

Ideon Audio 3R USB Renaissance USB Hub

Small Wonder

Andrew Quint

In the primordial days of computer audio—that is, around a decade ago—it was obvious early on that the analog output from a laptop or desktop machine just wouldn't do for anything resembling critical listening. Although there was some initial interest in replacing a computer's factory soundcard with something better, that approach quickly gave way to a new class of audio component, the USB DAC. Why USB? The answer is simple. For the vast majority of stock computers, the Universal Serial Bus is the only option for getting digital data out of the machine to the promised land of high-quality D-to-A conversion. Actually, almost *all* DACs these days are USB DACs, though most sport other options—TosLink, SPDIF, and/or AES/EBU. (The most notable exceptions are the Berkeley DACs.) Audiophiles currently have an enormous range of DACs that will accept a data stream from a computer's USB output, from the tiny but mighty AudioQuest DragonFly Black or Red (\$99 and \$199, respectively) to MSB Technology's Select DAC (\$90,000).

But important sonic problems exist with the USB interface. There is noise associated with this connection as well as the potential for sound-degrading timing errors, and even data loss (with audio streaming, an isochronous transfer). Small, inexpensive devices that are deployed between the rendering computer and DAC have become popular, especially with audiophiles who use an off-the-shelf computer as their digital source. Some examples include the AudioQuest Jitterbug and UpTone Audio's Regen, as well as products from Wyred 4 Sound, iPurifier, and others. Among the most recent entrants into the fray is Ideon Audio's 3R USB Renaissance.

Ideon Audio is a small Greek company based in Athens. Its engineer/designer is Vasilis Tounas (described to me by an audiophile friend who knows him as “a digital wizard”), and there are three other partners in the enterprise, including a Microsoft veteran and a security and smart-card technology firm. Ideon's first product was the Ayazi digital-to-analog converter, which costs a bit over \$1000; a new, more ambitious DAC is in the works. Ideon sells its products worldwide through an online store, with delivery by courier service. In addition they have two “re-sellers” in Japan and Canada, with plans to establish more (check the website for updates).

The 3R USB Renaissance is packaged in a sturdy box that's placed inside a substantially padded envelope for shipping. The device itself measures 2 7/8" x 2 1/4" x 5/8". One narrow sur-

face has an input for the “B” end of a USB cable and a 5.5mm x 2.1mm DC power jack that accepts a cable from the included 7.5V/1A switch-mode power supply. On the opposite side is a USB “A” output and two LED lights. One indicates that the 3R is powered up and the other, when lit, confirms connection to the host computer. UpTone prefers that its Regen be situated as close to the receiving DAC as possible and provides a solid plug adapter for this purpose. Ideon demos its 3R with a cable connecting it to the DAC; they've compared a connection with a converter adapter and believe the sonic results with a good cable are superior.

“3R” refers to “redrive,” “relock,” and “regenerate.” A redrive chip improves signal transmission from the incoming USB cable and the data stream is then regenerated utilizing a low-noise power supply. A low-jitter oscillator reclocks the signal. Ideon's explanations of these mechanisms and their alleged benefits are familiar from my having read other manufacturers' claims regarding similar devices. Does the 3R USB Renaissance make a consequential positive difference when inserted into an audio system? There's only one way to find out.

I evaluated the Ideon 3R with two host computers

and two DACs, in various configurations detailed below. The connecting USB cables were kept consistent for A/B comparisons—Ideon not in signal path—and included a robust generic cable as well as AudioQuest Forest and Furutech GT2Pro-B models. David Berning Quadrature Z monoblock amplifiers and Magico S1 Mk II loudspeakers were in service for the review period. Primarily, I used three musical selections for testing the 3Rs, material that was well-recorded but I also knew wouldn't make me homicidal when repeated comparisons were needed. There were FLAC rips of two CDs—the Emerson Quartet playing the Andante con moto from Beethoven's String Quartet No. 3 in D major, and the opening movement (“Par les rues et par les chemins”) from Debussy's *Ibéria*, performed by the Cincinnati Symphony Orchestra led by Jesús López-Cobos, and an HDtracks 192/24 download of “Southern Cross” from Crosby, Stills & Nash's 1982 album *Daylight Again*.

I began with relatively low-hanging fruit, a computer/DAC combination with which I anticipated the 3R would make an easily appreciable difference. The computer was a five-year-old Dell desktop (a Pavilion p6744y with an Intel Pentium E5800



processor) that was my first machine completely dedicated to audio. The DAC was my Anthem D2v, still highly valued for its DSP room correction and multichannel capabilities but admittedly showing its age—especially with stereo playback—with an old AKM DAC chip set. The Anthem doesn't even *have* a USB input so my trusty Halide USB-to-SPDIF Bridge was called into service to deliver data from computer to processor. The improvement heard with inserting the Ideon 3R between the Dell and Anthem was obvious and quite impressive. The background became much quieter and the musical presentation, in general, took on an ease not heard before with this combination. The Emerson Quartet's ensemble sonority was fuller and dynamic shadings were more apparent. On "Southern Cross," the smoky character of Stephen Stills' tenor was more accurately represented, and the sumptuously harmonized vocals heard during the song's chorus were less coarsely shrill. With the Debussy recording, the sound was far more spacious and the dynamic range seemed to be expanded. You'll probably want to know *how* much better the sound was with the 3R in the signal path. That's a completely subjective valuation, of course, but I'd say I heard a 30% improvement: It was on the scale of a major upgrade to one's loudspeakers or replacing an analog playback system in its entirety. Not bad for about 212 bucks.

Next, a top-drawer modern DAC was introduced into the equation, a T+A DAC 8 DSD, baby brother to the \$22,500 PDP 3000 HV that received a very positive notice from Robert Harley in Issue 268. With the 3R between the Dell and the T+A, a significant improvement was again readily apparent. The presentation of both quartet and orchestra was more dimensional and, listening to the Beethoven, there was increased inner detail, manifested by more richly textured string sound. On "Southern Cross," steady sixteenth notes played on a high-hat were clearly heard throughout the song—something I'd missed on a couple of dozen previous occasions. The sound quality leap-frogged over that achieved when the Ideon was applied to the Dell/Anthem pairing.

Finally, I connected the Baetis Reference 2 to the T+A. Baetis' interface-of-choice is AES/EBU, but recently the manufacturer has starting offering, as an option, the inclusion of a pair of outputs employing the pricey SOTM USB card (connected directly to the motherboard) and the accompanying clock board. The cost of these parts is several times the price of the Ideon 3R, and the sound from the SOTM outputs on the Baetis is the best I've heard via a USB interface. The Baetis has eight other "regular" USB ports for the attachment of hard drives, a wireless dongle, and other peripherals. Using one of those ports to connect the computer to the DAC resulted in quite wonderful sound; inserting the 3R between them brought the sonics within shouting distance of the Baetis' via its premium USB interface. With the Debussy, massed violins playing loudly were less astringent using the Ideon. Castanets and tambourine were farther back in the soundfield, yet crisper. Adding the 3R to the signal path originating at the SOTM output, by the way, proved to be a step backwards—the string sound with the Beethoven quartet lost some of the purity and lifelike detail heard without the Ideon.

I had on hand the two most visible competing products in the U.S. marketplace, the aforementioned AudioQuest Jitterbug and the UpTone Regen. With my "low-hanging fruit" setup

Specs & Pricing

Description: Powered, single-port USB hub

Dimensions: 2-7/8" x 2-1/4" x 5/8"

Price: 200€ (approximately \$212)

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(Dell to Anthem via Halide Bridge) the addition of either device brought about notable improvement. With the Jitterbug, for example, Stills' voice was better characterized, and adding the Regen improved dynamics—there was more satisfying "snap" to snare drum. By the way, this review isn't intended as a shootout among products of this type, but my strong impression is that the magnitude of the improvement was less than what I heard with the 3R.

Many audiophiles employ more than one of these sorts of devices connected in series to get additional incremental improvements in sound quality, and Ideon customers are no different. Because I didn't try it I can't comment but I know of one sophisticated listener who uses two "daisy-chained" 3Rs in his system and finds the addition of a second one beneficial. When he tried three, he reported, his DAC wouldn't lock on the incoming data stream. Also, a good number of people who use noise-reducing/reclock-

ing components power them with a far more robust power supply than the one provided with the device—something like the HDPLEX PSU that Baetis supplies with its Reference 2. One of Ideon's principals explained to me via email that the company will be introducing a power supply "specially tuned for the 3R and keeping a value-for-money approach." (At press time we were told that the power supply is now shipping at a price of 399 euros.)

Improving the performance of the USB interface isn't the only factor to consider when attempting enhancement of a computer-based system's sound. For example, eliminating as many irrelevant operations running in the background on your machine can help a good deal; software exists for this purpose. And it's the opinion of some, myself included, that at the present time, AES/EBU is still king of the hill when it comes to data transfer from a computer to a DAC. With the Baetis Reference 2, the sound was even better using the AES output versus one of its SOTM USB ports.

The bottom line is that the Ideon 3R USB Renaissance will step up the sound quality heard through the USB outputs of most rendering computers, and at a very affordable cost. It's been a long time since I introduced a component into my system that brought about this degree of sonic improvement and that didn't require hand truck usage. Sometimes, big things come in small packages. Anyone using a USB DAC, especially if the data source is a standard-issue computer, should make a point of investigating this small wonder. **tas**