



"My aim is to arrive at a musical instrument."

So said Franco Serblin, designer of the Sonus Faber loudspeakers, as we talked last fall at the TOP Audio/Video show in Milan. He continued:

"It is usual in hi-fi to say, 'Ah, incredibly good sound, just like live.' But no—my idea is different. My idea is that it is possible to invent new emotions in terms of sound reproduction.

"Sometimes it is possible—with a good speaker, careful setup, and a high-quality amplifier—to experience a different perception of a piece of music than you would have when listening live. With a Beethoven piano sonata, for instance, you might have a more intense emotional experience with a recording than a live performance. It is for this reason that I continue to believe in hi-fi."

Franco is not your usual speaker designer. He talks more about music than measurements, more about producing musical instruments than loudspeakers. His *Homage* series of speakers are named after the legendary Italian violin makers Guarneri, Amati, and Stradivari. The *Strad* will be a luxury model and will likely cost more than some luxury cars.

But wait—Franco has also launched a more affordable line of loudspeakers, named the *Cremona* series after the North Central Italian city where Guarneri, Amati, and Stradivari perfected the art of making stringed instruments. Franco probably has some secrets of his own. *Sonus faber* means "sound maker" in Latin—or, as Franco translates it, "hand-made sound." And, like those ancient fiddle firms, Sonus Faber is family-owned.

The nomenclature is confusing, however: The floorstanding *Cremona* speaker looks like a miniature *Amati Homage*. The *Amati*, reviewed by Michael Fremer



Franco Serblin stands beside the *Cremona* speaker, in "Graphite" finish, at the TOP Audio/Video Show in Milan, September, 2002.



Cremona Center Channel speaker, in "Graphite" finish, at the TOP Audio/Video Show.

in June 1999, retails for \$22,000/pair, the *Cremona* for \$7495/pair.

Like the *Amati Homage* and *Guarneri Homage*, the *Cremona* is shaped like a lute—inspired by *Stradivari*, according to Franco. The *Cremona*'s curved sides are fashioned from 32 layers of maple; its top and bottom are solid blocks of the same wood. A light, medium-gloss finish is applied by hand. The appearance is ex-

quisite. (A metallic-gray "Graphite" finish is also available.)

Like those of the *Amati* and *Guarneri* speakers, the *Cremona*'s "grille" is a series of cords fastened to top and bottom plates. Insert the bottom plate into the base of the front baffle, stretch the cords, and insert the top plate into the top of the baffle. *Ecco!* You have a sonically transparent grille.

But the *Cremona* looks beautiful *without* its grille. The front baffle is padded and covered with leather—not for looks, but to prevent backwaves from bounding off a hard surface. Two metal crossbars screw into the base of each speaker. Threaded holes in the plinths accept the spikes. Sonus Faber recommends adjusting them so the back spikes are lower than the front ones, which tilts the speaker back by about 5° for better sound dispersion. Every detail received special attention, including the single pair of binding posts. Each nut on the binding post is shaped like a lever, so you can tighten it without resorting to tools.

The *Cremona* measures 41.5" high by 9" wide by 17.25" deep and weighs 75 lbs. Its sensitivity is stated as 90dB/W/m, its nominal impedance as 4 ohms. The frequency response is 32Hz–40kHz. Plus or minus how many dB? Sonus Faber and Franco Serblin don't specify.

Along with the main speaker, the *Cremona* line includes a center speaker, a powered subwoofer, and a stand-mounted monitor, the *Cremona Auditor*. The idea is to offer a complete *Cremona* array for multichannel sound. But, like the main speaker, the *Auditor* can be used in a two-channel, music-only system.

Franco himself seems none too keen on home theater. Speaking with me in *Vicenza* nearly two years ago, when I visited the factory, he told me that he found a center-channel speaker "destructive of

the stereo image"—the same objection voiced by Renaud de Vergnette, of French manufacturer Triangle.

But some markets demand multi-channel. Franco said that in Spain, for instance, two-channel stereo has all but disappeared. The opposite seems to be true in Germany, he told me in Milan last fall. There, two-channel stereo appears to be flourishing, perhaps even enjoying a renaissance.

"At the last Frankfurt hi-fi show, I noticed that many young people were all into two-channel stereo—music, not home theater." Home Theater is okay for people who like their sound in large quantity, Franco said, "but two-channel hi-fi, by contrast, is a small market. But this market will continue to exist, as it is impossible to remove music from our lives."

If Franco Serblin doesn't talk like most other speaker designers, Sonus Faber doesn't act like most other speaker manufacturers. They don't revise their product line every two years or so, replacing models so they always have something "new." Sonus Faber products evolve. They follow, one from another, in a kind of logical sequence. And Sonus Faber speakers tend to stay in production, more or less unchanged, for a decade or more. The Minima FM2, for instance, was made from 1984 to 2001. And the Guarneri, the first speaker in the Homage series, has been produced since 1993. If the past is any precedent, the Cremona won't be replaced anytime soon, or updated in another year or two with a Mk.II version.

Sonus Faber established its reputation in the 1980s with a succession of stand-mounted monitors—the Parva, Minima, Electa Amator, and, in 1991, the Extrema. Knowing that the Minima's days were numbered, I snagged a pair from one of the last production runs. It was the quintessential Sonus Faber mini-monitor, with superb focus and imaging. I found the sound sweet, forgiving, slightly rolled-off on top, and somewhat

ripe in the mid- to upper bass. Not what most audiophiles demand today, perhaps, but a treat for sore ears.

With a 4" bass-midrange driver and a small cabinet, the Minima didn't do deep bass. And, like many other mini-monitors of the 1980s, it was insensitive: 84dB/W/m. Low-powered single-ended triode amps were out of the question. Never mind—there was magic in the Minima. It remains one of Franco's favorites and, for him, a reference.

Sonus Faber speakers tend to stay in production, more or less unchanged, for a decade or more.

"I aim for simplicity," he told me in Milan last fall. "With the Cremona, you'll notice there is a single pair of speaker binding posts. I don't believe in biwiring or biamping. It just introduces complications."

The Guarneri Homage was Franco's first speaker to use a cabinet "in the ancient shape of a lute designed by Antonio Stradivarius," wrote Franco, in the company's literature. Sonus Faber holds a patent on the shape. The speaker retails for \$9995, including the integral stands. Some consider this Franco's finest speaker to date.

I asked Franco about the shape—and the evolution of the Cremona—during our lunch at the TOP Audio/Video Show.

"The Cremona is the consequence of the Guarneri Homage speaker," he told me. "The Guarneri was born 12 years ago. For me, this was a new idea in cabinet design. There was nothing else like it on the market. It was a simple idea: You remove one side of the cabinet and you control resonances."

Eliminating parallel walls—especially the back wall—helps control or kill standing waves. The curved side walls make the cabinet rigid, and also help to control resonances. And the tapered form facilitates the transmission of back waves to the ports. The midrange driver "sees" its own separate chamber and is vented via a small port in the upper third of the cabinet. Backwaves from the bass drivers evacuate through the larger port below.

I first heard the Cremona in late spring 2001, when I visited the factory

in Vicenza. My visit was impromptu. I was in town to visit amplifier manufacturer Pathos Acoustics—not realizing that the same city was home to Sonus Faber. Paolo Andriolo, of Pathos, called Franco on my behalf, and a factory visit was hastily arranged.

From Franco's point of view, my visit may not have been well-timed. He was busy voicing the Cremona, working closely and intensely with Lars Goller, development manager of Vifa-ScanSpeak, of Denmark. From my point of view, however, Lars's presence couldn't have been better. I not only got a sneak preview of the Cremona, I also got to witness an afternoon's listening and design session. Franco asked me to keep the Cremona a secret. And not to judge.

"It's not finished yet," he admonished. It took him another six months to tune every aspect of the drivers and the crossovers. "You know, Sam, if you change the value of just one resistor, you can change the sound entirely," he said at the time.

This is hard work. By day's end, Franco and Lars were clearly exhausted.

Working with Lars and the engineering team at Vifa-ScanSpeak, Franco requested a series of modifications to be made to the drive-units. Different generations of the drivers were compared—always with music rather than measurements as the guide.

To be sure, Franco uses computers to measure speaker performance. He also uses computers for quality control—to measure each speaker that comes off the production line, as I saw for myself at the factory. And ScanSpeak uses computers in designing their drivers.

But computers and software don't drive Franco's decisions. His ear, his experience, and his intuition do. While speakers today, on the whole, are better than ever, and while there's much more consistency than in the past, it seems to me that there is a certain sameness about many loudspeakers today, combined with something approaching sterility.

Should a speaker be entirely neutral? Should it be a transducer—something that passes the signal and just gets out of the way? Is accuracy everything? Or is a loudspeaker something more? Is it a musical instrument?

I asked Franco if he'd ever considered making his own speaker drivers. He shook his head. Franco likes the freedom to choose among drivers from all manufacturers of what he calls the "Danish School": Vifa, ScanSpeak, Peerless, Seas, Dynaudio. Danes have a way with drivers, just as Italians have a way

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with cabinets.

"Are the Cremona's drivers custom-made?"

"Customized, certainly. But each driver is based on an already-established unit. In the past, I was interested in having totally new drive-units designed. But now, with experience, I realize that that isn't such a good idea, because it is so difficult to design a good driver.

"Each manufacturer of drive-units has models which are superior. I choose from the market the best that is available and spend time adjusting the crossover and making whatever modifications are necessary."

I remembered something Franco had told me during my factory visit to Vicenza. He had a speaker that used a certain bass-midrange driver and wanted to make a larger speaker. (He didn't specify which model, but it might have been the Minima FM2.) He asked the driver manufacturer for a larger version based on the same design principles—but anything larger lacked the magic of the original driver.

A mass-market speaker manufacturer might not care. He might simply take the larger driver and use it to make a speaker, filling out a product line or meeting a price point. In other words, marketing considerations rather than musical considerations drive the design. If you want to know why so many speakers are ho-hum—not bad, not great—this is one of the reasons. If you want to know why some speakers in a manufacturer's line might be standout performers and others mediocre, well, here you have it.

The Cremona's drive-units all come from ScanSpeak, and I can attest that Lars Goller and his team worked really hard to give Franco just what he wanted. The 1" fabric-dome tweeter employs a "ring radiator" design. A metal phase plug sits in the center, surrounded by a ring of fabric into which is tucked the voice-coil former.

I asked John Hunter, of Sumiko Audio, Sonus Faber's US distributor, to elaborate:

"The [ring radiator] extends out to approximately 42kHz, and only the outer ring, or donut, emits sound. The approach brings two benefits. First, you reduce the moving mass, resulting in that fabulous high-frequency extension and air. Second, you improve the dispersion, especially lateral. Because of the neodymium magnet, the tweeter is highly sensitive and can play very loud."



Sonus Faber Cremona loudspeakers

**"Each [customized] driver is based on an already-established unit."
—Franco Serblin**

I quizzed John about the crossovers. Specs are sparse with Sonus Faber designs.

"The tweeter is gently phased out starting at about 5–6kHz and is down 3dB at 3kHz," said John, after checking with Franco. "The woofer begins gently rolling off slightly below 100Hz and is 3dB down at about 300Hz. As with all of Franco's recent designs, the crossovers are first-order, with phase optimization involving minor corrective circuitry placed in parallel with the drivers. In this way, the fewest number of additional components are placed in series.

"Essentially, for all the tonic that the human voice and most instruments produce, you are listening to that single 5" midrange driver. The tweeter replicates the upper-level harmonics, while the twin 6" bass drivers act almost like subwoofers."

The cones of the midrange and bass drivers are made from "hand-thrown" paper, John added, knowing that would

pique my interest.

"Hand-thrown paper?"

"The paper isn't plain paper," he explained. "Various high-tech materials have been mixed into the pulp fiber—materials like carbon fiber and titanium dust." ScanSpeak and Sonus Faber do not supply a list of ingredients.

"When you hand-throw paper, that's what you do. You have a perforated screen that's maybe 4' by 8'. You throw the pulp fiber at the screen, it sticks, you let it dry for a while, then you throw some more, in fairly random form. You keep doing this over the course of two or three days, letting each layer dry."

"Sounds like fun."

"No, it's hard work, and takes considerable skill. At the end of three or four days, you have maybe 40 or 50 layers built up. The material is incredibly rigid, random, and internally self-quieting. You don't have common-mode resonances building up."

"What are those lacerations I see on the cones?"

"They're razor cuts applied to the cone at oblique angles."

"Why would you slash a speaker cone with a razor?"

"After hand-throwing the paper, you still have some vibrational standing waves emanating in a radial fashion from the voice-coil toward the rim, much like the waves rippling outward from a pebble dropped into a calm pool of water. These standing waves form a dominant sonic 'signature' in untreated drivers.

"So what they do at the factory is take a razor and actually slash the cone at oblique angles to the center. This breaks up the surface tension of the cone membrane. Any axial resonance runs into one of these razor cuts and is broken up. You can think of these razor cuts as an acoustical breakwater."

A polymer adhesive is then applied to heal the wounds, as it were, and keep the cone from shredding. The adhesive is said to be stronger than the cone material itself.

My review pair of Cremonas finally arrived—more than a year after my visit to Vicenza, and a few weeks before last fall's TOP Audio/Video Show. I was going to set up the Cremonas in my cluttered listening room—but when I saw them, I knew I'd have to listen in our living room. When my wife, Marina, came home, she flipped. Wife Acceptance Factor: 100%.

Our living room measures about 13' by 21'. I set up the speakers about 4' from the back, short wall and just under 3' from the side walls—my usual position for speakers in that room.

I thought the soundstage was excellent, and listened contentedly for several weeks, using the Musical Fidelity NuVista 3D CD player and the Unison Research Unico integrated amplifier. I also tried the YBA Passion Intégré which proved a perfect match. Ditto the Musical Fidelity A3.2^{CR} pre- and power-amp separates that I wrote about last month, two more good choices. My listening-room system went largely unused.

Then Giovanni Cacciatore (that's how Franco Serblin refers to John Hunter) arrived from Sumiko, along with his associate, Patrick Butler, or Pasquale Maggiordomo. Giovanni was equipped with the *Duets* CD by electric bass player Rob Wasserman. They put vocalist Jennifer Warnes' "Ballad of the Runaway Horse" on endless repeat. For more than an hour, I listened patiently as Ms. Warnes sang breathlessly about a "galloping steed." Finally, I could take no more and hoofed it up to my office.

"Call me when the woman stops panting after the runaway horse," I said.

Half an hour later, Giovanni and Pasquale were done. *Finito!* All that work to move the speakers a matter of mere inches! Now they were about 3½' from the back wall and 2½' from the side walls.

There may have been something to that "galloping steed" song—the speakers kept their superb imaging and center fill, but now I heard a much stronger, more extended bass response. Srs. Cacciatore and Maggiordomo had also adjusted the spikes so the speakers tilted back at maybe a 3° angle.

"Franco wouldn't approve," said John.

I didn't either. After several weeks, I readjusted the spikes for a 5° backward tilt, and what I thought was a better tonal balance—more highs. But I left the speakers where Giovanni and Pasquale had placed them.

Taking my cue from Franco, I didn't rush things. If he could give the Cremona three years, I could give it three months. I listened to all manner of material with the speakers—but no more galloping steeds.

I tried various 1920s, '30s, and '40s pop and jazz recordings, including Duke Ellington and tons of Count Basie. Historic classical recordings from the 1930s and '40s, including Jascha Heifetz reissues on Naxos. Lots of late-night chamber music. I even listened to

some blues recordings that I bought last October at the Fifth Annual Blues Masters at the Crossroads concerts, at Chad Kassem's Blue Heaven Studios, in Salina, Kansas.

The Cremona was the finest speaker that I—or we—have had in our living room. It was also the best-looking, but sound is what counts. The midrange and treble had the expected Sonus Faber magic: sweet, smooth, completely free of grain, with not a hint of hardness. Bing Crosby, recorded in the late 1930s, was right in the room. His baritone voice was clear and pure, without boominess or chesty coloration. Bing's

The Cremona was the finest speaker that we have had in our living room.

pipes are difficult to get right.

The treble was well extended—so much as I can hear in my approaching geezerhood. There was more top-end extension, more sparkle than I'd noted with the Minima FM2, which preceded the Cremona in our living room. The sound was clear and pure—crisply articulated without being overetched. Do you have a bad case of high-tech, metal-dome tweeteritis? Sonus Faber offers a cure. In the midrange and treble, the Cremona reminded me of a Sonus Faber minimonitor.

The bass was surprisingly extended, given the size of the cabinet and the 6" diameter of the twin bass drivers. This is what a minimonitor *can't* do: go down to 32Hz. The bass extension and authority sometimes caught me by surprise. Bass was there when needed and, even more important, absent when not.

I asked Franco how he'd achieved such low-end performance. Was it the lute-shaped cabinet?

"Honestly, it's the fantastic realization of the bass drive-units. The ScanSpeak bass driver delivers unprecedented performance for its size."

I substituted the Audio Analogue Maestro integrated amplifier for the Unico. The Maestro is rated at 150Wpc into 8 ohms, which allowed me to crank up the volume a little and still not clip. At this point, I borrowed a Sony XA-777ES SACD player. (I have enough SACDs now to think about actually *buying* an SACD player.) I played mostly large-scale orchestral works. The tonal

balance was excellent. The bass was extended—more so than with regular "Red Book" CDs—yet controlled.

"What's that slight buzzing sound coming from my speakers?" Marina wanted to know. "Is something wrong?"

"No, that's the sound of the rosin on the bows."

I played the Scriabin Etudes on a Lang Lang disc that also contains Rachmaninoff's Piano Concerto 3 (Telarc SACD-60582). The Etude Op.8 No.12 almost lifted me off my seat with its dynamic range and tight bottom end. I love tight bottom ends.

Even at moderately loud listening levels, the 80Wpc Unison Research Unico integrated didn't break a sweat. What a combination. And fitting, perhaps—like the Cremona, the Unico comes from Vicenza.

During our talk in Milan, Franco emphasized that amplifier quality is more important than amplifier quantity. In most rooms, the Cremona will not require the most powerful amp—or, necessarily, the most expensive. Depending on your room and preferred listening levels, you might get by quite nicely with a modestly priced integrated amp like the Unico or YBA's original Intégré. Or the Musical Fidelity A3.2^{CR} pre- and power-amp combination.

I couldn't resist going retro.

After listening to the Cremona for several months, I put the Minima FM2 back into the system. It was a trip down memory lane, back to the mid-1980s, when the Minima was introduced. The top end was rolled-off. The mid- to upper bass was overripe, as I said earlier. The Minima was less resolving, less transparent than the Cremona. The Minima's focus, however, was superb. So was the Cremona's. Now I know why Franco keeps a pair of Minimas on hand as a reference.

The Sonus Faber Cremona is the finest cabinet-built speaker I have heard for under \$10,000/pair—not that I've heard everything. On looks alone, the Cremona probably creams its competition. It represents Franco Serblin's finest achievement yet in terms of value for money—a mini Amati Homage for about a third the price.

Like other Sonus Faber models that I've heard, the Cremona had a quality that's impossible to quantify. Perhaps the best analogy is with watches. Many loudspeakers these days are like quartz watches: accurate, practical, soulless. A Sonus Faber speaker, on the other hand, is like a mechanical watch. It has a heart.

Bravissimo, Franco. Molto, molto bene. ☛