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DISPLAY UNTIL JANUARY 15TH 2007

MartinLogan Vista Loudspeaker

'Logan's latest electrostatic-hybrid sporting a passive woofer

Dick Olsher

MartinLogan's revamped hybrid electrostatic line comprises a trio of models all sharing the company's trademarked XStat electrostatic panel technology. At the top (not surprisingly) is the Summit, and one notch below it, the Vantage. The smallest and most affordable family member is the Vista, which presumably offers a sonic glimpse of its bigger brothers, but uses a passive instead of a powered bass section. The notion of being able to control both drivers with a single power amplifier attracted me initially to the Vista, on the basis of the dictum "simpler is better." But frankly, the Vista rekindled fond memories of the old Aerius, with its powered woofer, and I began to wonder if the Vista's 8" aluminum cone actually would improve bass precision and integration with MartinLogan's electrostatic panel.

Bass-reflex loaded with a box tuning frequency of about 28Hz, the Vista's crossover frequency is centered at 450Hz, and both the low and high-pass slopes are said to be 12dB per octave. In my experience, aluminum-coned woofers blow plastic types out of the water in terms of pistonic precision and speed. Now, I know that the term "quick bass" is a bit of a technical oxymoron, as a bass transient's rise time is actually defined by its upper frequency content, which is not reproduced by the woofer in a multi-way system. However, in the context of a musician's vocabulary, I think the term makes a lot of sense. It refers to a lack of undamped enclosure or suspension resonances, which by their nature exhibit a long time signature. A decay time in the hundreds of milliseconds translates to muddy bass (when bass lines are obscured by the continued outpouring of sound energy at one or more resonant frequencies). In the extreme, this can lead to one-note bass reproduction, where pitch definition is obliterated.

It's hard to overlook the see-through transparency of the XStat panels—they have no grille cloth for the sound to pass through. I can think of several ESLs that

come fully clothed, but treble attenuation is a factor with any sock, and the ML solution offers the closet proximity to the diaphragm, and hence the sound source. Some designs even incorporate a Mylar dust bag to protect the diaphragm, which is typically sensitive to dust, smoke, and moisture. ESLs, by virtue of electrostatic attraction, do accumulate airborne particulates. In the case of the XStat, periodic vacuuming is possible and recommended. The diaphragms are strong enough to handle it. And since they charge up extremely quickly (within a few seconds), they may also be disconnected during long idle periods to minimize the collection of dust and other pollutants such as smoke particles.

The elegant Vista should cause few ripples as far as the domestic acceptance factor is concerned, but take note that as with other dipole radiators, sufficient breathing space from the rear wall is required for optimum performance. My standard recommendation is for a five-foot spacing from the rear wall, though

Specs & Pricing

MARTINLOGAN LTD.
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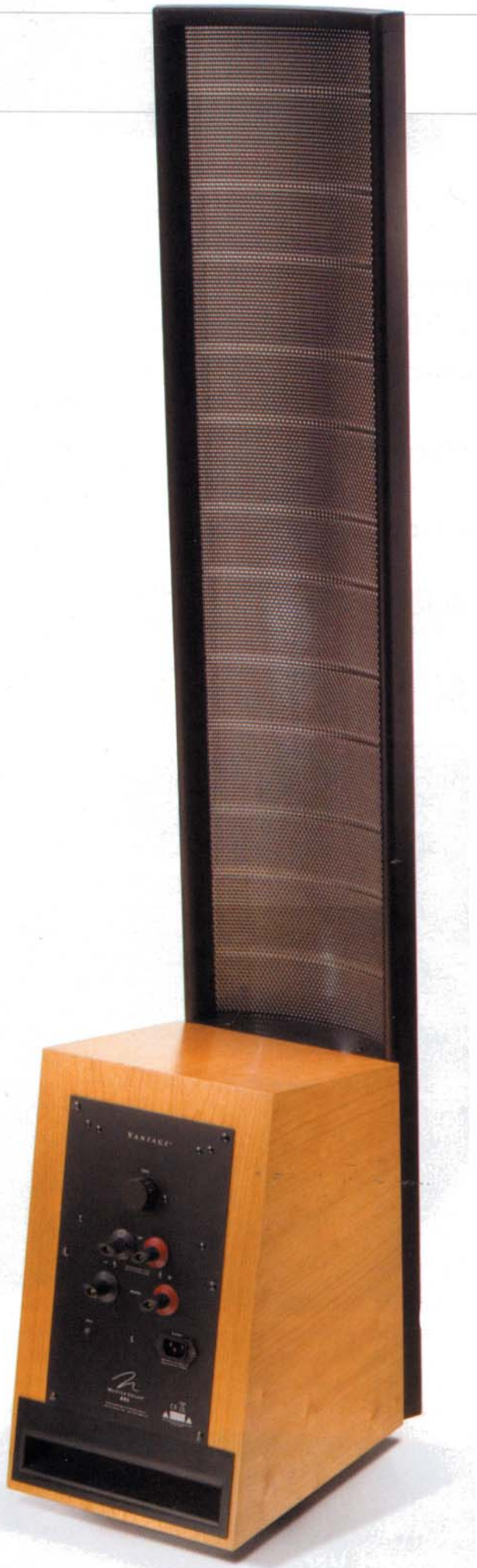
martinlogan.com

Type: 2-way electrostatic/cone hybrid
Frequency Response: 43Hz–22kHz ±3dB
Sensitivity: 90dB
Nominal Impedance: 4 ohms (1.2 ohms minimum at 20kHz)
Recommended amplifier power: 100–200Wpc
Dimensions: 10.7" x 57" x 16.8"
Weight: 54 lbs.
Price: $3695 (in black and dark cherry; $300 more for natural cherry and maple veneers)

Associated Equipment
Kuzma Reference turntable; Graham Engineering 2.2 tonearm; Symphonic Line RG-8 Gold MC phono cartridge; Air Tight ATE-2 phonostage; Altmann Micro Machines Attraction DAC; Gamut D3 linestage; Gamut D200, EAR 534T, Prima Luna KT88 monoblock amplifiers: Acrotec 6N and 8N copper; Kimber Select KS-1030 interconnects: Fadel Art Streamflex Plus, Acrotec 8N copper speaker cable



you might be able to get by with as little as three feet, especially if the rear wall is treated with acoustically absorptive material. The idea is to delay the dipole's reflected energy by a time window of about 10 milliseconds relative to the direct sound. It's the critical time period during which our auditory system does most of its processing. Since sound travels about one foot in one millisecond, a five-foot spacing automatically delays rear-wall reflections by the requisite time period.

I'm not implying that a dipole's rear wave is a liability or that the ideal listening environment is highly absorptive. No one should be happy listening in an anechoic chamber, and much of the magic of a concert-hall experience results from being enveloped by ambient sound. But having both the direct and ambient sound propagate from the plane of the speakers is not a good thing, and the absence of room reflections gives an artificial window on the sound.

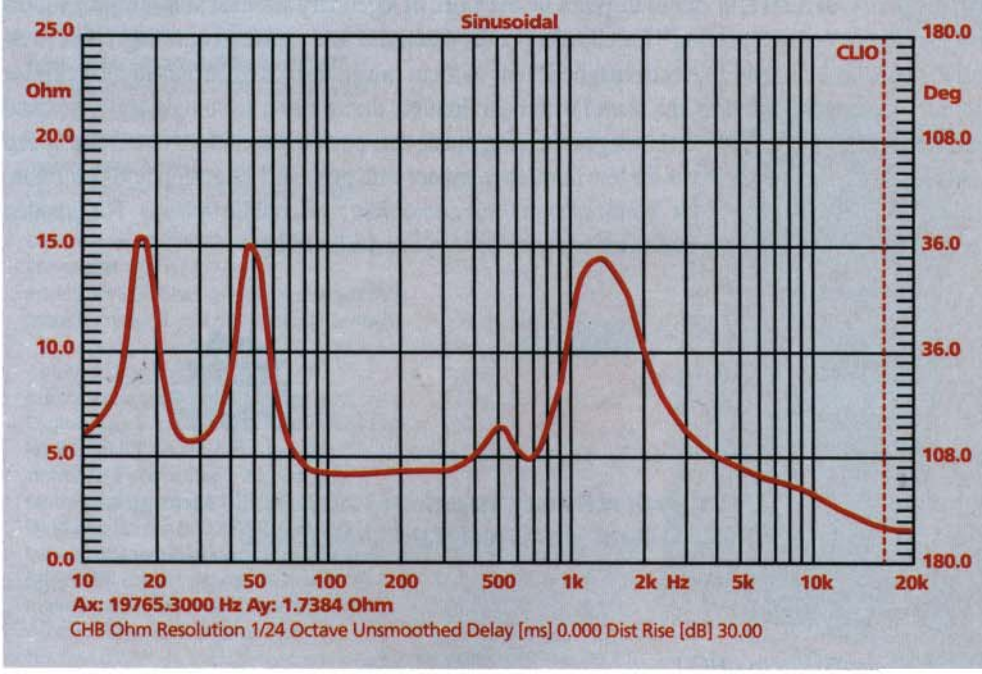
The Vista takes a long time to break in. So let them simmer for a few days before attempting any critical listening. The bass range tightens up significantly during this process as the cone suspension breaks in. You might as well plan on bi-wiring since image focus benefits noticeably. Follow instructions in the manual and be sure to remove the shorting strips from the

Driving the Vista

I've been on a soapbox for over a decade, preaching the importance of the amp-speaker interface, and no where is that of greater relevance than in the case of an electrostatic speaker. An ESL presents a capacitive load, demanding what has been dubbed "wattless power." Power is stored but not dissipated in the speaker, and is eventually kicked back to the amp's output stage. Amplifier power dissipation and stability are major concerns, and I have personally witnessed several amplifiers brought to their knees by the Sound Lab A-1. Some solid-state power amps insert a coil in parallel with a resistor at the output stage to protect the amp against instability induced by capacitive loads. (The Gamut D200 Mk. III amplifier even features Normal and Direct outputs, where the Normal output is protected by such a filter network and is recommended for use with ESLs.) In the case of the Vista, which allows bi-wiring, the electrostatic panel may be connected to the Normal outputs while the bass is connected to the Direct outputs.

Another issue, which is not necessarily confined to ESLs, has to do with the interaction of the amplifier's source impedance with the speaker's impedance to induce frequency-response deviations. If the speaker's impedance magnitude were flat, then the amp's source impedance would not matter at all. But that's not what happens in the real world. Speaker impedance magnitudes are typically far from flat, and the amp's source impedance acts as a voltage divider, reducing the speaker's response proportionately more at those frequencies where the speaker impedance is lowest. If the source impedance is a few tenths of an ohm and the speaker impedance does not dip very low, the effect is minimal. However, for low or no global-feedback designs, source impedance may approach and even exceed 1 ohm. Such amps may significantly affect the speaker's frequency response. Take a look at Fig. 1, which shows the Vista's impedance magnitude.

Starting at about 1.3 kHz, the impedance drops from 14 ohms to about 1.7 ohms at 20kHz. The specifications state an impedance minimum of 1.2 ohms, which is probably more accurate as I did not subtract the lead cable resistance from my measurements. Driving the Vista with the Prima Luna KT88 monoblocks, which perform extremely well with conventional loads, resulted in a severe loss of treble response. The best frequency response was obtained from the 2-ohm taps, but even here the response was down 6dB at 20kHz relative to the response obtained with the Gamut D200. The EAR 534T solid-state integrated amplifier also performed well in this application, and I actually found its warmer sound (relative to that of the Gamut D200) more suitable to the needs of the Vista. ***DO***



binding posts before bi-wiring or else you run the risk of shorting the amplifier.

To my ears, the Vista's most compelling attribute was imaging cohesiveness, which extended across the frequency spectrum. The soundstage unfolded almost independently of the speakers, and with excellent depth and width perspectives. Many speakers, and large planar types in particular, create a soundstage that perceptually resembles an arch, as sound preferentially pools near the speakers with reduced center fill. In contrast, the Vista painted the soundstage with linear brush strokes that caused the speakers to virtually disappear. Soundstage dimensions remained stable as musical lines ebbed and flowed and the music's harmonic tapestry bloomed across the spectrum. This in itself was proof positive that the marriage of dynamic bass and electrostatic midrange was nicely consummated. Transparency, or the ability to visualize every recess of the soundstage, was world-class. Image outlines were nicely focused, but without the spatial compactness generated by ordinary box speakers. Audiophiles who are accustomed to pinpoint imaging might be taken aback by the more realistic presentation of the Vista. It's about width and height, and from my perspective planar drivers create the more lifelike image size.

The midrange was both suave sounding and low in distortion, capable of voicing the core of the music with harmonic purity and sweetness. There was never a hint of harshness or brightness that sometimes is confused for enhanced resolution. Yet, low-level detail was easily retrieved. Clarity and delineation of individual lines in complex passages were superb. Decay of musical transients was discernible down to the noise floor of a recording. There was plenty of speed in evidence—but always with exquisite control.

I am so weary of speakers that divide the frequency spectrum at around 3kHz and then try to reconstitute a believable presentation with separate mid and treble drivers. In fact, it's fair to say that I am allergic to most dome tweeters. A dome tweeter pushed too low or rolled off too slowly can sizzle or sound acidic—the sonic equivalent of a mouthful of jalapenos. But the Vista speaks in one voice. It radiates all overtones in-phase and in a coherent wave launch. There is plenty of treble extension to above 20kHz, but without a bump in the presence region or lower treble. With a gently sloped roll-off above 5kHz, the sound was always natural in character rather than hyped up. As a consequence, recordings that are aggressively equalized in the lower treble sounded respectable through the Vista.

Clarity of individual lines was superb

Given a solid-state amplifier with a power reserve of at least 100Wpc, dynamic shadings were quite convincing, shifting gears from soft to loud with little compression. And this is an area where the Vista clearly outperforms full-range electrostatics. At my altitude of 6400 feet, between sea level and an absolute vacuum, Quads and Sound Labs have always struggled to reproduce symphonic playback levels. Relieved of the need to reproduce most of the power range of the orchestra, which peaks around 400–500Hz, the XStat can play louder and cleaner without the dreaded problem of arcing. And there was also plenty of microdynamic finesse. The micro-modulations in pitch, volume, and rhythmic intensity that code the music with feelings and emotions were communicated with little loss of the music's drama.

Bass extension was into the 40s, which is plenty for most types of music. There was, however, plenty of tight and precise midbass, though the 8" woofer lacked the punch and slam of a larger driver. From a practical standpoint, it is almost impossible to achieve uniform deep bass extension in a small domestic listening environment, and I have never been a fan of subwoofers partly for that reason. In my experience, most of the dissatisfaction with the bass range appears rooted in either the midbass (60Hz–120Hz) or the upper bass (120Hz–240Hz). In the case of the Vista, it was in the octave between 180Hz and 360Hz, spanning the upper bass and lower midrange, where I experienced the most difficulty. I recall a jazz listening session during which my attention was drawn to an anemic tenor sax sound, distinctly lacking in body and weight. Upon further review, I discovered that all woodwinds share a first spectral peak around 260Hz and that a sax has its most intense spectral peak around 500Hz. In-room frequency-response measurements were consistent with my listening impressions and showed a deficit of about 3dB over this range. (Because in-room measurements are susceptible to distortion by room modes, I decided to perform a near-field measurement of the woofer, as well, moving the mic to about 1" in front of the woofer's protective cover. These measurements suggest that the woofer is shelved several dB in the upper bass relative to its midbass output.)

The bottom line is that the Vista's tonal balance is lean, maybe acceptably so for baroque music, but too much so for symphonic music. For my taste, I would prefer a few more dB of upper bass/lower midrange. Note that this is not the sort of problem that can be resolved by throwing a subwoofer into the mix. Most subwoofers augment the range below 100Hz, which is not where the problem resides. Use of a warm-bodied tube preamplifier at the head of the signal chain did help a bit, as did use of the EAR 534T integrated amplifier, which projects an authoritative lower midrange. But at the end of the day, there was no escaping the fact that the Vista is a lean, clean, sound machine.

To my mind, the Vista represents the confluence of technology and materials in the service of sound. Its electrostatic virtues do offer a slice of sonic heaven, and I usually prefer a speaker that approaches the real thing in several respects to one that fails to excel in any particular category. Yet, its lean tonal balance impacts timbre accuracy and diminishes the authority of big ensemble music. On balance, this is a speaker that merits a careful audition. It is up to you to decide whether its virtues overcome its deficits. ***TAS***