Radial Engineering Tonebone PZ Pre and PZ Deluxe pre-amplifiers

Looking for a pre-amp for your onstage work but spoiled for choice? Radial has a couple of suggestions. **Bob Thomas** checks them out.

'If you're intending to play an acoustic instrument fitted with a piezo-based pickup on stage you'll want to have a few basic bits of equipment available - a pre-amplifier that, ideally, will accept active or passive pickup systems), an EQ system (ideally semi-parametric at least), a Mute pedal for silent tuning and a DI box with, ideally, separate feeds to the FOH mixer and to your stage amp or monitor system.

If, like me, you've built up your system piecemeal over the years then you'll have at least four separate boxes and a rat's nest of wires to contend with on every gig. Yes, I know that I could build a pedalboard, but it's easier to throw everything into a small bag at the end of the gig!

Enter Radial Engineering's Tonebone PZ-Deluxe, which is all of these things in one small, built-like-a-tank box. Radial Engineering, which is based in Canada, has gained a stellar reputation by building superb-sounding solutions to real-world problems of stage and studio inside steel enclosures that are designed to withstand the rigours of life on the road.

If you take a look at it, you'll soon realise that the PZ-Deluxe is a well-featured combination of high-quality preamplifier, EQ and DI box all squeezed into a pedal-sized box. The single, side mounted ¼" input jack socket can be switched between 6.8KΩ - ideal for active piezo pickup systems - and a 10MΩ setting with +10dB of gain that takes care of piezo pickups plugged directly into it. The front panel Level control sets the amount of signal entering the PZ-Deluxe's internal circuitry and therefore controls the output volume of both the high-impedance ¼" jack output and the balanced XLR DI out. The Tuner output is tapped off after the Level control and the main signal then passes through the Mute footswitch to the three position switch controlling the Low Cut filter. This filter high-passes the signal at progressively higher frequencies, and is set depending on the instrument that you're playing. For example, if you play an acoustic bass, you'll leave it set flat, if you play guitar you might need to switch in the middle (low-mid) setting to cut down body resonance to help avoid feedback, and if you play mandolin or fiddle you'll use the third position to cut out the low-frequency range that that those two instruments don't produce.

Next in the chain comes the 3-band EQ with sweep midrange, the independent phase reverse switches for the jack and XLR DI outputs and the footswitchable, variable level Boost function. The level of boost is set by a recessed potentiometer next to the input jack that you'll need a small, flathead screwdriver to adjust. Finally, the signal leaves the Pre-Deluxe via the Hi-Z output jack and the balanced XLR DI (with its own ground lift switch).

The PZ-Deluxe is, in point of fact, a lower cost (and physically smaller) development based on the earlier, larger, higher-featured and more expensive PZ-Pre. I've got personal experience with the PZ-Pre as I ran FOH sound for a visiting US band last year whose acoustic guitarist used a PZ-Pre that gave me a straight feed with no buzzes, clicks or surprises throughout the whole three weeks of the tour.

STAR RATING

★★★★☆

EACH

PROS Professional level of performance • Superb build quality • Supremely practical features

CONS None - although I could quibble over the non-locking power supply connectors

[...>]

Radial Engineering Tonebone PZ Pre and PZ Deluxe pre-amplifiers

Rather than doing a full rundown on the PZ-Pre, I'm going to concentrate on the differences between it and the PZ-Deluxe. First off, the PZ-Pre has two inputs, both of which are identical to that of the PZ-Deluxe, and each of which has its own level control. A side-mounted Blend/Mix switch allows you to choose either to run the inputs separately and switch between them using the Toggle footswitch, or to mix them together using their Level controls.

Although its Low-Cut filter and EQ are as those of the PZ-Deluxe, the PZ-Pre adds a variable frequency Notch filter that acts between 56Hz and 300Hz, offering -8dB or -15dB of attenuation at the selected frequency. The level of the PZ-Pre's Boost function is set by a front panel control knob and its footswitch can be set, by means of a three position switch, to switch in boost, boost plus FX loop and FX loop only. This enables you to set up a footswitchable effects chain that can be brought in whenever you want.

The presence of an FX loop, which can be switched on permanently by means of a recessed, side-mounted switch, is not the only socket set abandoned on the PZ-Deluxe, as the PZ-Pre has not one, but two balanced XLR DI outputs. One of these is taken pre-filters and is designed as a FOH feed, and the other, which is post FX, is intended to drive on-stage monitoring and therefore benefits from the front-panel phase switch that, on the PZ-Pre, does not act on any other output. In the case of the PZ-Pre, the ¼" jack output is intended for a stage amplifier, but equally could be used for other purposes.

Both units are powered by identical 15VDC/400mA external power supplies and, although these aren't equipped with a locking connector, the PZ-Pre has a clip to secure the cable in order to prevent it being pulled out.

As far as I can tell, the PZ-Pre and PZ-Deluxe sound more or less identical, the only difference being the additional Notch filter on the PZ-Pre. The Class A circuitry in both units delivers a professional level of performance that would be equally at home on stage or in the studio.

Both these Tonebone pedals appear to have been designed by someone who has intimate knowledge of the problems faced by acoustic guitarists who rely on active or passive piezo-based pickup systems in their instruments. Operationally, I can't fault either unit and I can't think of any situation that I have come across on stage with my guitars that wouldn't have been dealt with by either the PZ-Deluxe or the PZ-Pre.

Which of these you choose will depend on the rest of your set-up and what you need to integrate everything. For my needs, the biggest factors would be the twin inputs, the two different XLR outputs and the FX loop on the PZ-Pre - if I decided that I didn't need any of these, then the PZ-Deluxe would get my vote.

The Tonebone PZ-Pre and PZ-Deluxe are professional level products that do, admittedly, carry fairly chunky price tags. However, given what you're getting for the money, the quality of their construction and performance, those price tags aren't in any way unreasonable - the old saying that "quality is remembered long after price is forgotten" will be only too true of these two Tonebone units. Highly recommended indeed! END>

Radial Engineering Tonebone PZ-Pre Acoustic Preamplifier and PZ Deluxe

RRP: PZ-Deluxe: £203.53 US $300 PZ-Pre: £271.38 US $400

Made in: Canada

Tonebone PZ-Deluxe

Circuit type: Class A FET Hybrid Input Stage

Frequency response: 20Hz ~ 18kHz (0/-3dB)

Dynamic range: 105dB

Total harmonic distortion: 0.03% @ -20dB output

Equivalent Input Noise -108dBu

Intermodulation Distortion: 0.07%

Input Impedance - PZB Off: 6.8K-ohms

Input Impedance - PZB On: 10M-ohms

Gain - 1/4" Input to stage amp out: +16dB (PZB-Off)

Gain - 1/4" input to XLR Out: +21dB (PZB-Off)

Gain - PZB Piezo booster circuit: +10dB

Gain - Boost On: +13dB maximum

Output Impedance - XLR Output 600Ω

Size: (6.1" x 3.8" x 2.1") (155 x 96.5 x 53mm)

Weight: 1.75lbs (0.8kg)

Power Requirement: 15V (Nominal) 400mA Center Pin Positive Adapter

Tonebone PZ Deluxe

Circuit Type: Proprietary active circuit

Standard input impedance: 6.8k Ohm at input jack ('PZB' switch out)

Input with PZB switch in Impedance: 10meg Ohm at input jack

Output Impenitence: 1k Ohm

Low cut roll-off:

Position 1: 75Hz

Position 2: 2:220Hz

Notch Freq. range: 56Hz to 330Hz

Notch Q:

Setting 1: -8dB

Setting 2: -15dB

EQ

LOW

Shelving

+/- 12dB @ 75Hz

MID

Parametric

+/- 12dB @ 82Hz to 5.6kHz

HIGH

Shelving

+/- 12dB @ 7.5kHz

Boost level 12dB

Effects send & receive -10dB

FX loop impedance

Send: 1k Ohm

Receive: 15k Ohm

Polarity 180° switch (absolute phase reversal)

Connections Input-1: ¼" unbalanced

Input-2: ¼" unbalanced

Insert Send/Receive: ¼" unbalanced

Amp output: ¼"unbalanced, Hi-Z, 1k Ohm

Tuner output: ¼"unbalanced, Hi-Z, 6.8k Ohm

Pre-EQ output: XLR balanced mic level 600 Ohms

Post-EQ output: XLR balanced mic level 600 Ohms

Footswitches Three: Mute, Boost, Toggle 1-2

Heavy-duty high-cycle switches

LED indicators Large 3mm OD ultra-bright LED indicators for:

mute, boost, Ch-1 & Ch-2 toggle status

Construction 14 gauge steel, baked enamel finish

Size 8"w x 4 ¼"d x 2"h (205 x 110 x 51mm)

Weight 2.7lbs (1.2kg)

Warranty Radial 3-year limited warranty

Power Supply: 15VDC 400mA, center pole positive

TECH SPEC