



Undeniably Vital

Tales of the humble DI box

By Chris Kathman

Ah, the tiny DI box. So small compared to a loudspeaker cabinet or console, yet an indisputably crucial part of the signal chain. When one goes bad, it can really mess up a show.

Most of us have our own superstitious DI favorites. As I've said before in these pages, I'm convinced that this is, to some extent, very much in the mind of the beholder, and not backed up by empirical evidence. I'm not capping on others – I'm as guilty as anyone.

I flunked my own blindfold test a few years ago. Mixing a show in Milan with Cake, every single one of the venue's DIs were intermittent, and I swore that would never happen to us again. When we came home, I went down to Guitar Center with the band credit card and invested in a number of Whirlwind IMPs.

Some of them rode in the microphone box, but one was stashed away in the back of the bandleader's little Fender amp. We did a show one day with Rat Sound, and my standing instructions to the monitor guy and guitar tech were to use the DIs "du jour" belonging to the venue or sound company, and only go to the IMPs if those were defective.

Positioned at balcony mix position, I assumed that they'd used Rat's Countryman boxes. I brought up the bandleader's guitar and was really impressed by how clear and big it sounded. I got on the talkback and said, "That's the Countryman, right?"

The guitar tech answered, "No, it's the IMP."

Apparently this is not an isolated experience. On the LAB (Live Audio Board), Mikey P related that, "When I

saw a passive bass brought out, I immediately had my doubts. But the IMP2 has wowed me each time I've used it in such an application since then."

Adam C agreed, saying "The IMP2 is definitely my favorite cheap passive DI – I've got eight of them. They sound good, they're indestructible, and they don't have a switch for speaker input that can accidentally get pushed and attenuate a signal to the point of uselessness."

I've met Carl Countryman, and he is a nice person who makes a great product, so I would like to apologize to him for the story I am about to tell. It doesn't reflect on his justifiably famous direct box, but rather on some touring people with poor communication skills and working procedures.

I'm a former employee of the Warfield Theatre in San Francisco, a 2,500-seat vintage venue that hosts bands on their way up and on their way back down. Countless times, a shout would echo forth from the house mix position to the stage, "I don't have such and such channel."

Invariably, the dork out front would gain the channel in question wide open, then someone on stage would holler the fatal question, "Did you put the phantom on?"

It was like a nightmare or a horror movie, where everything goes to slow motion, and I knew it was too late to scream, "Mute the channel!" The next thing heard would be a titanic "BANG!" through the house system.

I started putting out passive boxes and would only break out the Countryman units if someone really made a fuss. Their own product literature claims you can drive a truck over one, which makes me feel better

for the way I used them to prop up the Sound On Stage monitor wedges.

Craig Leerman tells a funny story, thankfully without the massive explosions. "A few years ago I was doing a backline gig, and as usual, was helping the PA company set up the stage mics, DIs, etc., for soundcheck. We get the stage wired up and go through the inputs for a line check before the band comes out.

"All the inputs are getting into the PA except the bass guitar and keys. We try a (SM) 58 into the line and it works fine. Thinking that the phantom power may not be working on that channel, we actually plug a condenser mic into the line, and that works also.

"Now we think we have a bad DI, so we change the Countryman to another, and still no bass guitar. Puzzled, I go over to the keyboards and discover that those Countryman DIs aren't working either. As the PA guys, stagehands and myself are standing there discussing what in the world is going on, the new guy from the PA company says, 'I don't understand why they are not working, I just put batteries in them.'

"Countryman DIs don't need a battery for phantom power usage,' was our group reply. We opened up the units to find that he had installed batteries in the 'empty' battery slots of all the Countryman units. Unfortunately, he had used all the dead batteries that had just been taken out of the band's IEM systems! We removed the dead batteries, and the units functioned flawlessly. Leave it to the new guy to 'FIX' things!"

Then there is the world of megabuck specialty DIs. Dave Dermont, chief lizard of the LAB



Lounge, mentioned that, "A bassist I work with occasionally carries around an esoteric tube DI called The Evil Twin that just smokes!" I did a little research and found out that The Evil Twin is made by BruceSiefried at Eclair Engineering and retails for \$800.

Also for use with bass is the Ampeg SVT-DI Tube Driven Direct Box, which lists for \$429, although you can find it through some mail order outlets for \$300 plus shipping. It has a 12AX7 tube in it, plus both XLR

and 1/4-inch outputs.

For guitars, in addition to the ubiquitous rack-mount Line 6 POD units, many people are using DI boxes made by Palmer that include straight-up models that just transform the 1/4-inch signal to XLR. There's also The Junction PDI 09 specialized filtered guitar box that includes mellow, normal and bright tones and retails for \$135. Of course, the Hughes and Kettner Red Box Pro Cabinet Simulator have been around for quite

a while.

There's something for everyone in the wonderful wide world of DI boxes – passive, active, expensive, cheap, pretentious and plain. All I've gotta say in closing: they can have my Director box when they pry it from my cold, dead fingers! ■

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Whirlwind Director

www.whirlwindusa.com



U.S. List Price: \$115.95

Manufacturer Take: 1/4-inch parallel wired in/out jacks, ground lift switch; 30 dB pad switch for selecting between line/instrument or speaker level input signals; switchable high-cut filter. The MultiDirector combines four units into a 1U rack package, the DIRECT4 combines them into a stage box and the Medusa MultiSnake has four DI's along with four mic lines.

C.K. Take: In my travels, when offered a choice of different DI's, I always choose this one and joke, "If I had enough of these, I could make 'Dark Side of the Moon.'" I've just found these to be (if not battered and abused) consistently clear and reliable, and not subject to the slings and arrows of dodgy phantom power.

Klark Teknik DN 100

www.klarkteknik.com

U.S. List Price: \$198

Manufacturer Take: Extended dynamic range, low noise floor; a thick aluminum shell protects the electronics, and further protection from a tough silicone rubber casing that is replaceable and available as a spare part. Two 1/4-inch jacks and one XLR linked in parallel for input, one XLR for output. Switchable 20-dB attenuator.

C.K. Take: This is the successor to the much-loved LBB100. If all of us can get over our weeping and gnashing of teeth about its passing, I'm sure we'll find this one to be as excellently designed and engineered as all of K-T's other products.



Countryman Type 85

www.countryman.com



U.S. List Price: \$231.70

Manufacturer Take: Provides a strong, clean signal to the mix board without adding noise or distortion. Uses only hand-selected, high-quality discrete components. Input circuit can withstand 220-volt AC and static spikes up to 20,000 volts. Can always isolate ground, even when running on phantom power.

C.K. Take: Indisputably the industry standard, seen everywhere. Accepted (as far as I know) by every touring act. You have to really mistreat this box to make it malfunction. On the LAB, Hoob said, "I'm very partial to Countryman. Nothing like getting the 'Wow, what did you do to my guitar? I've never heard it sound so good!'"

Radial JDI

www.radialeng.com



U.S. List Price: \$200

Manufacturer Take: Jensen transformer-equipped, passive. 100 percent isolation eliminates ground loops; virtually zero phase and harmonic distortion. Good for high-output, broadband instruments. The JDI can be rack-mounted using the Radial J-Rak and is also available in two-channel and six-channel versions

C.K. Take: The world-famous Woody Nuss said, "I also love the Radial passive for electric bass. Smooth, nice low clarity and plenty transparent on the transients. If I were to stock a stage or club with all new stuff, I would buy all Radial passives and one or two active K-Ts (Klark Teknik) for weak output sources."

EWI LBD-101

www.audiopile.net

U.S. List Price: \$75

Manufacturer Take: Active, with two-position attenuation switch, ground lift switch, rugged construction, and powered by battery or phantom power. Transformers are manufactured to strict tolerances. Multiple boxes can be hooked together either side-by-side or one on top of the other.

C.K. Take: EWI is an up and coming South Korean company that makes low-priced yet sturdy equipment, including stage boxes, snakes and cable testers. On the LAB, Karl P said he uses it, and Quentin Blaylock (a man of few words) stated, "Good sound. Phantom power. Built tough."



BSS AR-133

www.bss.co.uk



U.S. List Price: \$185

Manufacturer Take: If phantom power from the console fails, the AR-133 automatically switches over to the internal 9-volt battery for uninterrupted use. Inputs are both 1/4-inch and XLR, so the unit can convert unbalanced signals to a balanced output on XLRs throughout. A ground-lift switch is provided.

C.K. Take: Successor to the late, great AR-116. BSS says the signal path has been "enhanced." I remember when we got a 133 at a venue I used to work at. There were initial complaints about the size of the unit, which stopped once it was heard in action. After that, it became something to put on a special channel or to give to someone we really liked.

Pro Co CB-1

www.procosound.com

U.S. List Price: \$109.99

Manufacturer Take: Passive direct box, not recommended for speaker-level use. 1/4-inch input (with parallel 1/4-inch output). Switch for ground lift. Male XLR balanced mic-level output. Uses Pro Co CBT-1 transformer. Also available in the Pro Co DB-4A Quad Direct Box.

C.K. Take: Total workhorse DI, seen in a large number of workboxes at different sound companies and venues. Simple design, not glamorous, and therefore quite competitive with other mid-priced boxes.





Tech 21 SansAmp XDI

www.tech21nyc.com



U.S. List Price: \$95

Manufacturer Take: Phantom power operable or uses optional DC power supply. Design includes advanced, low-noise F.E.T. technology. Balanced XLR and low-Z 1/4-inch outputs. Two 1/4-inch, high impedance, 1M-ohm inputs (normal and bright). The bright input simulates the EQ curve found in tube amps with bright inputs.

C.K. Take: SansAmp is, of course, well known for its guitar and bass pedals that many players swear by. This DI is undoubtedly as well made and designed as those. The company is promoting it as ideal for computer-based recording.

LR Baggs ParaAcoustic

www.lrbaggs.com

U.S. List Price: \$229

Manufacturer Take: Includes proprietary semi-passive five-band EQ with bass, treble, and presence controls, and also a tunable notch filter and sweepable midrange control with two-octave range. 24 dB of adjustable gain, phase inversion. Automatically turns battery off if phantom power is present. Outputs are both XLR and 1/4-inch.

C.K. Take: Dan Timon said on the LAB, "When dealing with a low-output piezo pickup, I like to use an active DI with an input gain control like a Baggs ParaAcoustic DI. The Baggs, with its EQ and notch adjustments, is also nice when you have limited EQ on the channel strip and the guitar or bass needs a lot of attention to get the right tone. Its amplification is cleaner than the mic preamps on some mixers, so it lets you get a little higher signal-to-noise ratio."



Stewart Audio ADB-1

www.stewartaudio.com



U.S. List Price: \$109

Manufacturer Take: No transformer; RF protection on input and output, operates on battery or phantom power. Switchable ground isolation, on/off switch preserves battery life, flush mounted slide switches minimize accidental switching and resist breakage, switches and markings on top of unit. Also available as ADB-4 Quad DI.

C.K. Take: I've never had a bad experience with one of these and have used them many times, in different venues. I feel like the ADB-1 is very solid and well made, and sounds fine.

Avalon U5

www.avalondesign.com

U.S. List Price: \$595

Manufacturer Take: Unique passive tone selector with a variable gain preamp and filter. Class A, 100 percent discrete design, variable gain preamp to +30 dB. Dual mic and line level outputs. High-cut switch. Headphone monitor output jack. 400-watt speaker input. High-input impedance input stage for zero load effect on sensitive pickups.

C.K. Take: Used by Dave Lawler on the upright bass with Diana Krall, and by Frank Aponte on acoustic guitar and electric bass for Juanes. If those two guys are using it, that's good enough for me. I assume it sounds spectacular.

