

HIRES ON CD?

Currently there are plenty „UHQ“ CDs with MQA encoding coming from Japan. Does the CD sound high resolution now? We’ve checked it out.



Japan, the country of perfectionists, is once again bringing us a new “audiophile pressing”: after the “SHM-CD” in 2010, Universal Music Japan is now bringing out the “Ultra High Quality”-CD. It is made of a “photopolymer” that hardens faster under special light than the usual polycarbonate, therefore supposedly producing more precise pits. The technology comes from the Japanese company Memory-Tech and was already introduced in 2015. Universal Music Japan is now releasing more than 100 albums, mostly international classics from pop/rock, jazz and classical music, as UHQ CDs (see box).

The physical manufacturing process is one thing – the sound format on these CDs is another: they are “MQA” encoded. They are not CD-ROMs with FLAC files, but audio-CDs that can be played on any player. Their full potential, however, only unfolds when they are played back – on any CD player – via S/PDIF using an MQA-compatible converter. Or on a player with an integrated MQA decoder, like they are available from Meridian or Oppo.

How is it possible to squeeze high-resolution audio content into the 16-bit format of the audio CD you ask? After all, MQA usually works with 24-bit FLAC files that are streamed or played back on

the PC. Thereby MQA dispenses with the lower eight bits and uses digital transformation to hide the HiRes components, i.e. the audio content above 20 kHz, there. But how should this work on the CD, where only 16 bits are available? You can’t really omit eight out of 16 bits.

MQA Ltd. is responding cryptically about this wonderful bit-multiplication. They say, they’d hide a “narrow data channel” underneath the noise layer and can, therefore, at least store audio components up to 35 kHz. In addition, pre-ringing is suppressed during encoding, which is why MQA CDs should sound better even without MQA decoders.

KEYWORD

pits
The data on the CD consists of „pits“ and „lands“ (the spaces in between). The pits reflect the laser beam differently than the lands during scanning.

Let’s see if we can reproduce that in a hearing test, using the sampler “Rock & Pops” from Universal Japan. The set contains two CDs with identical recordings: one UHQ CD with MQA and a standard CD without MQA. We play both discs

on a T+A player via the MQA-compatible “Nyquist”-DAC from Brinkmann.

With surprisingly definite results: even the pure stadium atmosphere on the live title of The Band sounds noticeably more

spacious and live-like in the MQA version. “I’m In Love” by 10cc sounds beautifully silky from the MQA CD – without the sometimes sharp S sounds of the normal CD.

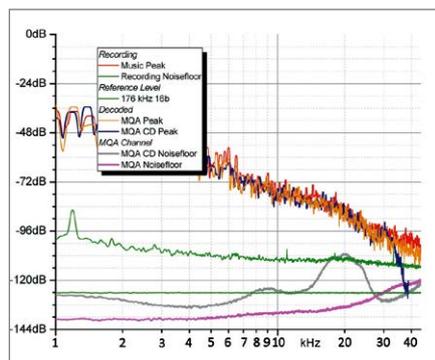
Is the MQA decoder to thank for this? For the countercheck we played both CDs directly via the analog output of the T+A player, i.e. without decoding. The differences are no longer quite as clear, but even now the MQA disc sounds smoother and more spacious than the normal CD. This may be due to the special “UHQ” production, but apparently the MQA mastering also has a positive effect. The MQA decoder only adds the icing on the cake.

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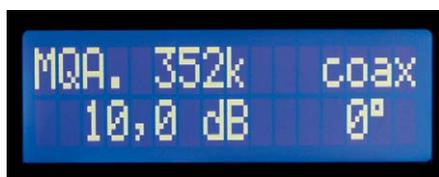
MORE THAN 100 UHQ-CDS

Universal Japan offers international album classics as UHQ CDs. Here is a selection of the best known:

- The Rolling Stones:** Sticky Fingers, Exile on Main Street, It’s Only Rock ,n’ Roll
 - The Who:** Tommy, Who’s Next, The Singles
 - The Beach Boys:** Pet Sounds, Endless Summer
 - Queen:** A Night at the Opera, The Game
 - Steely Dan:** Pretzel Logic, The Royal Scam, Aja
 - Dire Straits:** Dire Straits, Love over Gold, Brothers in Arms
 - Stevie Wonder:** Talking Book, Innervisions
 - John Coltrane:** A Love Supreme, John Coltrane and Johnny Hartman, Ballads, Blue Train
 - Herbert v. Karajan/ Wiener Philharmoniker:** R. Strauss: Ein Heldenleben, R. Strauss: Also sprach Zarathustra, Holst: The Planets
- Also numerous other titles from pop, classical music and jazz. The prices vary between 20 and 49 Euro. The following samplers are particularly interesting for comparisons: „Rock & Pops,“ „Jazz,“ and „Classic.“ They contain a standard CD and a UHQ CD with MQA encoding and the same titles.



▲ The useful signal spectrum (blue) of the decoded MQA CD reaches up to about 35 kHz, while the original master (red) and a 24-bit MQA file (orange) extend beyond 40 kHz. Below, the noise layer of the MQA CD (grey), the 24-bit MQA file (purple) and the analog noise (green).



▲ Sampling rate and MQA logo appear on the Nyquist DAC display. The dot behind it stands for „MQA Studio“, the authenticated version.