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Antelope Audio
Satori High-End Monitoring Controller
A rackmount solution for monitor switching, interfacing, summing, and more

Antelope Audio has expanded from its origins as a builder of exacting studio clocking devices into the realm of audio routing and interfacing. We have recently reviewed the Orion[32] rackmount audio interface (February 2014) and the portable Zen Studio (October 2014). Both interfaces represented an exceptional level of features per dollar, with flexibility and sound quality galore.

In this review, we take a look and listen to the new Satori, a monitor controller with some wonderful extras added to the package. "Satori" is a Japanese term meaning "enlightenment" or "seeing truth"—not a bad sentiment if you're talking about a device to help you hear the truth in your monitoring situation!

The box

The Satori is a 1U rackmount box that offers up to 16 inputs and 8 outputs organized in stereo pairs, with a built-in talkback system, subwoofer support, four separate headphone outputs, and a summing mixer with 8 inputs. A quick tour around the box reveals a whole lot of ins and outs and some well-designed controls to manage them.

The front panel is dominated by a large stepped rotary encoder with pushbutton. This is your master control knob for all levels; push-clicking cycles it through the various possible outputs it controls—the currently selected output pair, Headphone 1, and Headphone 2—and a ring of LEDs shows current settings. Pressing and holding the knob mutes the currently selected speakers while leaving the headphones live.

On the left of the rotary encoder are selection buttons for the eight stereo Inputs, with the power button to the left of those; on the right of the encoder are selection buttons for the four stereo Monitor outputs. You can see at a glance what's routed where.

Also on the right are a Talkback button with built-in mic, controls for Mono, 20

dB Dim, and M/S control, and two $^{1}/_{4}$" headphone outputs. Just to the left of the encoder is a Sum button. We'll discuss M/S and Sum below.

On the rear panel are eight sets of stereo inputs: one XLR pair, three balanced $^{1}/_{4}$" TRS pairs, and four pairs on D-Sub connectors. These last four pairs are of interest because they are not only routed per the front panel but also passed through to a D-Sub output, and also summed to a stereo pair of Sum outputs on balanced $^{1}/_{4}$" TRS. The four Monitor outputs are on one pair of XLR and three pairs of TRS.

There's also a $^{1}/_{4}$" Talkback mic input, two more headphone outputs, and a $^{1}/_{4}$" TRS LFE output. The LFE out is always live and sends a mono mix of the currently selected Input pair to a subwoofer, leaving filtering, level control, and bass management in the sub's hands. Finally there are a standard IEC power connection and a USB port.

Extras and computer control

The Satori also offers a variety of monitor-control functions in addition to its I/O routing. Besides the Mute and Dim functions, the Mono button does double duty when combined with the M/S button beneath it. You can select whether you're listening to the sum of the Left and Right signals (what we'd normally call the Mid signal in a Mid/Side array) or the difference (what we'd call the Side signal). This is very handy for checking for phase problems in stereo signals.

The Sum function lets the Satori act as an analog summing bus in addition to its

other functions; stereo pairs 5–8 are not only summed but passed through to other equipment. This lets you, for example, patch the Satori in between your analog mixer and your audio interface to capture an analog summed signal in addition to what you send to your DAW as stems or individual tracks.

This is a nice feature set as it is, but when you open the Satori remote control software, everything gets taken up a notch. The control panel not only gives an easy-to-read graphic display of the unit's status, but there are a host of added and extended features as well.

The central control shows the output level in dB, between selector buttons for input and output. In addition, you'll see two knobs marked Trim; these are ±6 dB offset adjustments so you can quickly dial in small adjustments to each input or output to

Pressing Mono and M/S gives you a mono summed signal (labeled R+L in the software); deselecting M/S so the light's off gives you the difference signal between the sides (labeled L–R).

However, these defaults can all be changed in the remote software. For stereo use, you can select normal stereo behavior, invert the polarity of L, R, or both, flip L to R and vice versa, or do flip plus polarity invert. In mono mode, you can monitor L, R, R+L, L–R, or R–L.

As a final note, up to five sets of control settings can be saved as Presets in the software, and the software can be reduced to an undocumented "hover mode" where you're given the main output level control, Mute, and Talkback, in a tiny window that floats above your DAW software and is always handy no matter what you're doing.

line up levels. It's not documented anywhere, but you can also do this from the front panel; just hold down the appropriate Input or Monitor button while turning the encoder, and the LED ring displays the offset in dB as you work.

The remote software also offers a high-resolution stereo meter, visual indicators/buttons for Mute and Dim, and a HPF (highpass filter) button for use with a subwoofer, rolling off at 120 Hz. (The HPF control was a late addition, so it wasn't fully documented in the manual.) The remote control software is also where the two rear-panel headphone output levels are set. The software lets you direct the currently selected Monitor output to each pair of headphones, or hardwire each to a specific Input pair for monitor use; you can also select which headphones receive the Talkback signal when toggled.

Speaking of talkback, the remote control expands on the simple pushbutton and onboard mic found in the hardware by offering mic level control and a choice of onboard mic, rear panel mic input, or a separate USB mic plugged into your computer. Note that this USB talkback mic function is the only time that any audio is passed over the USB connection. It's locked to 16-bit/48 kHz operation and there's considerable latency when using it, but if you don't have a spare dynamic mic to hook up to the rear panel and don't feel like leaning over the Satori to yell at the front panel, it's at least an option.

Stereo analysis

One particularly deep area where the remote software expands on the hardware's direct control capability is in processing stereo information. One of the most important functions of any monitor controller is to check for mono compatibility and phase mismatch issues, and with its added software control functions the Satori goes over the top.

As mentioned above, when used from the front panel, the default behavior for the Mono and M/S buttons is as follows. When both are off, you hear an ordinary L/R stereo signal.

In use

It took me very little time to get the Satori set up in my studio and put it through its paces. The remote software installed instantly and flawlessly, as did the latest firmware update; in under an hour I had three sets of monitors, multiple input sources, and four sets of headphones hooked up, calibrated, and happily playing away.

The digital control in Satori doesn't mean there's any A/D or D/A conversion; the signal path is all analog (aside from the USB talkback function, if enabled) and you can hear relays click inside the box whenever you change routings or levels. Doing things like changing the stereo or mono channel assignment menu settings can produce audible clicks, and rapidly changing levels using the encoder or mouse can produce a "zippering" noise, but conventional input, output, and mono/mute/dim switching are noiseless.

And the sound quality? The only quoted specs for the Satori are 127 dB THD+N and 132 dB dynamic range, which are both scary-good numbers but presented without reference levels or test parameters. Specs aside, though, the Satori sounds wonderfully clear and transparent, delivering signals from point A to point B without any significant coloration. If you're worried that a cheaply made monitor controller might be compromising your audio, the Satori will banish those worries for good.

In fact, "banishing audio control worries for good" is not a bad way to describe the Satori in general. There are costlier monitor controllers out there, but they tend to offer functions like surround control, bass management, or high-end A/D and D/A conversion with digital I/O and word clocking. If what you want is pure analog monitor control with impeccable sound quality and easy-to-use features from front panel or DAW screen, the Satori is hard to beat. ॐ

Price: $1475

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