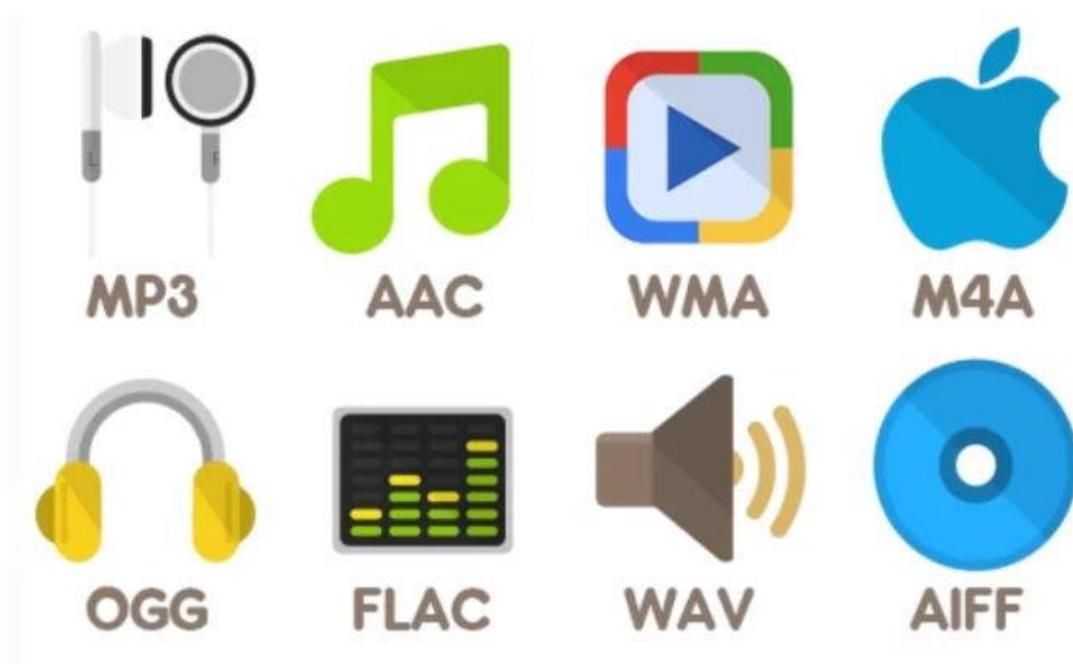


11 Common Audiobook Formats You Must Know



Audio files come in all types and sizes. And the most common audiobook formats can be down into two main categories: lossless compressed audio formats and lossy compressed audio formats. Most of you may be familiar with MP3 format, what about other formats, like AAC, FLAC or WMA? Which ones should you care about and which ones can you ignore?

- 1. Lossy Compressed Audio Formats
- 2. Lossless Compressed Audio Formats

1. Lossy Compressed Audio Formats

Lossy compression is a form of compression that loses data during the compression process. In the context of audio, that means sacrificing quality and fidelity for file size. The good news is that, in most cases, you won't be able to hear the difference.

MP3 (.mp3)

MP3 is the name of the file extension and also the name of the type of file for MPEG, audio layer 3. Layer 3 is one of three coding schemes (layer 1, layer 2 and layer 3) for the compression of audio signals. Layer 3 uses perceptual audio coding and psycho acoustic compression to remove all superfluous information (more specifically, the redundant and irrelevant parts of a sound signal. The stuff the human ear doesn't hear anyway). It also adds a MDCT (Modified Discrete Cosine Transform) that implements a filter bank, increasing the frequency resolution 18 times higher than that of layer 2. The result in real terms is layer 3 shrinks the original sound data from a CD (with a bit rate of 1411.2 kilobits per one second of stereo music) by a factor of 12 (down to 112-128kbps) without sacrificing sound quality.

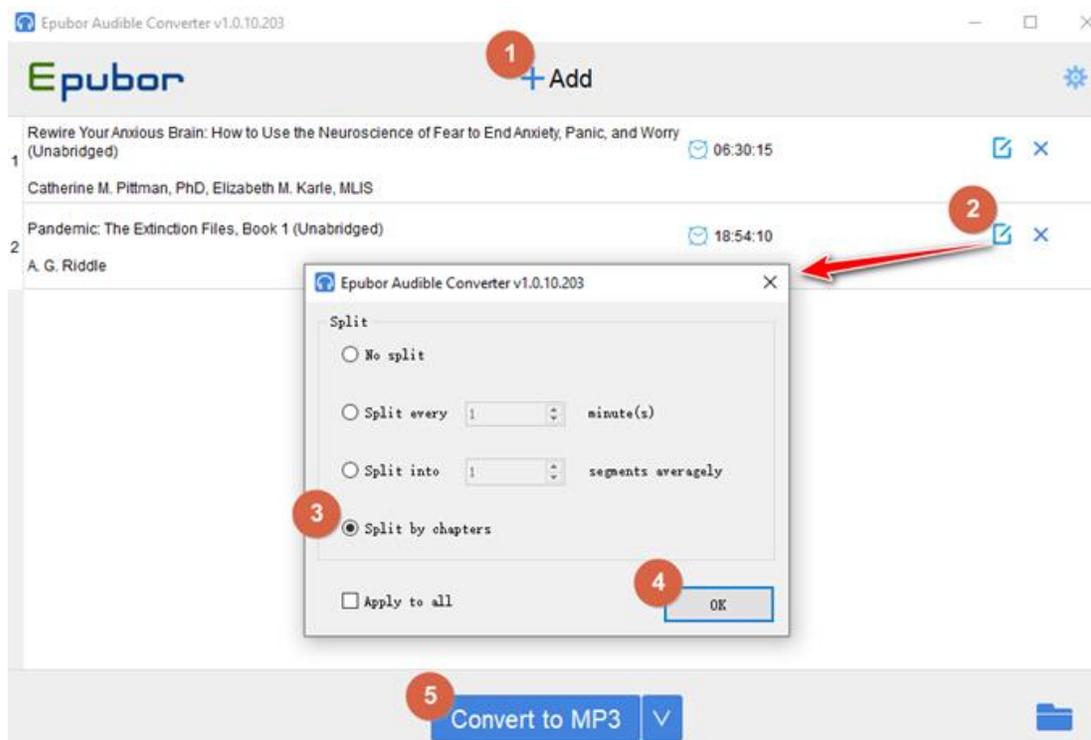


AA/AAX(.aa/.aax)

Audiobook format, which is a variable-bitrate (allowing high quality) M4B file encrypted with DRM. M4B contains AAC or ALAC encoded audio in an MPEG-4 container.



These two audiobook file formats .aax and .aa are created by Audible. Generally, they are encoded by DRM and you can only listen to Audible audiobooks on assigned software. But with the help of [Audible Converter](#), you can convert [Audible AAX/AA to MP3](#) on your favorite audio players or another third-party music apps.



Tips All Audible books downloaded via Audible Android app are AAXC format which is used to stop users converting Audible books. If you want to convert Audible AAXC books, you can read this step by step guide on [how to convert Audible AAXC to MP3](#) .

M4A/M4B(.m4a/.m4b)

M4A, an audio-only MPEG-4 file, used by Apple for unprotected music downloaded from their

iTunes Music Store. Audio within the m4a file is typically encoded with AAC, although lossless ALAC may also be used.

M4B, Audiobook/podcast extension with AAC or ALAC encoded audio in an MPEG-4 container. Both M4A and M4B formats can contain metadata including chapter markers, images, and hyperlinks, but M4B allows "bookmarks", whereas M4A does not.



AAC(.aac)

AAC stands for Advanced Audio Coding. It was developed in 1997 as the successor to MP3, and while it did catch on as a popular format to use, it never really overtook MP3 as the most popular for everyday music and recording.

The compression algorithm used by AAC is much more advanced and technical than MP3, so when you compare a particular recording in MP3 and AAC formats at the same bitrate, the AAC one will generally have better sound quality.

Again, even though MP3 is more of a household format, AAC is widely used today. In fact, it's the standard audio compression method used by YouTube, Android, iOS, iTunes, later Nintendo portables, and later PlayStations.



M4P (.m4p)

A version of AAC with proprietary Digital Rights Management(Fairplay DRM) developed by Apple for use in music downloaded from their iTunes Music Store. M4P stands for MPEG 4 Protected (audio), which is a lossy compression generally intended as the successor to MP3. In general, M4P produces better sound quality and files of smaller size, when compared to the MP3 format.



Ogg (.ogg)

OGG doesn't stand for anything. Actually, it's not even a compression format. OGG is a multimedia container that can hold all kinds of compression formats, but is most commonly used to hold Vorbis files — hence why these audio files are called Ogg Vorbis files.



Vorbis was first released in 2000 and grew in popularity due to two reasons: first, it adheres to the principles of open source software, and second, it performs significantly better than most other lossy compression formats (i.e. produces a smaller file size for equivalent audio quality).

MP3 and AAC have such strong footholds that OGG has had a hard time breaking into the spotlight — not many devices support it natively — but it's getting better with time. For now, it's mostly used by hardcore proponents of open software.

WMA(.wma)

WMA stands for Windows Media Audio. It was first released in 1999 and has gone through several evolution since then, all while keeping the same WMA name and extension. As you might expect, it's a proprietary format created by Microsoft.



Not unlike AAC and OGG, WMA was meant to address some of the flaws in the MP3 compression method — and as such, WMA's approach to compression is pretty similar to AAC and OGG. In other words, in terms of objective quality, WMA is better than MP3.

But since WMA is proprietary, not many devices and platforms support it. It also doesn't offer any real benefits over AAC or OGG, so in most cases when MP3 isn't good enough, it's simply more practical to go with one of those two instead.

2. Lossless Compressed Audio Formats

On the other side of the coin is lossless compression, which is a method that reduces file size without any loss in quality between the original source file and the resulting file. The downside is that lossless compression isn't as efficient as lossy compression, meaning equivalent files can be 2x to 5x larger.

This is obviously much harder to do well, but there are a few good formats for this. And don't confuse lossless compression with high-resolution audio (which is most likely a scam anyway).

FLAC (.flac)

FLAC stands for Free Lossless Audio Codec. A bit on the nose maybe, but it has quickly become one of the most popular lossless formats available since its introduction in 2001.

What's nice is that FLAC can compress an original source file by up to 60% without losing a single bit of data. What's even nicer is that FLAC is an open source and royalty-free format rather than a proprietary one, so it doesn't impose any intellectual property constraints.

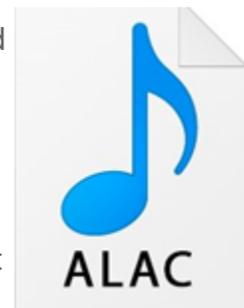
FLAC is supported by most major programs and devices and is the main alternative to MP3 for CD audio. With it, you basically get the full quality of raw uncompressed audio in half the file size — what's not to love about it?



ALAC (.alac)

ALAC stands for Apple Lossless Audio Codec. It was developed and launched in 2004 as a proprietary format but eventually became open source and royalty-free in 2011. ALAC is sometimes referred to as Apple Lossless.

While ALAC is good, it's slightly less efficient than FLAC when it comes to compression. However, Apple users don't really have



a choice between the two because iTunes and iOS both provide native support for ALAC and no support at all for FLAC.

WMA (.wma)

WMA stands for Windows Media Audio. We covered it above in the lossy compression section, but we mention it here because there's a lossless alternative called WMA Lossless that uses the same extension. Confusing, I know.

Compared to FLAC and ALAC, WMA Lossless is the worst in terms of compression efficiency but only slightly. It's a proprietary format so it's no good for fans of open source software, but it is supported natively on both Windows and Mac systems.

The biggest issue with WMA Lossless is the limited hardware support. If you want lossless audio across multiple devices, you should stick with FLAC unless all of your devices are of the Windows variety.

What's the best format for audio books?

So which format would you use for your audiobooks? For most people, the decision is actually pretty easy:

If you want faithful audio representation, use lossless audio compression. This is why audiophiles always scramble for FLAC albums over MP3 albums. Note that you'll need more storage space for these.

If you're okay with good enough audio quality, or if you need to conserve disk space, use lossy audio compression. Truth to be told, most people actually can't hear the difference between lossy and lossless compression.

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