



by Mitch Gallagher

MODEL: Mackie Big Knob

PRICE: \$385

CONTACT: www.mackie.com

MODEL: Grace Design m906

PRICE: \$5,995

CONTACT: www.gracedesign.com

MODEL: Nautilus Master Technology

Nemo DMC-8

PRICE: \$3,600

CONTACT: www.nautilusmaster.com

It's an EQ Award triple play! All three of these products deserve EQ Awards. The Mackie Big Knob offers tremendous performance and flexibility at a minuscule price point. The Grace m906 is a top-of-the-line do-everything stunner. The Nautilus Nemo DMC-8 provides audiophile/mastering-quality analog lushness. Three products, three price points, three approaches, three winners.

Taking Control

Three new monitor control boxes address different needs

As computer-based DAW users shift more and more of their focus "inside the box," many are moving away from large mixers as the centerpiece of their studio. For some, this has created a dilemma: how to perform all the control functions normally handled by the master section of the mixer. These functions include setting monitor levels and switching between sets of speakers, providing headphone feeds, talkback, and more. In some cases, studio owners are using small-format mixers for these functions, which have the added benefit of providing some extra signal mixing capabilities when required. But for others, a small mixer isn't the answer.

A number of manufacturers have stepped in to fill the void with studio control boxes; the last Winter NAMM show saw the introduction of several such boxes. Let's take a look at three very different monitor system controllers. Each offers a unique take on solving the problems associated with going "mixerless" — and each comes in at a very different price point.

MACKIE BIG KNOB

The Mackie Big Knob is set up to duplicate the master section of a well-appointed mixing

Analog inputs	DAW, 2-track A, 2-track B, DAW Phones Mix (all 1/4" TRS, switchable +4/-10); Phono (RCA); talkback footswitch (1/4")
Monitor outputs	Monitor A, Monitor B, Monitor C, Studio Out (all 1/4" TRS, switchable +4/-10)
Headphone outputs	Front panel 1/4" TRS (2)
Other analog outputs	2-track A, 2-track B, DAW, Phones amp (all 1/4" TRS)
Digital inputs	—
Controls	source select (4), speaker select (3), mono, mute, dim, source level (4), monitor level (3), headphone level (2), studio out level, volume, talkback level, phones/studio out source, studio out on/off, talkback to 2-tracks, talkback to phones/studio, +4/-10 switches (for all source and mid/down I/O)
Meters	6-stage LED ladder (2)
Talkback	Built-in microphone, footswitchable
Level matching	Back-panel knobs, for sources and monitors
Format	Stereo
Form factor	Desktop unit
Frequency response	5Hz to 100kHz, +0/-3dB
THD+IMD	>0.015% @ +4dBu
Crosstalk	90dB @ 1kHz
Noise floor	-90dB, 20kHz bandwidth, +4dB

console — and then some! You can switch among four stereo sources, routing them to up to four sets of monitors (three in the control room, one in the studio). All source and monitor connections have level calibration knobs. Almost all connections are on 1/4" TRS connectors; this meant adapters for me as most of my gear uses XLRs.

The unit is designed to sit on your desktop, which is convenient for control. However, if you connect all the possible

ins and outs, you're going to have a ton of cables dangling off the back of your desk — better stock up on cable ties.

Big Knob offers full talkback control, with a built-in mic with level control, and the ability to route talkback to either 2-track for slating or to headphones or the studio set of monitors to communicate with musicians. The headphone outs have a ton of power — even the deafest metal-head should be able to hear phones jacked into the Big Knob. A special DAW Phones Mix Input lets you route a separate cue signal through Big Knob to the phones while a control room mix is coming out of the unit's monitor outs. Input sources can be routed to three stereo outputs for mixdown; there's also a stereo out for feeding an external headphone amp, should you need one.

The push-button switches for choosing sources and monitors have associated LEDs that



indicate when a switch is depressed. You can have more than one switch depressed at once; this lets you monitor, say, a source while you play along, and it's great if you're using a monitor out to feed a subwoofer and you want to be able to turn it on and off without affecting the full range speakers. But for clean A/B'ing it means you have to hit two switches simultaneously. A little practice and it works fine.

And the sound? Big Knob delivers big time. The sound is clean, open, full, dynamic, and rich. Having spent many hours on Mackie boards, I expected good clear, neutral sonics. But Big Knob definitely raises the bar toward high-end analog tonality; I'm quite impressed.

If you need a complete control center for your DAW-based studio, Big Knob has you covered. Big Knob, big performance, small price . . . too cool.

STRENGTHS:

- Stellar sound quality
- Dual headphone outs with separate volume controls
- Convenient desktop unit
- LED meters
- Built-in talkback mic
- Performs far beyond its price point

LIMITATIONS:

- All cables must be routed to desktop
- Takes practice to cleanly switch between sources and speakers for A-B'ing

GRACE DESIGN M906

Jack of all trades, master of none. Does that phrase apply to the Grace Design m906? Nope — more like the opposite. There's little this system can't do, and do with top-of-the-line performance. If you've got a variety of digital and analog sources, work in surround and stereo, and want the best audio quality, this is the box for you. It can accept up to

Analog inputs	2 Channel 1, 2 Channel 2, Cue, talkback mic (all XLR); 5.1 Input 1 (DB25); 5.1 Input 2 (RCA); talkback footswitch (1/4")
Monitor outputs	5.1 Control Room Out 1, 5.1 Control Room Out 2 (DB25); Control Room Out 1, Control Room Out 2, Cue Out (XLR)
Headphone outputs	one on remote, one on rack unit (1/4" TRS)
Other analog outputs	5.1 DAC Out (DB25)
Digital inputs	8-channel AES3 (DB25), 2-channel optical (Toslink), S/PDIF (RCA), AES3 (XLR), 8-channel ADAT (Toslink); word/super clock in and thru (BNC). Supports up to 24-bit/192kHz
Controls	Analog input select (5), digital input select (6), channel solo/mute (7), mono, dim, mute, speaker select, talkback, clock select, Mono>Cue, calibration
Meters	
Talkback	Requires external microphone
Level matching	Comprehensive calibration of all I/O, including cue, talkback, dim, and individual 5.1 speakers
Format	Stereo and 5.1 surround
Form factor	2U rackmount unit + desktop remote
Frequency response	3Hz to 250kHz, ± 3 dB (analog)
THD+N	<0.009% (analog)
Crosstalk	<100dB @ 1kHz (analog)
Output signal-to-noise	-98dBu (low gain mode, analog)

five analog and six digital sources, including two analog and two digital sources in 5.1 surround. You can control up to three sets of monitors (two using the speaker selector switch, the third using the Cue>Monitor switch), two of which can be 5.1. There's an XLR connector for a footswitchable talkback mic.

The built-in 24-bit/192kHz converters sound stellar, and the analog audio quality is top-notch. Every input and output can be individually calibrated, including the cue I/O and the talkback mic.

Digital clocking is foolproof; the m906 can deal with cleanly switching among sources without any digital

noise or reclocking delays. While it's often best to have an external master clock for all your digital gear, with the m906 you don't have to have one. I used the box to control four digital sources and never had a clocking problem.

All input and output is handled by a 2U rackmount box, which also has a headphone connector. Control functions are handled by the sleek remote, which has an LCD for calibrating and selecting clock functions, and two LED readouts to display output levels for the headphones and monitor outputs. The LED readouts aren't meters, they display the reference level of the volume controls. However, I calibrated my monitors using an SPL meter so that, say, 80dB on the LEDs matched 80dB reference level on the speakers.

The remote also has a second headphone output. The headphone amp sounds great, but it doesn't have a ton of output. It should be okay for normal control room use, but may not keep up with loud tracking applications. ►

