

# NuForce S9 Loudspeaker

A matter of some controversy

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**B**efore you even hear a sound, you know this one is something different. Symmetric driver array speakers are common enough, and the cabinet, though a little unusual in shape and visual texture, is basically still a box. But what is this with the tweeter? It is down in a round hole, like a horn. Designer Bob Smith of SP Tech and co-designer Casey Ng of NuForce like to call this “waveguide-loading” rather than horn-loading or even shallow-horn-loading. But whatever you call it, it is not the way most consumer speakers treat their tweeters, although similar “waveguides” are more common in pro monitors such as those from Mackie and Genelec.

There is logic behind it. The waveguide makes the tweeter transfer energy to the air more effectively at lower frequencies so one can use a lower crossover frequency (the S9s are fourth-order Linkwitz-Riley at 1.25kHz, and some of SP Tech’s other models run the tweeter down even lower). Moreover, the more efficient coupling of the tweeter diaphragm to the air makes for lower distortion and greater output capability.

This may seem like techno-babble, but it works. The S9s are extraordinarily clean-sounding, and they will also play really loudly for a speaker of moderate size—without losing that cleanness. The measured distortion levels are comparable to electrostatics, and the listening impression is of ultra-pure sound.

In addition, the \$5500 S9s have a very “black” background, with the carefully damped cabinet presumably contributing here. Their ability to reveal the details of sound expanding into ambient space is startling: Try the *Delmoni Plays Ysaÿe-Kreisler-Bach* recording from Water Lily (reissued by John Marks Records) to hear something stunning along this line.



The S9s are not phase-linear, but the recessed tweeter time-aligns the drivers. Perceived transient behavior is excellent. The mid-tweeter-mid arrangement minimizes bounce off the floor, so the sound arrives at the listening position unimpeded. Things like drum kits are remarkably convincing and well defined.

The S9s also have good bass extension (–2dB at 40Hz, 24dB/octave roll-off) for a smallish speaker, and the bass integrated nicely into my room, as well. For absolutely deepest bass, you will need a subwoofer, but for most music most of

the time the bass is covered.

Treble is all there, too—indeed, a little more than all there. The extreme top of the S9s takes off into the wild blue yonder. You will notice the increased “air” in high percussion, for example, Cymbal crashes come across well—too well, as it were—compared to what is on recordings.

But the S9s are rather more different from other speakers of similar overall frequency extension than such simple descriptions of bass and treble would

suggest. These differences are enough to make the speaker a matter of some controversy; as always, you will need to listen for yourself.

First of all, the S9s are directionally sensitive, especially horizontally. At 30 degrees off-axis, where many box speakers have hardly changed from on-axis except in the extreme top, the S9s are down something like 4dB or more from 4kHz on up. Since this is an aspect of the waveguide and thus a deliberate part of the design, you need to listen almost exactly on-axis horizontally—and vertically, too. Beware the careless demo! You may never hear what the speaker is capable of unless you position yourself exactly right.

On account of their steep off-axis roll-off, the S9s put less high-frequency energy in the room on the whole than do “wide-dispersion” speakers. To my mind—and ears—this is very much to the good. Live music usually has very little top end in the reverberant field. (I wrote about this in *TAS* many years ago. You can see my original article on how this works in concert halls, “Records and Reality: How Music Sounds in Concert Halls,” on [regonaudio.com](http://regonaudio.com).) And the S9s’ combination of essentially flat response on-axis but rolled off-axis behavior sounds natural, like a live concert. Incidentally, the roll-off is very regular, without large dip-and-return phenomena. We are not speaking here of induced colorations, but rather of a natural in-room balance from reduced higher frequencies and freedom from room effects. But it does make the S9s sound different from those with less control of dispersion in the top end.

It is often said that speakers with wide radiation in the higher frequencies image better. For listeners sitting off to the side there is some modicum of truth in this. But only a centered listener can hear correct stereo anyway (time of arrival is wrong for off-center positions), and for a centered listener imaging is better if the speaker is spreading less high-frequency energy around the room.

In practice, the controlled-dispersion S9s image superbly for a centered listener, aided not only by their controlled radiation pattern but also by their coherence:

They really do function essentially as a point source, with all that provides for imaging behavior. And with the ultra-low diffraction of their smooth waveguide, they do a good job with recordings like the somewhat playful outside-the-speaker images of *Tiden bar gaar* [Opus 3].

The S9s do many fundamental audio things superbly well, but how do they actually sound? In overall balance, they are basically flat and neutral. The only significant tonal caveat is that they are somewhat irregular, with some ups and downs in the 1kHz–10kHz range compared to the smoothest speakers. There is a dip in the 1–2kHz range and comparatively a bit of extra zip in the octave or so above 2kHz. (Don't even think about the switch on the back of the speaker that ups the 2–3kHz range.) I know that acoustician Vilhelm Jordan determined years ago that musicians typically like a little extra zing around 2kHz, but a little cut in the 2–5kHz range with the Z Systems rdp-1 made string sound, for instance, more natural and accurate, and indeed quite magically

## Specs & Pricing

### NUFORCE, INC.

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**Type:** Two-way stand-mounted loudspeaker  
**Driver complement:** Two 6.5" aluminum mid/bass drivers, 1" textile-dome tweeter, waveguide-loaded

**Frequency response:** 40Hz–25kHz  
**Recommended amplifier power:** Up to 200Wpc

**Sensitivity:** 89dB

**Nominal impedance:** 4 ohms

**Dimensions:** 9" x 22.5" x 17.5"

**Weight:** N/A

**Price:** \$5500

### ASSOCIATED EQUIPMENT

Classé CDT-1 transport and DAC-1; Benchmark D-to-A converters; Z Systems rdp-1 digital preamp and EQ device; Plinius 12 and Bryston BP-25 preamps; Bryston 14B ST and Nuforce Reference 9 amplifiers; Liberty Audio Suite and Liberty Praxis measuring equipment



beautiful on, say, Dvořák's "Silent Woods" [Dorian]. Both the cello and the big Steinway here were fantastic. How good to hear the top piano notes so free of distortion. In any case, the intrinsic resolution of the S9s enables one to hear into the action and ambience of complex music in a very rewarding way, regardless of tonal balance.

The S9s did well on the ultimate test, reproduced-versus-live music. As it happened, I was doing much of my listening to them during a time when my orchestra (St. Matthew's Chamber Orchestra) was preparing for a concert. So when I listened to things like the Sitkovetsky/Bach *Goldberg* Variations, in an arrangement for string orchestra [Nonesuch], I had an almost immediate memory of the real sound of a string orchestra. Few speakers fail to be humiliated by such a recent memory of reality. The S9s were really convincing in this nearly direct comparison with live music. And with their unstrained dynamic behavior, they were convincing on large-scale music like full orchestra, as well. The famous Byron Janis Rachmaninoff Third Piano Concerto on Mercury was very well done from top to bottom.

Voices were surprisingly realistic in their

natural timbre and precise positioning, and people sounded like people. Even test CD announcements ("left channel") could be intriguing in their realism. And on *Crusin' with the Desotos* [Wilson Audio], the vocal in "I'm Ready" was especially convincing. Instrumental presence could be superb, too. The gorgeous recording by cellist Orah Harnoy of Schubert's *Arpeggione* sonata [BMG] all but put the cello right in front of you, so clean and natural was the sound and precise the imaging, though the cello was slightly less "soft" tonally than usual.

To me the S9s embody so many effective and unusual ideas that they unquestionably need to be heard and thought about. One might hope for a bit smoother mid/upper-mid/lower treble. But that aside, will the controlled radiation pattern and the associated approach to overall room sound seem as wonderfully natural to you as it did to me? Listen for yourself, and be sure that you listen positioned correctly. Then think about what live music really sounds like. I think you will come away as impressed as I did. **TAS**