

Sample rate and bit depth

For music production the sample rate should be 48 kHz at 24 bits. This strikes a nice balance between quality, file size, and processing power.

Sample rate determines the number of snapshots taken to recreate the original sound wave while bit depth determines how many amplitude values each of those snapshots contain. Together bit depth and sample rate work together to determine audio resolution.

The most common audio bit depths are 16-bit, 24-bit, and 32-bit. Each is a binary term, representing a number of possible values. Systems of higher audio bit depths are able to express more possible values:

- 16-bit: 65,536 values
- 24-bit: 16,777,216 values
- 32-bit: 4,294,967,296 values

Higher bit depths mean higher resolution audio; if the bit depth is too low, some information of the original audio signal will be lost. With a higher audio bit depth—and therefore a higher resolution—more amplitude values are available for us to record.

Mono / Stereo

The choice between mono and stereo sound depends on the listening situation. Generally speaking, stereo sound is better for music, home theater, and video games because it is more immersive and because these types of audio files are made specifically for stereo listening.

The Mono audio setting makes both left and right audio channels get played back simultaneously when playing audio. Using Mono instead of Stereo playback is most useful for users with certain types of hearing loss or for safety reasons, for example when you need to listen to your surroundings.

Phone call audio is mono - there's no left and right channel.

In Phone we have only mono and in CD we have stereo - stereo sound is better for music, home theater, and video games because it is more immersive and because these types of audio files are made specifically for stereo listening.