

Mackie Onyx 800R

The reduction in the number of preamp channels on affordable digital desks has happily coincided with an increase in the number of channels of preamp now regularly offered on outboard. Flukey or what? **JON THORNTON** tests an 8-channel pre that would challenge the boutique set.



THERE'S NO DOUBT that ever since the introduction of the LM-1602 mixer, Mackie's analogue products have been very capable technically. And, for a company whose marketing seems to very much address a mass market, many a Mackie desk has been incorporated into very high-end pro audio applications. A winning combination of build quality, sonic performance and price has been the key to establishing the brand as one that crosses boundaries very effectively. So there's something of a gauntlet being thrown down by Mackie when it refers to the 800R as a 'premium' 8-channel mic preamp, with claims that it offers comparable performance to what it describes as 'boutique' stereo units.

Underpinning this claim is the development of the 'Onyx' preamplifier design. Used in a range of other Mackie products, this is a further development of the 'XDR' (Extended Dynamic Range) design used in Mackie VLZ Pro mixers. With impressive technical specs — a dynamic range of 123dB, Equivalent Input Noise of -129dBu and a frequency response that's almost flat from 20Hz to 20kHz, with only a 3dB drop from 10Hz to 170kHz — there seems to be some substance to this on paper at least. Not only this, but the claim is that the Onyx preamplifier circuit design is equally good at handling 'real-world' issues such as RFI rejection and linearity of response. But as we know, there are lies, damned lies and audio specifications — so into the studio arena we go.

In the blue corner is the Crookwood Paintpot reviewed elsewhere in this issue. In the red corner the Onyx 800R, and in the yellow corner a Focusrite ISA220. Before battle commences, a quick review of the 800R's features (UK£935 + VAT). Packaged in a 1u rackmount that is surprisingly deep, each of the 8 channels has a gain control that offers 0 – 60dB of gain for a mic level input, and -20 to +40dB for a line level input. Each channel also has a line/mic switch, a switchable high pass filter (75Hz at 18dB/octave), a phase reverse switch and one for phantom power. Metering is rudimentary but sensible on each channel, with three LEDs indicating signal present at -20dBu, 0dBu and overload at +22dBu.

Channels 7 and 8 also have a front panel, high impedance instrument level input with an associated switch, while channels 1 and 2 have the ability to switch their input impedances to one of four settings (2.4kOhms, 1.5kOhms, 500 Ohms and 300 Ohms). Another trick feature of these first two input channels is their ability to decode two microphones arranged in an MS arrangement such that AB stereo is output from

their associated line outputs. A neat function, but let down slightly by the fact that the button to select it is located on the rear panel — not especially convenient if the unit is permanently racked. Analogue interfacing is also on the rear panel courtesy of XLRs for the 8 mic level inputs, and the ever more ubiquitous 25-pin D-Sub connectors for line inputs and outputs.

Unlike most of its direct competitors, the 800R features digital connectivity as standard fit, and perhaps as a result of this it seems very well thought out. A single front panel control selects sample rate (all usual rates from 32kHz to 192kHz) or external Word clock, and a single button allows the digital section's output to be 24-bit or dithered down to 16 bits. Turning to the rear panel again reveals another D-Sub connector that can carry up to four pairs of AES-EBU or SPDIF format digital signals. In addition, two lightpipe (ADAT) optical outputs are provided. Switches on the rear panel allow selection of SPDIF or AES-EBU formats together with termination options for both and for the external Word clock input. Additional switches are also provided to configure the D-Sub and optical outputs for either dual-wire or dual-speed mode at higher sampling rates, which makes interfacing to other equipment very flexible with the proviso that at sampling rates of 176.4 or 192kHz, only the first four audio channels are output.

Weighing in at 4.8kg, the 800R appears to be substantially and well built — although on the review unit a couple of the gain pots were very stiff and scratchy at various points in their travel but this didn't

appear to have any effect on the audio. Nevertheless, back to the arena...

First impressions are that on the noise front, the 800R at least matches the competition. With no source and 60dB of gain racked on each unit the Mackie was, if anything, a little quieter than the ISA220. All three contenders were significantly quieter than the (Audient) desk mic pres.

The first round of tests were done with an AT4050/CM5 capacitor microphone. Now, this is a fairly sharp sounding mic and can prove troublesome with some preamps. The Mackie was good at capturing transient detail, and was very revealing of some of the mid-range harmonics in a voice. Surprisingly, adjusting the input impedance here had quite significant effects — softening the treble response progressively as it was lowered. In comparison with the other two units though, the 800R sounded slightly gritty against the Focusrite and wasn't as good at recovering low frequency information as the PaintPot. It was a similar story with an SM57.

In summary, the 800R is a well thought out, nice sounding unit. It's certainly very quiet and it does seem to impart its own character to a microphone — particularly in the high-mid range. It's impressive and it put up a good fight. ■

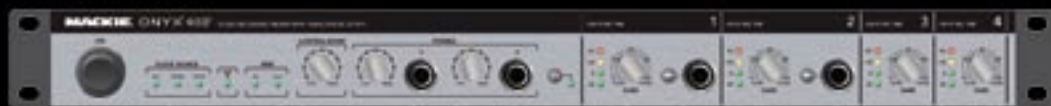
Contact

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PROS Extremely quiet; well thought out and implemented digital I-O as standard; useful additional features; resolves mid range detail very well.

CONS Some tiny niggles in build quality; a little 'hard' sounding in comparison with more expensive competition; daft positioning of MS decode switch.

EXTRAS Mackie's Onyx 400F is a 10-channel, 192kHz-capable FireWire audio interface that features Onyx mic preamps as well as on-board DSP matrix mixing for latency free headphone mixing and routing independent of the DAW software.



Front panel controls include control room output level, dual independent headphone outputs with dedicated level control, dual instrument inputs, and four-segment metering for the mic inputs. The rear panel includes four combo mic/line inputs, balanced TRS sends and returns for the first two mic inputs, four line inputs, 8 line outputs, control room outputs, Word clock I-O, MIDI I-O, SPDIF I-O and two FireWire ports.