



MACKIE ONYX 1620

COMPACT ANALOGUE MIXING CONSOLE

Has Mackie changed the complexion of the compact mixing market... again? JAMES WILKINSON finds out.

Mackie's reputation for building affordable, compact, low-noise consoles with good dynamic range is well documented. When the CR-1604 was released nearly 15 years ago the world of small-format mixing consoles was changed forever. Now, much of the design innovation that established Mackie's reputation back then has been reignited with the release of the new Onyx series of small-format consoles — quality construction, new ideas, new audio design and an optional FireWire I/O card that links your mixing console to your computer... this is no re-tread. Sure, there are the believers and non-believers out there who will forever argue the merits (or shortcomings) of an affordable pre-amp versus more expensive esoteric standalone models, and no-one will ever resolve the debate that rages between them. But for the record, it is important to state *here* that the new Mackie Onyx mic pre-amps *do* sound better than the old Mackie XDR mic pre-amps — end of argument.

In an A/B test the new Onyx pre-amps had greater transparency and improved fidelity that's due in part to the new custom-built IC chip, which produce (quoted) specs like 123dB total dynamic range and 0.0007 percent total harmonic distortion. Also included on the first two pre-amps is a Hi-Z selection button, which alters the impedance to suit inputs from guitars and the like (without having to use a DI). These are located on the top

face of the console along with all the mic and line inputs for easy access.

Speaking of the face of the console, Speaking of the face of the console, the Onyx mixers feature a more upscale industrial design than their VLZ siblings, with more generous heat-dispersing design that has soft rubber edging and a distinctive wedge shape that inclines the angle of the console work surface, making the controls easier to see and operate. New, bright-colour coding also helps to identify the various sections and define how signal flows through the desk. As an aside, you may be surprised by the comparatively hefty proportions of the 1620 (especially the height). If you're going to replace another 16-channel desk that's in a ready-made enclosure with an Onyx, be sure to check the external dimensions first.

A New 'Q'

The EQ department has evolved. Veteran Mackie collaborator Cal Perkins has re-designed the EQ section to include a wider 'Q' filter. The task set him by Mackie was to produce an 'old school' EQ with a design and sound reminiscent of classic British mixing consoles of the '60s and '70s. The result is a far more coherent, musical, and natural-sounding EQ than any of the previous models due to the wider 'Q' and improvements in phase shift. In the past Mackie EQ has — to my ears at least — sounded

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a little brittle, but this new Perkins design has created an effect that is broader, smoother and sweeter when applied. The new 'Q' curves and frequency overlaps may not make the Onyx an EMI console, but certainly these changes represent a significant reappraisal of Mackie's tone, and are well and truly a step in the right direction. Each of the eight mic pre-amps has four-band equalisation comprised of low (80Hz), high (12kHz), sweepable low/mid (100Hz to 2kHz) and high/mid (400Hz to 8kHz) — all with 15dB of boost or cut. The four stereo channels (Channels 9–16 ride on four stereo faders) have no parametric EQ, with the mid frequency set to 2.5kHz, highs at 12kHz and lows at 80Hz, and as with all the channels, they have a switch to bypass the EQ section completely.

There are four auxiliary sends that are individually selectable from the Aux Masters section to be pre/post the fader. The third of four Aux Returns also have an 'FX to Mon' switch which routes the signal returning on Aux 3 to Aux Send 1, and in most cases would send a returning effect send into the fold back for a musician to hear. The Aux Master and Return knobs are located next to each other underneath the monitoring controls. You can select which source you want to hear in either the control room or headphones by selecting Main mix, Alt 3-4, Tape, or FireWire (if the optional card is installed). Next to these switches are the main peak meters that display the audio source you have selected or soloed, so if there's nothing selected they won't do anything.

Speaking of metering, wedged between each of the 60mm channel faders there four LEDs, which illuminate (-20, 0, +10, Overload) to indicate individual signal levels pre the fader, and to ensure that your levels are not overloading when recording to tape/disk.

Bussing is where Mackie has always excelled as a designer of compact mixers, so much so that we've all come to expect a certain amount of routing flexibility that usually isn't available on other mixers. An example of this on the Onyx is the Mute/Alt switch which combines muting individual channels with the option of re-directing the muted signal to outputs 3/4, and effectively turns the mute switch into a clandestine subgroup that may never be utilised until the day you're standing in front of the mixer thinking: "How can I send signal to..."

The talkback section is comprehensive enough to cater for both studio and live applications. There's a built-in condenser microphone (for the studio) or alternatively, you can plug in your own mic via an XLR on the rear panel (for the pub) and select it via a switch. If you've ever mixed a live band and wanted to leave a mic connected to allow you to talk to the band via the foldback but had to forgo it because you'd run out of mic channels, then this is a welcome addition. Also the mic output is selectable between the control room/phones and aux one and two.

Playing With Fire

Aside from all the improvements with the analogue mixer components, Mackie has taken the very shrewd step of including an optional 24-

bit/96k FireWire I/O card that allows connection to a computer for digital recording and playback.

It features 18-track recording (simultaneously), with tracks 17 and 18 carrying the main mix output signal, allowing you to easily record the mix outputs when you're tracking a live gig. Signal sent to each track for the FireWire card and (analogue) recording outputs (a multi-pin DB25 connector) is taken directly after the initial pre-amp stage (pre EQ and fader), as this is the shortest path to your multitrack recording machine, which helps preserve the greatest recording fidelity.

The optional FireWire card ships with Mackie's

own Traktion software that's designed to be an intuitive recording and MIDI multitrack

program for independent use or with an Onyx mixer. While my brief sojourn into the world of Traktion didn't allow for an in-depth assessment, it did seem easy enough to install, use intuitively and start recording. The I/O also worked well with Logic Pro 6.4.1, Peak 3.2 and Live 4.04. On all applications I recorded 18 tracks at 24-bit/96k (the upper limit of the card's capacity) on a Mac G4 1GHz laptop with 768MB of

RAM running OS 10.3.6. But it is imperative to understand that the capacity for recording and playback via the Onyx is really a case of 'how

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