

Tests

RADIAL JDI JT-DBE DIRECT BOX

by John Albani



Radial's new JDI passive direct box is amazingly clean and noise free. Its design was a direct result of asking reputable names in the industry, such as John Vrtacic (Little Mountain Sound, and currently at the Armoury Studio) and Ron Obvious (of Bryan Adams' Warehouse Studio) what would make up a great direct box. John was responsible for helping with the design of the circuit board; and Ron's involvement was in the initial testing and input on design.

In my tests, I used, as a comparison, my active BSS AR-116 with a 117 phantom power pack. Both units are similarly priced around \$300 Canadian. The BSS had only one feature over the JDI, that being a phase reverse switch that I find very useful when working on the large amount of consoles not having a phase flip switch. However, the JDI was much more open sounding than the BSS.

The heart of the box is a Jensen JT-DBE. Jensen has been well known for years as the maker of the best audio transformers in the world, which are designed with legendary high frequency response and low distortion levels. The Jensen transformer used for the JDI direct box comes with a 20-year guarantee, and the JDI itself has a three-year warranty. The features of the JDI (known as the "Jeddy") consist of a ground lift, 1/4 inch input and through jacks, an XLR output connector, a 15dB pad switch, a line and instrument pick-up optimizing switch which utilizes a roll-off circuit at 60 kHz, and a no-slip pad on the bottom of the box, which is great for preventing it from falling off things due to heavy vibration. All of the switches and jacks are hand wired using Mogami wire. The JDI employs a dual chassis design. The extra thick circuit board is mounted on an internal chassis to help reduce damage from abuse.

This chassis is fitted inside an extruded aluminium body to prevent damage to the switches. The Jensen transformer is protected from magnetic fields by its mu-metal casing and from RF interference by the internal 'Faraday' electrostatic shield, eliminating hum and buzz completely. This high quality direct box, being passive instead of active, means you do not have to fool around with batteries or rely on phantom power. Also, you don't run into the danger of blowing up the box when (*not if*) someone unplugs the unit before the Phantom power is turned off. It is in my experience, that most Phantom powered direct boxes can also be quite noisy, the exception being the more expensive high-end ones on the market.

The most noticeable difference with this direct box is definitely its transparency and extra fullness of tone. Keyboards had much more clarity and definition. On bass guitar, the bottom end was thunderous and tight. The top fre-

quencies exhibited an openness and increase in intelligibility I have yet to hear with another direct box. It literally sounded like I put new strings on the bass. I usually like to mix some of the bass player's amp with the direct sound. The amp is used for top end and the direct sound for solid bottom. I could, however, in most cases, easily use the direct bass without an amp as the only sound because of the incredible clarity and increased top end which comes from that wonderful Jensen transformer. I plugged my Takamine acoustic guitar into the JDI and could not believe how full it became as compared to running through my tube pre-amps. Again, there just seemed to be all this tone which wasn't there before.

If you are in the market for a direct box, I would strongly suggest you give the JDI a try. It's definitely the best direct box I've heard in a while, and its quality and price make it well worth considering over other passive or active boxes.

Specifications

Input impedance: 130 k-Ohm
Output impedance: 150 Ohm
Pad: 15dB
High frequency filter circuit: 60 kHz
Internal wiring: hand-wired to PC with Mogami
Inter-modulation distortion: 0.0068%
Distortion: 1 kHz, +4dBu 0.001%
20 Hz, +4dBu 0.036% typical
Deviation from linear phase: +1.21-01 typical
Common mode rejection: 100dB @ 60 Hz
Noise (JT-DB-E transformer): -131dBu 22 Hz-22 kHz
Noise JDI: -102dBu 22 Hz-22 kHz
Guarantee (Jensen JT-DB-E): 20 years
Guarantee (Radial JDI): 3 years

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