

### Technical specs for preparing Audio for DMM-vinyl-cutting and reproduction

Preparing audio for vinyl one should take some technical requirements and limitations into account. These specs show up strictly from the mechanical nature of DMM-vinyl-cutting and reproduction of sound by a gramophone cartridge.

#### Maximum length of audio on a vinyl record side

size of disc	33 1/3 rpm	45 rpm
7"	7:00 min.	5:00 min.
12" Pop, Rock	21:00 min.	12:00 min.
12" Jazz	23:00 min.	-
12" Classic	28:00 min.	-

If your material exceeds the above specs, please contact us by tel. +48 228722722 / extension number: 122, email: slawomir.sliwinski@gmrecords.pl.

#### Maximum level of digital source signal

The maximum level of digital source signal should not exceed 0.0 dB True Peak. The True Peak Level is not Peak Level.

#### Approved frequency bandwidth

Both ends of audible bandwidth (below 30 Hz and above 18 KHz) should be kept on a decent level (not exceeding the rest of the audible spectrum). One should also realize the bandwidth of high frequencies is limited toward the end of a disc side. Especially on 7" discs played with 33 1/3 r.p.m. This phenomenon is inevitable and can not be cured by pre-emphasis / de-emphasis means.

#### Sibilants

Too high level of sibilants (like: sss, shhh, zzzz etc) and the upper band contents (like hi-hats) are not suitable for vinyl and could cause cross-modulation effects. It sounds like distortion and unstable stereo image on such signals. It is strongly recommended to keep these sounds on a decent level, by using de-essers and other means during pre-mastering process.

#### Phase and correlation

The overall correlation of stereo should not exceed 90%. 0% - means mono, 180% - means anti-phase. The correlation of bandwidth below 200 Hz should be even narrower, and below 100 Hz should be 0% (mono). It is highly probable that additional click, crackles and distortions occur, if these specs are overridden.

#### Dynamics and non-linear distortion

It is strongly recommended to not overdose the usage of maximizers during the pre-mastering process. The loudness level of -10 dB LUSF seems to be enough for a really loud undistorted vinyl.

The process of DMM-cutting and vinyl reproduction is analog by its nature. It brings its own non-linear distortion to reproduced sound. So, all non-linear effects could get its new sometimes unpredictable flavor on vinyl. So, it should be taken into account.

#### Approved file formats

We approve such files:

.wav  
.aiff

Sampling frequencies and bit depths:

44.1 KHz (16, 24 bits); 48 KHz (16, 24 bits); 88 KHz 24 bits; 96 KHz 24 bits.

We do prefer 24 bits.

On special request we approve files of 192 KHz 24 bits.

On a special request and by additional fee we approve analog tapes (1/2" and 1/4").

#### Files management

We do not put pauses between tracks on a vinyl plate. Thus if one song should seamless go into another (atacca) there would be no unwanted break in sound. But still there will be a visible Virtual Track Marker (widen groove) to show where next song begins.

If you intend to have a silence between two songs, it should be appended to the end of the first one file.

Your files should be named in a way so the computer browser could line them alphabetically up in a right sequence. For instance: A\_01 A\_02 B\_01 B\_02 C\_01 C\_02 D\_01 D\_02.

Thus when you put your files into one folder everybody would know what is the right order and which songs belongs to side A, B, C or D of your album.

#### Final notes

In some cases vinyl change the way your digital pre-master sounds. Sometimes it's change for good,

Sometimes it's change for strange. In digital realm we can produce sounds vinyl cannot retrieve.

If this happens you got two ways to take: love it or produce your sound with the above specs in mind.