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# Converting Audio Files to MP3

Tech Tip 103 - Scott Nesbitt



If there's one thing that the computer world isn't short of, it's audio file formats. There are literally dozens of them. You've probably heard of a few, like [WAV](#), [WMA](#), [RAM](#), [ACC](#), [FLAC](#), [OGG](#), and others. It can be a confusing maze of acronyms and formats that leaves your head spinning.

It's safe to say that MP3 is the most popular audio format around. It's supported by every [digital audio player](#) on the market and in every [media player](#) – regardless of whether you're using Windows, Mac OS, or Linux. Not every audio file that you encounter will be an MP3, though. As such, you might not be able to play it on your MP3 player or media player. To get the file to play on your hardware or software, your best bet is to transform it to MP3.

## Why Convert?

Take what recently happened with me as an example. My friend Jeff passed me an audio file of the classic surf rock instrumental "Pipeline." I'd been looking for that particular song in digital format for a while, and was more than happy about Jeff's little gift. The only problem was that the file was in WAV format (an older, and once very popular, audio format for Windows). The file was big – over 30 MB. I've never been a big fan of WAV files, preferring smaller MP3s. So, before

transferring the file to my portable music player, I decided to convert that WAV file to MP3.

The process isn't difficult. All you need is the right software and a little time.

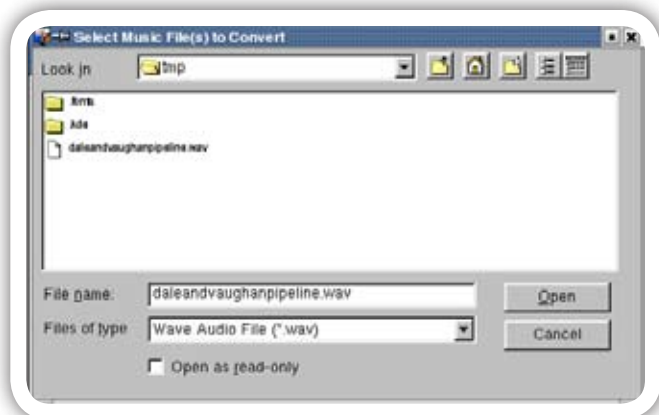
## Doing a Conversion

There are a number of programs floating around on the Web that enable you to convert audio files from one format to another. You can find quite a large list of those applications [here](#). For my conversion, I chose an application called [dBPowerAmp Music Converter](#). It's shareware, and well worth the \$14 registration fee. While there are plenty of free converters out there, I chose dBPowerAmp Music Converter because it's not only easy to use,

but has all the options and features that I need. On top of that, it produces great quality MP3s files.

Note: While the process of setting up the conversion will vary from application to application, the concepts that are discussed below will apply to all conversions.

I started up the software, and was asked to choose the file I wanted to convert:

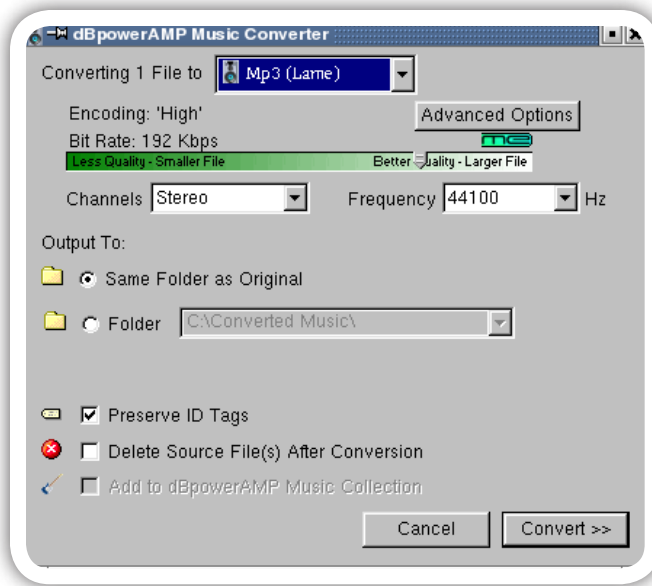


With that out of the way, I chose MP3 for my conversion option. dBPowerAmp Music Converter uses an MP3 encoder called [LAME](#). Contrary to its name, LAME is anything but. It's a powerful [Open Source](#) encoder that creates MP3s that are comparable to those produced by expensive commercial encoders and applications.

Since I wanted the MP3 that I was creating to be of CD quality, I left the frequency set to 44100 Hz.

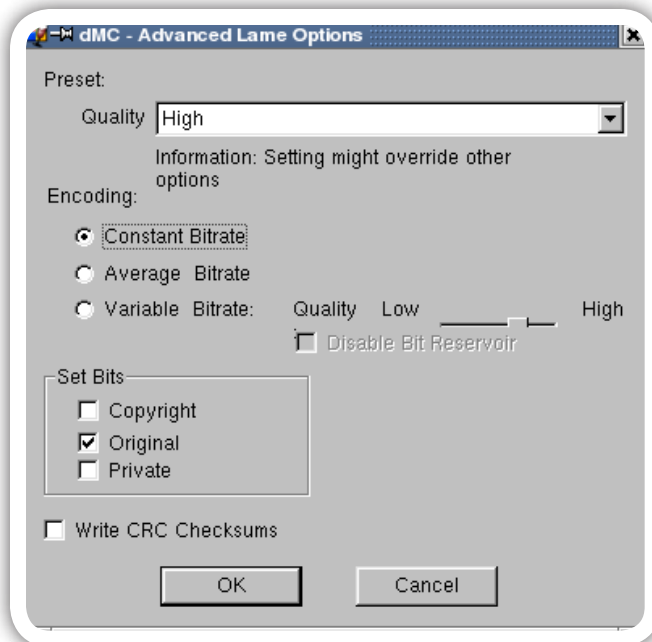
The frequency is also called the sampling rate, and it helps determine the overall quality of the sound. I could have chosen a lower rate and probably wouldn't have noticed much of a difference. But, why take the chance?

Like the sampling rate, the bitrate (the number of bits of data converted each second) helps determine the sound quality. Everyone I've talked to says that a good bitrate for music is 128 kbps. I decided to go with a slightly higher



bitrate and selected 192 kbps using the slider in the dBPowerAmp Music Converter window. Remember, the higher you set the bitrate, the better the sound quality will be. The trade off is that you'll also wind up with a bigger file. The MP3 file format [specification](#) allows for a maximum bitrate of 320 kbps.

I wanted to tweak the quality of the MP3 a bit more. To do that, I clicked the Advanced Options button.



I chose Very High from the Quality dropdown list. While this eventually fattened my file somewhat, I figured it was worth it. As for the bitrate setting, I kept the default of Constant Bitrate (CBR). All of this means is that regardless of what the audio is, the bitrate will always remain the same. To capture some of the nuances of the song, I could have chosen Variable Bitrate (VBR), which changes the bitrate depending on the audio content. However, I'm not that much of an audiophile and probably wouldn't have noticed the difference anyway. Generally speaking, using VBR will yield smaller MP3 files.

Once I was done, I clicked the Convert button. The conversion took about a minute to complete. The converted MP3 file weighed in at 4 MB, which was 26 MB smaller than the original WAV file sounded crystal clear. It now resides happily on my MP3 player.

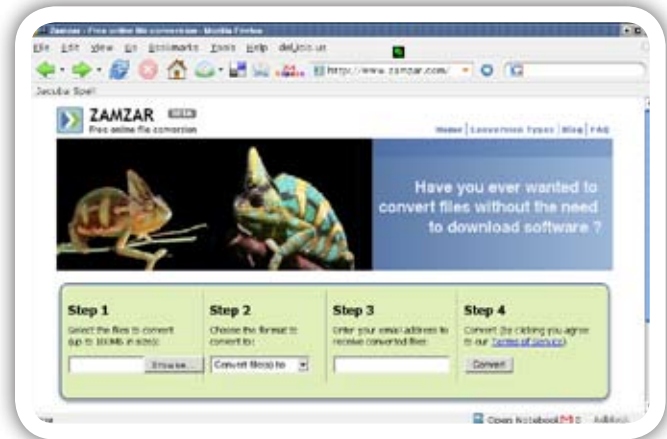
### Quick and Dirty Conversions

What happens when you aren't at your own computer, don't want to install any more software on your system, or just want to impress your friends and family with your geek skills? You turn to the Web, of course. There are two great Web sites that enable you to do quick and dirty audio conversions.

The sites are [Media-Convert.com](http://Media-Convert.com) and [Zamzar](http://Zamzar.com). Media-Convert.com offers conversions for a large number of audio formats. Zamzar, on the other hand, is more modest in its offerings – the number of *formats it supports* is limited. However, the Zamzar site is very clean and polished; Media-Convert.com is cluttered with ads.

Why do I call the sites quick and dirty? It's because they don't offer you any options to set the bit rate or sampling rate, or to tweak the files in any way. The results are good enough for most people, though.

With Zamzar, for example, you upload a file



and then choose a conversion format. Then, you enter the email address to which you want the converted file sent.

Then, just click the Convert button. Depending on the size of the original file and the speed of your Internet connection, the conversion could take a couple to several minutes. Once it's done, you check your email for a link to download the converted file.

Media-Convert.com works in much the same way. But instead of emailing you the file, your browser automatically downloads it once the conversion is finished. How well does it work? Recently, my wife used Media-Convert.com to transform some MIDI files of Scandinavian folk music to MP3, and there was no loss in quality. Her only complaints were that the site is difficult to navigate and the conversion was slow.

### A Couple of Gotchas

Converting from other audio file formats to MP3 is easy. However, there are a few things that you must watch out for. MP3s are smaller than many other audio files because they're compressed. MP3 uses lossy compression, which means that some unneeded or redundant information is tossed away when the MP3 is created. If you're converting other types of audio files that use lossy compression – like Apple's AAC, Ogg Vorbis, or Windows WMA – to MP3 then you should make sure

that the encoding quality is as high as possible. If it isn't, then you'll notice a real difference in the quality of resulting file.

Something else to consider is DRM. DRM is short for Digital Rights Management. It's a method of protecting files from being copied and pirated. Two of the most widely DRM-protected file formats are ACC (used with many tracks available from the Apple iTunes Store) and Windows WMA. While Geeks.com doesn't advocate digital piracy in any shape or form, there may be a time when you have a legitimate need to convert protected files to MP3. A friend of mine recently had his iPod die on him, and he bought another brand of audio player. But, he had a large number of ACC files that he couldn't play on his new device.

So, how do you get around a situation this? The easiest option is to burn the protected files to an audio CD. They'll be converted to actual CD tracks. Then, rip the CD to MP3 files using a program like [Cdex](#). It's a time consuming process and requires you to sacrifice a CD. On the other hand, it beats having a bunch of audio files that you can't listen to, especially if you've already paid for them.

### Conclusion

While MP3 is arguably the most popular audio format around, not every bit of audio is available as an MP3. With the right tools,

converting other audio formats to MP3 can be quick and easy.

### On a more serious note:

If you go to the website [LetsSayThanks.com](#) you can pick out a thank you card that Xerox will print and send to a soldier that is currently serving in Iraq. You can't choose who gets it, but it will go to a member of the U.S. armed services. How AMAZING it would be if we could get everyone we know to send one!!!

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