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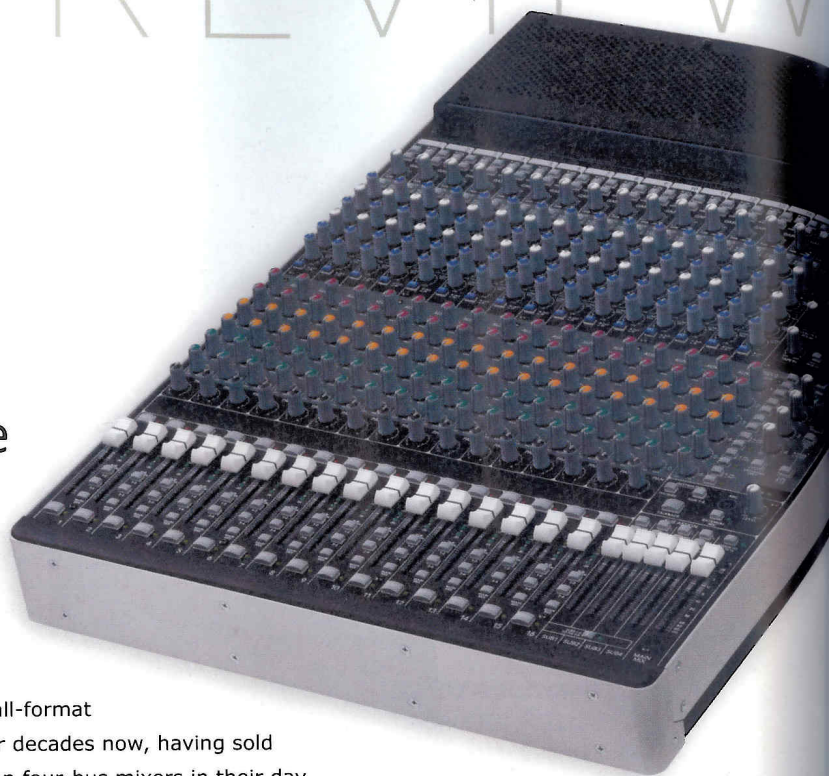
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AUDIO REVIEW

MACKIE

Onyx 1640i Analog Firewire Production Mixer



Reviewed by: Loren Alldrin

It would be a shame for Mackie to design such a solid analog platform then fumble at the converters, but they were careful to keep the quality intact.

Mackie has ruled the roost for small-format analog mixers for decades now, having sold about 2.7 bazillion four-bus mixers in their day. Let's see a show of hands—how many sound engineers out there haven't spun the knobs on a Mackie 16x4 mixer at least once in their life?

Mackie has earned their place at the top by making affordable, good-sounding mixers that simply do the job. And once Mackie hit on a design that worked, they've been wise to leave the basic format unchanged. Sure—they've retooled with better preamps, more flexible routing, a few extra knobs and LEDs and a number of other small improvements. But a new VLZ mixer will still feel familiar, even if you haven't touched a Mackie four-bus mixer in 15 years.

With the Onyx line, Mackie has taken their wildly successful mixer format and refined things even further. The Onyx line was first introduced in 2004, and now includes large-format eight-bus consoles all the way down to a compact 8x2 mixer. All Onyx models offer

high-quality mic preamps, EQ with sweepable mid, built-in talkback mic and many other niceties. Perhaps most notable

in the small-format Onyx mixers is their integrated FireWire interface for direct digital recording and playback.

With the Onyx 1640i, Mackie has cranked the potential of its four-bus format right up to 11. The 1640i sits at the top of the Onyx small-format line, but its feature set more closely matches the larger Onyx eight-bus mixers. The 1640i has a list price of \$2,200 (about \$1,700 street), which is pretty high-brow for a small Mackie mixer. Use the 1640i for a while, however, and the price will make sense. This mixer offers no-compromise excellence in sound, design and construction.

A Quick Tour

The Onyx 1640i boasts 16 mic/line/digital inputs, four busses, four-band EQ with sweepable mids and six aux sends. Each of the mixer's 16 mono inputs offers a high-pass filter and phantom power (the 1640i has no stereo line inputs). Line inputs one and two have a switchable high-impedance

company: **Mackie**

product(s): **Onyx 1640i Analog Firewire Production Mixer**

phone: **(800) 898-3211**

website: **www.mackie.com**

suggested retail price: **\$2,200**

AUDIO

mode for better direct input of electric guitar and bass.

Each input then passes through an insert jack and four-band EQ with true bypass. Six

aux sends allow for a generous number of

monitor mixes and out-

board effects; each aux is switchable pre/post fader. Each input ends at a 60-mm fader, mute and solo buttons, nice four-LED level meter and assign switches for the mixer's four busses and stereo output.

Outputs are generous on the Onyx 1640i. Main stereo outputs include balanced 1/4-inch and XLR stereo with inserts; the XLR output has a mic/line level switch for use as a submixer. Other outputs include summed mono with level control, stereo control room and RCA stereo for analog recording. Mackie even includes a pair of 1/8-inch sub (Tascam) direct analog recording outputs. About the only glaring omission from this digital-friendly mixer is an SPDIF or optical stereo output.

Physically, the Onyx 1640i is rather odd—view it from the side and it looks like a hatchet. The main mixer surface is very shallow, and is topped by a large connector module that's almost completely perforated with ventilation holes. This connector section—which extends several inches past the end of the mixer—will rotate with the purchase of an optional Mackie "Rotopod." A rack mount kit is also available for the 1640i, but few racks will accommodate a mixer that's over 26 inches long.

The mixer's aluminum side panels look sharp, and the whole unit feels very

solidly built. Knobs are sturdy, but a bit cramped (especially in the EQ section). Faders feel smooth and have adequate friction to stay where you left them. Buttons are easy to use and give good tactile feedback. Mackie's "Rude Solo" light is as rude as ever.

Fire in the Wire

Big news for the small-format Onyx line is the addition of a 24-bit, 16x16 FireWire interface working at sample rates up to 96 kHz. Install drivers and control software into your PC (none needed for Macs), and Onyx users have a high-resolution recording and playback system built right into the mixer. Input and output routing isn't as flexible as that of a dedicated outboard converter, but the basics are covered well. It's worth noting that a simple external FireWire interface with similar channel count will set you back several hundred dollars.

The Onyx's FireWire return configuration is easiest to understand, as it essentially maps the 16 computer outputs to the mixer's 16 input channels. Push a button at the top of the channel strip, and the FireWire output drops in just upstream of the channel insert and EQ. The Onyx has just one additional button that controls FireWire inputs, allowing you to route FireWire returns one and two directly to the stereo bus. This is handy for returning backing tracks from the computer without using up a pair of inputs.

When it comes to FireWire outputs, the Onyx offers several more options. In its default configuration, the Onyx's 16 FireWire outputs come directly off the individual input channels. A nice touch is a button (per channel) that taps the FireWire output from just after the preamp and high-pass filter or after the insert and

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AUDIOREVIEW

Did You Know?

All Onyx models offer high-quality mic preamps, EQ with sweepable mid, built-in talkback mic and many other niceties. Perhaps most notable in the small-format Onyx mixers is their integrated FireWire interface for direct digital recording and playback. Input and output routing isn't as flexible as that of a dedicated outboard converter, but the basics are covered well. It's worth noting that a simple external FireWire interface with similar channel count will set you back several hundred dollars.

EQ. The former gives you the cleanest-possible recordings, while the latter allows for more processing at the mixer.

Want to record subgroups via FireWire? A switch near the subgroup faders routes groups one to four to FireWire outputs five through eight. Need digital outputs from the six aux sends? A similar button routes these to FireWire outputs 9-14. Finally, you can capture the stereo mix on FireWire outputs 15 and 16 if desired. This flexibility is wonderful, but subgroup, bus or master routing hijacks the corresponding channel outputs. Only channels one through four are guaranteed an A/D converter. I'm sure it would have driven the price up, but additional A/D converters and FireWire outputs would be really handy for large recording applications.

The Onyx plays well with most major digital audio workstations, which makes it a nice front-end for recording. The FireWire interface is also tailor-made for outboard digital processing. Folks with insatiable appetites for plug-ins and a powerful laptop should look into a Waves MultiRack/Onyx combo.

To the Test

Though they've gotten progressively better over the years, I've found small-format Mackie mixers to have a somewhat harsh, thin sound. I'm pleased to report that the Onyx 1640i sheds this family trait completely, delivering smooth, full sound with plenty of detail. I think this sonic improvement comes mainly from the mic preamps and EQ section.

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AUDIO REVIEW

The Onyx mic preamps sound very good, with ample fullness and detail. They're not as open and natural as high-end studio mic preamps, but the quality is impressive for this price point. Gone is the gritty, edgy sound of early Mackie mic preamps. The redesigned EQ section (bearing the name of Mackie analog engineer Cal Perkins) is also extremely well-behaved for a mixer in this class. More musical than surgically precise, it's almost hard to pull a harsh sound out of this EQ. The EQ's high filter is smooth enough, in fact, to have me convinced it wasn't delivering a full 15 dB of boost. A quick test proved me wrong, and Mackie right.

It would be a shame for Mackie to design such a solid analog platform then fumble


at the converters, but they were careful to keep the quality intact. The Onyx 1640's digital converters sound excellent, as they should—they're Cirrus chips, on-par with those found in many outboard digital interfaces. In a studio test, the Mackie's preamps and converters easily held their own against a mid-priced outboard FireWire interface with a fancy European name.

Can it Compete?

Mackie's approach—adding FireWire digital I/O to an analog mixer—makes sense if your goal is to retain a familiar analog feel. Anyone who has used a Mackie mixer will feel at home quickly with the 1640i. In a church venue, where training can be a challenge, this is a real plus.

But the Onyx 1640i's price is ratcheted up high enough that it's not just competing with other analog mixers. It's within a few hundred dollars of some very stiff competition from "true" digital consoles from the likes of PreSonus, Yamaha and others. The Onyx 1640i may be flirting with the price point of these digital mixers, but it can't begin to compete with their on-board digital processing power.

Yet digital mixers aren't right for everyone, nor every venue. Churches wanting some of the benefits of both worlds—the familiarity and immediacy of analog with the quality of digital I/O—should give the Mackie Onyx 1640i a close look.

LOREN ALLDRIN is a regular contributor to *Church Production Magazine*. 

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