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## Thiel CS2.4 Loudspeaker

Jim Frane



**J**IM THIEL FOUNDED Thiel Audio in 1977 and the company's products have become a strong presence in the music and home theater markets. Their 12 speaker models include in-wall, stand-mount, floor-standing, and a subwoofer. The CS2.4 is about in the middle of the floor-standing model range.

The newly introduced CS 2.4 is a three-way speaker with all metal

diaphragm drivers designed and built by Thiel. Metal drivers are used because they have increased stiffness and can be designed to place diaphragm resonance points outside the operating range. The driver complement comprises a coaxial 1-inch dome tweeter combined with a 3.5-inch midrange, an 8-inch woofer with a hefty 2.5-pound magnet, and a 7.5 x 11-inch passive

radiator. The drivers are arrayed from largest to smallest from the bottom to the top of the front baffle. The coaxial tweeter - midrange combo is particularly interesting in that they share a common voice coil with a mechanical crossover, eliminating an electronic crossover between them. I found the result to be quite good. I have heard many metal tweeters I didn't like for a

variety of reasons, including irritating edginess, harshness, or a metallic sound. Those used in the CS2.4s sounded very neutral and natural to me.

The 70-pound CS2.4 is 42 inches tall and 10.5 inches wide. The three-inch thick front baffle is sloped back, so that the enclosure depth varies from 14 inches at the bottom to 9 inches at the top. Large radiused top and side edges on the baffle are intended to eliminate edge diffraction. The rest of the internally braced enclosure is of 1-inch thick MDF. The wood veneer is well matched, fitted, and finished with lacquer. A 1 inch tall plinth that matches the veneer forms the base of the speaker. A trademark of Thiel's larger speakers is this backward-sloping front baffle designed to provide vertical alignment of driver voice coils. The design is to ensure the sound waves from each driver reach the listener's ears at the same time. The geometry works for a listener who is seated on axis at the correct distance away from the speaker.

A thin, flexible grille frame (covered in black cloth on the review sample) is held in place magnetically and is easily removed. Other grille cloth colors are available. I found that a close-miked (6 inches in front of the grille) response on my ADC SS-525x frequency analyzer showed about 1-dB attenuation at 16 kHz using pink noise with the grille in place as compared to no grille. I did most of the auditioning with the grille in place. The CS2.4s appear quite refined with the grille on and more high-tech with the good-looking drivers visible.

The review pair was done up in amberwood, but other wood finishes are available, as well as a more utilitarian version painted black. The other wood choices are white oak, birds-eye maple, maple, natural cherry, teak, dark mahogany, dark cherry, and morado. Photos are shown in color on Thiel's website. They will also custom make enclosures with finishes to match a buyer's requirements. The back is finished in the same wood as the sides and top and has gold-plated binding posts with large knurled nuts near the base, each with a hex section for wrench tightening. I found the knobs gave sufficient grip

to make a tight connection. The five-way binding posts accept different types of connections. They are purposely spaced too far apart to accept dual banana plugs in order to meet European regulations.

The six-page, fold-out owners manual recommends a standard

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### **These Thiel speakers are available in a large range of standard finishes or you can do a special order.**

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speaker placement facing straight ahead and away from walls, but allows for some circumstances and desired effects that may require toeing the speakers inward. Examples of when the parallel placement may not be the best are: 1) when the speakers can't be moved far enough from side walls to reduce early reflections; 2) when more specific instrument location is desired. The speakers can successfully be placed farther apart than many speakers because of their wide dispersion. Whether parallel or toed in, an arrangement forming an equilateral triangle with the listening position is recommended.

Four gold-colored spikes are provided with each speaker for use on carpeted or uneven surfaces to improve stability. Thiel offers an extra-cost option of a metal outrigger base that bolts to the cabinet bottom and places the spiked feet outboard of the four cabinet corners for increased stability and resistance to an overturning force, such as someone bumping the speaker. I installed 1/8-inch thick adhesive-backed felt pads instead of spikes, as I customarily do, to protect our oak floor. The CS2.4s were located 8.6 feet apart center-to-center and each was 8.6 feet from the listening position, 4.5 feet from the wall behind them and 5.5 feet from the nearest side wall. I tried the Thiels with various degrees of toe-in and found any angle from straight ahead to about 20 degrees of toe-in worked, but settled on no toe-in. Experimentation is the key as your room may yield slightly different results.

Thiel states that the speakers improve with a break-in period of at least 50 hours playing moderately

loud music. I agree with this and found that bass extension and fullness increased and improved with time. Rated frequency response of the CS2.4s is -3 dB, 33 Hz to 37 kHz, and from 36 Hz to 25 kHz, the spec is +/-2 dB. Thiel offers a 10-year warranty to the original owner.

I had an opportunity to discuss with Jim Thiel the major differences between the CS2.4 and the CS2.3 model it replaces. The units are similar in appearance because the changes have to do with the drivers and the crossover network. The coaxial tweeter-midrange double ferrite magnet was replaced with a much stronger neodymium magnet to eliminate some minor resonances, provide improved venting, and reduce operating temperature. The 8-inch woofer crossover has been fine tuned, improving its effective efficiency. This makes it easier to drive and extends the bass a bit deeper, to 33 Hz vs. the 2.3's 35 Hz.

### **Listening**

The most difficult stereo component to design, build or review may be speakers. Electromechanical transducers are affected by many variables, such as 1) the size, shape and type of enclosure; 2) the crossover network; 3) locations within a room; 4) room surfaces and furnishings.

In addition to serious listening to a wide variety of music from FM, records and CDs, I always listen with pink noise. I found little discernible difference in the sound of pink noise when moving back and forth in front of the CS2.4s, which indicates wide and even horizontal distribution at all frequencies. There was only a slight decrease in the highs when I moved from sitting to standing. I listen to music at live unamplified levels or lower. As with any speakers, the amp power, room size, and volume levels used can affect performance. The CS2.4s worked very well in my 22 x 15 foot room, filling the room with sound at live performance levels.

Chesky Records' *Jazz Sampler, Vol. 1* (Chesky JD37) has test tracks designed to set up and test stereo systems. I use these tests as an objective standard for evaluating speakers. The "Left-Right Imaging" voice locations were more precisely

in the proper spots than most of the speakers I've auditioned. With the "Listening Environment Diagnostic Recording," the "Up" sound went straight up for most of its climb, arching slightly inward at the top. "Over" made an arch at least three feet above the speakers. "Lateral" went straight across, and the "Depth" test provided realistic distance increments from 1 to 12 feet.

I enjoy LPs as well as CDs. As long as both media are handled with care, kept clean, and played with good equipment, the sound can have many of the attributes of a live performance. One of the first things I do when arriving home from a concert or other performance is to turn on comparable music and listen. A few days ago, after a combined chorale and orchestral performance in one of my favorite-sounding places, I listened to the Thiels playing a similar piece. I enjoyed their accuracy of timbre and reproduction of the space. I have to note that picking out individual performer locations may work with a trio or quartet, but the sounds of large groups in large venues blend in live performances. The CS2.4s have the ability to reproduce the sounds on a recording in a realistic manner. They do so with openness, detail, dynamic range and response, and tonal accuracy, offering just plain enjoyment. I placed my Mach One speakers on their stands alongside the Thiels for comparisons, as trading exact locations proved impractical logistically. The following recordings are a sampling of the wide variety of selections I used during this review.

Jazz instrumentals were reproduced very well, with realistic balance over the entire spectrum. The Dave Brubeck Quartet's *Time Out* album (Columbia CK 40585) was recorded with wide separation of the instruments. On "Kathy's Waltz" and the other cuts, the performers are distributed from one side to the other, with specific and steady locations for each. The CS2.4s' deep bass was clear and defined, with a good balance and detail. Low notes had authority without overhang introduced by the speakers. The Mach Ones needed the NHT sub to reach the same lower registers. Lester Young's sax came through with mellow raspiness on the

monaural "D.B. Blues" from *The Best Of Jazz Saxophone* (Direct Source SJT 15632) with both sets of speakers. The piano and bass backup were distinct even though they were mixed at a reduced level. Gerry Mulligan's *Dream A Little Dream* album (Telarc CD-83453-B) exemplifies the tonal accuracy and detail of these speakers. The baritone sax's deep, reedy sound was a

from *Ray Charles – His Greatest Hits* (Dunhill DZ036) sounded natural, without midbass exaggeration. There was slightly better sense of the recording space with the CS2.4s compared to the Mach Ones.

Classical music and some rock showed off the CS2.4s' dynamic capabilities and depth. Jefferson Airplane's "Somebody to Love" from *Surrealistic Pillow* (RCA LSP-3766)

was spread across a deep, imaginary stage extending well behind the speakers. Depth and clarity abounded. Janis Joplin with Big Brother and the Holding Company *Live At Winterland '68* (Columbia/Legacy CK 64869) nearly put me at the concert. There was spaciousness to the sound that let me know I was hearing a performance that was recorded live. Tchaikovsky's "Overture Solennelle 1812" performed by the Israel Philharmonic Orchestra and conducted by Leonard Bernstein (Time-Life CMD-01A) sounded superb, from the softest passages to the cannon shots at 112 dB. The Thiels showed no sign of strain, distortion, overload or congestion.

Yo Yo Ma's recording of Bach's *Six Unaccompanied Cello Suites* (CBS Masterworks M2K 37867) sounded closer to live with the CS2.4s than on other speakers I've auditioned. The roundness of the

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## Thiel's CS2.4s have an open sound, with good detail and dynamics.

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little warmer and fuller on the Thiels.

Vocals sounded like the recorded artist – there was no mistaking the performer's identity. Julie London's "Round Midnight" from *All Through The Night CD* (JAS CD308) portrayed a wide stage with the orchestral background spread between the CS2.4s and behind Julie's centrally located voice. The texture, tone and slight sibilance of her voice were right. "In The Still of the Night" from the same album, starts with lively double bass off to stage right, and it was perfectly located, lively, and distinct. Ray Charles' "Georgia on My Mind"

## NOTES

**Thiel CS2.4 loudspeakers**, \$3,900 per pair. (Note: some veneers increase this price; the painted finish costs less). Thiel Audio, 1026 Nandino Blvd., Lexington, KY 40511; phone 859/254-9427; website [www.thielaudio.com](http://www.thielaudio.com).

### Associated Equipment

Bryston BP25 preamp and Parasound HCA-1000A power amplifier (200 wpc). Other speakers were Mach One model M-Two 2-way on stands and an NHT SW3 subwoofer driven by an NHT SA-3 power amplifier with electronic crossover. The M-Twos were run full range. Interconnect cables were by Vampire, WireWorld, and Gotham. Speaker connections were via Mach 1 twisted pair cables to the Mach Ones and Thiels with a pair of Kimber 4PR cables to the NHT subwoofer. Sources were a Sony CDP-XA20ES CD player, Thorens TD-320 Mark III turntable with Sumiko Blue Point cartridge and Parasound P/PH-100 phono preamp, Denon TU-767 tuner, and an ADC SS-525x frequency response analyzer with calibrated microphone.

sound and texture of the bow on strings were very realistic, as was the size and stable location. Having heard my daughter play the same Bach pieces on her cello in my listening room has given me the perfect reference. Classical orchestral recordings placed and blended the instruments such as one might hear in a live performance. This is to say the positions of the groups of violins, cellos, and other instruments could be readily identified. Murray Perahia and the Amadeus Quartet, performing Brahms Piano Quartet, Op. 25 portrayed the piano in front with great depth to the string section. There was no blurring of notes and tonality was right on.

The CS2.4s' bass extension gave a solid foundation to the music, sounding as deep as the Mach One-NHT combination. The Thiels' bass was clear and precise, with no overhang or muddiness. Piano, double bass, tympani and organ all sounded right. The music was as detailed with the CS2.4s as with the Mach Ones, and was a bit smoother and more spacious.

### Summary

The Thiels' portrayal of every type of music sounded as it should – consistently better and closer to live

music than I have heard from other speakers in my listening room, given a good recording. The CS2.4s presented a soundstage that reflect-

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## Recordings sounded more consistently like live music than with any other speaker I have heard.

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ed just what was on the recording, to a slightly better degree than the smaller Mach Ones. This made it easy to visualize the positions of the performers (groups or individuals, depending on the situation) and the feeling of the location. Both male and female voices were natural, with no mid-bass emphasis and no excess sibilance. The CS2.4s let you hear what's on a recording and it's easy to differentiate between good and poorly miked or mixed performances. They also portray the ambiance of the space where a recording was made. The Thiels were competent and enjoyable over a wide range of volume levels, whereas not all speakers I've auditioned are this capable. The drivers and enclosure integrate into a sound source with smooth extension covering the musical spectrum. The rel-

ative sizes and locations of performers were accurately portrayed. The Thiels were able to provide recorded detail at all levels and reach deep bass without a sub-woofer.

My family and I found the Thiels visually attractive; they didn't take a lot of room and the elegant design allowed them to blend in to the decor. In general, the music floated in space, seldom appearing to come from the Thiels. The CS2.4s are much larger and more than twice the price of my Mach One M-2 speakers, and their performance reflects these differences. The increase in size, coupled with driver alignment had many advantages, such as low frequency extension and a broader and deeper soundstage. The listener is farther back from the performance than with the Mach Ones. The CS2.4s are not cheap, but their fine performance and build quality make them more than competitive with the other speakers I've heard that are at or even above their price. The CS 2.4s were the first pair of speakers I've auditioned that haven't made me feel, after a while, that I was being deprived without the Mach Ones. Listen to the Thiel CS2.4s if you have the opportunity, if only to hear some very fine speakers.

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