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Start ME UP



Rotel RDD-1580 Digital-to-Analog Converter

Great Digital Made Affordable

Spencer Holbert

It's an amazing time for computer-based audio. It wasn't too long ago that DACs connected to a PC or Mac were limited to CD-quality resolution and relied heavily on upsampling or multiple conversions to match the capabilities of transports. What's better than a computer that manages a seemingly unlimited number of high-res songs at 192kHz/24-bit (or higher)? Here's what: the fact that you can now own an entire computer-based system at a fraction of the cost of components from just a couple years ago, without sacrificing sound quality. As with all facets of life there will always be *uber*-expensive gear that can do it better, but the new \$799 Rotel RDD-1580, with its myriad inputs and superb design, represents an affordable option that won't become obsolete in a few years. Plus the RDD-1580 is more than just a checklist of features; it's a true hi-fi component with gripping sonics that run with the best of 'em without running you into debt.

Back to Basics

First and foremost, a DAC should have the ability to handle any digital input you could ever hope to use. There's no point in purchasing one component for your transport, another for your computer, and then another for your iPod. The Rotel RDD-1580 has six inputs: two optical TosLink, two digital coax, one computer USB, and one iDevice USB on the front panel. It's easy to scoff at that last one, because the front-panel USB input is limited to 48k/16, but it's a great option when friends come over and want to play "that new song you just have to hear" without the hassle of ripping the music from their iPhone or iPad onto your computer. The front-panel USB input also doubles as a charger, which

was super-helpful when my iPad—aka my computer-audio command center—ran out of juice.

For high-res computer audio, I connected the RDD-1580 via USB and TosLink to my iMac with an external 12TB RAID NAS drive, selected the Rotel under outputs, then fired up iTunes with Amarra Hi-Fi. It's nice that most Macs feature optical and multiple USB outputs, because that not only allows for easy A/B comparisons from the same source, it also allows for comparisons with multiple DACs. Like I said, it's an amazing time for computer-based audio.

Maybe I'm a bad reviewer for admitting this, but I no longer use a transport for SACDs—I rip all of my SACDs to my computer using a Playstation 3. Caveat: This requires an older firmware version that can read SACDs and convert them into an ISO file, then more software to convert the files into PCM that can be streamed to your DAC, all of which can be a little daunting for a newcomer to computer-based audio. If you have a large collection of SACDs, a transport is still the easiest option; but if you're up to the challenge it can be fun—yet very time-consuming—to finally transfer those SACDs to your computer and break free of the physical constraints of changing discs. This topic probably warrants an entire article, but let's get back to the DAC.

Rotel has long been known for high-quality components at an affordable price, and the RDD-1580 is no exception. Unlike most DACs in the same price range, the RDD-1580 features two Wolfson WM8740 converters—one for each channel—a Rotel-designed toroidal transformer, and slit-foil capacitors to supply the DAC with great power. If you've been following DAC technology for a while, you'll

START ME UP - Rotel RDD-1580 DAC

know that sound quality is not just about the quality of the converters, but also the digital filters, output stage, and power supply; in this regard the “dual-mono” design of the RDD-1580 really shines. Unless you are getting into DSD, this DAC has everything you need to rule the digital world. Oh, and it has a remote! More on that in a bit (pun intended).

Bits, Bytes, and the RDD-1580's Sonic Capability

If the world of digital audio were simply eight bits in a byte, any ol' DAC would do. It's the aggregate design that counts, not just the mathematical sum of its parts. When I listened to the RDD-1580, it was obvious that Rotel always had high-quality analog sound as its goal. Sound quality seems to be an afterthought for many sub-\$1000 DACs that have the capability to handle 192/24 PCM signals; heck, there are \$30 DACs that can do this. For those of you who remember the early mindset when turntables were simply something that spins a record, this will be a little *déjà entendu*.

When testing DACs, my go-to music is always something from the Ultimae record label, purveyors of incredible ambient soundscapes from artists like Aes Dana, Solar Fields, Hol Baumann, and Carbon Based Lifeforms. This type of music is perfect because it's not only great to listen to, but also pushes the limits of a system in a controlled manner that orchestral movements just can't touch. Ambient music plays with soundstage width, depth, height, and extreme frequency response with lightning-fast speed. Such ambient music is like a modern-day version of classical music in that it paints a landscape and takes you on a journey, except that the sound is phasey left and right, front to back, and top to bottom.

What's amazing about the RDD-1580 is that it took the massive amount of sound from Solar Fields' *Movements* and translated it into a beautiful soundscape that was far wider and deeper than that of my comparison DAC, which retails for about the same price. On “Sol,” the first track of the album, the bass seemed to rip from the ground and leap into my chair, while simultaneously the high-frequency zips-and-zaps flew from beyond the outer edges of the speakers to land centerstage, dance in mid-air, then retreat well to the rear. With the comparison DAC the effect was “similar,” but the soundstage was truncated, never extending beyond the edges of the speakers, and had about half the depth. This was using the same USB cable, the same computer—same everything. For the same price, the RDD-1580 put the comparison DAC to shame, and was far more engaging in its ability to elicit a visceral response to the music. Several times during the track “Discovering” I caught myself clenching my fists and sliding toward the edge of my seat, all because the RDD-1580 made the music that much more gripping.

I wanted to throw another variable into this aural showdown and choose an album that I have on vinyl and digital. If you

haven't heard Zero 7's *When It Falls*, it's an absolute must-own. This genre-bending album employs multiple “jazz” singers—both male and female—throws in violins, pianos, electric basses, and acoustic guitars, then interlaces everything with down-tempo ambient music to create an intoxicating sound. If you've seen the movie *Garden State*, or TV shows like *Top Gear*, *CSI*, or *Smallville*, then you've heard Zero 7. So I pulled out the vinyl version of *When It Falls*, threw it on an analog setup that cost the same as the RDD-1580, and A/B compared the digital to the vinyl. I'm going to get hate mail for saying this, but on the track “Somersault,” underrated jazz singer Sia Furler sounded *much* better than with the vinyl setup of similar cost, not to mention that the instruments were more distinctly defined within the soundstage. Even though I liked the “vinyl sound” more than the digital, it couldn't compete with the RDD-1580's imaging, lack of smear, and superb dynamics. Before this, if someone would have asked me, “For \$800, should I go digital or vinyl?” I would have said *vinyl!* all day long. Yet, the RDD-1580 made me reconsider that question, and then ultimately decide in favor of it over an analog front end for the same price. Yes, I'm going on record and saying that if you have \$800 and have to choose between vinyl and digital, buy the RDD-1580 first.

But maybe that was just a fluke, eh? Let's try the same vinyl/digital comparison with James Blake's “Retrograde” from his second album, *Overgrown*. This track features Blake's incredible vocal range as he hums R&B-style up and down the octaves, backed by a simple beat and piano. Yet again, the RDD-1580 easily beat out the other DAC and comparable analog front end. The RDD-1580's soundstage was deeper, the piano was spatially separate from the vocals and the beat, and everything sounded tighter. I did the same test again with Portugal. The Man [*sic*], Neko Case, Wayne

SPECS & PRICING

Inputs: Two digital coax; two optical TosLink; one PC-USB; one front-panel USB

Output: RCA; XLR

DAC: Dual Wolfson WM8740s

Frequency response: 10Hz-95kHz

S/PDIF LPCM: up to 192kHz/24-bit

Rear-panel USB: Asynchronous, 192kHz/24-bit

Front-panel USB: Up to 48kHz/16-bit

Dimensions: 17" x 2 1/8" x 12 1/2"

Weight: 11.24 lbs.

Price: \$799

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Shorter, Miles Davis, ZZ Top, and dozens more, and each time the RDD-1580 outperformed the “other DAC” and the analog setup.

I wanted to do this same “triple comparison” in another system located in an entirely different room, so I went over to a fellow audiophile’s house and began the process all over again. I didn’t necessarily expect the same conclusions, but I was curious whether I simply preferred the sound of the RDD-1580 through my amp/speaker combination. Maybe the RDD-1580 better complements my system, I thought. After three or four hours of A/B/C testing, it was abundantly clear that the RDD-1580 *still* sounded better than the alternatives in my friend’s system. A couple days later, I received an e-mail from this friend, who had gone out and purchased the DAC for himself. If you are in the market for a DAC and have a max budget of \$1000, you would be foolish not to audition the RDD-1580.

Other Likes, and a Few Minor Dislikes

Like I said earlier, the RDD-1580 comes with a remote, which when connected via USB controlled PLAY, SKIP FORWARD, and SKIP BACK; obviously this didn’t work with the other inputs. But these controls were a little finicky: The PAUSE button didn’t work via USB, but if you hit the PLAY button again it would pause the track. I could skip forward and back with the respective buttons, but I couldn’t fast forward, nor was there any volume-control capability. I used the RDD-1580’s remote mainly because it was faster than unlocking my iPad, letting the Remote app sync, and then trying to control the computer. But ultimately I preferred using the iPad to control the computer, rather than Rotel’s remote.

This next one might just be my personal preference, but the blue indicator light, which rings the circumference of the RDD-1580’s power button, stays illuminated whether the DAC is on or in standby mode. Several times I thought the DAC was on when it was actually in standby, and vice versa. The only way to tell if the DAC is actually on is to look at the small input indicator light, or the sample-rate indicator. Again, this isn’t a huge deal, though it is somewhat strange to not indicate on/standby individually.



Another thing that might throw a lot of people off is the fact that you need to manually switch between USB 1.0 and USB 2.0 modes by holding the PC-USB input button for five seconds (this is a one time thing). Windows users will need to install a supplied driver in order to utilize USB 2.0. For Mac users, this is already taken care of, but I couldn’t determine whether the switch from USB 1.0 to 2.0 actually made a difference in my Mac setup, because the 192kHz indicator light was illuminated before I read the owner’s manual (I might have been overeager).

I really like the RDD-1580’s sleek, slim design; the review sample I received came with the silver faceplate, which just so happens to match a lot of my other gear. Plus, the RDD-1580 ran surprisingly cool, which means that you could place a preamp on top of it without worries; this is most likely due to the fact that it only draws 25W when on, and less than 0.5W when in standby.

Another really cool feature is that you can stream music via Bluetooth when the supplied Bluetooth adaptor is plugged in to the front-panel USB input. The Bluetooth dongle is tiny and unobtrusive, and was a lot of fun to use when I worked on my laptop and wanted to stream music from my favorite listening chair. You can also stream music from smartphones and tablets, but I didn’t test out what would happen if multiple devices tried to connect via Bluetooth simultaneously, *à la* during a party where multiple people want to play phone DJ.

Aside from these few minor things, the RDD-1580 was flawless, both in features and in sound quality. It is by far the best DAC that I’ve heard in this price range, and probably would beat out most DACs double or triple its price. Does it beat out a \$10,000 DAC? Sorry Rotel, but the big boys still win in overall sonics (not to mention DSD capability). But if you are looking for a DAC that costs even \$2500, don’t overlook the RDD-1580. I definitely hope Rotel will let me hang on to this one a while longer. **tas**