

Audio. Production.
Installations & Gear

In the News

- 5** Ex-Starlite Employees Face Gear Theft Charges
- 5** Educator John Krivit Named AES President
- 10** In Memoriam: Buggy Moran, Jimmy Page Henderson

Buyers Guide

- 40** 2-inch Neodymium Compression Drivers



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30

The Top Ten Tours of 2015

The soundcos, crew and gear that made it all happen

COVER PHOTO BY JENSEN SUTTA

44

ROAD TEST Radial JDV Mk5 Direct Box



inside this month



36

50 Years of Heil Sound A Half Century of Innovation



49

Theory & Practice Removing Feedback from Wedges



52

FOH-at-Large Guns!

Jerry Harvey AUDIO
EST 1995

3 Doors Down | 30 Seconds to Mars | A Day to Remember | A Perfect Circle | Aaron Carter | **AC/DC** | Ace of Base | Adam Lambert | **Aerosmith** | Alice in Chains | **Alicia Keys** | Alter Bridge | Alt-J | Andre3000 | Animal Collective | Anthrax | Ariana Grande | Ashley Simpson | **Averged Sevenfold** | Avril Lavigne | Awolnation | Backstreet Boys | Barenaked Ladies | Barry Manilow | **Bastille** | Bela Fleck | Between the Buried and Me | Big Time Rush | **Billy Joel** | **Blink 182** | Blonde | Redhead | **Bob Seger** | Bon Jovi | Jason Bonham | Boston | Bouncing Souls | Boyz II Men | Brand New | Brandy | Brian McKnight | Bring Me The Horizon | **Britney Spears** | **Bruno Mars** | Buckcherry | Bullet For My Valentine | Bush | Carley Rae Jepsen | Counting Crows | **Carrie Underwood** | Cat Power | Ceelo Green | Celtic Woman | Charli XCX | Cheap Trick | **Cher** | Chris Isaak | **Christina Aguilera** | Circa Survive | Clean Bandit | Cody Simpson | Coheed and Cambria | Crown The Empire | The Cult | The Cure | D'Angelo | Dan + Shay | Darius Rucker | The Darkness | Daughter | Daughtry | Dawes | **Def Leppard** | Dead by Sunrise | Deftones | The Devil Wears Prada | Dirty Heads | Disturbed | Doobie Brothers | Drake | Dropkick Murphys | **Duran Duran** | **Earth, Wind and Fire** | Edward Sharpe and The Magnetic Zeros | Ellie Goulding | Englebert Humperdinck | **Elvis Costello** | **Eminem** | **Enrique Iglesias** | Fall Out Boy | Falling In Reverse | Father John Misty | Feist | Fiona Apple | Five Finger Death Punch | **Fleetwood Mac** | Florence and The Machine | Florida Georgia Line | Foreigner | **Foo Fighters** | Fun. | Garbage | **Garth Brooks** | **Gavin DeGraw** | Godsmack | Goo Goo Dolls | Grahger Smith | Grouplove | Guns N' Roses | Heart | Here Come The Mummies | Hollywood Undead | I cona Pop | **Iron Dragons** | Ingrid Michaelson | Interpol | Inxs Iratlon | Iron Maiden | Jack Johnson | Jake Owen | **Janet Jackson** | Jennifer Hudson | **Jennifer Lopez** | **Jimmy Buffet** | John Mayer | JoJo | Josh Groban | Sparks | Journey | The Joy Formidable | Judas Priest | Julio Iglesias | **Justin Bieber** | **Justin Timberlake** | **Katy Perry** | Keith Sweat | **Keith Urban** | Kip Moore | Kool & The Gang | **Kenny Chesney** | Kiss | **Eddy Gaga** | **Lana Del Rey** | Lauryn Hill | Lenny Kravitz | Lil Wayne | Limp Bizkit | **Linkin Park** | **Lionel Richie** | Local Natives | Machine Head | Macy Gray | **Madonna** | Marc Anthony | Mariah Carey | Manson | Marina and the Diamonds | **Maroon 5** | Mary J. Blige | Mastodon | Maxwell | Meat Loaf | Megadeth | Meghan Trainor | Mel B | Melissa Etheridge | Michael Franti & Spearhead | **Miley Cyrus** | Behavior | Miranda Lambert | Mjss May I | Modest Mouse | Modestep | The Monkees | Montgomery Gentry | Moody Blues | Morrissey | Motley Crue | N3s | **Neon Trees** | New Edition | Nickelback | Nico Vega | **Nails** | NKOTB | No Doubt | Of Mice and Men | Oily Murs | Owl City | Ozzy Osbourne | Papa Roach | Passion Pit | Pennywise | Peter Frampton | Petshop Boys | Phantogram | **Pharrell Williams** | Phillip Phillips | Phish | Phoenix | Scissor Sisters | Selena Gomez | Sevendust | Shakira | Shinedown | Slipknot | Smashing Pumpkins | St. Vincent | Steely Dan | Sting | Stone Roses | Stone Temple Pilots | Sum 41 | System of a Down | T Pain | Tears for Fears | Tenacious D | Testament | Three Days Grace | Tim McGraw | Trace Adkins | Train | Travis Tritt | **Trey Songz** | Trisha Yearwood | Trivium | **U2** | **Van Halen** | Vance Joy | The Wanted | The War on Drugs | We Are The Fallen | The Weeknd | The Who | The Yellowjackets | Whitesnake | Wiz Khalifa | Young Guns | Young the Giant | Youth Lagoon | Zac Brown Band

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The Super Direct Box?

Radial Engineering's flexible and versatile JDV Mk5 direct box combines a non-compromised approach to audio purity with an advanced feature set for sonic tweaking — and a host of functions that redefine the notion of a “simple” D.I.

Radial Engineering JDV Mk 5

PROS

- Transparent, but full featured
- Tough, near-indestructible construction
- Unit can output at mic or line level
- Jensen Transformer isolated outputs

CONS

- Uses external power supply
- It can be difficult to determine which position the inset switches are in (particularly on the side of the unit).

STATS

Frequency Response	20 Hz to 20k Hz
Dynamic Range	107 dB
Equivalent Input Noise	-90 dBu
Weight	2.8 pounds
Price	\$449/street
Manufacturer	Radial Engineering
More Info	radialeng.com

ROADTEST

Radial JDV Mk5 Direct Box

By JJ Jenkins

How many times can you reinvent the wheel? A direct box may seem like a simple piece of gear — and some are, such as Radial's acclaimed JDI line of passive direct boxes. But when active processing enters the picture, Radial has been known to break out of that “just a direct box” mold with some creative designs and features that redefine the modern direct box.

In fact, Radial seems to do this on a regular basis and improves on it every time. The Mk5, the latest version (and fifth generation) of the company's popular JDV active direct box, features some interesting and useful innovations that take it well beyond the norm.

» Features & Functions

The user guide is well put together, informative and useful. It even has a block diagram so you can see the routing of the electronics.

But let's begin with a look at the JDV Mk5's front panel. There two input channels with separate level adjustment knobs for channel A and B. Both channels also have individual knobs for high pass filters ranging from 5 Hz to 500 Hz.

There is also a channel select button and LED indicator to switch between channels A and B. A Phaser (phase adjustment) knob to fine-tune the relative phase (time alignment) between channels A and B. But this is no simple polarity reverse: A switch changes your adjustment option from 1 to 180 degrees to 181 to 360 degrees — an essential touch, particularly on combined miked/direct bass feeds.

LEDs on each channel show if you are receiving signal or you are overloading. Channel A has a “10M” switch sets the load to 10 Mohms for piezo or variable drag for magnetic pickups. A “drag” adjustment knob for matching the load of passive pickups is one of the recent innovations that Radial has broken new ground with. Also on channel A is a phantom power LED to let you know 48V phantom power is active on the mic input.



The actual phantom power switch is on the side of the box, along with a button to blend channels A and B, and an Aux out/direct switch that lets you introduce an isolation transformer into a stage amp output signal path to reduce ground hum or buzz.

I have to say that these switches, as well as the load switches on the front are all recessed inset switches, which I think are great for keeping them safe from getting bumped by accident, but I had trouble visually telling if they were active or not. The phantom has a front panel LED, so that is identifiable, although I had trouble turning the phantom off. I thought I had released the switch, but the LED remained lit.

To continue with the front panel, in addition to the level and high pass filter adjustment, channel B has a load switch that the input impedance from 10M ohms for piezo transducers to 220k ohms for magnetic pickups. On the back panel we've got a locking 4-pin XLR power connection, a standard 3-pin XLR output that is transformer isolated to address ground loops.

» Slick Input Tricks

There are also two unbalanced 1/4" input jacks used to connect instruments to either channel A or B. There is a balanced 1/4" TRS microphone input. And as the unit has phantom power, you can use a condenser or dynamic microphone. One slick trick comes from the “Blend” switch, which makes both the A and B inputs active at the same time. Using the Blend switch, you can easily combine an instrument's Hi-Z pickup output (going into channel B) with a mic input (such as a miniature clip-on mic) going into channel A. This opens up a lot of tonal variations with a rotary pot on each controlling the blended sound. The downside here is that the mic input is TRS, so you will have to come up with an appropriate adapter to connect to your mic.

An unbalanced 1/4" thru output can be used to feed a stage amp. There is also a 1/4" tuner output and an input for an optional JR2 remote footswitch. When connected, this lets you select the input channel or mute the JDV for silent tuning. There are also a series of inset switches to adjust the XLR output. The first is a polarity reverse that inverts the signal polarity by flipping pin-2 and pin-3 on the XLR output. The second is a ground lift that disconnects



pin-1 at the XLR out to reduce hum or buzz that might be caused by ground loops. Switch three adds a transformer into the XLR signal path to help eliminate noise — or simply add another tonal variation. Switch four increases the XLR output from mic level to +20 dB line level for direct connection to a console.

» The Bottom Line

I tried the JDV Mk5 out with a variety of instruments to see how it handled them. I tried guitars, keyboards and bass and the JDV did not color their sound in any way, which is what I look for in a direct box — that is, unless I wanted more coloration and here, the unit delivers a wide palette of possibilities.

From an audio perspective, the JDV Mk5 rocked, taking full advantage of the clarity of its discrete Class-A electronics, feed-forward design and 30-volt rails providing headroom for days — exactly what you want when capturing the percussive transients of hard rhythm guitar strums.

Is this the perfect direct box for every situation? Hardly. The JDV Mk5 is a precision instrument and would not be my first choice when plugging into a bass rig from band #11 while doing sound for an all-day street fair. But for use with players that are willing to make a relatively small investment in time to create the optimal sound from their instrument, the JDV Mk5 is an ideal tool for some serious sounds. Radial Engineering refers to this flagship model as a “Super Direct Box” and I believe you'd be hard pressed to find a more versatile, great sounding tool in your sonic arsenal. **FOH**

JJ Jenkins is a live sound and studio engineer based in the San Francisco Bay Area.