

Weiss DAC1 Converter Review

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Introduction

The DAC1 is a top-of-the-line digital to analog converter from Daniel Weiss Engineering of Switzerland. The version tested accepts inputs at 44.1, 48, 88.2, and 96 kHz., and double-samples data input at the lower sample rates via DSP to one of the two higher ones, before subsequent 4x upsampling within its D/A chip. A Mk. II version will be available by May, 2002 which includes a second AES receiver for dual-wire 176.4 and 192 kHz conversion, but is otherwise identical to the review sample.

General Overview

The Weiss DAC1 is both simple to use and extremely flexible in interfacing possibilities. There are four inputs—three on XLR connectors and one on Toslink optical—and each is selected by its own large lighted front panel pushbutton. Each of the three AES/EBU XLR inputs is actively routed to a corresponding XLR digital output, producing a „thru“ connection suitable for monitoring at multiple stages within a digital studio setup, or other recording, monitoring, or routing possibilities. Three front panel LEDs display input wordlength (1-16, 17-20, 21-24 bits).

The Weiss engineering philosophy of combining several signal reclocking schemes has produced extremely high jitter attenuation, leading the firm to boast that the DAC1 is virtually immune to jitter frequencies from fractions of a Hertz up to tens of kHz. While earlier models of the DAC1 included a clock output on one pin of a rear panel DB15 connector—enabling the unit to be set to act as a clock master—later units, as well as the DAC1Mk.II, omit this feature, as no audible improvement was said to be heard as a result of master clock operation. I was, unfortunately, unable to test this feature on my review unit, but can state without reservation that I have never heard cleaner sound from any DAC—with or without master clock mode.

Particular attention was paid to the analog output stage, designed with the aim of keeping as uncompromised an audio signal path as possible. The unit's discrete Class A outputs present an extremely low output impedance, but never showed a bit of instability in driving various loads—including 50 meter cables with unbalanced termination—in my studio. The output level can be switched between „high“ or „low“ mode, and the symmetrical circuit can swing +27dBu.

Certain pins on the aforementioned rear-panel DB15 connector can accommodate two external mono or one single stereo potentiometer for remote level control; other pins can control source selection with LED illumination. The remote level control takes place in the digital domain, and is properly dithered to avoid quantization artifacts.

The DAC1 runs quite warm—especially on the right side, and should be ventilated adequately.

In Use

First the bad news, then the good news. When I received the unit, I didn't think I liked its sound at all. Two months later, I purchased the review sample! What happened during that time period involved a certain amount of „ear-training“ on my part, and a re-evaluation of my monitoring system.

I have owned an extremely expensive so-called state-of-the-art audiophile DAC since 1988—a Wadia 2000—whose hardware, firmware, and power supply had been continually updated by Wadia throughout the late nineties. As I received newer pro audio converters for review during the past several years, I always compared them to my Wadia reference unit and, ultimately, found them all lacking in one or more subjective parameters. The dCS 954 was the first unit I tested which gave my Wadia serious competition but, for various reasons, I passed on its possible purchase.

When the DAC1 arrived for review, I was about to do an interesting „international violin band“ session for the United Nations here in Studio Dufay, so I quickly patched it in and, during and after that three-day session, alternated between it and the Wadia. The latter sounded warm and euphonically pleasant, while the Weiss sounded bright, scratchy, and a bit „phasey.“ I impulsively pronounced it inferior, and went on to other matters.

A month later—the morning after the first day of a week-long 96 kHz multi-track session I was recording for Dorian—I was playing my rough mixes at the studio and was a bit underwhelmed by the sound from the Wadia. I idly flipped to the DAC1's position on my monitor selector, and my mouth fell wide open! Here was the sound I had heard live on my Stax headphones and Dynaudio BM6As the evening before. I switched back and forth between Wadia and Weiss and slowly realized that the Weiss' sound was clear, warm, crisp, true, airy, open, relaxed—all the proper audiophile jargon, while the Wadia's was closed, murky, boomy and veiled.

What was going on here? I continued to use the Weiss DAC1 as reference DAC during that session (at which I was recording the early music „super-group,“ Fortune's Wheel, at Mount Holyoke College's Abbey Chapel), even to the extent of bringing it along to substitute for the DAC section of the Apogee PSX-100 I was using as my „rough mix“ A/D-D/A converter. Each time I listened to the Weiss unit, I liked it more.

A few weeks later, after I had finished the first edit of that project, I had time to revisit my U.N. violin recording. It had been a „quick and dirty“ session, with recording, mixing, and editing happening simultaneously. I went back to my original multi-track master and listened to each stereo pair. Yikes! One of them *did* sound screechy and, since my quick direct-to-analog mix did not incorporate any of the delay compensation I always add when I have the luxury of mixing „after the fact“ within software, a certain phasiness was definitely present.

To make a long story short, I learned that the Weiss DAC1 is a true monitoring tool. If something sounds wrong through it, it *is* wrong! And if a source sounds really nice, then one should pat oneself on the back. I had apparently been monitoring for many years with a DAC which tended to „improve“ (via sins of omission) many of its sources and which—in the final analysis—had been lying to me.

Conclusion

My experience with the Weiss DAC1 has taught me many valuable lessons about audio and auditory perception. As I embark on my latest recording system upgrade (to Merging Technologies' Pyramix and 192 kHz multi-track), I am extremely grateful that I have finally found a stereo monitoring DAC which will „tell it like it is“ while still rewarding me with a „nice“ sound—as long as I've done the footwork and presented it with a good recording in the first place. Thus, the ball is back in my court!

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