

# Sonus Faber Cremona Elipsa

LOUDSPEAKER

John Atkinson

**DESCRIPTION** Three-way, floor-standing, reflex-loaded loudspeaker. Drive-units: 1" (25mm) ring-radiator tweeter; 6" (150mm) wood-fiber-cone midrange unit; 10.25" (260mm) aluminum/magnesium alloy-cone woofer. Crossover frequencies: 250Hz, 2.3kHz. Crossover slopes: second-order. Frequency range: 35Hz-30kHz. Nominal impedance: 4 ohms. Sensitivity: 91dB/2.83V/m. Recommended amplification: 50-250W (without clipping).

**DIMENSIONS** 49" (1245mm) H by 21.7" (550mm) W by 17.9" (455mm) D. Weight: 107 lbs (48.5kg) each, net; 250 lbs/pair (113.5kg), shipping. **FINISHES** Natural Maple or Graphite, medium-gloss, ecologically sensitive lacquer.

**SERIAL NUMBERS OF UNITS**

**REVIEWED** 003.

**PRICE** \$20,800/pair. Approximate number of dealers: 90.

**MANUFACTURER** Sonus Faber, 36057 Arcugnano (Vi), Italy. Tel: (39) 444-288788. Fax: (39) 444-288722. Web: [www.sonusfaber.com](http://www.sonusfaber.com). US distributor: Sumiko Audio, 2431 Fifth Street, Berkeley, CA 94710. Tel: (510) 843-4500. Fax: (510) 843-7120. Web: [www.sumikoaudio.net](http://www.sumikoaudio.net).



Sonus Faber Cremona Elipsa loudspeakers

It is the audio writer's nightmare that the combination of the large number of exhibitors at a Consumer Electronics Show and the very limited amount of time the Show's doors are open will lead him to miss the event's biggest story. I came close to living that nightmare last January, at the 2007 CES, when I realized that I had missed an entire floor of Las Vegas's Venetian Hotel. And it was, of course, the floor where, among other high-profile high-end companies, Sumiko was debuting the Cremona Elipsa from Italian speaker manufacturer Sonus Faber.

I rushed up to the Venetian's penthouse floor, where I was just in time to get a demo of the speaker before the Show closed for the evening. Of course, my camera's memory card turned out to be full, so I couldn't include a photo with our live coverage (see <http://blog.stereophile.com/ces2007/011407elipsa>), but, as I reported then, the sound of the new speaker was extremely impressive. I asked for a pair of Elipsas for review once the speaker was in production, and they arrived at the end of May. I settled down for a summer of serious listening.

## Cremona Elipsa

Sonus Faber's Cremona line of speakers comes in at lower prices than their top *Homage* and *Anniversario* models; the latter's stunning, hand-lacquered, seven-



layer, deep-gloss finishes are replaced in the Cremonas with a semi-matte finish. Even so, these are still handsome speakers; when I reviewed the original Cremona in March 2004, I was very much taken by the combination of well-balanced sound and excellent fit'n'finish at a very affordable price of \$7495/pair (back in those far-off days of a strong US dollar and a weak euro). I very much agreed with Sam Tellig that the Cremona's sound was "sweet, smooth, completely free from grain" (January 2003).

At \$20,800/pair, the Cremona Elipsa is significantly more expensive than the original Cremona. While similarly finished, it is a much larger loudspeaker, its shape echoing the top-of-the-line Stradivari Homage, which Michael Fremer reviewed in the January 2005 issue. Rather than the Cremona's lute-shaped, narrow but deep

cabinet, the Elipsa's enclosure is wide and shallow, its plan section (from above) being, naturally enough, an ellipse. The cabinet is constructed from layers of wood joined with a polymer glue that provides internal damping and is reinforced with internal ribs. The center of the front baffle is covered from base to top with black leather, and flanked with panels of naturally polished maple. The side panels are finished in semigloss black with concave cutaways that lend an elegant edge to the speaker's appearance. As with all Sonus Faber speakers, the grille consists of silicone-rubber cords covered in black silk and vertically strung from top to bottom of the baffle at low tension, to ensure that any vibrations are well below the audioband.

The Elipsa is a three-way design. A 1" ring-radiator tweeter sits 36" from the floor, mounted very close above a

6" pulp-cone midrange driver, the diaphragm of which has a concave dustcap to continue the smooth profile. The midrange driver handles a wide range, 250Hz-2.3kHz, and is acoustically loaded within its own elliptically shaped subenclosure, this vented to the speaker's rear with a 2.25"-diameter port. Whereas the Cremona has twin 6" woofers, the Elipsa uses a single 10" woofer, the cone of which is formed from an alloy of magnesium and aluminum. This driver is acoustically loaded by two 3"-diameter flared ports on the cabinet rear and, rather than a dustcap, has a stationary metal phase plug on the front of its central pole piece.

The crossover is specified as using second-order slopes. Electrical connection is via a single pair of high-quality binding posts at the base of the cabinet rear, beneath the lowest of the three

## MEASUREMENTS

The Cremona Elipsa has a usefully higher voltage sensitivity than average, at an estimated 90dB(B)/2.83V/m. Though this is slightly lower than the specified 91dB, the shortfall is not important. While it will therefore require less of a voltage swing to play loud, the speaker is still a demanding load for the partnering amplifier, with an impedance magnitude that drops to 2.5 ohms throughout the upper bass (fig.1). There is also a punishing combination of 4 ohms magnitude and -50° electrical phase angle at 70Hz that will suck gobs of current from the amplifier.

There is a suspicious-looking wrinkle in the impedance traces around 125Hz. Investigating the vibrational behavior of the cabinet panels with an accelerometer, I did find a resonant mode in that region on the front and rear panels, along with others at 154 and 387Hz (fig.2). These may well be associated with the slight warmth I noted in my auditioning.

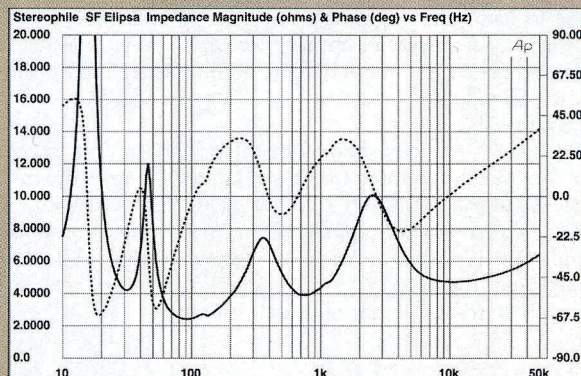


Fig.1 Sonus Faber Cremona Elipsa, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

The shape of the impedance-magnitude trace in the bass suggests that the lower two of the three ports on the speaker's rear, which load the woofer, are tuned to a frequency of 32Hz. The top port loads the midrange unit, and, as with other Sonus Faber speakers, the Elipsa's low-frequency behavior is complex. Fig.3 shows the individual behaviors of the midrange unit (black trace), the woofer (blue), the top-most port (green), and the sum of the bottom two ports (red), all measured in the nearfield—*i.e.*, with a small-diameter microphone very close to the diaphragms—and scaled in the ratio of the square root of the radiating areas.

The crossover from the woofer to the midrange unit is set at around 250Hz, with initially shallow filter slopes. The woofer's output features the usual minimum-motion notch at the port tuning frequency, while the sum of the lower-port outputs broadly peaks in the same region: classic reflex behavior. However, there is a discontinuity at 125Hz in the woofer output and a peak in the ports' output at the same frequency, this also where the wrinkle is apparent in the

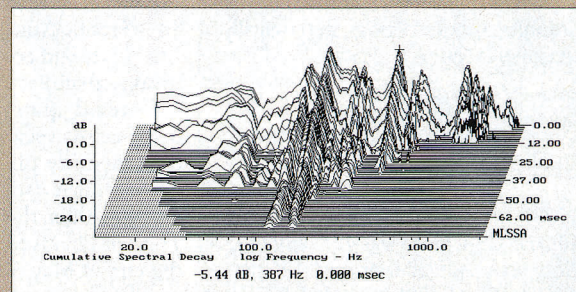


Fig.2 Sonus Faber Cremona Elipsa, cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the center of the front baffle to the side of the midrange unit (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).



## SONUS FABER CREMONA ELIPSA

ports and set, like them, on a leather-covered panel. The black metal bottom plate can be fitted with spikes of differing lengths front and back to allow the speaker to be raked back.

### Sonus Sonics

The Elipsas were set up in my room by Sumiko principal John Hunter. As he had when setting up the Cremonas and the Amati anniversarios (which I reviewed in May 2006), Hunter used the duet between bassist Rob Wasserman and singer Jennifer Warnes on Leonard Cohen's "Ballad of the Runaway Horse," from Wasserman's *Duets* (CD, MCA MCAD 42131), to get positions that resulted in the optimal balance through the upper bass and lower midrange. He then experimented with the speakers' rakeback to bring the image into focus. Compared with the Amatis, it took him a lot less time to get a sound that he felt

was representative of what the Elipsas were capable of in my approximately 24' by 14' room.

loudness window of a pair of small speakers. Without my really being aware of the change in my listening

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After several months of living with minimonitors, several of them very worthy in their way, it was instructive to go back to a pair of high-quality, full-range loudspeakers. I had forgotten how much music's dynamic contrasts need to be diminished to fit within the

habits, with the smaller speakers the frequency of my playing of the larger-scale orchestral music that *Stereophile* founder J. Gordon Holt continues to insist high-end audio gear was created to play (see the November issue's "As We See It") had diminished in favor of

impedance graph. Some sort of acoustic resonance is present at this frequency, which might also have contributed to the feeling of upper-bass warmth I commented on in my "Sonus Sonics" section. The notch in the midrange unit's low-frequency response indicates that its port is tuned to a low 43Hz; though that port does have a very slight peak at that frequency, the main peak in its output occurs an octave-and-a-half higher in frequency, where the midrange unit has its rolloff "corner" and the woofer ports have a deep notch. The reflex tuning of the midrange unit and its port is presumably affected by the series impedance of the high-pass crossover filter.

Predicting how these four individual low-frequency outputs will add in the farfield is not trivial. The blue trace to the left of fig.4 shows the complex sum of the nearfield responses, taking into account both acoustic phase and the different distances of each radiator to a nominal lis-

tening position. The broad, smooth hump in output in the mid- and upper bass will be due in part to the nearfield measurement technique, but it does suggest that the Elipsa has a little too much bass energy to sound truly neutral in all but very large rooms. The resonant problem in the upper bass results only in a mild perturbation of the calculated response. The speaker's output rolls off sharply below 30Hz.

Higher in frequency, the Elipsa's farfield response is impressively flat, though the details of that flatness do depend quite critically on exact listening axis, which is why experimenting with the baffle's rake angle produces relatively large changes in perceived treble balance. The red trace in fig.4 shows the response on the tweeter axis, 36" from the floor, the blue that on the midrange axis, 32" from the floor. It should be apparent that for a seated listener

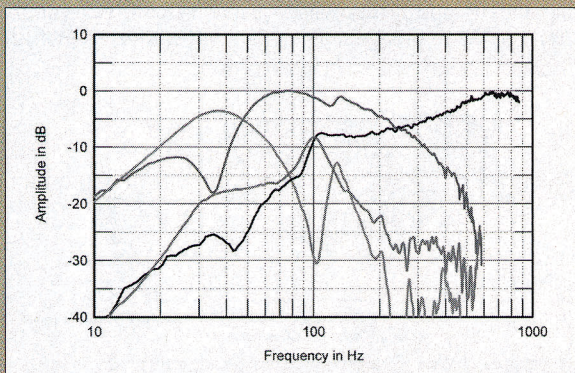


Fig.3 Sonus Faber Cremona Elipsa, nearfield responses of midrange unit (black), upper port (green), woofer (blue), and lower ports (red), all plotted in the ratios of their radiating diameters.

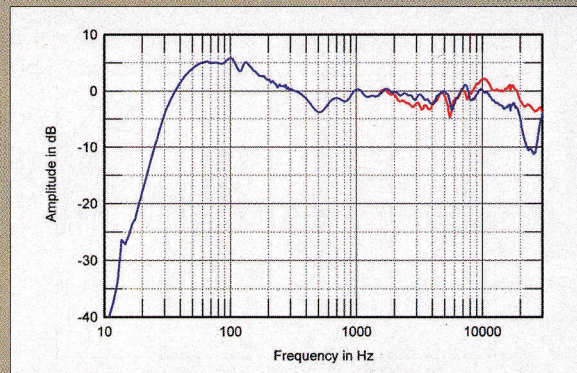


Fig.4 Sonus Faber Cremona Elipsa, anechoic response without grille on tweeter axis (red) and midrange axis (blue) at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield responses plotted below 300Hz.



recordings of chamber and vocal music. But with the Cremona Elipsas, there was an ease to the sound even at high volumes that had me reaching not just for Mozart but for Mahler as well.

On the recording I produced of Antony Michaelson performing the Mozart Clarinet Concerto (SACD, Musical Fidelity MFSACD017), the strings' high frequencies sounded smooth without being rolled off, the solo clarinet was completely believable in its natural tonal quality, and the cellos and double-basses sounded rich and warm. Perhaps a bit too warm? A touch gruff-sounding? The Elipsa's mid-upper bass could be warm or even a bit lumpy, depending on the music played. Listening to the half-step-spaced tonebursts on *Editor's Choice* (CD, Stereophile STPH016-2), the Elipsa didn't speak quite as clearly between 80 and 100Hz as it did above

and below that range. The low-frequency, 1/2-octave warble tones on the same CD sounded very clean, however, and were reproduced without audible distortion or port wind noises, even at high sound-pressure levels. Bass extension was excellent, with usable output down to 25Hz, though the 20Hz warble tone was inaudible at normal listening levels.

It's fair to say that the lows didn't have the tight slam of, say, the Wilson Audio Sophia or the ultimate weight of the Dynaudio C4's lows, though the Sonus Faber also never sounded anything less than tuneful in this frequency region—just a bit of upper-bass character, was all. But there was no coloration—pink noise on the optimal axis sounded continuous, without any frequency bands jumping forward at me, and instrumental tonal qualities sounded superbly natural. Through-

out my auditioning, I continued to be impressed by the Elipsa's smooth, grain-free treble and its articulate, smooth, natural-sounding midrange.

Hmm. "Smooth treble." "Smooth midrange." The word smooth does, indeed, appear throughout my listening notes, and classical music benefited from this characteristic. Returning to Mahler, Amazon.com recently recommended that I buy Claudio Abbado's live 2005 recording of his Symphony 6 with the Berlin Philharmonic (SACD, Deutsche Grammophon 00289 477 5684). Abbado's 1970s Mahler cycle with the Chicago Symphony had been a favorite of mine back in the days of LP, so it was with anticipation that I unpacked the cardboard box with its familiar swoosh logo. Yes, this recording sounded smooth through the Elipsas, but not in the sense of detail being obscured or the high frequencies being

## measurements, continued

whose ears are 36" from the floor (the average found by UltimateAVmag.com's Tom Norton back in the early 1990s, when he was *Stereophile's* Technical Editor), tilting the speaker back will reduce the top-octave level but increase the presence region a little.

All the measurements so far were taken with the grille removed. However, as with other Sonus Faber speakers I have measured, the vertical-string grille has only a mild effect on the farfield frequency response, with some mild comb-filtering apparent (fig.5).

The Elipsa's lateral radiation pattern is superbly wide and even in the mid-treble and below, but features a sharp discontinuity at 7.5kHz (fig.6). Above that frequency, the wide baffle drastically restricts the tweeter's off-axis output. As a result, the speaker might sound a little airless in large rooms. In the vertical plane (fig.7), a large suckout develops at 2.3kHz, the upper crossover frequency, for listener

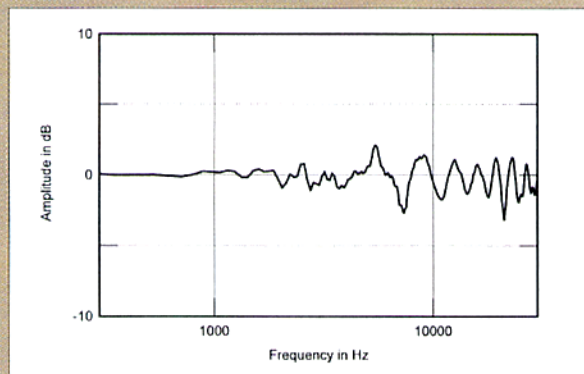


Fig.5 Sonus Faber Cremona Elipsa, difference made by grille in tweeter-axis response (5dB/vertical div.).

ear heights above the tweeter axis. As discussed above, the asymmetric spikes should be used to place the listener's ears somewhere between the tweeter and midrange axes, though exactly where will depend on the room acoustic and the tonal character of the listener's system.

Fig.8 shows how all this quasi-anechoic measured behavior summed in my listening room. I took four 1/2-octave-smoothed responses for each speaker individually at 10 microphone positions in a grid centered on the position of my ears in my listening chair, using an Earthworks omnidirectional microphone and SMUG Software's Fuzzmeasure program running on my Apple laptop. This technique integrates the direct output of the speakers with the reverberant field in the room, and to a large extent smooths out the effect of low-frequency room resonances. The peaks at 30 and 150Hz and the dip at 45Hz are residual room effects; the suckout in the middle of the midrange is due to the Allison Effect, in which the direct sound of the midrange unit is interfered with by the reflec-

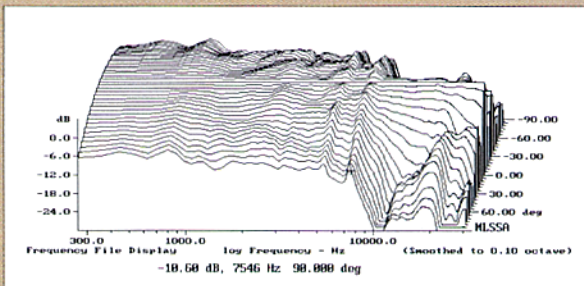


Fig.6 Sonus Faber Cremona Elipsa, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90-5° off axis, reference response, differences in response 5-90° off axis.



suppressed; instead, the balance between the midrange and the high frequencies seemed in natural proportion. Both the timpani strokes that lead into the chugging rhythm of the symphony's *Scherzo* and the thunderclap hammer blows in the final movement were beautifully defined, for example, as were the individual characters of the orchestra's string, woodwind, and brass choirs. I kept coming back to how grain-free, how *clean* the Elipsa's treble was above 4kHz, yet without the music sounding rolled off. The triangle Mahler uses for emphasis, for example, neither sounded exaggerated nor dulled.

Piano recordings don't have as much energy present in the top two octaves, yet they also sounded superbly natural through the Elipsas. September's "Recording of the Month," Zenph Studios' "re-performance" of Glenn Gould's 1955 recording of Bach's *Goldberg Variations* (SACD, Sony Classical 88697-03350-2), convincingly put me in the hall when played on the Sonus Fabers, as did my own recording of Robert Silverman performing Beethoven's *Diabelli Variations* (CD, Stereophile STPH017-2). The differences between pianos—a Yamaha Disclavier Pro for the *Goldbergs*, a New York Steinway in the *Diabellis*—were clearly delineated, as were the acoustic characters of the recording venues: respectively, the small, rather dry acoustic of the Glenn Gould Studios in Toronto; and the larger but rather characterless Austad Auditorium at Weber State University in Ogden, Utah. And as with the Mahler, the climaxes seemed effortlessly reproduced. When Bob Silverman pounds the piano's bass notes in the *Diabellis*' final fugue, my room shuddered.

Over time, however, I became convinced that there was a narrow band of brightness in the speaker's mid-treble—

not so much that any coloration was audible, but the speaker was definitely a bit fussy with recordings with a lot of energy in that region. For example, I had the Elipsas set up while I was doing the final mixes for the new CD from the Minnesota male choir Cantus—titled, with commendable imagination, *Cantus* (Cantus CTS-1207). The DPA microphones I like to use to record Cantus have a touch of excess sparkle in the presence region, so when mastering their CDs I generally apply a touch of equalization to get the most neutral treble balance. Not much—perhaps a shallow trough 0.75dB deep between 2 and 5kHz—but auditioning the master files with the Sonus Fabers, I felt that a bit more reduction in presence-region energy was needed.

The Elipsa definitely worked better in the treble with the darker-hued Mark Levinson No.33H monoblocks than with the lighter-balanced Parasound

tion of its output from the room boundaries. But note how smooth and flat the Elipsa's upper-frequency output is in-room. Yes, there is a very slight energy excess apparent in the tweeter's bottom octave that correlates with the slight brightness I noted, but the speaker's upper midrange and treble measure as neutral as I would have expected from my auditioning.

In the time domain, the Cremona Elipsa's step response, measured on the tweeter axis (fig.9), indicates that the tweeter and woofer are connected in positive acoustic polarity and the midrange unit in negative, which is what you need with second-order crossover filters to get good frequency-domain integration between their outputs on the intended listening axis. Note how each unit's step smoothly hands over to that of the next lower in frequency—exactly what is needed. The Elipsa's cumulative spectral-decay plot (fig.10) is very clean in the treble, but a little less so in the midrange, where some low-level modes are apparent.

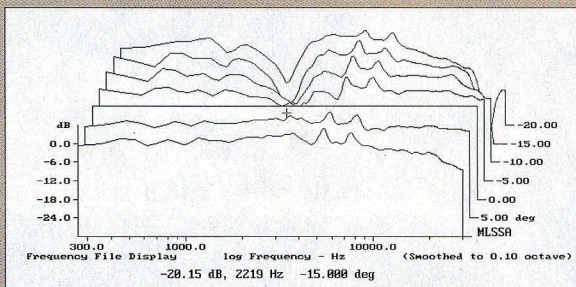


Fig.7 Sonus Faber Cremona Elipsa, vertical response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 20-5° above axis, reference response, differences in response 5-10° below axis.

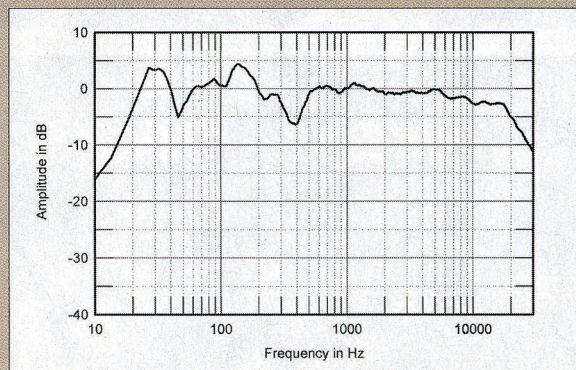


Fig.8 Sonus Faber Cremona Elipsa, spatially averaged, 1/3-octave response in JA's listening room.

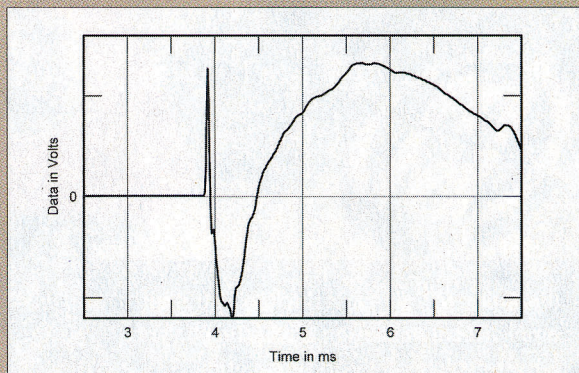


Fig.9 Sonus Faber Cremona Elipsa, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).



Halo JC 1 monos. The Boulder 860 stereo amp proved silky smooth in the highs with the Sonus Fabers and got the best from the speaker of the three amplifiers I used while preparing the review. However, it couldn't match the low-frequency impact of the Parasound and Mark Levinson monoblocks, both of which gave a better marriage with the Elipsa's low frequencies. The slam of the bass and kick drum in guitarist Eric Johnson's "Desert Rose," on his *Live from Austin TX* (CD, New West NW6084), had to be heard to be believed through the Elipsas, though this recording's overcooked highs were definitely pushed forward in the soundstage.

The question has to be asked: How does the \$20,800/pair Elipsa compare with the \$30,000/pair Amati anniversario? The latter are long gone from my listening room, but I consulted my auditioning notes to remind me of what I had experienced. I *loved* that speaker. "The Amati anniversarios opened onto the recording venue a clean, uncolored, undistorted window," I wrote in 2006. The window opened by the Elipsas was less clear, a little more blurred, in that the imaging was not quite as delicately delineated, the speakers disappearing not quite as effortlessly.

I also wrote that the Amati loved female voices. And so did the Elipsa, though the less-expensive speaker's mid-treble was balanced a touch more forward than I remembered the Amati's as being. With the Boulder amplifier still in the system, I dug out a DVD-Audio disc I hadn't played in a long time, Joni Mitchell's *Both Sides Now* (Reprise 9362-47620-9). Her husky, cigarette-stained alto and the Elipsa's midrange clarity were made for one another. Every small nuance of the singer's phrasing, the grace notes and

## ASSOCIATED EQUIPMENT

**DIGITAL SOURCES** Ayre C-5xe, Pioneer DV-578A universal players; Mark Levinson No.30.6, Benchmark DAC 1usb, Bel Canto e.one DAC 3, Musical Fidelity X-DAC<sup>v8</sup> D/A processors; Logitech (Slim Devices) Transporter WiFi music player with Apple Mac mini running OSX for media storage.

**PREAMPLIFIERS** Parasound Halo JC 2, Ayre K-5xe, Mark Levinson No.380S.

**POWER AMPLIFIERS** Parasound Halo JC 1 & Mark Levinson No.33H monoblocks; Boulder 860.

**LOUDSPEAKERS** Monitor Audio Gold Signature GS10.

**CABLES** Digital: Kimber Illuminations Orchid AES/EBU, AudioQuest OptiLink-5 S/PDIF Interconnect (balanced); AudioQuest Cheetah, Ayre Signature Series. Speaker: AudioQuest Kilimanjaro. AC: PS Audio Lab, Shunyata Research Anaconda Helix Alpha, manufacturers' own.

**ACCESSORIES** Target TT-5 equipment racks; Ayre Myrtle Blocks; ASC Tube Traps, RPG Abffusor panels; PS Audio Power Plant 300 at 90Hz (sources only), Audio Power Industries 116 Mk.II & PE-1, APC S-15 AC line conditioners (not power amps). AC power comes from two dedicated 20A circuits, each just 6' from the breaker box, a power amplifier plugged into each. —John Atkinson

ornaments, the difference between tremolo and vibrato, was clearly evident, without being confused by the loudspeaker's own character. The backing orchestra was arrayed behind Joni in a deep, supportive semicircle (in two channels, of course), and I quite forgot I was supposed to be listening critically.

In the final analysis, that's what matters: the musical experience. As I write these words, I'm listening to the 24-bit/96kHz FLAC download of Linn's recording of the Mozart *Requiem* with Sir Charles Mackerras conducting the Scottish Symphony Orchestra, decoded by the Slim Devices Transporter WiFi DAC and reproduced by the Sonus Faber Cremona Elipsas driven by the Parasound Halo combo of JC 2 preamp and JC 1 power amps that Sam Tellig reviews in this issue's "Sam's Space." A delicious mystery to the sound of the solo bassoon in the *Introitus*, a rich, broad sweep of sound in the *Kyrie*, and, in the *Lacrimosa*, a delicate depiction of the violins' obbligato underlying the hauntingly delineated voices—all of these effortlessly trans-

ported me into the music. It doesn't get much better than that.

Well, okay, it *can*: The 24/96 LPCM version didn't quite reach the sonic heights of the DSD-encoded SACD (Linn CKD211) played back on the Ayre C-5xe universal player in terms of sheer believability and that sense of hushed expectancy before musical climaxes. And the Elipsas had no difficulty in allowing me to hear that improvement.

## Summing Up

It is not quite without character—that slightly warm upper bass and slightly forward mid-treble will need some adjustment in system setup and/or choice of ancillaries—but Sonus Faber's Cremona Elipsa is, overall, a superb performer. It also looks stunningly beautiful. If you can stretch your budget by 50% for the Amati anniversario and be prepared to work harder to integrate it in your room, that might be, overall, the better choice. If not, the Cremona Elipsa is a loudspeaker for which no apology need be made. ■

## measurements, continued

Overall, I was impressed by the Sonus Faber Cremona Elipsa's measured performance. It demonstrates some excellent loudspeaker engineering, although, as with some other expensive loudspeakers, I do wonder if a simpler low-frequency arrangement might produce more consistent results. But this is a minor quibble, considering how fine the speaker sounds.

—John Atkinson

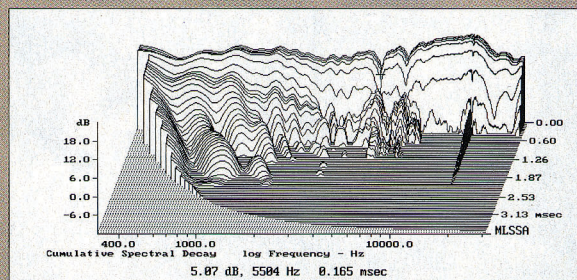


Fig.10 Sonus Faber Cremona Elipsa, cumulative spectral-decay plot at 50' (0.15ms risetime).