

# MACKIE Onyx 1620

This analogue console can be fitted with a digital implant, but will it appeal to digital diehards? **Bob Dormon** plugs and plays.

**W**hile Mackie has diversified to produce amps, speakers, hardware controllers and digital desks, it has not ceased to innovate in the area where the company made its name: analogue consoles. The new Onyx range is certainly proof enough of this as it offers improved EQ and mic preamp circuitry, but doesn't shy away from the demands of the digital domain. What makes the Onyx rather special is its FireWire interfacing option, enabling this analogue console to ferry multiple digital audio streams to a suitably equipped host computer or workstation. Hence, the ease of analogue can be married to the fidelity of a digital audio workstation with just one cable.

## New Model Army

There are three Onyx models: the 12-channel 1220, the 16-channel 1620, and the forthcoming 1640 (16-channels and four busses). On review here is the Onyx 1620, which is suitable for both live and recording scenarios. Its back panel features a power rocker switch and

## There's little to be found wanting in this console in terms of interfacing and flexibility.

IEC mains socket supporting 100–240V. Although the mixer has a built-in talkback mic there's an external talkback mic XLR input option alongside the balanced XLR main outputs, with -10dB/+4dB line-level switching. Four aux sends appear on balanced 1/4-inch TRS jacks. Next are eight channel inserts on 1/4-inch TRS jacks, and below are eight balanced 1/4-inch TRS jacks for the four aux return stereo pairs. If only the left side is plugged in on one of these pairs then this mono signal will be routed to both sides of the aux return channel on the console. Along the bottom is a blanking panel for the FireWire card option and two 25-pin



The 1620's clearly coloured knobs really help you to navigate the console quickly. The metering alongside the faders is a nice touch, too.

D-type connectors marked Recording Outs 1–8 and 9–16. These balanced connectors conform to Tascam's DTRS recorder analogue interfacing pin-outs. They take a direct feed from each channel that is post-gain, pre-EQ and pre-insert. While not having a compressor to contain the dynamics when recording might alarm some, the thinking is that

input and output on phono sockets, plus a BNC connector for a gooseneck lamp.

While the stereo line inputs 9–16 have only basic gain controls (-20dB to +20dB), mono channels 3–8 operate on either mic (0dB to +20dB) or line levels (-20dB to +40dB) depending on what's plugged in where. All the mono channels feature independent phantom power switching and high-pass filtering (75Hz at 18dB/octave) for each channel. The latter is helpful to subdue feedback and mic handling noise, or rumbling transmitted up the mic stand from vocalists shuffling their feet.

## The Equaliser

Channels 1 and 2 are slightly different in that they don't have a line input. Instead, there's the Hi-Z switch that utilises the mic preamp. When active, the mic input is deactivated and the unbalanced 1/4-inch jack socket can be used to plug in guitars directly. All channels have EQ switching enabling the equalisation circuitry to be completely bypassed to prevent any colouration in the sound or additional noise in situations where a direct signal is desired. The stereo channels have a basic three-band EQ with shelving low (80Hz) and high (12kHz) sections and a peak mid

### ONYX 1620

Manufacturer **Mackie**

Price **£765**;  
FireWire option **£439**

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### METHOD SPOT Fire in the hole

The Onyx FireWire option sends the main mix and 16 channels directly to a computer or workstation with 24-bit/96kHz resolution. There's also a two-channel return, enabling the console to be used to monitor the playback of the digital recorder's main mix with the FireWire control room switch.

TEST

MACKIE ONYX 1620



section (2.5kHz), each with  $\pm 15$ dB of cut/boost. The mono channels have identical low and high sections, but have a far more flexible low and high-mid section. These two semi-parametric bands feature sweepable frequency controls ranging from 100Hz–2kHz (low-mid) and 400Hz–8kHz (high-mid) each with  $\pm 15$ dB of gain. Alas, there's no Q (bandwidth) control as found on Mackie's higher-end consoles and the fixed Q rating is unspecified (but not too severe).

The Onyx has four aux sends per channel, but there's no individual pre- or post-fade option, as this is done globally for

output and headphones. The four Aux Return knobs determine the level of incoming effects or additional sound sources. The FX To Mon switch routes stereo aux return 3 to aux master send 1. So, if aux 1 is being used as a headphone mix, using FX To Mon will enable effects to be heard in the aux 1 buss. Besides the main mix fader there's a whole talkback section with a built-in mic above the level control and external mic switch. A single, non-latching switch activates the talkback function.

In use, going through the motions of pressing Solo, adjusting the gain control and observing the

## There's nothing like the instant access and visual feedback of an analogue console.

switches alongside each of the four aux master controls. Above the scribble strip are the pan knobs, with the Mute/Alt 3-4 buttons, 60mm faders and Solo buttons below. All the Mute and Solo buttons feature status LEDs, and to the right of each fader is a four-segment LED level meter.

### Sound choices

The master section has a headphone socket and 12-segment LED stereo metering, plus a solo LED indicator and AFL/PFL switch. Above the control room and phones level knobs are the source switches, which determine what aspect of the mixer's routing will be heard. The choices are: Main Mix (general use), FireWire (if installed), Alt 3-4 (alternative routing) and Tape (2-track tape return). There's an Assign To Main Mix button, too, that enables you to send the FireWire, Alt and Tape sources to the main output rather than just the control room

appropriately marked main meters will enable the optimum setup for a channel's input level. The Hi-Z option works well enough on electric guitars and basses, but a passive piezo pickup on an acoustic guitar will still sound rather thin, as specific equalisation and preamplification circuitry is required. Note that if mic and line sources are connected to a channel, it's possible to hear both. To avoid noise, be sure to disconnect any redundant gear as this affects the line level, too.

### Perkins engine

The mic preamps are based on Mackie's XDR (eXtended Dynamic Range) design and sound clean and quite transparent. The mono channel EQ is a Cal Perkins design that has been modelled to give a classic British EQ sound. The outcome is a versatile EQ with sufficient mid-range control to dig away at muddy resonances. In

**The FireWire card panel remains unoccupied, but when it's shipping it will support Core Audio on Mac OSX and ASIO on Windows XP.**

### RELATED TECHNOLOGY Keeping mute

For years Mackie has made good use of the Mute switching on its budget console channels. While this silences the channel output from the main mix, it also routes the audio to a separate pair of outputs – the Alt 3-4 buss. By muting a channel you can take it out of the main mix and send it to a sampler, computer soundcard or multitrack recorder. The Alt 3-4 buss can be monitored from its control room source switch, so it's possible to set up a whole mix on this buss too, as channel EQ and panning position are also conveyed to the Alt 3-4 output. Effectively muting a channel and routing it to a multitrack recorder is very useful, as you can set it up to monitor the recorder's track returns without hearing the sending channel(s). It's an excellent feature, especially on stereo desks, so plug it in and use it.

combination with the low- and high-shelving sections, sounds can easily be warmed up to boost bass or thinned out to tweak the treble. The process can be both subtle and severe, with high-gain boosts being relatively noise free. Annoyingly, switching in the low-cut filter in combination with the EQ would produce a nasty thump even when the EQ was flat, although with the EQ off, the switching was silent – so watch out if you're monitoring at high levels. The stereo EQ channels perform well, enabling beneficial tweaks rather than sonic surgery.

Sadly, there was no FireWire option to test, but this will be released shortly – keep an eye on the MTM news pages for details. With digital consoles available for a similar price to the Onyx/FireWire card duo, you might need convincing to go down this road. But, compared to prodding and clicking through menu-driven LCD screens, there's nothing like the instant access and visual feedback of an analogue console. With the FireWire option installed, the Mackie Onyx provides the best of both worlds. **MTM**

## SUMMARY

### KEY FEATURES

- 16 channels
- Four mono aux sends
- Four stereo aux returns
- Eight mic inputs with independent phantom power
- Two high-impedance instrument inputs
- Talkback section with built-in mic
- Two Tascam-standard 8-track recorder outputs
- Optional multi-channel FireWire interface
- Individual channel metering

### WHY BUY

- Flexible monitoring
- Alt 3-4 function provides additional stereo buss
- FireWire option expands versatility
- Multitrack recorder output convenient
- Pleasant EQ and mic preamps

### WALK ON BY

- No phase reverse switch on channels
- No multitrack 'tape' return facility
- No Q control on EQ
- No rack mounting lugs provided
- No individual pre-/post-fade switching on channel aux sends

## VERDICT

Some folk might wish for larger faders, but there's little wanting in this console in terms of interfacing and flexibility.

