

Quality control

When it comes to digital volume controls, the old rules don't necessarily apply in the filestreaming age, says **Jason Kennedy**...

This business is not short of wannabes who spend a bit too long in the shed tinkering in the hope that they can create the next Holy Grail of high fidelity. Usually they dream up loudspeakers or cables, but occasionally something more ambitious is attempted. All too often they end up reinventing the wheel...

Sometimes, however, they choose a niche that proves fruitful, and create a product that just *might* be a game changer. One such character is Scott Berry, an American living in London who has managed to put together something that works extremely well and looks like it could put the cat among the digital audio pigeons! Scott works under the guise of CAD or Computer Audio Design, and unsurprisingly he has spent more time than most eking the most out of music files in his quest to create the best USB DAC (in the world ever)!

He has ended up with a highly dedicated convertor, one that eschews inputs other than USB, and only has one of those on a back panel that is empty save a pair of high-quality RCA phono sockets and a captive mains lead. How commercial such an approach will be remains to be seen, but it sounded extremely good with a Mac mini computer.

The case is all acrylic in a chunky matt black form that's both unusual and attractive, and it contains Scott's NOS (non-oversampling) DAC, which he built out of 16 TDA1543 chips, a classic 16-bit converter from the nineties that has something of a cult following. It's the first example to my knowledge of a USB DAC using such a basic, in bit-depth terms, converter chip yet it sounds better than any 24-bit example I've come across in the streaming era.

In the process of building the DAC, Scott discovered a few interesting things about getting the best from your computer, and one of the more controversial ones is that the replay gain option on software like Audirvana Plus and Decibel among others can sound as good if not better than the volume control on a serious preamp.

This is pretty controversial stuff, because this system of volume control is based on reducing resolution in the digital domain, an approach which did not prove terribly successful in the early days when such devices could be found on a few DACs

and CD players. Times have changed however and the dithered system of attenuation that modern software uses is arguably less detrimental to sound quality than the volume pots found in many amplifiers. Scott has been to a number of dealers and managed to gobsmack them by bypassing their classy preamps and delivering higher sound quality. When he tried the same in my system the change was not huge, in fact it was damn close, but given that I use the Townshend Allegri autotransformer passive preamp, this is no mean feat!

Very little gets close to the sound of the Allegri, very little except the software in the Mac that I have been using for the last year or so it would seem! In most cases, of course, you need a preamp or that section of your amp to be able to switch inputs if nothing else, but if you are a dedicated computer audiophile this is an astonishing discovery.

I went back and did some further A/B comparisons with the Allegri and came to the conclusion that its timing is clearly better than the software, but in other respects the two are surprisingly close. I tried the same thing with a Cambridge Audio Azur 851A integrated and got a dramatically better result when bypassing the onboard volume control, again it was timing that improved but this time the software controller clearly had the upper hand. The 851A has a better power amp section than I'd realised.

All of which goes to show that the pace of change within digital audio is too fast to be taken for granted, what was once a very poor substitute for a proper preamplifier now gives good examples of the genre a real run for their money.

Scott Berry has managed to put together a product that works well and looks like it could put the cat among the digital audio pigeons!



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