Weiss DAC501: Beauty With Brains

February 23, 2021 Michael Lavorgna HiFi Reviews

No matter how smart you think your DAC is, the Weiss DAC501 is probably smarter. A lot smarter. Heck, its Quick Start Guide is 10 pages long.

In the history of hi-fi components, especially DACs, the general operating procedure runs along the lines of plug it in and play. The assumption inherent in this approach is we've already worked out the rest. Of course speakers demand the most care and nurturing when it comes to setup and mating, where getting the best sound in-room can come down to a matter of inches. Or less.

The problem with this general approach is the room — in terms of getting the best sound from a hifi, the room is the boss. It's the elephant in the hifi.

You may be wondering why this is at all relevant in a review of a DAC. Well, the Weiss DAC501, like its full-width brother the DAC502, has the built-in smarts to address the problems in your room, yes *yours*, and correct for the reality that states, as a matter of fact, there's no such thing as a perfect room when it comes to listening to music on the hifi in the home. Look, I'm not insulting your room or trying to make anyone feel uncomfortable or, heaven forbid, inadequate, it's simply the case that homes and the rooms in them were not designed to perfectly reproduce music.

"Yea, but we've ignored this supposed problem all along and we're doing just fine!" I heard someone say. Here's my response, which is rooted in relationship experience — *Why settle*?

The Weiss DAC501 is a DAC with Roon Ready streaming capabilities built in. The rear panel attests to this fact as it includes an Ethernet input, something I expect to see more of in DACs as time goes by. Keeping Ethernet company are S/PDIF (Coax and Toslink), USB, and AES/EBU inputs, while pairs of single-ended RCA and balanced XLR outputs take analog to your hifi. The 501 currently handles PCM resolutions up to 24bit/384kHz and DSD to DSD128 but the company offers — *future formats can be accommodated for via software updates*. For those DACologists in the audience, the Weiss DAC sports a pair of ESS Sabre 32-bit DAC chips which are fed nothing but re-clocked (by an internal high precision / low jitter clock generator) PCM 195kHz data which Weiss has determined to be the ESS DAC's sweet spot. [footnote 1]

Weiss has taken care with the DAC501's power supply, *A powerful non-switching power supply is*

used. All sensitive voltages have their own regulators which are separated between left and right channels. The result is an analog output free of "digital noise" and channel crosstalk. [footnote 2]

As you already know, the DAC501 has a host DSP (Digital Signal Processing) inside offering a number of features and plugins including a DeEsser (*the automatic removal of overly bright sibilance from human voices*), Vinyl Emulation (*get that special sonic character of a record player based playback chain*), Equalizer (*a tone control with low boost/cut, high boost/cut and mid boost/cut*), Room Equalizer (*to suppress room modes for a decent bass reproduction*), Dynmaics (*reduce the dynamic range to a constant value*), and Crosstalk Cancelling (XTC) (*for the playback of dummy head recordings or live recordings via speakers for an incredible live sensation*), Loudness Control (*a listening volume dependent equalization of the audio*), Headphone Equalizer (*to adapt any headphone to the listener's ears in terms of frequency response*), and Crossfeed (*to emulate a speaker based playback impression on headphones*). We'll dig into some of these in more detail shortly.

The DAC501's front panel is deceptively simple with a color touch screen LCD display, 1/4" headphone jack, and a multi-function knob. Weiss includes a plastic remote that offers a number of useful functions, many are also available via the touchscreen as well, but the company recommends using the DAC's web interface for those ready to dig into DSP. I happen to find the DAC501's size, 18.8cm x 30cm x 7.2cm (W x D x H), a welcome change. The main difference

between the DAC501 and the full-width DAC 502 is the inclusion in the latter of a 4 pin headphone socket located on the unit's rear panel. The Weiss DAC501 chassis is stainless steel with a solid 10 mm aluminum front plate and it is built to a high standard, making physical interaction a reassuring pride of ownership pleasure.

For the majority of this review, the Weiss DAC501 was connected to the review sample Riviera Labs LEVANTE integrated amplifier driving the DeVore Fidelity O/93.

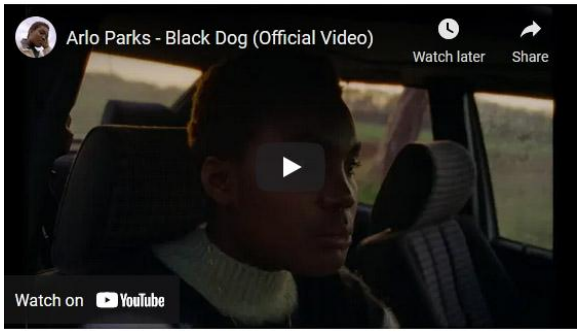
from left: the Beast and Beauty

Of course, after all that talk of rooms and elephants in the intro, when the Weiss DAC501 arrived, I unpacked it and had it playing in no time flat, DSP options be damned (I think that's a NJ bad attitude thing). Within minutes, I settled down into that comfortable reviewer zone of — *OK, this is going to be an absolute pleasure*. Out of the box, the Weiss DAC501 announced itself by completely getting out of the way of music. And I mean completely. This vanishing act is a rare occurrence with digital replay, at least in my experience, and only a handful of DACs from totaldac, dCS, and Mola Mola have pulled it off and the Weiss does so with a $4k gap between it and next least expensive DAC in the group. Nice.

I'm saying, right here and now even before we DSP, that if the Weiss DAC's asking price is within reach and you're in the market for a streaming DAC, you'll want to add the Weiss to your audition list.

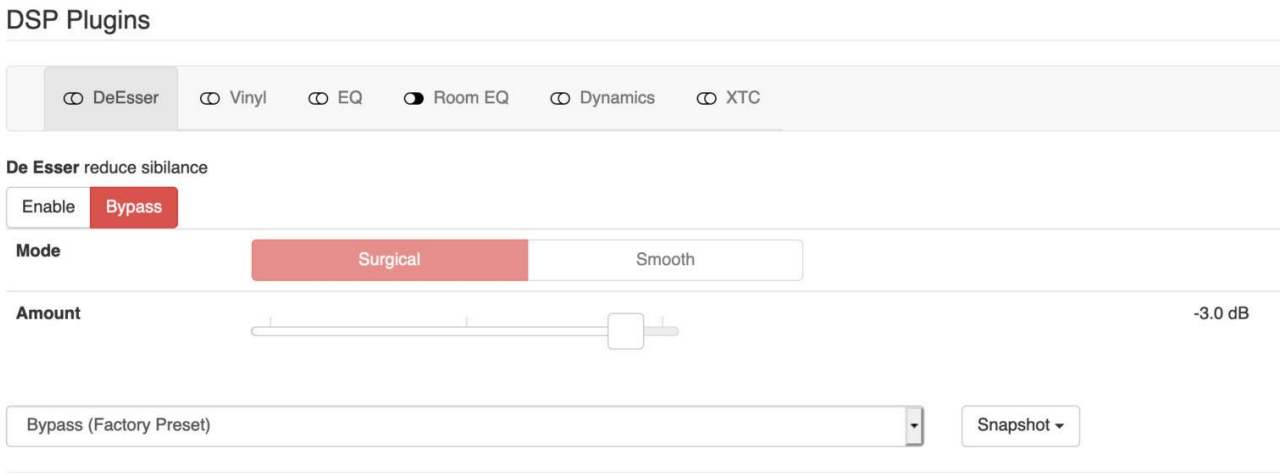
I spent countless hours, days, and weeks listening to music through the Weiss DAC501 led by musical whim and Roon Radio. Here's a tip — if you read a review and the writer talks about the thing under reviewed as being particularly good for a certain kind of music, that means whatever it is, it isn't very good. I know because I've written it. The Weiss DAC501, even running without DSP,

embraces all music as if it really cares about getting its sound into your ears as purely as possible. I'm talking about as clean, clear, fluid, rich, and pure as the recording allows. Everything from poorly recorded great music to well recorded great music was portrayed in a completely captivating way, all round and fleshy and *human*.



I've been digging into Arlo Parks breezy and beautiful *Collapsed In Sunbeams* for all the strings and things used to back Parks' infectious joyful vocals. With the Weiss turning Tidal's streaming bits into analog waves sent to the LEVANTE integrated amp, the music coming out of the DeVore O/93s was sweet, as fluid as honey on a warm summer's day, and filled with the broad range of voices, subtle movements, and dance-along beats that make one forget about things like snow and ice and pandemics and politics.

Sometimes, when reviewing a piece of hifi gear you just know you're listening through a component or speaker that makes music on your terms. You know this because you do things like smile, dance, sing, and wish it never had to stop. Of course it has to stop, for things like food and sleep, but when I returned to the barn each morning I'm telling you I wanted to pat the Weiss on its top plate the way I say hello to Lulu Bear, our Bernese Mountain dog, when I come in from the barn each night. With affection.



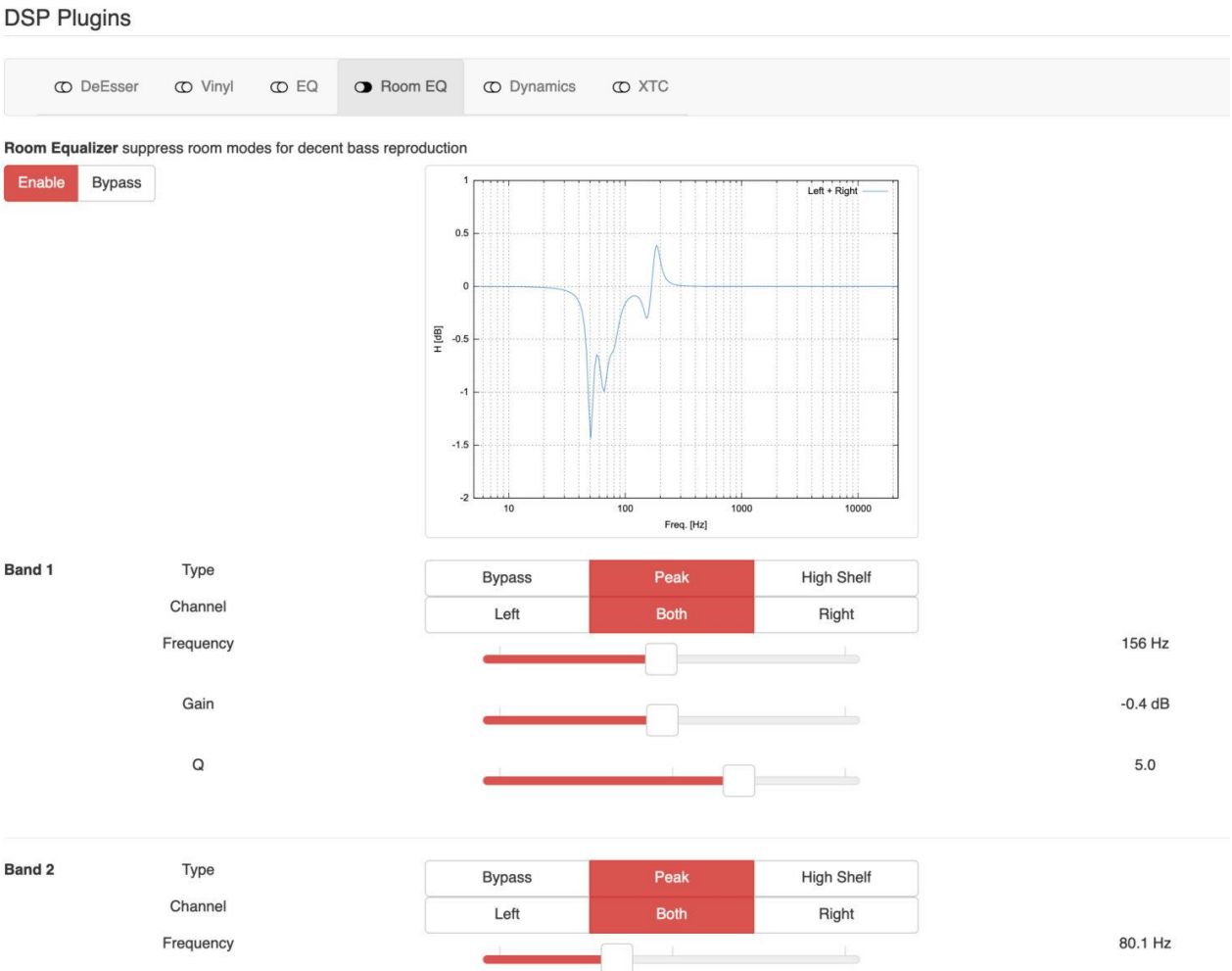
Let's Plug In.

Room EQ

Let's correct! The process to figure out how to apply room eq is relatively simple and very well described in the 36-page DAC501 manual. In brief, Weiss provides a "Sweep EQ Room" audio file (FLAC or WAV) for download from their website. Once downloaded and loaded into my Roon directory on my NAS, the file showed up in Roon. Get a notepad handy, or any way you prefer to take notes, play the EQ file and note where, in time, the volume peaks occur. Using the handy dandy chart in the manual, convert the time(s) into frequencies. Then open the DAC501 web interface (by entering its IP in a browser), go to the Room EQ tab, enter the peak frequencies, and adjust the Gain and Q settings for each. Weiss recommends starting this tweaking process with a Gain setting of -15dB and a Q setting of 14 (the higher the Q, the narrower the notch filter) which is exactly what I did. Play the EQ file again and refine by ear.

If you're anything like me, you like obvious. Since the EQ settings are applied in real time, once I'd entered the frequencies that needed some correction in the DAC501 web interface, I slid the gain settings to their -39.0dB settings, effectively removing these frequencies from the music. Ouch! I ended up spending more time, about a 1/2 hour, tweaking the EQ settings using music until I was happy with the results. You can also Enable and Bypass the Room EQ plugin in real time with a tap and when all was said and done, the final EQ settings applied a gentle but effective correction to my music in-room. Basically, these settings removed a bit of bass and upper bass bloat.

Once set and done, there was noticeable improvement, mostly in terms of perceived clarity and greater resolution. Things sounded clearer.



Vinyl Emulation

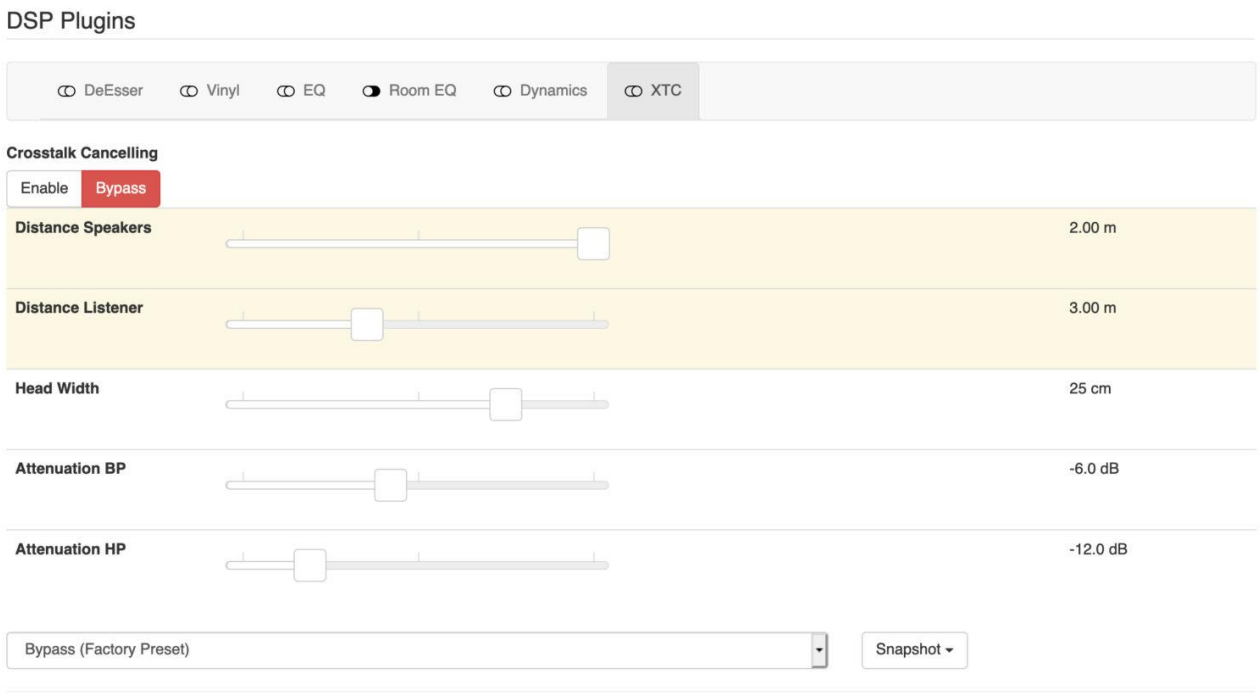
Speaking of NJ attitude, I find the inclusion of a Vinyl Emulation plugin to miss the point, at least my point, of listening to records. And that point is hunting, gathering, holding, playing, smelling, and listening. The entire experience matters, not just sound. Especially, not just a sound effect.

So I played with the Vinyl Emulation plugin in a half-assed manor and found I didn't like what it had to offer. *How you doin'! No, how you doin'!* [footnote 3]

XTC (not the band, the plugin)

According to Weiss, *With the XTC playback the listeners gets a live-like listening experience. The sound stage extends beyond the speakers and even becomes 3-dimensional with certain recordings*. There are 5 parameters to set in the XTC plugin including the distance between your speakers, the

distance between the speakers and the listening position, the width of your head (not critical), and mid- and high- frequency attenuation. Weiss also notes that to get the best results from XTC, speakers should be placed closer together than the distance to the listening position. This is my preferred setup with the DeVore O/93, about 8' apart with the red chair about 10' away.



Once I entered these numbers into the XTC settings, the most notable change was music now felt as if it was being made damn close to my ears. Music's presence was nearly headphone-like. I'm reminded in some ways of the BACCH 3D software I reviewed for AudioStream years ago which offered an even eerier sense of music existing in 3-dimensions completely apart from the speakers. The Weiss XTC plugin didn't get *that* 3D, but it did expand the sound image well into the room. Due to the time constraints of the review period, I did not get to listen to this plugin on/off long enough to develop a lasting impression. My quick thoughts are I found it interesting on some recordings but overall I preferred most of my music straight, no chaser. Seeing as you can also Enable/ Bypass the XTC plugin in real time with a simple tap, I'd imagine most users will use it on and off.

Crossfeed Headphone

From Weiss: *The Crossfeed Headphone plugin is designed to enhance the playback via headphones. Its usage is especially recommended when listening to audio with high channel separation. Furthermore it creates a more roomy sound scape, similar to loudspeaker reproduction in a room.*

The Crossfeed plugin offers a single parameter, Amount, which is self-explanatory. I used the AudioQuest NightOwls to test drive Crossfeed and, in a word, this stuff works. As readers are aware, I'm not a headphone listener in part due to the closed in nature of wearing things over or in one's ears. With Crossfeed engaged, music reproduction expanded well beyond the cans, so to speak, which made me feel more relaxed, which is always a good things for most occasions. In general, I found the DAC501's headphone output highly enjoyable for the long(er) haul.

Compare & Contrast

The in-barn DAC these days is the totaldac d1-tube DAC/Streamer (see review) which comes in at roughly US$8600 or within spitting distance of the cost of the Weiss. I love it when that happens. I

also love when differences are obvious, which was the case with this totaldac / Weiss deal. Switching to the totaldac from the Weiss, after weeks of Weiss-time, the first change I noticed was one of size — the totaldac throws out a larger sound image in every dimension — height, width, depth. The totaldac sounds, in a word, bigger. It also sounds fatter and I'd go the extra step and call this richness greater perceived tonal saturation. Music sounds more lush, as if it spent more time on the vine, as compared to the DAC501. Depending on your room, system, and preferences, this may or may not be *better*.

Anyone who has read any of my reviews of any totaldac knows that my preferences align with the totaldac house sound, nearly to a T. But, yea I said but, the Weiss DAC501 offers a very compelling alternative especially keeping in mind its wily DSP ways. All told, my best guess is the Weiss DAC501 will be better suited to more listeners in more rooms with more systems than the totaldac d1-tube. And that's sayin' somethin'.

To put a finer point on this DAC preference mating game, the totaldac sounds bigger, richer, and riper while the Weiss sounds more refined, controlled, and transparent. Add in the Weiss' DSP options and things tilt toward my above conclusion — the Weiss DAC501 will be better suited to more listeners in more rooms…

All That And Beauty, Too

If you've been reading this review all the way through, you already know the end. I gave it away early on. To say that I was impressed with the Weiss DAC501 is a gross understatement as it leaves out the most important aspect of a hifi — its ability to connect us to our music. On this score, the Weiss DAC501 ranks among the top of my running list of favorite DACs. Bravo!

Weiss DAC501
Price: $8995

Company Website: Weiss Engineering Ltd.
US Distributor Website: Bluebird Music

---

1. I'd like to pause for a moment and reflect on this — *which are fed nothing but PCM 195kHz data which Weiss has determined to be the ESS DAC's sweet spot*. If you read about digital replay, even from some supposed experts, you'll hear tale of how all we need is 16/44 and Shannon/Nyquist proves it. Further, many people take that tale and extend it to the entire spectrum of digital music from recording, to the transport medium, to replay. Anything more, in terms of bit or sample rates, is just a waste of *space*, an argument I find amusing seeing as most people don't seem all that concerned with real space. In any event, as is always the case, reality intrudes on theory and we find real engineers, like Daniel Weiss, solving problems and building solutions to them into his products.

2. Digital noise. Yea, he said digital noise.
3. That’s NJ slang for an imagined confrontation.