

# BRYSTON 4B<sup>3</sup>

Reviewer Edgar Kramer

POWER AMPLIFIER



**C**anadian audio specialist Bryston is one of the few companies successfully treading both the professional and consumer audio spaces. Surfing both waves is not always easy — the two camps are not always aligned.

Yet they ultimately share a common goal — the reproduction of music with accuracy in all aspects of sonic performance. And other aspects can satisfy both tribes of users — such as Bryston's reputation for building amplifiers which are reliable, indeed indestructible (an industry-leading 20 year warranty is an unambiguous statement). Who's going to object to that?

#### THE EQUIPMENT

Aesthetically, the 4B<sup>3</sup> is a alarmingly austere power amplifier design, almost a by-product of that build quality. The solid machined aluminium grooved fascia (black or silver available) presents an expertly anodised finish. Machined etchings display the company logo and the amp's model number just above a central on/off switch which engages after operation of the circuit breaker style mains switch around the back. Two tiny green LEDs inform you the amplifier is active. Switching on the amp starts a series of relays and soft-start circuits that produce a short string of rather cute-sounding effects — I enjoyed hearing that pre-music-session electronic ritual every time.



SPECIFICATIONS

**BRYSTON 4B<sup>3</sup> AMPLIFIER**

**RATED POWER:**

300W into 8 ohms; 500W into 4 ohms; 900W into 8 ohms (bridged mono)

**HARMONIC DISTORTION:**

≤.005% from 20Hz to 20kHz at 300W

**NOISE BELOW FULL**

**OUTPUT:** -110dB single ended, -113dB balanced

**SLEW RATE:** >60V/μS

**POWER BANDWIDTH:**

0.5Hz to >100kHz

**DAMPING FACTOR:**

>500 at 20Hz (8 ohms)

**SWITCHABLE GAIN:**

23dB or 29dB

**DIMENSIONS (WHD):**

432 × 160 × 395mm

**WEIGHT:** 28.6kg

**WARRANTY:** Twenty years from date of manufacture

**PRICE:** \$7899

**CONTACT:** Busisoft AV

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The rear panel is well laid-out and provides all you'll need from a power amplifier. Inputs can be switched to either XLR or RCA, while speaker outputs feature good quality binding posts. (My only gripe would be that the spade openings are located at the top of the post, rather than the more common top-and-bottom provision, so that inserting very stiff large-gauge spade-terminated cables may leave them sticking up above the amp's top panel line in an unsightly manner.)

A small switch toggles between normal operation and bridged mono, while a further semi-recessed switch controls either 'local' operation or activates a terminal for remote switching via an external component. There's a standard IEC socket for the provided cable.

Lastly, we have a feature that more amplifier manufacturers might consider, in our view. The amp can be switched to a choice of two gain settings where the low setting provides 23dB of gain and the high setting 29dB. This is an extremely useful option which can provide better preamplifier matching where a passive unit may require the higher gain setting and, conversely, a high-gain active preamplifier may be best suited to operate via the low gain switch. This goes a long way to alleviate excessive noise issues in cases where there's too much system gain — a high-gain valve preamplifier, perhaps — or to help kick along a struggling passive preamp or maintain a direct-feeding DAC at higher output levels in order to avoid bit-stripping.

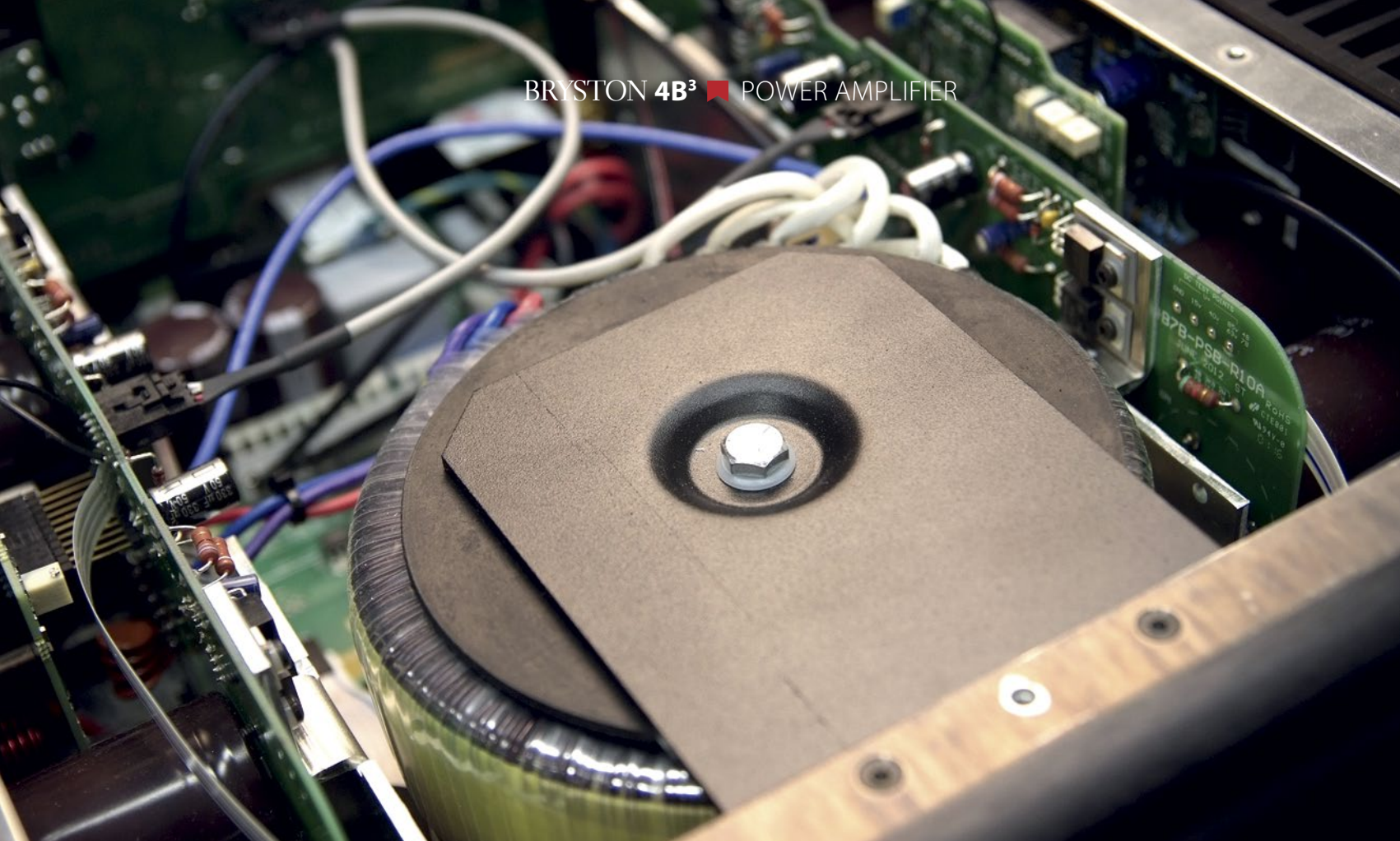
The 4B<sup>3</sup>'s input and filtering stages are based on Bryston's patented low distortion circuit, designed by respected engineer the late Dr Ioan Alexandru Salomie. Bryston has designed a stout regulated power supply featuring two large stacked toroidal transformers rated at 540 watts each, a capacitor bank with 80,000μF of storage and eight bipolar devices per channel. The 4B<sup>3</sup> should drive just about any speaker you can imagine with authority (my Wilson Alexia's near-1-ohm dip in the bass is a strong case in point).

**PERFORMANCE**

And that is where this amplifier's performance story should start. The 4B<sup>3</sup> is a control freak in terms of grabbing hold of your speakers' drivers and maintaining bass control, depth and power (the high damping factor of 500 at 20Hz at 8 ohms will have a big role to play). Add to that list superb detail resolution too. Kai Eckhardt's fligree bass lines on *Brenda* from Curandero's 'Aras' are remarkably nuanced and agile while possessing tremendous attack when required, especially towards the end, where very low bass notes, harder to reproduce, are introduced as track closers — no problem here. Ditto with staple reference track *Sergio Leone* from Jackson Browne's 'The Naked Ride Home', where the subterranean bass drones mid-track are superbly controlled, and extremely deep. Large floorstanders or subwoofers are essential here to appreciate this almost scary phenomenon.

▽ THE SMALL CENTRAL SWITCH TOGGLES THE 4B<sup>3</sup> BETWEEN NORMAL OPERATION AND BRIDGED MONO.





△ BRYSTON HAS DESIGNED A STOUT REGULATED POWER SUPPLY FEATURING TWO LARGE STACKED TOROIDAL TRANSFORMERS, A CAPACITOR BANK WITH 80,000MF OF STORAGE AND EIGHT BIPOLAR DEVICES PER CHANNEL.

Low frequency prowess is one thing, but the 4B<sup>3</sup> manages, nevertheless, to remain superbly balanced. Some amplifiers have tremendous bass power that comes at the expense of some midrange clarity. Not this one. The Bryston sounds evenly capable throughout its wide 0.5Hz to 100kHz range — no exaggerations or omissions at any portion of the frequency band.

Neutrality is a strong feature on the 4B<sup>3</sup>'s

comprehensive menu. This amp is neither warm nor sterile and certainly never syrupy — nor, conversely, brittle. In fact, the best descriptor for the 4B<sup>3</sup> (and strictly speaking for any quality amplifier) is neutrality. If you like spices with your music, they should be condiments added via other components, the amplifier should reproduce unaltered signal.

Of equal importance is resolution and separation, aspects of reproduction that can challenge some lesser solid-state amplifiers. The 4B<sup>3</sup> excels in reproducing low level music cues required for the best high fidelity 'virtual reality', while clearly delineating busy compositions into easily discernible individual

instrumental strands. The Los Angeles Guitar Quartet (LAGQ) self-titled release illustrates this strongly, with four distinct guitars and percussion in *Djembe*, the second movement of *The African Suite* individually placed in tight focus on a large soundstage. When guitars and drums play in unison, all can be either appreciated as a musical whole or each followed individually to fully appreciate each musician's skills.

Bryston's amplifier is rather good at presenting accuracy in tonality, too, with acoustic instruments sounding lifelike, present and delightfully realistic. The 4B<sup>3</sup> is capable of very good dynamic expression with explosive tracks such as *Whipping Boy* from Ben Harper's 'Welcome to the Cruel World', where the shades between the slow guitar intro (with all its microdynamic metal-string detail beautifully rendered) and the subsequent blast of snare and bass guitar is neither truncated nor diminished in any way.

#### CONCLUSION

A well-designed solid-state amplifier should fulfil the purest principles of music reproduction, accepting the input signal, then transparently and harmlessly delivering it to the transducers regardless of their inherent electrical demands, providing effortless and tight control of the drivers while manifesting boundless dynamic expression, detailed resolution and accurate tonality. In the 4B<sup>3</sup>, Bryston has covered all these bases covered... for at least 20 years. ▲



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