



High Res Audio and MQA: Cheat Sheet

Overview:

While many of us already record, mix and master in hi-res, the marketplace has been slow, if not unresponsive to our pleas for higher-quality audio. This is changing in leaps and bounds with the introduction of services and formats like Tidal and MQA. What it means is that we are now able to push hi-res audio into the ears of listeners in the marketplace to give us all the benefit of hearing what we intended in the studio.

This is coming to us as consumers at two levels – hi-res audio and MQA.

Hi-Res Audio

Overview:

Hi-Res Audio is not only currently available in the marketplace, but it is gaining popularity. More and more devices, apps, and software are allowing consumers to engage with music in the way we, as audio professionals, are accustomed to.

More Info: <https://www.whathifi.com/advice/high-resolution-audio-everything-you-need-to-know>

Workflow:

NARAS (The Recording Academy) released a doc outlining recommendations for workflow to ensure high-resolution optimization. Here's Anna's cliff notes from the document:

<http://airshowmastering.com/what-you-should-know-about-new-recommendations-on-high-res-audio/>

More Info: P&E Wing Recommendations: http://airshowmastering.com/wp-content/uploads/2017/06/recommendations_for_hi_resolution_music_production_05_10_17.pdf

The Consumer Side:

Many sites – like HD Tracks – are now offering hi-res downloads. Mastered For iTunes uses 24-bit files to encode to AAC, where other sites offer the full experience by letting you choose what format you wish to download: AIFF, WAV, FLAC, etc.

Of course, you also need a way to play back these downloaded hi-res files. HD Tracks recommends players MediaMonkey, Songbird and JRiver. As far as DACs, there are a whole lot of makers in the consumer game – check out the link below.

And now, if you really want to get into it, you can even listen to hi-res on your iPhone: Try Onkyo's HF Player App, (pay \$10 to unlock the HD section, otherwise you can still play up to 48k wavs or aiffs) which allows you to play up to 192k/24b or DSD – on the iPhone 7, pair this app with a set of lightning connector headphones that will bypass the iPhone's internal DAC.

Streaming services – like Tidal – are now streaming CD-quality files – a huge leap from the 320kbps MP3 (or lower) streams offered by services like Spotify or Apple Music. It isn't true hi-res, but that's where MQA comes in.

More Info: [Tidal.com](https://tidal.com) / [HDTracks.com](https://www.hdtracks.com)

HD Tracks Hardware Recommendations: <http://www.hdtracks.com/digital-store>

MQA Audio

Overview:

MQA, which stands for Master Quality Authenticated, is a new encoding/decoding process that allows hi-res audio to be folded into a 48/24 or 44.1k/16 file. Upon playback, if you have an MQA-enabled DAC, the file is fully decoded to reveal the full resolution of the song – up to 384k/24b (8x). Through MQA-compatible software, such as the Tidal player, files will decode up to 96/24. Additionally, through an MQA-enabled DAC, the "deblurring" feature is enabled. This corrects the phase response of the converters. If you do not have an MQA-enabled DAC or software, that same file simply plays back as a CD-quality file. So this technology, when coupled with the now-available ability to stream 44-16, means hi-res streaming is now feasible.

More Info: <https://www.whathifi.com/advice/mqa-audio-what-it-how-can-you-get-it>

Workflow:

A mastering studio that is equipped and certified to deliver MQA files auditions the files using an emulator plugin. With the emulator, we can dial in the exact parameters we want the encoder to use. These settings are saved to a parameter file that is uploaded with the full-res files to MQA, where they are encoded and delivered back.

One of the largest benefits of this technology is that all of the encoding is done by the MQA team, in conjunction with the mastering engineers and major labels that are trained in MQA technology. This is where the "Quality Authentication" comes from – the process is locked down and done to the utmost standard.

More Info: How MQA Works: <http://www.mqa.co.uk/professional/>

The Consumer Side:

Right now, you can stream MQA files on Tidal. It is available in their HiFi tier (\$19.99/mo.). The MQA songs are marked with an "M" for Masters – the term Tidal uses to differentiate the MQA songs. If you have an appropriate DAC, you're all set – it'll decode the song to the full resolution and you'll hear it the way it was intended in the studio. Don't have the proper DAC? You'll still be streaming a CD-quality FLAC file.

More Info: MQA Partners: <http://www.mqa.co.uk/customer/our-partners>

Consumer MQA Explanation: <http://www.mqa.co.uk/customer/how-it-works>