FIG. 1: Big Knob, which offers DAW users the functionality of a console monitoring section, draws its name from the massive volume knob that sits in its center.

MACKIE Big Knob

Console monitoring features for the mixerless studio.

By Mike Levine

With today's DAW software and a fast processor, you can create an entire mix inside your computer without having to route tracks through an external mixer. But with all the power that software mixers offer, there are some essential functions, such as monitoring and talkback, that still need to be accomplished with outboard hardware.

A number of companies manufacture specialized devices to provide the functions of a console's monitor section, and one of the more intriguing products is Mackie's Big Knob. It provides DAW users with input and monitor selection, cue and talkback, and monitor volume control and muting. With Mackie's experience as a manufacturer of quality yet affordable mixers, I was not surprised to discover that Big Knob is well designed and reasonably priced.

Knob Hill

The metal-housed Big Knob, which is designed to sit on your desktop, is about a foot in length and six inches deep. It has an internal AC power supply (no wall wart) that can be switched between 100- to 120V and 220- to 240V operation.

Big Knob is aptly named, because its centerpiece is an oversized volume knob near the middle of its angled front panel (see **Fig. 1**). The sheer size of this control makes it easy to grab for a quick volume change. The volume pot inside it, like the other components in this device, is high quality; it fades out smoothly as you get to the bottom of its throw. According to Mackie, Big Knob uses parts that are similar in quality with those used in its Onyx mixer series.

Below the main knob are switches for three useful functions: Mute shuts off all output from the board to the monitors, Dim lowers the volume by 20 dB, and Mono folds your stereo signal down—great for checking a mix's mono compatibility.

A stereo 6-segment LED meter that displays input-signal level is located on the left-hand side of the front panel. Big Knob has four stereo inputs: DAW Mix, 2-Track A, 2-Track B, and Phono. Each input can be activated with the flip of a switch, which also lights a corresponding LED status indicator. You can have more than one input active at a time if you want.

The DAW Mix input and the two 2-track inputs are on ¼-inch TRS connectors, and each has a switch to toggle between +4 dBu balanced and –10 dB unbalanced operation. The Phono input is on unbalanced RCA jacks.

Depending on your hardware setup, you might not use all four inputs, but it's nice to have them available. The ability to quickly select different inputs makes life a lot easier and often eliminates the need to repatch. In my setup, I frequently have to switch between the outputs of two audio interfaces and my computer's built-in audio, and with Big Knob it's a breeze.

FIG. 2: The rear panel features multiple I/O as well as switches and knobs for adjusting various inputs and outputs from –10 dB to +4 dBu.

If you mix to a 2-track machine, Big Knob lets you easily toggle between listening to the outputs of your multitrack and your mixdown deck. Or if you're comparing your mix against a CD, you can patch a CD player into one of the 2-track inputs, and flip back and forth between its output and that of your main mix with the input select switches. If a turntable is part of your setup, it's handy to have the RCA Phono input with its built-in preamp.

The DAW, 2-Track A, and 2-Track B inputs all have corresponding outputs on the rear panel (see **Fig. 2**). Like most of Big Knob's I/O, these are all switchable between +4 dBu and –10 dB. You can use those outputs to feed 2-track machines with your mix or to send your mix back into your DAW or to any other device. You can think of Big Knob as a push-button-controlled audio matrix and patch bay.

BIG KNOB SPECIFICATIONS

Audio Inputs	(6) balanced/unbalanced ¼" TRS (3 stereo pair, 2 RCA phono, 1 stereo pair)
Audio Outputs	(6) balanced/unbalanced ¼" TRS monitor (3 stereo pair), (12) balanced/unbalanced ¼" TRS line (6 stereo pair), (2) ¼" TRS stereo headphones
Talkback/Footswitch Output	(1) ¼" TS
Input VU Meter	6-segment LED ladder
Frequency Response: Line-Level Inputs and Outputs	0+, –1 dB, 10 Hz–50 kHz; 0+, –3dB, 5Hz–100kHz
Frequency Response: Phono Input	± 0.5 dB, 20 Hz–20 kHz
Distortion: Line-Level Inputs to Line-Level Outputs (unity gain)	>0.015%, 20 Hz–20 kHz @ +4 dBu
Distortion: Phono Input, Nominal Gain	>0.015%, 20 Hz–20 kHz @ +4 dBu
Dynamic Range: Line Inputs	112 dB minimum
Dynamic Range: Phono Input	93 dB minimum
Dimensions	13.5" (W) × 3.2" (H) × 5.9" (D)
Weight	3.5 lbs.

Select Me, Please

If you're used to a mixer with a single monitor output, you'll love Big Knob's monitor-selection features. Three Monitor Select buttons (labeled A, B, and C) that have corresponding ¼-inch outputs on the rear panel, allow you to switch between several sets of monitors. Monitor Trim pots let you adjust the level for each of the three monitor outputs anywhere from –10 dB and + 4 dBu, making it easy to match levels.

I patched the output of Monitor A to a pair of Genelec 1029As, and the output of Monitor B to a power amp that drives my Yamaha NS-10Ms. On my old mixer, I had to set up a dedicated bus to route the signal going to the Genelecs, and setting it up required patching and several adjustments. With Big Knob, however, my speakers are permanently configured and can be switched easily and often.

Because all of your monitor mixes will be passing through Big Knob on their way to your speakers, headphones, and 2-tracks, sound quality is an important factor. In the listening tests that I did, Big Knob exhibited a crisp, clean sound. To my ears there was no discernible coloration—it just sounded good.

Answer the Phones

You get several options when it comes to headphone monitoring. The front panel has two ¼-inch TRS stereo headphone jacks, each with its own output control. The headphone outputs can pass along the main mix, or you can switch them to monitor the input of the DAW Phones Mix Input jacks by pressing the Phones/Studio Out Source button. (Because this button has no LED status light, it's a little hard to tell at a glance which way it's set.) The internal headphone amp seems plenty powerful.

Two ¼-inch Phones Amp output jacks give you the option to send your monitor mix to an external headphone amp or headphone mixer. You can also send that headphone mix or the main output to the ¼-inch Studio Outs jacks on the rear panel, which let you feed studio monitors in another room, allowing your talent to listen to playback with their headphones off.

Back Talk

Big Knob has a built-in talkback mic with a compressor designed into its circuitry to help keep levels even between sources (such as engineers and producers) who are at different distances from the mic. The mic's output can be routed with the push of a button to either the Phones/Studio mix for talking to talent located in a different room or to the 2-track outputs for slating takes. A level control lets you adjust the output level of the talkback mic, and it has plenty of headroom.

There's even a Talkback Footswitch input for connecting a momentary footswitch or a momentary handheld switch (not included) so that somebody other than the engineer can trigger the talkback circuit.

Big Deal?

If you're looking to replace those monitor-section functions from a hardware mixer and want some additional options to boot, Big Knob is an excellent product. It's well designed and offers a good blend of quality, features, and price.

I liked it so much that I bought one for myself. It's now become a thoroughly integrated part of my studio. I can't imagine doing a session without it.

Mike Levine is a senior editor at EM.

PRODUCT SUMMARY

MACKIE Big Knob

audio controller
$384

OVERALL RATING (1 THROUGH 5): **4.5**

PROS: Solidly built. Fully-featured and versatile. Has the ability to handle both +4 dBu and –10 dB signals. Volume knob easy to grab. Plentiful I/O. Loud headphone amp.

CONS: Phones/Studio Out Source button status hard to tell at a glance. Tabletop design not ideal for rack-mount setups.

MANUFACTURER
Mackie
www.mackie.com