

image test



Thiel CS 7.2

Preis: 30000 Mark



Reprinted from

image hifi

Germany • Number 26 • March/April 1999

I am really looking forward to doing this test. Not only because it provides me with an opportunity to enjoy Thiel's largest model within my own four walls for a while, but another nice extra is that Sun Audio, Thiel's German distributor, offered *image hifi* the opportunity to present the CS7.2 for the first time in this country. However, the best bonus is that I feel excellently prepared to do this review thanks to my report on the CS6 in issue 4/98 and thanks to my being able to visit Thiel. So when Philipp Krauspenhaar and Thomas Bernhard of Sun Audio illustrated the technical features of the CS7.2's individual components in their usual expert manner, much of it already seemed well known to me. Writing this article will be an easy task—or at least that's what I thought.

However, I quickly became aware that our faithful readers—and this group likely includes the majority of our readers—at least are as familiar with the most important facts on the subject, Thiel, as the author of this article. Nevertheless I don't find it advantageous to omit the description of a CS7.2's structural details entirely. Because, as is customary with Thiel, much more than just nicely packaged, standard technology is offered here. However, I will make an effort to avoid repetitions as much as possible.

A revision of Thiel's top model had become necessary when the CS7 was clearly outperformed in the mid-frequency range by the CS6, which is lower priced. This performance dif-

ference was mostly due to the fact that the CS6 is equipped entirely with drivers produced by Thiel, whereas only the CS7's woofer was manufactured in their own factory. But even this impressive woofer had to undergo thorough enhancement before it was allowed to be part of the CS7's new edition. The woofer, with its new pole geometry and mag-

Thanks to drivers from their own manufacturing facility, the CS7.2's crossover is required to do significantly less frequency correction than the previous model. The superb quality of the crossover's components was, of course, maintained.

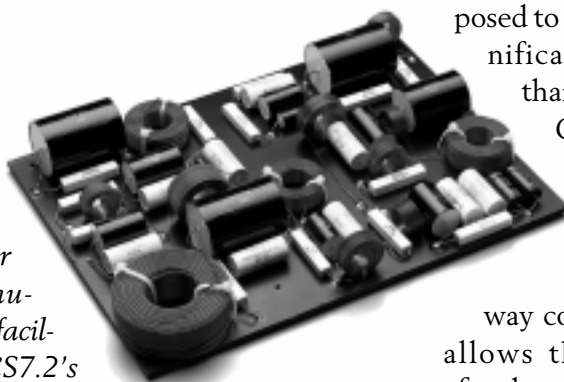
net system, now possesses a higher degree of efficiency, which is not used to increase sensitivity though, but is fully applied to impedance linearization. Therefore the CS7.2 clearly demands significantly less from an amplifier than the previous version.

With the lower midrange driver, which covers a frequency range of 220 to 700 Hertz, a relatively short voice coil is at work—as is the same with all the other drivers—in the long magnetic gap. This means that the

coil never leaves the linear magnetic field even during long excursions by the diaphragm—a rather elegant technique to reduce harmonic distortion, which, however, requires the use of particularly powerful magnets. This is a problem that can be solved though, since the driver is not only designed by the same company but also manufactured under its own direction. The new driver is supposed to not only produce significantly less distortion than the one used in the CS7, but should also clearly excel as far as dynamics are concerned.

The CS7.2's four-way concept, on one hand, allows the use of a larger woofer than is used in the model CS6 without having to be concerned about cone breakup effects at higher frequencies. On the other hand, having a separate mid-frequency driver for the upper midrange alleviates it of having to reproduce low frequencies. Therefore it only needs to process small excursions, which again reduces sound coloration in the treble area. And, high-frequency sound waves, which are reflected off the midrange driver's diaphragm, vibrate only very slightly due to smaller excursions. The upper midrange driver's diaphragm, which surrounds the tweeter dome, uses a layered sandwich design.

Yet this is not the only method Jim Thiel employs to eliminate diffraction—which is customary with con-





The enclosures for the midrange and bass drivers are made of polyurethane. The motor system's "short coil/long gap" design requires huge magnets for the drivers. Low-oxygen, Teflon-insulated, solid copper internal wiring is affixed to grooves in the cabinet bracing.

ventional coaxial layouts—in his coaxial drivers. The top aluminum layer of the diaphragm's sandwich is kept very flat, so that the sandwich membrane does not function as a horn. Furthermore the upper midrange driver includes a molded rubber surround, which not only has a largely linear power/distance relationship, but also minimizes diffraction effects due to its flat shape.

By the way, the CS7.2's coaxial driver is not a reuse of the CS 6's proven midrange/tweeter even if it appears as such at first glance. While the smaller models driver's voice coils are driven by the same magnetic system, the CS7.2's tweeter obtains its power from radially magnetized neodymium magnets. The more expensive CS7.2 coaxial supplies the midrange driver as well as the tweeter with even more power.

Even though the development of new drivers enjoys highest priority with Jim Thiel at the moment, the crossover network was definitely not short-changed in the top model's revision. As the new drivers are far superior to previous ones, significantly less crossover frequency correction is needed than before. Of course, the various crossover sections are still divided with a slope of only 6db/octave on the CS7.2. This is the only way ideal time and phase characteristics for the entire speaker are insured, explains Jim Thiel. First-order networks are not easy on the drivers as they supply them with frequencies well above and below the crossover points. Therefore, with Thiel drivers, any resonances are supposed to be at least three times the crossover point.

To Jim Thiel, equally important as nearly perfect impulse response and smooth on-axis frequency response is good off-axis response. In a stan-

dard room the acoustic pattern conveyed to the listener is comprised of direct and reflected sound waves, therefore it is not enough for a speaker to be well balanced only on-axis. The output toward the sides, which is then reflected, must also be dispersed as evenly as possible among the entire frequency range to avoid sound coloration at the listener's location. The crossover design, drivers and cabinet shape all insure the CS7.2's extremely even sound dispersion.

As there were occasional problems with cracks in the cast concrete front baffles when shipping a CS 6 and 7 overseas, Jim Thiel was looking for an alternative to the concrete—and found it. A mixture of polyester and ground mineral, which was used for the first time with the CS 7.2, should not only withstand any rough handling by shipping personnel, but also possess the similarly proficient acoustical advantages of concrete. Fortunately, his new development has also turned out significantly lighter. This is not only a very positive experience when moving the CS7.2 into my listening area, it also increases—at least principally speaking—one's willingness to experiment when positioning the speakers. However, the Thiel already plays music with such persuasion with the same positioning enjoyed by the CS 6, the Trenner & Friedl Gordon, and the Roksan Darius from my previous review, that the notion to search out a special spot for these speakers from Kentucky to sound even a little bit better, doesn't even present itself.

In early December last year, I had noted two business trips in my appointment calendar so that, meanwhile, the Thiel speakers had sufficient time—at least during the day—to break-in for their impending as-

signment. About half of this time they were badgered with a test CD's chaotic signals, while afterwards being permitted to relax with some light jazz.

The black laminate surface provides these test models with an elegant presentation. It doesn't shine quite as noble as a real piano finish, however it is far easier to care for and, at the same time, does not carry an upcharge to the standard finishes.

Much more than looks, though—as you certainly already know—I love bass tones. Therefore Bela Flecks' "The Flight Of The Cosmic Hippo" was the first disc played, well isolated inside of my Burmester 969 CD Player. D/A conversion was handled by a Cello Reference Standard in its most current modification level, Higher Fidelities took care of the required amplification, and the connection between these mono amps and Thiel speakers was provided by flat line SPM Reference cables. In this set-up, the title track turns into pure joy: The E-bass note grumbles and resounds, nearly frightfully; the electronic drums explode dangerously and yet never cover up the banjos and piano's playing. These low frequency elemental forces, which the CS7.2 released in my otherwise rather reserved room, make the Thiel speakers an absolutely exceptional speaker for me. I would have never thought that this much tightness combined with such precision is possible with a passive radiator design. Even at extreme volume levels during a solo on a tuned-down, five-string bass guitar, the CS7.2 does not grant itself the slightest deviation off its path of purity. Seemingly without effort, even frequencies far below 40 Hertz are thrust into the room without, for a moment, sounding too dense or even slightly out of control.

And because this was so much fun, I wanted more. This time Robbie Burns plays a four-string “Wale” bass, amplified by Trace-Elliot Amps. These fantastic slap-bass fireworks were recorded during a live concert and can be found on Burdon’s “That’s Live”, (Inak 854) and the track, Bruce Springsteen’s “Working Life.” Here it is primarily because of a virtual tension that the CS7.2 captivates the listener with its spell. This time it impresses with its seemingly unlimited dynamic capabilities. At the same time, it does not only effortlessly convey Burns’ vehement attacks on his steel strings, but also delivers an abundance of club atmosphere—there is not even the slightest trace of the sound coming from the speakers. The Thiel ambiently documents whistles, screaming and the applause of an enthusiastic audience—and this is done with unheard-of meticulousness.

If I now elaborate on the immense power of Eric Burdon at his best, you will get the completely inaccurate impression that a CS7.2 is best with electrically amplified music. Let’s therefore begin a little more quietly—without getting to flutes, harps or even silvery voices. How about “Blue Sun”, (ECM 1250). This album, by Ralph Towner, profits tremendously from the Thiel’s abilities: The CS7.2’s exact timing supports the “C.T. Kangaroo” rather vehemently; its precise tracing allows the solo guitar to appear very vividly in front of the spiritual eye of the listener; and thanks to its splendidly rich sounds, it is possible to find many positive aspects even in the combination of a classical guitar and a synthesizer. And when studio technol-

ogy magically produces huge imaginary spaces, I am able to lose myself wonderfully in this universe—becoming completely one with recording. A CS7.2 needs neither a sound spectacle nor higher volume levels to connect emotionally with the listener.

And that is why I won’t spend any time on any abysmal drumbeats and the pouncing dynamics on the reissue of the “Bang, Baa-Room, and Harp (LSC-2423) usually one of my favorite test CDs. No, I don’t want to rave about this unnecessarily. My duty as a chronicler, however, obligates me to acquaint you with the open, vivid and expansive spaciousness the CS7.2 is capable of when used with a Souther-Arm together with an Insider Reference pickup, for example. An imaginary stage expands along the entire width of the listening room, indeed at times even appears to extend beyond it. Even the depth of the individual instrument groups’ positioning is mastered magnificently—it’s simply fantastic!

Image x-tract

It’s incredible that a speaker is capable of creating such powerful and yet such precisely controlled bass without electronic assistance. But one would do the CS7.2 injustice if this particular characteristic were isolated in the spotlight, as it possesses quite comparably outstanding qualities in all other areas. It doesn’t make sense to specifically praise its great speed, its absolute dynamics, its grand imaging, or its enormous capability for definition. Jim Thiel’s latest creation is much more convincing with its absolutely harmonious sound, its total performance. To me, the Thiel CS7.2 is simply a dream speaker.

image info



Thiel CS 7.2 loudspeaker

Design:	dynamic, four-way, with passive radiator
Nominal impedance:	4 Ohm
Minimum impedance:	3 Ohm
Efficiency:	86 dB/W/m
Input:	1 pair gold-plated terminals
Special features:	Midfrequency and treble range drivers in coaxial layout
Measurements (W/H/D):	14/55/19 in
Weight:	168 pounds
Price:	DM35,000 (\$20,500 U.S.)
Warranty:	10 years

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