



Mastering For Itunes

How to Get Your Album Ready For Digital Distribution

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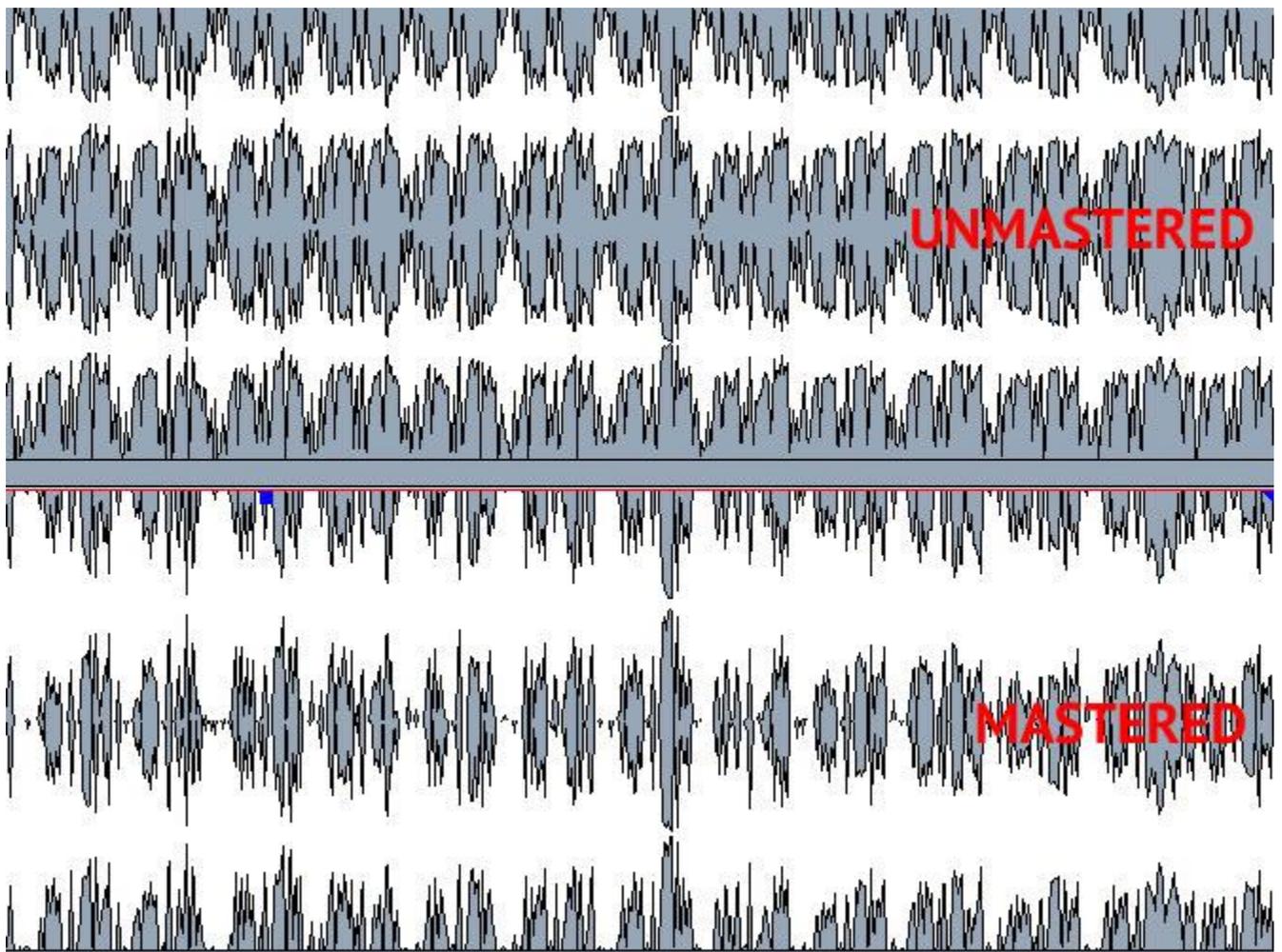
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What is Mastering?

Song mastering is the final stage of song production. It is when a song that has been mixed down into a single wav file and sent to a mastering engineer to among many other things be made louder, brighter and wider.

Here's what an unmastered song looks like compared with a mastered song. As you can see the mastered version is much more compressed and will therefore be much louder than the non-mastered version.



Think of mastering as a home inspection before you buy a house, a mastering engineer makes sure your song is suitable for play on most sound systems. Since listeners enjoy music on everything from iPod buds to car radios to computer speakers it is important that your music translates well on different kinds of audio

systems. This is because a song will sound different depending on the source that is played on as well as the environment that it is listened to on.

What Do Mastering Engineers Use?

Mastering engineers use powerful and expensive hardware and software such as limiters, compressors, stereo enhancers, and EQ to bring your songs to life. The most important tool an engineer will use is of course their ears as only after years of practice in the right [listening environment](#) will they be able to make the right mastering choices.

What is CD Mastering?

CD mastering is when a mastering engineer not only makes sure your song can translate well on different audio systems but also make sure that each song on your album is at a consistent volume. Because each song on your album may sound different whether due to its style or because they were mixed by different people, they may end up with different volume levels. The mastering engineer will try to make the album sound cohesive thereby providing a better listening experience for the listener (i.e. they won't have to change the volume on every song).

Will Mastering Ruin My Song?

What separates the great mastering engineers from the average ones is that the great ones makes sure that your artistic vision is carried out while at the same time ensuring that your mixes translate well. Because mastering is the final process in music creation, and because the mastering engineer has so much power to change the feel of the song, it is important that the mastering engineer creates a master that is consistent with your vision, your genre and style. Many great albums have been ruined by bad mastering and many average albums have been made good by great mastering.

How to Avoid a Bad Mastering Job?

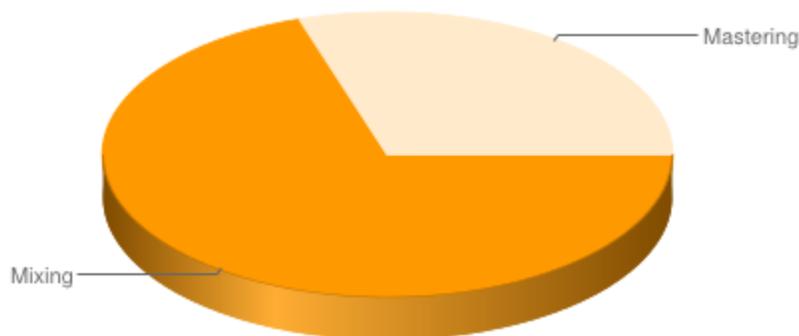
The best way to avoid a bad mastering job is to ask for a [free mastering sample](#). Go to 3 or 4 mastering engineers and ask them to master one of your songs and then compare them all. Obviously, the one that sounds the best for you and that is within your budget, choose. You should never pay for mastering before the mastering

engineer has provided you with a sample done to one of your songs. It is okay to listen to an engineer's past work, but those are not your songs. You should only really care about what a mastering engineer can do for YOUR MUSIC.

How Much Can Mastering Improve Sound Quality?

I want to get a little theoretical and speak about mix quality. Particularly, what makes a song sound good from a mix and mastering perspective? And more importantly how much can a mix and master improve a song's sound quality? Why do I want to this? Because many falsely think that a good mastering job is all that is needed to create a great sounding song. This is absolutely wrong and here's why.

On a macro level, 70% to 80% of how well a song sounds depends on how well it is mixed. This leaves only 30% to 20% to on how well it is mastered. Audio mastering will help a song that is mixed decently sound good and make a song that is mixed great sound perfect.



I should clarify something since I am using words like "good", "great" and "perfect", it may be helpful to quantify them in percentage terms. When I master a song I like to get it over a certain threshold of quality, in my mind I imagine it like a scale from 1 to 100. The majority of songs I receive already sound "good", so are already at about 70%. My job is to bring it over 90% which is "great" and ideally 100%, which is "perfect".

Some songs I receive sound horrible, which would make them less than 10%. Mastering a horribly mixed song is only going to at most produce a benefit of 20%. Some artists want this and there's nothing wrong with that as 20% is still better sounding than 10%.

Of course this is not all that goes into making a song sound good from a qualitative perspective. If we drill down into the mix, we have many elements such as quality of recording, quality of production, quality of arrangement and quality of vocals. We could even drill down further into these categories. For example, in quality of recording, we could have types of microphone used, types of preamps, design of vocal booth and materials used in its construction.

The trick here is to focus on the areas that will provide the biggest areas of impact. If you can make a song that sounds "okay", say a 60%. Mastering it will bring it to a 80% to 90% level. This is the kind of gains you want and where home studio musicians can benefit the most by having their songs mastered. On the other hand, if your song is mixed to a 80% level, mastering would probably get it to 90% to 95% if done well and perhaps a perfect 100%. And if your mastering engineer doesn't know what they're doing, your song's quality may even fall say to 60% or even 10% as a bad mastering job can reduce a song's quality as well.

I hope I haven't confused you but rather put it into your mind that creating a great sounding record is all about going over certain thresholds in the major categories discussed above. It is important to remember when it comes down to it, there are many categories and sub-categories you can focus on to get the sound you are looking for, and that mastering is just one piece of the puzzle.

What Format Does Itunes Accept?

So you want to get your song on iTunes? Today that's actually easier than it looks. With sites like CDBaby and Tunecore, all you do is pay a small fee and you can get your album or single on iTunes as well as many other digital retailers. All you have to do is provide a wav or aiff file at 16 bit, 44.1khz. This is the same format I provide to my clients when I master their songs and is the same format CD's have been using since the 1980s'. Though I do wish these sites accepted higher bit rates, but hey if it's going to be converted to mp3 anyway...it doesn't really matter.

Bonus: [Read which digital distributor I think is better for independent artists.](#)

RMS Level Before Mastering

I had a little spare time in the studio and decided to compare the RMS levels of some songs. If you don't know what RMS is it means "Root Mean Square" and is useful for seeing how loud a piece of audio is. Personally, I am not for or against the **loudness wars**, rather I'd like to think some music just sounds better louder and some music sounds better softer. So you can say I am for whatever sounds good. However, I had to rub my eyes a few times looking at the RMS of some of my favorite songs.

One of them is A\$AP Rocky's [PMW](#).

I love the bass in this song and the vocals are very clear. The song is also loud as hell! With a peak RMS of -4dbs this song would put a lot of heavy metal to shame. How can this song be this loud without turning into a pool of mush? Simplicity. It only contains about 4 sounds: vocals, 808 bass, drums and a high synth. That's it. That's the magic. The less sounds your song has the louder you can make it. Of course, loudness isn't the goal. Making your song sound the best is the goal and should always be the goal. As I stated before some songs sound better louder and some sound better softer. Some of my favorite rock songs such as The Killer's [Sam's Town](#) have a peak RMS of -7.5dbs (which in 2006, when it was released, would be considered quite loud).

What RMS level should your songs be at before you send them to mastering?

Each mastering studio has different requirements that are based on personal preferences and on the equipment they're using. I would say a good level pre-mastering for a mix would be around -14dbs. Keep in mind this isn't a hard rule, if it sounds better at -12dbs than leave it at that. However, don't send a song in at -3db and expect your mastering engineer to take you seriously. What are they going to do with that? You are basically shoving a pool of mush into a box to be squeezed into an even smaller box. Does that even sound right?

Peak RMS vs Average RMS

Another thing to keep in mind is the dynamic range of your song. A lot of heavy metal songs are unlistenable because their dynamic range is so small. For example, they'll have a peak RMS of -2db and an average RMS of -4db. That's a very small

dynamic range, just - 2db, which basically means the song is all loud. Some of the best sounding songs have much bigger dynamic ranges say from about - 7db to - 10db and it is because the loud parts and the soft parts contrast well with each other. Remember our ear only knows what is loud when we hear something soft. It is just like color. If you think the walls in your house are white, hold a white piece of paper up to it, doesn't look so white anymore?

House songs have used dynamic range to ad infinitum by having these long drawn out parts with no bass or kick and that eventually lead to the cliché build up and then the boom. The reason it is so popular and works so well is because that dynamic range between the quiet part and loud parts is what builds emotion. Remember music is all about stirring emotion in the listener. Having a large dynamic range is one tool that can build anticipation and emotion.

Easiest Way To Set Mixing Levels for Mastering

If your song's average peak volume is 0 db, meaning the loudest points in the song are consistently hitting 0 db (or higher) you'll want to do a little mixing before sending it off to mastering. The easiest way to get your mix levels right for mastering is to drop the volume level on your faders by -6 db. So for example, if you're bass is coming in at -8, lower the volume on it until it is - 14. If you're vocals are sitting pretty at -3, drop it to -9. Basically you want to take whatever level each channel is at when you've got the song mixed and sounding good and drop it by -6 db. Here's a fancy math formula which will either make me look smarter than I really am or just confuse you even more.

Volume of channel – 6 db = Happy Mastering Engineer

Why -6 db? You can really choose any number below -3 db, but I find -6 db is easy to subtract from any number and at least helps provide some headroom for mastering (it is certainly better than 0 db). When it is all said and done you should have a song that has an average peak volume of -6 db (assuming that your songs peak volume was 0 db before), which will make it suitable for high quality mastering -thus making your mastering engineer very happy because they can than do a really good job for you.

How to Prepare Mix for Mastering

Before you send your songs to mastering, you are going to want to prepare your mix so that your mastering engineer can get the most out of your audio. Here are 6 things you can do to create the perfect mix for mastering.

- 1) Your songs should **NOT HAVE BEEN NORMALIZED**.
- 2) Your songs should **NOT HAVE ANY EFFECTS OR PLUGINS APPLIED TO THE FINAL STEREO OUT**. If you don't know what this means take one look at this:



- 3) Your songs should either be in **.WAV FORMAT** or **.AIFF FORMAT**. You don't want to send MP3s to be mastered as they are of lower quality and not suitable for mastering. I can't say this enough: **DON'T SEND MP3S TO GET MASTERED!!!**

- 4) If your song's average peak volume is 0 db, it is not suitable for mastering. What the heck is average peak volume you ask? It is the highest point in your song's volume. To get the master with the most dynamic range you'll want to mix your song so that its average peak volume is lower than -6 db and ideally lower than -10 db. If you're having trouble with this re-read: [Easiest Way to Set Mix Levels for Mastering](#).

- 5) Label your songs properly. You'll want every song to have the artist name and song title. All you have to do is rename your file name to look something like this

"Artist Name - Song Title.wav". The reason for this is that your mastering engineer will have worked on many projects and may have files submitted with the same file name. By providing both your artist name and song title, you help save time and help your mastering engineer organize your files for retrieval.

6) Listen to your song carefully and at high volume. Make sure there are no glitches, distortions or anything else you don't want.

Free Mastering Sample

Thank you for downloading this free eBook. I really hope you've learned something from this guide and are one step closer to releasing your album, EP, mixtape, or single.

I firmly believe the best way to make the world a better place is by helping other people. If you know any artists that could benefit from this guide, feel free to pass it along to them.

As always, you can get a free mastering sample to hear what your songs sound like mastered by [uploading your song](https://www.adgmastering.com) at [ADGMastering.com](https://www.adgmastering.com)