

stereophile
GUIDE
to
HOME THEATER

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SPEAKER

Thiel CS1.6

Fred Manteghian

In this case, Thiel isn't a color, it's a lack of color, and nothing impressed me so much during my time with these five Thiel CS1.6 speakers as their colorlessness. One color particularly notable by its absence is green, as in the minimal amount of greenbacks you'll have to peel off your roll—the CS1.6 is one of the more affordable floor-standing speakers in the Thiel line. For only \$2390, you can get a pair finished on five sides in a wood veneer, like the beautiful natural-cherry ones I used for the front channels—or, if you want to save a cool grand on a quintet, the \$1990/pair matte-black models I put in the rear are all the color you'll need.

While Thiel's new speaker may be com-

paratively affordable—I can't say "inexpensive"—they're still all Thiel. Joining a 2-inch-thick, highly carved front baffle to the 1-inch thickness of the remaining cabinet walls, the CS1.6 presents the same sloped face as the rest of Thiel's Coherent Source (CS) series, and so lays claim to like benefits in time and phase coherence. The 6.5-inch woofer uses a relatively *huge* 3-inch voice coil to propel its metal diaphragm. The short-coil/long-gap 1-inch aluminum tweeter is an all-new Thiel design.

Perhaps the most visually interesting aspect of the CS1.6 is viewable only with the speaker's grillecloth removed. Starting at the bottom and running half the height of the front baffle is a narrow, gently beveled

bass-reflex slot—a big change from the more conventional round ports and passive radiators. Still, this is a relatively small speaker, so what the reflex slot adds falls in the midbass; the CS1.6 is rated as being down -3dB by 48Hz.

I first heard the CS1.6 at CES last January, with a pair of Thiel's new SW1 subwoofers (not available in time for this review), yet at home I was comfortable enough listening to 2-channel music with only the CS1.6s at the wheel. Of course, a big Velodyne subwoofer was only a button away if I panicked.

Ready Freddy?

One of the reasons I wanted to review the CS1.6s, besides the fact that I'd loved what I'd heard at CES, is one of the reasons you may not. With their relatively short stature, a single CS1.6 just fit beneath my drop-down Stewart screen without blocking the image, making a quintet of matching Thiels a natural choice. But it was close, and even in my case, I could use the provided spikes only for the main left and right speakers. Placed on the center speaker, the spikes raised the speakers enough that they came dangerously close to blocking the picture. When it comes to perfectly matched timbre across the front channels, there's no center speaker like . . . well, no center speaker.

If you have a more conventional arrangement in your home theater, meaning just about any TV in a box, you'll have to go with

SPECIFICATIONS

CS1.6 2-way bass-reflex speaker

Drivers: short-coil, long-gap, 1" aluminum tweeter; 6.5" metal-cone woofer with 3" voice coil

Frequency responses: 48Hz–20kHz, -3dB; 50Hz–20kHz, ±2dB

Phase response: ±10°

Sensitivity: 90dB/2.8V/m

Impedance: 4Ω nominal, 3Ω minimum

Recommended power: 50–300W

Finishes: matte black; add \$400/pair for various real-wood veneers

Dimensions: 35.5" × 9" × 11.5" (H×W×D)

Weight: 38 lbs each

Price: \$1990/pair in Painted Black finish, \$2390/pair in Ash, Black Ash, Cherry, Maple, Oak, and Walnut

5.0 System price: \$4975 (black finish, subwoofer not included)

Manufacturer

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a traditional, horizontally oriented center-channel speaker like Thiel's SCS3. If you can make it work, I advocate identical speakers all around. Conventional dipoles may be okay for the surround channels with movies, but with the advent of multichannel music, a quintet of reasonably priced high-end speakers like the Thiel CS1.6 is the proverbial chicken in every pot.

Listening

It was with music that the Thiels snared me at CES. After living with the CS1.6s for a few months, I'm still glued to the musical web they weave. Jazz vocalist Kevin Mahogany weaves a little Motown magic on the CD track of his new *Pride and Joy* (Telarc SACD-63542), covering past hits with his own

fresh approach. Run without the aid of the subwoofer, a pair of CS1.6s fully re-created Melissa Stocum's finger-plucked double bass on "My World is Empty Without You," with no sign of that published 48Hz limit. If anything, the bass was one of the most evenhanded performances I've heard from a 2-way speaker, subjectively lacking the characteristic midbass "hump" that seems to be the bane of such designs.

Maybe it's Thiel's dense, rap-your-knuckles-till-they-hurt cabinet at work here, but the CS1.6's rendition of vocals was box-free! Kevin Mahogany's voice is a rich, deep, velvet even when he's reaching for those inspirational high notes, and the Thiel presented it with none of the cupped-hands quality frequently encountered in conventional

speakers. To say the CS1.6 was superior in this regard to most dynamic speakers would be a fair statement. It combined some of the best characteristics of good electrostatic speakers, such as their sumptuously detailed midrange and effortlessly fast transient response, with the natural body and weight of the best dynamic designs.

With only two speakers, a great soundstage still emerged—hey, anyone remember 2-channel? With mild toe-in, so the tweeter axes crossed far behind my head, the CS1.6s created a solid center image. The Thiels demonstrated an ability to project height as well, putting Mahogany about a foot above the top of the temporarily silent center speaker. More impressive—and,



when we go to the movies, more important—sitting off-center still produced a highly enjoyable aural panorama. Sure, the sweet spot was great, but sitting three across on the couch, we could all enjoy not only the music but the presentation as well.

How well Thiel's new tweeter did its job is an important question for the many who seem to come away from speaker demonstrations muttering the "B" word: *bright*. After a few weeks' break-in, the CS1.6's new 1-inch metal-dome tweeter sounded extended, as expected, but sweet and musical as well. Here, "B" stood for *brilliant*—cymbals sweated *zing*, but this was backed up with body, too. Harmonics were so natural, I knew I had a good seat up close to the stage. The new tweeter laid to rest any complaints I'd had regarding the lack of sweetness of some earlier Thiel designs.

I'm still one SACD player short of an SACD player, but I have plenty of DTS mul-

tichannel CDs to pick from. Holst's *The Planets*, as performed by Yoel Levi and the Atlanta Symphony Orchestra (Telarc CD-80466), is lively, but as we swing out toward *Jupiter*, the very big and luscious ASO counters Levi's brisk pace with superb and articulate playing. The Thiels were very warm and set the mood. On *Mars*, the clacking percussion of men marching off to battle was apocalyptic, the horns blaring at high levels, seemingly distorting; but here the recording was at fault, as I've heard it sound no better on my reference system. The Thiels hid no flaws.

As a fan of early Edgar Winter (his *Entrance* album remains one of my favorites), I was interested in his lesser-known *Jasmine Nightdreams* (1975, HDS/Blue Sky A-28500), remixed to 5.1-channel for this DTS release. The virtue of

five identical speakers jumps right out with this CD. Details, like the shakers in the rear left channel on "Tell Me in a Whisper," sound like they're coming from a front speaker that someone's carelessly placed in the rear. Sitting some 6 feet behind me, their tweeters barely clearing the top of my listening couch, the surround-channel CS1.6s consistently threw up a rear curtain of sound nearly as tall as the one in front. This was all beginning to explain why movies sounded so good.

Project Green Light

Donnie Darko (DVD, 20th Century Fox 2004057) may be a "hare" frightening for a younger audience, and just "plane" weird for the English Tea Party crowd, but it's rapidly becoming one of my favorite flicks. I'm sure it has a lot to do with the superb soundtrack, peppered with hits from the 1980s. The Thiel didn't sugarcoat the over-produced, overcompressed pop mixes, but they were still enjoyable. Even driven to high levels, the sound never became harsher than these EQ'd-to-death tracks warranted.

Michael Andrews' score creates such a powerfully emotional ambience that only *perfect* seems adequately descriptive. The

REVIEW SYSTEM

Sources

Krell DVD Standard DVD player
Pioneer DV-626D DVD player
Zenith DTV1080 HiDef/DirecTV receiver
VPI Aries turntable with VPI JMW tone-arm, Grado Sonata Reference MM cartridge, Audio Research SP14 preamp used as phono stage

Surround Processor

Krell HTS

Power Amps

Sunfire Cinema Grand Signature
Ayre V-6

Subwoofers

Velodyne FSR-18
MartinLogan Descent

Cables

Digital coax: Straight Wire Silverlink
Interconnect: Straight Wire Rhapsody, balanced & single-ended
Speaker: Straight Wire Virtuosity Gold, Quartet

end of the movie holds some of the treasures of the score. First is a song written by Roland Orzabal, “Mad World,” sung by Gary Jules and accompanied simply by Andrews on piano and synth. Jules’ spacious, reverb-soaked voice reached deeply through the room, in sharp contrast to the intimately breathed sighs of a family in mourning. The

credits roll, an aria—a requiem, really—leads into a series of other short arias and thematic recaps that, strung together, capture the mood of the film like a parting *Cliff’s Notes*.

By this point, the Thiels were in their glory, simply waiting for General Admission to pin purple hearts on their grillecloths.

flick and let me pick. He simply said, as the credits finished and the autumn thunder of the menu returned, “this is better than any movie theater I’ve been to.” I’m convinced he wasn’t commenting on the burnt popcorn.

From the opening, and instantly recognizable, 20th Century Fox teaser of *The*

The CS1.6 struck a **balance** that was . . . **remarkable** for a speaker at **any** price.

Thiels combined these discrete environs into a holistic image in which this sort of dichotomy seemed commonplace. As the

The sense of being awash in a sea of sound was convincing. One visitor—someone in the HT business, actually—dropped in for a

Deep End (DVD, Fox 2003167), the Thiels proved that they were subject to little of the compression expected from a speaker in

MEASUREMENTS

All measurements were taken with the grille removed.

The impedance of the CS1.6 indicates that its ported cabinet is tuned to about 49Hz, with minimum impedances of 3.4Ω at 250Hz and 3.2Ω at 5.5kHz. We would rate the nominal impedance at about 4Ω. The impedance magnitude remains below 4Ω over most of the range above about 200Hz. While I would not judge the Thiel to be a particularly difficult load to drive, I would recommend that it be used only with amplifiers comfortable with loads under 4Ω. While the Thiel’s very high sensitivity (about 92dB/W/m) should somewhat mitigate the disadvantages of its low impedance, if you plan to drive these speakers with a receiver, in particular, make certain it’s comfortable driving low impedances.

The pseudo-anechoic response of the CS1.6 at tweeter height, averaged over a 30° forward horizontal angle and combined with the nearfield responses of the woofer and port, is shown in **Fig. 1** (violet). The bass is useful down to only about 39Hz (−10dB); for home theater applications, a good subwoofer is a must with these speakers. The overall response, however, is exceptionally flat and smooth over most of the frequency range.

Moving off-axis horizontally (Fig. 1), the inevitable high-frequency rolloff is well controlled, even at 60° (blue), with a modest suck-out starting to appear at at 2kHz at a wide 60° angle.

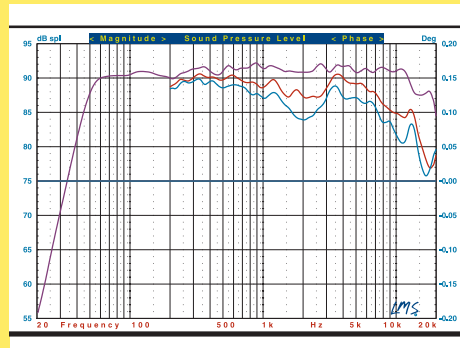


Fig. 1: Thiel CS1.6, pseudo-anechoic horizontal response at 45° (red) and 60° (blue) relative to tweeter axis.

Fig. 2 shows the same averaged horizontal front response (violet), plus the vertical responses taken at +15° (red) and −15° (blue) relative to the tweeter. The speaker is clearly at its best on or very near the tweeter axis; the first-order crossover networks used in all Thiel speakers, and the resulting overlap between drivers, make extreme off-vertical-axis angles problematic. Since the tweeter will be significantly below ear height in most installations (it is several inches below the top of the 35.5-inch-tall cabinet), you might try experimenting with a slight cabinet tilt-back if the balance sounds a little off. Thiel can provide optimal outrigger feet that not only facilitate this but also improve the speaker’s stability.

The day I wrote up these results we received September’s issue of our sister publication,

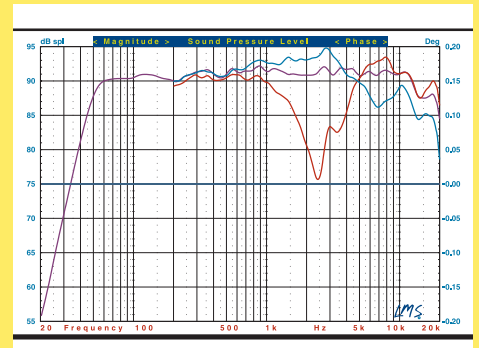


Fig. 2: Thiel CS1.6, pseudo-anechoic response at +15° (red) and −15° (blue) relative to tweeter axis.

Both figures: Violet: Pseudo-anechoic response on tweeter axis, averaged across a 30° horizontal window, combined with nearfield woofer and (if applicable) port responses.

Stereophile, with a review of this same Thiel speaker. I found it interesting that where our measurements overlap theirs (*Stereophile* presents a somewhat different, and broader, set of tests than we do)—impedance, frequency response, bass extension, off-axis response—the two do not differ significantly. They rated the sensitivity 2dB higher than we do (at an astonishing 94dB/W/m), but apart from that, the two sets of results correlate closely. Interestingly, we use different test gear—LMS in our case, MLSSA for *Stereophile*. The fact that the measurements are so similar for two entirely different samples of the CS1.6 also speaks well of Thiel’s quality control.—Thomas J. Norton

their price category. Peter Nashel's excellent score is masterfully mixed into all five channels; the combination of acoustic and electric guitars, synthesizers, and percussion is highly evocative. While the blending of Foley effects is only somewhat less accomplished than on *Donnie Darko*, the CS1.6s still reveled in their own excellent resolution. The speakers moved seamlessly from quiet dialogue, to sparsely scored music intended to build suspense, through to the inevitable final conflict, simply getting louder and more committed while showing not the slightest strain. Dynamically, the Thiels played well above their league. Points of punctuation were sharp, fast, even electrostatic-like. It would be so easy to think the macrodynamics of such a small speaker would be limited; after several months of listening to them, I conclude otherwise.

Many systems fall apart when sounds travel around a room. The continuity of the sound as it travels from the front of a system to the rear, or vice versa, is often marred by a discrepancy in timbre between the front and rear speakers. Theoretically, five identical speakers pose no such problem, but difficulties in placement and a speaker's inherent dispersion characteristics mean that there is no guarantee that "equal" means "effective."

One movie that tests the quality of a system's rear-to-front blend is *The Others* (DVD, Dimension 24168). At the end of chapter 5, Nicole Kidman stands in a spare bedroom, turning in place amid a sea of furniture and statues covered in white sheets, as whispering voices seem to travel from rear left to front left, while her frightened breathing remains fixed in the center channel. The CS1.6s projected the illusion artfully. The nature of the voices remained identical regardless of position—somewhat darker and with less presence when behind you than in front, but that's just as Mother Nature intended by giving us all big, fleshy pinnae.

Conclusions

The speaker market was crowded before the advent of home theater; now, the choices are even more intimidating. There are a few fine speakers in the Thiel CS1.6's not unreasonable price category, but the CS1.6 is one of the finest all-purpose speakers I've heard. My vinyl popped to life just as much



as my DVDs did. Plus, a quintet of identical speakers makes achieving a pleasing *and* accurate balance so much easier.

Don't expect earth-shattering bass from a small 2-way, but as I roll out the last of my review, I'm sitting listening to my turntable, and the bass, unassisted by a subwoofer, is comfortable and enjoyable. Otherwise, of course, this *is* home theater—make sure you pick up a decent subwoofer. Elsewhere, the Thiel is all magic, with a midrange that's warm and inviting yet remains resolute and very detailed. The CS1.6's tweeter is simultaneously extended and sweet, with none of the tendency toward brightness that mars many metal tweeters.

I've not always been happy with the smaller Thiel speakers I've heard in audio salons. They had a tendency to arrive at their high degree of resolution by shining a bright spotlight on the lower treble, at least in comparison with their bass and lower midrange. But I think Jim Thiel is now well beyond that in his designs. The CS1.6 struck a balance that was not only remarkable for a speaker at its price, it was remarkable for a speaker at *any* price. The next time someone asks me what kind of home-theater speaker system they can get for \$1000, I'll tell them to get one CS1.6 and save up for the rest. This little speaker has forever colored my way of thinking.

THIEL

Ultimate Performance Loudspeakers