

SXSW 2012: Austin Explodes With Opportunities—We'll Take You There!

# RECORDING

The magazine for the recording musician

## MIKE YOUR INSTRUMENTS

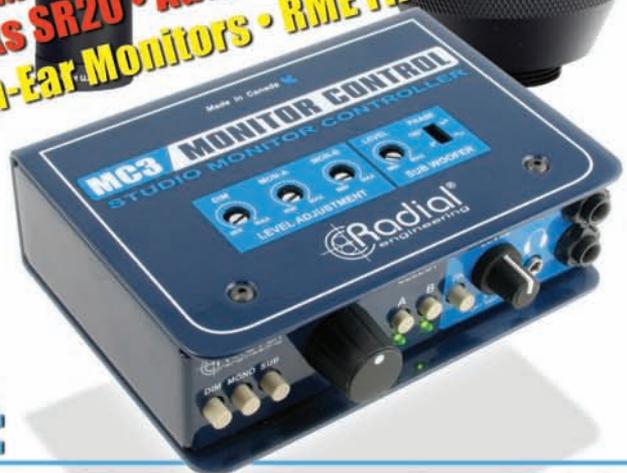
For *Maximum* Impact!

**LEARN:** The Art of Capturing Performances  
**CHOOSE:** The Right Tools For The Job  
**EXCEL:** Combining New Technology And Old



**8 Products Reviewed:**

**MICS ON TEST:**  
Kel Audio HM-7U and HM-3C • AKG Perception 120 USB  
Earthworks SR20 • Audio-Technica AT4050ST  
**Alclair Reference In-Ear Monitors • RME Fireface UCK**



**FIRST LOOK:**

**Radial Engineering MC3**  
—monitor switching for every studio!

\$5.99US \$5.99CAN

0 09281 03050 8

VOL. TWENTY FIVE  
NUMBER EIGHT  
MAY 2012  
USA \$5.99  
CANADA \$5.99



# REVIEW

BY MIKE METLAY



## Radial Engineering MC3 Passive Monitor Switcher Now every studio can have practical, excellent-sounding monitor control

In these pages, we spend a lot of time talking about how you have to use multiple sets of monitors to check your mixes if at all possible. You want to be able to switch back and forth between full-range studio monitors and one or more sets of “check monitors” with different audio characteristics, including if possible a mono check speaker like the DIY model we discussed in our April 2012 issue.

If possible, the levels of the speakers should be adjusted so they all hit your ears with the same SPL at the sweet spot, so you’re not fooled into thinking your mix sounds better on one or the other set of speakers because it’s slightly louder. And in addition to your speakers, headphones can be invaluable for homing in on tiny details and imperfections.

Comparative listening on multiple speakers at reliably matched levels and then on headphones—that’s the key to making your mixes sound their best. But while you’re futz-ing around with your speaker connections, there are other things that could be handy for even a small listening environment.

Phone ringing? Someone popped into the control room to ask you a question? It’d be nice to mute or dim (reduce) the speaker volume for a moment or three, without messing up your volume levels when you bring them back up. What if

you want to check your mix with a subwoofer? It’d be great to send a mono signal (properly summed) to a sub without messing up your conventional speaker routings. Did you hear something on headphones that you want your talent or the producer to hear for themselves? It’d be great to feed more than one set of headphones at a time... or even send a signal to a headphone distribution amplifier so the whole band can listen in.

The device that makes all of this possible in the modern studio is the monitor controller. And there are some really big, fancy ones out there that we’ve reviewed in the past, with stuff like a built-in talkback circuit, or active bass management, or surround capability, or any one of a number of other specialty features—but they tend to be big devices with a big desktop presence (or a big remote controller) and price tags to match. Not outrageous for a medium- to large-sized studio, but enough for users of small setups to sigh and say, “That’s just too much box for my little rig”... and go on messing with subgroup outputs feeding multiple speakers, mismatched levels, no easy way to mute or dim in a hurry...

It should be no big surprise that Radial Engineering, those devilishly clever Canadians with a habit of inventing dozens

of clever little boxes that solve dozens of studio problems, should eventually address the question of easy-to-use, great-sounding monitor control that anyone can afford to install in even the smallest studio arrangement. The MC3 is a passive monitor controller and headphone amp that hits all the key issues and then some; we got one of the first ones in the USA and put it through its paces.

### What’s under the hood?

Built into a typically Radial-tough steel chassis that could be used to prop up a building, the MC3 is a hybrid active/passive device that offers monitor switching, headphone amplification and distribution, mono summing, and subwoofer support.

When I say “hybrid active/passive” I mean that there is active circuitry in the MC3, which is why it needs an external power supply, but that said active circuitry appears in only two parts of the box: the headphone amp (which naturally needs active circuitry, being an amplifier) and the

subwoofer feed (which is buffered so that switching in the sub doesn’t load the speakers being listened to). The monitor switching, dim, and mono summing circuits are all completely passive so as to minimize or eliminate any audio effect on your listening chain. This yields an impressive –108 dBu noise floor.

### How does it work?

The rear panel has 1/4" TRS jacks for balanced inputs and two sets of balanced outputs, A and B. There are also a Sub Out (an unbalanced 1/4" TS jack) and a stereo 1/4" Aux Out, which is simply an extra output from the headphone amplifier. The front panel has buttons for Dim, Mono, and Sub, a large Master level pot, Monitor Select A and B buttons with LEDs, and the headphone amp’s On button, with three 1/4" TRS stereo outputs in parallel, two 1/4" and one 1/8" mini. Note that the Master pot is a passive control; it can’t set your signal any louder than what you feed the MC3.

The MC3 also has a number of recessed controls activated or tweaked with a screwdriver; these are settings that you’ll need to get your rig working properly but won’t want to mess with while using the MC3—in fact, that you don’t want anyone else messing with either!

Each monitor output has its own top-panel



trimpot from muted to full volume, so you can adjust speaker levels to be the same at your listening position and leave them that way; there's a similar trimpot for the Dim function so you can decide if you want the Dim button to just drop your monitor level by a few dB or down to silence. (There's no Mute button per se; if you want to mute rather than dim your speakers, just hit the A or B buttons to turn them off. Simple!)

The Mono button works as advertised, and the Sub button simply routes the main signal to the Sub Out, leaving the filtering to the sub itself. That greatly simplifies the MC3's internals with little or no harm, since pretty much every studio-worthy sub has its own lowpass filter settings. A separate trimpot and switch let you set the Sub Out's level and flip it in or out of phase. Oh, and on the rear panel, a tiny hidden button lets you select whether you're feeding the MC3 from balanced or unbalanced inputs.

#### What does it sound like?

Nothing.

#### What do you mean, 'nothing'?

I mean *nothing*. This is the quietest, cleanest audio router I've ever heard—the headphone amp is exceptionally clear and quiet even while producing hefty output levels, but its -87 dBu noise floor is positively noisy compared to the dead-silent monitor path.

This box simply does its job and lets you hear what your speakers can do without any coloration at all.

#### Gripes and final thoughts?

Gripes? Tiny ones, addressing which would have added a lot to the complexity and cost of the MC3—I'd have liked to see a separate level control for one or more of the headphone outs, and/or a way to have the headphone level pot not affect the Aux Out level (for feeding an external recorder or headphone distro amp at a steady level). Small stuff compared to what this box does right, which is pretty much everything else.

The MC3 does everything it's designed to do without fuss and at relatively little cost compared to super-duper active monitor-control devices. It brings the useful, convenient, audio-respectful monitor control that every serious musician needs into reach for pretty much every studio out there. The more you read our articles and Readers' Tapes critiques and learn about how important it is to be able to reliably switch between monitors and headphones in even the smallest studio, the more you will realize that this box was designed as if Radial was reading *Recording's* collective mind. ➔

**Price:** \$249

**More from:** Radial Engineering, [www.radialeng.com](http://www.radialeng.com)