Preparing For Mastering

The Essential Checklist

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An in depth guide to getting the best results from your mastering
Creating Space

Cut the low frequencies on tracks that shouldn't have them

Low frequencies can creep in to your track unnoticed when recording vocals and guitar using a microphone. Below you can see the frequencies that are present on a vocal recording and the eq I used to cut out the unwanted low end. This doesn't change the sound of the vocal as I don't cut into the frequency range of the singer. You can apply this technique to any of your tracks but be sure to not cut the frequency range you actually want to hear.

Clean up the clicks & pops

Solo individual tracks to check for clicks and pops in your mix. These are easy to identify and cut during the mixing stage. If they are not removed from the mix the mastering process can emphasise them making them obvious to the listener. If there is a small click after vocal phrase, simply cut that click out and put small fades either side of where the click was.
Depth

When people talk about a track having ‘depth’, what they mean is how close or distant the different elements of the mix sound. Using effects such as reverb can make things sound far away, whereas a dry signal with no reverb sounds closer. Try and play around with varying levels of effects to give your mix depth.

Stereo Image

Panning is a useful tool for creating space in your mix. Utilising mono signals can help free up stereo space and increase focus on high energy elements. In many scenarios it is recommended to place your kick, bass, snare and vocals in mono. These files may already be in mono but if they’re not you can use the gain plugin to sum them from stereo to mono. This helps the fundamental elements of your mix become the focus of your music. This also minimises changes to these instruments when you hear your mix in mono. You can use reverb and delay to enhance your vocals without affecting your mono signal. An effective way to do this is by employing a process called parallel processing. This is where you send your audio to a bus and place the reverb on the newly created auxiliary channel. You can then mix in as much reverb as you want without altering your original mono source.
Critical Listening

You've heard your song about a million times now so all subjectivity is lost. The best way to get some perspective on whether your mix actually sounds good or not is to bring in a few reference tracks to your project. These should be songs in a similar genre and vibe to your own track. If you have a down tempo country ballad don't reference against a high energy drum and bass track.

The questions you should be asking yourself when referencing…

Is my bass and treble at a similar level to this reference track?

Are my instruments balanced in a similar way?

Is my kick too soft?

Does my snare have enough body to it?

Do the vocals cut through the mix in a similar way?

Are the reverb levels similar to the reference track?

KEEP IT BALANCED…Don’t have super bright cymbals but very dull vocals

Playback systems

As amazing as your track might sound in your studio, It may sound completely different on other playback systems. Try listening to your music on as many systems as possible to make sure your mix translates well on all of them.

Near-field Monitors
Studio Headphones
Consumer Headphones
Car Stereo
CHEAP Kitchen Radio
CHEAP Ear Buds
What is mono?

Mono is one single channel of audio. The left and right channels of your stereo mix are combined into one signal and sent individually to both of your speakers. A surprising amount of listeners will experience your track in mono. A lot of portable speakers are mono and all car FM radios automatically switch to mono when the signal is weak. Most nightclubs and venues also play music in mono.

How should I check my mix in mono?

In Logic, load up the Gain plugin on the master channel. Check the box below ‘Mono’ but be sure to uncheck this box when bouncing your audio. Listen and hear how your mix changes. Some instruments may be quieter or even disappear completely from you mix. This happens due to the sound waves being out of phase. Make sure you only listen in mono through one speaker. If you use two the bass will be hyped giving you a false balance of your mix. Use your reference tracks to achieve a good balance between your instruments whilst listening in mono.

Listening levels

The level at which you listen to your material will have an effect on your perception of frequency balance. The louder you listen, the louder the bass. The quieter you listen, the quieter the bass. Listen to your track at varying loudness levels to make sure the bass is present but not too loud. The reference tracks you brought in to your project will help give you some perspective on what is a good bass level.

80-85dB
Ideal Critical Listening Level

Bass Feels Quieter

Bass Feels Louder

Min
Max

Listening levels

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Bouncing

So, you have followed the above instructions and you’re happy with how your track sounds. You’re ready to export your Wav or Aiff audio from the DAW (Digital Audio Workstation).

Headroom

Headroom is the ‘space’ between the highest peak of your audio and zero decibels full scale. If your audio goes above 0 dBFS it will clip and distort and the numbers displayed on the output fader will turn red. When bouncing your final mix make sure the loudest part of you song is roughly -6db. You can measure this by looking at the numbers on the output fader or by using the level meter plugin on the master bus.
Here is an effective way to create headroom when you don’t have any…

To start with, the output and master bus should always be left at 0db. The Image below shows a mix that is clipping. This is displayed by the red peak reading of ‘0.4’ on the output bus.

To fix this select all the channels in your DAW, but deselect the output and master bus to leave them at 0dB. Once all the individual tracks are selected bring one of the volume faders down. They will all move down together which means that the balance of your mix will not change. Bring the levels down until the output fader shows the peak level of roughly -6db as seen in the image below.
Dynamic range

Dynamics bring music to life and enhance the listening experience for your audience. Your master bus shouldn't have any processing on it at all. Remove any limiters and compressors. If you have an EQ on the master buss that you like the sound of, try EQing individual channels to get a similar effect. This will give you greater control over the sound.

Stereo master VS Stem master

A stereo master is where the engineer deals with just one single file. If you are happy with your mix and you just need a final polishing touch then a stereo master will be ideal for you. Stem mastering is where the engineer deals with groups of audio tracks from the project. This gives him greater control over the final result. An example of stem groups could be…

Vocals dry
Vocals wet
FX
Backing vocals
Synths, Guitars and Piano
Drums (Cymbals, Snare and Toms)
Bass
Kick

Follow the instructions laid out earlier to get the correct peak levels. Then solo the instruments to create the grouped bounces. They should look similar to the image below.
Intro and Outro

When you place your bouncing markers, leave some empty audio space at the beginning and end of your track. If you want the mastering engineer to bounce your track with the first beat happening right at the start of the audio then let him know. Leaving space at the end of the track allows any reverb or other effects to decay naturally. Including a few seconds of ‘blank audio’ at the starts or end of your bounce also gives the mastering engineer a noise profile to work with. This can help him transparently remove any unwanted noise or hiss throughout your track if necessary.

Normalisation

Normalisation is where a constant amount of gain is added to audio to bring the peak to 0db. This doesn't change the relative dynamic range, but it does take away the headroom. When bouncing, make sure it is switched off.

Dithering

Dithering is a subtle low level of noise added to audio to eliminate truncation distortion. Dithering is the very final stage of mastering and should be left to the mastering engineer.
“Mastering The Mix is not your ordinary online mastering service. I offer a unique experience that gives you the information and tools to get your music productions sounding better than ever. I can help you achieve a flawless mix that brings your music to life. By getting the audio perfect at the source, the mastering stage becomes more effective. I musically enhance your track for commercial release, I don’t squash the life out of it. Together, we can give your fans the best listening experience possible and keep them coming back for more. I have worked with artists at all stages in their musical careers. From aspiring songwriters to Grammy award winning producers. And, with 100% 5 star feedback on Google and Yelp I can safely say that my customers are always extremely happy with my service.”

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