

You can bet Infinity plans on selling a respectable number of \$8000/pair Prelude MTS speakers (reviewed in the May 2000 *Stereophile*) over this ambitious, full-range design's anticipated lifespan. But will the company make enough money to recoup the megabucks spent on researching, designing, and developing the all-new CMMD (Ceramic Metal Matrix Diaphragm) drivers, BASH (Bridge Amplifier Switching Hybrid) powered subwoofer, and RABOS (Room Adaptive Bass Optimization System) bass-equalization system? **NOWAY** (Never Over-Estimate What Acronyms Yield).

Part of Infinity's grand development strategy clearly included trickling down the innovations in the Prelude MTS into simpler, more affordable products designed to sell in far greater numbers. But for that strategy to succeed, the flagship product has to float — pieces of sinking vessel usually don't attract customers.

Fortunately for Infinity, the Prelude MTS has garnered nearly universal praise from reviewers and consumers, encouraging the development of new CMMD/BASH/RABOS-equipped speakers like the Intermezzo 2.6 — a small, stylish, two-way bookshelf model selling for \$2000/pair. But is the Intermezzo 2.6 a worthwhile chip off the old block or just a marketing divot?

No Chipboard was Injured in the Making of This Product

There's not a natural fiber in the Intermezzo 2.6 — no wood, chipboard, or paper that I could find. Instead, the powered 6 1/2" woofer (powered by a 250W BASH amplifier) and 1" tweeter with integral waveguide are housed in a curvaceous, asymmetrical enclosure of cast aluminum, finished in a textured powder coat. The stylish shape avoids parallel surfaces, which should help reduce or eliminate internal resonances. The CMMD drivers feature ultra-lightweight, ultra-stiff aluminum diaphragms anodized with a ceramic material on both sides. Their measured results include fast transient response, low overall distortion, and fundamental resonances well out of the operating bandwidth.

An optional stand includes a threaded mounting plate that allows you to securely attach speaker to plate and plate to stand. Most stands place the pillar at the back of the floor plate. The Intermezzo's snazzy design puts the pillar on the outside, with the speaker hanging over toward the center of the soundstage. The mirror-imaged cabinets look striking: the curvier sides of the front baffles face each other, and the straighter edges — accented with snap-on decorative trim of black or optional plastic "wood" — face the side

walls. Grille covers are available in a variety of colors.

When the 2.6es are viewed from the front, it's not apparent which is the left speaker, which the right. Nor are the instructions clear about this. In fact, the cover photo has the proper orientation reversed, but because of the unusual design, it looks correct, which is probably why the photographer placed them that way. A top view in a placement diagram offers a correct silhouetted outline, but given the reverse cue on the front, I wasn't sure. Casting numbers on the enclosures were definitive: one ended with an *L*, one with an *R*. The instructions should be rewritten.

Setup

I set up the Intermezzo 2.6es where all speakers have worked well in my room, including the Prelude MTSes: about 3' from the back wall, 30" from the side walls, 9' apart, and 8' from my listening position. Like the Preludes, the Intermezzos sounded best firing straight ahead — aiming the tweeters at the listening position was too "in your face." Each powered speaker must be plugged into a wall socket and switched on. When fed a signal, the amp wakes up and the backlit bass-level potentiometer on the front baffle goes from red to green.

The RABOS is a single variable-frequency parametric equalizer that allows the user to determine and attenuate the characteristic "room bump" that most spaces exhibit somewhere between 20 and 80Hz. These bumps usually create an overabundance of midbass; this can sometimes be reduced with proper speaker placement, but it often conflicts with effective imaging and soundstaging. RABOS makes it possible for the end user to place the speakers where they image and soundstage best, without worrying about low-frequency bloat due to a room resonance.

Infinity supplies a test CD, a battery-sucking SPL meter (have 9V spares on hand!), and an ingenious gauge of clear plastic that can be adjusted to mimic the

Description: Two-way, stand-mounted, moving-coil loudspeaker with powered woofer. Drive-units: 1" Ceramic Metal Matrix Diaphragm (CMMD) tweeter, 6 1/2" CMMD powered woofer. Crossover frequency and order: 2.8kHz, 24dB/octave. Woofer amplifier rated power: 250W, <0.1% THD at 100Hz. Frequency response: 50Hz–20kHz, ±1.5dB; 40Hz–22kHz, ±3dB. Impedance: 8 ohms. Sensitivity: 90dB/2.83V/m. Recommended amplifier power: 25–150W. Second- and third-order harmonic distortion, 20Hz–20kHz at 95dB SPL: <1%.

Dimensions: 15" H by 9 3/4" W by 11 1/2" D. Weight: 27 lbs each.

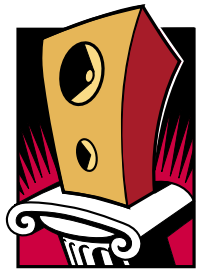
Finishes: Powder-coated aluminum with a plastic trim strip.

Serial numbers of units reviewed: NM0730-001845/6.

Price: \$2000/pair. Approximate number of dealers: 80

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Infinity Intermezzo 2.6 loudspeaker



width and height of the “bump,” determined by connecting dots on a graph you create using the CD and SPL meter. Once you’ve determined the width, amplitude, and center frequency of the bump (or bumps, which the excellent instructions offer options for

dealing with), you refer it to a chart that tells you how many clicks to turn the three adjustment pots on the front of each speaker. You then rerun the test; hopefully, the resultant curve will indicate that the peak has been significantly reduced. You then set the woofer level

to the recommended position or to wherever your ears prefer.

The results of the RABOS test were similar but not identical to the curves obtained with the side-firing Preludes sub, which probably loaded the room differently (and, of course, extended

down to 20Hz): a 6dB peak at 85Hz and a 4dB peak at 56Hz. After the RABOS optimization, the larger peak was reduced by 2–3dB, resulting in a frequency response of 30–100Hz, +4/–1dB. When I dialed in the Audio Physic Rhea subwoofer, the response extended to 20Hz and was essentially flat from 20 to 43Hz, with no effect above that. The Rhea was left off for all critical listening, however.

Intermezzo Sound

Most small audiophile loudspeakers give up the bottom octaves in a tradeoff for better midbass and less coloration in the midband. Like the \$3500/pair Red Rose Music R3, which I reviewed last

month, Infinity’s \$2000/pair Intermezzo 2.6 offered outstanding bass response without mucking up or slowing down the midband. The R3 accomplished this passively and with a port, the Intermezzo actively, with 250W packed into each sealed-box enclosure. The Intermezzo’s response was somewhat more robust below 40Hz, but in my room at least, subjectively, the two opposite methodologies produced similar and equally satisfying results. The Infinity’s powered woofer permits more personal tailoring, and of course gives the user the option to drive the tweeter with a tiny tube amp. It also seemed to be somewhat “faster” and more muscular, and could be pushed harder... but I

wouldn’t rate it as necessarily “better.”

The Intermezzo’s bottom end was surprisingly deep and robust, though of course it could not match the Prelude MTS’s monstrous, stomach-compressing authority, or produce the midbass riches of the \$20,000/pair Sonus Faber Amati Homages. No surprises there. But once my ears had acclimated to the Intermezzos, as they had to the R3s, I realized that the Infinity’s overall performance was so satisfying that I could live with them, at least for pop and small-combo jazz. But for full orchestral weight and the suggestion of the hall space, you do need those bottom few octaves.

Test pressings of Groove Note’s

Measurements

With its powered woofer, the Infinity Intermezzo 2.6’s impedance plot (fig.1) shows just the tweeter’s electrical characteristics. It reaches a minimum value of 5.95 ohms at 18kHz, which is benign. However, the high-pass crossover gives rise to quite an extreme phase

angle in the mid-treble, which will result in the speaker being a harder load to drive than otherwise would be the case. On the other hand, my estimate of its voltage sensitivity was 89.3dB(B)/2.83V/m, which is significantly higher than average.

The metal enclosure was reasonably well-damped and -braced, but a resonant mode at 254Hz could be detected on all surfaces (fig.2). This mode is low enough in frequency and high enough in level that I would have expected it to degrade lower-midrange clarity. MF noted nothing amiss in this region, but perhaps this mode is connected with the slightly unstable imaging he noted with mono recordings.

Fig.3 shows the Intermezzo’s frequency response averaged across a

30° lateral window on the tweeter axis. Some of the apparent rise in the bass will be due to the nearfield measurement technique used to assess the speaker’s low-frequency behavior. However, most of it is real, the farfield behavior looking very similar. (The woofer control was set to “10” for this measurement; lowering it seemed to hinge down the midbass rather than reduce the upper-bass peak.) The trace with the more restricted extension was taken with the Infinity’s high-pass filter switched in; compared with the maximum level, it reaches its 3dB-down point at almost exactly 80Hz, and rolls off at 24dB/octave below that point. Both aspects make it ideal for use with a subwoofer.

Moving higher in frequency in fig.3, the midrange is depressed by a

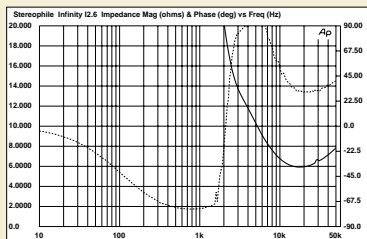


Fig.1 Infinity Intermezzo 2.6, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

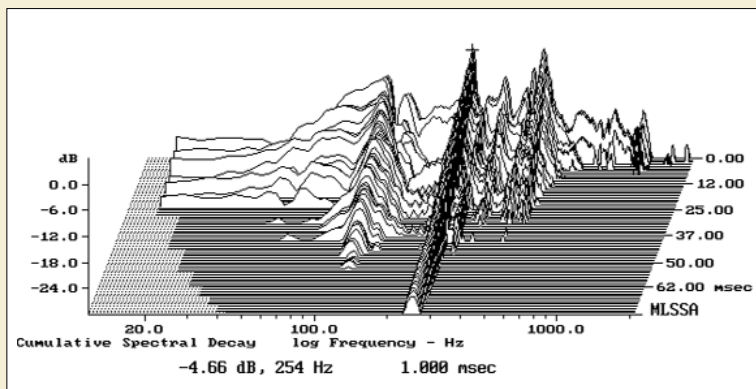


Fig.2 Infinity Intermezzo 2.6, cumulative spectral-decay plot of accelerometer output fastened to center of top panel. (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz)

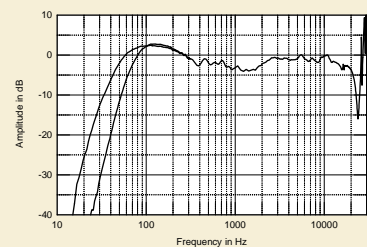


Fig.3 Infinity Intermezzo 2.6, anechoic response on tweeter axis at 50°, averaged across 30° horizontal window and corrected for microphone response, with the nearfield woofer response plotted below 300Hz with (bottom) and without (top) high-pass filter engaged.

direct-to-disc recordings of the Bill Cunliffe Trio (covered in last month's "Analog Corner") arrived shortly after I'd set up the Intermezzos. Although I had no reference other than the giant Tannoy monitors in Bernie Grundman's studio, the low end through the Intermezzos was big, rich, and nimble.

Bassist Darek Oleszkiewicz's tone and texture were immediately recognizable, and the size and weight of the miked instrument (no direct amplified feed was used in the mix, though it was available) was beyond criticism. The bass sounded tightly focused, well-controlled, and harmonically pleasing, the recording capturing both the percussive string slaps and the body's woody resonances.

The 6 1/2" drivers couldn't move the

room air as effectively as larger speakers did on the Beatles' "Baby You're a Rich Man" or Davey Spillane's "Atlantic Bridge," both of which feature enormous amounts of deep-bass energy, but what was there suggested the intended effect at very high SPLs without distortion or strain. Few rockers will complain about the Intermezzo's bass weight or high SPL capabilities.

The Intermezzo was less satisfying on symphonic music, like Classic Records' reissue of Saint-Saëns' *Organ Symphony* (RCA Living Stereo LSC-2341); the shoebox shape of Boston's Symphony Hall didn't suggest itself, and the lowest organ stops lacked weight. Same with Classic's 45rpm reissue of Mussorgsky-Ravel's *Pictures at an Exhibition*—the orchestral crescendos wimped out on the peaks, and the timpani lacked their

full body weight and distinctive timbral signature. Overall, though, the bass performance from the pint-sized Intermezzos was damn impressive. If you're pressed for space and you love that bass, you need to check these out—especially if your room has a problematic "bump." If you need to keep your speakers close to a back wall, the Intermezzos can help you get reasonably deep bass without bloat or hangover.

Above the low bass, nonscientific measurements taken from my listening chair indicated a smooth response up to the 2.8kHz crossover frequency. The "presence" region, which had sounded dipped (and measured so) with the Red Rose Music R3s and made the sound relaxed and somewhat recessed, seemed elevated in the Intermezzos.

Measurements

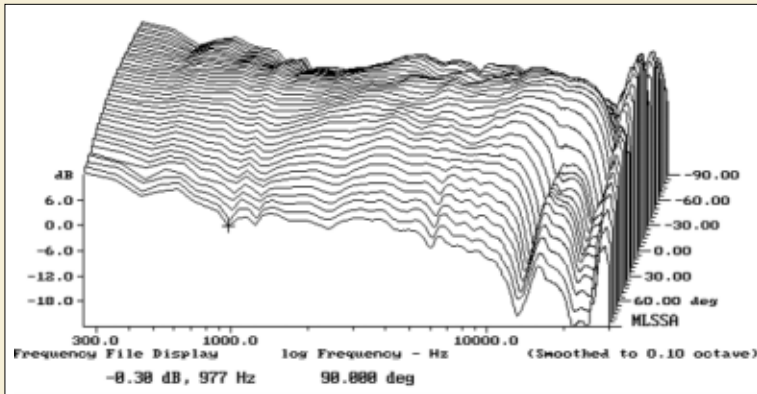


Fig.4 Infinity Intermezzo 2.6, lateral response family at 50°, from back to front: responses 90°–5° off-axis on wooden trim side of baffle, reference response on tweeter axis, responses 5°–90° off-axis on drive-unit side of baffle.

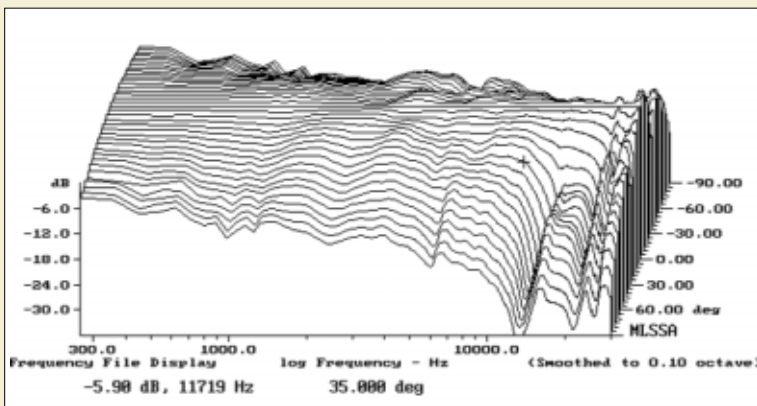


Fig.5 Infinity Intermezzo 2.6, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90°–5° off-axis on wooden trim side of baffle, reference response, differences in response 5°–90° off-axis on drive-unit side of baffle.

couple of dB with respect to the treble. Whether this balance is heard as a laid-back midrange or an elevated lower treble will depend on the listener's taste and the music listened to. Michael did note that he found the Intermezzo's presence region to sound a little boosted. The overall response trend is very smooth, however, and the high-amplitude resonance of the metal-dome tweeter is too high in frequency, at almost 30kHz, to have any subjective consequences.

A speaker's perceived in-room balance will be significantly affected by its dispersion, particularly in the horizontal plane. The Intermezzo 2.6's lateral radiation pattern is shown in figs.4 and 5, the former showing the actual responses (though not corrected for the measuring microphone's departure from flatness), the latter just the differences between the off-axis responses and the tweeter-axis response. You can see from the even spacing of the contour lines in this 3-D plot how even and well-controlled the speaker's dispersion is—something that correlates with stable, accurate perceived imaging. That MF was bothered by the stability of dual-mono imaging can't be laid at the door of the speaker's dispersion, which is why I wondered if it was actually due to enclosure resonances.

Only above 12kHz does the 2.6 start to beam, due to the tweeter's waveguide acoustic environment.

My RadioShack analog SPL meter was significantly up from the reference 1kHz tone between 3kHz and 6kHz, and the Intermezzos sounded that way: much more forward and far less forgiving of poor program material. This is probably one reason I preferred listening off-axis, and why, shortly after beginning my auditioning, I was drawn to my refurbished Dynaco Stereo 70, which proved to be the ideal companion for the Intermezzos. If my reference Musical Fidelity Nu-Vista 300 has any fault, it's a bit of coolness. I craved some richness, which the Stereo 70 supplied.

Like the Prelude MTS, which uses the same tweeter and waveguide configuration, the Intermezzo's top-end response sounded subjectively smooth, free of grain, natural, and not at all

bright or sizzly. In fact, listeners used to peaky tweeters might find the sound lacking in detail and transient snap until their ears adjust, at which point the enormous amount of inner and low-level detail the Intermezzo's tweeter is capable of revealing will become apparent. Still it won't be every listener's cup o' tea.

Putting It All Together

Combine metal drivers and a metal enclosure and what do you get? Non-metallic sound.

When I auditioned the Cunliffe Trio's direct-to-disc recordings, I was immediately struck by the impressively natural, unboxy sound of the Hamburg Steinway. I'd heard this piano live before it was muffled with blankets and closed

down for the recording, and later through the studio monitors. The close-miked recording was intended to capture the instrument's percussive, dynamic, rhythmic nature without short-changing its sound board's resonant signature, and the deep, luxurious bass produced by the lowest key hammers hitting those long, thick, wound wires.

The recording succeeds in creating the illusion of the piano playing in your space, not of you being transported to some live venue where it's off in the distance, bathed in a reverberant field. Reproducing such a dynamic, percussive, timbrally complex recording is difficult for any speaker, and the Intermezzo did an extremely credible job, providing impressive bottom weight without bloat or congestion, and that unique "chimey/"

As a result, in all but small, live rooms the Intermezzo might sound slightly softened in the extreme highs, as MF indeed found to be the case. A similar

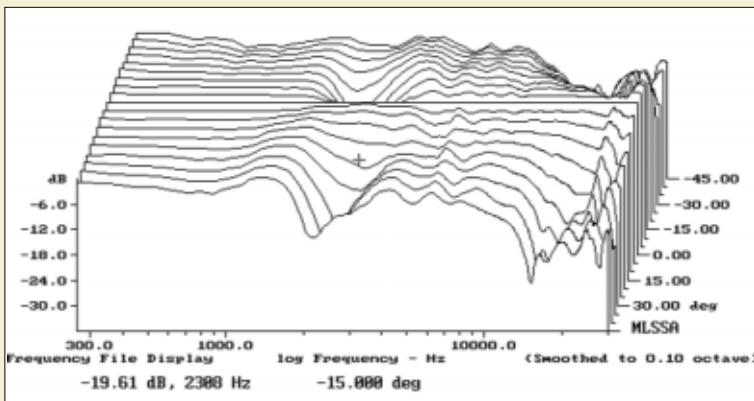


Fig.6 Infinity Intermezzo 2.6, vertical response family at 50°, from back to front: differences in response 45°-5° above tweeter axis, reference response, differences in response 5°-45° below tweeter axis.

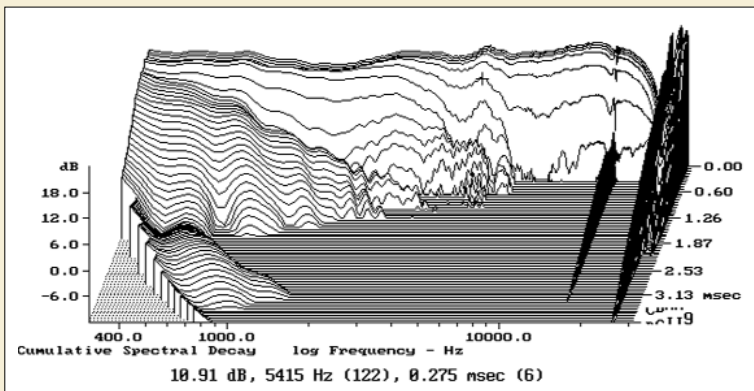


Fig.8 Infinity Intermezzo 2.6, cumulative spectral-decay plot at 50° (0.15ms risetime).

plot in the vertical plane (fig.6) reveals that the Infinity speaker is best auditioned on or slightly under the tweeter axis. Sit too high and a large suckout appears in the crossover region.

In the time domain, the Intermezzo's step response (fig.7) indicates that both of its drive-units are connected with positive acoustic polarity but that, as is almost always the case, the design is not time-coherent. The associated cumulative spectral-decay plot (fig.8) is one of the best I have ever seen in any speaker at any price! A smooth, grain-free presentation should be the result.

This is yet another in a series of superbly engineered, high-quality loudspeaker designs emanating from Harman's Northridge plant. It is a tribute to its designers, and to the research and testing facility set up there by Floyd Toole. —John Atkinson

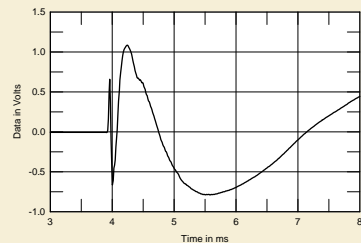


Fig.7 Infinity Intermezzo 2.6, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

woody” bell-like sound in the upper registers without ringing or glassiness.

This trio set demands a speaker that produces fast transients and an overall taut sound to do it justice, and the Intermezzo’s performance was impressive. Joe LaBarbera’s drum kit was also convincingly “in the room,” the snare snapping smartly, cymbals ringing without hurting the ears, the brushes shimmering and free of hash, and not sounding soft, like air-brakes.

But the Cunliffe recording’s odd soundstaging—giant piano up front, widely spread, oversized drum kit behind—was not the ideal recording for checking out the Intermezzos’ soundstaging and imaging abilities. So it was back to old standards like *The Weavers: Reunion at Carnegie Hall, 1963* (LP, Analogue Productions APF005). The Intermezzos proved better at lateral imaging than at creating adequate depth. The tautness of the presentation, or the forward nature of the midband, or perhaps the lack of bottom octaves, seemed to string the vocal images across the stage in reasonably solid three-dimensional focus, but the space behind, including the rear stage wall, seemed somewhat flattened compared to what I’m used to hearing from this disc. The R3s didn’t offer better bass, but definitely produced greater depth, perhaps due to the dipolar radiation pattern of their ribbon tweeters.

Near the end of the review period, the mono version of the Helikon cartridge arrived (see this month’s “Analog Corner”), and I began auditioning my favorite mono recordings. I found achieving a truly solid center image independent of frequency somewhat

tricky to maintain. Cymbals would sometimes appear off to one side or the other, despite my constant tweaking of speaker positions. I don’t know why this was (frequency-dependent front-baffle diffraction? woofer beaming at the high end of its range in the two-way design?), but when I put the Sonus

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Faber Amati Homages back in, the center image immediately locked in and stayed put on all recordings I auditioned, as if there was a speaker in the center and not a phantom image. Of course, the Amati costs 10 times as much as the Intermezzo.

Conclusion

Two solid months with small, two-way, relatively inexpensive designs was a refreshing wake-up call. While very different from one another, the Red Rose Music R3 and the Infinity Intermezzo 2.6 both offered a surprisingly high level of musical satisfaction. I could happily live with either if I had to, though I have no doubt that part of my reaction was due to my room, which has been treated with RPG products and was well-proportioned to begin with.

The Infinity Intermezzo 2.6 offers a great deal of technology and performance for \$2000, subsidized in part by the development of Infinity’s flagship Prelude MTS. Powered woofers and 90dB efficiency mean it can be driven with just about any amplifier you can think of, solid-state or tubed. The Musical Fidelity Nu-Vista 300 was overkill; the Dynaco Stereo 70—which cost me \$5 at a garage sale and a few hundred more to refurbish and retube—was a great match for the Intermezzos, which were fast, taut, extended, reasonably neutral, and rhythmically adept.

With the exception of a slightly forward presence region, the Intermezzos proved to be extremely well-behaved. They were on the analytical, revealing side and didn’t draw me into a warm and fuzzy musical world, nor were they the most transparent speakers out there—but they were free of gross colorations up and down the sonic spectrum, and went very low for their size. What this meant—as I found out listening to the usual commercial CD dreck and to the Groove Note direct-to-disc sides—was that bad recordings had no place to hide, while great ones truly shone. ❧

Associated Equipment

Analog sources: Simon Yorke, Graham 2.0 turntables; Immedia RPM2, Triplanar VI tonearms; Lyra Helikon, Helikon mono, Clearaudio Insider, Accuphase AC-2 cartridges.

Digital source: Sony SCD-1 SACD player, Audio Alchemy DDS•Pro transport/EAD DSP-9000 Mk.3 HDCD DAC.

Preamplification: Hovland HP-100 preamplifier, Audio Research Reference and Naim Stageline phono sections.

Power amplifiers: Musical Fidelity Nu-Vista 300, Dynaco Stereo 70.

Loudspeakers: Red Rose Music R3, Sonus Faber Amati Homage.

Cables: DIN/RCA: Hovland Music Groove. Interconnect: Harmonic Technology Pro-Silway II. Speaker: Harmonic Technology Magic Woofer. AC: JPS Labs, Electra-Glide.

Accessories: PS Audio Power Plant P300 and P600, Sounds of Silence Vibraplane active isolation platform, Symposium Rollerblocks (Tungsten), Grand Prix Audio Monaco amplifier stands, Walker motor drive, Finite Elemente Pagode and Zoethecus equipment stands, A.R.T. Q dampers, Walker Valid Points, ASC Tube Traps, Shakti Stones and On-Lines, RPG BAD and Abffusor panels.

—Michael Fremer