...

- ☒ The mix has a good level: it isn't too quiet and doesn't clip at any point
- ☒ I haven't bypassed any mix bus processing just to please the mastering engineer
- ☒ There's no mix bus processing that's **ONLY** being used to make it loud
- ☒ The sample rate of the pre-master file is the same as the sample rate I mixed at
- ☒ I've exported at 24-bit or 32-bit floating point if my DAW allowed me
- ☒ I didn't get too worried about dithering. It's fine if it's there but it didn't ruin my day
- ☒ The pre-master file is in a lossless format such as WAV

Hopefully this has been helpful for you. I've tried my best to keep it as concise and to the point as possible, focussing only on the 4 most important topics to think about at this stage. As a consequence, some of the more in depth reasons for certain steps had to be left out. If you're interested in **WHY** or you have any questions, feel free to get in touch by emailing me [here](#).

