



## Atlantic AT-1 Tower Speakers with H-PAS Technology

### Cheeseburgers & Better Bass

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Years ago a sales representative from a speaker company told me that only two things really matter: finding a better cheeseburger and reproducing better bass. Then he proceeded to demonstrate his speaker with its better bass. Cheeseburgers aside, great bass reproduction is arguably the most difficult to achieve in a stereo system. Since the loudspeaker was invented, manufacturers have tried every trick in the book to design a speaker with jaw-dropping bass that will bring an audiophile to tears. With that as background, I was eager to review the latest attempt, the Atlantic AT-1 tower speakers with H-PAS technology.

#### Features

I first saw and heard the Atlantic Technologies AT-1 speaker at an industry trade show. The speaker shown was a prototype version of H-PAS technology, not yet available for sale. H-PAS (Hybrid Pressure Acceleration System) was presented as **a new concept in speaker design that could achieve remarkably deep, extended bass from a moderately sized tower speaker with two 5.25" mid-woofers**. It was a unique combination of time-tested speaker designs - inverse horn, transmission line, bass reflex and acoustic suspension - in one enclosure. As the bass winds its way through the enclosure, it cascades and accelerates from one chamber to the next eventually exiting the cabinet through a tuned port at the bottom of the enclosure. It's a passive system requiring no special amps or EQ. The AT-1 employs two 5.25" GLH woofers (Graphite-Loaded Homopolymer), which also act as midrange drivers, and a single 1.1" soft dome tweeter positioned between the two midrange-woofers. This midrange-tweeter-midrange (M-T-M) driver alignment offers wide horizontal dispersion while limiting vertical dispersion, which reduces floor and ceiling sound reflections. A three-position switch controls the output level of the tweeter. The heavily braced enclosures are solid and easily pass the knuckle rap test signifying solid construction. The cabinets are finished in high gloss black with a hint of metal flakes in the paint and a smoked glass top. The AT-1 can be bi-wired or bi-amped for better performance. Included are machined floor spikes and wire management brackets on the back of the cabinets.



*Atlantic AT-1 Speaker with H-PAS*

#### The Importance of Correct Speaker Placement

Before I render my opinions of the AT-1, it's important to point out that achieving deep, extended, tight bass is heavily dependent on a speakers' placement in the room. This requires a bit of patience and some experimentation but is well worth the time. Even a few inches difference in placement can make a big difference in bass reproduction. This rule applies to all speakers, not just the Atlantic AT-1. Correct speaker placement has a huge payoff, and it's free!

#### Robust Bass Performance

Having stated a common principle that every audiophile knows, I spent some time fine-tuning the position of the speakers. Although my listening room has an annoying bass hump at around the 60-70 Hz range, I experimented with placement until it sounded as if I had nailed it. I did, and **the result was bass I've never heard from two 5.25" drivers. Punchy, robust (very robust), tight bass was the result. The bass sounded very fast, thus the**

punchy, tight sound quality – no sloppy, heavy bass here. The quickness of the bass is likely due to the 5.25" GLH mid-woofers. They're smaller, and the graphite-polymer cones are stiffer with low mass and thus are agile and can move very quickly. They also produced extraordinarily solid and robust bass, the kind of bass that makes you want to turn up the volume. The AT-1 sailed through all of my good bass demos, even at moderate to high listening levels. I sure would have enjoyed the AT-1s in my college dorm room! Bass pitch and definition are equally as important as depth and tightness. Each bass note should have its own pitch and must be distinguishable from the note before and after it. 'One Note Bass', where all the bass sounds the same is a malady that affects many otherwise great sounding systems. The AT-1s are as articulate in pitch as they are in speed as I heard in Dean Peer's 'Lord's Tundra', from his Uncross CD. Each note sounded distinct and separate from the others.

### Uncommonly Clean Mids & Highs

While the AT-1 belted out uncommonly robust and deep bass, it also possesses a degree of finesse. The mids and highs are refreshingly open with remarkable transparency. In my opinion, the mids and highs are as equally impressive as the bass. Instrumental details are crisp and vocals have a distinctively in-room presence. The vocal duet of Renee Olstead and Peter Cincotti in "Breaking Up is Hard to Do" (CD, Verve Records) simply jumped out of the speaker. The AT-1 speakers probably sound best in mid to large sized listening rooms. A larger room allows full bass extension, close to the rated 29 Hz (+/- 3 dB). I tested them with a Yamaha A-S500 integrated amp with 85 watts x 2, which was plenty of power, but with a sensitivity spec of 89 dB don't hesitate to feed them more power.



*Atlantic AT-1 Speaker with H-PAS - cutaway*

### Conclusions & Specifications

Speaker designers will continue the quest for better bass – the Holy Grail of music reproduction. At least for now, the Atlantic AT-1 has earned that spot. Its solid, deep bass response and beautifully open mids & highs will turn your head. Now that I've found better bass, I'm getting hungry and, strangely, I feel like eating a cheeseburger. Good listening!

### Specifications

- Speaker Type: 2-way H-PAS (Hybrid Pressure Acceleration System) M-T-M array
- Drivers: Two 5 1/4" long throw GLH cones, 1 1/8" soft dome tweeter
- Frequency response: 29 Hz – 20 kHz, +/- 3 dB
- Nominal Impedance: 6 ohms
- Crossover Frequency: 2 kHz
- Crossover Type: 2nd order LP (low pass), 3rd order HP (high pass)
- Sensitivity: 89 dB
- Recommended amp power: 20 – 200 watts
- Dimensions (W x H x D): 8 7/8" x 41" x 13 3/4" (including grilles)
- Weight: 54 lbs. each
- Price: \$2500 per pair
- Contact: atlantictechnology.com