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FULL REVIEW - EDITORS CHOICE

Bryston BHA-1 Headphone Amplifier



Bryston's BHA-1 has proved itself for over a decade and is one battle tested headphone amplifier I wish I had discovered sooner.

For the better part of the past three years, almost every headphone that has passed through my hands for review has been tested with the Pass Labs HPA-1 Headphone Amplifier.

DACs have come and gone, but this is one headphone amplifier that consistently tells me what every headphone is capable of. My testing rig was recently upgraded with a DCS DAC which has only helped the HPA-1 illuminate every wart or positive attribute with even a higher level of resolution and accuracy.

Because of the nature of headphone testing and listening, my desktop consists of a wide variety of headphone amplifiers that were designed for specific headphones. There is no one size fits all solution for planars, electrostatic, dynamic and AMT headphones.

The Sennheiser HD800 is one of my benchmarks in the dynamic category and it works extremely well with the Pass Labs amplifier.

An astute reader reached out to me and wondered why I don't use a Bryston headphone amplifier considering how much I enjoy using one of their pre-amplifiers in my reference two-channel system. Fair enough.

FULLY BALANCED CIRCUITRY THROUGHOUT



Because of demand and supply chain issues, it took awhile to secure the only review sample of the Bryston BHA-1 and I had to make good use of my time with it because the line of future reviews is fairly long.

For those unfamiliar with Bryston, the Canadian manufacturer has been one of the premier brands out of the Great White North for over four decades with a sterling reputation for reliability and customer service.

Their extensive range of components and loudspeakers have never been that affordable, but most dedicated Bryston customers point to decades of use and high-end sound quality as evidence of their long-term value. It's a fair point to make at a time when brands keep recycling their product lineups every few years with minor adjustments.

Bryston also goes the extra mile with their packaging that is designed to keep your purchase well protected whilst being shipped by those with clumsy hands and poor handling skills. The amplifier is available in either black or silver finishes and offers the trademark Bryston tank-like build quality.

Users can also order the BHA-1 with 17-inch or 19-inch wide faceplates; the unit is just under 2.75 inches tall and just over 10 inches deep making it easy to install in a 1U rack space. The front of the unit from left to right has the input select 3-position switch, gain switch, volume knob and balance control which is placed left of center.

The other side of the front panel features the balanced outputs (a pair of single channel followed by a single stereo output), and a 6.35mm single-ended output fol-



FULLY CLASS A FROM INPUT TO OUTPUT

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lowed by a single LED indicator lamp, and the power switch on the far right.

On the rear face, the fuse and power inlet are located on the far left followed by the remote trigger. The inputs/outputs require one to actually pay attention when connecting sources because they are not totally straight forward in their operation.

On the far left is the balanced output (XLR) for the left channel followed by the balanced input (XLR) for the left channel. The next series of inputs are the left channel RCA and right channel RCA single-ended jacks. The right channel balanced input (XLR) and balanced output (XLR) finish off the rear panel on the right side.

If not paying attention, it would be easy to think that the left XLR jacks serve as the outputs and the jacks on the right as the inputs; the amplifier is a dual-mono design with each channel split up. The input impedance is listed at 10k Ohms so a wide variety of sources will work with the BHA-1.

Internally, the BHA-1 is designed using the same philosophy as Bryston's pow-

er amplifiers with six class-A fully discrete operational amplifiers (2 for single ended and 4 for balanced/differential outputs) offering 2 watts of output power into 32 Ohms.

Each Op-amp has a 2 Ohm output impedance making the BHA-1 capable of working with a wide range of headphones. The gain options are 14dB and 20dB respectively and the volume is controlled by a laser trimmed Noble stereo volume pot. The BHA-1 has a THD+N of <0.005% and extremely low noise floor which was confirmed with five pairs of headphones.

All of that class A power also means that the unit gets rather warm with only passive cooling; Bryston offers a 20 year warranty on all of its analog electronics and it is rather unlikely that the unit would experience a broken part from heat build-up.

LISTENING

Because of its connectivity options and multiple headphone jacks, we decided to use the BHA-1 as both a headphone amplifier and pre-amplifier in my den system; the amplifier was connected to



A COMPLETE ABSENCE OF ANY NOISE !

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my RME ADI-2 FS R B DAC using Cardas Clear Balanced Interconnect Cables. I also tried the single-ended inputs using a pair of 6.35mm to RCA cables provided by Mogami.

When testing the unit as a pre-amp, I left the RME attached as the source and added an adapter between the XLR outputs on the HPA-1 and the RCA inputs on the Van Alstine SET 120 Power Amplifier that I use to drive the Mision 783s I've been toying with recently.

There was a complete absence of any audible noise or hum with all of the associated electronics and cabling.

The Sennheiser HD800 can be a tough pair of headphones to drive with solid state amplification; too much infusion of light and neutrality is not always a great thing with these headphones.

More than a few members of the Head-Fi community have told me that

the Bryston BHA-1 is one of the few solid state headphone amplifiers that can really make these headphones shine.

ARE THEY CORRECT?

Right out of the gate, the BHA-1 made it clear that it has an abundance of power; I was able to achieve normal listening levels with the volume in the 35 to 40% range and on the low gain setting.

The cavernous soundstage that is the trademark of the HD800s extended well beyond the ear cups and those who love listening to binaural recordings will be enthralled by what this combination can achieve in that regard.

A heavily modified Bottlehead Crack Headphone Amplifier is my normal pairing for the Sennheiser HD800 and it helped shape my opinion that the headphones sound better with tube

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amplifiers than any solid state offering.

The Bryston BHA-1 blurs that line rather significantly offering up a cleaner sounding and more detailed presentation than any of the tube amplifiers in my collection, but with a warmer tonal balance than I would have expected. Texture and tone through the HD800? Hell hath frozen over.

The Sennheiser HD700 and Drop HD6xx also performed extremely well with the BHA-1; the Bryston has a tremendous degree of control in the low end and the infusion of color added an enhanced sense of presence in the midrange with both headphones.

But was the Bryston BHA-1 up to the challenge with more demanding planar headphones like the HiFiMAN HE-6, Arya Stealth, and the Audeze LCD-3?

The HD800 requires big voltage swings at modest currents to do its best work, whilst the HE-6 has big current demands but is less concerned with voltage swings.

The HE-6 did sound better on the high gain setting but again the volume was kept to modest levels. I found myself preferring the Pass Labs HPA-1 because of some compression that I noticed when listening with the BHA-1.

With that point of reference, we switched over to the Arya Stealth and LCD-3 which are easier to drive and my feeling was that the Bryston did a better job than the Pass Labs amplifier; cleaner sounding, more detail, and no added sense of coloration.

The LCD-3 can be prone to noise if the amplifier bleeds somewhat at either volume extreme with no music playing; the BHA-1 was remarkably silent in that regard which is not



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ONLY A HANDFULL ARE TRULY WORTHY

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the case with some other amplifiers that I have used with the Audeze headphones.

Bass impact and transient response were definite strengths of the Bryston amplifier and there was the case with every pair of headphones that I listened to with this rather impressive amplifier.

As a pre-amplifier, the Bryston proved to be a very clean sounding hub that was free of noise and a very good match with the Van Alstine power amplifier. There was some additional color in the midrange but I was hearing this amplifier perform at its best and that's a strong compliment for the BHA-1.

FINAL THOUGHTS

Though not inexpensive for a headphone amplifier and there are only a handful that are truly worth it in the high-end headphone space.

Both the Bryston BHA-1 and Pass Labs HPA-1 belong on that list.

By
W. Jennings



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