



SOUNDROOM



Bergantino B|AMP

BY JONATHAN HERRERA

IN MY YEARS AT BASS PLAYER, I'VE MET MOST OF the minds behind the gear we know, love, and use. The passion of most of our craft's technical types is no less intense than our own for playing, and being aware that Person X, Y, or Z in the manufacturing community reads my BP writing has often helped me maintain a high level of rigor and detail. (At least that's my intent; I'll leave it up to you to decide if I succeed.) Of the many clever engineers and luthiers I've encountered, few have been as consistently impressive as Jim Bergantino. The amp side of the bass market is rife with imitation; best practices emerge, largely because of an innovative few, and then some manufacturers debut products that leverage those innovations, regardless of their philosophical commitment to the design ideas they embody. Bergantino has always been different, as my many long discussions with him discussing amp and speaker technology evince. He's fiercely committed to his design principles, deeply knowledgeable in audio

electronics, and unafraid to introduce designs that buck trends, if that's where his muse takes him. After dipping his toes into the amp world with his IP series of powered cabinets, Bergantino is all-in with the B|AMP, an innovative lightweight head that capitalizes on the flexibility of digital audio to solve some vexing engineering challenges.

On power-up, it's obvious that the B|AMP is different from the typical bass head. A large LCD display illuminates above the row of four rotary encoders, each knob labeled with its current function. This is a clue as to the Bergie's key differentiating feature: Rather than rely on analog components for preamp duties, the B|AMP incorporates a digital signal processor (DSP) chip, meaning the signal goes through an analog-to-digital (AD) converter after the input, is processed in the digital realm, and then converted back to an analog signal before it hits the power amp. DSP is exponentially more powerful, precise, and versatile than



The B|AMP has an impressive amount of connectivity considering its diminutive size.

any equivalent analog circuit, so the benefits of integrating it into a bass head are significant. But rather than try to stuff the kitchen sink into the amp, Bergantino initially sought to use DSP to improve a rig's fidelity. As a long-time speaker designer, Bergantino is well aware of the lumpy frequency response of the average bass cabinet. In fact, his IP-series cabinets utilized similar DSP to mitigate this uneven response with a counteracting EQ curve. The same principle applies with the B|AMP, and although the head flexes its DSP muscles in other ways, it's the pursuit of flat speaker response that lies at the core of Bergantino's concept.

In order to achieve this flatness, the frequency response of a given speaker cabinet must be known. Only then can a complex EQ curve that counteracts the dips and peaks be applied to a signal. For understandable reasons, Bergantino limits these "Profiles" to cabinets of his own design. If you're not already a Bergantino cabinet user, the Speaker Profile feature is unavailable. Not to worry—the head works beautifully regardless, and Bergantino says the Speaker Profiles often work well for cabinets from other manufacturers that match the speaker configuration of a similar Bergantino cab.

The B|AMP's DSP-powered features aren't limited to speaker-compensation curves, though. For example, the head's EQ is substantially more versatile than most, and thanks to the use of rotary encoders (also known as "soft knobs") instead of potentiometers, its user interface is flexible enough to accommodate a deep feature set. Each EQ filter includes a selectable array of relevant frequency centers and WIDE, MEDIUM, and NARROW Q (bandwidth) settings. Additionally, a BRIGHT filter includes user-control over its center frequency and gain amplitude. To further aid tone shaping and avoid power-robbing near-subsonic frequencies from muddying up tone, a variable highpass filter is included. Even more interesting is the B|AMP's VARIABLE FEEDBACK filter, which seeks to notch out a problematic frequency with a narrow-Q filter. Rather than sweep through the frequency spectrum to find the offensive resonance, the FEEDBACK filter aligns its frequency centers according to the fundamental frequencies of musical notes. That way, a player who consistently gets feedback by playing a low G, for example, will easily be able to identify and notch out the offending frequency (49Hz, in this case).

The B|AMP's DSP engine also allows for the

S SPECIFICATIONS

BERGANTINO

Bergantino B|AMP

Street \$1,200

Pros Extremely versatile; robust and muscular power; sweet and musical tone

Cons Onboard fuzz effect is just okay; slightly self-noisy at idle

Bottom line By thoughtfully integrating DSP into a hi-fi bass amp, Bergantino has essentially created an entirely new product category.

SPECS

Power rating 800 watts @ 2.67Ω or 2Ω; 700 watts @ 4Ω

Preamp Solid-state DSP-based

Power amp topology Class D

Power supply Switchmode

Input impedance 1MΩ

Outputs Two parallel Speakon speaker, 1/4" effects send and return, XLR balanced line out, 1/4" headphone

Inputs 1/4" instrument, 1/8" aux

Tone controls (All frequency centers adjustable) BASS ±9dB @ 40Hz-120Hz; LO-MID ±9dB @ 150Hz-800Hz; HI-MID ±9dB @ 600Hz-2kHz; TREBLE ±9dB @ 2kHz-9kHz

Weight 6.5 lbs

Made in USA

Contact bergantino.com



inclusion of some useful effects, although don't expect the kind of comprehensive suite available on purpose-built DSP-based multi-effect units. While future firmware updates may expand its offerings, the thoughtful selection of three different types of distortion (OVERDRIVE, DISTORTION, and FUZZ), each of which includes variable drive and volume, is a nice addition. Also welcome is the B|AMP's VARIABLE RATIO COMPRESSOR (VRC), a clever implementation that alters its ratio in real-time to best enhance a bass' dynamic output. As with most of the B|AMP's special features, the VRC setting is storable in one of two available memory slots for instant recall. And while I was initially disappointed to discover that the amp does not include a footswitch to engage its effects, Bergantino assures me a Bluetooth-based footswitch is in development.

The B|AMP system enhances the head's I/O versatility, too. The stereo 1/8" AUX input can double as a secondary input for anyone who doubles with two basses or a synth, and since it has its own gain knob, a player can mix the levels to suit their needs. Additionally, the head's DI output features pre/post-preamp selection, as does its 1/4" tuner output.

SOUND

Given my word count thus far, it's clear that the B|AMP is as full-featured a bass head as there is, but none of that matters if it doesn't sound good. To test the head I used a variety of cabinets, including Bergantino's own HT-322 and HDN-212 models, as well as appropriate-size cabs from Aguilar, Ampeg, Epifani, and Barefaced Audio. I used the head on a couple medium-sized gigs and tracked with it in my Bay Area studio, Airship Laboratories.

Anxious to check out the B|AMP's marquee feature, I hooked up my Bergantino cabinets in succession. Loading the profile into the head requires downloading a small file from Bergantino's website to a USB thumb drive, ensuring it's FAT32 formatted, which is the PC standard. As a Mac user, I initially had a little trouble with transferring files to the B|AMP, as the instructions in the owner's manual and online were a bit unclear—look for revised instructions accompanying future firmware updates. Once installed, I fired up the Bergie cabs, first without the

Speaker Profile engaged. I played a bit, tried to lock the sound in my mind, and switched in the profile. The resulting sound was indeed different, although hard to quantify, and surely variable depending on the cabinet in question. The "profiled" settings made each slightly brighter, with a touch less upper-midrange response and a deeper bottom. While evaluating which was better is entirely subjective, there is something comforting knowing that the tone emanating from the speaker is as flat as possible—it certainly makes evaluating the differences among basses more confidence-inspiring. The Bergantino cabinets were already superb, so it wasn't like the un-profiled sound was a disappointment to begin with.

Through the Bergantino cabs and the others, the B|AMP revealed its phenomenal power, authoritative transient response, rich and smooth midrange, and seemingly limitless endurance. It sounds awesome, and don't let its DSP brain fool you: There is nothing digital-sounding about its essential tone. Each of the EQ filters proved effective, and the additional versatility that the DSP affords made fiddling with the tone filters all the more inspiring. Whether I was going for a blended-pickup bright sound, a dull P-with-flats tone, or a bridge-pickup/no-tone vibe, the B|AMP was consistently musical and rewarding, never running out of breath. The VRC is a nice added bonus, too. The smooth-sounding compressor added just enough bounce and sheen to my fingerstyle lines.

I have two small gripes with the B|AMP. First, the distortion effects are just okay. I thought OVERDRIVE worked well, with nice dynamic sensitivity, but DISTORTION and FUZZ were not quite up to the standard set by many outboard stompboxes. FUZZ, in particular, seemed to cause my signal to fade out unnaturally as a note decayed, as if a noise gate were abruptly crossing a threshold. I also thought the head had slightly more self-noise than others I've tested set at similar output levels.

The B|AMP is a legitimate step forward for bass amps. Instead of cramming a bunch of middling bells-and-whistles into his DSP-based head, Jim Bergantino continued the well-earned reputation for excellence he's long enjoyed. Whether or not you make use of the B|AMP's innovative features, the head's versatility and superb tone make it one of the best amps on the market. **BP**