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Golden days

Antelope Audio has an impressive track record in high-end audio – now it's bringing its expertise to bear on the home market with the Zodiac Gold DAC/preamp. Jon Myles listens in.

If one segment of the hi-fi separates market has enjoyed exponential growth over the past few years it's that of the outboard DAC.

Not only are new products emerging at a dizzying rate, they come in a variety of shapes and sizes – ranging from thumb-drive sized devices which plug into a computer's USB slot to considerably more exotic, higher-specced units with price tags to match.

Antelope's Zodiac Gold fits firmly into the latter camp – being a DAC/preamp/headphone amp in one box costing £2,595. The optional power

supply as provided for the review costs another £765 – although the pair can be bought as a package for a discounted £3,095.

Not exactly cheap, then. But, to be fair, there are DACs costing much more and when you look at the technology Antelope has packed into the Zodiac Gold then things begin to make sense.

If the name Antelope is new to you, suffice to say the company has a large and respected presence in the pro-audio world through founder Igor Levin's innovative work in digital clocking and audio processing technology.

Indeed, it recently provided the playback, lighting, sound effects and vocals clocking system for Rihanna's recent Diamonds tour – which, I believe it's probably safe to assume, was no small job.

Not that pro-audio credentials necessarily translate into great sound in a domestic environment but it shows the background behind the Zodiac Gold, especially when it comes to the digital domain scheme of things.

So the Zodiac is a full 24-bit/384kHz capable DAC utilising Antelope's proprietary "Oven Control" clock.



Which, to put it in layman's terms, means the clock is housed in a shielded container where the temperature is kept constant – Antelope believing this brings significant benefits to the detail, dynamics and stereo placement of the audio.

Jitter management is also handled by the company's proprietary Acoustically Focused Clocking technology (AFC) as implemented in all its professional master clocks.

As befits Antelope's pro-audio background the unit itself is sturdily built and reassuringly hefty despite its relatively compact 165mm/112mm/190mm (H/W/D) dimensions.

That compact size means almost every inch of the rear panel is taken up by the various connection options – befitting the Zodiac's ability to form the heart of even the most complicated audio systems.

The six digital inputs consist of USB, one AES/EBU, two coaxial S/PDIF and two Toslink. In addition there are both balanced and RCA analogue inputs which by-pass the digital circuitry to be fed directly to the preamp's volume control.

Output options consist of both

balanced and unbalanced analogue as well as both AES and S/PDIF digital.

Inputs are selected by toggling through the options via the source button on the front – and intelligently the Antelope's circuitry auto-senses what connections are in use and ignores redundant inputs.

The fascia also features a pair of full-sized headphone outputs with their own dedicated volume control as well as power, mute, mono and standby buttons.

A small multi-function LED display at the top can be set to show incoming sample rate, main volume level, source, headphone amplifier impedance and various information regarding the USB mode being used.

The simple, all-metal remote control is well laid-out and gives access to power on, source, mute, mono and volume controls. Alternatively Antelope also has a control PC/Mac app for the DAC which can be downloaded from its website and sends commands via the USB connection.

A single lead connects the Zodiac to its matchingly-styled but slightly smaller Voltikus power supply. This is said to deliver a purer, more stable DC power feed to the Zodiac

Gold and so produce a noticeable improvement in sound quality.

Paired together on a hi-fi rack the two units do have an attractive, and undeniably high-end look and feel.

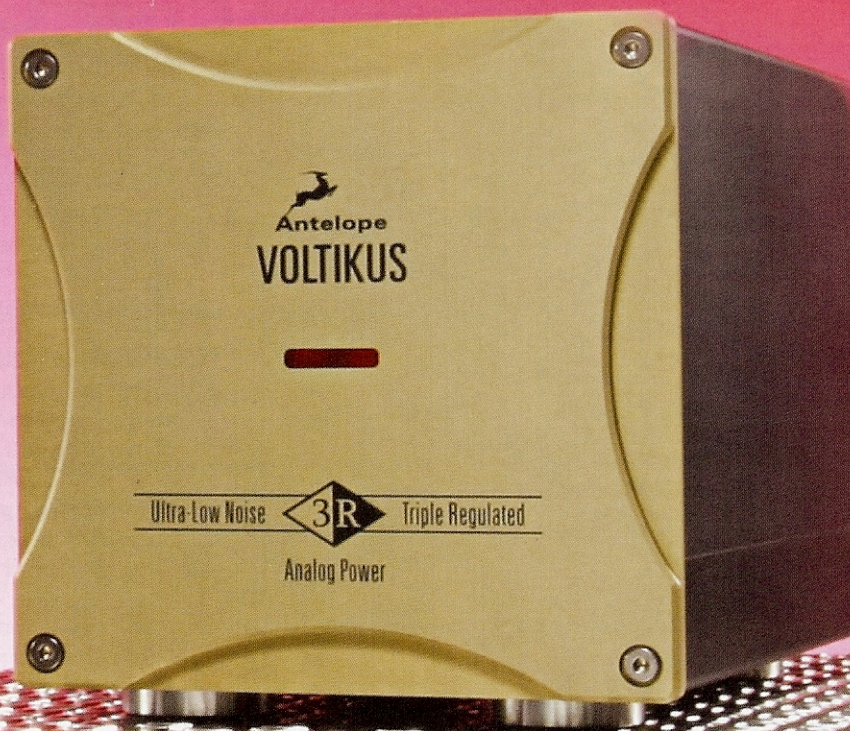
SET-UP AND USE

Despite its variety of input and output options, once connected the Zodiac and Voltikus pairing is admirably easy to operate.

All the buttons on the remote and fascia are firm and responsive while switching between sources is fast and easy – helped by the auto-sensing feature which ignores unused inputs.

The volume control is well-weighted too, with fine adjustments easy to make from the remote control – a feature not common to all DAC/preamp combinations. Incidentally, volume adjustment is carried out entirely in the analogue domain to avoid any loss of resolution.

The only noticeable quirk is



a series of relay clicks when the volume knob is turned. This is a consequence of Antelope's use of a hard contact relay volume controller rather than a simple potentiometer – a decision the company says was made for sound quality reasons.

SOUND QUALITY

Unlike some other DACs, the Zodiac Gold seems to take a good 90 minutes or so to come on song from stand-by – sounding slightly soft at first.

Presumably, this is a feature of the "Oven Control" clock philosophy (see above). Once warmed through, though, that first impression quickly disappears.

What appears instead is a thoroughly refined, smooth and authoritative sound.

Chief among its attributes is detail retrieval and instrument placement. Anyone who likes to hear exactly where the performers are placed in a good orchestral recording will find the Antelope to their liking.

A 24/96 file of the San Francisco Symphony's 'Mahler No. 2' was powerful and expansive – with each section of the orchestra placed precisely within the soundstage.

Here, the Zodiac seemed to pull off the impressive trick of combining outstanding levels of data retrieval with a cohesive, rounded presentation that conveyed all the emotion and force in the music.

Not all DACs can manage that – with some sounding detailed yet a little sterile while others sacrifice that last ounce of musical insight for a lush, more romantic sound.

The Zodiac Gold, by contrast, manages to tread a fine line between the two.

The timbre of instruments is supremely well-rendered – Charles Mingus's bass sounding suitably rich and resonant on the classic 'Mingus Ah Um' while Nils Lofgren's guitar work on 'Keith Don't Go' was suitably crystalline.

In fact there's a general agility and confidence about the overall sound that works well with all sorts of music.

Massive Attack's 'Safe From Harm' from their remastered 'Blue Lines' romped along with vigour. The bass was suitably deep and powerful while Shara Nelson's sweet, soulful vocals soared into the room.

Cranking the volume up on this track and fed into a Naim power amplifier the Antelope DAC/preamp

retained its composure even at the highest levels.

Switching to the headphone amp and the Zodiac retained its open and balanced presentation with a noticeable absence of grain.

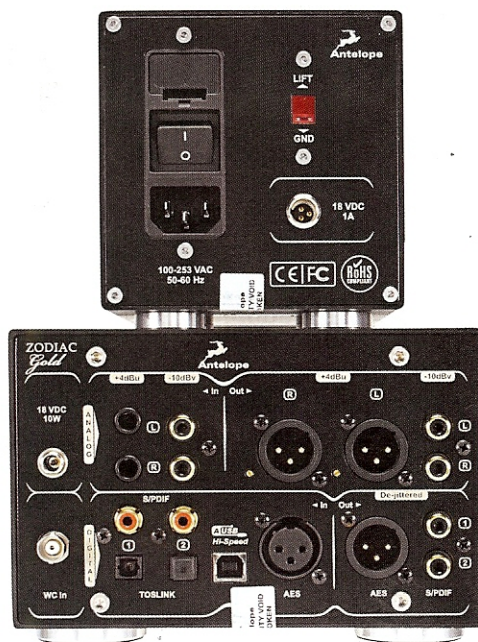
Listening through a pair of the excellent Philips Fidelio XIs and the sound was beautifully airy and spacious with Cowboy Junkies' 'Trinity Sessions'.

CONCLUSION

The Antelope Audio Zodiac Gold/Voltikus combination is an impressively-engineered package that ranks among the best DACs I have heard.

It boasts class-leading resolution allied to a musically-coherent, rich presentation that brings music to life whatever genre you throw at it.

Add in the preamp facility and analogue inputs and the Antelope becomes a must-hear for anyone considering a DAC at this price level.



MEASURED PERFORMANCE

The Zodiac Gold manages some large figures under measurement, showing it is an advanced design. The XLR output gives a massive 9.8V output swing and best dynamic range as a result, by keeping signal above the noise floor of the output amps. The EIAJ Dynamic Range value was an impressive 123dB with a 24bit resolution signal, with either power supply. Through the phono socket (unbalanced) outputs that deliver 2V maximum, this fell a trifle to 121dB, so the Zodiac Gold looks impressive in this

important area.

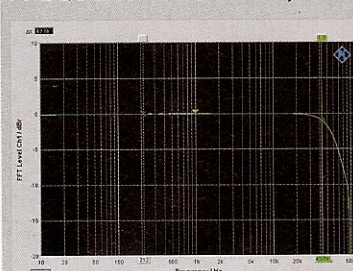
The electrical S/PDIF input worked to 192kHz but the optical input to 96kHz maximum. Frequency response reached 43kHz with 192kHz sample rate, before rolling off smoothly to 96kHz our analysis shows, so the Zodiac Gold exploits high sample rate well.

Distortion was the lowest we have measured to date, just 0.016% at -60dB with a 24bit resolution signal, and this held at all sample rates. With 16bit (CD) the figure was a low 0.2%.

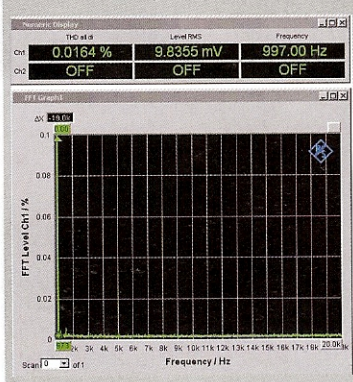
There is no gain from analogue input to output and the output overload ceiling is 2.6V. There is x4 gain from the analogue input to the balanced XLR output however, and a 13V maximum output swing. So the XLR output can be used as a preamp with gain, but the phono outputs have no gain; the volume control affects both.

The Zodiac Gold measures very well in all areas, being up amongst the best designs currently available, so sound quality is likely to be of an equally high standard. **NK**

FREQUENCY RESPONSE, 192k



DISTORTION, 24bit



Frequency response (-1dB)

CD	4Hz-43kHz
Distortion	%
0dB	0.001
-60dB	0.016
Separation (1kHz)	116dB
Noise (IEC A)	-116dB
Dynamic range	123dB
Output	9.8V XLR, 2V Phono

ANTELOPE AUDIO ZODIAC GOLD/VOLTIKUS £3095



OUTSTANDING - amongst the best

VERDICT

Superb DAC with matching headphone and preamp capabilities. Exceptional clarity and definition, comprehensive inputs and a beguiling sound.

FOR

- great detail
- refined presentation
- flexibility
- wide soundstage

AGAINST

- not the cheapest
- nothing else

Antelope Audio
www.antelopeaudio.com