

Test Reports

THIEL AUDIO



SCS4T TOWER SPEAKERS **\$3,690/PAIR** BY BRENT BUTTERWORTH

You already own a speaker that's better in some ways than any ever reviewed in *Sound+Vision* – and you've owned it since you were born. What is it?



IT'S YOUR MOUTH. No, it doesn't play as low as a subwoofer (unless your name is Michael Clarke Duncan) and it doesn't go as high as a tweeter (unless your name is Young Geddy Lee). But all frequencies emerge from your mouth perfectly in phase, a feat that even \$100,000 speakers cannot equal. So next time one of your buddies starts bragging about his speakers, you can shut him up by telling him, "**Sound+Vision** said mine's better."

It's probably impossible for any speaker to equal the phase coherence of your mouth, but the late speaker designer Jim Thiel probably came as close as anyone ever did. Thiel devoted his career to the design of phase-coherent speakers, which reproduce all frequencies of sound in phase within plus or minus a few degrees.

Designing a phase-coherent speaker without relying on digital audio processing isn't easy. It requires that the acoustical centers of the drivers be at the same distance from the listener's ear. In practice, that means pushing the tweeter back so that its dome is roughly even with the woofer's dust cap. Phase coherence also requires the use of a first-order (6 dB per octave) crossover. Because a first-order crossover doesn't filter sound as drastically as higher-order crossovers do, the drivers need to have an operating range at least two octaves past the crossover. That means that the tweeter in a phase-coherent speaker with a crossover point of 2.5 kHz should be able to handle frequencies as low as 625 Hz. If it doesn't, you'll get distortion at best and a blown tweeter at worst.

To my ears, phase-coherent speakers produce an especially enveloping stereo soundstage. Listen to a good orchestral recording through them, and you'll get a more convincing sense of the ambience of the recording space. Listen to a pop recording, and the reverb effects tend to sound more intense and compelling.

There can be downsides to phase-coherent designs, though. Because of the shallow crossovers, they often exhibit high distortion. They also tend to have lousy vertical dispersion — i.e., if you raise your head a few inches, you'll hear a difference. Many speaker designers, in my opinion, ignore these problems, but Thiel essentially eliminated them through his use of ultra-robust tweeters and coaxial midrange/tweeter drivers.

The SCS4T is the latest in a line of phase-coherent, coaxial two-way speakers that dates back to the early 1990s. It's almost the same as Thiel's SCS4 compact speaker (reviewed in **S+V** in August 2008 and available at soundandvisionmag.com). The difference is that the body of the speaker has been extended into a tower; the crossover has also been tweaked slightly to compensate for the sonic difference caused by the larger front baffle. Acoustically, though, that extra space goes to waste because it's sealed off to make the internal volume match the SCS4's. I guess Thiel's engineers wanted the sound of the SCS4T to match the SCS4 as closely as possible.



VERDICT

It may be a bit pricey, but the Thiel Audio SCS4T's outstanding build quality and ability to sound great with a wide range of music earn it a solid recommendation.

DESIGN 7



PERFORMANCE 9



VALUE 4



OVERALL 6.7



Thiel Audio SCS4T

At \$3,690 per pair, the SCS4T isn't cheap. But it's built to a much higher standard than your average speaker. The handsome, elegant cabinet is made from thick medium-density fiberboard, covered in hand-selected real wood veneer, and finished in your choice of natural cherry, dark cherry, or black ash. A cast-aluminum baffle provides a sturdy mounting surface for the 6.5-inch woofer and the 1-inch tweeter housed in the woofer's center. Aluminum outriggers with huge metal spikes keep the tower up-right. The massive speaker-cable binding posts look like they came off an arc welder — well, a really high-end arc welder.

SETUP

With just a single pair of binding posts per speaker, the SCS4T couldn't be easier to hook up. It's also easy to set up because the coaxial design makes the sound fairly consistent even if you move to the side of the speaker or stand up. Basically, you position them far enough apart that they produce an enveloping stereo soundstage, but close enough together that they also produce a solid center image. You then move them closer to the wall behind them to get more bass, or farther from the wall to get less bass.

Key Features

+ 6.5-in woofer; 1-in tweeter

Dimensions + Weight 8.4 x 11.7 x 40.5 in; 50 lb

thielaudio.com



Thiel Audio SCS4T

While these speakers don't particularly need careful positioning, they do reward it. I experimented with toeing in the speakers — i.e., varying them between pointing straight at my chair or straight ahead — to fine-tune the treble response, and also played with the spacing between the speakers to get just the right amount of center imaging.

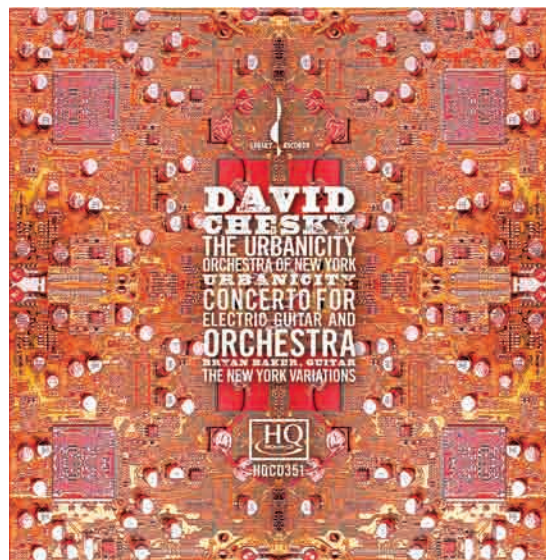
With 4 ohms nominal impedance, the SCS4T demands a decent amplifier — a midprice or better receiver, say, or any good stereo amplifier with at least 50 watts or so per channel. Not surprisingly, the Krell S-300i integrated amplifier I used had no problem driving it at all.

PERFORMANCE

I've hosted lots of phase-coherent speakers in my home, including other Thiel models, but I was still surprised to hear what the SCS4T did in my listening room. I actually yelled "Whoo!" when I heard the orchestra kick in after the first few seconds of David Chesky's *Urbanicity*, from the album that also features his *Concerto for Electric Guitar and Orchestra*. (The release is available on HQCD or as a 96/24 download from HDtracks.com.) The Thiel SCS4T perfectly captured Chesky's carefully choreographed cacophony. Percussion percolated across the front of my room, while the ambience of the recording space enveloped my listening chair. I could even hear the echoes of a faint, high-pitched instrument — a bell tree or a tambourine, perhaps — coming from behind my listening chair. Rarely does one hear this combination



THE SCS4T's PINPOINT imaging went far toward capturing the carefully choreographed cacophony and recording-space ambience of composer David Chesky's *Urbanicity*.



of pinpoint imaging and an expansive soundstage.

Rarely, too, does one hear an audiophile speaker as versatile as the SCS4T. Often a speaker that sounds great on, say, David Chesky recordings will sound stressed and unbalanced when you play commercial pop and rock recordings through it. (In fact, a Thiel model from the early 1990s, the CS 2.2, was the speaker that first hipped me to this phenomenon.) Yet even schlock like Das Racist's YouTube smash "Combination Pizza Hut and Taco Bell" sounded great through the SCS4T. Cranking up Mötley Crüe's "Kickstart My Heart" pushed the speaker into mild distortion, but the tonal balance stayed true even as the woofer fought for its life against Tommy Lee's kick drum.

Few speakers sound so good on so much material with so little fuss. Something about the presentation really grabbed me, and I think it's the spatial character rather than something in the tonal character. I suppose this is the phase coherence I'm hearing. Many other speakers, such as bipolar and electrostatic designs, produce a great sense of ambience, but their spatial qualities sometimes sound exaggerated.

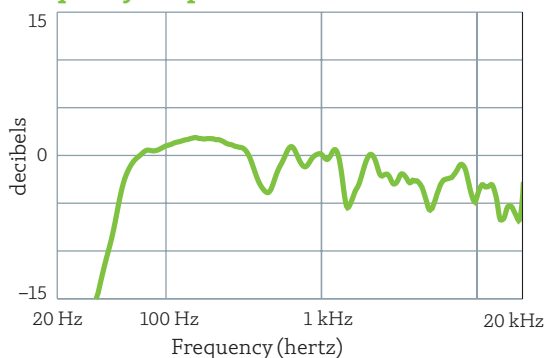
Here's my one beef: The SCS4T's upper treble, above about 8 kHz or so, didn't sound quite as refined, natural, and spacious as the lower 90 or so percent of the audio band, so small cymbals and the upper notes of acoustic guitar came across as a little brittle. Given how little musical information exists at such high frequencies, this isn't a problem that bothered me much, but at \$3,690 per pair I'm allowed to nitpick.

BOTTOM LINE

Usually, when I review a speaker, I end with a line to the effect of "You'll like this speaker if . . ." That's too-faint praise for the SCS4T. Unless you're that guy who craves tons of crazy-deep bass, I can safely say, "You'll like this speaker" and leave it at that. There are certainly more affordable options, but enthusiasts who seek a speaker they love rather than the least expensive model that will suit their needs will find the SCS4T hard to resist. **SV**

Test Bench

Frequency Response



The frequency response of the Thiel SCS4T is mildly uneven, with a downward tilt that indicates a **somewhat reduced treble response**. There's no low bass, but midbass output is good, averaging 93.1 dB from 40 to 63 Hz. Slightly below-average sensitivity and a **nominal 4-ohm impedance** dictate that a fairly high-quality amp be used for best results. — B.B.

Full Test Bench data at soundandvisionmag.com/thiel_scs4t