

SOUNDRoom

Peavey VB-3



BY JONATHAN HERRERA

THOUGH MANY MANUFACTURERS HAVE tried, there's simply no way to perfectly duplicate the sound of an all-tube head using solid-state components. Those who dig the plush response, rich harmonic color, and sweet overdrive potential of tube circuits are thus forced to accept tube heads' limitations, most painfully their much heavier weight compared to solid-state amps. But what makes tube amps so heavy? First, power amp tubes are physically large and require airspace to dissipate heat, so most tube heads are big. Second—and most important in terms of weight—tube amps have so far needed two heavy transformers to operate: An output

transformer for impedance matching between the power amp and speakers, and a power supply transformer to step-down and distribute the power from a wall outlet. The revolutionary Peavey VB-3 all-but-eliminates one of these transformers, and the weight savings are enormous. It accomplishes this feat with a switchmode power supply (SMPS). While the technology is increasingly common in solid-state heads (it's the basis of an entire new segment of ultra-portable, powerful amps), it's unheard of in tube amps. Power tubes require much higher voltage than the output transistors of a solid-state amp, as well as an entire power-supply circuit dedicated to heating

PEAVEY VB-3

Street \$1,800

Pros Amazingly lightweight all-tube head with impressive feature-set; thick and juicy all-tube vibe

Cons Compressor a little underwhelming

TECH SPECS

Power rating 300 watts @ 4Ω

Tone controls 3-band tone stack w/ active BASS and TREBLE and passive MID cut; 9-band graphic EQ

Power amp topology Class AB

Tube complement 12AX7 x 3; 12AT7 x 2; EL34 x 8

Power supply Switchmode

Weight 37 lbs

Made in U.S.A.

Warranty Five years



The blue LED above the MUTE switch blinks when the button is depressed.

The VB-3's 9-band graphic EQ offers precise tone control.

every tube's heater filament. These requirements, coupled with the relative lack of new R&D for tube amps in the consumer electronics universe, have so far prevented SMPS from being implemented in tube amps ... until now.

SMPSs don't do away with the power transformer; it's just shrunk to a negligible size, weight-wise. In an SMPS, power transistors are switched on and off at a frequency that's much higher than the 50 or 60Hz coming from the wall outlet. This high-frequency current requires a much smaller transformer than one that's directly connected to the power source, as in the typical tube amp power supply. An SMPS is also much more efficient than a conventional linear power supply, so it doesn't generate as much heat.

FRONT AND BACK

Beyond the SMPS, the Peavey VB-3 is an all-around high-tech, feature-packed tube head. EQ duties are split between a 3-band tube-driven tone stack with shift-able mid-frequency center points and a powerful 9-band graphic EQ that's tube driven, but with solid-state filters. There's an onboard optical compressor with front-panel control over ratio. The input can feed either a clean or OVERDRIVE channel, and there are knobs to control the gain of each. A MUTE switch, -15dB pad, and BRIGHT button further regulate the input's behavior. The RESONANCE and PRESENCE controls tailor the amp's frequency response and feel in the low and high registers, respectively, by manipulating negative feedback in the output section.

Not unlike the front panel, the VB-3's rear-mounted features are significant: A full-featured DI output, TUNER SEND, EFFECTS LOOP, preamp and power amp outputs, and a jack for the included footswitch offer a ton of connectivity. There's even a dimmer knob for the VB-3's brightly backlit front panel—a welcome feature on more conservative gigs.

The VB-3 was solidly constructed, with



Peavey also sent along its Tour 215 2x15 cab (\$700). The neodymium-driver-equipped cab is all about big-volume booty and cutting through at high volumes. At 87 pounds, it's not too bad to cart around, especially with the tilt-back casters and big back-mounted handle. Peavey did a good job delivering a cabinet with major rock appeal that won't break the back ... or bank.



What's your take? Let us know what you think of this product on the Low Down Lowdown forum at bassplayer.com

smoothly rotating knobs, robust switches and jacks, and an overall rugged vibe. The two big top-mounted rubber handles are well placed for schlepping, and Peavey thoughtfully recessed the front panel. Should you ever make it past the extensive hands-off warnings and oodles of bolts and screws, you'll find a clean no-frills interior, with printed circuit board construction and contemporary connectors and components.

VB VIBE

Output-tube choice has a major effect on the personality of a tube head. Rather than the stout SVT-style 6550, Peavey chose EL34s for their more colorful harmonic characteristics and punchy midrange. If a rounder, warmer tone is desired, a swap for 6L6s is a simple matter. Preamp and output driver/phase-inverter tubes are all the dual-triode 12AX7 or 12AT7 type.

SMPSs can potentially be noisier than linear power supplies, due to potential electromagnetic interference from the switching devices. The latest designs overcome this problem, and I never heard any parasitic hums or buzzes coming from the VB-3. That's not to say it's a stealthy amp: There's a fairly loud fan that's on all the time.

Tube purists concerned that the SMPS sacrifices tube tone in some way will be pleased with the VB-3. It sounded tube-y indeed, although it's definitely on the quicker, more immediately responsive end of the tube-amp spectrum. Setting it flat with the clean channel engaged, my first impression was, My God, this is loud. It's a brutally potent head, especially paired with big cabs like Peavey's Tour 215 2x15 cabinet or an Ampeg SVT 8x10. The input was fairly sensitive—pushing it into clipping was a breeze, even with a passive P-Bass. Should a cleaner tone be desired, the -15dB pad quickly brought the input gain back into the mellow zone. The VB-3's tone sculpting was extensive, but easy to grok. The Peavey's sonic variety is atypical for a tube head, with the graphic

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EQ providing ample precision for taming out-of-control resonance and feedback.

Major kudos to Peavey for the wicked OVERDRIVE circuit, and double-kudos for making it available via footswitch. The VB-3's distortion was wonderfully rich and organic sounding, with gobs of mellifluous overtones and pleasing saturation. It's especially revealing of the head's negative-feedback controls, which offer substantial power to utterly change the amp's personality from loose and chaotic, to tight and controlled. I wasn't a huge fan of the compressor circuit, which seemed a bit sensitive, even at low knob settings. Tubes themselves, with their squishy transition into their overload zone in high-gain amps like the VB-3, already yield a notably compressed tone.

The VB-3 behaves like a super-versatile all-tube head with a well-regulated, high-current power supply. In practice, there's



The VB-3's back panel allows easy access to the power tubes for quick replacement.

no knowing that it's anything but typical—a testament to Peavey's excellent engineering. While the VB-3 loses some of the old-fashioned appeal of classic tube amp

designs, particularly the ease of repair and part replacement, it is a huge step forward in a product category that seemed to be done walking decades ago. **BP**