



EQUIPMENT REVIEWS
Loudspeakers \$10k-\$40k



Magico V2

Explosive Eloquence

Neil Gader

The Magico V2 sells for \$18,000 a pair—not an insubstantial amount by any means. But that’s not really the news—there are already a surprising number of components that bump up against the \$20k level. The real news is that this two-and-a-half-way floorstander—actually the *bottom* of the lineup in Magico’s Murderer’s Row of Loudspeakers—is Magico’s answer to the question of whether it can successfully translate the R&D that inspired its statement products like the V3, the Mini II, and the remarkable M5 to an “entry-level” offering. Can magic strike twice (or thrice)? Is the V2 a true Magico?

The best way to think of the V2 is as a slightly condensed and concentrated version of its Magico stablemates. But it is not stripped down. Similarities rather than differences abound. In construction, it most closely resembles the larger three-way, four-driver V3 (reviewed in Issue 179), with the notable difference that the V2 drops the 6” Nano-Tec midrange of the V3 and retains the pair of 7” Nano-Tec mid/bass drivers. Unlike the V3 however, the V2 uses the proprietary Magico 1” ring-radiator tweeter also found on the vaunted M5. Impedance mirrors the V3 at 4 ohms; sensitivity is 89dB, also roughly the same as the V3. The drivers are back-mounted to the aircraft-grade 6061-T aluminum faceplate, which is itself mounted to the front baffle via internal tensioning rods. The mounting screws only see aluminum, not softer wood contact points, thus ensuring a tight fit even after years of playing.

Interestingly the V2 and V3 match each other in height at 42”, but the V2 is considerably shallower and narrower making it a much more room-friendly speaker. The sophisticated crossover is a masterpiece to admire, with a parts list that rivals the entire cost of many loudspeakers!

The V2, like all Magico speakers, is an acoustic-suspension design in a seventeen-ply vertically stacked Baltic birch enclosure that almost imperceptibly angles back a few degrees to align the drivers for phase coherence. The heavily damped interior employs the aforementioned tension-coupling mechanism, where a trio of aluminum rods and rear-panel fasteners draws the aluminum baffle against the enclosure in the way a cylinder head is torqued into the block of an engine. The result is a cabinet of such rigidity and aversion to flex it borders on overkill. A final comparison—the V2 weighs in at 120 pounds,

the V3 at 160 pounds—like a super-bantamweight to a middleweight. To put things in full pugilistic perspective, the M5 at 360 pounds and Model 6 at 650 pounds would be the super- and unlimited heavyweights of the stable. But clearly, Alon Wolf and his team are not slumming with the V2.

From the moment the needle hits the groove, it’s plain to hear that their intentions are as serious as a heart attack. But the key word to describe the V2’s overall performance envelope is discipline. There was no single piece of music that could derail it or upset its composure (mirroring the demeanor of Magico’s unflappable creator, Alon Wolf). It’s also a paradigm of balance, striking a sweet blend of tonality, dynamics, imaging, transparency, where no single criteria attempts to grab more of the attention than another.

Tonal balance in the lower octaves is rich and fully

EQUIPMENT REVIEW - Magico V2 Loudspeaker

realized although not plummy and overbearing. The mids are full-bodied, the treble region smooth and airy with just a hint of brilliance in the sibilance range. The character of the V2 steers clear of overt romanticism yet it never crosses the line into sonic sterility. Soundstage depth is excellent and on a par with its broad lateral spread of images. As dynamic as the V2 is, it doesn't convey an overtly forward balance. In fact on some vocal recordings it almost seems to pocket the singer a row to two further back than I'm accustomed to. If it's not dead-bang flat, it never deviates very far from neutrality. Inter-driver transitions are seamless and there is little indication that floor cancellations are sucking out upper-bass energy. The Magico team places great stock in ameliorating these issues in its crossover design, but most particularly the infamous baffle-step—the 6dB difference in gain due to baffle reinforcement in the midrange followed by a comparable gain deficit as the longer bass wavelengths lose that reinforcement. Observationally, my in-room experience validates Magico's approach, as transitions from roughly 200 Hz and below were essentially flat by listening tests and test tones, except for some typical room gain in the 40–50Hz range.

This is all a way of describing how the V2 drills deeper into the sonic picture, nibbling past the thin gauze and glaze that obscure transparency. Its sensitivity to low-level secondary details is, in a word, *dogged*. It sifts through an orchestra and suddenly a harp or triangle seemingly buried alive in a far corner of the stage snaps into view. Or the fluttering skin sound off a drum head reveals itself. Zils on a distant tambourine no longer blur or, in the case of Linda Ronstadt's angelic harmony

during “Under African Skies” from *Graceland* [Warner], her iconic voice—as deep in the mix as it is—appears luminescent. The same held true with large assemblages of voices, each individual distinctively reproduced within the penumbra of a multi-layered chorale. On Rutter's *Requiem* [Reference Recordings], the V2 captures the dual sensation of music vaulting heavenward into the church, as the anchor of a deep organ descends into the earth.

As I reflected on its resolving power, transient speed, and fidelity-to-timbre, I found the V2 became less identifiable as a cone-driver system. It began resembling an imaginary hybrid, reflecting the distortion-free speed and transparency of an electrostat panel with the turbocharger-ready thrust of a dynamic driver. Although its coherence can give even dedicated two-ways a run for the money, the V2 truly begins to shine when you start throwing complexities its way. The full-bore Atlanta Brass Ensemble and percussion section blasting out Copland's *Fanfare for the Common Man*, for example. Like a juggler who is tossed one bowling pin after another from an offstage assistant, the V2 is acrobatically gifted in the way it manages to keep so much information in the air without dropping a note.

The V2 forces one to reconsider the entire micro-dynamic relationship. Even during familiar recordings, like Dire Straits' *Love Over Gold*, the most pin-drop quiet passages are quieter still, more fully revealing the unique tactile inflections of the nylon-string guitar during “Private Investigations” and the cascading toms of “Telegraph Road.” And the loudest cacophonous instances are—mercy—louder still. During “Mars” from Previn's performance of *The Planets* [EMI], I

found myself riding the volume control more than normal, a result of the outside of the dynamic envelope having been pushed just a bit more.

Quick story: Back in the 70s I became addicted to early Linda Ronstadt records, particularly her *Simple Man*, *Simple Dreams* and *Hasten Down the Wind* albums which featured hits like Warren Zevons's “Poor, Poor Pitiful Me” and loads of Karla Bonoff. The players were the cream of the crop of the acoustic singer-songwriter era, JD Souther, Danny Kortchmar, Russ Kunkel, and Leland Sklar. When I replayed those discs, the Magicos brought a low-level focus to details that I thought were hopelessly indistinct, either because of the pressing or the record's engineering or mastering. Not true. The V2 depicted every instrument in a uniquely layered perspective. No instrument seemed to exist at the exact same depth in the soundspace. Each was unique. But nothing was as breathtaking as the articulation the Magicos expressed with background singers. These voices, from Don Henley to JD Souther, were each so distinctive and identifiable that it was as if I were hearing these old recordings for the first time.

Weaknesses? No Achilles' heel here. Okay, the bottom half of the lowest octave is absent—a minor deficit that certainly doesn't hold the V2 back much. At a strong lower limit of 30Hz organ devotees could be thinking subwoofer (forget it, Magico ain't making one), but good luck keeping pace with those tight-fisted Nano-Tec drivers. Also, bass timbre could be characterized as dry, even overly controlled, and lacking the rush of resonant content more typically encountered in bass-reflex designs. Admittedly, I'm an acoustic-suspension fan and thus prefer the V2

presentation, but neither iteration touches all the bases in quite a fully realized naturalistic way. Dipole bass, like the Jamo R909, still strikes me as more authentic, but when rock-level dynamics and output are required dipoles tend to run out of steam. At the other end of the spectrum, the V2 possesses a slow upward tilt in the lower treble that hones leading-edge information somewhat. Most prominently strings and brass. It's not a peaky coloration by any means and the added energy actually flatters most music. Unless you're

SPECS & PRICING

Magico V2 Loudspeaker

Type: Two-and-a-half-way floorstanding dynamic loudspeaker

Driver complement: Two 7" Nano-Tec woofers, one 1" MR-1 ring-radiator tweeter

Frequency response: 32Hz-40kHz

Sensitivity: 89dB

Impedance: 4 ohms

Recommended amplifier power: 50-300 watts

Dimensions: 10" x 42" x 12"

Weight: 120 lbs. (each)

U.S.

Price: \$18,000/pr

MAGICO LLC

932 Parker Street, #2
Berkeley, CA 94710
(510) 653-8802
magico.net

U.K.

Price: £18,901/pr

ABSOLUTE SOUNDS

58 Durham Road,
London, SW20 0TW
+44 (0)20 8971 3909
absolutesounds.com

CLICK HERE TO COMMENT IN THE FORUM AT [AVGUIDE.COM](#)

www.theabsolutesound.com

EQUIPMENT REVIEW - Magico V2 Loudspeaker

deeply sensitive to such matters, you'll be too consumed by the tweeter's musicality to notice.

Note also that if there is something amiss with the chain of electronics upstream, the V2 will be happy to let you know. Suddenly that special amp that you once had so much faith in can't keep up with the broader demands and athleticism of the V2. It has a palette for highly refined power, and even a hundred high-resolution watts will barely elicit a wink from the V2. At around two-hundred it finally grumbles to life. Give it 250 or, better yet, 300Wpc, and the V2 jumps off the launch pad like its name implies it should. (A quick call out to the Sumiko Palo Santos Presentation cartridge—review to come—and Plinius Hiato integrated [Issue 201]. Their performance with the V2 contributed to the finest resolution I've yet attained in my listening room.)

Returning to the question posed at the outset of this article—yes, the V2 is pure Magico through and through. In many ways it's everything an audiophile could hope for from the high-end experience. The totality of execution is superb. Its performance echoes the musicality of the company's no-holds-barred efforts. Its reasonable size can't quite match the sheer majesty of Magico's heavies, but on so many levels there are few speakers I've reviewed that have ever been as satisfying. The V2 may be *the* speaker to beat in the under-\$20k bracket. **tas**

Performance series

"this system is something of a musical genius"
— *What Hi-Fi? Sound and Vision*

L2 Series Loudspeakers
99 Series Electronics



The Quad 99 series electronics and L2 series loudspeakers are a match made in heaven. Detail, accuracy and refinement all combine to present one of the most musical and insightful systems available – and with our new 99CDP-2, will integrate seamlessly into your digital world allowing up to 6 digital sources to benefit from our state-of-the-art DACs

QUAD

the closest approach to the original sound.

Quad ESL-2905

Heavenly

Jonathan Valin

Before I begin to heap praise on Quad's new ESL-2905 electrostat, which, if there were a Platonic realm of loudspeakers, would come as close to the electrostatic ideal as any 'stat I've yet heard (and I've heard and owned a few), let me say a few words about what a Quad ESL-2905 *won't* do.

First and perhaps foremost for many of you, it won't play *real* loud. And I don't just mean this in an average-SPL sense (although I mean that, too). If a record contains a hard-enough transient, like, say, the gunshot-snaps of the strings on J.W. Warren's guitar near the beginning of "Have You Seen Corinna?" from Mark Levinson's truly great coastal-blues compilation *Came So Far* [MusicMakers], the 2905 will literally make you wince trying to cope with them, even if you're playing back the cut at relatively moderate *average* levels. Because the Quad is so fast and faithful and willing to go, it doesn't compress or round off hard transients; it tries, instead, to reproduce their full dynamic scale but ends up flying at full speed smack into the plate glass window of its own diaphragm-excursion limits, distorting with a literal shattering sound (and if you persist, shutting itself down via its panel-protection circuits before any permanent damage can be done). In other words, though it is well nigh incomparable in transient speed and clarity, the 2905 is also restricted (at the loud end) in dynamic range to *peaks* of about 95dB SPL. I believe that Quad's Peter Walker, the patriarch of

electrostatic loudspeaker design, once said that every record has "its own correct volume level." What he failed to add was, "Particularly when you use a dynamically handicapped speaker like an electrostat."

Second (and for the same reason), it won't play *real* loud in the bass. Some reviewers (who should know better) have declared the Quad 2905 to be the last word in low-end high fidelity, even on heavy-duty rock 'n' roll. While it *is* exceptionally fast, standard-settingly clear, and (up to a point) naturally full and surprisingly powerful and robust in the bottom, it most certainly isn't the last word in low-end extension, flatness, or dynamics. Like a lot of British speakers, the 2905 has been designed to fool you into thinking it has deeper bass than it really does. To this end, its otherwise excellent frequency response is bumped up a tad in the 40–80Hz range before it begins to plummet (down ten or twelve dB by the time it hits 30Hz). The neat thing about this psychoacoustic trick is that because the dipole Quads are so fast and clear, relatively low in distortion (though not, according to a report in *Hi-Fi News*, quite as low as some of the best dynamic competition), and



EQUIPMENT REVIEW - Quad ESL-2905 Electrostatic Loudspeaker

SETTING UP AND DRIVING THE QUAD ESL-2905

It is often said that dipoles are easier to set up than directional speakers. This has always been both true and untrue. While dipoles don't have the sidewall-reflection problems that wide-dispersion cone speakers have, you still have to deal with backwall and backwall-to-sidewall reflections (and, in the ESL-2905's case, the slight rise in the midbass), which means you're going to want pull these things out into the room by about three or four feet and keep them a few feet (at least) from sidewalls. You're also going to want to tune toe-in and speaker-to-speaker-to-listening-position distance by ear. (At least in my modestly sized listening room, I think the ESL-2905s did better with a small amount of toe-in, rather than being parallel to backwalls and at right angles to sidewalls.) There aren't any hard-and-fast rules here, as everything depends on the size and shape and relative "aliveness" of your listening room, although I do think that the ESL-2905s will generally require less "room treatment" than other speakers. (Unless you live in a glassed-in condo, be wary of overdamping your digs.)

You're going to want to attach the weight that Quad supplies to the bottom of each speaker's transformer box to add a little extra mass to the frame, and you're also going to want to attach the supplied spikes. When doing both of these things, be sure to gently lower the speaker face-forward onto a clean rug

by grasping it at its sides. Never lift or lower or move the ESL-2905s by grabbing its rear support-strut. (You're going to need at least two people, BTW, to get the ESL-2905s out of their shipping cartons, and a room with very tall ceilings, as the outside box needs to be lifted straight up and off to gain access to the inner packing and the speakers themselves.) Like all electrostats, the ESL-2905s' high-voltage power supplies need to be plugged into the wall. (Quad supplies the power cords, although you may want to experiment with aftermarket brands.) The speakers also need to "charge up" for a day or so before you play them (or, at least, before you listen to them critically).

As for driving the Quads, I'm sure that many amps, tube and solid-state in the 50-200W range will fit the bill. However, I can strongly recommend one particular combination: the Air Tight ATM-3 monoblocks—beautifully made, one-hundred-watt, 6CA7-based, ultralinear/triode-mode-switchable tube amplifiers that are simply a marriage made in heaven with these speakers. (So, for that matter, is the amp's superb matching preamplifier, the ATC-2.) Also great (for a good deal more dough) are Emotive Audio's 50W, 6550-based Vita monoblocks (and matching Epifania preamplifier). **JV**

well-controlled in dispersion, you don't really notice this small rise the way you would with a cone speaker in a resonant box. Save for a teeny recording-dependent bit of plumminess on instruments that happen to be playing right where the Quad's low-end peaks (around 60Hz), the thing sounds so beautifully balanced, so full, fast, rich, and natural in the bass—with a clarity of line that, as noted, sets a new standard in low-end resolution—you might easily think that you were hearing all the way down into the bottom octave (although you aren't). Up to a point, the 2905 delivers things like hard timp or bass drum strikes, cello and doublebass played legato or staccato, low-pitched winds or brass, and even electric bass guitar and Hammond organ with *exceptionally* lifelike timbre and dynamics. (Part of the Quad's little secret in the bass is that the transients of these instruments are not in the bass but in the midrange, where the Quad's speed and low distortion are superlative; another part is that, since many bass-range instruments don't have the narrower directionality, steeper transients, and wider dynamic envelope of higher-pitched instruments, they inherently sound "softer," more billowy, less focused and, hence, less explosively dynamic, even when they're being played loud.) *But...* try turning the volume up (above mid-90dB peaks) on Kodo drums or the synth on Paula Cole's "Tiger Lily" or the big pipe organ on the Sheffield recording of Mendelssohn's Organ Sonatas, and you'll hit that same plate-glass window in the bass you hit in the midband.

Third, the Quad 2905 won't play *real* loud in the top treble, although here the problem isn't an electrostat's inevitable struggle with diaphragm-excursion limits. It would be if the Quad played

with equal power all the way out to 20kHz, but it doesn't. It rolls off (once again, I think, by design) above 15–16kHz and, though it measures quite respectably flat up this point, it actually sounds more rolled-off on top than it is (just the opposite of its bass). Oh, it will reproduce top-octave piano with the kind of natural sparkle that people pay big bucks for in a ribbon-based transducer, and if there is a better speaker in all this wide world on violins, solo or massed, I haven't heard it. Strings are ravishingly beautiful, even when played with energy in their upper octaves. Whether it's the roll-off on the very top (or the roll in combination with the slight rise on the bottom), the Quad simply takes almost all the edge off recordings that can (and often do) sound edgy on other speakers, and yet it does this without robbing most instruments of their authentic tonal and dynamic character. Most, I say, but not all. The Quad 2905 will reproduce something like a thumb roll on a tambourine with a clarity that lets you hear the skin and every zil. Unfortunately, it also sometimes makes things like cymbal crashes and bells sound a bit tambourine-like—a little like they're being shaken or brushed rather than struck. There is a softness up on top—an airlessness and darkness and reduction of size and power delivery—that is a little reminiscent of CD (which, you may recall, is also bandwidth limited in the treble).

Fourth, the vocal and instrumental images projected by the Quad ESL-2905 don't have as much three-dimensional body as they do through great dynamic speakers. They sound a bit the way medieval art looks—exquisitely detailed and gorgeous, almost gold-leafed, in color, but somewhat flattened in perspective. By this, I don't mean that the soundstage of the Quads lack for

EQUIPMENT REVIEW - Quad ESL-2905 Electrostatic Loudspeaker

HOW ELECTROSTATS WORK (AND HOW QUAD 2905S WORK)

Although the theory behind electrostatic loudspeakers dates back to the nineteenth century, it took the invention of Mylar (in 1949) and, later, other plastic films to make the theory practical. Prior to this, what electrostaticians had lacked was an extremely lightweight, suitably flexible material capable of holding a constant charge to serve as the loudspeaker's diaphragm.

In a 'stat that diaphragm is impregnated with an electro-conductive material and then connected to a very-high-voltage power supply that keeps it at a constant charge. This charged, freestanding diaphragm is then sandwiched between two fixed perforated grids called stators, with air gaps (and usually some sort of additional protective spacers) between it and either grid of sufficient width to allow the diaphragm to move freely without actually contacting the stators (this would cause sparking or "arcing" and leave burn holes in the plastic membrane). The stators are fed the audio signal from your amplifier—one stator getting the positive half of the signal, the other the negative half—generating a varying electrostatic field between them. This field causes the charged diaphragm to vibrate like the cone of a dynamic speaker, moving forward and back in response to the fluctuating polarity of the audio signal.

The advantages of electrostatic drive are

many. Being extremely low in mass (often lower than the air that helps support it) and charged equally throughout its entire area, a 'stat's diaphragm moves very quickly and uniformly, increasing perceived transient speed and low-level resolution, and lowering harmonic distortion to the levels of some preamplifiers. In addition, since it doesn't need to be back-loaded by a sealed or ported enclosure, a 'stat doesn't have box coloration (or much of same); it doesn't need elaborate crossovers, either, since it is driven full-range.

However, there are also downsides to electrostatic drive. For one thing, electrostats are typically limited in bass response by low-frequency phase cancellation (due to their dipolar dispersion) and by the limited excursion of their diaphragms (see "arcing," above), which also reduces their dynamic range and scale. In addition, they are prone to "beaming" in the treble. (This highly directional projection of high frequencies is due to the large size of the driver relative to the "small" wavelengths it is attempting to reproduce.) Treble-beaming mandates that the listener sit in one spot, directly on axis with the 'stat panel (the so-called "head-in-a-vice" effect), and makes off-axis listening generally much less satisfactory.

Although America's Arthur Janzsen designed and marketed the first widely

depth or width or that the images within it are crowded into a single plane, as in a painting by Cimabue. On the contrary, the ESL-2905s have excellent lateral spread (though not as good as, say, a Magico Mini II), very good depth (ditto), outstanding clarity, astonishingly fine retrieval of ambient cues and of instrumental decay, and tight image focus. Rather, it is the individual images themselves that seem a bit "flat" in volume. All 'stats typically sound as if they miss some of the natural weight, body, and three-dimensionality that cones (and certain planar-magnetics) have, and the ESL-2905s aren't exceptions, although they are better than some in this regard.

Which brings me to two important qualifications to the reservations I've listed above. No, the Quad ESL-2905 could not be called a completely characterless loudspeaker. With its dynamic-range limitations above certain peak levels, its slight softness in the treble, its slight rise in the midbass and precipitous drop in the very low bass, and its slight flattening of three-dimensional body, it has a definite personality that will not suit all music equally well at all playback levels. But—and here is the first qualification—although this particular combination of "weaknesses" is unique to the ESL-2905s, the weaknesses themselves aren't; they are, in fact, inherent in electrostatic loudspeakers, every one of which suffers from them to varying degrees. Indeed, the ESL-2905 will play louder before breaking down, play lower before giving out, and play wider and deeper and with tighter focus and more dimensionality than almost all of its formidable competitors—and all of its Quad predecessors. Plus—and here is the second qualification to my reservations—the ESL-2905's merits (including the improvements I just

mentioned in areas of electrostatic weakness) far outweigh its demerits.

First and foremost, the Quad 2905s (played within its dynamic-range limits) is among the most beautiful-sounding transducers money can buy. Timbres are, if not purely right in the sense of being dead-center audiophile-neutral, as close to right as you can get in a pleasantly forgiving, naturally sweet transducer. Minus a smidge of top-end air, instruments sound almost exactly the way they sound from a middle-row seat in a big, rich, warmish hall like the Berliner Philharmonie. Strings, top to bottom, are, as noted, ravishingly beautiful; piano, also as noted, has the sparkle in the treble and the dark complex density of tone color and dynamic in the middle and bass octaves that it has in life (and simply incredible articulation throughout); winds are sweet and silvery on top, woody and resonant on bottom; brasses are golden (and very powerful on fortissimos—watch those SPL levels!). Voices, from Mario Lanza's powerful tenor on the Cilea aria "Lamento di Federico" on *Mario Lanza Live in London* [RCA]—and, no, when overall volume is set properly, his voice does not break up on crescendos on this, one of the single most consistently powerful and challenging vocal CDs I know of—to Maria Black's sad, dreamy soprano on "I Dream of Columbus" from *Looking Back* [Curb Records] sound as natural in color and texture as stereo systems can make them sound.

Which brings me to the second of the Quad ESL-2905's sterling qualities, and one of the other chief reasons that voices and instruments sound so real, so immediate, so "there"—the speaker's truly phenomenal low-level resolution. Outside the top treble and at the right volume levels, the ESL-

EQUIPMENT REVIEW - Quad ESL-2905 Electrostatic Loudspeaker

available electrostat in 1953—an add-on tweeter often used in combination with Acoustic Research’s AR-1 acoustic-suspension loudspeaker—it was Quad’s own Peter Walker (founder of that British company) and his colleague David Williamson who developed and marketed the first full-range electrostat, the fabled (and still highly esteemed) Quad Electrostatic Loudspeaker, popularly known as the Quad 57.

For his next speaker, the ESL-63, Walker devised what is arguably the most ingenious modification of electrostatic technology since he virtually invented the full-range electrostat with the Quad 57. To help solve the treble and bass problems of ‘stats, he attempted to turn the electrostat from a line source (with a line source’s beaming and phase cancellation) into a point source. By splitting the stators into concentric rings, each fed by a slightly more time-delayed signal, he made the speakers react to an input signal like a proverbial stone dropped into a pond, rippling their energy out in concentric waves from a theoretical “point” in space just about a foot behind the planes of the diaphragms. The result was a less beamy treble, a wider sweet spot (less of a “head-in-the-vice” effect), more controlled dispersion top-to-bottom, and somewhat better low-frequency response, although the 63’s “annular rings” and delay line didn’t really do much to solve the diaphragm excursion (and, hence, dynamic range) problems endemic to all electrostats.

Quad’s next efforts, the ESL-988/989, were

more evolutionary than the revolutionary ESL-63 and Quad 57. Both speakers added extra “bass” panels (a misnomer, since all ‘stats play full-range) to the ESL-63’s ingenious concentric-ring panels, augmenting output in the low end and improving dynamic range by adding sheer radiating surface-area.

The speaker under review, the Quad ESL-2905, goes even further in the direction that the ESL-988/989 pioneered, as well as taking off in its own directions. Almost five feet tall (with its tiptoes attached) and almost one hundred pounds per side (with weights attached), the ESL-2905 is far and away the largest and brawniest electrostat Quad has yet marketed. At the center of each speaker are two of Walker’s concentric-ring stators, surrounded top and bottom by six flat “bass” panels (three above, three below) that operate linearly (as opposed to the time-delayed concentric panels), adding, as per the ESL-988/989, even more radiating area to further improve bass and dynamics.

Save for the number of panels, none of this is very different than the ESL-988/989. Where the ESL-2905 steps off into the ether is in the sheer solidity of its construction. Influenced apparently by the way SME’s late Alistair Robertson-Aikman had beefed up his Quad ESL-63s by adding mass and rigidity to their frames, Quad decided to do a bit of the same. The ESL-2905s are the most massive and rigid Quads yet, using stainless-steel frames coupled to aluminum extrusions and wooden trim (finished, in the models I auditioned, in

2905 is perhaps the clearest, most finely detailed loudspeaker I’ve ever heard. When you can hear, without straining in the slightest whether the speaker is being played soft or loud, the timbre and dynamic of every string of Galvin Gallagher’s string bass on the aforementioned Mary Black recording, when you can follow the line of that chunky, squawking, mostly-buried-in-the-mix guitar or synth-guitar (equipped with what sounds like a wah-wah pedal), on the Alabama 3’s “Woke Up This Morning” from *Exile on Coldharbour Lane* [One Little Indian], when you are startled by that little mic pop as Dr. John clears this throat at the very start of “On a Roll” or by the utter lucidity of the bass guitar and purling organ on Irma Thomas’ “There Must Be A Better World Somewhere” from *Till The Night Is Gone: A Tribute to Doc Pomus* [Rhino], when you catch the reverb of every instrument on Marc Cohn’s “Ghost Train” from his eponymous album on Rhino, you know you’re in the presence of loudspeaker greatness. Even something as incredibly finely detailed as the Magico Mini II sounds a bit less discerning next to the ESL-2905.

The Mini II also sounds just a bit slower. Up to the limits of its diaphragm’s excursion, the ESL-2905 is among the fastest loudspeakers I’ve heard, with transient speed that makes even the very best cones (and the Mini IIs are the very best) sound a bit sluggish. Of course, with their very low mass and very low inertia drivers, all stats sound “fast,” but they also sometimes sound wildly uncontrolled due to ringing. Thanks in part to the rigidity of their frames and their point-source configuration, the ESL-2905s are both fast and focused, both hard-hitting and under control. No, they don’t have all the lifelike weight and body

of Mini IIs—it’s almost as if ‘stats are so fast that they leave these things behind, like bags forgotten on the platform in a race to catch a train. Still, they will reproduce a timp or bass drum with genuine room-shaking power (and the kind of speed on the mallet-strike that only ‘stats—and the real thing—seem to own). They’ll just reproduce them with a slightly reduced sense of instrumental size and dynamic scale, as they do with instruments or instrumental overtones in the top treble.

The Quad ESL-2905’s soundstaging is also excellent, though, once again, not as panoramic as, say, that of the Magico Mini II. As sound

SPECS & PRICING

Quad ESL-2905 Electrostatic Loudspeaker

Frequency response: 32Hz-21kHz (-6dB)

Impedance: 8 ohm nominal

Maximum continuous input voltage: 10V

Program peak (for undistorted output): 40V

Dimensions: 1430 x 695 x 385mm (add 25-55mm for feet)

Weight: 76.5 lbs.

U.S.

Price: \$12,000/pr

TAIGA LLC (U.S. DISTRIBUTOR)

310 Tosca Drive
Stoughton, MA 02072
(781) 341-1234
info@taigallc.com

U.K.

Price: £7,000/pr

QUAD ELECTROACOUSTICS

Huntingdon, Cambs
PE29 6XU
+44(0)1480 447700
quad-hifi.co.uk

CLICK HERE TO COMMENT IN THE FORUM AT [AVGUIDE.COM](#)

www.theabsolutesound.com

EQUIPMENT REVIEW - Quad ESL-2905 Electrostatic Loudspeaker

a glossy piano-black) for “enclosures” and adding, at the back of the panel, a heavy-duty aluminum strut that runs from the top rear of the speaker to the box which houses its transformers and crossovers at its base and acts as a brace. (There is an additional sizable weight that can be attached, with some difficulty as no instructions are included, to the bottom of the transformer box. Intended primarily to satisfy the “anti-tipping” requirements of the British audio industry, these weights serve the further function of adding mass to the entire framework—and I recommend their use.)

For the indubitable sonic improvements these extra drivers and the more rigid and massive and heavily braced “support structure” have made, see the review. **JV**

sources, they don’t (because of their tonal balance, combination of dispersion characteristics, and dynamic strengths and weaknesses) disappear as completely as a Mini II (or, as you will see in a few months, an MBL 101 X-Treme, which simply owns this territory). You don’t exactly hear a “box” with the ESL-2905s; it’s more like hearing a window—as if you’re hearing *through* them to an incredibly detailed soundstage peopled with incredibly realistic, slightly miniaturized instruments and vocalists, rather than as if they’re completely disappearing and leaving a soundstage and its inhabitants behind. In this regard, the Quad ESL-2905’s aren’t as “transparent” as the original MartinLogan CLSes were.

Bottom line. If you understand and can live

with the inevitable limitations of an electrostatic speaker, the ESL-2905 offers virtues that no other kind of speaker does. Given certain significant dynamic limitations, it will carry you closer to the absolute sound in truth of timbre, fineness of texture, clarity of line and detail, transient speed, and lifelike presence than most cone loudspeakers (Mini IIs excepted). It is not the ideal speaker for stadium rock, for electronica, for drum-and-bass, or for power music of any kind played at true concert-hall or rock/jazz-club levels. But for the smaller-scale acoustic music that I favor—for chamber, small combo jazz, folk, blues, and much rock—and even for the larger-scale music that I often listen to (albeit played back short of concert-hall volumes on fortissississimos), it is superb. Nothing else plays more realistically at low-to-moderate volumes, regardless of music.

Though not without character of their own, the Quad ESL-2905s are the best electrostatic loudspeakers I’ve yet heard. They immediately join the very small rank of truly great transducers that I’ve auditioned. They are to electrostatic technology what the Magico Mini IIs are to cone technology, the Symposium Acoustics Panoramas to planar-magnetic technology, and the MBL 101 X-Tremes to omni technology—benchmarks. Much as I’d like to own the \$30k Mini IIs, the \$100k Symposium Pans, or the \$200k 101 X-Tremes, unless I start knocking over gas stations again I’ll never be able to afford either. I *could* afford the \$12k Quad ESL-2905s and can honestly say that, as of this writing, they are the speakers I would buy if I were buying a high-end loudspeaker. For those of you with taste in gear and music like mine, they are must-hears. **tas**





Vienna Acoustics "The Music"

Redefining the art of the loudspeaker

Jim Hannon

Large, full-range, multi-driver loudspeaker systems can be thrilling and a lot of fun, yet in my experience, they frequently suffer from a lack of coherence between at least some of their drivers. My former Infinity Beta and RS1B speaker systems, with their separate woofer towers, generated plenty of goosebumps, yet their lack of coherence ultimately destroyed the illusion of a live performance for me. Modifications to the external crossovers, cabinets, and drivers helped, but not enough to keep me from parting with them. Indeed, getting woofers or subwoofers which plumb the depths to mate seamlessly with smaller quicker drivers is a major design challenge. Full-range electrostatics, as well as some highly regarded two-way dynamic systems, solve the coherence problem at the expense of bottom-end extension and weight, and most limit dynamic output. I've typically accepted these trade-offs and voted in favor of coherence over goosebumps.

However, as subwoofer advocates can attest, that bottom octave not only gives the performance a solid foundation and dynamic impact, but additional spatial cues which help soundstaging and musical realism. When I heard Vienna Acoustics' new "The Music" loudspeaker for the first time at CES 2008, I was mightily impressed that here was a full-range, multi-driver speaker system that provided plenty of goosebumps without sacrificing coherence, plus it also had an extraordinarily expansive and deep soundstage. Having lived with *The Music* for many months, and then again for several more after it returned from

an appearance at a trade show, my appreciation for this brilliant loudspeaker has grown on many levels.

The Music occupies the uppermost rung in Vienna Acoustics' new Klimt Series of loudspeakers, named for the Viennese artist, Gustav Klimt. The connection between art and music is intentional, as *The Music* advances the art of loudspeaker design, while also being quite an artistic statement, in both physical appearance and performance, staying true to "the music" and, in many respects, preserving the illusion of attending a live concert. It is a beautifully finished

EQUIPMENT REVIEW - Vienna Acoustics “The Music” Loudspeaker

VIENNA ACOUSTICS’ REVOLUTIONARY DRIVER—THE IDEAL REALIZED?

Imagine a dynamic loudspeaker employing a revolutionary flat midrange driver that covers the entire range of the human voice and works seamlessly with a handcrafted, coincident silk dome tweeter without producing any objectionable frequency anomalies. What you’d have is a time-accurate and phase-coherent point source covering the range where most music lives, resulting in a presentation with truth of timbre, an incredibly broad and deep soundstage, and an ultra-wide “sweet zone.” It certainly sounds too good to be true, but Peter Gansterer and his team at Vienna Acoustics have achieved it with their Klimt Series loudspeakers, and the results are stunning!

Driver arrays that replace the dust cap of the midrange cone with a tweeter and align the centers of both units coincidentally have been around for decades. Perhaps the best known is the Uni-Q tweeter/midrange array from KEF, now in its tenth generation, according to the KEF Web site. Two speakers utilizing coincident driver arrays, the KEF Model 207/2 and TAD Reference One, have been highly praised recently in these pages by AHC, and I have been impressed by their respective performances, along with that of the TAD Compact Reference One Monitor, at trade-shows. Along with Vienna Acoustics’ Klimt series, these concentric-array speakers share a lot of compelling sonic attributes, most notably in projecting an

expansive soundstage with subtle spatial cues across a wide listening area, in time alignment, in enhanced coherence, and in better matching of directivity, when compared to their more traditional, “separated” driver counterparts.

The heart of Vienna Acoustics’ remarkable The Music loudspeaker is a patented 7” flat concentric midrange driver that is both an engineering and sonic breakthrough. This is not just marketing speak, but a major achievement, aided by advances in materials science and the skillful application of computerized Finite Element Analysis (a numerical modeling technique using calculus to obtain approximate solutions to vibration systems, and typically used to solve complex elasticity and structural-analysis problems). Combined with its first-order crossover, for greater phase coherency, this flat midrange with coincident tweeter is housed in a separate sealed enclosure, which not only helps to extend the midrange driver’s range but completely decouples it from the bass cabinet to preserve clarity and natural musical timbre. Moreover, it can be swiveled both horizontally and vertically via an ingenious pivoting mechanism, allowing minute adjustments for both rake and toe-in. The ability to aim this top cabinet separately from its lower one, housing three nine-inch bass drivers and a Murata super-tweeter, gives The Music a lot of flexibility, helping to lock-in the

speaker, with a relatively small footprint that does not dominate the listening or living room, but also breaks new ground for Vienna Acoustics, propelling the company with great velocity into the reference loudspeaker ranks. Its remarkable flat, concentric, Spider-Cone midrange driver with a coincident silk dome tweeter is a stunning technical achievement (see sidebar), providing *The Music* (and presumably other speakers in the Klimt Series) with an absolutely breathtaking soundstage and the core of a level of coherence difficult to match by any full-range, multi-driver system. *The Music* is thrilling, dynamic, eminently musical, and truly full-range, with deep-bass extension and weight, as well as highs that go out to the stratosphere.

In my experience, if a transducer can reproduce the human voice coherently over its entire range, from lyric soprano to bass, limitations elsewhere in the frequency spectrum can be more easily tolerated. Full-range electrostatic speakers from SoundLab, Quad, and MartinLogan pass this vocal coherence test with flying colors, and so does *The Music*—it is very close to “being of one cloth.” What makes *The Music* different from most fine multi-driver systems is that voices come from a single point source in a phase-coherent time plane that is devoid of a crossover throughout this critical range. The Vienna Acoustics’ flat, concentric midrange driver alone covers an amazing seven octaves of music, which closely approximates the bandwidth of the human voice. It is skillfully coupled with a handcrafted silk dome tweeter at its center that extends beyond 20kHz. This remarkable coincident planar midrange/tweeter array, housed in a separate, enclosed cabinet that Vienna Acoustics calls the “Music

Center,” is a major sonic breakthrough.

Indeed, these Vienna Acoustics speakers certainly have an engaging, almost irresistible way with both male and female voices. I love to listen to vocal recordings to test loudspeakers, because it’s so easy to detect coherence problems and frequency anomalies. To help aid in this evaluation, I listened to several vocalists, including: Holly Cole on “I Can See Clearly Now,” Peggy Lee on her signature tune “Fever” from *The Best of Peggy Lee* [Capitol], Mirella Freni on *French and Italian Opera* [EMI], Ella Fitzgerald on *Let No Man Write My Epitaph* [Verve/Classic



EQUIPMENT REVIEW - Vienna Acoustics "The Music" Loudspeaker

soundstage and achieve better tonal balance and coherence.

While mounting a tweeter coincidentally within the midrange driver produces numerous sonic benefits, it does present other design problems that need to be overcome. With the tweeter placed at the throat of the cone, time alignment suffers and horn loading results, which can produce "cupped-hands" highs or squawks. Another problem is that the addition of the tweeter to the midrange driver increases its overall mass, which can affect transient quickness. Over time, designers of coincident arrays have used lighter materials for both the midrange and tweeter drivers; they have also shortened the depth of the midrange cone and flattened its surround. However, unless the midrange driver is completely flat, phase distortion occurs, as the output of the cone pumps the highs unevenly at the listener, resulting in a somewhat ragged on-axis frequency response. While a crossover can correct the irregularities in frequency response, it also alters the character and natural launch of the sound, thus affecting the purity of the midrange.

So why haven't designers of coincident midrange/tweeter arrays just flattened out the midrange driver to eliminate these somewhat deleterious cone effects? The primary reason is that the conical shape of most conventional drivers provides the stiffness needed to generate sufficient output and frequency response; flat drivers are, by comparison, too soft and pliable. The cone also acts as a wave-

guide for the coincident tweeter. However, Peter Gansterer saw the design challenges associated with a flat midrange "cone" as opportunities. Indeed, some would suggest that he has been evolving his reinforced-cone driver technology towards this goal since the introduction of his first Musi speaker in 1991. To stiffen its flat midrange driver, he used FEA to determine where to place its Spider-Cone web—essentially a lightweight net to reinforce the driver and increase its stiffness. He also employed Vienna Acoustics' proprietary X3P "self-quieting" driver material, which provides soft inner damping but adds glass fibers in the molding process, for even more rigidity without increased mass. Adding a "self-quieting" silk dome coincident tweeter ensured that acoustic energy would be effectively dissipated across the entire surface of the array.

Voilà, problems solved! Well, not so fast. Peter and his team spent several years honing at least five successive pre-production models trying to get everything right, even changing seemingly small related materials elements like glues to improve the sound. With such a sophisticated driver, there were also considerable production problems that had to be solved, but eventually these were too overcome, and the flat midrange/tweeter array became a reality.

Because of the extended low-frequency response achieved with the flat midrange unit, Gansterer was able to use a relatively low crossover point (approximately 100Hz) between it and the three new 9" Spider-Cone woofers.

Records], Nick Drake's *Pink Moon* [Universal Japan], James Taylor on the recent *Sweet Baby James* reissue [Warner Bros.], as well as several operas including Verdi's *Aida* [Decca] and Puccini's *La Bohème* [London]. On each and every recording, I noted that the voices were precisely focused and continuous across their respective ranges, without any chestiness or bloat in the upper ranges of male vocals, or excess sibilance on female ones. Better still, voices had a musical realism and natural tonal balance that avoided being either too clinical or too warm. Mirella Freni's and Ella Fitzgerald's voices were "to die for," beautifully portrayed with no stridency even during wide dynamic swings, and both Holly Cole's and Peggy Lee's had an engaging openness, clarity, and sense of life. On the *Aida* recording, both male and female soloists were distinct while still being nicely integrated with the whole, and the layering of massed voices with the full orchestra was stunning.

Yet, making the most of its superb coincident midrange/tweeter array doesn't begin to tell this loudspeaker's whole story. Many promising hybrid designs have been undone by the mating of a 'stat or some exotic wide-bandwidth driver with dynamic woofers that just can't keep up with it, impinging on the purity of the midrange and/or changing the timbre of instruments as the sound moves from one type of driver to another. However, the transition from the deep bass to the midrange in *The Music* was also quite seamless—far better than I have been able to achieve over decades of trying to match subwoofers with either 'stats or mini-monitors. Paul Tortelier's cello on the Brahms Double Concerto [EMI/ Testament], Ray Brown's string bass on *Ben*

Webster Meets Oscar Peterson [Verve], and Joe Mondragon's bass fiddle on Peggy Lee's "Fever" were first-rate and eerily realistic, maintaining timbral coherence throughout their ranges (and in the Brahms from the highest notes of the violin to the lowest of the cello) with wonderful transient quickness. Indeed, the overall speed of its bass

SPECS & PRICING

Vienna Acoustics "The Music" Loudspeaker

Type: 3-way loudspeaker system employing integrated sub-woofers plus super-tweeter

Frequency Response: 22Hz–100kHz

Sensitivity: 91 dB

Impedance: 4 ohms

Power Requirement: 50W minimum, 500W maximum

Driver Complement: One midrange/treble coincident driver (7" Vienna Acoustic Flat-Spider-Cone with 1" vented neodymium-magnet silk dome); one Murata 0.5" super-tweeter; three 9" Vienna Acoustics spider-cone bass drivers

Dimensions: 10.75" x 50.98" x 24.80"

Weight: 180 lbs. each

U.S.

Price: \$27,000/pr

SUMIKO

2431 Fifth Street
Berkeley, California
94710
(510) 234-0182
sumikoaudio.net

U.K.

Price: £19,750/pr

AUDYUS LTD

Unit 5, Ermine Business
Park, Huntingdon,
Cambridge PE29 6XY
+44(0)1480 270550
audyus.co.uk

CLICK HERE TO COMMENT IN THE FORUM AT [AVGUIDE.COM](#)

www.theabsolutesound.com

EQUIPMENT REVIEW - Vienna Acoustics "The Music" Loudspeaker

Thus, he was also able to avoid a crossover throughout the entire practical range of the human voice. Like the flat midrange driver (sans some glass), these low mass, but incredibly stiff, bass drivers are composed of a similar, yet stronger, X3P material, and benefit from a similar lightweight reinforcing web, developed and positioned on the underside of the drivers using FEA. While all three woofers work in parallel, the first has its own chamber within the bass cabinet, and its primary job is to match the performance of the flat midrange driver. The other two woofers, which are ported out the back of the speaker, add bass weight and reach down below the 20Hz range.

This design approach—utilizing a wide bandwidth, flat midrange/coincident tweeter array, first-order crossovers, Spider-Cone technology, and very similar low-mass, self-quieting driver materials—helps give *The Music* its outstanding coherence, soundstaging, clarity, transient quickness, and timbral accuracy. Add to this a Murata super-tweeter, and *The Music* enjoys seemingly unlimited high-frequency extension and a more life-like presence. **JH**



was matched by the amazing transient speed of *The Music* throughout its entire range, giving the speaker tremendous rhythmic drive and a sense of “aliveness.” Reaching down even further, the low bass notes on Hans Zimmer’s scores on the soundtrack recordings for *Black Hawk Down* and *Gladiator* [Decca], had weight, dynamic punch,

and control, producing a spaciousness that was awe-inspiring, while also validating the speaker’s rated 22Hz low-frequency extension.

Even more stunning than *The Music*’s remarkable coherence was its enormous, focused, deep, and layered soundstage with well recorded source material like Miklós Rózsa’s score to *Ben Hur*

[Decca Phase Four], Gil Evans’ *Out of the Blue* [Impulse/Alto], and Mozart’s *Requiem* [Deutsche Grammophon/Speakers Corner]. Performers were precisely arrayed across the stage, giving the music a wonderful sense of spaciousness. Instruments like woodwinds floated in space and were stable as they descended the scale and moved back up again. Mass voices had an engaging layered depth that one experiences in a live performance and were literally wall-to-wall on the Rózsa. With *The Music*, I was able to “see” the entire stage, from left-to-right and front-to-back.

This level of soundstaging and imaging performance is what one would predict with a coincident driver array approximating a perfect point source, and *The Music*’s soundstaging is as good as it gets from the plane of the speakers to the back wall. In contrast to many fine

Another outstanding sonic attribute of *The Music* was its ability to realistically reproduce the leading edge of transients. Rim-shots, cymbal crashes, strummed guitars, plucked stringed instruments, and double-and-triple tongued brass had lightning quickness without overhang. I felt as if some tympani strikes on power orchestral music might have knocked me down had I been standing and certainly provided plenty of goosebumps. On the Gill Evans recording, the three trombones had that initial “ping,” “blat,” and “spit” that made them feel as if they were in the room.

In addition to its reference-quality soundstaging and superb coherence and transient quickness, *The Music* delivered the sonic goods in many other areas. It extracted micro-fine layers of inner detail, like Martha Argerich’s fingernails clicking on

The Music is priced in an increasingly competitive segment of the market, yet it also compares favorably with reference speakers costing far more

loudspeakers, the soundstage is not truncated at the back of the stage, nor is there a narrow sweet spot where only one person can experience this spectacular imaging. Like other top models featuring coincident driver arrays, most notably from TAD and KEF, *The Music* accommodates and encourages a broad range of listening positions, like a great concert hall. Soundstaging is even quite respectable while one is standing, which you’re likely to do, as the rhythmic drive and snap of *The Music* often make listeners want to get up and dance.

the ivories, Oscar Peterson talking to himself and singing along while playing, audience whispers on live recordings, and Xuefei Yang’s finger movements on the neck of her classical guitar. Its ability to accurately replicate the natural timbre of instruments and voices was also uncanny. This Vienna Acoustics flagship was equally at home with all types of music, from small-scale, intimate works to power orchestral, big band jazz music, and electronica. It convincingly conveyed the weight, dynamic range, tonal balance and power of the piano, as well as its ability to seduce with a

EQUIPMENT REVIEW - Vienna Acoustics “The Music” Loudspeaker

gorgeous singing tone.

The formidable strengths of this remarkable speaker were even more evident when compared to a live performance. During the review period, I had the considerable good fortune to be given tickets to the best seats in the house at a San Francisco Symphony performance of Mahler’s Eighth Symphony conducted by Michael Tilson Thomas, arguably this country’s greatest conductor today. I listened to the famous Solti Decca recording on *The Music*, both prior to and right after the concert, and subsequently using more powerful electronics in an even larger listening room. Whereas the live performance was a musical “peak experience,” the speakers were able to replicate so many of the attributes of the live performance that I was shocked—most notably the natural timbre of instruments and voices, along with the width, depth, and height of the entire soundstage. *The Music* accurately reproduced the top end shimmer of the violins, along with their “feathery” delicacy and bite. It handled all the complex interactions among choruses, orchestra, and soloists without getting confused. The mallet strikes against the tympani were well preserved and nearly as thrilling as in life. The soprano soloist and the piccolo cut through the mass of performers in the recording, much as they did in the live performance. While the speakers could hardly be expected to move the amount of air these hundreds of voices and instruments generated during the live performance, particularly the pressure one feels against the breastbone on *fortissimos*, *The Music* conveyed the large dynamic swings of the *Symphony of a Thousand* (well, in this case, about 400) much better than I expected. In the larger

listening room, with far beefier amplifiers, the gap between the recorded and live performance was closed still further, most notably improving the sense of scale, drama, and ease, as well as adding a cushion of air behind the massed strings. As in the live performance, the sound

through *The Music* was big, bold, dynamic, and supremely musical, with plenty of goosebump moments, as when the sudden chime-strikes sent shivers down my spine.

Given its superlative performance across the board, it was difficult to find fault with *The Music*.



This speaker was like a chameleon—minor flaws I thought were in *The Music* were ameliorated by changes in electronics, listening room, or recordings. Although it was quite revealing, and did not mask problems elsewhere in the system, *The Music* sounded marvelous with a wide variety of recordings, not just a treasured few. Admittedly, I was aware of more surface noise on some of my more well-worn analog recordings, but I also heard a lot more of what was buried deep in their grooves. With its Murata super-tweeter, *The Music* has seemingly unlimited upper-end extension and air but also more lifelike presence. It is less warm than what might be characterized as Vienna Acoustics’ house sound, but its neutral tonal balance is more like the real thing. Lastly, while the speakers seemed to just disappear, I was occasionally reminded I was listening to a box enclosure.

A few caveats are also in order. With *The Music*’s ingenious dual-pivoting mechanism for its top enclosure, you can really lock in the soundstage and achieve a neutral tonal balance. However, don’t think you can plop this loudspeaker down where you’ve placed others in your listening room and extract all the performance this loudspeaker is capable of producing. A dealer trained in Sumiko’s technique of loudspeaker placement, where the bass from the left speaker is optimized first, is invaluable here. In my listening room, the speakers were pulled farther forward and apart than what one would expect using the “rule of thirds.” The top modules were pointed right at my ears, whereas the bottom cabinet, housing the woofers and Murata super-tweeter, were directed at my shoulders.

Also, don’t judge these speakers until the flat

EQUIPMENT REVIEW - Vienna Acoustics “The Music” Loudspeaker

midrange driver with its coincident soft dome tweeter has had considerable time to break in. Until then it will sound a bit too thin with a slight plastic coloration in the upper midrange, but given time to settle down, *The Music* begins to bloom. With its relatively high sensitivity (91dB) and 4-ohm impedance, the system can be powered to great effect by lower-powered amplifiers. I used the stellar 45-watt per channel Pathos Inpol2 integrated amplifier for most of my listening, and it was a wonderful match. Certainly, in a room larger than my 22’ by 16’ space, I’d go for more amplifier power. Driven by the Pass Labs X600 amplifiers in a big room, the speakers were really able to breathe, the soundstage was even more expansive, and the sense of scale and dynamic range increased.

The Music is priced in an increasingly competitive segment of the market, yet it also compares favorably with reference speakers costing far more. If you feel you should have to spend more on a reference speaker, I might suggest adding a REL Studio III subwoofer (with a cross-over point at 22Hz so you don’t impinge on *The Music*’s coherence) for even more concussive impact and a greater sense of the hall from the plane of the speakers to the listening position. Given how musically satisfying *The Music* is by itself, this might appear to be wretched excess, but the overall performance of this Vienna Acoustics/REL combo is even more amazing.

Vienna Acoustics’ *The Music* loudspeaker system is aptly named, because it is so true to the music. With its extended, flat midrange driver with coincident tweeter, it pushes the performance envelope on multiple fronts. Here’s a thrilling

full-range loudspeaker of reference quality that supplies plenty of goosebumps, but also has ’stat-like coherence, superb time and phase accuracy, and breathtaking soundstaging. It is an accurate, yet musical speaker with fast transients, precise layered imaging, and articulate, extended bass. You may have noted that I frequently used the phrase, “just like in a live performance,” when describing the sonic prowess of this Vienna Acoustics flagship loudspeaker. And that’s just it. *The Music* compares surprisingly well to a live performance, and that’s very high praise. **tas**



Wilson Audio Specialties Sasha W/P loudspeaker

It's Good to be King

Alan Sircom

The king is dead, long live the king! Wilson Audio's introductory tag-line to its new Sasha (technically, Sasha W/P) loudspeaker could be viewed as supreme arrogance or high hubris. One problem though, it happens to be true.

The Sasha is the replacement to the Wilson WATT/Puppy, a product that — above all others — has earned the right to be called 'king' among audiophile loudspeakers. First sold back in 1986, the Wilson Audio Tiny Tot (soon joined by its woofin' Puppy partner) went on to become the most successful \$10,000+ loudspeaker in history, and became a fixed point in the audiophile firmament. It set the tone for other Wilson designs, bigger and smaller. Recently though, the direction-finder in Wilson Audio sound came from elsewhere in the range. Each successive change made the W/P sound more integrated and lively and brought it more in line with the sort of sound made by other Wilsons, but the bright star of the Wilson line cannot spend its life playing catch-up to products like the Sophia or the MAXX.

In the Sasha, what could have been just another iteration of the WATT/Puppy concept (it would have been 'System 9') has undergone a root-and-

branch reworking. The human brain's ability to form associations and patterns is a remarkable thing, but it can be prone to failure (optical illusions are a perfect example of this). A quick glance at the Sasha in isolation will see similarities between this new speaker and the WATT/Puppy products it replaces and we will naturally make associations between the two that simply aren't there. Because there are so many changes between the Sasha and what went before, it's almost easier to point out the bits that aren't changed rather than list what's been swapped: the cones in the bass drivers, the range of 'Wilson gloss' finishes (our ones were finished in an almost black midnight blue) and — I think — the rear port and spikes are held over from what went before. Pretty much everything else is a new speaker.

A fair chunk of Sasha — the 25.4mm inverted titanium-foil dome tweeter and the proprietary 178mm paper/carbon-fibre composite cone

midrange driver, for example — are a direct 'lift' from Wilson's MAXX 3. These new units were chosen after a moment of audio epiphany at the Musikverein Concert Hall in Vienna by David Wilson. Other parts are total newcomers, such as the cabinet. Not only is it made from a new kind of material, developed out of the X (cellulose/phenolic composite) and M (wood fibres in phenolic resin) materials found in previous Wilson speakers. The new cabinet material doesn't have a capital letter name, but features as yet undefined natural fibres set in a phenolic resin laminate. This is suggested to make for a low coloration cabinet material with a particularly good midrange.

The new material has allowed Wilson to completely redesign the chassis, making for increased volume in both cabinets and a head unit with more nonparallel lines. Inside, there's a new bracing design. All of which helps aid rigidity and minimise resonance and standing waves. Those



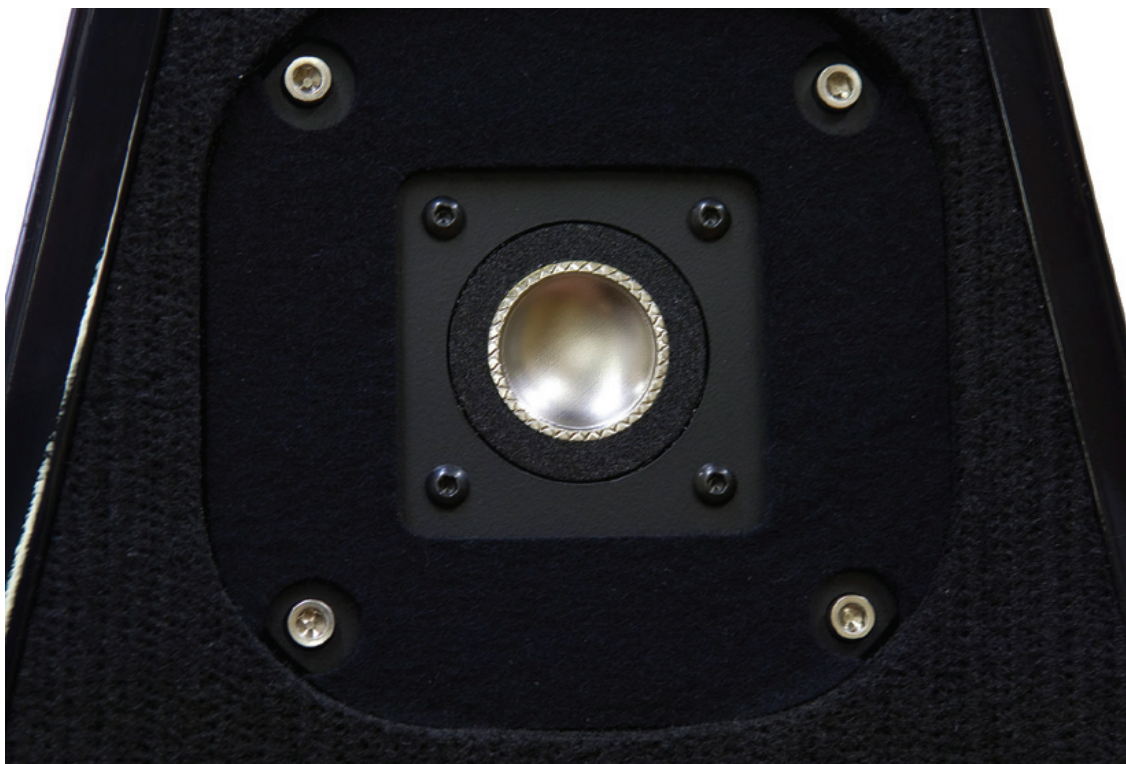
EQUIPMENT REVIEW - Wilson Audio Specialties Sasha W/P loudspeaker

surviving woofer cones are backed up by a new motor and magnet arrangement, which basically means more magnet for the same cone mass.

The crossover has been moved from inside the mid/treble head unit to a rear panel at the top of the bass unit. The panel allows components in the crossover to be altered to suit specific rooms, and also gives the midrange driver more legroom,

and supposedly more midrange clarity. One legacy point that is missing from both the Sasha is the grab-handle at the back of the WATT. This marks the end of the WATT's vestigial standalone monitor role; the new head unit is adjustable to better integrate the speaker with the room and the listening position, but it's got nothing to do with being used as a solo speaker.

Because your attention is focused elsewhere, like on the dynamic range, the solidity, or the sheer exuberance of the sound, that reference-class imaging passes almost unnoticed.



On paper at least, the end result of all this change is just 2Hz more in the bass. The relatively high sensitivity (91dB/W/m) is tempered somewhat by the impedance plot. Although nominally a four-ohm load, the Sasha is claimed to dip to 1.8ohm minimum impedance at 92Hz. In practice, this means the Sasha is not a friend of the Single-Ended Triode brigade and does place a limit on the choice of amplifiers used with this speaker, but the sort of amplifier one would normally consider a comfy partner for a speaker costing nigh on £28,000 will have no problems handling the Sasha. And when used with a pair of Krell Evolution 900 monoblocs, which deliver upwards of 900W per channel, you have nothing to worry about, except losing hearing. The rest of the system in this case was a four-box Krell Evolution Two twin mono preamp and a Metronome Kallista CD transport and C2A digital converter. Heady, bank account draining stuff indeed. It was playing into a room about 18x24x9, with the main listening position about 10' into the room. The speakers were about four feet from the rear wall, but only two-and-a-half feet from the sides and had about a 20° toe-in.

The Evo 900s demonstrated one of the joys of the Sasha; no limits imposed. With nigh on a Krellowatt being pushed up its speaker terminals, the Sasha has the throat needed to roar, but does so with subtlety as well as gusto. you can play at the sort of levels that cause rimshots and massed choirs to leave your hearing relaxing between notes and yet allows you to hear the springs beneath the snare resonating and lets you pick out individual singers in the mix. Normally, this is an either/or situation; either you get the full-blast sound, or you get the subtlety.

Here, you get both.

It's also a bigger speaker squeezed into a Sasha-sized box. Those who know their way around the Wilson portfolio are in for a surprise here. "Hey, where did you hide the MAXX'es?" will likely be the stock question. It's got most of the bass dynamics, bass depth, almost physical

SPECS & PRICING

The Wilson Audio Sasha loudspeaker

Type: Three-way, two cabinet floorstanding loudspeaker

Drivers: 2.54mm titanium-foil inverted dome tweeter; 178mm paper/carbon-fibre composite cone midrange 2x 203mm poly-coated woofers

Frequency Response: 20Hz-22kHz +3dB

Sensitivity: 91 dB/w/m at 1kHz

Impedance: 4 ohms nominal, 1.8 ohms minimum at 92 Hz

Minimum Amplifier Power: 20 watts per channel

Dimensions (WxHxD): 356 x 1118 x 539mm

System Weight: 89.36 kg

U.S.

Price: \$26,900/pr

WILSON AUDIO SPECIALTIES

2233 Mountain Vista Ln,
Provo, Utah 84606
(801) 377-2233
wilsonaudio.com

U.K.

Price: £28,046/pr

ABSOLUTE SOUNDS

58 Durham Road,
London, SW20 0TW
+44 (0)20 8971 3909
absolutesounds.com

CLICK HERE TO COMMENT IN THE FORUM AT [AVGUIDE.COM](#)

www.theabsolutesound.com

EQUIPMENT REVIEW - Wilson Audio Specialties Sasha W/P loudspeaker

You are here

solidity and power of the MAXX models — as well as its utterly transparent midrange and soaring top end — but in a smaller package. You get more from the MAXX, but the gap has closed considerably with the launch of the Sasha. In fairness, much of this is based on exposure to the MAXX 2; I'm pretty far from instrument rated on the new model.

Recently, I highlighted a step-change in audio, that I called the difference between 'Hummers' (big and bling) and 'Humblers' (forget the speakers, the music impresses first and foremost). The Sasha is very much on the Humbler side of the equation. It scales beautifully — swap a Big Band sound for a fey girl-with-guitar and the soundstage accommodates accordingly. Now move from breathy songstress to full-on dub reggae then to large-scale orchestral work, a jazz trio, live rock at full tilt and all points in between and the Sasha adapts beautifully. You don't get eight-foot tall singers or an inch-high second violin... everything played has an appropriate sense of scale. Wilson has been moving the W/P design further from the enlarged sound of the footie score models (WATT 3/Puppy 2, Caledonians vs Queen of the South...match abandoned due to catastrophic pie failure) for some time.

A lot of this comes from the work done (both in the cabinet and the use of that MAXX driver) to improve the midrange. The W/P always had a good, clean and extended treble (it's got better, cleaner and possibly more extended in the Sasha, but the improvement is more like a developmental progression than a jump) and has been well-respected for its big, powerful bass (once again, a developmental improvement), but the midrange was always a big part of the Wilson character. And the move to the Sasha brings the Wilson midrange in line with the MAXX above and the Sophia below. It gives the Sasha something of an electrostatic-like transparency to the midrange.

That beacon for audiophiles — imaging — is excellent, but curiously it will take you some time to notice this. Because your attention is focused elsewhere, like on the dynamic

range, the solidity, or even the sheer exuberance of the sound, that reference-class imaging passes almost unnoticed. Part of this is because the overall performance is so very, very natural — the 'holographic' cliché doesn't apply here, because the sounds are too controlled and solid for that.

We've supposedly been ticking off all the boxes for superlative loudspeakers for some years now, and the Wilson WATT/Puppy ticked them all a long time ago. What's left on offer and what makes this one so much better than what went before? Along with the bigger speaker in a smaller box and the more open than ever midrange, the Sasha does something very, very few loudspeakers can do, irrespective of price. It manages to reconcile the world of the audiophile with that of real people. Audiophiles choose — and design — products in adherence to Harry Pearson's benchmark of the sound of live, unamplified music occurring in real space. However, there are people (a lot of people) who do not possess a single piece of live, unamplified music and typically find systems designed for audiophiles to sound 'boring'. Products — especially loudspeakers — that reconcile the two are extremely rare. The Sasha is one of the very few exceptions.

The reconciliation process is not perfect — play a compressed or badly-mastered recording and the Sasha keeps it distinctly in the sow's ear region. But what it does well is exactly what the predecessor was praised for, only more so. The studio sound that Wilson tried for with the WATT/Puppy is here in full effect. Play the Sashas and you are in the control room, listening to the sort of sound the producer and engineer always wanted you to hear.

Although the Sasha changes are not necessarily driven by increased competition, the days of Wilson Audio having this market more or less to itself are long gone. And the new speaker gives us a perfect opportunity to remap the high-end landscape, to see just where products like the Sasha fit in. Of course, there's no easy way to compare large, top-grade loudspeakers. This is because it's almost impossible to compare them side-by-side; it can take as much as five



EQUIPMENT REVIEW - Wilson Audio Specialties Sasha W/P loudspeaker

days just to install, set-up, fine-tune, bed in and repackage a pair of speakers like these, and often the best place in the room for one pair of speakers is the same place for another. But, we can draw parallels and this reasserts Wilson's place at the acme of speaker design at this price. It was never really in doubt.

Broadly speaking, there are four equally valid 'sounds' at this price level; there's 'music as art', 'music as magic', 'music as science project' and 'music free from influence' loudspeakers. Wilson has always been firmly in the last camp, and with the Sasha it digs its heels in still further. The Sasha is not a magical window on the composer's soul, a talisman to make all music wonderful or a product that lays music bare. It does all these things, but it's principally the studio monitor we all wish every studio used, because they'd make better music in the process. It will expose weaknesses in the recording, in the performance and in the audio system with stark clarity, but curiously these don't detract from the enjoyment, any more than the surface noise on a good LP played through a top turntable stops you from enjoying the music.

Sasha highlights a difficult admission for reviewers. We are apt to look at incremental changes in designs as dirty great changes in sound. It comes from many of us getting our degree in Reviewology from the Centre for the Easily Impressed. The problem arises when we actually happen across a genuine large-scale change in sound and we end up like the (middle-aged, beer gutted) boy who cried wolf. And Sasha is a dirty great big change in the right direction for the W/P system. In fairness, previous W/P designs did offer distinct improvements over earlier models; however some — like System 6

— were bigger and more significant than others. Sasha is the biggest change of them all.

So, should you turn in your WATT/Puppy system for the Sasha? Not necessarily; the W/P remains one of the few legends in high-end and that reputation is still richly deserved. Just one thing though; if you aren't planning to upgrade soon, you might want to steer clear of hearing the Sasha. Even the briefest exposure may make you change your mind about upgrading.

Le Roi est mort, vive le Roi! +

ABSOLUTE ANALOG.



THIS FREE BUYER'S GUIDE INCLUDES:

- 29 EXPERT REVIEWS OF TURNTABLES, PHONO CARTRIDGES, AND VINYL ACCESSORIES
- HIGHLIGHTS OF PROMISING ANALOG PRODUCTS ABOUT TO BE INTRODUCED
- 22 TOP PICKS OF PHONOSTAGES AND TONEARMS
- THE 100 BEST SOUNDING LPS...AND MORE!

YG Acoustics Kipod Studio Loudspeaker

The Best Loudspeaker on Earth?

Robert Harley

YG Acoustics is a relatively young company (founded in 2002) that has made quite a splash in the upper end of the loudspeaker market. The firm has attracted some fervent supporters along with much controversy surrounding its key marketing slogan, "The Best Loudspeaker on Earth. Period." This statement, along with the products' pricing and unusual build, tends to polarize audiophiles.

The Kipod Studio reviewed here is YG's least expensive full-range loudspeaker, priced at \$38,000 per pair. The Kipod Studio's design brief was to bring the same level of performance found in YG's \$107,000 Anat Professional to a more compact design, with the only trade-offs being bass extension and maximum playback volume.

The Kipod Studio is a two-piece system: The Kipod Main Module is coupled to a woofer enclosure that also serves as a stand for the Main Module. The Main Module is a small two-way speaker in a sealed enclosure that is available on its own for \$17,000 per pair. The Kipod Main Module is transformed into the Kipod Studio with the addition of the \$21,000-per-pair woofer, which can be ordered with or without integral power amplifiers (the price is the same). In my mind, the Kipod Studio is a single loudspeaker system that

happens to be housed in two enclosures. Indeed, the Kipod Main Module bolts to the woofer enclosure to form a single structure. Nonetheless, one can buy the Kipod Main Module and later add the woofer for the same price as purchasing both together.

The sealed woofer module has a truncated pyramid shape that houses a 9" ScanSpeak woofer in the front and an amplifier panel in the rear. This panel has a variety of controls for tuning the system to a room. These include woofer level, crossover frequency, equalization frequency, and equalization level. Single-ended and balanced line-level inputs are provided. The line-level input is fed from a second output from your preamplifier. Note that your preamp needs two main stereo outputs, one to drive the woofer modules and one to drive your main power amplifiers. The integral



EQUIPMENT REVIEW - YG Acoustics Kipod Studio Loudspeaker

INSIDE THE YG ACOUSTICS FACTORY

I visited YG Acoustics' factory in the Denver suburb of Arvada, Colorado, last year for a firsthand look at how these loudspeakers are made. I learned that Yoav Geva, YG Acoustics' founder, based the loudspeakers' design on an analog application of a digital-signal-processing algorithm he developed that allowed simultaneous optimization of signals in the amplitude and time domains. When used in loudspeakers, this technique reportedly results in flat frequency response and nearly perfect phase response. The "Best Loudspeaker on Earth" claim stems from what YG claims is the flattest frequency response and best phase response of any loudspeaker.

YG builds the loudspeakers from scratch inside its 6000-square-foot, seven-employee factory. The enclosures are all made from solid sheets of aircraft-grade aluminum. (The baffles of the Anat Main Module and the tweeter ring of the Kipod are ballistic-grade aluminum,

which has some titanium in it.) YG owns the very expensive (and reportedly top-of-the-line) milling and grinding machines for working the metal. Raw aluminum sheets, some of them weighing three-quarters of a ton, are moved via an overhead crane system. The panels that make up the enclosure are cut and drilled, and then ground to create the finish you see on the final product. The panels are then anodized by an outside facility.

One model loudspeaker is built at a time with drivers that have been individually tested and measured. The data on each driver are archived so that if a customer needs a replacement driver, one of nearly identical characteristics can be substituted. Each speaker's crossover is tuned to match the set of drivers going into the enclosure. The crossovers use the huge (and extraordinarily expensive) Mundorf capacitors and inductors. The Kipod's two cone drivers are sourced from ScanSpeak and are

either custom-made for YG or re-built by YG to its specifications. The tweeter in the Anat, for example, uses a diaphragm from Germany and ScanSpeak's motor structure, with final assembly performed in YG's factory.

The facility felt more like a craft shop than an industrial factory. There was a perfectionist attitude toward every aspect of production, and the pace was slow and deliberate. The metalwork was exquisite.

In addition to the Kipod reviewed here, YG makes the Anat Reference II line that begins with the \$33k Anat Main Module. As with the Kipod, the Anat Main Module can be used on its own or mounted on a woofer. This configuration is the \$70k Anat Reference II Studio, and can be ordered with a passive or actively powered woofer (the price is the same). The top-of-the-line is the Anat Reference II Professional, which adds a second woofer enclosure and is priced at \$107k.

power amplifiers, designed specifically for this particular woofer, are rated at 400W.

The enclosures are made entirely of aluminum panels, machined and finished in YG's Colorado factory (see sidebar). The Main Module's ScanSpeak-sourced 6" midrange driver is crossed over to the tweeter at 1.75kHz with a fourth-order slope. The crossover components are as good as they get—the ultra-expensive Raimund Mundorf capacitors and inductors. Each driver is measured and the crossover hand-tuned to a specific set of drivers. YG keeps these measurements on file so that if you need a replacement driver it can supply one of identical characteristics.

The crossovers are designed using a program YG founder Yoav Geva wrote that is based on an algorithm he developed for another field that reportedly allows simultaneous optimization of the frequency and time domains. That is, the loudspeaker's amplitude response is flat and its phase response is uniform. YG claims that the Kipod Studio has a phase uniformity of $\pm 5^\circ$. This means that the disparate drivers move in unison in response to a musical signal.

A machined-aluminum waveguide around the Vifa ring-radiator tweeter controls the tweeter's dispersion. The Main Module can be ordered with single-wire or bi-wire connection. The review samples were supplied with bi-wire connections. Incidentally, I replaced the stock jumpers with a pair from Kimber (Kimber Select KF9033 jumpers) and heard a reduction in grain and a small increase in transparency.

Although the woofer module is available in passive or active configurations, virtually every customer opts for the active version—and for good reason, in my view. An active woofer has many



EQUIPMENT REVIEW - YG Acoustics Kipod Studio Loudspeaker

advantages, the main one being the removal of passive crossover parts from the high-level signal path between an amplifier and the woofer's voice coil. A crossover's low-pass section that feeds the woofer typically uses a large series inductor; its removal allows the amplifier to better drive and control the woofer. Second, an active woofer relieves your main power amplifier of the burden of driving the woofer. Third, a powered woofer can be equalized to deliver deeper extension than would be possible from a passively driven woofer. That's the case with the Kipod Studio; the system is flat to 20Hz despite the small footprint and compact dimensions. Fourth, a powered woofer offers the ability to control the woofer level to best match your room. Finally, the integral amplifier can be designed specifically for the impedance curve it will be asked to drive.

Interestingly, the Main Module is run full-range. That is, there's no high-pass filter to keep bass out of the Main Module's 6" driver. The idea is to achieve the purity of a two-way mini-monitor with the bass extension of a floorstanding three-way. Nonetheless, the 6" driver's excursion will be the limiting factor in the system's macro-dynamic capabilities. It is, however, loaded in a rather small sealed enclosure which helps limit its excursion. For those who want higher sound-pressure levels, YG makes a Main Module Subsonic Filter that keeps low bass out of the Main Module, but presumably at the expense of ultimate transparency.

The Kipod Studio doesn't carry a specified frequency response—the literature states that it delivers “useable output from 20Hz to above 40kHz” and that frequency-response deviations are limited to +/-0.7dB “in the audible band.”

Note that the upper-midrange and treble balance is somewhat dependent on the speaker's rake angle—it can be tilted back to varying degrees by how far the front or rear spikes are inserted. Sensitivity is a moderate 87dB and the impedance is 8 ohms nominal, 5 ohms minimum, suggesting that the system should not present a difficult load to a power amplifier. The 100-watt Pass Labs XA100.5 monoblocks were plenty of power for the Kipod Studio.

LISTENING

Dick Diamond of YG Acoustics set up the Kipod Studio in my listening room, as he does for many YG customers. Setup, placement, and tuning were surprisingly quick and easy, partly because of the ability to adjust the bass from the rear-panel controls. There wasn't the usual struggle between the loudspeaker and the room; the Kipod Studio's low bass and midbass integrated easily and perfectly. The loudspeakers ended up very close to where I've positioned the last few speakers I've auditioned, the Revel Salon2, Magico V3, and Wilson X-2.

I had heard the Kipod Studio at the 2008 Rocky Mountain Audio Fest and thought it was one of the show's highlights. In fact, the Kipod Studio in a small hotel room showed better than YG's Anat Professional in the cavernous acoustic nightmares that are the ballrooms at The Venetian hotel. The Kipod Studio struck me as having tremendous clarity and dynamics, with an almost horn-like presence and “jump-factor” dynamics, but without typical horn colorations.

That initial impression was consistent with my observations after living with this loudspeaker for the past two months. The Kipod Studio's sound

YG ACOUSTICS FOUNDER YOAV GEVA TALKS WITH ROBERT HARLEY

How did you get into loudspeaker design?

I was 15 or 16, and bought my first stereo system—a Sony CD player, Sony integrated amp, and a pair of Bose speakers. I wasn't too happy with the speakers, so I asked my father what I should do. He told me I had two options: One was to work more, save more money, and buy better speakers; the other one was to build my own speakers. He knew that I liked to tinker with stuff and said that if I were to build my own speakers, he would be happy to supply me with the books and materials necessary to do it. So, of course, I chose that option and started to build speakers as a hobby.

Did you make speakers continuously from that time until you started YG Acoustics?

Yes, it was always a hobby.

When you started YG, why did you decide to make the enclosures from aluminum panels?

The first-generation speaker actually had an MDF cabinet. I ended up using aluminum for the insert around the tweeter because there was just no way to machine that complex shape out of wood. I really liked what it did in terms of preventing the front baffle from vibrating. The second-generation speaker already had the entire front baffle made of aluminum, and the body was still a combination



of MDF and plywood. That sounded much better—the images started to float better in space. I decided to go full-bore and do everything out of aluminum, and haven't looked back since. It allows you to machine things more accurately than you would with a soft material, such as wood. So you have a speaker that has a better production tolerance and also allows you to achieve more complex geometries inside the speaker.

EQUIPMENT REVIEW - YG Acoustics Kipod Studio Loudspeaker

was extraordinarily quick, clean, detailed, and “alive.” It was also an extremely transparent and revealing loudspeaker that laid bare changes in electronics, cabling, setup, AC quality, and source deficiencies. The Kipod Studio walked a fine line between resolution of musical detail and sounding analytical. Consequently, it should be matched with high-quality associated components, preferably those that favor warmth and ease.

With the right electronics, the Kipod was capable of an enormously appealing and captivating sound. It disappeared in the sense that it was a transparent window on the music, with extremely low coloration. I heard an immediacy and presence, yet the overall presentation wasn’t forward, spotlighted in the midrange, or colored in other ways that foster a sense of life but quickly become fatiguing. Rather, the Kipod Studio achieved its lifelike vitality by imposing so little of itself on the music.

This quality was, I concluded, not just the result of the Kipod’s lack of tonal colorations in the midband, but of its transient quickness and coherence. Leading edges of notes seemed to jump out of the presentation with startling speed, much the way horn loudspeakers reproduce music’s dynamic structure. Transient information had a coherence that was world-class; although highly resolving of dynamic shadings, transients never degenerated into mere noise. Instead, I heard percussion instruments, acoustic guitar, and other transient-rich instruments rendered with a completely natural and organic quality that was the antithesis of “hi-fi.” This quality is the Kipod Studio’s greatest strength—the ability to sound highly resolving and alive without a trace of fatigue-inducing etch. Many loudspeakers sound

“detailed” during a brief listen and then become fatiguing. The tell-tale sign of such a speaker is a sense of relief when the music is turned down or off. Not the Kipod; its resolution was musically authentic, not an artifact, which allowed very long listening sessions.

I was greatly taken by the Kipod Studio’s reproduction of brass and woodwinds, particularly trumpet and saxophone. The speaker was able to convey the “blat” and bite of these instruments’ timbres (they are rich in upper harmonics) but without glare or shrillness. Check out the superb (and superbly recorded) DVD-Audio title *XXL* from Gordon Goodwin’s Big Phat Band for a great example of this quality. Much of what we find unpleasant in a trumpet reproduced at realistic levels is not the instrument itself, but rather the distortion components that make it seem louder than it actually is. The Kipod Studio rendered these instruments with a full measure of upper-midrange energy that gave them a lifelike immediacy with no trace of hardness.

This performance was realized, however, only with very clean-sounding sources, electronics, and cables. The Pass Labs XA100.5 amplifiers were an ideal match, with their gorgeous rendering of timbre and lack of solid-state artifacts. Similarly, the Kipod much preferred the Air Tight PC-1 Supreme phono cartridge over the “hotter” Dynavector XV-1s. Note that I’m not suggesting that the Kipod needed “soft” electronics and sources to compensate for an overly bright presentation (it wasn’t bright), but rather that this loudspeaker was so revealing that it uncovered any flaws in source or electronics. (This is probably why show demonstrations of YG products have been so variable.) Indeed, the

Can you talk about the crossover and your technique that result in optimized performance in the frequency and time domains?

This is really what sets us apart from other manufacturers. Most manufacturers use a piece of software called “LEAP,” Loudspeaker Enclosure Analysis Program; it’s a very, very good piece of software. It controls about 80% of the market. That’s what nearly all manufacturers use to optimize their cabinets and crossovers. The problem with LEAP is that it allows you to optimize either frequency response or phase, but not both. What we have that’s unique is software I developed that allows you to optimize both at the same time. That’s why our speakers are currently the only ones on the market that offer zero relative phase (actually, plus or minus five degrees relative phase) and flat frequency response. You’ll find a lot of speakers that offer one or the other. Those that offer a flat frequency response tend to sound very neutral, but sometimes a bit lifeless. Those that offer good phase have great dynamics and soundstaging, but are usually a bit colored. We’re proud to be able to offer both.

So, you actually developed this algorithm and wrote the software?

Exactly.

And how does that manifest itself in the loudspeaker’s sound?

The speaker is, first of all, very neutral

because of the flat frequency response. Instruments have the same timbre that they would have in real life. And, because of the phase, the soundstage is very accurate. It’s not overly big, not overly small—it is exactly as recorded. And maybe the most important thing is the dynamic pop of instruments, the absence of which to me is the number one thing that tells you immediately that you’re listening to hi-fi rather than to live music. With my speakers, I have to say the dynamic pop is there as it would be in live music, since all drivers move exactly at the same time.

What’s the thinking behind the Kipod Studio, a compact \$38,000 loudspeaker?

Most speaker manufacturers create a huge, big, sophisticated flagship. But as you go lower in their price line, even if it’s very expensive, you’ll find products that are very big, but they might not have the same technology as the flagship. What I did was compromise on maximum volume, or size in this case, which obviously affects maximum volume. The Kipod is a speaker that is scaled down in size, but it has the same level of technology that I offer with my Anat, my flagship line. The result is a speaker that is compact and intended only for medium-sized rooms, but one that offers technology that you would otherwise have to spend \$107,000 to get.

So, the Kipod Studio features the same degree of execution as the \$107,000 Anat Professional, just scaled-down in size?

EQUIPMENT REVIEW - YG Acoustics Kipod Studio Loudspeaker

Kipod Studio thrived on a very clean and resolved source, such as high-resolution files played back on my fan-less, drive-less PC-based music server feeding a Berkeley Alpha DAC. This loudspeaker reached down to the lowest signal levels and to the farthest reaches of the soundstage to bring that information to the listener's attention. My caveat earlier about the Kipod Studio walking a fine line between resolution and sounding analytical applies not to highly detailed sources, but rather to etch or brightness in the associated electronics. In short, if you feed the Kipod Studio a clean and detailed signal, you'll be rewarded by a presentation that is richly filigreed and immensely involving.

The Kipod Studio's bass was notable for its tuneful quality in the midbass along with extremely deep extension, the latter thanks to the integral amplifier and equalization circuit that pushes the woofer harder below its natural roll-off frequency. Even organ pedal tones were well served by the Kipod Studio, provided that the playback level was kept moderate. The bass had a consistent character throughout the entire range, and mated seamlessly to the midrange. The texture of acoustic bass was beautifully rendered, with a satisfying combination of warmth and agility. On bass-heavy recordings the Main Module's midrange driver limited the playback level because of excessive excursion; the upper-bass became loose and uncontrolled. Keep the playback level moderate, however, and all is well.

Just as the midrange had tremendous clarity without sounding forward, the Kipod Studio's treble was alive, open, and present yet never overbearing. The top end was musically vivid without being sonically vivid. In addition, the

treble was exquisitely detailed, with fine resolution of nuances and inner detail. Delicate brush work on a drum kit, for example, had real detail that conveyed the mechanism by which the sound was made rather than merely sounding like a high-frequency noise. Cymbals were notable for the sense of delicacy, and of being surrounded by air.

The Kipod Studio's soundstaging was commensurate with the rest of its performance—tight, precisely defined, and tangible. Images floated independently of the loudspeakers just as one would expect from a mini-monitor. The loudspeaker's tremendous midrange and treble transparency helped in creating the impression of a “see-through” quality that allowed very low-level sounds at the back of the hall (including spatial cues) to be rendered with great resolution. The overall presentation was highly revealing of the hall's size and characteristics, but not hugely expansive. The soundstage was wide, deep, and transparent, but had less height and sense of envelopment than I'm used to hearing. I had, however, been listening to the Wilson X-2 for the previous 18 months. No doubt this impression is the result of the Kipod Studio's much smaller physical size that puts the drivers at ear level rather than considerably above ear level.

As much as I enjoyed the Kipod Studio, I have one serious reservation about its performance, particularly relative to its considerable price—it is limited in playback level and macro-dynamics. Timpani and other high-level, low-frequency transients caused the 6” midrange to produce a “popping” sound (the back of the voice-coil former hitting the magnet) when its excursion limits were exceeded. A related phenomenon was

It's scaled-down in size, but not compromised in technology.

You use powered woofers in all your designs, which is unusual in high-end audio. What do you see as the advantages of driving the woofer with an integral amplifier?

It offers two advantages. First of all, it's room adjustable. That would be, by far, the biggest advantage. We can achieve uniform sound in pretty much any room. It's important to note, by the way, that we don't expect the customer to know how to adjust the woofer. Using a diagram of a customer's room, we can optimize the settings. The second advantage is that the main amplifier doesn't have to work as hard. The load gets shared between the woofer amplifier and your main amplifier.

There's traditionally been resistance by audiophiles to powered loudspeakers.

Some audiophiles prefer not to have it. That's why I also offer a fully-passive version of the Kipod Studio and the Anat Studio. But I think once they see the quality of the amplifier that we put in it and how the amplifier was designed specifically for our bass driver's impedance curve, that reluctance tends to go away.

Your literature and Web site stress the measured performance of your loudspeakers. How much can measurements tell us about speaker performance?

Measurements can tell us everything, as long as we measure everything. It's important to

note that measurements that we do at the factory, or that any designer does, are not just the six or seven graphs that you see in some magazines. We have a book containing hundreds of tests we've performed. These can describe the performance of the speaker start-to-finish—without anything missing.

But what role does listening play in loudspeaker development?

Listening tells you whether you have measured everything or not. Your ears will not tell you specifically what's wrong and how to fix it. That's what measurements are used for. They are the development tool, but the ears are the best verification, because if you didn't measure something, you will still be able to hear it, and this will tell you that something is wrong. Whereas with measurements, if you didn't measure something, how would you even see that it's wrong?

Or how to fix it?

We need to listen to see if something is problematic and then find the measurement that shows you how to fix it. I doubt that from just listening, you'd know how to fix it. At least I don't. But, it tells me that I need to measure more until I find something that explains the phenomenon that I could hear.

Over the years I've heard your loudspeakers many times at shows, sometimes sounding wonderful and other times not so good. Is there something about your designs that

EQUIPMENT REVIEW - YG Acoustics Kipod Studio Loudspeaker

a tendency for the upper-bass to lose definition and sound flabby with a combination of high-ish playback levels and the presence of low-bass in the music. The low-bass caused high midrange-driver excursion that colored the midbass. All loudspeakers have such limitations, and typically the higher the price, the louder the system will play without strain. Judged from one perspective, the Kipod Studio is quite expensive considering its inability to reproduce orchestral climaxes with ease at realistic levels.

CONCLUSION

The YG Acoustics Kipod Studio is an extraordinary loudspeaker, but one that won't satisfy all listeners. In a moderately sized room, fed by high-quality electronics, and played at reasonable levels, it is world-class. Its ability to vividly bring music to life through dynamic expression without becoming analytical is extraordinarily compelling. This is a vital aspect of music reproduction, and one at which the Kipod Studio excels.

If, however, you want to play orchestral music at full-tilt, or have a large room, or cannot invest in high-quality electronics and sources, the Kipod Studio probably isn't your best choice. YG's solution for larger rooms and for higher playback levels is the Anat Reference II series. The Kipod Studio is a specialized loudspeaker that maximizes transparency, transient accuracy, soundstaging, resolution, and tonal purity within certain limitations of room size and playback level. But when playing within those parameters, the Kipod Studio is utterly magical. **tas**

SPECS & PRICING

YG Acoustics Kipod Studio Loudspeaker

Type: Three-way dynamic loudspeaker

Driver complement: 6" midrange, ring-radiator tweeter (main module); 9" woofer (woofer module)

Woofer module amplifier power: 400W RMS

Impedance: 8 ohms nominal, 5 ohms minimum

Sensitivity: 87dB

Cabinet: Aircraft-grade aluminum; tweeter ring is ballistic-grade aluminum

Dimension: 7" x 16" x 13" (main module); 12" x 41" x 17" (woofer)

Weight: 40 lbs. each (main module); 64 lbs. each (woofer)

U.S.

Price: \$38,000/pr

YG ACOUSTICS LLC

4941 Allison, St., Unit 10
Arvada, CO 80002
yg-acoustics.com

U.K.

Price: £28,700/pr

METROPOLIS MUSIC

+44(0)1435 867438
metropolis-music.co.uk

CLICK HERE TO COMMENT IN THE FORUM AT [AVGUIDE.COM](https://www.avguide.com)

make them more sensitive to the room, or associated equipment, or setup?

Our speakers are very critical. When you have a speaker that exposes all of the nuances in a performance, you will hear very clearly any change that you do upstream. Think of it this way: If a speaker has a response deviation of plus/minus 4dB and you put in front of the speaker a cable that rolls off highs by 1dB you probably won't be able to hear it. Do the same with a speaker that's plus/minus 1dB and it will be much more apparent. Our speakers are very, very critical. With a speaker of this quality the whole system would be of very high quality and assembled quite carefully.

You chose not to high-pass filter the Kipod Main Module's 6" driver to keep low bass out of it. Is that because the Kipod Main Module is available separately as a stand-alone system or because you felt that the additional crossover parts would compromise the sound quality?

It's actually both. I really like the transparency of a two-way design. It's a simple design and a lot less can go wrong when you do a simple design. That's why both the Anat and the Kipod lines are essentially two-way monitors, and then you add to them bass modules. The driver relies on mechanical filtration, meaning a sealed enclosure to protect the mid/woofer from very high excursions.

Doesn't that limit the system's dynamics?

It limits the system's overall maximum sound. When you say dynamics, you could refer to two things. One is just maximum volume level, which definitely it will limit. That's why the Kipod is designed for medium-sized rooms or smaller. The Anat can handle far, far greater volumes because it has two mid/woofers. And, I would have to say with the Anat, I've never encountered the volume limits of this design approach. But when you refer to dynamics in terms of the sense of immediacy in the music, I would claim that it's very helpful to have a mid/woofer that is not blocked by a big capacitor with its own problems.

Tell us about your advertising slogan, "The Best Loudspeakers on Earth. Period."

Of course, I believe it, otherwise, I wouldn't write it. But, I don't expect anyone else to believe it just because I said so. In fact, I would claim that a customer who chooses to purchase my speakers just because I claim that they are very good is not a careful enough customer. But I would expect these customers to be curious enough to decide to test my slogan for themselves to see if they agree with me. My hope would be that the customers read the slogan and say, "Yoav believes it. He tries to give scientific evidence for it in his ads. I would like to try to schedule a demo and see if I agree with him or not."