

## Blind testing USB cables!

# music matters

By Alan Sircom

Many think audio cables are a waste of money, and USB digital cables in particular a waste of money squared. But are they? At the end of last year, Roy Gregory, a pair of Chris's (Thomas and Binns), two members of a US-based forum who prefer to remain anonymous and I assembled one Saturday at Roy Gregory's listening room to put this very question to the (blind) test.

The test was performed in a very high-resolution system, comprising a top-of-the-line late 2010 MacBook Air (running the latest version of OSX Lion, Pure Music, 4GB RAM and 256GB SSD) with a USB-powered Lacie 1TB external HDD running off one bus for the music files and the other connected via USB to a number of DACs (HRT Streamer II+, Ayre QB-9, Bryston BDA-1 and the ARC DAC 8) into a VTL TL-7.5 line preamp and MB-450 Series III mono power amps into Coincident Pure Reference Extreme loudspeakers, with all the cables that weren't USB from the Nordost Odin range.

While we didn't test AIFF to ALAC (I'm not convinced there's a difference to be had here, although the last time I tested this was in 2009) and while we did not experiment with hi-res on that day (*mea culpa* - time constraints and an awareness of the ability for such tests to erode the listener's interest and acuity put limits on the number of possible tests), we did compare the iTunes-purchased 256kbps (VBR) AAC version of a recent album (The Avett Brothers' 'I And Love And You') with the ripped CD version in ALAC, then the same converted to 256kbps (VBR) AAC. Despite a lot of claims to transparency between uncompressed and high-quality lossy compression, the differences were noticeable, albeit not enormous. Citing specific characteristics, the differences were notable largely in the precision of leading and trailing edges of bass lines and a blurring of fast percussion (not the phasey effect of low-rate MP3 compression; more of a 'purr' when there should be a 'rat-a-tat-tat'). In order of preference (but not in order of play) the listeners unanimously preferred the ALAC version over the iTunes-purchased version, and consistently chose the iTunes-purchased AAC file over the iTunes-transcoded AAC file. The album choice was deliberate on two counts; it's recent enough not to be listening to two wildly different remasters between CD and iTunes purchase, and it's indicative of recent 'hot' masters without being cut so loud that it suffers from heavy-handed dynamic signal compression or digital clipping. Also, when we compared the best an ALAC file could produce against the CD played through a Wadia 861se, everyone - including those already migrated onto computer audio - preferred the sound of CD. Some major head-scratching ensued.

The cables we tested (in order of price) were a giveaway grey cable from an HP printer, Cardas Clear USB, Nordost Blue Heaven USB, AudioQuest Diamond and one of Crystal Cable's Dreamline USB range. This gave a spread of prices from essentially free to about £2,000. I ensured the test was run blind and not in price order. As test admin, my

opinions and findings do not form part of the test, because I was the one person who knew what was playing at any given time. In rough order of preference two of the five listeners preferred the AudioQuest, while the other three preferred the Crystal Cable. Interestingly, those who liked the AudioQuest ranked the Crystal Cable as their second choice, followed by Nordost, Cardas and then the giveaway, while those who preferred the Crystal Cable, ranked Nordost second, followed closely by Cardas, then AudioQuest a distant third and the giveaway trailing in the rear. All five listeners immediately identified the giveaway cable as 'cheap and nasty' and one managed to recognise the AudioQuest cable because he felt it sounded 'too hi-fi', but the likes and dislikes were remarkably consistent.

The question this raises is 'why?' The USB 2.0 spec is incredibly well defined; four 28 AWG conductors (a Data+ and Data-twisted pair, referenced against a ground wire and a +5v Vbus for powering devices like the HRT Streamer) in individual dielectrics, with a aluminium foil tape, a braided shield and wrapped in PVC. So, the result of the whole test should be one of those 'bits is bits' moments, especially as the blind test element takes away the chance for someone to express their pet preferences based on brand names alone. And yet, not only were there differences between the cables, but the differences were identifiable enough for someone to pick out brands under conditions designed to eliminate such things. I don't discount the possibility of my own biases leading the listeners, but I've heard most of this group under my own steam in listening tests, and would have ranked the cables in the test very differently from anyone in the group. Also, their conclusions suggested they hear bigger differences than I have in the past. So if it's administrator bias, it's working contrary to the biases of the administrator.

So, as I said... why? +