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Robb Report

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making Magic

How Thiel Audio turns
mundane materials into some
of the world's most super-
natural sounding speakers.

In an unassuming industrial park nestled among the lush rolling hills outside bucolic Lexington, Ky., magic is made on a daily basis. A passerby might presume that the steel stud and concrete block industrial building at 1026 Nandino Boulevard conceals a shipping company, computer sales center, or gear and widget manufacturer. Instead, it houses a dedicated team of craftsmen who turn magnets, lacquer, slivers of wood, and endless strands of electrical wiring into some of the most revered loudspeakers in the audio/video world.

The way such mundane materials are turned into Thiel Audio's sensational speakers may seem supernatural, but it really is the result of sweat, artistry, engineering, cleverness, and unwavering dedication to a common goal. If there is any sorcery

>> STORY AND PHOTOS BY SCOTT WASSER



HIGH-END

AUDIO SPECIAL

“ INDIVIDUAL SPEAKERS ORDERED BY THE SAME CUSTOMER ARE PERFECTLY MATCHED—IF THEY ARE PLACED SIDE BY SIDE, THE CONTOURS AND SHADING OF THE WOOD GRAIN FOLLOW THE SAME PATH OF EACH CABINET’S SURFACE. ”

MAKINGMAGIC

happening here, it is conjured up by a soft-spoken engineer who has been driven for decades by a burning desire to produce the most supernatural sounding speakers on the planet.

10 Jim Thiel, co-founder, co-owner, and product design engineer for the company that bears his name, is a perfectionist who doesn't hesitate to devote years to tinkering and tweaking a speaker design until it achieves his ultimate goal of perfectly mimicking the original source material. He explains, "When you're listening to live music, you immediately know that you're listening to live music. And if you're playing back a recording of a saxophone, it should ideally sound exactly the same way ... exactly like a live saxophone."

Thiel Audio co-founder and co-owner Kathy Gornik explains. "What Jim is going for is if you had a pair of Thiel speakers playing in your living room, and it was totally dark, you would be fooled into thinking you were listening to a live performance," she says. And anybody can achieve this. The technology is out there. The difference [between Thiel and most other speaker manufacturers] is that very, very few have the intelligence, the experience, and drive to want to do this and go for absolute perfection the way Jim does."

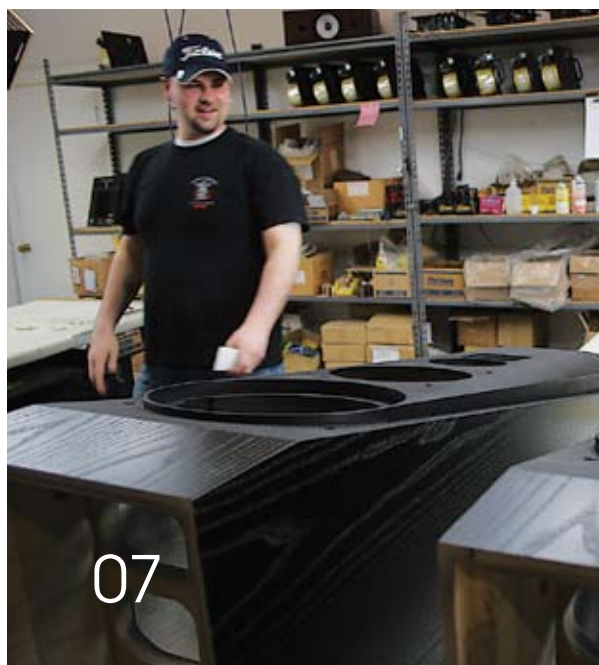
If there is a downside to Jim Thiel's quest for perfect audio reproduction it is how long it can take to get a new product to market. For example, the CS3.7 speakers announced at CES 2006 weren't expected to be produced until the first quarter of 2007. Even Gornik and other members of Thiel Audio's brain trust have teased the company's namesake about how long it took to get the new model to market. Their consolation is that the speaker it is replacing, the CS3.6, has been an exceptional performer for 13 years and Thiel only recently stopped producing it. And like every other speaker and subwoofer the company makes, Thiel Audio will provide replacement parts for, and/or make repairs to, even the first pair of CS3.6 speakers that it sold, according to Gary





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“ THIEL DOES VIRTUALLY ALL OF ITS SPEAKER DEVELOPMENT AND MANUFACTURING IN-HOUSE AT A TIME WHEN MOST OF ITS COMPETITORS ARE FARMING OUT CABINET CONSTRUCTION AND SPEAKER ASSEMBLY TO OVERSEAS MANUFACTURING FACILITIES. ”



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Dayton, the company’s customer service and technical support guru.

A crew of around 30 full-time employees helps ensure that every product in the current model lineup helps Thiel Audio retain its position as one of the world’s preeminent speaker manufacturers. Whether they are artisans or business professionals, each and every one seems to share a common dedication to producing some of the world’s best looking and best sounding speakers. This becomes very obvious during a tour of the 30,000-square-foot, low-rise industrial building that houses Thiel Audio’s corporate offices, speaker factory, shipping warehouse, and listening room. During the tour, one encounters everything from mountains of sawdust (which is sent to recycling centers or otherwise repurposed) to speck-free spray-painting booths. But the one common trait prevalent in every area of Thiel Audio’s relatively humble headquarters is the smile on each employee’s face. Since it’s highly doubtful the workers get paid per toothy grin, a visitor must assume their joy is genuine.

Anyone who has spent any time working in a factory knows that grins are generally far less common than grimaces. So it occurs to a visitor that if Thiel Audio could package and sell the secret of contented employees to other manufacturers, America’s industrial might could be restored to its former glory. Since each of the 15 speaker models Thiel produces is meticulously assembled and tested individually—there are no conveyor belts or assembly lines in this manufacturing facility—Thiel workers share the satisfaction of knowing they literally have a hand in building and sustaining a company that grew 50 percent a year in the first decade since its inception.

Gornik says the privately held company doesn’t disclose its gross or net revenues, but makes no secret of the fact that Thiel does virtually all of its speaker development and manufacturing in-house at a time when most of its competitors in the high-end speaker business are farming out cabinet construction and speaker assembly

to overseas manufacturing facilities. Gornik says that all of the key components that go into the company’s speakers are designed by and proprietary to Thiel Audio. She credits the company’s longtime director of manufacturing, 4 Walter Kling, with dramatically reducing development time by designing and building machines and other devices that enable Thiel Audio to create its own prototypes in-house.

Gornik explains, “The way it used to be, Jim would take a stab at designing something, we’d send the drawings to Denmark, where the part would get built, it would come back, and Jim would listen to it. Every time we did that, it would be a six-week process. Now, what used to take six weeks we can do twice in a day. When Walt developed the capacity to do this, it totally revolutionized our product line. It gives us enormous control over the fine nuances of the final product.”

Kling said that although Jim Thiel uses computer design tools that enable him to create virtual speaker components and simulate how they will affect the sound of the finished product, he is never satisfied until he has had an opportunity to listen to an actual prototype. Because so much tweaking is done as he homes in on the exact sound he’s after, being able to build prototypes in-house not only saves time and money, but also results in a finished product that more closely represents what Thiel, whose academic training is in physics and mathematics, envisions when he begins creating a new speaker.

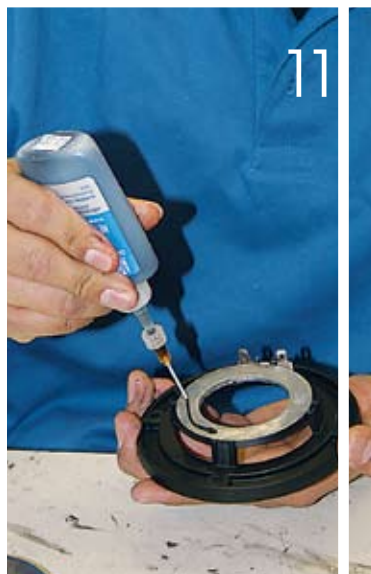
Thiel Audio’s speakers range in price from around \$2,000 to \$16,000 per pair and run the full gamut of speaker styles: bookshelf, on-wall, in-wall, ceiling, subwoofers, and floorstanding. Although all of Thiel’s products are well-crafted, the floorstanding and bookshelf speakers in particular are lauded as much for their aesthetic appeal as their audio perfection, thanks to a finishing process more typically associated with fine furniture than with audio/video components.

It is easy to appreciate at even a casual glance the seamless appearance;

sensuous lines; and deep, lustrous finish of a Thiel loudspeaker. But a closer look results in an even greater appreciation of the company's products. For example, the genuine wood veneer used on each speaker is not only chosen for its elegance and appropriateness to its application, but also is applied so that individual speakers ordered by the same customer are perfectly matched. That is true even to the extent that if two speakers are placed side by side, the contours and shading of the wood grain follow the same path and fall on the same part of each cabinet's surface.

Those surfaces are covered with the finest genuine hardwood veneers. Thiel Audio generally stocks nine different wood veneers, which are stacked in a corner of the warehouse in piles that resemble gigantic reams of printing paper. The company prides itself as much on purchasing veneer only from responsible foresters and contributing to sustainable forest management as it does in being flexible enough in its manufacturing process to deliver speakers finished in any attainable wood a customer desires. What's more, says customer service specialist Dayton, if a customer orders a pair of speakers now but expresses a desire to order additional speakers in the future, Thiel Audio at no additional charge will store the same veneer applied to the first pair so that the second set of speakers will match the originals.

In an example of the synergy that can exist between form and function, Thiel Audio's veneers and the process used to apply them add structural integrity to the speaker cabinets and help make them more resistant to the effects of temperature and humidity. Prior to the veneer application process, book-matched, paper-thin slices of wood are joined with glue by a special "stitching" device. These pieces are then roughly trimmed and applied to the cabinet using an environmentally friendly glue. Once applied, the finished panels are subjected to an airbag press that uses 75 pounds of pressure per square inch to ensure that the finish will last a lifetime under a wide variety of temperature and humidity conditions.





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The material to which the veneers are applied is **4** medium-density fiberboard (MDF) thick and rigid enough to help prevent vibrations that could introduce unwanted resonances when the speakers are playing. The panels and front baffles are cut using an ultra-accurate computer numerical control (CNC) machine that in operation resembles a giant phone booth in which someone somehow managed to capture a desert sandstorm. Cabinet panel and front baffle edges are engineered for a precise fit that contributes to the finished cabinet's stoutness and seamless appearance. This precision also results in nearly effortless **8** assembly of the cabinet components. During that assembly process, Thiel workers like **6/8/13** Kevin Mitchell reinforce the cabinets with internal braces that increase their structural integrity and further minimize potential vibrations. Once assembled, the cabinets are fine sanded and then stained and lacquered in a dust-free environment by artisans like **9** Jorge Guerra.

While the cabinets are being assembled and finished, technicians such as **11** Angel Flores and **5** Theresa Ashcraft are in another part of the Thiel factory assembling the drivers that will go into them. Except for the magnets, the company fabricates all of the **1/12** components that comprise its woofers, tweeters, and midrange drivers. It also designs and builds its own **2** crossover circuitry. The drivers and crossover networks are mounted in the finished cabinets and connected to each other by folks like **7** Joey Chadwell just prior to a **3** computerized sound check to make sure everything is behaving the way Jim Thiel engineered it to work.

Each and every finished loudspeaker produced by Thiel Audio undergoes the same testing before being packaged in another area of the factory where cartons **14** await what are likely to become prized possessions of those who order them. To the lucky recipients, Thiel loudspeakers may seem to perform like magic, but their build quality and audio performance are really nothing more than the result of unwavering dedication by Jim Thiel and his talented colleagues. [HE](#)



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THIEL

Ultimate Performance Loudspeakers

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