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MEMO: To All Bryston Customers
SUBJECT: Bryston Active Demo – Mark Jones Audio

April 2018

Bryston Active event at Audio by Mark Jones

A couple of weeks ago I was invited by Mark Jones to attend the Bryston Active event at his place. James Tanner of Bryston was presenting the new active loudspeaker system featuring Model T Signature loudspeakers and BAX-1 electronic crossover.

I am familiar with "active" loudspeakers, such as those produced by Meridian Audio. They have amplifiers built right in and all you need is a source, like a CD player or a network streamer.

Bryston's Model T active loudspeaker system is different. The loudspeakers' drivers (woofer, mid-range and tweeter) are directly connected to an amplifier's output. This is known as active bi-amping or tri-amping, since there are no passive components, i.e. crossovers, are present in the signal path between the amplifier and the drivers. Not to be confused by "passive" bi-amping or tri-amping, where a separate amplifier is assigned to each driver, but internal crossovers are still used to control which frequencies are handled by which driver, as well as roll-off characteristics.

 But in a truly active system this is handled by an "electronic crossover" placed between the preamplifier and individual amplifier(s), basically in a small signal level stage. The electronic crossover used in this presentation was Bryston BAX-1 dedicated Digital crossover.

The other components in the system were:

- BP17³ preamplifier (bottom box in the photo above)
- 2 x 28B³ power amplifiers to drive the woofers
- 2 x 4B³ power amplifiers to driver mid-range and tweeters
- BDA-3 DAC
- BDP-3 Digital Player

The BAX-1 electronic crossover is controlled through a Bryston developed app from an iPad.

Although it is more costly to properly develop a truly active system, it has a number of advantages:

more efficient use of power superior direct coupling of drivers to the amplifiers provides better control of drive units and damps unwanted resonances in drivers splitting frequency bands before amplification results in easier design of crossover filters simplified control of amplitude and phase (delay) and driver anomalies higher SPL's are achieved in larger systems (you get 4dB improvement in level with the same power) it can be used to tune the system to any room with any acoustic deficiencies

As James Tanner remarked, music reproduction is a transient condition, where stop and start signals are transmitted to the drivers. With the amplifier being connected directly to the speaker driver this condition is improved and better controlled, which results in a much more accurate reproduction of the music. True active system can bring a much higher resolution and dynamic control to an audio system.

And this is exactly what I experienced with the system that was being presented that night. James first played some of his own selections. But then one of the guests brought his own musical selections on a USB stick. As they were played, the gentleman remarked that this is the best reproduction of these tracks that he has ever heard.

- Besame Mama by Poncho Sanchez and Mongo Santamaria
- The Black Messiah (Part Two) by George Duke
- Good Bye Pork Pie Hat by Uzeb

Each musical selection showcased the system's full potential. The clarity, the level of detail, the instrument separation and air around each instrument were simply superb.

The bass was tight and powerful even without any subwoofers. The imaging was precise. Soundstage was truly three-dimensional with depth, width and height clearly defined.

I have only heard this level of reproduction in systems that cost tens of thousands more than Bryston.

That is not to say that the electronic crossover does not have its weaknesses. The main one being that you cannot currently use BAX-1 in any other system. Current design only works with Model T speakers and Bryston amplifiers (ED: For very good technical and performance reasons).

But all in all it was very enjoyable experience and I am grateful to Mark and James for the presentation.

Alex G.