



Radial Engineering features a wide variety of gear built for both the studio and stage. Based in Vancouver, Radial is widely known for its line of great-sounding and nearly indestructible DI boxes, with products built for any application or I/O situation imaginable.

Radial is also home to other products such as interfaces, guitar amp attenuators, 500 Series modules, and reamping tools, just to name a few. Today we will be taking a look at the newest generation of Radial's flagship active DI, The JDV. The JDV mk5 is a Class-A active direct box and preamplifier, armed with tons of useful features.

Origins

The first generation JDV originated in the 1980s, traced back to renowned studio designer John Vrtacic. Vrtacic's custom-made direct box stood apart from the others, quickly becoming

Radial Engineering JDV Mk5

Truly a "Super Direct Box", this DI lets you add miked signals with ease

known for capturing amazing bass tones with an extremely accurate signal. Vrtacic accomplished this by discovering a way to buffer the direct signal without the use of negative feedback.

After a shootout between some of the top active DI boxes on the market, Vrtacic's custom-made design had an overwhelming response. Radial quickly reached out in an attempt to purchase the design. It worked—and this is how the first generation JDV (V for Vrtacic) came to be.

Overview

The JDV Mk5 is very well designed. An arched handle that sweeps the top of the unit makes it easy to carry, and the metal casing extends over the pots and switches for extra protection (a common Radial design feature). There are optional additions to rackmount the unit, should your JDV Mk5 want to live in a rack rather than on a tabletop or amp. Overall, the JDV Mk5 is pleasing both aesthetically and practically, and is a rare breed of DI units that excels in both live and studio situations.

The JDV mk5 is a dual-input DI, mic preamp, and phase adjustment tool. The front end on the JDV features 100% discrete electronics, and a unique Class-A design using zero negative feedback to buffer the signal. This creates an extremely accurate signal, without adding any coloration or artifacts of any kind. The JDV Mk5 also comes armed with Radial's well-known Drag control, which allows you to adjust the input impedance to match any pickup. The output is handled by a single XLR out, armed with isolated Jensen transformers, and a new +20 dB feature to send out line-level signal—eliminating the need to run the JDV Mk5 into a mic preamp at the mixer.

A walkthrough

The rear panel has two instrument inputs, a TRS input, a Thru for your amp, a Tuner output, and a footswitch input, all on 1/4", and an XLR output, plus a 4-pin socket for the external power supply.

Input A can accommodate anything from a magnetic pickup to a condenser microphone (yes, with 48V phantom power!), the latter using a dedicated balanced 1/4" TRS microphone input.



The Drag control for Channel A adjusts the load from 1MΩ down to 10kΩ.

Turning the control clockwise will add air and make the tone sound brighter.

Turning the control completely counterclockwise will round off the tone, making it sound warmer and slightly darker. We'll talk more about Drag in a moment.

Channel B has, in place of the Drag Control, two different load settings—220KΩ or 10MΩ. The 10MΩ load setting is intended for piezo transducers. Elevating the impedance with a piezo dramatically widens the frequency response and smooths out the tone.

If you are using two separate instruments with the JDV, you can switch between channels A and B via front panel switch or optional footswitch. The currently selected channel will be indicated from an LED on the front panel.

Both channels come with green and red signal-present and overload LEDs, and a highpass filter ranging from 5 Hz to 500 Hz. Also on the front panel is an LED for the Mute feature, which is available via the optional JR-2 footswitch.

Phantom power for channel A has a front-panel indicator light and a recessed button on the side panel. Also on the side panel are recessed controls to transformer-isolate the Aux (Thru) output if desired, and to turn on Blend. The rear panel has recessed controls pertaining to the XLR output—180° phase flip, ground lift, transformer isolation, and a +20 dB switch (see below). Both transformers are made by Jensen.

Blend it and Phaze it

Combining both inputs with the Blend function can create a very full, well-rounded tone. Once you've adjusted relative levels on the inputs, the built-in Phazer phase adjustment tool allows you to accurately time-align both channels for use on a single instrument, such as a pickup and a condenser microphone on an acoustic guitar. Using a pickup in conjunction with another microphone can produce a much more rich and balanced tone than just using a pickup alone.

The Phazer really opens up some flexibility when using a two-input setup on stage. The placement of the microphone may change from gig to gig, but a quick adjust with the phase tool can ensure that everything sounds full and vibrant, even after getting folded into the single XLR output. When working in a home studio with limited mic preamp real estate, the ability to blend both signals then output

at line level to save a mic preamp can rescue a session. It's a very practical and easy to use tool, and I got a ton of use out of it during the review period.

A real Drag

I tried running my G&L ASAT through the JDV Mk5 to try out the different Drag settings. To my ears, rolling the Drag to either extreme sounded similar to adjusting the EQ, even though it's actually changing the impedance. Both extremes tend to shape the sound in a very natural way, without any honks or spikes.

Turning the Drag clockwise created a tone that had an easier time cutting through the mix. It added a nice top end without sounding brittle; it created a layer of definition that sometimes lacks in a standard DI box. In my recent projects, I've been recording with the Drag control set counterclockwise side. To my ears, this really warms up the tone, while still capturing that same definition—especially when you dig into a line. Depending on your instrument, I would suggest experimenting with the settings to see what sounds best to your ears.

I did some recording with a bass guitar through the JDV, and the results were very impressive. The signal on its own sounded clean—then with the Drag set counterclockwise, it delivered just the right

amount of warmth. After adding some vibe with plug-in emulations of analogue compressors, I was able to get a fantastic bass tone using just the JDV and some digital processing. No amps needed here!

Additional features

One thing I love about the JDV is its extended headroom. Typical direct boxes have a rail voltage of about 3 to 5 volts, but the JDV is designed to handle signal levels in excess of 16 volts. This is partly why a 'pad' function is not missed. The headroom is so great that only extreme cases will be able to overload the JDV.

The Mk5 brings a new +20 dB switch to the rear panel, intended for line-level direct recording. The option to choose the output level makes this an even more versatile unit.

Comments and conclusions

The Mk5 is a faithful next stage in the evolution of the JDV family. It combines the same consistently accurate, clean and precise tone we expect with an extremely intuitive design and new features. Drag control alone sets the JDV apart from all the standard Hi-Z instrument DIs on the market!

The microphone preamp is very solid on the JDV. It really shines with instrument-specific condenser mics, many of

which can be found as clip-ons, or built straight into acoustic instruments. The ability to blend the two channels together can bring an entirely new spectrum to your tone, combining the life and energy from a condenser mic with the instrument's pickup. Keep in mind that if you are looking for an instrument preamp that will cover your tone with vibe and vintage coloration, you won't find it here. The JDV Mk5 is intended to capture your instrument's sound in a realistic way.

If you are a musician gigging with acoustic instruments, the JDV will give you studio-quality results in a durable housing that is road ready. The JDV has also proven worthy as a workhorse studio DI; the Drag control gives you flexibility for any variety of pickup you may encounter, and you won't be able to beat the reliability, headroom and consistently clean tones for the price. Highly recommended! ☺

Price: \$449.99

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