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# Atlantic Technology System 8200 **High Performance And Custom Flexibility**

By Perry Sun

# Issue 87 Attractions

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Atlantic Technology System 8200

8200 LR

# Flagship Design And Comprehensive Flexibility

Atlantic Technology is a company known for producing home theatre loudspeaker systems of remarkable performance capability and value, as well as being one of the first companies to design consumer loudspeakers with reasonable, compact sizes for multichannel sound implementation for use in home environments. Founded in 1989 by Peter Tribeman, a respected consumer electronics veteran, Atlantic Technology designs its loudspeakers as part of complete, fully-integrated multichannel solutions.



Atlantic Technology adheres to several loudspeaker design principles, including the use of sealed cabinet designs for its subwoofers, and the implementation of the D'Appolito driver configuration for most of its direct-radiating loudspeakers (to control dispersion in the direction collinear to the drivers). All of the company's center channel loudspeakers feature special equalization controls to compensate for room acoustics or boundary effects. In addition to its several surround sound loudspeaker lineups, Atlantic Technology offers a multi-room audio distribution system, in-wall and in-ceiling loudspeakers, and even electronics, which includes a surround processor and multichannel power amplifier.

One of the loudspeaker systems that helped put Atlantic Technology on the map during the growth of home theatre in the 1990s was the System 350 THX. During a time when owning THX®-certified equipment was still considered quite a luxury, the System 350 THX was considered an attractive value for the substantial performance it offered. Since then, the company has introduced several

Frequency Response: 50 Hz-20 kHz, ±2 dB Crossover Frequencies: 450 Hz, 3 kHz (24 dB/Octave Linkwitz-Riley Crossover) Impedance: 6 Ohms (Nominal) Efficiency: 90 dB Drivers: 8-inch GLH (Graphite Loaded Homopolymer) Woofer (2), 5-1/4-Inch GLH Midrange, 1-inch Silk Dome Tweeter Cabinet Design: Sealed Finishes: duraBlac™ matte black (Cabinet); duraBlac, Natural Maple, Natural Cherry, High Gloss Black, Asian Mahogany, Unfinished (Accent Panels) Dimensions (WHD Inches): 9.3 x 31.7 x 15.6 Weight (In Pounds): 65 Price: \$1,450

#### 8200 C

Frequency Response: 50 Hz-20 kHz, ±2 dB Crossover Frequencies: 450 Hz, 3 kHz (24 dB/Octave Linkwitz-Riley Crossover) Impedance: 6 Ohms (Nominal) Efficiency: 90 dB Drivers: 8-inch GLH (2), 5-1/4-Inch GLH Midrange, 1-inch Silk Dome Tweeter Cabinet Design: Sealed Finishes: duraBlac matte black (Cabinet); duraBlac, Natural Maple, Natural Cherry, High Gloss Black, Asian Mahogany, Unfinished (Accent Panels) Dimensions (WHD Inches): 28.5 x 16 x 11.5 (With Base And Accent Panels) Weight (In Pounds): 55 Price: \$1,500

# 8200 SR

Frequency Response: 80 Hz-20 kHz, ±2 dB Crossover Frequencies: 450 Hz, 3 kHz (24 dB/Octave Linkwitz-Riley Crossover) Impedance: 6 Ohms (Nominal) Efficiency: 87 dB Drivers: 8-inch GLH Woofer (2), 5-1/4-Inch GLH Midrange, 1-inch Silk Dome Tweeter Cabinet Design: Sealed Finishes: duraBlac matte black or matte white Dimensions (WHD Inches): 14.7 x 19 x 10.4

THX-certified loudspeaker systems, and currently has four such product families.

The flagship of these loudspeaker lines, and the subject of this review, is the THX Ultra2-certified System 8200. This is a fully configurable, high-performance home theatre loudspeaker system, delivering up to 7.1-channel capability. Additionally, the System 8200 offers numerous customization options for aesthetic integration into living environments, as well as several special equalization controls for sonic integration with real-world home listening rooms.

# C.O.R.E.™ (Custom Optimized Room Enhanced)

The System 8200 family is the first from Atlantic Technology to feature the company's C.O.R.E. design concept. It's an embodiment of product development and performance principles with the objective of achieving an optimal combination of aesthetics, performance, and acoustical fine-tuning. The more affordably priced, THX-certified System 6200 and System 4200 series also feature C.O.R.E. technology.

The Custom Optimized portion of C.O.R.E. entails a special approach to loudspeaker system visual design, as well as a variety of appearance options for the loudspeakers. This includes optional accent panel kits for most of the System 8200 loudspeaker models, comprising wood side panels in various finishes (duraBlac™, Natural Maple, Natural Cherry, High Gloss Black, Asian Mahogany, and unfinished). Available for certain models are beveled smoked glass tops. Efforts were taken to achieve visual consistency, not only between the various speaker models, but also between the loudspeakers, their stands, and the subwoofers. And in fact, the subwoofers can double as loudspeaker stands. They are available with their own accent panel kits, as are optional pedestal loudspeaker stands.

The Room Enhanced part of C.O.R.E. is the loudspeaker system's feature set of equalization options to enable tailoring of the speakers' in-room frequency response to best match their interaction with their surroundings. For the loudspeakers, there are several specialized passive equalization circuits. The outboard amplifier for the subwoofers feature a series of preset and adjustable equalization options.

## System 8200

#### 8200 LR

The 8200 LR is a three-way loudspeaker system, designed to be used for the front left and right channels. This loudspeaker could also be used for the surround channels, particularly if you do not elect to adopt a true THX Ultra2 setup, and opt to go with a direct-radiating loudspeaker setup instead. The 1-inch silk dome tweeter is flanked, above and below, by two 5-1/4-inch Graphite Loaded Homopolymer (GLH) midrange drivers in a D'Appolito configuration. This limits vertical directivity, a requirement for THX certification with the goal of controlling ceiling and floor reflections. The D'Appolito drivers are then flanked, above and below, by two 8-inch GLH woofers.

The 8200 LR has a respectably-sized footprint. It is also of rather considerable weight, especially when the optional accent panels are added. Both the cabinet and panels are constructed of MDF (Medium-Density Fiberboard), and the cabinet is finished in duraBlac matte black (this applies to all other System 8200 loudspeaker models). The cabinet is sealed and has a sloped rear panel to help break up internal standing waves. The 8200 must be supported on stands, and because of its substantial weight, it is highly recommended that they be placed

Weight (In Pounds): 24 Price: \$1,700 Per Pair

# 8200 Pedestal Subwoofer (PedWoofer) System

8200 PedWoofer Frequency Response: 20-150 Hz. ±2 dB Driver: 12-Inch Glass Bead/Ceramic/Carbon Fiber/Polymer Woofer Cabinet Design: Sealed Finishes: duraBlac matte black (Cabinet); duraBlac, Natural Maple, Natural Cherry, High Gloss Black, Asian Mahogany, Unfinished (Accent Panels) Dimensions (WHD Inches): 9.3 x 29.6 x 15.6 (With Feet And Spikes) Weight: 52 Pounds

### SA-8200 Subwoofer Amplifier

Inputs: RCA (2)
Outputs: Five-Way Binding
Posts (4), RCA (2)
Rated Power Output (Per
Channel): 350 Watts RMS,
550 IHF Dynamic Peak
Frequency Response: 15
Hz-100 kHz (+0.5/-3 dB)
Dimensions (WHD In
Inches): 19 x 5 x 14
Weight (In Pounds): 38.9
Price: \$4,000 (Includes Two
PedWoofers & SA-8200)

Manufactured In The U.S.A. By: Atlantic Technology 343 Vanderbilt Avenue

Norwood, Massachusetts 02062

Tel: 781 762 6300 www.atlantictechnology.com only on the 8200 PedWoofers or the optional, sand-fillable 8200 LR Pedestals.

The low-end extension capability of the 8200 LR is rated at 50 Hz. The loudspeaker is bi-wirable. What distinguishes the 8200 LR from its competitors is the implementation of three selectable (and defeatable) equalization settings. The first allows you to select high-frequency filtering, including a roll-off to compensate for sonically "live" environments with reflective boundaries and a slight boost to accommodate rooms that have lots of sonic absorption. The second equalization setting applies a midrange/high-frequency shelf filter to account for attenuation due to installation of the speakers behind front-projection perforated screens. The final setting is to mitigate boundary proximity effects, as a result of placing the loudspeaker in a cabinet or wall unit, by attenuating the lower-midrange.

#### 8200 C

The 8200 C is also a three-way loudspeaker design and has the same driver complement as the 8200 LR. The difference is that the loudspeaker is oriented horizontally rather than vertically, and the woofers are situated to the left and right of the D'Appolito array. (Atlantic Technology pioneered the design of horizontally oriented, THX-certified front channel loudspeakers.) With part of its bottom surface rounded, and a dedicated base, the 8200 C can be tilted. Optional accent panels attach to the sides of the 8200 C. The cabinet is sealed, and there are two sets of five-way binding posts for bi-wiring. Like the 8200 LR, the 8200 C is rated to deliver low frequencies down to 50 Hz. Because of its considerable size and weight, the 8200 C might not be an ideal match for certain direct-view and rear-projection displays. Therefore, you may want to consider Atlantic Technology's smaller-sized THX center loudspeaker models (the timbre, or tonal character for the 8200 C and the smaller models is said to be very close). The 8200 C has the same equalization features as the 8200 LR and also has a sloped rear panel to help reduce internal resonance.

# 8200 SR

The two-way 8200 SR is designed for surround channel use in either dipole or bipole operation. The driver complement includes two 6.5-inch GLH woofer and 1-inch silk dome tweeter sets, mounted on their own surfaces. The two sets radiate sound in opposite directions, creating the sonic "null" when the loudspeaker is placed directly to the side of the listener. A switch on one of the panels selects dipole or bipole operation. In dipole mode, the two driver sets are wired out of phase with respect to each other, which enhances sonic diffusivity. While in bipole operation, both sets operate simply as perfect duplicates. There is a single pair of five-way binding posts. The 8200 SR is rated to deliver bass down to 80 Hz, rather typical for a THX-certified surround loudspeaker. This loudspeaker can be wall-mounted, or situated atop the optional, visually complementary 8200 SR Pedestal (which is sand-fillable for maximum stability).

# 8200 Pedestal Subwoofer (PedWoofer) System

The 8200 PedWoofer System is comprised of two passive subwoofer cabinets and a two-channel power amplifier, the SA-8200, which also provides active low-pass filters and a host of electronics for subwoofer setup including equalization. Each cabinet is sealed and has a side-firing 12-inch woofer with a cone made of a composite of glass beads, ceramics, carbon fibers, and a polymer. The cone has an integrated dust cap. The low-end extension limit is rated at 20 Hz. The accent panel kit for the PedWoofer includes four panels for the left, right, front, and back sides. Since the PedWoofer is indeed passive, the only connection available is a single set of five-way binding posts.

The two-channel SA-8200 provides a rated 350 watts RMS power output for each of the two subwoofers. It was designed specifically for use with the 8200 PedWoofers. For each of the two channels, line-level (unbalanced) or

speaker-level inputs may be used. In the most likely scenario for typical home theatre setups, you would want to make sure that the SA-8200 is set to accept just one line-level input, which would be the LFE/subwoofer output of your surround processor or receiver.

On the front panel, there are three settings available for each subwoofer. For phase, there are four points selectable between 0 and 270 degrees. The low-pass filter lets you set the cut-off frequency between 50 and 150 Hz (or defeated if you've already engaged bass management in your electronics). Finally, bass level sets the output level for the sub. You generally will also want to leave this defeated if you're relying on your surround processor/receiver for setting the output level. However, this control may be useful in tweaking the relative output of the two subs to achieve balanced in-room frequency response.

With two subwoofers at your disposal, particularly the 8200 PedWoofers, each of which is capable of prodigious low-end delivery, you have the capability to achieve both optimum bass output and smooth frequency response, depending of course on where you place them. However, more often than not you're likely to be limited in subwoofer placement flexibility, so the SA-8200 offers the ability to compensate for imperfections in low-end response, particularly likely when at least one of the subwoofers is situated in a corner. With a low-frequency noise source, tone sweep, or generator, and an SPL meter or real-time analyzer, you can approximately locate the frequency where a response peak (or standing wave) occurs. The SA-8200 allows you to set special equalization controls to control this peak by specifying the frequency where this occurs, the bandwidth (between 0.2 and 1.5 times the specified frequency), and amount of attenuation (between 0 and -20 dB).

If you thought that these features were to the extent of which the SA-8200 was capable of, you're mistaken. There's also an infrared remote control, which allows you to not only adjust output level and mute the subwoofers, but also select between four preset equalization settings, tailored for certain applications such as effects-laden movie soundtrack presentation, music listening, and low-volume listening.

## **System Setup**

The Atlantic Technology System 8200 was designed to be implemented as a 7.1-channel THX Ultra2 setup. This would include two 8200 LRs for the front left and right, an 8200 C for center channel duty, two 8200 SRs for the left and right surrounds, a pair of 8200 LRs for back surround, and two 8200 PedWoofers to provide low-end output. Because my preference for a loudspeaker configuration is to use identical monopole loudspeakers for all channels, I typically used the 8200 LRs for the front and surround channel pairs.

For the front channels, the 8200 LRs were placed at about 35 degrees with respect to the axis defined by the central listening seat and the center channel loudspeaker, while for the surrounds the 8200 LRs were positioned at 125-degree angles. All were situated on their pedestal stands, so that when I was seated the heights of the tweeters were equal, and reasonably at ear-level. I placed a pair of 8200 SRs on their stands at 90 degree angles, which were directly to the sides of my head. The stands for the 8200 SRs have the loudspeakers somewhat elevated with respect to my ears, which is what THX recommends. I mostly used the 8200 SRs in dipole mode. In my listening tests, I alternated between the 8200 LRs and 8200 SRs for surround channel duty.

For the subwoofers, I placed the 8200 PedWoofers in the two locations in my

listening room that I have known to yield a nicely balanced combination of acoustic output and smoothness. With all settings on the SA-8200 defeated, I measured low-frequency tones between 20 and 120 Hz using The 5.1 Audio Toolkit DVD and a conventional Radio Shack sound meter, and discovered that in-room response was impressively smooth. The only peak I noticed was at just below 50 Hz. This wasn't as objectionable as the more common 60 to 90 Hz peaks, and when I attempted to impart just slight equalization to reduce this peak, I found that rather important low-end detail was being affected. I concluded that my listening room (with acoustic treatments for bass) was inherently compatible with the PedWoofers, obviating the need for equalization compensation.

Similarly, I found that the equalization settings provided with the 8200 LRs and 8200 C were not necessary in my listening room. I have acoustically treated my home theatre environment with diffusion and absorption, and the result is a sound that seems to be nicely balanced. Of course, your mileage will very likely vary, and so the compensation settings of Atlantic Technology could be a very useful fine-tuning tool.

The adjustments provided with the SA-8200 for the low-end really allow for setup flexibility with subwoofers, to the extent that you will not find with the majority of competing products. They are suitable for very precise in-room frequency response calibration when using a real-time analyzer. Included with the 8200 PedWoofer system is a CD-ROM, which provides some valuable information on home theatre setup, but more significantly, offers discrete low-frequency tones to help in your assessment of deep bass smoothness.

# **Listening Tests And Performance**

The Atlantic Technology System 8200 proved to be an excellent workhorse for a variety of home theatre applications, particularly movie soundtrack reproduction. In my 2,500-cubic foot room, the loudspeaker system much more than adequately filled the space, and in fact, I thought that my room was a little small for the loudspeakers.

With powerful, dynamic soundtracks such as Star Wars: Episode II—Attack Of The Clones and K-19: The Widowmaker, the System 8200 easily delivered the demands of wide dynamic range and sheer intensity without hesitation. The low-end was powerful and downright room-shaking during the appropriate moments. As well, the System 8200 rendered presentations of quiescent movie soundtracks and classical surround sound music with gracefulness and articulate detail.

With movie soundtracks, the holosonic<sup>™</sup> image portrayed by this system was very compelling, with a wide presence across the screen and a wraparound effect from the surrounds. The effectiveness of the imaging was especially apparent when I used 8200 LRs for both the front and surround channel pairs. Along with the 8200 C, there was an excellent sense of dimensional integration all around. The 8200 C also delivered exemplary dialogue clarity and easily handled loud sound pressure level reproduction without the strain that is often encountered with many center channel speaker designs.

Overall, the System 8200 seemed to have just a slight balance in tonality toward the upper-midrange. This was especially noticeable when listening to movie soundtracks with some inherent tonal "sparkle," such as the first two installments of The Lord Of The Rings. Nonetheless, the 8200 LRs, in two-channel music listening, did reveal abundant midrange detail and seemed convincing in terms of having a musically authentic sound. These observations are likely to have resulted

in part from my being accustomed to the JMlab Electra loudspeaker system which I have been using as a reference, with a sound that I have found very appealing for being balanced, natural, and smooth. Another factor could have been the rather large size of the System 8200 for my room.

In general, I was very pleased with the sound of the System 8200 when playing multichannel high-resolution music (SA-CD and DVD-Audio), especially with respect to imaging. I felt a compelling sense of holosonic immersion that connected me emotionally to the music. The ability to localize sounds between the physical loudspeaker locations was readily apparent, and also quite consistent with the excellent imaging capabilities of the JMlab Electra system and previously reviewed Phase Technology PC Series. However, I did consider the JMlab Electra system to be distinguished, in comparison to the System 8200, for its rendering of depth-of-field imaging.

Another objective of these listening evaluations was to compare the use of the dipole 8200 SRs and the monopole 8200 LRs for surround channel duty. I determined that the 8200 SR was a very capable loudspeaker for its purpose of providing diffuse sound, and at the same time it had remarkable tonal consistency with the other System 8200 loudspeakers. However, although the inherently nebulous sound produced by this loudspeaker (as a result of the dipole design) provided for good envelopment effect, there wasn't quite the spatial involvement and intimacy that I consistently experienced when using the System 8200 LRs (or other systems with tonally matched, monopole loudspeakers all around). With the latter in place, I simply found myself more a part of the movie or musical performance, as a result of the seamless three-dimensional imaging. The diffuse sound of the dipole loudspeakers made the listening experience resemble that of a movie theatre audio system (as intended), but also less emotionally engaging.

I certainly would be remiss if I didn't elaborate on the 8200 PedWoofer System as one of the prime highlights of the System 8200. The low-end reproduced was detailed, very deep in extension, and incredibly tight. With the low-frequency tones from The 5.1 Audio Toolkit DVD, I readily noticed output down to 20 Hz and very solid acoustical content from 25 to 40 Hz. During K-19: The Widowmaker, I noticed some extremely deep pulses below 30 Hz for the rumblings of K-19 as it dove though the depths of the sea to near its hull crush limits. The PedWoofers were really well-controlled and taut-sounding, only making their presence known when called upon to do so by the program material. The two 8200 PedWoofers definitely did not hesitate to play downright loud and shake the room. At the same time, they rendered musical bass that was natural and free of objectionable boom, particularly with the reproduction of the double bass in jazz recordings.

# Conclusion

For larger room environments (greater than 3,000 cubic feet), the Atlantic Technology System 8200 should serve as an excellent choice for home theatre, especially when movie soundtracks tend to be the favored entertainment choice. They also offer very delightful performance for multichannel music listening, a definite plus for a THX-certified system (with a history of being associated with being somewhat compromised for music playback). Atlantic Technology offers two aspects of progressive loudspeaker design for the System 8200, which includes an array of visual and acoustical customization options, both of which really make it stand out from its competitors, and offer dramatically expanded possibilities for integration with home environments.

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