

## Musical Fidelity V-DAC II Digital-to-Analog Converter (Playback 53)

by Steven Stone

February 13th, 2012

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### Making Your Computer Audio System Sing—On a Budget

So you have decent headphones and a dedicated headphone amplifier... what's the next step for improving your computer's audio sonics? It's time to get an external Digital - to - Analog Converter or DAC. One good option is the Musical Fidelity V-DAC II. Priced at only \$349, the V-DAC II is aimed at folks looking for their first outboard DAC as well as audiophiles looking for a lightweight portable DAC to couple with their portable computer-based audio system. And although the V-DAC II isn't as fully featured as some DACs, it delivers all the essential features Musical Fidelity thinks you need.



#### FEATURES

**Audio highlights:** The Musical Fidelity V-DAC II replaces the original three year old V-DAC. Improvements include the case, which is now made of satin-finished brushed aluminum with heavier gauge end-pieces than the original. The USB input is an asynchronous connection that is identical to the chipset Musical Fidelity uses in their V-Link, and it supports up to 96/24 via USB 2.0. (The V-DAC II's S/PDIF inputs, however, do support 192/24 files.). Other improvements over the original V-DAC include halving the distortion from 0.005% to 0.002% and upping the stereo separation to

-105 dB. Inside the V-DAC II you'll find the latest digital chips, a Burr-Brown DSD 1796 DAC and a Burr-Brown SRC 4392. With a fixed output of 2.2 volts the V-DAC II should be compatible with almost all two-channel preamps or active speakers.

**Ergonomics:** The Musical Fidelity V-DAC II is housed in a small, rectangular satin / silver box approximately 6 $\frac{2}{3}$ " by 3" by 1 $\frac{2}{3}$ ." One end has a single pair of RCA outputs while the other has input connections for S/PDIF, Toslink, and USB. This end also has a small toggle switch to choose between USB to S/PDIF, a blue power LED, and a green signal lock LED. Printing on the top plate identifies each input and shows the signal chain. There's no remote.

Does the V-DAC II have any sonic limitations? Well, yes, in that it only supports up to 96/24 bit-rates via its USB input. Obviously, if you listen to music from CDs and MP3s this 96/24 ceiling won't be a problem, but if you plan to use 192/24 music files you'll need to use the V-DAC II's S/PDIF inputs for that purpose.

#### SONIC CHARACTER

In the good old days reviewing DACs was easy because the sound quality differences between entry level DACs and the crème de la crème was wider and deeper than the Marianas Trench. Today that difference has shrunk down to gap that even a gymnastic mouse would be hard pressed to fit through. Top echelon DACs have gotten better, but entry level DACs have improved faster.

Much of my reviewing time was spent listening to the V-DAC II connected to one of the analog inputs of an April Music Eximus DP-1 DAC/pre. I also had an Empirical Audio Off-Ramp 4 USB conversion box connected to one of the Eximus' S/PDIF digital inputs. With this set-up I was able to do direct A/B comparisons between the V-DAC II and the Empirical/Eximus combo. Using Pure Music 1.85 I could go from one to the other via PM's audio control configuration box—it only takes about 15 seconds to do the switch.

After many hours of listening to a wide variety of sources I can confidently write that the Musical Fidelity is a VERY good DAC. Is it as good as the almost \$5000 Empirical/Eximus combination?

Nope, but it is much closer than the monetary difference between the two rigs. Where did the VDAC fall down? Compared to the double E rig the V-DAC II lacks some image specificity and dimensionality. Also the mid and

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low bass through the V-DAC II is not quite as fast, firm, or dynamically nimble as the E/E. Finally the E/E rig has a bit better low-level definition and inner detail. This was most noticeable on my own 96/24 recordings (mix - downs from DSD) that I'm very familiar with - on many commercial pop recordings the differences between the two set-ups were much harder to discern.



Near the end of the review period the Eximus DAC had to go back to the factory for an update so I replaced it with the Wyred4Sound DAC. For A/B tests I also pulled out an April Music Stello HP100 Headphone amplifier. The Stello has two analog inputs so I was able to connect it with one input attached to the V-DAC II while the other took the analog single ended output from the Wyred4Sound. With this system I could compare the V-DAC II with the Wyred4Sound fed from either an Empirical Off-Ramp 4 or a Matrix USB converter, a \$60 lipstick-sized 96/24 converter available through

Ebay. Using a pair of AKG 701 headphones (because, again, the Stello HP-1 is a headphone amp) I heard again how close the V-DAC II's performance came to the Empirical/Wyred4Sound combo. Once more, depth, image specificity, and dimensionality were the primary areas where the V-DACs performance fell slightly short of the Wyred4Sound. In terms of resolution and low-level detail I couldn't discern any difference between the two rigs. Using the Wyred4Sound's own USB input gave similar results - the principal sonic differences were spatial rather than harmonic or dynamic.

When I compared the V-DAC II with the Wyred4Sound using the Matrix USB converter connected to its S/PDIF input, much of the spatial differences between the two set-ups vanished. Even when listening to my own recorded material I was hard-pressed to hear any differences in A/B matched-level comparisons. Again, by using Pure Music the switchover took less than 15 seconds, and since I wore headphones my position vis-à-vis the transducers didn't change from A to B.



#### MUSICAL EXAMPLES

When I was not involved in real-time A/B comparisons, but instead listened to the V-DAC II by itself with no left-brained distractions, it was hard to fault the Musical Fidelity V-DAC II's sonic performance. I tried the V-DAC II with both the April Music Stello HP-1 and Musical Fidelity V-CAN II headphone amps as well as with the April Music Eximus DP1. In every case the V-DAC II performed without any technical issues or ergonomic glitches.

Harmonically, the V-DAC II is as neutral as I've heard, and through

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the Stello HP-1 the V-DAC II's sound was warm, full, and harmonically complex. Through the V-CAN II the sound was slightly thinner and less robust, but still involving and musical. Bass slam, dynamics, and resolution were also better with the Stello headphone amp driving either the AKG 701 headphones or Sony XBA-3 earphones.

But what does the V-DAC II sound like alone? I connected it directly to a pair of powered PSI A-14 powered professional monitors and it impressed me once more. Benjamin Zander and the Philharmonia Orchestra's recording of Mahler's 1st Symphony on Telarc had a spacious and very three-dimensional quality to its soundstage. The V-DAC II convincingly preserved this sense of air and space. When the bass drums entered around the 8:20 mark, the V-DAC II delivered the low frequencies cleanly and with a genuine feeling of moving air, even through headphones.

On rock recordings such as The Bottle Rockets' "White Boy Blues" from their Brand New Year album [New West Records], the V-DAC II was a bit kinder than some DACs I've heard. The nasty edge was there, but it was tempered by the V-DAC II's musicality. The crisp and crunchy electric guitars on "Something Better" from The Dirt Drifters' album This Is My Blood [Warner Bros.] stayed crisp and crunchy through the V-DAC II. It also preserved the textural differences between the six-string electrics and the pedal steel, even when they played the same lines.

### CONCLUSION

As I stated earlier in the review, the Musical Fidelity V-DAC II is a VERY good DAC. For anyone looking for a DAC that supports both USB and S/PDIF digital sources and only needs one pair of RCA analog outputs, the V-DAC II should be on your short list. If you connect to a headphone amplifier, such as the equally diminutive Musical Fidelity V-Can II, you have the makings of a fine sounding and reasonably priced personal computer audio system.

Consider this DAC if:

- Sound quality is your primary criteria for purchase.
- Size and easy portability matter.
- You want a simple way to improve your computer's sonics.
- You want a DAC that offers 192/24 capabilities via its S/PDIF inputs (but not via USB inputs), and that features internal upsampling to 192/24.

Look further if:

- You need a USB DAC that also has a digital output.
- You require a USB DAC capable of handling 192/24 digital audio files.
- You want a DAC with a variable output.

Ratings (relative to comparably-priced DACs):

- Design & Features: 7
- Tonal Balance: 8
- Timbral Purity: 8
- Detail & Resolution: 8
- Imaging/Soundstaging: 8
- Dynamics: 7
- Value: 9

### BOTTOM LINE

Although it doesn't look terribly impressive, the Musical Fidelity V-DAC II delivers exactly what audiophiles want—better sound from computer audio. Sure, it has limitations such as only one pair of fixed-level single-ended analog outputs and support for a maximum throughput of 96/24 via USB (although the V-DAC II supports 192/24 via its S/DIF inputs and upsamples all digital sources to 192/24 for internal processing). But if you are looking for a no-frills DAC with high-end sonics for a very real-world price, the Musical Fidelity V-DAC delivers the goods.



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### **SPECS & PRICING**

Musical Fidelity V-DAC II digital to analog converter

Upsampling: 24 Bit/192kHz

Output impedance: 47Ω

Maximum output: 2.2V

Total harmonic distortion: 0.004% at 20Hz-20kHz

Frequency response: 20Hz-20kHz (+0, -0.1dB)

Crosstalk: -104dB 20Hz-20kHz

Signal / noise ratio: -117dB A-weighted

Total Jitter: 12ps

Power requirement: 12V DC, 500mA

USB input: Asynchronous data stream at up to 24-bit/96 kHz

S/PDIF inputs: Data streams at up to 24-bit/192 kHz

Digital inputs: 1 RCA (coaxial), 1 TOSLINK (optical), 1 USB (type B)

Line level outputs: 1 pair RCA sockets

Power input: 1.3mm DC power socket

Dimensions: Length 170mm, 6<sup>2</sup>/<sub>3</sub>", Width 3", Height 1<sup>2</sup>/<sub>3</sub>"

Weight: Unit alone – 12 oz.; unit packed in carton – 2.2 lbs.

DC power supply: 12V, 500mA

Price: \$349

Warranty: One-year parts and labor

### **Manufacturer**

Musical Fidelity Limited

[www.musicalfidelity.com](http://www.musicalfidelity.com)

### **US Distributor**

Tempo High Fidelity

(617) 314-9296

[tempohighfidelity.com](http://tempohighfidelity.com)