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Atlantic Technology System 920 Speaker System and Onkyo TX-SR503 A/V Receiver

Thinking outside the box.



BY ADRIENNE MAXWELL

Who says you have to sacrifice performance to create a small, affordable speaker system? Not Atlantic Technology. With the new \$899–\$999 System 920, they set out to prove that we can and should expect more than we're currently getting from most tiny sub/sat and

HTIB speakers. I put their claim to the test for this Spotlight review by mating the speakers with Onkyo's brand-new \$300 TX-SR503 A/V receiver. Add an inexpensive universal disc player to this combo, and you've got a complete home theater system for about \$1,400.

Feeling Whole Again

The System 920 is the least expensive ensemble in Atlantic Tech's line, but you wouldn't know it by looking at it. The build quality is outstanding. The speakers and sub inherited their driver and design technologies from the company's

HIGHLIGHTS

- A full sound from such a small speaker system
- The 920 LR satellite performs well as a center-channel speaker

higher-end lines. The inert MDF cabinets create an impression of heft, but each speaker weighs only 4 pounds. The magnetically attached grilles and attractive polished side panels, available in black (\$105) or silver (\$120), are wonderfully stylish touches that belie the low price.

The next thing that caught my eye was the center channel—or lack thereof. Rather than including a horizontally aligned center speaker, Atlantic Tech supplies five identical, vertically oriented 920 LR speakers, each with a 1-inch soft-dome tweeter and a 4-inch GLH woofer. There's another difference. Narrow is all the rage in speakers these days, and many manufacturers accommodate this style by substituting a couple of small woofers for one larger woofer, then they put the whole driver array in as skinny a cabinet as they can design. Small speakers have a hard enough time reproducing midrange frequencies; minimizing their drivers and cabinets doesn't make their job any easier and puts a lot more pressure on the subwoofer to carry the mid-bass load, while also handling the lowest frequencies it was intended for. Atlantic Tech does not employ this practice with the 920 LR.

The trend seems to be that subwoofers are getting beefier as the speakers get thinner. In contrast, Atlantic Tech's 102 SB features a modest 8-inch woofer and 100-watt

(rated) amplifier in a modestly sized but well-built sealed cabinet that measures just slightly more than a foot in each dimension.

Before I introduced the speakers to the Onkyo receiver, I decided to listen to them using a receiver that I know well, Pioneer's \$1,700 Elite VSX-55TXi, which is admittedly a higher-priced model than most people would use with these

speakers. The Pioneer has a warm sound that takes off the harsh edges found in brighter systems; so, when a system sounds bright through it, you can imagine how much brighter it would sound with a more up-front receiver. The 920 LRs have a rated frequency response of 100 hertz to 20 kilohertz, so I set the receiver's crossover at 100 Hz. I then ran the

AT A GLANCE ATLANTIC TECHNOLOGY SYSTEM 920 SPEAKER SYSTEM



SUBWOOFER: 102 SB

Connections:	Line-level inputs and outputs
Enclosure Type:	Sealed
Woofer (size in inches, type):	8, long-throw composite cone
Power Rating (watts):	100 (RMS)
Crossover Bypass:	Yes
Available Finishes:	Black, Silver
Dimensions (H x W x D, inches):	13 x 13.2 x 12.2
Weight (pounds):	31
Price:	\$374 (black), \$399 (silver)

SPEAKER:

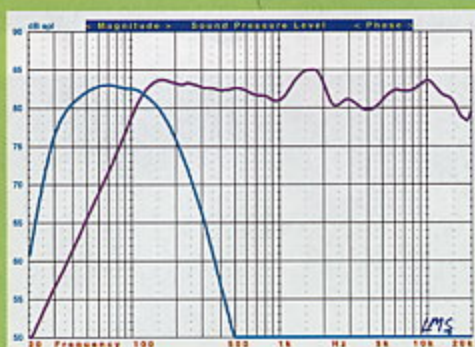
Type:	
Tweeter (size in inches, type):	
Midrange (size in inches, type):	
Woofer (size in inches, type):	
Nominal Impedance (ohms):	
Recommended Amp Power (watts):	
Available Finishes:	
Dimensions (H x W x D, inches):	
Weight (pounds):	
Price:	

920 LR

two-way, satellite
1, soft dome
N/A
4, graphite-loaded homopolymer
8
10-100
Black, Silver
8.5 x 5.9 x 6
4
\$105 (black), \$120 (silver)

These listings are based on the manufacturer's stated specs; the HT Labs box below indicates the gear's performance on our test bench.

HT Labs Measures: Atlantic Technology System 920 Speaker System



→ Satellite Sensitivity:
82.5 dB from 500 Hz to 2 kHz

This graph shows the quasi-anechoic (employing close-miking of all woofers) frequency response

of the 920 LR satellites (purple trace) and 102 SB subwoofer (blue trace). The passive loudspeaker was measured at a distance of 1 meter with a 2.83-volt input.

The 920 LR's listening-window response (a five-point average of axial and ± 15 -degree horizontal and vertical responses) measures $+2.40/-2.83$ decibels from 200 hertz to 10 kilohertz. An average of axial and ± 15 -degree horizontal responses measures $+2.40/-3.21$ dB from 200 Hz to 10 kHz. The -3 dB point is at 104 Hz, and the -6 dB point is at 90 Hz. Impedance reaches a minimum of 5.05 ohms at 224 Hz and a phase angle of $+42.14$ degrees at 102 Hz.

The 102 SB's close-miked response, normalized to the level at 80 Hz, indicates that the lower -3 dB point is at 37 Hz and the -6 dB point is at 30 Hz. The upper -3 dB point is at 156 Hz with the crossover-frequency control set to maximum. —MJP

speakers in for a while using a five-channel stereo mode, and then switched to Dolby Pro Logic II to casually listen to audio from my cable box. I always listen to my stereo TV signals in DPLII, which means the center channel does most of the work. If that speaker falls short, my everyday entertainment experience suffers.

The quality of the dialogue that emerged from the 920 LR in the center position stopped me in my tracks. I've listened to many sub/sat systems, and I've come to expect a certain tonal quality from tiny center channels—usually a thin, nasal sound. The less nasal it is, the

more I usually like the system's performance. I couldn't judge this center by the same standard because it had a completely different sound—the sound of natural midrange. What a concept.

If you're used to a horizontal center channel, the 920 LR center's tonal shift may throw you off, but I liked the fact that it sounded like the rest of the speakers in the system, especially with music. I'm often reluctant to use DPLII for music, even if I want a bigger soundstage, because I find vocals to be more natural in stereo. With the System 920, I enjoyed the best of both worlds: a large sound and vocals that

HIGHLIGHTS

- The \$300 TX-SR503 receiver fills even a large room with sound
- The receiver is easy to set up and use, with enough features to keep the more advanced user happy

retained the same character whether they came through the center or left/right speakers.

There's some chestiness with deeper male vocals, but I'll take a little chestiness if it means I can hear more center-channel effects in movie soundtracks. That's what the 920 LR center gave me, whether it was relaying more of the battle sounds in the "Battle of the Pelennor Fields" from *The Return of the King* or just putting vocals on an even footing with special effects in *The Empire Strikes Back*.

That upgraded 4-inch woofer doesn't just benefit the center channel. The surround field was fuller in the middle without sacrificing high-end clarity. The sound had a wholeness that's often missing from smaller systems. Surround effects didn't just consist of higher-frequency swooshing and whizzing; the effects had real meat on their

NEED A DISPLAY?

We recommend the following displays to mate with this Atlantic Tech/Onkyo combo:

Toshiba 34HF84 CRT HD Monitor, \$1,399

Screen size: 34 inches
Best video connection: HDMI
Weight: 156 pounds

InFocus 4805 DLP Projector, \$1,299

Resolution: 854 by 480
Best video connection: DVI
Weight: 6.8 pounds

***Please remember that if you decide to use a projector, you will also need to purchase a screen.*



Screen image courtesy of 20th Century Fox

ATLANTIC TECHNOLOGY SYSTEM 920 SPEAKER SYSTEM

OVERALL RATING

Build Quality

- Cabinets constructed of inert MDF, with finely polished side panels
- Higher-end drivers in both the speakers and the subwoofer

97

Value

- The system will give more expensive bookshelf ensembles a run for their money
- Each piece is also sold separately

95

Features

- The subwoofer has a crossover bypass
- The grilles are easy to detach
- The speakers are magnetically shielded

96

Performance

- Wonderful midrange for such small speakers
- Provides excellent bass definition

98

Ergonomics

- The manuals are thorough
- Speakers aren't overly placement sensitive

95

97

The System 920 offers everything you should value in a speaker system at any price: a well-defined sub, a solid midrange, and smooth highs, all with minimal setup effort. It's the most complete entry-level speaker system Adrienne has heard.

General information

System 920 Speaker System, \$899 (all black), \$999 (all silver) → Atlantic Technology, (781) 762-6300
www.atlantictechnology.com → Dealer Locator Code ATL

bones, which made them more believable. In a scene like "Lobby Shooting Spree" from *The Matrix*, the music behind all of those machine guns and high-pitched shell casings is often buried, but here it had enough presence to complete the scene. Whether I was listening to stereo music, high-resolution audio, or movie soundtracks, I was consistently impressed by the System 920's cohesiveness, the way each piece of the ensemble seemed comfortable carrying its own weight.

Man, does that ease the 102 SB subwoofer's burden. With both music and movies, bass notes had excellent definition. It may not shake your room as much as larger subwoofers I've heard, but I'll take refinement over brute force any day. With the help of my room's boundaries, I got wonderful low-end presence in scenes from *U-571*, *The Return of the King*, and *Close Encounters of the Third Kind*.

That nice blend between the sub and sats meant I didn't have to experiment with the crossover setting or spend much time fiddling with speaker and sub placement, although the vertical center may prove challenging in some setups (it's 8.5 inches tall). In the manual, Atlantic Tech recommends that you keep the speakers away from the wall and align all three front speakers at ear level. This setup certainly maximizes the drivers' effectiveness and creates the fullest sound, but I also experimented with higher placements and didn't feel like I lost much ground.

I did need to push the receiver's volume a little more than usual in order to bring out the best in this speaker system. The more volume I fed it, the more it seemed to come into its own. There are other sub/sat systems that sound bigger

overall, but I've yet to hear one that sounds as full as the System 920.


Nice and Easy

So the System 920 sounded great with a receiver that costs almost twice as much as the speakers.

How would it sound with a comparably priced entry-level receiver like the TX-SR503?

Onkyo has found an excellent balance between features and ease of use in this new receiver. It's a 7.1-channel model that has the

AT A GLANCE ONKYO TX-SR503 A/V RECEIVER



FEATURES

Processing Modes:

Dolby: Digital 5.1, EX, Pro Logic IIx
DTS: DTS, ES Discrete/Matrix, 96/24, Neo:6
Other: 8 DSP modes

THX Certification: No

Audio D/A Converter: 24-bit/192-kilohertz

Number of Amp Channels: 7

Power Rating (watts per channel): 75, into 8 ohms

Frequency Response: 10 Hz to 100 kHz

Dimensions (H x W x D, inches): 5.875 x 17.125 x 14.813

Weight (pounds): 22.5

Price: \$300

CONNECTIONS

Inputs:

Video: component video (3), S-video (3), composite video (4)

Audio: optical digital (3), coaxial digital (1), 5.1-channel analog (1), stereo analog (5)

Outputs:

Video: component video (1), S-video (2), composite video (2)

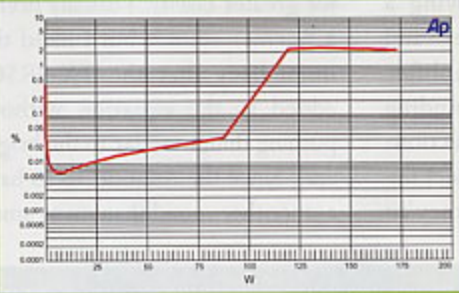
Audio: stereo analog (2), subwoofer pre out (1)

Additional:

RI jack for controlling other Onkyo products (1), AM/FM antenna (1/1), headphone output (1)

These listings are based on the manufacturer's stated specs; the HT Labs box below indicates the gear's performance on our test bench.

HT Labs Measures: Onkyo TX-SR503 A/V Receiver



Five channels driven continuously into 8-ohm loads:

- 0.1% distortion at 66.7 watts
- 1% distortion at 81.7 watts

Analog frequency response in Direct mode:

- 0.18 dB at 10 Hz
- 0.05 dB at 20 Hz
- 0.05 dB at 20 kHz
- 0.30 dB at 50 kHz

Analog frequency response with signal processing:

- 3.08 dB at 10 Hz
- 1.01 dB at 20 Hz
- 0.19 dB at 20 kHz
- 23.62 dB at 50 kHz

This graph shows that the TX-SR503's left channel, from CD input to speaker output with two channels driving 8-ohm loads, reaches 0.1% distortion at 96.1 watts and 1% distortion at 113.5 watts. Into 4 ohms, the amplifier reaches 0.1% distortion at 118.5 watts and 1% distortion at 145.8 watts.

Response from the multichannel input to the speaker output measures -0.14 decibels at 10 hertz, -0.01 dB at 20 Hz, -0.19 dB at 20 kHz, and -0.44 dB at 50 kHz. THD+N from the amplifier was less than 0.007% at 1 kilohertz when driving 2.83 volts into an 8-ohm load. Crosstalk at 1 kHz driving 2.83 volts into an 8-ohm load was -78.20 dB left to right and -79.11 dB right to left. The signal-to-noise ratio with 2.83 volts driving an 8-ohm load from 10 Hz to 24 kHz with "A" weighting was -105.64 dB.

From the Dolby Digital input to the loudspeaker output, the left channel measures -0.01 dB at 20 Hz and -0.16 dB at 20 kHz. The center channel measures -0.02 dB at 20 Hz and -0.00 dB at 20 kHz, and the left surround channel measures -0.02 dB at 20 Hz and -0.04 dB at 20 kHz. From the Dolby Digital input to the line-level output, the LFE channel is -1.52 dB at 20 Hz when referenced to the level at 40 Hz and reaches the upper 3-dB down point at 116 Hz and the upper 6-dB down point at 119 Hz. —MJP

major Dolby and DTS processing modes, three wide-bandwidth component inputs, one set of 5.1-channel analog inputs (awkwardly labeled as part of the DVD inputs on the back panel), and an extra set of speaker connections if you'd prefer to send stereo audio to a second zone rather than use the rear channels.

During setup, I was disappointed to discover that the receiver doesn't have an onscreen display, until I realized that I didn't need it. The front-panel display is thorough and easy to maneuver, and the clearly written manual will walk a beginner through each step. I assigned the digital inputs to my sources, then set speaker size, distance, and level—and that's it. There are a couple more advanced controls to adjust the DPLII and DTS Neo:6 parameters, too.

In terms of build quality, the TX-SR503 is more substantial than most receivers you'll find in the HTIB realm, employing a hefty power transformer and Onkyo's Wide Range Amplifier Technology. The plastic binding posts for the speaker connections are the only things that reflect the receiver's low price tag; they're

very close together, which makes it a challenge to insert bare wire. The receiver is available in a black or silver finish.

The remote is designed to be a universal model that controls up to five components, and it's preprogrammed for Onkyo components.


Only the source buttons are backlit, but the buttons are arranged logically and have different shapes to help you find them in the dark. I'm not sure I agree with Onkyo's decision to put the number keys and input selectors on the same buttons, and AM/FM tuner functions aren't clearly labeled; but, otherwise I found it easy to use. Should you ever lose the remote, you can perform many functions using the receiver's front-panel buttons.

When I paired it with the System 920, the TX-SR503 definitely sharpened up the sound, trading a bit of the Pioneer's warmth for greater clarity. I usually prefer a warmer sound, but I liked the immediacy that the TX-SR503 added to the equation without pushing things too far to the bright end. Since the Atlantic Techs have a smoother sound than many small

speakers, this combination worked very well. Brighter speakers would probably benefit from a more laid-back receiver.

With both multichannel music and dense movie soundtracks, the TX-SR503 had enough power to fill my largish room with sound. Again, the speakers seemed to thrive when I fed them more volume, and I seldom felt like I was pushing the Onkyo beyond its comfort level, although it did labor a little when I really pushed the volume during particularly intense battle sequences from *The Return of the King* and *Gladiator*. The System 920 is a 5.1 system, so I didn't drive all seven channels; however, you could add two more 920 LR's to create a 7.1 system.

Why Settle?

This Atlantic Tech/Onkyo combo proves that you don't have to spend a lot to break free from the confines of the home-theater-in-a-box. This system is easy enough for a beginner yet flexible enough for someone who's looking for a strong foundation on which to build. Atlantic Tech has certainly proven their point: Think small, and you'll get small. Think big, and you'll get the System 920. Consider my expectations raised. 

 The Onkyo receiver's remote has differently shaped buttons that make it easy for you to find your way around in the dark.



ONKYO TX-SR503 A/V RECEIVER

Build Quality	Value	Features	Performance	Ergonomics
<ul style="list-style-type: none"> → Features a hefty power transformer → Large, easy-to-read front-panel display → The remote lacks backlighting 	<ul style="list-style-type: none"> → Plenty of features for the price → Has more versatility than you'll find in the HTIB realm 	<ul style="list-style-type: none"> → The CineFILTER can help tame brighter soundtracks → One coaxial digital input, but that third component video input can make setup easier 	<ul style="list-style-type: none"> → Ample power to drive small or even medium-sized speakers → An up-front sound 	<ul style="list-style-type: none"> → No OSD, but setup is still quite simple → Switching sound modes is a logical process
93	95	93	94	94

General information

TX-SR503 A/V Receiver, \$300 → Onkyo USA, (800) 229-1687, www.onkyousa.com → Dealer Locator Code ONK

OVERALL RATING

94

The TX-SR503 balances features with ease of use, low price with high performance. It's a good anchor for an entry-level system.