

Mackie

Onyx 800R 8-channel mic preamp

As most people know, Mackie has become a leading manufacturer of affordable audio products. The company is perhaps best known for its great line of simple but clean-sounding mixers. The company has gone back to the drawing board with the introduction of the *Onyx* series. *Onyx* is the name they have given their new preamp design that they are incorporating into their new generation of mixers. At the same time, Mackie has introduced an eight-channel 1RU mic preamp called the *Onyx 800R*. This unit has eight balanced mic inputs, with a Mid/Side decoder on the first two channels; two 1/4" DI inputs; and balanced line-level I/O via DB25 connectors. Oh yeah, it also comes with analog-to-digital converters, word clock in, AES/EBU or S/PDIF digital out via DB25, and ADAT lightpipe out. With eight channels of 24-bit A/D conversion, it's a good companion for Digi 001, 002, or similar digital-recording setups. And because the unit is capable of sampling rates up to 192 kHz, buying an *800R* is also an extremely cost-effective way of adding mic preamps and line inputs to higher-end systems.

Each of the input channels has a gain knob; buttons for mic/line switching, polarity reverse, low-cut, and phantom power; an LED indicator for phantom power; and a three-stage LED display for level (-20, 0 dB, and OL). More LEDs for visual level-monitoring would be nice, but three is better than none. Also, if you're using the *800R* to feed a DAW or digital recorder, you'd probably want to use the recording device's meters instead, downstream of the converters. The *800R* is calibrated so that the optimum gain setting for preamp overload and A/D overload are the same. My ears told me when there was overload, and the LED just confirmed it. The manual states that the OL indicator comes on at 22 dBu. I found that minor clipping does occur when the OL indicator flashes momentarily. When really driven, the distortion characteristics of the preamps are somewhat musical, especially on drums. Definitely not a good sound on already overdriven sources like electric guitar, but I liked the lo-fi smash it gave to overhead mics when pushed to the limit. I also took advantage of the overdriven preamp's distortion to record some lo-fi lead vocal tracks. It made that nice modern vocal sound that has come into favor as of late.

In addition to the standard controls and indicators found on all the input channels, Channels 1 and 2 have impedance selection with settings for 300, 500, 1300, and 2400 Ohms. 2400 is a good place to start since the remaining six channels are set to 2400 Ohms. Impedance matching is one of those "advanced" ideas that good mic preamps often offer, and for many beginning engineers, it is largely misunderstood. Most mics will behave quite well on the 2400 Ohms setting. The other choices are for matching input impedance to vintage condensers and older ribbon mics. Use your ears if you don't know your mic's rated impedance to hear which impedance setting sounds best, as the incorrect settings will result in weaker sound and will require more gain from the preamp. Channels 1 and 2 also incorporate a Mid/Side decoder, but there is one little drawback. The decoder engagement switch is on the rear panel, making it hard to access if the *800R* is rackmounted; and there is no LED indicator to let you know if the MS decoder is on. The decoder button, like the polarity and low-cut buttons, has a white band towards the rear half of the button that is visible

together flawlessly, and everything sounded just fine. Being able to adjust my input levels was also helpful for the transfer. The only drawback here is it would have been nice to know where 0 dBfs is supposed to be, because if you're not diligent about watching your DAW's channel meters, you can quickly create digital clipping. The back of the unit is set up with a DB25 input connector for line input so you may need to invest in some D-Sub snakes if you plan to use the line ins. Mackie has also wisely set up the digital outputs using a DB25 connector that is pin-compatible with standard digital D-Sub snakes. The manual is well laid-out and provides accurate wiring diagrams so you can always make the cable you need. The manual also explains clearly how the higher sampling rates work. Selector buttons on the unit switch between AES/EBU, S/PDIF, double-fast single-wire, and double-wire dual-mode formats for the DB25 digital outs; and the two ADAT lightpipe outputs can use the S/MUX standard to transmit eight channels of audio at 88.2 or 96 kHz and four channels at 176.4 or 192 kHz.

So what sets the *Onyx 800R* apart from the myriad of multi-channel mic preamps available? Well for starters, how about the price. The street price on this unit is \$999 (\$125 per channel)! I gave the *Onyx* a workout and used it exclusively for all the basic tracking on a recent project with a local band. At first, I was reluctant to use the band as my review "guinea pigs," and I was fully prepared to use my other preamps in the rack if the sound did not come to either quickly. This proved to be unnecessary as the *Onyx* preamps sound clean and accurate at 0 dB, and all changes made to the drum sound were through mic selection and placement. I mic'd the kick with an Audix D-6 as this particular band was going for that "modern" drum sound. The *800R* was plenty open and handled the transients well. The snare, mic'd with an SM57, sounded fine and was all there, and the *800R* handled the dynamic swings of the snare track quite well. The toms, mic'd with Sennheiser MD 421's, were full and warm and sounded like they should. The *800R* also handled the Royer SF-12 stereo ribbon quite well and was still very quiet even towards its full 60 dB of gain. I prefer to use a SansAmp processor for direct bass recording, and the accuracy of the *Onyx* allowed the bass player to dial in the sound he liked. By adjusting the EQ on the SansAmp, and with the *Onyx* faithfully amplifying the signal, we got the sound he wanted without any additional low-end murk, which made him happy. On acoustic guitar, using a small-diaphragm condenser, the *Onyx* was bright and present, and on electric guitar, it was also accurate.

Okay, so far so good. Eight solid mic preamps at a bargain price. That should be enough reason to consider the *Onyx* for any studio. But there is still a lot more to this unit. There is the MS decoder to consider. When engaged, Channel 1 becomes the Mid input and Channel 2 is the Side input. I went into detail about the fun of MS stereo mic'ing in my review of the True Systems P2analog in the last issue, so I won't go over all that again. The *Onyx* did a pretty good job of creating an MS image, but I was not really blown away by it. The stereo image was decent only when the Side was pushed up past the Mid level, but then the center would feel lacking. As a stereo option for overhead drums it works pretty well as the close mics will reinforce your center, and the MS decoder will keep those overhead mics mono-compatible, which is always a plus.

Now that we have pretty much covered the analog side of the unit, let's look at its other features. As mentioned at the opening of the review, the *Onyx 800R* is also a good-sounding A to D converter. Hell, at \$125 per channel, the *Onyx* could just be an ADC and that would be a great deal, especially considering 192k converters are still very few and far between. Since I have had to recently enter this century and purchase some multi-channel digital audio capability for the studio, and I had an album project that required transfer from 2" 24-track at 30 IPS to 24-bit, 48 kHz WAV files, having the *Onyx* review unit show up was quite serendipitous. The *Onyx* hooked up to the Digi 002 just fine with the lightpipe, and with the 002 set to ADAT sync, the two boxes worked

Mackie has clearly priced the *Onyx 800R* to attract budget-conscious studios. At \$999 street, not only is the unit a cost-effective preamp, but it also makes a great front end for dedicated digital recorders. That being said, considering all its features and its decent sound, I think the *Onyx 800R* is a good purchase for any studio, regardless of budget. Modern, clean, and accurate is as much a sound these days as warm and fuzzy used to be. For the many engineers who desire neither the sound nor the price tag of old analog gear, the *Onyx* is perfect. I like to think of it as the audio equivalent of a Swiss Army knife—with preamps, line inputs, DI's, an M/S decoder, and 192k converters—for your DAW, standalone hard disk recorder, digital mixer, or even for your analog mixer if you need to step up to better mic preamps or bypass your mixer by going "straight to tape." It has a lot of good, usable audio tools built into one unit, and its versatility makes it a real winner. (\$1279 MSRP; www.mackie.com) —Craig Schumacher <craig@tapeop.com>