

## Vinyl Audio Best Practices

We encourage you to supply audio for vinyl master creation at the highest original sampling rate (up to 192 kHz) and bit depth (up to 32 bit) using the following notes and best practices as a guide.

- ☐ Individual .wav files for each track or one combined .wav file per side are acceptable.
- ☐ If any gaps between tracks are desired beyond those included in the provided audio masters, they must be confirmed at the time the order is submitted.
- ☐ Up-sampling does not help quality; send files at the highest rate recorded during tracking and mixing.
- ☐ Aim to stay within the maximum recommended side length on all sides, as longer playing times may require significant decreases in recording levels and dynamics - see the table below for reference.

### Most Music:

	45 RPM	33 1/3 RPM
12"	12 - 15 minutes	15 - 24 minutes
10"	9 - 12 minutes	12 - 15 minutes
7"	4 - 5 minutes	5 - 8 minutes

### Music with Heavy Low Frequencies (Hip-Hop, Electronic, etc.):

	45 RPM	33 1/3 RPM
12"	8 - 12 minutes	12 - 16 minutes
10"	6 - 8 minutes	8 - 10 minutes
7"	3 - 4 minutes	4 - 6 minutes

- ☐ A "loud cut" may be requested, but workable side lengths are even shorter to avoid distortion.
- ☐ Cutting a 7" project at 33 1/3 RPM is not advised, as low groove speed limits maximum recording levels and use of high frequencies near the center of the record and may also increase the risk of distortion.
- ☐ Place demanding, powerful, and exposed tracks at the beginning of each side, as the risk of distortion increases closer to the center of each disc - this is known as *inner ring* distortion.
- ☐ Unreasonably large elements in low (around 20 Hz) and high (around 20 kHz) frequency zones may prove problematic and should be avoided.

- ☐ Sibilants and high-frequency percussive sounds - hi-hats, cymbals, tambourines, etc. - may be problematic in some cases as low as 4-5 kHz, **especially near the center of the record**. These concerns may be corrected before submission by de-essers and high frequency limiters/compressors, but note that de-essing works best on separate tracks during the mixing process to avoid unintended changes to other high-frequency sounds.
- ☐ Dynamic range (sometimes shortened to DR) is a measure of the difference between a sound recording's loudest and quietest moments. A range of around 12 is generally a good target for vinyl production; however, some genres may work up to a range of 8 if mixed and mastered well.
- ☐ Audio may peak near 0 dBFS, but leave at least 0.1 to 0.5 dB headroom for digital-to-analog conversion.
- ☐ Avoid excessive use of psycho-acoustic processors, loudness maximizers, and peak/brick-wall limiters.
- ☐ The project should be in-phase, as out of phase audio can cause skips during playback. Phase issues in the lowest acoustic zone frequencies (below 100 Hz) will be automatically corrected by our team if they exceed the limits of our pressing technology.
- ☐ Inaudible signals including sub-acoustic signals below 20 Hz and high frequencies above 20 kHz should be filtered out for reproduction. Gradual high-pass filters below 40 Hz (12 or 18 dB/oct.) and low-pass filters above 16 kHz may be used to this effect, or our team can be relied upon to choose a proper filter, as necessary, once your audio has been submitted.
- ☐ Audio that excessively features electronic processing on vocals, effects, and/or samples may exceed the limits of our pressing technology and will be rejected if it is deemed a risk to damage the cutting head. If you feel that this may be a concern for your project, reach out to our customer care team as soon as possible after order placement to minimize the risk of non-refundable charges being applied.

In addition to providing our team with a completed IPR form and track list with the names and lengths of all tracks - including hidden/bonus tracks - please inform us of any special effects or anomalies in the supplied audio and any special requests that may affect the cutting stage (locked grooves, endless loops, etchings, etc.).

**Q: How should I report gaps / silence added in between tracks?**

A: Reported track times should include any silence at the end of each track.

**Q: How should I report fractions of a second for each track?**

A: Please round track times to the nearest second.

**Q: Do I still need individual track times if I'm submitting one audio file per side?**

A: Yes! Submission of individual track times helps our team to place visual track markers on the disc.

**Q: What is a visual track marker?**

A: Visual track markers - sometimes called VTMs - are the rings between tracks on the record surface.

**Q: What else do you need if my order includes download cards?**

A: For the best fan experience, we recommend sending a link to download card audio - separate, cleanly numbered, and titled tracks - for our customer care team to add to your order once it's placed.

**Orders that do not include a full track list with names and run times may be refused for production.**