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## Gear On Review:

**Antelope Audio Zen Studio**—world class sound on the go  
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**Dynaudio BM mkIII Series**—a stellar monitor line gets even better

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# REVIEW

BY PAUL VNUK JR.



## Antelope Audio Zen Studio

Grab high-end audio interfacing by the handle and take it along

Back in our January 2014 issue, I reviewed a remarkable audio interface that offered an unprecedented 32 channels of high-end audio conversion in a 1U rack box with low latency over the USB 2.0 protocol—Antelope Audio's Orion<sup>32</sup>. This month we are looking at Antelope's newest interface, the Zen Studio. With the same clocking technology, USB 2.0 connectivity, and converters (up to 24/192) as the Orion<sup>32</sup>, the Zen Studio lessens the analog track count to 20 in/14 out, but adds 12 built-in mic preamps and onboard DSP, all wrapped up in a portable package that weighs about 4.4 pounds.

### The look of Zen

The Zen Studio is housed in what could be considered a 19" rack mount enclosure... except that it only measures 16.8" across, lacks rack ears, rests on 4 rubber feet, and has a large robust built-in handle designed for easy transport. The Zen Studio was designed with a "pick up and go" mentality; the handle is not removable, and there are currently no rackmount ears available, although a change to this is forthcoming.

With mobility in mind, the unit is quite robust with a solid metal chassis coated in a red baked enamel finish. Its faceplate is a thick brushed steel, complete with an equally thick plexiglass multicolor LCD screen—again like that of the Orion<sup>32</sup>. Unlike the Orion<sup>32</sup>, the Zen Studio offers only 3 function buttons, but adds a large multifunction stepped rotary encoder/pushbutton.

Antelope did an outstanding job in the industrial design department. The front looks clean and minimal, and the rear panel is chock full of ins and outs with zero leftover real estate. Four of the 12 mic pres dot the front, while the rest reside around the back. Each uses a Neutrik Combo jack, and will also accept 1/4" line-level and (for the four on the front panel) Hi-Z instrument inputs as well.

Also on the rear of the unit are a pair of TRS channel inserts, a pair of 1/4" monitor outputs, coaxial SPDIF I/O, BNC Word Clock ins and outs, a pair of TASCAM-style DB-25 connectors offering 8 additional line ins and outs, a USB 2.0 socket, a threaded AC jack for connection to the external power supply, and on the non-handled side of the unit are 2 pairs of ADAT digital light pipe connectors. The front panel also sports a pair of independently assignable headphone outputs—these do not just offer different volume levels, but completely different monitor mixes if desired. The converter specs are impressive: Antelope quotes 118 dB dynamic range and THD+N of -98 dB on the D/A and -105 dB on the A/D.

### The soft side of Zen

On the software side, the Zen Studio uses a drag-and-drop matrix routing program similar to that of the Orion<sup>32</sup>, but greatly expanded. As an all-in-one portable device, the Zen Studio must serve as a faderless digital mixing console, not just an I/O box that lets the DAW do the heavy lifting. As a result, its software routing becomes integral to getting the most out of the unit.

The Zen Studio's matrix software has four full-fledged 24-channel mixers under its hood. With these you can set up multiple monitor mixes for tracking musicians—two for the two headphone outs, a third to the monitor outs, and a fourth to any pair of analog or digital outs. This last can be used to feed a headphone amp or a 2-track recorder to capture a live mix.

The Zen Studio's software also gives access to the unit's onboard DSP engine. Currently this is in the form of EQ and compression (a reverb is on the way, possibly out by press time) that can be used in tracking, monitoring, or even in mixdown from your DAW. Sonically it is quite functional and akin to what you might find built into your DAW. I did find setting the compressors to be on the

tricky side, but like the fact that each one contains a fully variable knee setting.

### Preamps, lines and instruments

The preamps on the Zen Studio are capable of up to 65 dB of gain with a THD+N of -108 dB. They are of the "clean, clear, and colorless" variety, but unlike a "straight wire with gain", these trend toward more of a neutrally-weighted recording console sound. Each one is digitally controlled and offers +48 V phantom power; currently they do not offer phase switching, but this is coming in a future update as well. The preamps have no pad, but they do offer an extra 10 dB of headroom/gain, effectively allowing you to pad them down in any increment you wish.

Each preamp can be bypassed and switched to a line input for use with preamps that you already own, or any of them can be switched to a Hi-Z direct instrument input as well. Unfortunately Antelope doesn't list the inputs' impedance.

### In use: setup and converters

I tested out the Zen Studio on both my 2.5 GHz quad-core i7 late 2011 17" MacBook Pro and my 3.5 GHz quad-core i7 iMac, both running OS X 10.9, and setup was fast and simple with nary a hiccup. Originally with the Orion<sup>32</sup> I had some issues with Cubase 7, but I'm pleased to say that the Zen Studio has been running flawlessly for the past few months in Cubase 7.5 with zero issues. I am even able to track at a buffer setting of 32 samples (!) on my iMac.

During this review, Antelope was kind enough to leave the Orion<sup>32</sup> in my possession, and I noticed zero sonic difference between the two when it came to the sound of the converters. As with the Orion<sup>32</sup>, this puts the Zen Studio in the same class as the Lynx Aurora, Apogee Symphony I/O and others, with only subtle taste differences to be heard. The Zen

Studio's conversion is open and honest yet subtly smooth.

### In use: preamps

There have been a lot of claims made about the Zen Studio's mic pres online—some saying that they sound "APHish", others saying "Neve-ish", and overall besting microphone preamps that on their own cost as much per channel as the entire Zen Studio. I so wanted to be the person to debunk their quality and cry foul, but I'll be darned if these preamps didn't impress the heck out of me!



I did side by side comparisons with the 212 API mic pres found in API's THE BOX (reviewed September 2014), a Chandler Limited TG2-500 (reviewed elsewhere in this issue), and a Neve-inspired Great River MP500NV (reviewed October 2011), as well as my longtime stalwart Millennia Media HV-3D (most recently reviewed in its HV-37 dual rackmount form, July 2013).

The Zen Studio's preamps are not Neve, API, Chandler, or Millennia. However, they're not a million miles away either. They hang with the pack nicely, exhibiting

a strong sonic quality that, as I mentioned before, offers a nice evenly-weighted modern day console sound. For remote work I had zero qualms using only the Zen Studio's preamps and leaving all of my expensive (not to mention bulky and heavy) preamps racked up in the studio.

I was also impressed by how much clean gain I could get out of these pres. They handle ribbons and dynamic mics with ease, with the noise floor only becoming apparent on the very quietest of sources. As a final note, I noticed no sonic difference between

the mic inputs in line-level mode and the line-level inputs on the DB-25 connectors.

### Conclusions

I only have two concerns with the Zen Studio. One: I would like a less-scratchable cover for the LCD on the front panel, considering this unit is meant to be safely portable. Two: be aware that as is often the case with multichannel converters, the Zen Studio gets fry-an-egg hot when in use for long sessions, so be careful where you place it. Maybe it's because I was already used to the Orion<sup>32</sup>,

but I got the hang of the Zen Studio's software and hardware interface in a matter of hours and soon felt like an expert, working quickly and intuitively.

As a whole I am amazed at how much functionality has been packed into such a small footprint. In under five pounds, it delivers 12 great-sounding mic preamps for tracking, eight line ins and outs for looping hardware effects in and out of your DAW or for analog summing or monitor mixes,



Antelope's world-class conversion over USB 2.0, one of the most full-featured internal mixers I have used, and onboard DSP, all in a robust portable package.

All things considered, I think the Zen Studio is even more cutting-edge and impressive, and an even greater value for the price, than the Orion<sup>32</sup>—and that's quite a feat! ➤

**Price:** \$2495

**More from:** Antelope Audio,  
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