



## How to Prepare Your Mix

- ☀️ Vocals can often be one of the trickiest parts of a mix to manage. Uneven vocals are extremely difficult to correct in mastering so if your vocals have a lot of dynamics (low passages as well as loud ones) consider using two compressors in series with low ratios rather than one with a higher ratio. Also, if your DAW has an automation feature this can go a long way to stabilizing vocal idiosyncrasies. If you are unsure of what the best vocal solution would be submit alternate versions (ex; One with lower vocals, another with higher), and I can choose the best one or compile a master version through editing.
- ☀️ Applying high-pass filters while mixing can cut down on muddiness during mastering, and increase the possibility of a hotter final loudness level. Place a high-pass filter on tracks that aren't critical to the bass profile of the song. However, do not high-pass filter the entire song, as this can lead to a thin sounding mix.
- ☀️ Plug-ins placed on entire mix bus (especially compression or limiting) should be avoided. Managing the dynamics of a stereo mix file should be handled during mastering. Any compression used during mixing should be applied to individual tracks in an effort to get the best mix possible. Again, when in doubt, please provide alternate versions (one with mix bus compression, one without) but generally master fader compressions plug-ins should be left off.
- ☀️ Try to keep your individual tracks muted during periods when they are not in use. For example, if a guitar solo is on it's own track, keep the solo muted for the rest of the song. That includes the seconds before the first note when the amp is buzzing.
- ☀️ After your mixes are finished put some critical distance between you and your music by not listening to them for a day or two. Often when mixes are revisited with a clear and rested mind you'll hear details and nuance you may have missed. Some of these may be problems that should be addressed before mastering.

## File Formats

### File Formats

- ☀️ .WAV, and .AIFF files are the best formats for mixes that are destined for mastering. All files should be stereo interleaved.

### Sample Rate and Bit Depth

- ☀️ Any sampling rate of 44.1k or above is fine. Only make your bounce files above 44.1k if you actually recorded all your tracks at a higher sampling rate. There is no benefit to upsampling; it only introduces larger files sizes and artifacts into the process. If your project contains songs recorded at different sample rates do not convert them on your own. Indicate the differences between the songs and I'll take care of it for you. The preferred bit depth is 24 bit. 16 bit can be used in a pinch but it is always better to work with 24 bit files.



# Mix Preparation Guidelines

## Headroom

☀ Please leave between 6dB-3dB of headroom on your mixes. That means your mix should not exceed -3dBFS.

## Dithering & Normalizing

☀ Avoid adding dither or normalizing when bouncing down. Both the final dithering and loudness optimization will be performed during mastering.

## Fades

☀ When mixing you should, of course, crossfade your edits, but leave the fade-ins/fade-outs to me. When you provide your files please indicate where fades should begin, and how long they should last.

## Ch\Yf' ðZc

## Red Book Standard

☀ The Red Book standard was first developed for audio CDs by Sony & Phillips in 1980. It's specifications outline appropriate encoding, capacity, indexing, spacing, error correction, and subcode channels for music bound for reproduction. Most commercial CD burning software does not burn Red Book CDs. If you intend to mass produce your CD or include ISRC information then you need a Red Book Master. The Red Book disc is to be opened only at the replication plant, and should not be removed from it's case or played.

## DDP

☀ Disc Description Protocol (DDP) files are error checked versions of Red Book CDs. If your replication plant can accept DDP images, this is often the best choice because many plants take Red Book CDs and make DDPs from the, so providing a DDP can eliminate a step. We can provide DDPs of your project via download from our server.

## ISRC

☀ ISRC (International Standard Recording Code) is a standard used to identify unique recordings. Each song has it's own ISRC code. It is necessary to have an ISRC code if your music is going to be sold on iTunes, and if your music is played on the radio ISRC coding can identify your songs and track their airplay. Record labels can apply for ISRC codes from [USISRC](#). Independent bands have several options. If you are using an online service to distribute your music some provide ISRC (ex; [TuneCore](#)), and some do not (ex; [BandCamp](#)). Check the documentation for your distribution service to see if you need to apply for ISRC yourself.

## UPC/EAN

☀ Universal Product Code (UPC) and the European Article Number (EAN) are the barcodes attached to products destined for retail sale. If you have UPC or EAN barcodes that information can, and should, be encoded in your final master disc or DDP.



# Mix Preparation Guidelines

## Gracenote

☀ iTunes (as well as other software) references the Gracenote database to pull song titles, and album/artist details. If you want your track names to appear automatically in these applications you should submit your music to [Gracenote](#).

## CD-Text

☀ CD-Text encoding allows some modern CD players to display artist names, and track/album titles. CD-Text has nothing to do with the Gracenote database, and is not universally supported. To avoid random characters appearing in CD-Text enabled players your replication plant may strip CD-Text out of your replication master, and require that CD-Text information be submitted separately.

## 5'K c fX'c b'@ i XbYgg

☀ Part of mastering is finding the optimal loudness level for each song and album. Much has been made over the past several years about the “Loudness Wars”; the phenomenon of increasing levels and damaged dynamics in popular music. Many find this occurrence troubling, others are indifferent. Every piece of music has a unique level beyond which increasing loudness offers diminishing returns for fidelity. Masters that preserve dynamics sound clear and retain impact, while overly loud masters often sound distorted and flattened. I can make your music as loud as you'd like, but great music is not made loud solely during mastering. It's a culmination of tracking techniques, mixing, and mastering. If you have questions about the best final level for your music I'm happy to discuss that with you.

if you have any other questions about mix preparation or the mastering process please email [adam@telegraphmastering.com](mailto:adam@telegraphmastering.com)

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