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Sonus Faber Amati Homage loudspeaker

After establishing a reputation for building small, magnificent-looking, very expensive, stand-mounted loudspeakers, the Italian manufacturer Sonus Faber has hit the ground running. First came the moderately priced (\$3500/pair) floorstanding Concerto Grand Pianos, and now the company's "statement" loudspeaker, the Amati Homage—a \$20,000/pair visual stunner that earns its keep almost by looks and touch alone.

The Amati Homage is Sonus Faber designer Franco Serblin's moment of truth: a fairly large, floorstanding, almost full-range speaker (the low-frequency response is rated to 24Hz) meant to be without sonic, structural, or aesthetic compromise. But while everything Serblin has learned about building and voicing loudspeakers has been incorporated in the Amati's design, there's more to come. The Amati is the second of three "homages" to Cremona-based violin makers. The first was the Guarneri (\$9500/pair including stands), issued in 1993 and reviewed for *Stereophile* by Martin Colloms in the July 1994 issue. Whatever Serblin's planning for Stradivari, hold on to your gold card.

Game plan

Serblin's first goal was to design as resonance-free a structure as he could, for a three-way speaker that would extend further down in frequency than any he'd yet built. The cabinet's lutelike shape was inspired by a drawing by Stradivari. (Sonus Faber holds an international patent on the design.) Such looks are dramatic and make good brochure copy, but what do they have to do with loudspeaker design?

Plenty, it seems—the Amati Homage's magnificent form follows its function. The lutelike shape eliminates parallel cabinet walls—especially the back wall—and helps control or eliminate standing waves. The curved side walls add tremendous structural rigidity. According to Serblin, the tapered form eases the transmission of the speaker's back wave to the ports and results in cleaner energy evacuation. When you think about it, the funnel shape makes complete sense: there's very little internal surface for the wave to bounce off of.

Like those of other premium SF speakers, the Amati's side walls are constructed of slats of wood, each slat built up of 21 sheets of varying thicknesses of maple laminated with a high-viscosity polymeric glue. Between each slat is an inlay of solid maple, aniline-dyed black. The slats are heat- and pressure-curved in a device that looks like a boat-hull former. The cabinet's top and bottom are of thick, solid maple.

All drive-units perch forward of the cabinet edges, with the midrange and tweeter angled back from the bass drivers. The sculpted and partly angled front baffle is of 1½" MDF covered in stippled leather. Aside from looking handsome, the leather provides topical damping, and



Sonus Faber Amati Homage loudspeaker

Description: Three-way, floorstanding, dynamic loudspeaker. Drive-units: 1.2" (28mm) soft-dome tweeter, 7" (180mm) paper/carbon-fiber/titanium-cone midrange unit, two 8.3" (210mm) rigid paper/carbon-fiber-cone woofers. Crossover: first-order "attenuated," 200Hz and 2.5kHz. Frequency response: not specified. LF extension: 24Hz. Measured impedance: 4 ohms nominal. Measured sensitivity: 92dB/W/m. Power requirements: 30–300W.

Dimensions: 46" H by 10½" W by 22¾" D. Weight: 154 lbs each.

Serial number of units reviewed: 024 "Anno 1998 Fecit."

Price: \$20,000/pair. Approximate number of dealers: 24.

Manufacturer: Sonus Faber, 36057 Arcugnano (Vi), Italy. Tel: (39) 444-288788. Fax: (39) 444-288722. Importer: Sumiko, 2431 Fifth Street, Berkeley, CA 94710. Tel: (510) 843-4500. Fax: (510) 843-7120.

is not only the gasket material for the drivers but a means of breaking up and diffracting energy along the baffle surface. The ported back piece is sculpted from a solid piece of aniline-dyed Balkan maple with a closer grain than the side walls.

Additional internal resonance control is provided by strategically placed copper/lead structures and subcabinetry. Each driver has its own chamber; though there are dual woofer ports, the two woofers' backwaves fire into a common chamber and out both ports, which are located almost halfway up the back. The midrange driver is also ported. The cabinet is richly finished: hand-applied stain and seven coats of special varnish result in a deep, lustrous, glasslike finish. Each speaker weighs a solid 150 lbs.

The finished product is simply one of the most stunning-looking large loudspeakers ever built by anyone. Upright caskets, refrigerators on spikes, Robbie the Robot—all those big speakers look silly next to the Amati.

What's inside

Serblin's goal was to design a high-efficiency, low-compression loudspeaker that would be fast and detailed yet dynamic and full-bodied. The high-compliance, low-compression drivers, custom-built to Sonus Faber's specs by Scan-Speak, consist of two extra-rigid, lightweight, 8" paper/carbon-fiber cone woofers, with the cone material "hand-thrown" to randomize the fibers (and break up resonances) and individually damped; a high-compliance, 7" multiple-coated paper/carbon-fiber midrange cone with a hyperbolic titanium phase plug (to break up high-frequency beaming); and a 28mm, non-ferrofluid, multiple coated soft-dome tweeter protected by a grate.

The crossover operates at 200Hz and 2.5kHz, features first-order slopes, and is impedance shunt-loaded. Judging by the photos, Sonus Faber uses high-quality capacitors and inductors. In fact, importer Sumiko told me that the parts cost for the Amati's crossovers totals around \$800. By the time you get to retail, that's more

than \$6000/pair for crossover parts alone! The internally mounted network is set in a box and potted with resin to control the effects of vibration. Van den Hul supplies the internal wiring,

The finished Amati is simply one of the most stunning-looking large loudspeakers ever built by anyone. All those other speakers look silly next to it.

WBT the large, substantial binding posts.

You pay yer 20 grand and that's what you get. You also get the speaker up off the floor on four beefy, beautifully machined spiked feet. These attach to heavy crossbars screwed into the Amati's bottom, and allow you to level the speaker and adjust the baffle's rake angle. You also get the "black pasta" grilles— a messy mass of stringy, stretchable stuff that attaches to two pegged metal plates that affix to the speaker front. When stretched, the black strings magically align, creating the sexiest, most transparent (visually and sonically) grille covering ever (though I left them off most of the time).

Get down! Set up!

When I spotted this beauty at CES, I asked to review it—once I'd moved to my new, larger listening room. Sumiko's Stirling Traylor responded, "Why not review it in your room now?"

Traylor knew my room, having set up Sonus Faber's Concerto Grand Pianos there for my review in May '98. After the difficulty I'd had with the large Aerial 8s in my room, I was a bit hesitant, but lust won out over reason. (What else is new?) If he didn't think the room was too small for so large a speaker, who was I to argue?

What a thrill it was carrying these rounded, tapered, slippery, 150-lb speakers down my steep, narrow basement stairs! With the help of a friend, I placed them precisely where my reference Audio Physic Virgos had been, as that location—about a quarter of the way into the room, wide apart, and toed-in to the listening position—seemed to work best with every other speaker I've had in the room, give or take an inch.

After a few weeks, Traylor paid a visit. He and an assistant spent the better part of a day fiddling with the speaker positions, playing the same CD track (Jennifer Warnes singing Leonard Cohen's "Joan of Arc") over and over and over and over and over and over again.

By the time he was finished all that moving and

regrooving, I never wanted to hear Jenny sing Lenny again—not that I'd ever liked it that much in the first place. And the Amatis were within an inch or two of where I'd had them to begin with! Better sound? Maybe slightly. Enough to change a word of this review? No. Did the importer feel *much* better? Yes. That counts for a lot in this world. If he was happy that the speakers were sounding as they should in my room, my comments on their sound would have a firm foundation.

Oh, my!

The Amati is rated at 92dB sensitivity, so I probably could have driven them with a Fisher 500B receiver or a Scott 299D. But I had three better choices: The Conrad-Johnson Premier 12s, the Ayre V-1, and the KR Enterprise VT8000—three very different-sounding amplifiers that I'm glad I had on hand. I spent the first week listening with the C-Js; I'd recently reviewed them, and was most familiar with their sound. Later I drove the Amatis with both the KR and Ayre amps.

The Amati is the most effortless-sounding large loudspeaker I've ever heard. It was as if my favorite recordings had been performing shackled all these years, and suddenly were free to move unhindered—physically and emotionally. The *feeling* of listening to the Amatis was similar to my first exposure to electrostats, with a difference: this time, the experience was not followed by the distinctive sound of what was actually moving the air, or the "ghostly" sensation of literal transparency.

Listening to the Amati, I came to appreciate that "fast" doesn't mean "etched" any more than "slow" has to mean "soft." The Amati was lightning-fast. This translated not into crisp transients, or grandiose gestures designed to bowl you over, but subtle yet explosive microdynamic attacks—those tiny, long-hidden gradations of sound that live at the bottom of the decibel scale suddenly rose to the surface to make their presence so obvious that I wondered how I could have ever missed them. I've heard this feat accomplished by tweeters in some other speakers (like the Alón Circes), but never before had I heard it so convincingly delivered top to bottom.

I'm sick of "Guantanamo." *Yo no soy un hombre sincero*. But I pulled out the Weavers' *Reunion at Carnegie Hall, 1963* (Analogue Productions APF005) to get an immediate handle on the Amatis' soundstaging abilities, transparency, and image focus. Instead, I was jarred by and drawn into Pete Seeger's oh-so-familiar performance. It sounded more emotionally and physically alive than I ever remembered hearing it. The Amati revealed tiny volume modulations, subtle nuances of amplitude phrasing I had never been aware of.

This may sound like picayune stuff, but don't be fooled: since the Amatis did all of this equally well from top to bottom, the immediate effect was to create the most seductively liquid, living, breathing, startlingly subtle, totally believable sonic picture I've ever heard from a loudspeaker—with the Weavers LP, and with every other record and CD I played.

The Amati was equally accomplished at the top end of the dynamic scale. It was able to portray those large-scale gradations starting at very

And what about the Audio Physic Virgo?

Despite my Amati ravings, my long-term reference, the Audio Physic Virgo, need not apologize for its performance. It is still a very special loudspeaker. The proof is that Audio Physic has had a difficult time selling the excellent \$10k/pair Avanti, which is priced between the Virgo and the \$19,000/pair Caldera. (From what I've heard of the Caldera, I find it inexplicable that this speaker is still placed in Class B in *Stereophile's* "Recommended Components" rather than Class A.) The Virgo is that good.

Compared to the Virgo, the Amati offers lower apparent distortion and resolves low-level dynamic contrasts far better than the Virgo, and better than any dynamic speaker I've heard. The Amati's rich, pure midrange causes a sensual meltdown the Teutonic-sounding Virgo can't approach, and the Italian speaker has fewer cabinet colorations—particularly in the midbass. The Sonus Faber's senses of "touch," of emo-

tional communication, overwhelm the Virgo—and every other speaker I've heard.

The Virgo does offer greater "slam," "physicality," and (at least in my room) disappears more effectively, leaving a bigger, more open soundstage. A few visitors have concluded that while they were moved by the Amati's ability to touch their hearts, they still prefer the Virgo's "balls."

I, on the other hand, find myself prying away for the Amatis. How to convince my (nonsaudiophile) wife to spend that kind of money? Amazingly, that was the easy part. After her first audition of the Amatis, she stood up and found herself saying—almost involuntarily, as if Beetlejuice himself had taken over: "I don't care how much they cost—we have to have them!" Guys, this *direct quote* says more about the Amati Homage than my whole damn review.

—Michael Fremer

low relative volume, meaning that the speaker didn't need to be played loud to come alive—it breathed music with ease, whether playing quietly or cranked to silly-loud levels. It didn't sound clogged and caged-in at low volume, or squeezed and constricted at high levels.

Could the Amati rock? Yes. I gave the British pressing of the Clash's *London Calling* a spin, and the title song issued forth with all the throbbing, jackhammer, bone-crunching intensity it requires to communicate its meaning. Paul Simonon's bass was deep, focused, and convincing in both pitch and texture. It never overloaded the room, nor did it ever sound as if "one-note bass" was coming from the speakers. The bass on "Jimmy Jazz," which digs deep, didn't suffer from overhang or bulbousness—in fact, it was as distinct and lithe as I've heard it, and the distant "walla" of the

crowd noise behind the song's silliness was laid out in a distinct layer that was clearly audible throughout the song. Have I heard greater bass slam on this tune? Yes—but not greater resolution, tonal authority, or subtlety of fingers on electric bass strings. The Amati could rock and play loud, *loud*, LOUD with no sense of strain.

I could pick apart the Amati's performance from top to bottom, extol its sonic virtues one by one, and go on about its ability to both exude harmonic richness and resolve fine levels of inner detail. But what's really special about this speaker is its unerring touch and seamless balance—tonally, spatially, dynamically, and, most important, emotionally. Of course, these are things you can't measure.

I invited the owner of my local wine emporium down for a listen. He's a classical music

enthusiast, and I'd been asking him for about three years. This time, I *insisted*. He asked to hear the Mendelssohn Violin Concerto in E Minor, so I played him the Heifetz/Munch/BSO recording (RCA LSC-2314). As Heifetz scaled the upper registers, my friend groaned with pleasure and involuntarily pointed to where Heifetz "stood." The Amati's reproduction of strings was, fittingly, exquisite: searing but never hard or strident, even on the most revealing recordings.

I knew what my friend was feeling. I'd been staying up until two and three in the morning every evening since the Amatis arrived, doing the same thing: pointing and making noises. Seated before them, even the most experienced listeners are confronted by an almost overwhelming sonic presentation—not of brute-force physicality (I've heard speakers with greater slam,

Measurements

Only occasionally do I find a high-sensitivity loudspeaker whose manufacturer's specifications agree with my own measurements. "92dB/W/m," says Sonus Faber of the stunning-looking Amati Homage; my estimated B-weighted sensitivity came in at 92.5dB(B)/2.83V/m. The speaker is a moderately demanding load, however, as can be seen from its plots of impedance magnitude and electrical phase angle against frequency (figs.1 and 2). With a maximum of 78 ohms, but a value below 6 ohms in the midrange and below 4 ohms in the bass and high treble, a good 4 ohm-rated amplifier will be called for.

The woofer ports can be blocked with supplied plugs. Fig.1 shows the imped-

ance, plotted with both ports plugged: the speaker behaves as a sealed box extolled to 37Hz. With both ports open (fig.2), the speaker is now a reflex design broadly tuned to 24Hz. By using one plug, two plugs, or none, the Amati's low-frequency performance can be optimized for the room in which it is used.

The Amati's enclosure is extremely dead to the knuckle-rap test, but I did find a couple of very low-level modes. Fig.3, for example, is a waterfall plot calculated from the output of a plastic-tape accelerometer fastened to the speaker's side 12" from the floor. The main resonance that can be seen is too low in level to have any audible effect.

With two woofers loaded by two

ports, and a midrange unit in its own subenclosure loaded by a third port, the Amati Homage's behavior in the midrange and bass is complex. Fig.4 shows the responses, measured in the nearfield, of all of these radiating elements. The top trace to the right in fig.4 is the midrange unit. This can be seen to slope up through the mids, but with a slight peak in its output at 70Hz. The trace just above the midrange unit at this frequency is the output of the twin woofers, this covering the 30–180Hz bandpass, with the reflex notch at a low 20Hz. The top trace to the right of the graph is the output of the woofer ports—very broad, and somewhat suppressed in level. Finally, the lower trace that peaks at the same 70Hz frequency where the midrange unit has a peak is the output of the midrange port. While all of these radia-

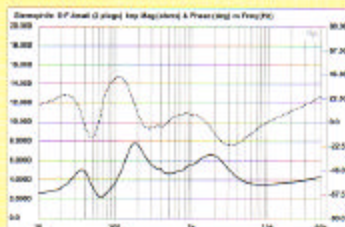


Fig.1 Sonus Faber Amati Homage, electrical impedance (solid) and phase (dashed) with both ports plugged. (2 ohms/vertical div.)

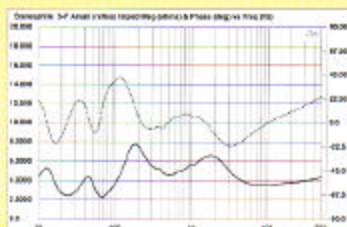


Fig.2 Sonus Faber Amati Homage, electrical impedance (solid) and phase (dashed) with both ports open. (2 ohms/vertical div.)

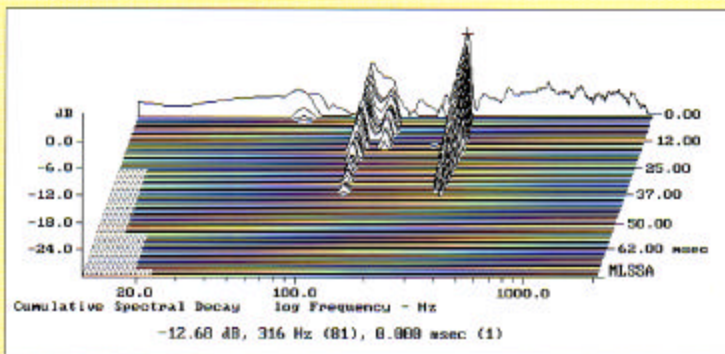


Fig.3 Sonus Faber Amati Homage, cumulative spectral-decay plot of accelerometer output fastened to side wall 12" from floor. (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz.)

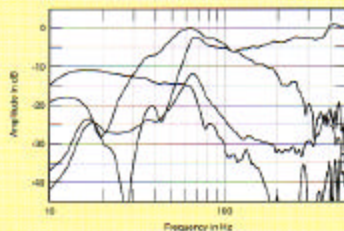


Fig.4 Sonus Faber Amati Homage, low-frequency acoustic crossover, measured in the nearfield.

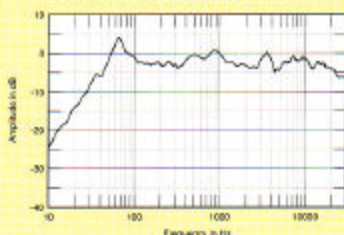


Fig.5 Sonus Faber Amati Homage, anechoic response on tweeter axis at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield woofer, midrange, and port responses plotted below 300Hz.

impact, and visceral power, but not pure, overwhelming emotional communication.) This speaker sings—in the best sense of the word, as applied to an audio component.

You can have your turgid, “analytical” studio-monitor-type speakers. (I needn’t name names.) The Amati imparted the meaning of the music—the soulful, intense truth of music, any music—with greater clarity than any speaker ever has in my listening experience. If that sounds like blathering hyperbole... so be it.

If you need a more earthbound sonic description, the Amati’s tonal balance was ideally rich: gossamer, airy, lush, and particularly pure on top; warm and highly resolved in the midrange; glowing, tight, and “cabinet-free” in the midbass; and delicate yet weighty and lithe in the lower bass. The Amati combined the bass weight of a large speaker with the stop/start low-frequency abilities of a small one.

Driver integration has been masterfully accomplished, not just in terms of frequency, but in dynamics and texture as well. There was an exceptional sense of “oneness” about the system’s components—drivers, crossover, cabinet. Whatever John Atkinson’s measurements end up showing, my listening demonstrated a well-behaved, superbly blended, coherent system with very, very low cabinet coloration.

The Amatis projected a lush bloom of sound that radiated evenly and commandingly, presenting a tall, wide, deep soundstage with clearly defined spatial boundaries in all three dimen-

sions. In a bigger room, the soundstage would probably develop further compared to what was possible in my room, but what I got was impressively well proportioned, as were the images within that soundstage. These big speakers worked remarkably well in my small room, never giving away their locations—even in the nearfield listening position in which I was forced to audition them.

I’ve read reviews that downplay soundstaging and imaging as “hi-fi artifacts” unrelated to the live musical experience. Really? I sat in row 24 of the orchestra section at Avery Fisher Hall the other night, hearing and watching the New York Philharmonic perform a Saint-Saëns’ Cello Concerto and Holst’s *The Planets*. Believe me, I could hear/see all of the sections of the orchestra: I could pick out precisely where the solo French

horn was coming from, and the locations of the other soloists as well. As my nonaudiophile friend who had invited me to the concert remarked later, “What you can’t get at home is the layering of the instruments.”

Of course you can. The Amatis do it, and so do many other fine speakers. What the Amatis accomplished so well in addition to this was (on good recordings) the convincing *balance* of layering, individual instrumental focus without “etch,” and the presentation of the whole orchestra in the spatial context of the hall. In short, the balance I heard at Avery Fisher.

Fault lines?

Finding fault with the Amati is not an easy task. Its deep-bass attack was perhaps slightly soft, but that might have been my room talking. An oh-so-

Associated Equipment

Analog source: Simon Yorke, Kuzma Stabi S turntables; Graham 2.0, Immedia RPM2, Rega RB600 tonearms; Crown Jewel SE, EMT TU, Lyra Parnassus D.C.t, Grado Statement cartridges.

Digital source: Naim CDX CD player w/XPS power supply.

Preamplification: Ayre K-1 pre-amplifier; Conrad-Johnson Premier 15, Audio Research PH3SE phono stages.

Power amplifiers: Conrad-Johnson Premier 12 monoblocks, Ayre V-1, KR Enterprise VT 8000.

Cables: Yamamura Millennium 6000, Cardas Neutral Reference, Cardas Golden Reference, Electra-Glide interconnects; Yamamura Millennium 6000, Cardas Neutral Reference speaker cables; Yamamura Quantum, Electra-Glide AC cords.

Accessories: Sounds of Silence Vibraplane active isolation platform, VPI SDS and Walker motor drives, Finite Elemente Pagode and Zoethecus equipment stands, A.R.T. Q dampers, D.J. Kasser Black Diamond Racing cones, Walker Valid Points, Harmonix feet, ASC Tube Traps, Shakti Stones, Checkpoint laser speaker-alignment tool.

—Michael Premer

Measurements

tors seem well behaved outside their passbands, their broad overlap will complicate any predictions about the Amati’s overall bass behavior.

To the left in fig.5 is shown the complex sum (amplitude, phase, and distance from the mike, assuming a nominal farfield mike position) of the individual responses shown in fig.4. The coincidence of the woofers and midrange unit in the upper bass appears to give a peak at 65Hz, with what is more like a scaled-box, 12dB/octave rolloff below that fre-

quency. An enigma!

Above the bass, the Amati’s overall balance is flat, though with three broad depressions and three areas of excess energy apparent. The lack of energy in the lower midrange and low treble might be thought to make the speaker sound laid-back, yet I note that MF did not find the speaker lacking in dynamics—quite the opposite, in fact. The slight plateau in the upper midrange might be thought to add to the perceived recorded detail, while

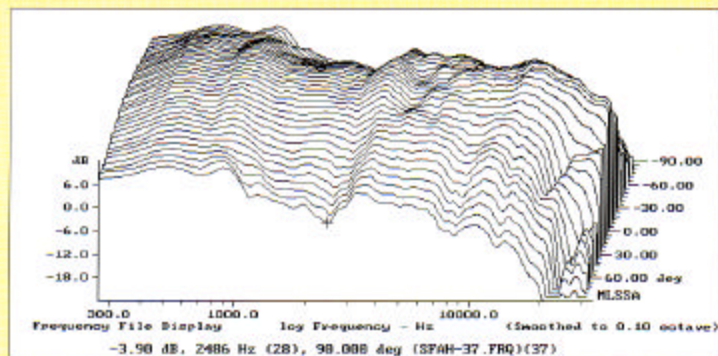


Fig.6 Sonus Faber Amati Homage, lateral response family at 50°, from back to front: responses 90°-5° off-axis, response on tweeter axis, responses 5°-90° off-axis.

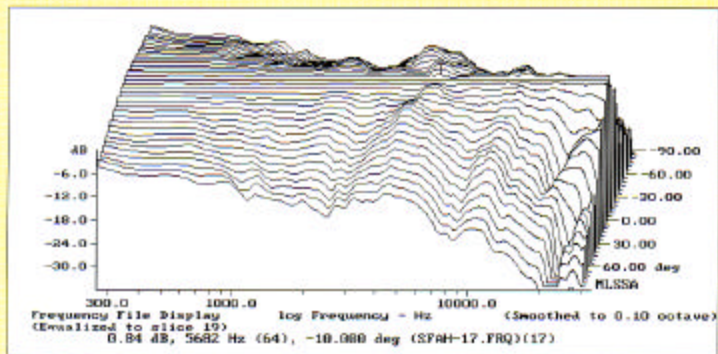


Fig.7 Sonus Faber Amati Homage, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90°-5° off-axis, reference response, differences in response 5°-90° off-axis.

slight and barely perceptible "hooded" quality in the lower midbass was *definitely* my room speaking. I thought I noted a slight loss of sparkle at the very top, but when I played ear-bleeder recordings, my ears bled with the Amatis—a good sign.

I'm really grasping to find fault with this speaker. It captured my heart with its harmonic rightness and low coloration, its unrestrained, nimble dynamic performance, its ultra-low distortion, its spatial grip, and its uncanny ability to communicate the emotional content and meaning of music with a vitality and clarity that is, in my experience, unmatched. If the Amati had faults or weaknesses, I couldn't find them. I haven't heard every dynamic loudspeaker in the world, or even most of them, but I can say without hesitation that the Amati is either the best there is


The Amati's tonal balance was ideally rich . . . it combined the bass weight of a large speaker with the stop/start low-frequency abilities of a small one.

today, or one of a handful of the best. Can I shower now?

Conclusion

Franco Serblin's goal was to create a fast, detailed, and dynamic full-range speaker that did

not suffer from compression anywhere in the audible bandwidth. With the Amati Homage, he's achieved that and a great deal more. No matter how much science we throw at loudspeaker design, in the end it will remain, like the building of musical instruments, an art. There is no sure recipe for successful loudspeaker design, but Serblin is one of our great craftsmen. In a career of great accomplishments, the Amati Homage is by far his finest.

Love may be blind, but you needn't proceed with caution. Go listen to this speaker. It'll sweep you off your feet with its physical beauty and graceful sonic performance. I'm sorry it costs so much, but this is one expensive speaker whose build quality and performance are worth every penny. In fact, at \$20,000/pair, it's probably underpriced. 

the narrower peak in the presence region might add a bit of sparkle. Yet, again, MF noted no problems at all in these areas. Again, an enigma.

The Amati's horizontal dispersion (figs.6 and 7) reveals very well-behaved off-axis responses, though with a slight lack of energy in the same presence-region areas where there is a similar on-axis lack. This will be due to the relatively large midrange unit's starting to beam at the top of its passband, and is followed by the tweeter's usual wide

dispersion at the bottom of its passband. Vertically (fig.8), a big suckout at the upper crossover frequency will be evident for standing listeners, but there should be only minor changes in balance for listeners with ear heights of between 36" and 44". (The tweeter axis is a high 40" from the floor.)

The Sonus Faber's impulse response (fig.9) is conventional, though some early reflections can be seen. The step response (fig.10) reveals that the tweeter and woofers are connected in positive

acoustic polarity, the midrange in inverted polarity. The speaker's cumulative spectral-decay plot (fig.11) is basically clean, but with some very slight modes evident at the top of the midrange unit's passband.

While some of the Amati Homage's measurements are excellent, there is nothing to indicate why Michael Fremer was so enamored of the speaker's sound. Indeed, some of the measurements, such as of the speaker's bass performance, raise more questions than they answer. But if a demonstration is required of the fact that once the basic science has been addressed, speaker design still involves art, the Sonus Faber Amati Homage provides it.

—John Atkinson

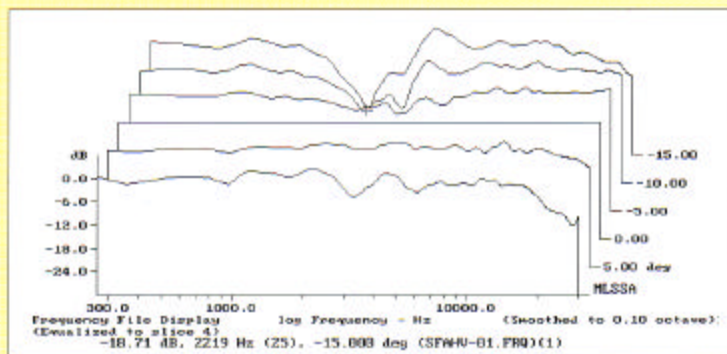


Fig.8 Sonus Faber Amati Homage, vertical response family at 50°, from back to front: differences in response 15°–5° above HF axis, reference response, differences in response 5°–10° below HF axis.

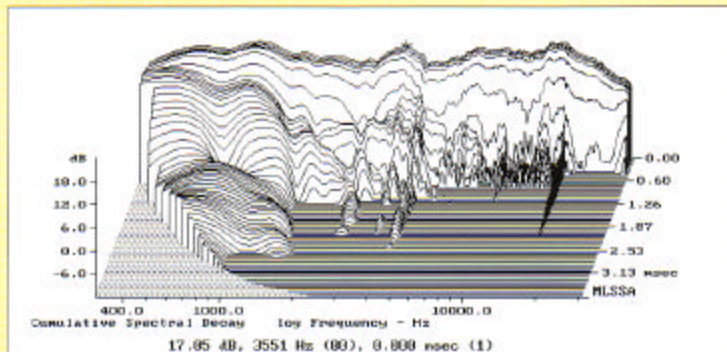


Fig.11 Sonus Faber Amati Homage, cumulative spectral-decay plot at 50° (0.15ms risetime).

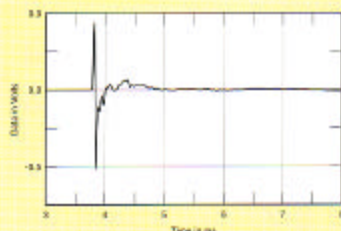


Fig.9 Sonus Faber Amati Homage, impulse response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

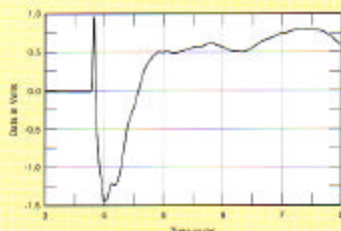


Fig.10 Sonus Faber Amati Homage, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).