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Greg Weaver weighs in on an ambitious new loudspeaker based on technology from Von Schweikert's one-off \$750,000 mega-speaker.

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Are loudspeakers with built-in amplification and digital signal processing the future of audio? Tom Martin argues that this new architecture might transform the high end.

# From the Editor

“Fifteen years after Albert began hand-making speakers in a garage, Von Schweikert Research (later Von Schweikert Audio) was born.”

## Albert Von Schweikert and Me

**I**n 1981 I was finishing college, had just built a recording studio, and was a part-time salesman at the stereo store where I'd been working for the past four years while attending school. The stereo store income helped while I was growing the nascent recording studio business. After transferring to another of the stereo chain's locations, I learned that one of the salesmen there made speakers in his garage on the side. This guy was different from the other salesmen—he was clearly very bright, highly eccentric, disdained the mid-fi gear we sold, and was completely obsessed with audio. His name was Albert Von Schweikert.

Albert began work on his speaker, which he called the Vortex Screen, in the early 1970s, enlisting the help of Dr. Richard Heyser at the nearby California Institute of Technology. Richard Heyser worked on spacecraft communications systems for the Jet Propulsion Lab, but his real passion was audio. He maintained a private acoustics laboratory for his own interest, and there invented Time Delay Spectrometry, a groundbreaking technique for measuring a speaker's frequency response without an anechoic chamber.

The Screen was a big rectangular slab that looked like a truncated version of the monolith in *2001: A Space Odyssey*. The bottom half was an MDF enclosure that housed the transmission-line-loaded woofer, and the top half was an open baffle with the midrange driver and tweeter mounted in the middle. All this was hidden by a fabric sock (available in black or “desert sand”) that covered the entire contraption. The shallow enclosure was supported by a base that, if I recall correctly, was made from Formica-laminated MDF.

One of the store's salesmen, who owned the Vortex Screen, invited me to his place to hear the speaker. It was one of those demos in which seconds after it starts you know that you have to have that sound in your home. The music was totally “out of the box,” with spectacular soundstaging. The tonal balance was smooth and uncolored, and the transmission-line bass was surprisingly deep and well defined.

Back at the store I spoke with Albert about buying a pair, but he told me that I'd have to wait until he built the next batch. Albert built the Vortex Screen in runs of about four to eight pairs once he had accumulated enough orders. He'd been operating like this for many years before I met him—building a small batch, waiting for more orders, and then building another small batch. There was no marketing; it was all word of mouth.

I owned a pair of ADS L810s at the time, but I had recently built them into my studio's control-room walls for monitors. I needed a speaker in my house for listening pleasure as well as for checking the mixes from my studio. Several months after I placed my order (price: \$750 per pair) Albert delivered the Vortex Screen to my home. Shortly after that, I left the stereo store, ran the recording studio for nearly four years, and then went to work in a CD mastering lab. I completely lost touch with Albert.

Fast-forward to early 1989, when I saw a small announcement in *Stereophile* that the magazine was looking for a technical editor. I, along with 52 other people, applied. After receiving my resume and interviewing me for the job, editor John Atkinson told me that he had narrowed down the candidates to just three, of which I was one. To determine the three candidates' reviewing abilities, he asked each of us to write a review of any product we wanted. The sample review would be used purely to assess our writing skills and would not be published. I chose to review the Vortex Screen, which I still owned and had been enjoying for the previous eight years.

I got the job, but John decided to publish my Vortex Screen piece in *Stereophile* as my first review. When the issue hit the streets, all hell broke loose. Albert's home phone, which was listed in the review (he had no business, and thus no business phone), rang off the hook with more than a thousand inquiries about this unusual speaker. Based on that interest, Albert partnered with an investor to build 100 pairs of Vortex Screens in one shot. Fifteen years after Albert began hand-making speakers in a garage, Von Schweikert Research (later Von Schweikert Audio) was born. And I was now a high-end audio reviewer.

As Albert said to me at a recent audio show, “That review launched both our careers.”

**Robert Harley**

# Revelati

**Von Schweikert Audio Ultra 9 Loudspeaker**

**Greg Weaver • Photography by Lee Shelly**

on





# Von Schweikert Audio Ultra 9 Loudspeaker

To understand the genesis of the new-generation VSA Ultra loudspeakers, we must go back to 2012, when a loyal, long-time VSA flagship owner contacted company founder Albert Von Schweikert and asked him to construct a one-of-a-kind, cost-no-object speaker. It will come as no surprise that Albert already had a theory for such a design, and this single project would overshadow everything, save standard production at VSA, for more than three years. Once Albert had settled on the drivers necessary for this ambitious project, Damon Von Schweikert, Albert's son (and as of fall 2015 VSA's CEO), spent a year on the enclosure alone. The overarching focus of this design was to reduce all forms of distortion, mechanical and electrical, to the lowest levels achievable. Even today, in any given system loudspeakers have the highest percentage of distortion of all components in the chain. (It's unnerving to realize that even the most highly regarded speakers produce on the order of 3 to 5 percent distortion or more at their rated output.)

What would come to be known as the VR-111XS was housed in six separate enclosures, three per channel. Each channel included a nine-foot-tall concentric-array/line-source hybrid, housing eight magnesium 7" woofers, four magnesium 5" midrange drivers, two 1" horn-loaded magnesium dome tweeters, and an Air Motion Transformer super-tweeter, with an identical set of tweeters (two domes and an AMT), mounted in an ambient array on the rear baffle. The second nine-foot-tall tower housed four 12" magnesium subwoofers (with quad voice coils), each one powered by its own amplifier, while the third enclosure housed the impressive custom dividing network. All enclosures were fabricated with VSA's proprietary "Triple-Wall Laminate Construction," a unique constrained-layering technique utilizing three fundamentally different materials, each with vastly different "Q."

The realization of this heroic loudspeaker would prove to be Albert's swansong. As the finishing touches were being addressed in preparation for delivery and installation in mid-2015, he announced his retirement. This meant that Leif Swanson, Albert's handpicked successor who has studied and worked with Albert for more than a decade, would assume the mantle of VSA's head designer.

It was during the delivery and installation of this \$750,000 statement design that Leif and Damon heard the VR-111XS in the customer's purpose-built 25' by 75' by 16' room, and realized just how successful their three-and-a-half-year-long journey had been. Upon hearing how effectively they had achieved their desired goals with this speaker, the notion struck them both that they simply had to reimagine their entire flagship line. In November of 2015, the seed of what would become the Ultra line had germinated.

My impressions upon hearing the first speaker to result from this new initiative, the \$300,000 Ultra 11 (which launched at AXPONA 2017), was that it represented a new benchmark, unmistakably surpassing the performance of every other speaker, regardless of price, that I had heard to that time. While some of the more competitive challengers offered remarkably diminished levels of distortion and perhaps even comparable degrees of resolution and transparency, in the areas of coherence, tone color, soundstaging, and especially dynamics the Ultra 11 simply had no equal.

When I arrived at the Denver Marriott Tech Center before the opening of RMAF 2018, I was granted the singular privilege of getting a quick preview of the Ultra 9. What I had expected to find was simply a scaled-down version of the Ultra 11; after all, when comparing the two it is immediately apparent that the Ultra 9 is literally just the bottom half of an Ultra 11. But what I heard with the Ultra 9s being driven by Kevin Hayes' then brand-new Valve Amplification Company Statement 450i iQ integrated amplifier (full review in progress) in this particular room and under the challenge of show conditions, was an entirely different, slightly more refined and involving speaker—one that in every way, save for the utter effortlessness and unrestricted dynamic scale of the Ultra 11, was as unfailingly authentic to the recorded event as its superb predecessor.

## GETTING IN TUNE

Seeing the Ultra 9 for the first time in its lustrous brilliant red finish is striking. Its multifaceted sides and angled front baffle give you the impression that it must be next to nightmarish to assemble. The fact that there are no right angles anywhere, nor any

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wider-than-necessary baffles to generate diffraction or interfere with dispersion, is also immediately evident. And weighing in at over 500 pounds and standing 50 inches tall, 32½ inches deep, with a 12-inch-wide front baffle (widening to a maximum width of 27 inches in the rear), this inspiring and massive device offers an amazingly streamlined and unimposing profile in every room where I have seen it installed, my own included. (My wife actually said, unprompted, “Those look amazing!”) Further, unlike many similarly sized speakers, the Ultra 9s are remarkably easily positioned on virtually any surface, with their rugged caster system, completely hidden by the purpose-built, form- and finish-matching skirt around the bottom of the enclosure.

The outermost layer of their proprietary triple-wall laminate composite enclosures consists of a sheet of resin-based HDF (high density fiberboard), a “medium” Q material, followed by a sheet of synthetic stone, fabricated from crushed gravel and various other minerals and a resin binder, with the third and innermost layer of hard felt (which has an extremely low “Q”), resulting in a wall some 4" thick. All three layers are bonded together using a layer (on the order of 1/5th of an inch), of industrial, anti-vibrational, plasticine-and-clay hybrid adhesive, integrating additional mechanical barriers capable of “shearing” energy by converting unwanted mechanical motion into heat for dissipation. Finally, using a method VSA has termed “Gradient Density Damping,” three different thicknesses of wool-like synthetic damping material are applied.

Packed extremely tightly closest to the cabinet walls, the wool is gradually decreased in density as it nears the rear of the driver in its baffle, providing exceptional absorption while greatly reducing reflections back into the cone.

This inventive enclosure construction technique, known as “Aktive Cabinet Vibration Control, Version 2.0,” is the result of Albert’s extensive research using the California Institute of Technology’s (Caltech) Laser Interferometer Labs to study and measure speaker cabinet-wall vibration and the subsequent release of stored energy. It was pioneered and first applied in the original Von Schweikert Research VR-4, circa 1992.

While VSA readily acknowledges solid aluminum will be much more sonically inert than good ol’ HDF, they are quick to point out that this triple-walled, constrained-layer design results in sonic results measurably equivalent to and arguably even slightly more effective than milled aluminum. And it is radically more cost-effective. VSA feels that this method does not “squander” value, allowing the company to maximize the worth of the resultant product. This enclosure design technology has proven so successful that it is used in every VSA model in production today.

Lowest on the front baffle, the first two-thirds of which is swept back at about seven degrees, are two modified Accuton 8" honeycomb-ceramic drivers. Covering the 50 to 250Hz region and offering superbly flat response, they are fed from their fourth-order acoustical G.A.I.N. dividing network (more on that later). Though there is no low-frequency electrical filter, the explicit internal volume of the enclosure imposes a very steep

acoustical roll-off below their lowest (50Hz) active frequency. Because they are not required to reproduce frequencies below 50Hz (there is a 15" subwoofer for that), these drivers exhibit an agility that results in both lower modulation and greater detail throughout their operational bandwidth.

Above the dual woofers, on that same swept-back section of baffle, is a unique Accuton 7" ceramic dome midrange. It implements an entirely new design approach Accuton calls the 4D (Direct Dome Drive Design) concept. As the spider is no longer connected to the former, its construction removes 15mm (more than half an inch) of unnecessary voice-coil former length, providing the shortest possible distance between voice-coil winding and cone. Use of a low-loss rubber surround connected to the voice-coil former prevents interaction with the cone, while an open-fabric spider allows the cone to center in its underhung motor structure with higher linearity. The back surface of the driver is open, helping to eliminate reflections and unwanted energy storage. Accuton claims this new driver delivers a considerably more faithful response to an applied signal, and I find its contributions to play a significant role in the creation of this speaker’s unmistakably musical voice. This inventive driver covers the 250Hz to 2.2kHz bandwidth, offering remarkably flat response, again fed by a fourth-order acoustical G.A.I.N. circuit.

Immediately above the midrange, on the final one-third of the front baffle, which is perpendicular to the floor rather than

being swept back as are the lower two-thirds, is a modified ScanSpeak 1" beryllium dome diaphragm tweeter. This 99% pure beryllium tweeter uses ScanSpeak’s unique AirCirc magnet system, reordering the traditional magnet structure from a large single magnet to an open magnetic circuit composed of six separate neodymium slugs that, in combination with other chamber modifications, optimize air flow within the chamber to eliminate reflections and resonances that compromise the performance of more traditional motors. With a large roll surround and outstanding off-axis dispersion, it operates in the 2.2kHz to 20kHz bandwidth, offering superlatively linear response. It is also fed by a fourth-order acoustical G.A.I.N. circuit.

The last driver, at the very top of the front baffle, is a 5" hybrid aluminum ribbon super-tweeter. A bespoke driver that is the product of the collaboration between two different manufacturers, its bandwidth begins at 20kHz and extends up past 60kHz, and it too receives its signal from the G.A.I.N. fourth-order network.

Moving to the top center of the rear baffle, we find the ambience-retrieval array—a feature unique to Von Schweikert loudspeakers. At the very top is the second 5" hybrid aluminum ribbon super-tweeter, identical to the one on the front baffle, but driven from a different portion of the dividing network.

Immediately below it is a 1" SEAS aluminum/magnesium-alloy dome tweeter. Featuring an optimally shaped dome, wide SONOMEX surround,

...an entirely new form of crossover.



and an immensely powerful magnet system, it leverages a stiff, stable rear chamber, optimal acoustic damping, and its proprietary DXT lens system to improve directivity, off-axis response, integration, and baffle diffraction. Chosen in part for its moderately low crossover frequency, it is an ideal driver to deliver the benefits derived from VSA's proprietary A.I.R. and G.A.I.N. circuitry.

Moving to the very bottom of the much wider back-baffle, we find another remarkable driver, the 15" subwoofer. Formed from thick, one-piece Nomex honeycomb cones covered with woven, heavy-duty glass fibers, these "ultra-still" drivers are remarkably resistant to deformation, while "Tall-boy" rubber surrounds with integrated gaskets maintain driver surface area during extreme excursions. To allow for their 1000-watt power handling capability, increase thermal dissipation, and reduce power compression, large anodized formers and vented pole pieces with under-spider ventilation, and two-layer copper voice coils are employed. The substantial, dual-stacked, high-energy magnets have a large copper sleeve and copper pole cap to help reduce energy storage from induction, and offer the added benefit of lowering overall distortion for "faster" response and lower Qts (total Q). Dual spiders are used to maintain linearity over their full one-and-a-half-inch range of travel, which also helps limit distortion and rocking modes.

Between the SEAS tweeter and the exotic 15" subwoofer, occupying roughly the middle third of the rear baffle, we find the large silver aluminum plate that houses the dedicated subwoofer amplifier, a highly versatile and granular Room Integration suite, and all wiring connectivity.

The plate amplifier driving the 15" subwoofer is a world-class, 1000-watt, Class D design, hand-built specifically for the VSA Ultra products by Channel Islands Audio in Port Hueneme, California. Using only the finest parts and exhibiting a build-quality befitting the exacting standards the Ultra 9 requires, its audio circuit is an advanced full-bridge UcD model, offering exceptional performance, reliability, and high efficiency.

The amplifier IEC socket is located on the lower left of this panel and two sets of speaker binding posts on the lower right. The lower set of posts feeds both the input board on the CI Audio amplifier and the passive crossover board for the woofers. The upper set of binding posts feeds the crossover boards for the midrange, front tweeter, ribbon super-tweeter, and the rear ambient array.

The Room Integration suite occupies a little more than the upper one-third of the panel, organized in two rows. The uppermost row includes three large Fostex 100-watt transformer-type attenuators, while the lower row includes a toggle switch on the left and three smaller variable-Q potentiometers. By using a transformer rather than a resistor network to attenuate voltage, output can be adjusted with no distinguishable degradation of the signal.

From left to right, the top row includes attenu-

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ation for the tweeter, the super-tweeter, and the ambient array, all three of which are variable in either 1dB or ½dB increments, selectable with the flick of the integrated switch. The lower row adds a two-position toggle switch to manage bass output below 25Hz (either 0 or +6 dB), followed by three potentiometers to manage subwoofer phase (variable from 0 to 180 degrees), low-pass frequency selection (variable from 50 to 100Hz), and subwoofer gain, variable from off (no output), through unity gain, to +9dB.

The top row of autoformers manages room interactions of the tweeter, the super-tweeter, and the rear ambiance array. The tweeter and super-tweeter adjustments allow users to compensate for boundary proximity, surface hardness, room size, shape, or spatial configurations, or even to accommodate personal tastes or recording-specific issues. The variable adjustment of the ambiance array affects staging and imaging, as well as altering the overall space of recordings, soundstage depth, illumination, and focus, and the reproduction of other details.

The bottom row of potentiometers manages the subwoofer's room integration. The granular regulation allows users to select between pure monopole or pure dipole configuration, and any variable degree in between. In rooms where speaker placement near side or front walls reinforces bass, the resultant lift will cause excessive boom, overloading the space. Often, by running the subwoofers in their dipole configuration (variable up to 180 degrees out-of-phase with the front woofers), as was the case in my room, excessive bass energy (boom) is greatly reduced or eliminated, without affecting dynamic bass pressure and integrity. Conversely, if you have a room that absorbs bass frequencies, you can configure the sub to work closer to or in absolute monopole mode, which will reinforce the performance of the 8" woofers on the front baffle. The result is considerably higher resolution throughout the entire frequency range than can be attained with other reference-caliber loudspeakers.

This unprecedented ability to tailor virtually every aspect of this loudspeaker's response sets the Ultra 9 (and for that matter, any of the VSA Ultra lineup) apart from all other traditional speakers, allowing you to enjoy nearly perfect frequency response in virtually any room.

VSA's proprietary crossover technology is described by the terms A.I.R. (Acoustic Inverse Replication), and G.A.I.N. (Globe-

al Axis Integration Network); however, given their proprietary nature I will not be able to go into them in any depth. But VSA sees the sonic result achieved by the utilization of this unique and intricate crossover circuitry as what elevates and separates its products from the competition—its signature defining advantage.

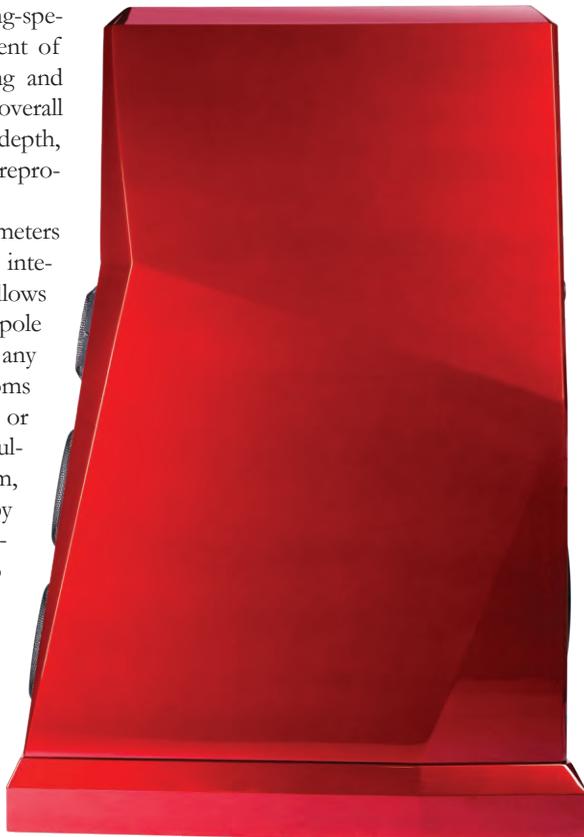
Formulated from experimentation he was doing in the laboratories of Dr. Richard C. Heyser at Caltech as early as 1972, Albert published his *Acoustic Inverse Replication* theory in 1980 after four years of development. It stated that a music recording is actually the "encoding of microphone voltages containing the clues of spatial dimension," and A.I.R. has been the driving principle at the core of the sound of every Von Schweikert loudspeaker.

This technology has been honed and improved since its first practical implementation in Albert's second commercial product, the VR-4, in 1992. (As a point of interest, his first commercial product, the Vortex Screen, released in the late 1970s, was the subject of the first published review of our own Editor-in-Chief, Robert Harley, in July of 1989.) [See this issue's *From the Editor for the full story.* —RH]

G.A.I.N., the second component in this sophisticated dividing network, is a circuit that enables soundwaves to be radiated in a spherical pattern without beaming, more as they are with live instruments. The resultant soundfield allows VSA speakers to sound nearly identical both on and off axis. Integrated with A.I.R., this circuit enables soundstaging and imaging over a broad, wall-to-wall area, and replicates the psychoacoustic cues necessary to more realistically recreate a live performance. In effect, this dividing network lets the speaker behave like a microphone in reverse, allowing the originally recorded perspective to be reproduced in your room.

In fact, this circuit is unique, and so unlike anything that you may encounter in the standard crossover-design "cookbooks" or that has been implemented by any other manufacturer, that when the late crossover guru Siegfried Linkwitz was visiting Albert in 2010 they discussed this circuit topology at some length. After considerable dialogue, including describing how this design was able to allow a fourth-order acoustic roll-off of every driver, Maestro Linkwitz asserted that Albert had produced an entirely new form of crossover.

Over the decades, VSA has done research on typical crossover-circuit components and found that even the normally accepted dissipation levels of expensive film capacitors and air-core



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inductors absorbed far too much low-level detail. As such, after testing all available capacitor and inductor types, their final selections were based on delivering the least intrusive impact on signal integrity.

Further research into wire and inductors led them to Master-Built Signature and Ultra wire, which uses proprietary metallurgy and geometry, and is fabricated and built here in the U.S. Used internally throughout the entire Ultra product line, this wire permits very low-level detail to be easily distinguished, as VSA feels that the reactive effects of inductance, resistance, and capacitance are minimized.

## EMINENCE FRONT

If you'd imagined the Ultra 9s, as substantial as they are, would be a challenge to unload and position, you'd be as mistaken as I was. I have to say, four of us rather easily glided them down the staircase into my basement listening room. Once the crates were opened, each Ultra 9 rolled effortlessly into position in my 600-square-foot (or 4300 cubic-foot) listening space. Using the location of my VR-55 Aktives as a starting point, with laser-measuring device in hand and constant listening for validation, we had the speakers optimally placed within an hour. This was without question the quickest and most straightforward setup of a speaker of this class I've ever been party to.

When you witness the incredible virtual reality created by the Ultra 9 driven with appropriately capable electronics, sources, and cabling, it becomes clear that VSA's encompassing approach to advancing fidelity by quashing the myriad distortions that speakers are heir to is highly worthy. I am witness to the fact that VSA has made a clear bull's eye of its target, culminating in an amazingly resolute, transparent, yet organic-sounding loudspeaker of unparalleled performance and accomplishment.

To be clear, my use of the term "resolute" here does not mean bright, spot-lit, or hyper-detailed; nor is it code for excessive upper-midrange or treble energy. True resolution uncovers detail and nuance, revealing microdynamic subtleties with superior refinement and accuracy of instrumental tone color and texture and particularly fine reproduction of transient information. It is indicative of an enhanced ability to follow a single instrumental line deep within dense arrangements by the depiction of a starker sense of the space between and around images within the soundstage.

Improving resolution in a loudspeaker can be accomplished only through increasing clarity. Superior clarity is achieved through diminishing or completely stripping away anything other than the applied signal. Typically, such advances come by improving and advancing a design and/or by applying new or unique materials, leading to lower distortions in the form of a more linear or less reactive response to the driving signal or the reduction of otherwise self-induced noises, both electrically and/or mechanically. Such improvements result in the unmasking of previously obscured information, not by enhancing or emphasizing any particular bandwidth or frequency range. In short, I

would apply the term "unmasking" to express what true resolution represents. And in the end, resolution serves transparency.

The Von Schweikert product lineup has represented some of the most authentic bass available since the time of the first VR-4, and was in fact a significant factor driving me back to dynamic speakers (with my purchase of the VR-4 Gen II) from the world of 8-foot-tall electrostatic panels I inhabited in the mid-1990s.

If bass isn't tonally truthful, accurately extended, and distinctly defined in pitch, the rest of the system's performance suffers—from its overall fidelity of tone color and balance to the representation of the acoustic of recordings. Given the Ultra 9's native ability to allow a level of room matching unsurpassed by any other single offering, regardless of price, these critical bass performance parameters can be optimized in any room in which it is installed.

With the subwoofer phase set at 0° in my room, there was clearly a bit of bloat and thickness to what was otherwise a very fast and relatively detailed low end. As Leif stood behind each speaker in turn and slowly adjusted phase, at a certain point, (in my case, somewhere near the 3 o'clock position on the potentiometer) that overemphasis evaporated, replaced not just with a clarity of definition and pitch, a sense of unconstrained transient speed, and an overall smoothness, but also with a dynamic heft and undeniable enhancement of the demarcations of the acoustic environment of the recording venue.

What VSA has accomplished here simply represents, in my opinion, the most articulate, best-defined, and most potent performance under 50Hz available today. Once the configurable time alignment, phase, and bipolar or dipolar radiation patterns are attuned to your room, the output offers a striking fidelity of transient performance, from seemingly instantaneous excitation and perfectly defined fundamental pitch and supporting harmonic structure, through an accuracy of decay, with no overhang, no slur, and no smear. This 15" driver settles seemingly as quickly as it is triggered into life, transcribing sounds with a power and authority more closely resembling the real thing than any other speaker in my experience. And performance is every bit as convincing through the lower midrange in transient response, tone color, fundamental and harmonic structure and texture, creating a brilliantly meticulous portrayal of both weight and impact.

From conveying the skin tone and ominous impact of the timpani in the fourth movement of Beethoven's Ninth Symphony (Solti and the CSO), to pressurizing the entire listening room when the lowest key on the organ is depressed in the second movement of Saint-Saëns Symphony No. 3, to the regeneration of musical drama like that served up by Jeff Porcaro's churning drum storm near the climax of a "It's a Miracle" from Roger Waters' masterpiece, *Amused to Death*, the Ultra 9's pitch definition, body, timbral faithfulness, and unyielding yet utterly articulate weight, impact, attack, and transient fidelity are simply unsurpassed in my experience. While I've heard other loudspeakers offer similar degrees of transient definition, none do so quite as

**The Ultra 9 redefines what can be accomplished.**

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effectively. Further, when you add their pitch, timbre, and timing authority to their unrivaled ability to convey body, bloom, and texture, the Ultra 9s redefine what can be accomplished in the bottom octaves, establishing a new reference.

As hinted at above, the Ultra 9s possess the best ability I've yet heard to convey a general sense of natural flow and organic-ness, while still rendering every musical nuance and instrumental detail. Their uncanny ability to offer a higher-resolution view into the music while at the same time reproducing more harmonic complexity and musical richness—more resolution and body at once—represents a fundamental step forward, not just a clearly apparent sonic difference.

One of the Ultra 9s' most significant virtues is their unmatched ability to represent differences in timbre. They portray tone color with a finer graduation between hues than I've heard from any other transducer. This enclosure, driver complement (most notably the modified Accuton 4D midrange), and dividing network are so free of distortion, so resolute and transparent, that the Ultra 9s consistently reveal unprecedented nuances and tonal shadings.

For a six-way, eight-driver loudspeaker, communicating with the blended voices of 16 drivers, the resultant degree of coherence, of convincingly speaking with one continuous voice, is simply extraordinary. That voice is so full-bodied and replete with the complex harmonic structures of individual instrumental accents that it renders an overall tonal balance that is as faultless as I've ever experienced. The Ultra 9s create a sonic representation so immediate and palpable, so vivid and articulate in detail, and so utterly correct in voicing that you simply must hear them to understand.

When it comes to dynamic performance, though I've touched on their singular ability to handle the deepest bass, the Ultra 9s reset all standards. As much subtlety and fluidity as they possess in the microdynamic realm, their explosive forcefulness is simply stunning, reproducing weight and impact with a deftness, definition, clarity, and focus unlike any other speaker in memory, save for their larger sibling. This system frequently and demonstratively evokes fight-or-flight responses when reproducing unexpected or overwhelming orchestral or rock crescendos. In general, tran-

sients are so spectacularly fast, so clearly defined and cleanly delineated, that the quietness between musical impulses is more distinctly resolved—a factor that only serves to make more relevant the message of the artist, adding an inexorable gravitas to the VSAs' ability to communicate the power of musical expression.

Beyond their assertive dynamic prowess, their ability to communicate the presence, as well as the scale and vitality of the music they recreate, is simply the most truthful I've heard. Maintaining the proper loudness across the spectrum of each instrument, from its lowest to highest registers, combined with the essential non-existence of any notable additional coloration or losses of

body across the entire audible spectrum, represents a new benchmark in my experience. The Ultra 9s speak with an immediacy and intimacy unmatched in my view.

Their ability to render stark transparency to the sources, to reveal any nuance in detail or scale, is disarming. Their ability to resolve so lucidly the subtle differences among recordings and the nuances of each, to reveal staging cues or microphone placement techniques, is exceptional and only closely matched by a few other speakers of similar class.

Given their exceptional facility to resolve low-level spatial cues, and their markedly coherent voice, it will come as no surprise that they present a degree of soundstage layering, of image specificity, size, and shape, that is extraordinary.

Instrumental locations are dimensionally solid and stable; image sizes are

unquestionably realistic, neither bloated nor diminished; and the sense of air and space around and between the highly individualized voices throughout the stage is remarkable. With recordings up to the challenge, the stage is compellingly wide, deep, and, most notably, of the appropriate height, with clear illumination deep into the rear corners, where so many speakers lose their lucidity.

With effects like QSound, from recordings like Sting's 1991 *The Soul Cages*, the sudden "appearance" of Sting in the very last seconds of "When the Angels Fall," just off your left shoulder saying "Goodnight," is flesh-and-bone real. The reality of the spatial presentation, including hall dimensionality, instrumental placement and interrelationships, the space between and around





## Von Schweikert Audio Ultra 9 Loudspeaker

those remarkably defined voices, as well as reverberant cues, sets a new benchmark.

During the product launch, in the Maroon Peak room at RMAF 2018 in Denver, the Ultra 9s were set up along the long wall (the room is 750 square feet, 30' x 25' x 10'). It was while speaking with Kevin Hayes of VAC, sitting against the side wall, at what could only

be described as an extreme listening position, about eighteen feet from the front wall, some twelve feet behind the plane of the speakers and roughly eighteen feet from the left, and twenty-five feet from the right speakers, that I heard something that made my jaw drop. Kevin didn't miss a beat; he looked at me with that Cheshire-Cat-like smile and said, "You just noticed!"

Normally, in such an extreme off-axis position, you will hear the closest speaker, period. Yet here, I not only heard the proximate left speaker; I also clearly heard the more distant right, *and* a significantly dimensional soundstage between them. The stage was obviously skewed, with the center being closer to the left speaker, but it had an astonishing degree of depth and instrumental specificity. This was not a one-time fluke experience, as I was able to duplicate this in my room for dozens of visitors during the review period. But it clearly demonstrates and validates the effectiveness of the remarkable capabilities of VSA's unique Ambient Driver array and dividing network.

As hard as this is to write, in all my time with them I simply could not find any particularly egregious fault or vulnerability to criticize. While I freely admit that they are not perfect—what loudspeaker is?—what they deliver, day in, day out, is so engaging and compelling, that I simply have no bones to pick with their overall dazzling performance.

### I CAN SEE FOR MILES

As music lovers and audiophiles, we live in an astonishingly exciting time. Today we are able to select from so many truly affordable speakers, electronics, and source products, all capable of producing more accurate and engaging sound than was possible from even the very best and most costly products in the early 1970s—the period that marks the start of what has become the high-end audio world we know today, as well as the start of my own audiophile quest. In addition to the number and excellence of affordable products, there have never before been so many luxury-class products capable of expanding the boundaries of what can be accomplished in the reconstruction of a live performance.

...a new pinnacle of achievement...

The trailblazing work that VSA is doing under the direction of its current chief designer, Leif Swanson, and CEO Damon Von Schweikert, building upon the groundbreaking work of the company founder, Albert Von Schweikert, epitomizes what can be done to recreate an authentic musical experience in the home. A product like the Ultra 9 elevates listening to music to the level of an enormously enjoyable event. At every turn, from its remarkably inert and voiceless enclosure, to its fabulously coherent drivers, to its distinct, serene, and transparent dividing network, to its extraordinary ambience, and speaker array with its unparalleled room-integration capabilities, we see how the Ultra 9 can deliver this exceptional musical expressiveness, with such heightened transparency and vanishingly low self-generated noise.

While I have traveled this particular road for almost five decades, and have had the pleasure and honor of reporting on this industry since the late 1980s, I find the Ultra 9 loudspeaker from Von Schweikert Audio a new pinnacle of achievement in recreating the reality of a recorded event. In terms of making music, of having that inexplicable ability to foster the suspension of disbelief, of permitting listeners to forget that what they are listening to is a recreation, the Ultra systems in general, and the Model 9 in particular, appear to have no equals today. The Ultra 9 consistently allows me to forget that the time and space of the events unfolding before me are merely auditory illusions generated by a complex reconstruction engine, a conglomeration of electro-mechanical devices. It more effortlessly and emotionally persuades listeners that they are hearing music, not recordings, than any other system I have encountered to date.

Just in case I've not made my case, let me sum up: The Von Schweikert Audio Ultra 9 is the most authentically musical loudspeaker I have yet encountered. In fact, it represents such a remarkable achievement that to my wife's distress and my banker's unconcealed joy, I have decided to trade in my VR-55 Aktives on the Ultra 9s. Even if they are not in your price range, you owe yourself a listen, if only to experience the wonder that can be achieved by a loudspeaker whose design, components, and integration represent today's state of the art. **tas**

### Specs & Pricing

**Type:** Six-way, eight-driver dynamic loudspeaker

**Driver complement:** Front baffle: 8" woofer (2), 6" midrange, 1" tweeter, 5" leaf tweeter; rear baffle: 15" powered subwoofer, 1" tweeter, 5" leaf tweeter

**Woofer loading:** Sealed

**Sensitivity:** 92dB

**Impedance:** 4 ohms

**Frequency response:**

16Hz–60kHz

**Dimensions:** 12"–21" x 50" x 32.5"

**Weight:** 535 lbs. each

**Price:** \$200,000 per pair

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