

Infinity TSS-4000 Speaker System

Infinity comes through again.



BY CHRIS LEWIS

When it comes to expectations, setting the bar high can be a double-edged sword. On the one hand, you can't establish credibility or customer loyalty without

coming through time and time again. On the other hand, the higher you set the bar, the easier it is to go down rather than up. Infinity quickly comes to my mind as one of the companies that isn't afraid of this challenge, whether it be with a \$500 speaker or a \$5,000

speaker. No reviewer can ever predict how tuned his ear will be to a particular set of speakers, or even a brand. However, with Infinity, you can count on getting a well-designed, well-built speaker from a company that has the right priorities in mind. Some speaker manufacturers get it, and some don't. Infinity is clearly one that does.

The latest indication of Infinity's high standards is their TSS-4000 system, which takes over flagship duties in their plasma-friendly TSS speaker line. Anyone who's shopped for so-called plasma-friendly speakers in the last few years already knows that their quality can vary significantly. Some companies have simply slapped together pretty silver boxes in an attempt to capitalize on a fad, with little thought for much more than aesthetics. Other companies have taken their time, done things right, and set out to prove that, just because a speaker is convenient and attractive, it doesn't have to sound compromised. With what I know of Infinity's track record, I definitely expected the TSS-4000 system to be of the latter variety.

The workhorse of the system is the TSS-SAT4000, a versatile three-way satellite that uses four 3.5-inch woofers, two 3.5-inch midrange drivers, and a 0.75-inch dome tweeter in an extruded-aluminum cabinet. All of the drivers are constructed using Infinity's new Metal

Matrix Diaphragm (MMD) process. Not to be confused with the CMMD drivers used in Infinity's higher-end speakers, which add a ceramic element to the mix, the MMD process instead applies an anodizing process

to both sides of an aluminum core. Infinity believes that this process provides significant improvement over standard metal cones.

The TSS-SAT4000s also have a highly versatile range of placement

options, as all good satellites should.

They come standard with wall-mount and table-stand options, including spacers for the latter that allow you to set the speakers at three different heights. The wall-mount brackets conveniently allow you to rotate the speaker 30 degrees in either direction. Optional floor stands, which are solidly built and easy to integrate, are available, as is a flush-mount kit.

Rounding out the system are the TSS-CENTER4000 and the TSS-SUB4000. The center-channel unit is virtually identical to the satellite, except for its horizontal orientation. It uses the same driver array and also comes with a table stand and a wall-mount bracket. The TSS-SUB4000 uses a 12-inch MMD cone, backed by a 400-watt amplifier, in a sealed enclosure. The back panel offers line-level inputs, gain and phase control, and crossover bypass. It also houses the controls for Infinity's proprietary R.A.B.O.S. system, an effective, easy-to-use low-frequency room-correction tool.

As it has been a while since we discussed R.A.B.O.S., a refresher may be in order. A parametric filter integrated into the subwoofer's electronics allows the user to optimize the system's low-frequency output based on the listening room's characteristics. Room anomalies usually have a great influence on the final sound, especially in the lower sonic regions. Speakers, even those with a perfectly flat response, will still have a poor, colored sound in a bad room. R.A.B.O.S. simplifies the generally difficult process of dialing-in your sub to best match your room. It comes with an SPL meter, a test CD (supplying test tones from 20 to 100 hertz), and

AT A GLANCE INFINITY TSS-4000 SPEAKER SYSTEM



SUBWOOFER: TSS-SUB4000

Connections:	Line-level in
Enclosure Type:	Sealed
Woofer (size in inches, type):	12, MMD anodized aluminum
Power Rating (watts):	400
Crossover Bypass:	Yes
Available Finishes:	Silver
Dimensions (H x W x D, inches):	17.5 x 11.1 x 17.25
Weight (pounds):	48
Price:	\$1,249

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

SPEAKER:

Type:	Three-way LCR
Tweeter (size in inches, type):	0.75, MMD aluminum dome
Midrange (size in inches, type):	3.5 (2), MMD aluminum
Woofer (size in inches, type):	3.5 (4), MMD aluminum
Nominal Impedance (ohms):	8
Recommended Amp Power (watts):	10-150
Available Finishes:	Silver
Dimensions (H x W x D, inches):	23 x 4.1 x 4.4
Weight (pounds):	12.7
Price:	\$549

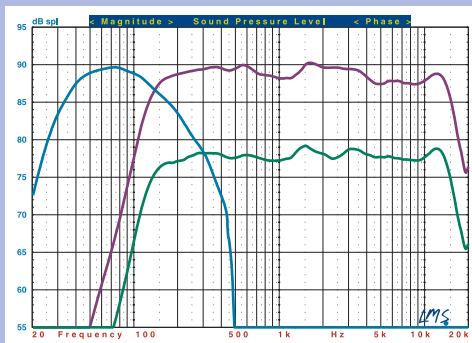
TSS-SAT4000

Type:	Three-way center channel
Tweeter (size in inches, type):	0.75, MMD aluminum dome
Midrange (size in inches, type):	3.5 (2), MMD aluminum
Woofer (size in inches, type):	3.5 (2), MMD aluminum
Nominal Impedance (ohms):	8
Recommended Amp Power (watts):	10-150
Available Finishes:	Silver
Dimensions (H x W x D, inches):	4.1 x 23 x 4.4
Weight (pounds):	12.7
Price:	\$549

TSS-CENTER4000

Type:	Three-way center channel
Tweeter (size in inches, type):	0.75, MMD aluminum dome
Midrange (size in inches, type):	3.5 (2), MMD aluminum
Woofer (size in inches, type):	3.5 (2), MMD aluminum
Nominal Impedance (ohms):	8
Recommended Amp Power (watts):	10-150
Available Finishes:	Silver
Dimensions (H x W x D, inches):	4.1 x 23 x 4.4
Weight (pounds):	12.7
Price:	\$549

HT Labs Measures: Infinity TSS-4000 Speaker System



Satellite Sensitivity:
88.5 dB from 500 Hz to 2 kHz

Center Sensitivity:
88.5 dB from 500 Hz to 2 kHz

This graph shows the quasi-anechoic (employing close-miking of all woofers) frequency response of the TSS-SAT4000 satellites (purple trace), TSS-SUB4000

subwoofer (blue trace), and TSS-CENTER4000 center channel (green trace). All passive loudspeakers were measured at a distance of 1 meter with a 2.83-volt input and scaled for display purposes.

The TSS-SAT4000's listening-window response (a five-point average of axial and +/-15-degree horizontal and vertical responses) measures +1.72/-1.10 decibels from 200 hertz to 10 kilohertz. The -3dB point is at 131 Hz, and the -6dB point is at 115 Hz. Impedance reaches a minimum of 4.72 ohms at 12.9 kHz and a phase angle of -55.24 degrees at 198 Hz.

The TSS-CENTER4000's listening-window response measures +1.67/-0.35 dB from 200 Hz to 10 kHz. An average of axial and +/-15-degree horizontal responses measures +1.09/-0.87 dB from 200 Hz to 10 kHz. The -3dB point is at 131 Hz, and the -6dB point is at 115 Hz. Impedance reaches a minimum of 4.72 ohms at 12.9 kHz and a phase angle of -56.21 degrees at 198 Hz.

The TSS-SUB4000's close-miked response, normalized to the level at 80 Hz, indicates that the lower -3dB point is at 37 Hz and the -6dB point is at 30 Hz. The upper -3dB point is at 141 Hz with the low-pass switch set to off. —MJP

level, frequency, and bandwidth adjustments on the back of the subwoofer. Instructions, worksheets, and a bandwidth-selector tool are included, as well. After you set a system test level and a subwoofer test level (with the main level control, also on the back of the sub), you then use the individual test tones to plot a frequency curve for the sub's output in your room. Next, you apply the bandwidth selector to the curve to adjust for the most severe problems and make level, frequency, and bandwidth adjustments based on the results, using the supplied charts. If you don't want to look up the adjustments for yourself, head to Infinity's Website. Enter the data you compiled from the test tones, and it will determine the proper settings for you. It doesn't get much easier than that.

I set up a 5.1-channel TSS-4000 system with the optional floor stands for the front and surround channels. I placed the front speakers about 3 feet away from the side and rear walls, slightly toed-in, and put the rear speakers behind the listening position at an angle of roughly 120 degrees. Then, I mounted the center channel on its tabletop base and set it just below the screen. A Parasound C2 surround controller and a Marantz DV8300 universal

player handled the audio signals, while a Sunfire Theater Grand amplifier traded off with my trusty old Krell KAV-500 amplifier in supplying the power.

The first aspect that grabbed my attention with two-channel music was the TSS-SAT4000's dead-on imaging. Vocals were perfectly centered (provided that they were recorded that way in the first place), and everything else took up residence right where it was supposed to. What is especially impressive about the imaging is that the front speakers were only toed-in a little, at an almost negligible degree. This was my first clue that these satellites have a wide sweet spot and solid off-axis performance. The two-channel soundstage was nicely developed, as well, but a bit smaller than I would have preferred. You cannot expect these speakers to defy the laws of physics. In other words, you have to be realistic about the fact that they, like virtually all other speakers with small drivers and limited cabinet dimensions, won't be able to develop the kind of low-midrange, upper-bass body that large, properly designed tower speakers can. Naturally, their low-frequency impact is also limited by design, and by necessity—that's where the sub of the sub/sat

HIGHLIGHTS

- Natural, engaging sound
- Considerable placement flexibility and ease of use
- R.A.B.O.S. low-frequency room-correction system

equation must step up to the plate. However, you can expect as full a midrange effort from the TSS-SAT4000 as I've heard from speakers of this size at this price. And that midrange is as natural as you'll find in this context—a hallmark of Infinity speakers from the tops to the bottoms of their lines. In addition to sounding lifelike and balanced, the midrange was scintillating and forceful. These MMD drivers appear to have all of the bases covered. The tweeter has a similar sonic profile.

The system's performance with high-resolution material was even more impressive, as it delivered an output level that, to some degree, defied its dimensions. Its neutrality was even more important, however. The system effortlessly and realistically delivered vocals, music, and anything else I sent it, with little of the constriction that I might

INFINITY TSS-4000 SPEAKER SYSTEM					OVERALL RATING
Build Quality	Value	Features	Performance	Ergonomics	93
→ Quality drivers → Sturdy, well-built cabinets and stands	→ Better drivers than most at this price → You could pay more for less	→ Several mounting options → R.A.B.O.S. system is easy and effective	→ Engaging sound → Strong with movies and music	→ Flexible and easy to place → R.A.B.O.S. simplifies a complex process	
94	92	97	92	95	
General information					
TSS-SAT4000 Satellite Speaker, \$549 each → TSS-CENTER4000 Center-Channel Speaker, \$549 TSS-SUB4000 Subwoofer, \$1,249 → TSS-SAT4000 Floor Stand, \$279 each Infinity Systems, (516) 674-4463, www.infinitysystems.com , Dealer Locator Code IFY					

I have come to expect a well-built, well-designed, and strong-performing speaker that has its priorities straight when I see the Infinity logo. The TSS-4000 system certainly lives up to that reputation, and it does so with an aesthetic flair that will definitely get it noticed in the in the wide sea of plasma-friendly speakers.

have allowed it to get away with, given its size. This was true with male voices at all pitches, from Muddy Waters (*Folk Singer*, MCA, SACD) all the way up through Ralph and Carter Stanley on the *O Brother, Where Art Thou?* soundtrack (Lost Highway, SACD). Female voices fared equally well, as Emmylou Harris, Alison Krause, and Gillian Welch's haunting "Didn't Leave Nobody but the Baby" from the *O Brother* soundtrack demonstrated. The TSS-CENTER4000 also anted up nicely with high-resolution, multichannel material, dropping the first hints of its strong performance with movies.

That strong movie performance was quick in coming, from both the center channel and the system as a whole. If you've read any of my reviews through the years, you're probably aware that my general philosophy for center channels is the bigger, the better. But I'm also well aware of the logistical realities that many systems face—realities that don't allow for a large center unit. I'm always impressed when I come across a smaller center channel that challenges my philosophy. I won't tell you that the

TSS-CENTER4000 will make you believe you're listening to a big, multithousand-dollar model. However, if someone pulled a blindfold away from your eyes and revealed this small, skinny unit as the source of the full-bodied sound you'd been hearing, you'd be more than surprised. I've come to expect that compact centers will be overwhelmed, both by the rest of the system and, even more, by the tendency Hollywood mixers have to overwork the channel. This one held its own impressively, though.

Dialogue was rich and lifelike, and the speaker had a surprising ability to effectively render the rest of the music and surround effects that get jammed into this channel.

Since the satellites are only rated down to 120 Hz, the system naturally leans heavily on the TSS-SUB4000—more heavily than some people, including the folks at THX, would like to see. But a sub that is designed to cover an extended range, like this one, can handle the 80-to-120-Hz region just fine without neglecting its primary workload below 80 Hz. Placement can be tricky, since the higher in frequency a sub must operate, the more localizable it will

be. This sub knows its role—and fills it well. It doesn't try to rattle the wall studs or ruffle your pant legs; it simply drives clean, impactful bass from 120 Hz and down with a natural attack and decay and no inclination toward boomy, monotone mush. It can certainly rumble when it's supposed to, but it doesn't when it's not supposed to—and that's one of the true marks of a quality sub.

I've come to expect a lot from Infinity over the years, and the TSS-4000 system only reinforced those expectations. It embodies all of the musicality and the quality of design and build that its predecessors have, and it does so with an aesthetic flair that is sure to get it noticed, even in the vast sea of plasma-friendly speakers that dominates store shelves these days. The prettiest speaker in the world isn't worth a cent if it doesn't sound good. So, if you have an eye for aesthetics, you'll want to take notice of a system that sounds this good, looks this good, is this versatile, and is easy to integrate, to boot. If you're looking for plasma-friendly speakers, put the TSS-4000 system on your short list. 🎧



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