

Atlantic Technology PB-235 Powered Soundbar

Review by Peter Loeser

Purchase new from Atlantic Technology (MSRP: \$899))



Introduction

Atlantic Technology has released its first powered soundbar featuring H-PAS. The PB-235 ("PB" stands for "PowerBar") looks a bit pricey compared to most models you'll find on the shelf at your nearest Best Buy, but it does have some handy features and impressive specs. The manufacturer even advertises that you don't need to add a subwoofer for great sound. Wait, what? Try telling anyone here at HTS there's no need for a subwoofer! But are they right? Can this hefty soundbar really provide convincing bass on its own? Depending on room size and other factors, the answer could, quite possibly be "yes".

Associated equipment: Apple TV, OPPO BDP-103

Design, Build Quality, and Aesthetics

The PB-235 is a 2-channel soundbar with a total of four drivers (one 4" woofer and one 3/4" tweeter per channel) mounted in a ported cabinet. It uses Atlantic Technology's H-PAS design to achieve higher levels of bass at lower frequencies, while maintaining a relatively small cabinet size. Speaker amplification is built-in, as is digital audio processing. There are multiple audio input options (both analog and digital), as well as a subwoofer output, if you are just crazy enough to still use one! [Insert sarcastic smirk] A small remote is also included to adjust volume and EQ settings, and switch between inputs and surround modes. This soundbar is intended to truly be an all-in-one solution for consumers with limited space, but a desire for great sound and flexibility.

So how can Atlantic Technology make such a claim about a soundbar that doesn't need a subwoofer to help it sound great? In their own words:

Quote:

H-PAS Bass System: H-PAS (Hybrid Pressure Acceleration System) is a unique, patented bass system that combines the best of four bass technologies: acoustic suspension, inverse horn, bass reflex, and transmission line. By cascading the four technologies onto one another in a precise, mathematically-determined formula, H-PAS achieves extremely deep bass response from small woofers in a compact enclosure, with no requirement for a high-powered amplifier. No subwoofer needed!

In other words, instead of using the brute-force approach of large woofers and powerful amps they have taken advantage of naturally occurring amplification. They

have incorporated some carefully calculated geometry into the soundbar enclosure. An old fashioned example would be the horn on a phonograph. No electronic amplification happening there. H-PAS takes advantage of similar principles and applies them to the bottom end of the audible frequency range. **By combining multiple types of passive amplification, Atlantic Technology has achieved surprisingly good bass performance from a relatively small package.**

The PB-235 looks and feels sturdy and well constructed. Its weight would suggest use of dense materials for the cabinet, as the speakers and electronics shouldn't add much to it. The buttons on the soundbar and remote worked reliably, but I would not say they look or feel premium. The amp plate (which can be seen on the front of the soundbar with the grille removed) would get warm to the touch after use at high volumes, but certainly not hot.

Aesthetically, it should blend well with most TVs and entertainment stands. The design is clean and simple, and not obtrusive in any way, other than maybe its size. As you can see in the photos below, it is almost as wide as the 46" TV in our living room, and barely fit within the depth of our mantle.

Setup and Operation

Depending on your preference and available space, setup of the PB 235 ranges from easy to very easy. For those of you whose TV resides on an entertainment center or TV stand, the most logical place for the soundbar is right in front of the TV, just below the screen. From here it is literally as simple as plugging in one power cord, and connecting a couple of optical digital cables from your sources. **Power it on and it's ready to go immediately.** For me, the idea of a self-powered soundbar makes a lot of sense, and should appeal to most consumers with a limited amount of space for audio gear. The features and connections make it pretty versatile too, allowing users to manage multiple audio sources.

These photos should give you an idea of what the PB-235 will look like in a typical environment where a soundbar makes a good alternative to separate speakers. I will note here that although it resided in our living room for a month or two seeing regular use, the majority of my critical evaluation and testing was done in a smaller room. I did notice an improvement in bass response and overall sound after moving it out of the living room.

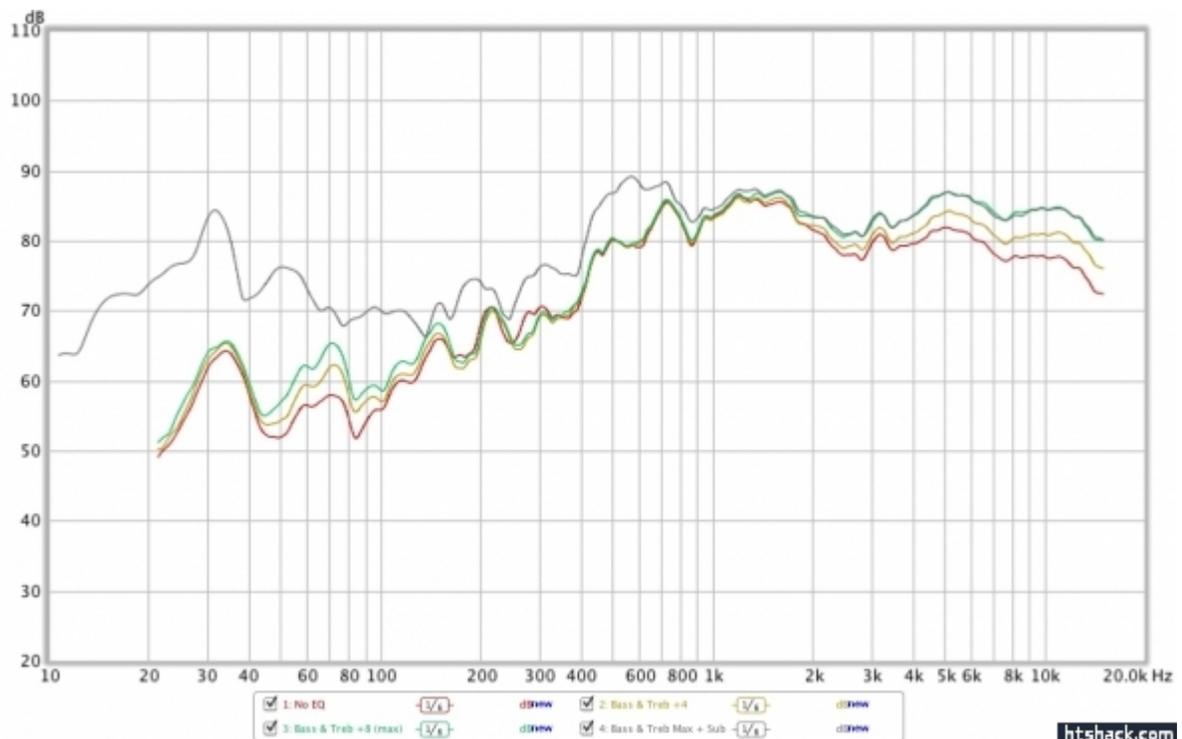


General Impressions and REW Results

It's hard not to be skeptical of a product that claims to perform far beyond what is typically expected from its category. In the right environment, however the PB-235 will surprise you. **In fact, most people going from the speakers in their TV to this soundbar will frankly be blown away.** I will pause here and state that it is still important to approach it with appropriate expectations. The laws of physics still

apply, and compromises have been made. As good as the bass is for such a small enclosure and such small drivers (4 inch woofers!), the soundstage is considerably smaller than you'd get from 3 separate speakers, and it simply isn't powerful enough to reach the theater-like SPL as Atlantic Technology would suggest. With that in mind, I must say I have honestly been impressed by the overall performance of the PowerBar. Although it revealed its limitations from time to time, it is certainly something I could live with if I was restricted to a single speaker in my HT.

To get a picture of how the PowerBar performed in my 240sqft home theater, I fired up REW and did some full range sweeps. The graph below shows the response of the soundbar alone with three different EQ settings. The fourth one includes the Atlantic Technology 642eSB subwoofer, just for fun. Note that my overall evaluation and comments regarding the music and movie performance are based on the soundbar alone, without a sub connected. The red curve represents the out-of-the-box performance, in 2-channel mode with no adjustments to the bass or treble settings. The yellow curve is the result of bass and treble both set to +4 (half of maximum). You can see about a 3db increase at the top end and a similar boost in the 50-90Hz range. The green curve shows the response with bass and treble settings at +8 (max boost). Again, there is a difference of a few db at the top and bottom ends of the measurement range. The grey curve was taken with a subwoofer attached. The PB-235 has an internal crossover and sub output which can be turned on or off, depending on your needs/preferences. With the 642eSB helping, we see a dramatic increase in bass performance below 150Hz. The soundbar lacks bass EQ settings beyond boost and trim, so any sub that lacks improved bass management features is at the mercy of room acoustics. The use of a sub does seem to improve the response of the soundbar itself in the 150-800Hz range, perhaps thanks to the lighter load on the PB-235's internal amps.



Music Performance

Audioslave - Gasoline (Audioslave, ALAC)

I would love to set up a test were individuals were blindfolded and the first 30 seconds or so of Gasoline were played before the blindfolds were removed. I can imagine you would see some very surprised looks from unsuspecting test subjects. Audioslave music is recorded to be turned up to 11 at all times. Anything less is just not right. I could feel the bass rumbling through my seat. Vocals and guitar were right in my face.

Phil Collins - Hand in Hand (Face Value, CD)

Now if you are thinking this is another sappy love song from a movie soundtrack, you might be surprised by how upbeat and jazzy some of Phil's early material is. *Hand in Hand* is a great mix of bass, percussion, vocals, and horns. Playback from the PB-235 was nicely balanced and unexpectedly satisfactory. The bass was very solid and the impact from the drums was impressive. Vocals were clear, and did not get lost behind the drums and horns. Treble was a bit reserved for my taste though (but remember that this can be adjusted to your preference). At this point I let the rest of the album play through as I sat and typed. For casual background music it was more than adequate. I didn't find myself wanting to turn it off or switch over to my main setup.

Daft Punk - Contact (Random Access Memories, 320kbps streaming)

It's hard not to enjoy the catchy tunes and techno beats from the group's latest album. *Contact* features the usual deep driving bass you would expect from Daft Punk, along with some fast paced drum solos. The song was fun to listen to on the soundbar and felt well balanced for the most part. The bass was strong and not as boomy as I expected.

Kyler Brown - Grand Choeur Dialogue (Masterpieces from the Church of St. Mary, CD)

The PB-235 began to reach its limits on some of the tracks from this recording. Although it did once again impress me with the power of the bass produced, it struggled to keep up during sustained full organ chords. At moderate listening levels though (I'm thinking background noise, casual listening, etc.) it does a fine job with organ music. Overall it had good clarity and balance, but did occasionally come across as a bit bright.

A note about listening to music

I used the 2-channel setting for all music listening, and typically left the bass and treble settings flat. The bass boost seemed to result in slightly more boomy, muddy bass.

Movie Performance

9 (Blu-Ray)

I keep coming back to this movie because of its terrific soundtrack and stunning animation. Atlantic Technology's soundbar cannot reach to the extreme depths of the LFE channel during some of the more intense scenes, but it certainly spent plenty of time making the room shake. Dialogue is a key part of this movie and it was executed very well. Remember, this soundbar has no physical center speaker, so those four little drivers are handling the entire front soundstage.

The Lord Of The Rings - The Fellowship Of The Ring (Blu-Ray)

Everything about this movie is so epic, it can be difficult to reproduce convincingly.

There are so many key elements to the soundtrack - dialogue, musical score, fighting, galloping horses, erupting volcanoes, I could go on. With the PB-235, there is no comparison to watching this movie through a TV alone, or even some HT-in-a-box systems I have heard. It won't blow the socks off a real basshead, but it does a very good job creating an environment that draws you into the story, and compliments the visuals nicely.

The Incredible Hulk (Blu-Ray)

It sounds cheesy even to myself, but all I can really say here is "wow". Again, I was surprised how much I could feel the bass. The experience was made even more enjoyable by the sheer impact of the fight scenes. Rapid gunfire, helicopter blades chopping away, cars being smashed, and all manner of explosions really jumped out into the room. The action sequences had a tangible quality that you just don't expect from a soundbar. It also did a decent job here of creating a soundstage that extended beyond its own physical dimensions.

A note about watching movies

For movie playback I use both the standard 5-channel mode as well as the 5-channel extended mode. I did not notice a drastic difference between the two, other than dialogue seemed to be slightly more forward when using the standard 5-channel mode.

Overall Value

Performance expectations as well as price tags for soundbars seem to be rapidly increasing. Many of the well respected brand names within the audio community have put significant amounts of effort into developing them. In my opinion, spending more on a soundbar can actually provide you with improved performance. The PB-235's real value lies in the fact that for consumers or enthusiasts with small rooms and little to no floor space for speakers, it really can serve as an all-in-one solution for good quality home theater sound. It essentially replaces a receiver (assuming you rely on your display for video switching/processing), separate speakers, speaker cable, and for some, a subwoofer. Many other soundbars rely on a subwoofer to even venture below 100Hz, others still require external amplification, and many lack the flexibility offered by the PB-235. One Benjamin shy of a grand seems pretty steep for a single box, but if you have absolutely no other option than a soundbar, you might as well go big.

Conclusion and Recommendations

So, at this point I owe it to you to answer a question - would I buy this, or even recommend it? Let me start by saying this: in terms of performance and overall value (not just value within the soundbar arena as stated above), it does not match a decent set of bookshelf speakers and a \$250-\$350 AV receiver. With a budget of \$700-\$1000 and space for bookshelf or floorstanding speakers, I would personally choose separate speakers and an AVR. If you are extremely cramped for space (or facing pressure from a significant other not to interfere with carefully executed decor) then the PowerBar may very well meet your needs. In the realm of powered soundbars it is quite a beast.