

## Bryston Earns Exceptional Merit Awards

We are pleased to report that the Bryston B-60 integrated amplifier and the 4B-ST amplifier received a Components of Exceptional Merit Award from Martin DeWulf in the January 1998 issue of "Bound For Sound". The following are the reviews as they appeared:

### Bryston B-60 Integrated 60 wpc

*"A benchmark for the modern integrated amplifier. Surpassing the performance of many separates combinations, the B-60 is a true high-end component."*

*After the review of this unit, I spoke to James Tanner of Bryston and told him that something very special was going on*



## This Issue

The Importance of Staying Active **P.1**

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## The Importance of Staying Active

Recently there has been a lot of interest in "Active Loudspeakers." Active loudspeakers are those in which the drivers (woofer, mid-range, tweeter) are directly connected to the output of an amplifier. This is referred to as active bi-amping, tri-amping etc. There are no "passive" components (large size resistors, capacitors, coils etc.) in the signal path between the amplifier and the loudspeaker driver(s).

signal level stage, using an "electronic crossover" which is positioned between the preamplifier or other input source and the individual amplifier(s).

There are two main types of active systems currently in the marketplace. One is the small or medium sized loudspeaker that also houses the drivers, crossover and separate amplifiers in a single enclosure. Two, the larger active systems that house the drivers in an enclosure but provide the amplification/crossover with external electronics usually placed adjacent to the loudspeakers.

The other option available is the so called "powered speaker" where a single amplifier is attached directly to the rear of the loudspeaker but the internal passive crossover is still used. This is not truly an active system (due to the use of the loudspeakers built-in passive crossover) but the advantage of having the power amplifier/speaker combination in a single portable unit is very convenient and cost effective.

An active system is certainly more costly to implement properly. The extra cost of separate amplifiers superior crossover parts and quality drivers certainly adds expense. If implemented correctly though the advantages



There is some confusion in the market place at this time because of "passive bi-amping." Passive bi-amping assign a separate amplifier to each individual driver but it still uses the "built in passive crossover" to control which frequencies are assigned to which driver and the per octave roll-off characteristics.

In a true active system this assigning of frequencies and roll-off is handled at the small

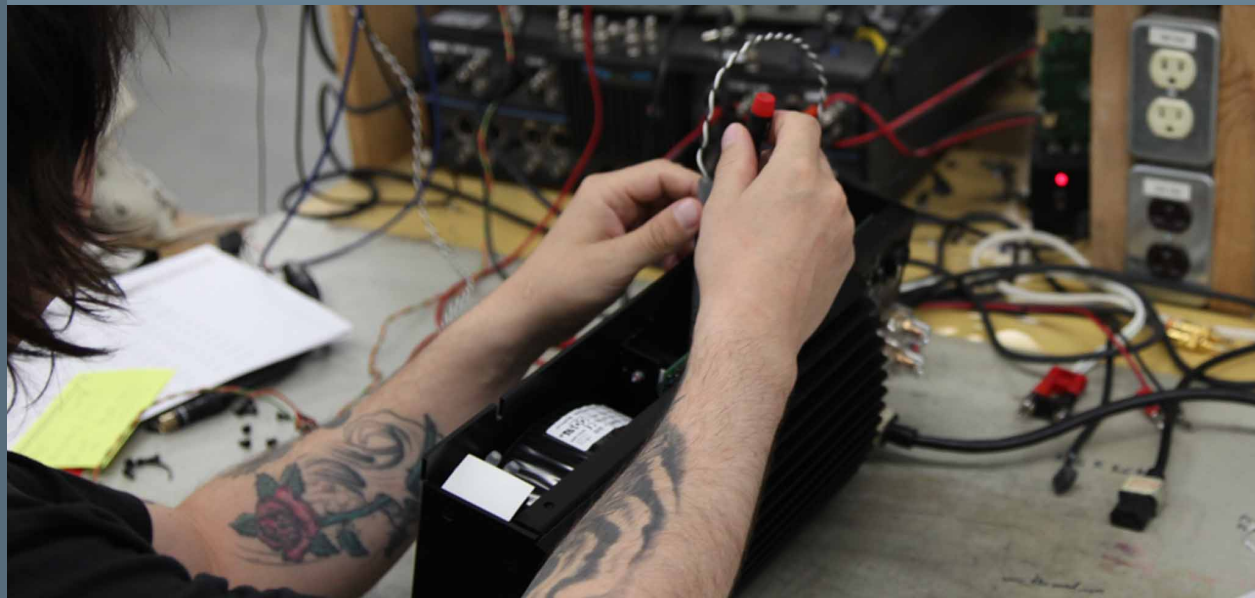
here. His response was that at Bryston, they too felt that they had stumbled onto something out of the ordinary, one of those rare instances where the end result was indeed greater than the sum of the component parts. Performance was indeed beyond their expectations. Mine too. You'll not find a deeper, better spaced soundstage in the industry. Dynamics were on a par with my reference (at the time) separates combo of Audire pre and RE designs power amp up to the limits of the output section, which by the way is a very gutsy and robust 80 wpc.

Spectrally, the balance is toward the warm and toasty. This unit has an inviting sound that beckons its user to sit and stay a spell. Surprisingly, the B-60 gets away with the "warm and cozy" presentation without sacrificing inner detailing. Edges (leading and trailing) are natural, distinct, and well integrated with the rest of the sonic persona. A perfect product for the 'phile' that is concerned mainly with the music."

**Bryston 4B-ST,**

**Stereo 250 wpc**

"A legendary power am-



of active systems are well worth it

#### **Advantages of Active Systems are:**

1. More efficient use of power.
2. Superior direct coupling of drivers to the amps provides increased control of drive units and damps unwanted resonance's in drivers.
3. By splitting the frequency bands before amplification crossover filters become easier to design and predict.
4. Control of level. Phase {delay} and driver anomalies (response/resonance/phase is simplified).
5. Higher SPL's can be achieved in larger systems (typically you get a 4dB improvement in level with the same power).

6. Convenient, smaller, one package solution to customer with the smaller active systems.

The foregoing is not in any way meant to diminish the value of passive systems. A good well designed passive system will outperform a poorly designed active system any day of the week. Passive systems are much more cost effective from a value/performance level standpoint than active systems. Passive speakers allow you to choose or upgrade to a specific amplifier now or at a later date (the larger active systems employing outboard electronics also offer this option). Passive systems do not require a power outlet near your speaker or the ugly power cord that attaches it. And finally, passive systems are usually a little more forgiving of the quality of the signal

#### **Q: What are Watts?**

**A: Watts** are a measure of power. It is equivalent to Volts, (a measure of electrical pressure), multiplied by 1 Amps, (a measure of electrical current flow), and is roughly analogous to volume in fluid-flow calculations. More power means louder potential musical sound, but costs more.

#### **Q: What is Distortion?**

**A: Distortion** is a measure of the impurities added to a signal, such as music. If you have ever heard music sounding screechy, shrill, gritty or otherwise uncomfortable, you know what distortion is. Less distortion, (below 0.05%, for instance), means smoother, sweeter



plifier. Years of refinement (introduced originally in 1976) have made the 4B-ST the power amplifier at its price point. The fit and finish of the metal work is superb, more finely finished than anything even near its price. The power is prodigious, and the sonics are superb. Yes, two thousand dollars is a lot of money, but few products in audio can boast of the positive qualities that the 4B-ST does.

This is one sweet sounding amplifier that will fit into the most sophisticated system around. You have Magpies? The perfect amp for that speaker. You have a difficult to drive low impedance speaker that the SE crowd can only dream of powering? The perfect amplifier, again. To do better power amp wise, expect to spend a lot more, and even then, the super esoteric high dollar amps don't come with a twenty-year warranty."



input than active systems and therefore, easier to listen to long-term.



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