Radial Engineering

Firefly Tube Direct Box

BY ED FRIEDLAND

THE FIREFLY TUBE DIRECT BOX INCORPORATES Radial’s time-tested Class A FET circuit and zero negative feedback design, prized for its natural tone and stable output. This signal is fed into a single Ruby Tube 12AX7 for warmth and character, then routed through their transformer-coupled output, which eliminates buzz and hum from ground loops. The Firefly has two ¼” inputs that can be switched manually via the front panel, or remotely with the optional JR2 footswitch (the JR2 also gives you access to the mute function). Each input has a dedicated TRIM control to match the output levels of different instruments. The DRAG control lets you lower the input impedance to match up better with passive magnetic pickups, or bypass it completely for a 4MO impedance best suited to piezo pickups. A variable LOW CUT filter lets you dial out the sub low frequencies that can make your bass muddy in the mix, and a master volume controls the overall output to your amp or to the board.

Around back, the Firefly has an XLR output with ground lift, and a phase-polarity switch. The PRE/POST switch lets you route the aux-out signal straight to your amp from the buffer, or through the tube, effect loop, and low-cut filter—mirroring the output of the XLR. A locking 5-pin XLR connector attaches the mid-line external power supply, which can accept voltages between 100 and 240 volts. The ¼” tuner out is post-Class A input, but pre-tube, so it can be used to send a clean signal to another source. It is always on for silent tuning while muted. A TRS jack gives you an insert point for an effect loop. On the side of the unit, a dedicated ground lift for the aux out is a welcome addition. The unit itself is housed in a heavy-duty steel case, with a convenient carrying handle that can be removed for rack installation.

Many of the controls are recessed switches or dials that require a small screwdriver to access, and all the front panel knobs are well protected from the casing’s overhang.

First, I plugged my passive Mike Lull P5 into input A, and connected the aux out to a G Ernst Benz GBE1200/Uber 212 rig. I set the gain at 12:00 and engaged the DRAG control, adjusting the sweep with a guitar pick. The DRAG control is said to simulate the sound of being plugged into a tube amp. The tone definitely darkens as you lower the control, with a decrease in volume that can easily be replaced with the Gain knob. The lowest LOW CUT settings are hard to hear unless you’re cranking big watts and moving some air, but rotating the control clockwise noticeably raises the low cut frequency. The key is learning to hear the sweet spot for each instrument, in each situation.

Next, I plugged the Firefly into Pro Tools via the XLR out and recorded some samples. I was able to hear the subtle changes from the DRAG control much clearer while monitoring through headphones. My P5 fattened up nice and round with lower settings and a little gain bump. The master volume lets you “play the tube” a bit as well. I bypassed the DRAG control and connected my David Gage Realist-equipped Jueck acoustic bass to the new 4MO input. I recorded samples with the PHASE switch in both positions and found one to be darker with less definition, while the other was more open and detailed. The overall tone was very natural and full—I could easily use this sound alone without adding a microphone to the mix.

The Firefly is a top-notch DI that imparts sweet tube warmth to all that passes through it, and the feature set gives you many advantages on stage as well as in the studio. BP

SPECIFICATIONS

Street $600
Bottom Line Radial Engineering’s new Firefly Tube Direct Box has cool bass-centric features, and it shines live and in the studio.

Contact radialeng.com

Audio circuit Discrete Class A FET with tube drive
Signal to noise ratio 85dB @ +4dB
Dynamic range >100dB
Noise floor -96dB at unity
Inputs Two ¼” HI-Z, selectable A or B, 1/4” insert
Outputs 3-pin AES standard x2, ¼” aux, tuner
Output Impedance 150Ω nominal
Switches Phase, x1x ground lift, aux ground lift, aux pre/post, input select, drag on/off
Controls Input gain (20dB max), low cut (-3dB @ 5Hz-500Hz), drag load adjust (22k-500K, 4MO in bypass), level
Power 5-pin x2 316V & 48V, 1600mA
Construction 14-gauge steel, baked enamel finish
Size 5.75” x 8.25” x 1.75”
Weight 4 lbs
Warranty 3 years transferable

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