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DACs

Antelope Audio Zodiac Platinum DAC with 10M Rubidium Atomic Clock Review

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Published on 24 July 2014

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Antelope Audio Zodiac Platinum DAC with 10M Rubidium Atomic Clock Review *Highlights*

Antelope Audio is a company originally based in the USA, but is now based in Europe, with the factory in Bulgaria. The manufacture DACs and A/D converters for the Pro industry (recording studios). However, they also offer these products in a high end consumer edition. The Zodiac Platinum DAC with an outboard 10M Rubidium Atomic Clock is their latest set of DAC components for audiophiles.

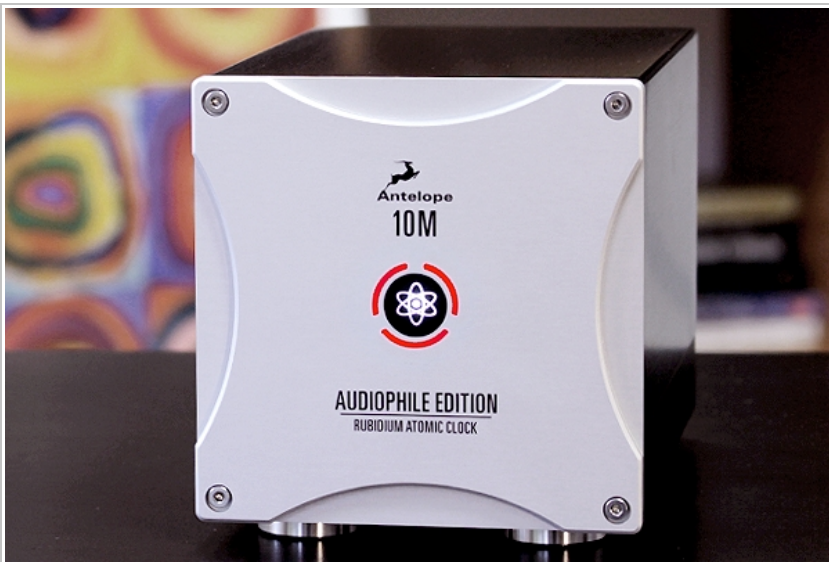
The Zodiac Platinum DAC is shown below, along with the outboard Voltikus power supply on the right, and the 10M Rubidium Clock on the left.

The 10M is not a "Master Clock" per se, but provides a 10 MHz reference to the clock that is inside the Zodiac DAC chassis. It operates when the it is connected to the Zodiac DAC, and is accurate to 1 second in 1,000 years. The 10M was used in scoring (the music) for *Avatar*, and is now used in the production of many major films out of Hollywood.

If you turn off the 10M (or don't have one), the clock that is integral to the Zodiac DAC chassis is used as is, without an additional reference. So, there are two ways you can use the Zodiac. The 10M is really for situations where someone wants to have the most precise timing that is available, and the Pro industry (recording studios) needs this.

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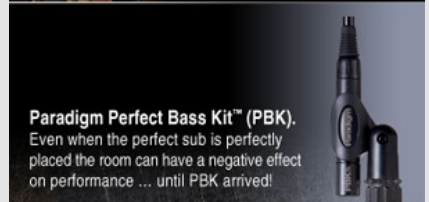
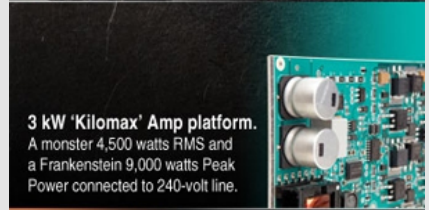
The Zodiac Platinum DAC with the Voltikus Power Supply are priced at \$5,500 USD. If you want the outboard 10M Rubidium Clock with the Zodiac, the total is \$12,995 USD.

The Zodiac DAC will decode PCM up to 24/384, and DSD up to DSD128, so the DAC is fully up to date with codec firmware.

The sound of this three-some was marvelous, with some of the best detail clarity I have ever heard. Music from the 1960's produced new detail that I never knew was there, either in the original analog LPs, or the CD versions. And this is the first time I have ever been able to actually hear the difference between 24/96 and 24/192. There are two 1/4" headphone jacks on the DAC front panel, and the sound through the HiFiMAN HE-500 and OPPO PM-1 planar magnetic headphones was fantastic.



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Although the USB input is Adaptive-Asynchronous, meaning it is not asynchronous, the distortion levels were about the same as they were with the AES (XLR, Balanced) connection, which surprised me, as I expected the adaptive-asynchronous circuit to result in more distortion. However, I had to download a software player (JRiver) to get the low distortion with the USB input. The native Windows music player gave a high noise floor artifact. This emphasizes how important it is to select the right software music player for using the Zodiac DAC through the USB input.

The user interface is a bit confusing, requiring a lot of e-mails back and forth with the Antelope Audio technical staff. The software interface allows you to select the input volume (called "Calibration Trim" by Antelope) in dBu, which is for the analog inputs if you are using the component as a preamplifier, and the analog output volume, also in dBu. The front panel of the Zodiac has a volume (calibration trim) control too, again, in the analog domain, and you can use your mouse to turn the knob in the software interface. The three "Trim" controls are used by recording studios for precise setup of playing recordings during the production process. For the consumer, this means getting the best balance of voltage going to your preamplifier. Stepped attenuators, matched to 0.05 dB, are used to control the volume (calibration) in all instances, including the two headphone jacks.

Antelope Audio Zodiac Platinum DAC with 10M Rubidium Atomic Clock Review Highlights Summary

- Very clean, detailed sound
- Plays all current high resolution music files
- Very high performance clock reference, and power supply, are in separate enclosures
- Instruction manual needs re-writing to explain the software interface in more detail

Introduction to the Antelope Audio Zodiac Platinum DAC with 10M Rubidium Atomic Clock Review

Antelope Audio produces high end DACs and A/D converters for the Pro industry. They also sell versions made for audiophiles, although you must use the lowest output setting, 14 dBu (to produce 4 volts at 0 dB) for connection to your preamplifier, as the other output settings (up to 26 dBu) produce voltage that is used in Pro venues, and which is too high for a consumer preamplifier.

The system that came to me for review included the Zodiac Platinum DAC, the Voltikus Power Supply (powers the DAC), and the 10M Rubidium Atomic Clock.

The Zodiac DAC chassis has its own clock, but addition of the 10M delivers 10 MHz reference capability and timing accuracy to 0.03 parts per billion. There is virtually zero jitter.

S P E C I F I C A

o Zodiac Platinum DAC

- o Design: Stereo DAC
- o Codecs: PCM up to 24/384, DSD up to DSD128, flac, wav, alac, aac, aiff, mp3
- o DACs: Two Stereo TI PCM1792
- o Inputs: One Balanced Analog 1/4" TRS, One Pair Unbalanced Analog Coax (RCA), One AES Digital, Two Coax (RCA) S/PDIF Digital, Two Toslink Optical Digital, One USB Type 1 (Connect to Computer)
- o Outputs: One Pair XLR Analog Balanced, One Pair Analog Coax RCA, One AES Digital, Two Coax (RCA) S/PDIF Digital (de-jittered), Two 1/4" Headphone Jacks
- o Other Connections: One BNC Umbilical for Connection to 10M Atomic Clock, One Umbilical for Connection to Voltikus Power Supply
- o Upsampling: Switchable On or Off, 8X, 64 Bit Precision, Used Primarily for DSD Music Files



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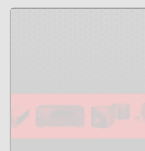
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- o THD+N: 0.0008%
- o Remote Control Included
- o Dimensions: 4.4" H x 6.5" W x 6.6" D
- o Weight: 4.4 Pounds
- o MSRP: \$5,500 USD (for Zodiac and Voltikus)
- o **Voltikus Power Supply for Zodiac DAC**
- o Input Power: 120V - 240V; 50 Hz - 60 Hz
- o Output Power: 18VDC
- o Dimensions: 4.4" X 4.2" x 6.6" D
- o Weight: 5.5 Pounds
- o **10M Rubidium Atomic Clock**
- o Clock Frequency: 10 MHz
- o Timing Accuracy: 0.03 Parts per Billion
- o Connections: Umbilical to Connect with DAC, Grounded AC
- o Dimensions: 4.4" H x 4" W x 6.6" D
- o MSRP: \$12,995 USD (for Zodiac, Voltikus, and 10M)
- o **Antelope Audio**
- o Tags: Antelope Audio, DACs, 24/384, DSD128

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