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DAC Review

Musical Fidelity V-DAC

Anthony Michaelson, owner and soul of Musical Fidelity, has managed to grant himself and his Company a prominent place in the hi-fi industry, from 1985 till today. Their creations were not shy to demonstrate they were opting for the first ranks, in almost every price category, only excluding the lowest budget. Those who have been into hi-fi for a while probably still remember the A370 and A470 power amps and the exceptional value they represented in their time. And, of course, many more should remember the famous A1, the 20W/c class A integrated that let the hi-fi luxury flow into the limited budget realm, thus pleasing many music lovers. In fact, I still own and cherish the Synthesis integrated -bought back in 1986- in one of my auxiliary home setups, playing some great music and constantly precluding any thought of replacement.



During the years, Mr. Michaelson's activity and indisputable competence have provided us with many best-buys and tempting propositions, wearing a variety of price tags. That's why the V-DAC, sitting on the Greek retailer's shelf, captured my interest on sight. As I already said, I maintain several auxiliary setups, on which, every now and then, I find it mighty interesting to review and... certify gear that qualify as best-buy material. Some of these secondary systems comprise ancillaries whose performance would justify a much higher cost, had they emerged in the past years (e.g. Briston's BDA-1 DAC). A brief investigation on the Internet made clear that the V-DAC is frequently discussed, especially due to its price/performance ratio. So, my curiosity, regarding not only MF's reflexes to the current market trends, but also the V-DAC's potential against its worthwhile blood-relatives (the X-Ray v8 and the A5, both of which are featured in our setups) got me strongly motivated towards this review. The Company's experience and know-how being indisputable, I now had to determine the amount of quality they were willing and able to enclose within a slim €180 envelope, deprived of a sophisticated PSU.

V-DAC comes in a tiny, simple and unembellished, aluminum package, measuring 17 x 9,5 x 4 cm. Its construction is however sturdy, providing a safe home to the real treasure that lies inside. Don't think that it isn't aesthetically pleasing, quite the opposite, it's just that the looks are kept... sporty and go-kart-ish in terms of absolute austerity, which is probably a good thing given the budget limit. No doubt, its potential buyers are out for the highest quality at the lowest price, therefore any fund-absorbing ornaments wouldn't be much welcomed...

The most crowded of the V-DAC's narrow sides hosts all available inputs, that is a TOS optical, a gold-plated SPDIF coaxial and a USB, that are of standard rather than exceptional quality. A switch allows for input selecting, while two leds monitor power-on and lock state. Their choice of placement is, I think, indicative of the V-DAC's designated fascia, despite the fact that all of the inputs will also be at the front plate, instead of the back, a possible caveat in ergonomics. Fortunately, the device's small footprint makes it easy for most users to choose its proper orientation, depending on their own setup and needs. The same narrow side also hosts a DC in for the power supply, a small 12V/500 mA mains transformer to be directly fitted in the wall outlet, just as a cell phone charger. I admit that the faint size and weight of this thing made me doubt its ability to support a demanding audio device. Auditioning, however, dissolved my doubts and reinforced Mr. Michaelson's proposition that when it comes to low-signal handling devices, such as DACs, a beefier power supply is almost non-beneficial whereas a modest one with low noise and low output impedance is the way to go. As for the other narrow side of the aluminum chassis, this one only hosts a stereo pair of standard gold-plated RCAs, i.e. the V-DAC's only output. This decision has obviously been made with the shortest signal path in mind, whilst Mr. Michaelson also claims that this is the only way to achieve total symmetry.



Lifting the V-DAC's hood reveals a good quality PCB, where higher than average quality parts are placed in good order and symmetry. The circuit is assembled in Taiwan, with all the positive consequences such a choice has in value for money. Surface-mounted are only the DAC and upsampler chips, while the rest of the circuitry remains easily accessible to potential DIYers wishing to upgrade it with higher-end components. The D/A section employs all Burr Brown (Texas Instruments) chips, namely:

- the PCM2706, a 16bit/48KHz USB DAC,
- the SRC4392, a 24bit/192KHz upsampler, and
- the DSD1792, a 24bit/192KHz DAC.

More info and datasheets on those can be found at www.ti.com.

Of course, the aforementioned chips can no longer account for cutting-edge nowadays, they are nevertheless found in devices costing ten times as much as the V-DAC. If only that USB DAC could handle 24/96 files... Never mind; in fact, they are not all that common yet. Another thing to be noticed is that, to favor simplicity, the V-DAC only partially utilizes the potential of some of the above chips. For example, the DSD1792, as implied by its name, is also capable of handling DSD (aka Super Audio) stream apart from PCM data. But even if the omission of a DSD input makes perfect sense, since devices implementing a DSD out are only numbered, this is not the case for the absence of an SPDIF out. The latter, which could be supported by the PCM2706, would allow for the V-DAC's use as a USB to SPDIF interface, greatly expanding its versatility. As for the dedicated

PSU sections, these look carefully designed, utilizing good quality regulators. The output stage is based on the JRC5532 opamp that is soldered on the PCB instead of residing in a socket, which would make opamp-rolling much easier for you...

The review sample having been well run in, I started auditioning on instant. Initially, the V-DAC was fed by the Philips DVD 963SA coax out. The first bars revealed a well dispersed, pleasant, surprisingly vivid and clean sound, totally free of the edginess and grain that often contaminate other hi-end... wannabes of this price range, who struggle to sound more detailed than they actually are. Being of another breed altogether, the V-DAC succeeded in combining elements like control, pace, resolution, frequency and image extension with a rather pleasant warmth that brings out and preserves the acoustic timbre of instruments like the violin or the piano. The sound is natural and well-balanced, while nothing feels amiss or in excess. That's the most surprising aspect of this device, the very fact that it manages to sound evenly complete, for this is a quality usually expected of big-buck contenders. Thus my initial audition turned out to be a sleepless night, as I was finding it hard to stop playing my favorite records. Another unexpected quality emerged through the V-DAC's canning ability to retrieve low-level information. I had the chance to pick barely noticeable details in very familiar recordings, such as recklessly truncated note decay in one of my favorite tracks. For example in 'retro-classic rock' recording of Peter Hammill, 'Over: in the Crying Wolf opening track, you can clearly hear the drummer in the first 30 seconds holding the rhythm at the background. My personal reference right now is the Briston BDA-1 DAC [~2300 euros] (coming soon on about:hi-fi.com) that is both analytical and extremely musical & natural sounding altogether, and yes... V-DAC is not a long way behind in terms of detail retrieval.

Needless to say that, compared to the DVD 963SA native (but modded) output, the V-DAC proved to be a striking improvement, which I was kind of expecting although not to this extent. In all, MF had raised the bar at least a level, confirming the importance of a proper source in a sound chain. If I had to find a caveat in its performance, this would be the lack of ultimate energy spark in electro-dance material... But I also think that, given the price, further experimenting would rather jeopardize the achieved balanced character rather than add to it.

Now, for the icing on the cake, a few words about the V-DAC's USB capabilities, a story told in 16/48... A humble -XP® running- laptop provided the signal through a ferrite equipped USB cord to the V-DAC's USB input, communicating via USB v1.1 rather than v2.0 protocol and bypassing the OS' kmixer and volume controls, to ensure data integrity. In brief, this was another step upwards for the sound, especially regarding clarity throughout the spectrum and bass control. This shows, if anything, that the Philips transport -or any low/mid-budget transport for that matter- can hardly compete with an HDD. Presumably, I had to suspend the 963 of its transport duties and never look back. The V-DAC is a real gem for those in search of a fine USB DAC that is also a fine bargain.

As you might guess, I couldn't escape the temptation to compare the V-DAC with costlier devices such as the Cambridge Audio DacMagic or even Benchmark's DAC 1, putting the Esoteric SA-50 to service as a transport and using Analysis Plus Digital Oval & Van Den Hul digital cabling. CA's DacMagic, the V-DAC's closest competitor, clearly takes the lead in convenience and features, which is merely surprise given their price difference. The same, however,

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cannot be said of sonics, as extensive auditions with a few friends showed. More precisely, the DacMagic presented a much more laid-back stage, almost too laid-back to be involving. The V-DAC, on the other hand, portrayed a palpable and vibrant scene -in 3D- that had much more of an emotional impact over the listening group, thus qualifying as more convincing. In fact, as the V-DAC was reproducing baroque music on period instruments, a friend said: "Please, don't change a thing!" - in reference to the listening setup composition, that is. His enthusiasm adequately reflected our common judgment that, at that given time, everything sounded just right.

As for the V-DAC's status versus Benchmark's DAC 1, the latter clearly held its advantage in every critical domain, as in definition, pace and dynamic response, giving this comparison an academic character, perfectly justifiable by an 8x price leap.

Nevertheless, I can say that in two of our more or less "tubed" sub-3k systems, upgrading from the V-DAC to a clearly better D/A converter would mean adding at least another 1k to their cost, significantly raising expectations and giving up the entry-level or amateur league for good. Only the MHTD Labs Havana NOS, which is also a tubed DAC, showed good potential of providing a true upgrade, while costing ca 700 euros - some may have never heard of it, but that's easy to fix with a scheduled review!

No doubt, the V-DAC presents a superb value for the asking price. I think of it as a finely balanced, "error-free" sounding device, claiming quite a decent, to say the least, rank in the sub €800 price league. It's most certainly able to reward those demanding music lovers who simply don't fancy stellar expenses for high-end gear, providing them the key into previously untouchable realms of enjoyment. Needless to say that a good portion of budget players may enjoy a massive upgrade through the V-DAC, not to mention music servers via USB connection, one of the V-DAC's most appreciated talents.

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Translation: Nick Douris



Type: DAC

Inputs: 1 x S/PDIF, 1 x Toslink, 1 x USB
Outputs: 1 pair unbalanced
DAC chips: BB PCM2706 (USB), DSD1792
Upsampling: 24bit/192KHz
Output impedance: 47Ω
Max. output: 2,2V
S/N ratio: -116 db
Crosstalk: -104 db
Freq. response: 20Hz-20KHz (+0, -0,1db)
THD: 0,004%
Total jitter: 170ps
Dimensions (DxWxH): 17 x 9,5 x 4 cm
Weight: 350 g

We like

- Smooth, detailed and balanced
- Small and solid build
- Amazing value

We didn't like

- Ergonomics only saved by the small footprint
- Lack of an SPDIF out
- Not the last word in dynamic bursts

Price: ~185€

Website: www.musicalfidelity.com

Loudspeakers:

Proac Response D18
Totem Arro & Mite

Amplification:

LFD Integrated zero LE mark III
Blue Circle NSCS
Conrad-Johnson Classic
Primaluna Prologue Five
Sun Audio 300B monoblocks
Placette Passive Pre-amp

Transports:

Esoteric SA-50
Philips DVD

Analogue:

Project RPM 6.1
Benz ACE (M)
Project Tube Phono

Cabling:

Kimber 12TC (sp)
Cardas Golden Ref. (ic)
Cardas Golden Ref. AC/power
Van Den Hul Digital RCA
Analysis Plus Digital Oval RCA
Vovox Initio (sp)

Racks:

Audio Magic

Listening programme:

1. Mahler «Symphonie No. 5»
Naxos Recordings
2. Steve Ray Vaughan
«The sky is Crying»
3. Gustav Holst
«The Planets» LP
Deutsche Grammophon
4. Placebo «Meds»
5. Serge Gainsbourg
«Melody Nelson»
6. Pink Floyd
«Wish you were here»
7. Paganini Concertos Box-Set
Deutsche Grammophon
Salvatore Accardo
8. Carlos Heredia
«Gypsy flamenco»
9. System of a Dawn
«Toxicity»
Columbia
10. Nirvana
«Live in New York - unplugged»
11. Metallica
«Death magnetic»
12. Romero
«Duente»
13. Peter Hammill
«Over»



® ™ OUTPUT

V-DAC

DIGITAL-ANALOG
CONVERTOR



12VDC

OPTICAL
INPUT

SPDIF

INPUT

COAXIAL

INPUT
SELECT

COAXIAL

USB

INPUT

USB



— (R) (L) OUTPUT



12VDC —

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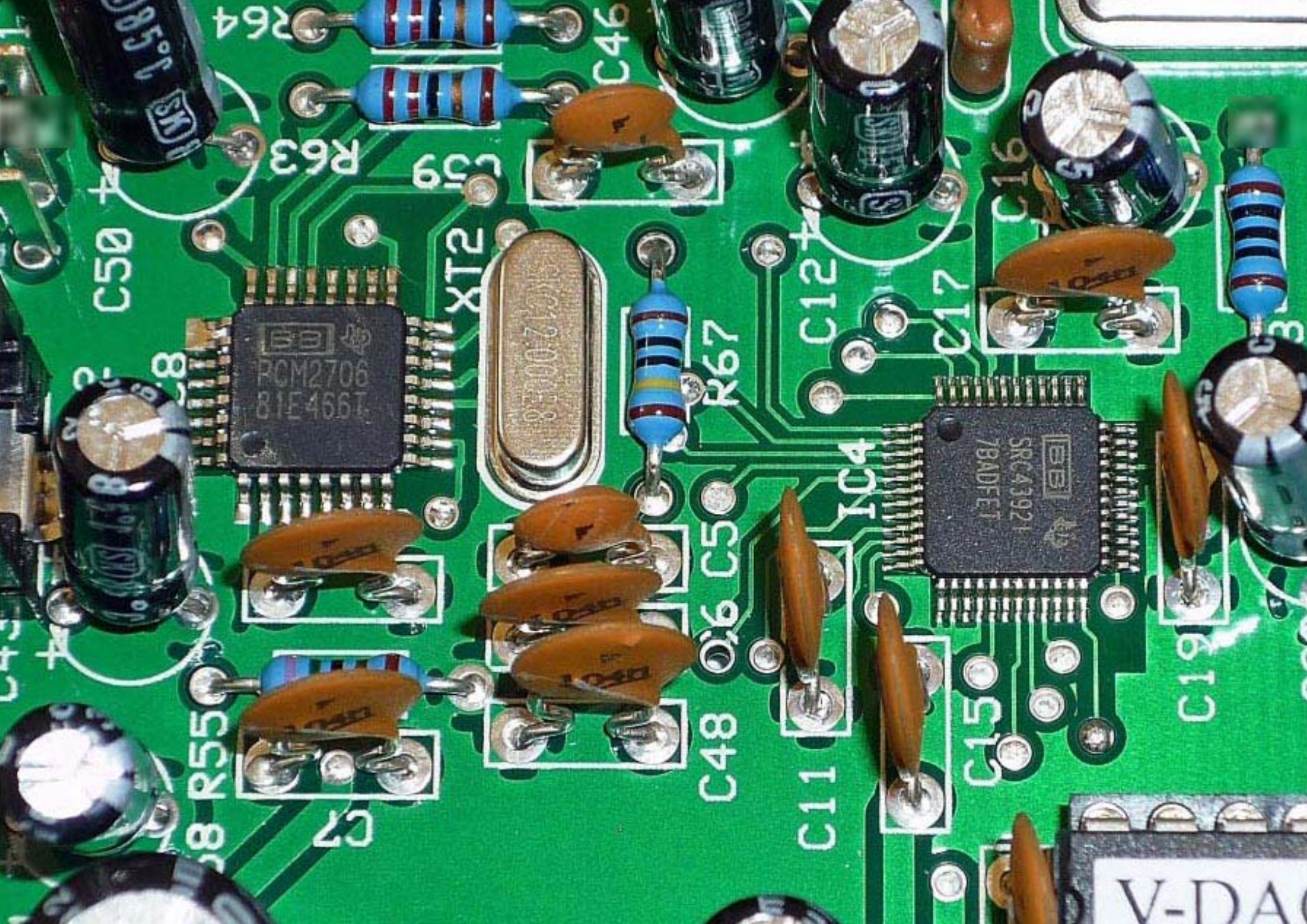
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DC

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V-DAC

C19

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C15

C16

SRC43921
7BADFE1

C11

IC4

C17

C12

C48

C5

R67

C47

C46

XT2

C59

C7

R55

RCM2706
81E466T

R55

C8

C50

R63

C46



SERIAL NO.
507242

DPC PCB 2288 Issue 83

NICHICON
ML100V0J1
2A570MKZ
10% 80°C

V-DAC V1.0

TAKAMISAWA
RY12W-K
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55320D
2008B

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REG1

IC2

IC9

C5

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F5

C45

IC8

C58

R63

R54

R54

R54

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