PRO AUDIO REVIEW

Gear & Software Reviews For The End-User

BY RUSS LONG

PrismSound
ADA-8XR Converter

L ike its predecessor the ADA-8, the PrismSound Dream ADA-8XR is a modular A/D-D/A converter and processor that can be configured for eight channels of simultaneous A/D and D/A conversion or for 16 channels in either direction. It supports 24-bit/192 kHz operation and it can also serve as a D/D format converter. The box is perfectly suited for studio and location recording, stereo and surround mixing and mastering.

FEATURES

The 2RU ADA-8XR can be adapted to virtually any situation. Each of the ADA-8XR's paths of eight channels is independently configurable and if desired, can have independent clock references and different sample rates. And each path can drive analog and digital outputs simultaneously if desired

The unit features a host of digital interfacing options that include: AES3-S/PDIF (up to 192 kHz); handles and converts two-wire formats for 96 kHz and 192 kHz; FireWire (which provides direct connection to DAW software on PC or Mac); DSD (for SACD production, with SDIF2/3 and

optional MAC-DSD); also allows sample rate conversion between any PCM rates, Pro Tools 24/Mix (direct connection in place of 888 IO), and Pro Tools/HD (192IO/96IOs; up to 32 channels in and out per Digi Core/Process card).

The ADA-8XR can act as a high resolution Pro Tools interface for recording or post production or, by using the FireWire card, it can work with a wide range of other popular digital audio workstations including Digital Performer, Logic, Cubase, Nuendo, etc.

The DSD I/O module is equipped with SDIF-2, SDIF-3 and MAC-DSD interfaces. DSP features include eight-channel PCM-to-DSD and DSD-to-PCM conversion (any PCM sample rate), plus eight-channel PCM sample rate conversion. By fitting the Pro Tools/HD and the DSD modules, Pro Tools can record and replay DSD audio, allowing SACD master recordings to be produced within Pro Tools.

The ADA-8XR's analog XLR inputs and outputs are electronically balanced, transformerless and galvanically isolated to pre-

vent unwanted noise. The analog input and output sensitivity (and interchannel balance) are software-adjustable over the entire range with 0.05 dB resolution. The analog inputs have a dynamic range of 112 dB (rms unweighted, measured at –60 dB FS). The THD+N is –105 dB (0.0004%) typical, rms unweighted at -1.0 dB FS. The analog outputs have a dynamic range of 110 dB (rms unweighted, measured at –60 dB FS). The THD+N is –104 dB (0.0004%) typical, rms unweighted at -1.0 dB FS. Additionally, there is a TASCAM DA-88/iZ RADAR compatible DB25 connector option available for the analog inputs and outputs.

The ADA-8XR's Ultimate PrismSound clock-stability and jitter-rejection provide crystal clear imaging, with independent multiple PLLs for A/D and D/A paths. The Over-killer setting provides gentle limiting for analog inputs and assures no overs. It can be independently turned on and off on each channel.

The user interface provides fast access to all I/O and processing functions while

Fast Facts

■ **Applications:**
Studio, broadcast, post production

■ **Key Features:**
Eight-channel; 16, 20, 24-bit; up to 192 kHz sample rate; Super-Noise-Shaping; Ultimate clock and anti-jitter technology; independent channel operation

■ **Price:**
Starts at $11,200

■ **Contact:**
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continually displaying all settings. The eight-channel LED bargraph/status monitor can access any point in the A/D or D/A signal paths. Each path offers DSP processing and all of the signal processing functions can be carried out in the D/D mode. The unit's modular construction allows easy upgrading of all input and output cards. The software is Internet-upgradeable, loading from a computer's serial port into Flash memory inside the ADA-8XR.

The front panel of the ADA-8XR contains four sections called panels. The Monitor Panel controls and displays all parameters of the two-channel monitor. The Mimic Panel controls and displays all parameters of the routing and processing of the two eight-channel audio paths through the ADA-8XR. The Meter Panel contains eight LED bargraphs which can be switched to meter either of the two eight-channel paths, as well as a row of Channel Select buttons, which are used to apply controls to one or more selected channels, or to all eight channels using the "All" button.

The Menu Panel contains the LCD display and navigation keys for the menu system, through which all parametric adjustments are made. Blue Access buttons, distributed over the other three panels, provide shortcuts into those parts of the menu system related to their positions. Below the menu controls are the buttons for the Configuration/Store system, which allows factory and user-defined setups to be instantly loaded. On the left side of the front panel is the Standby button that is used to switch the ADA-8XR in and out of standby power mode and, below, a headphone socket for the two-channel monitor.

The rear panel of the ADA-8XR features two large module slots house the analog I/O modules and two small module slots house the digital I/O modules. The Utility Module (also on the rear panel) contains a variety of input and output connectors for reference sync, analog and digital monitor and serial communications.

Like the ADA-8, the ADA-8XR has several processing options available. Four different Super-Noise-Shaping (SNS) curves provide greatly improved small-signal performance for limited word lengths (such as CDs), and are completely compatible with existing D/A converter products. The MR-X processor is a word-mapper that allows flexible use of multiple 16-bit or 20-bit tracks

for high-precision recording. The DRE (Dynamic Range Enhanced) function, retained from the AD-124 and AD-2, allows you to make 24-bit recordings on 16-bit recorders without sacrificing tracks.

The stereo monitor section can be switched between the A/D and D/A path, pre or post processing. The monitor function is equipped with Cut, Invert, Mono and Swap buttons, a volume control, and a front panel-mounted headphone jack. The stereo monitor feeds the rear panel's line level analog outputs and the AES3 digital output. These outputs can be pre or post volume control. As well as monitoring simple channel-pairs, a stereo monitor mix can be set up with panning and level adjustment for all channels. Any input or output pair or a panned stereo mix of all eight channels can be monitored at any time.

The front panel of the ADA-8XR continuously shows the status of all of the major functions including a routing display with a clear indication of all stages of the signal path. There is an access button for each function or stage that takes the menu display straight to the menu for that function, thus providing instant access to any control. For per-channel indications, an eight-channel bargraph/status display can be assigned to the A/D or D/A path, pre or post processing. Meter assignment and modes can be switched with a single key. By using the Configuration Stores, a wide range of factory and user stores can be quickly browsed and recalled.

In Use

The ADA-8XR that I reviewed was equipped with FireWire and Pro Tools/HD modules. The FireWire I/O module essentially enables the ADA-8XR to be used as a high quality soundcard, or I/O interface, for native PC and Macintosh workstation applications. Both allow up to four ADA-8XRs to be connected on the same FireWire bus allowing up to 32 channels of simultaneous recording and playback.

I initially put the ADA-8XR to work mixing a project for Nashville alt-pop band Shortwave Radio. I had fallen in love with the ADA-8 when I reviewed it a few years ago (*PAR* 12/04) so it was no surprise to find the 8XR equally impressive. The box instantly integrated with my Pro Tools rig (running ProTools 7.1) and when set to the Pro Tools setting the computer instantly saw it as another 192 I/O.

As was the case with the ADA-8, I found that the ADA-8XR has more depth and more definition in the low and high frequencies than the RADAR or the Digidesign 192 boxes I often use. There is not much difference in sounds that sit up front in the mix but sounds that are mixed fairly low sound like they have had a blanket lifted off of them in comparison to my other converters.

I loaded the ADA-8XR FireWire driver onto my laptop PC and in an instant I was mixing in Nuendo using the ADA-8XR. I used the box with my iBook to run Peak Pro XT 5 and Ableton Live 5 and again had wonderful results. I was also completely amazed at the ADA-8XR's ease of integration into various scenarios.

I have a Lucid clock that I typically use to clock all of the digital devices in my studio. I compared the sound of the Prism clocked internally to that of the Prism clocked through the Lucid and I surprisingly found that I prefer the sound of the Prism's clock to that of the Lucid. I went on to compare the sound of my Pro Tools HD converters and my RADAR Nyquest converters clocked internally, clocked to the Lucid clock and clocked to the Prism, and in every instance I preferred the sound of the converters when clocked to the Prism ADA-8XR.

Summary

After working with the PrismSound ADA-8XR over the past several weeks I have come to the conclusion that it is the best sounding A/D-D/A box that I've heard. The 8XR's modular format is the perfect solution to today's recording needs. The box allows you to purchase only the features that you need and not the ones you don't. The ADA-8XR has a high price tag but it is undoubtedly worth every penny.

The ADA-8XR offers the cleanest and most transparent conversion available making it the perfect tool for producers, engineers and artists with a desire to produce the finest results when recording, tracking and overdubbing, mixing to stereo or surround, mastering and monitoring. The ADA-8XR is perfect for recording vocal, single instruments, drums or orchestra and is just as much at home providing multiple outputs for external analog summing.

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