Wilson Benesch Omnium Loudspeaker and IGx Infrasonic Generator

The Hippocratic Oath

Robert Harley

The British firm Wilson Benesch has for 30 years been at the forefront of employing advanced materials technology in audio applications, specifically carbon fiber. In fact, the company's first product, a turntable and tonearm introduced in 1990, was built partially from carbon fiber. This was at the time when carbon fiber was an exotic new material used only in Formula One cars and aerospace applications. For more than three decades, Wilson Benesch has made carbon fiber a foundational technology of its loudspeaker enclosures, turntables, and equipment racks.

Carbon fiber is made from petroleum fashioned into long thin strings that are woven into a cloth-like material. The material is impregnated with resin that hardens when subjected to high temperatures. The flexible material is put into a mold and heated to cure the resin and create the final rigid shape. Carbon fiber has revolutionized many industries with its unparalleled combination of light weight and high strength. Today, you'll find carbon fiber in sports equipment such as snowboards, tennis rackets, golf clubs, automobiles, military hardware, and prosthetic limbs, for just a few examples.

Today's Wilson Benesch has full carbon-fiber manufacturing capability in-house, which may be unique in high-end audio. The 17-employee company also has a machine shop where it manufactures virtually all the parts in its loudspeakers, down to the driver-motor housings.

But is there a material even better than carbon fiber, and one that is more sustainable? To find out, in 2017 Wilson Benesch joined a consortium of 17 European research laboratories, universities, and industries to explore a sustainable (non-petroleum-based) alternative to carbon fiber created from renewable resources such as bio-materials. This collaborative development project was called SSUCHY—"Sustainable Structural and Multifunctional Biocomposites from Hybrid Natural Fibres and bio-based polymers." The four-year project had a budget of €7.4 million Euro's, €4.5 million of which was subsidized by the British government.

Specs & Pricing

Omnium
Type: Two-and-a-half-way, 9-driver floorstanding loudspeaker
Frequency response: 27Hz–30kHz ±2dB on-axis
Impedance: 4.5 ohms nominal
Sensitivity: 89dB at 1m, 2.83V input
Minimum amplifier power: 100Wpc
Driver array: 1x 1" WB Fibonacci hybrid silk-carbon tweeter; 2x 7" WB Tactic 3.0 bass high; 1x 7" WB Tactic 3.0 midrange; 1x 7" WB Tactic 3.0 bass low; 4x 7" WB Isobaric Drive System bass low
Enclosure: Carbon composite A.C.T. 3Zero monocoque
Loading: Sealed (isobaric drive system is ported)
Dimensions: 8.1" x 68.5" x 25"
Weight: 309 pounds each, net
Price: $149,000 per pair

IGx Infrasonic Generator
Driver: 18" carbon-fiber/polyethylene terephthalate
Motor: Push-pull around steel core
Frequency response: 5Hz–30Hz, min; 5Hz–90Hz, max (-3dB)
Integral amplifier power: 100W continuous, 500W peak
Inputs: Line level on RCA and XLR jacks, high level on Speakon jack
Input impedance: 10k ohms (RCA), 10k ohms per phase (XLR); 180k ohm (Speakon)
Controls: Polarity switch, phase, level, low-pass crossover frequency
Dimensions: 20" (diameter), 17" (height)
Weight: 119 lbs. each
Price: $32,000 each

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Associated Equipment
Analog source: Basis Audio A.J. Conti Transcendence turntable with SuperArm 12.5 tonearm; Air Tight Opus cartridge; Moon 810LP phonostage; DS Audio ST-50 stylus cleaner, Levin record brush, Degritter ultrasonic LP cleaner
Digital source: Wadax Reference DAC, Wadax Reference Server, Wadax Reference PSU, Wadax Akasa Reference DC Power Cables, UpTone Audio EtherREGEN Ethernet switch
Amplification: CH Precision L10 Dual Monaural linestage; CH Precision M10 Dual Monaural power amplifiers
AC Power: Shunyata Everest 8000 conditioner, Shunyata Omega and Sigma NR V2 power cords; Shunyata AC outlets, five dedicated 20A lines wired with identical length 10AWG
Support: Critical Mass Systems Olympus equipment racks and Olympus amplifier stands; CenterStage2 isolation, Ayra Audio RevOpods isolation
Cables: AudioQuest Dragon interconnects, AudioQuest Dragon Zero and Dragon Bass loudspeaker cables
Grounding: Shunyata Altaira system
Accessories: The Chord Company GroundArray noise reduction
Acoustics: Acoustic Geometry Pro Room Pack 12, ASC 16" Round Tube Traps
Room: Purpose-built; Acoustic Sciences Corporation Iso-Wall System

The group developed a fiber composite based on hemp that has properties very similar to carbon fiber. The new material was exhaustively analyzed in the laboratories at Bristol University and the Femto Laboratory at the micro and macro levels, comparing oil-based carbon-fiber composites with this new bio-based composite, specifically how the composites behaved when subjected to structural-borne vibration. The researchers found the new material to be superior to carbon fiber in many parameters, and being made from bio-materials, it doesn't rely on petroleum as the primary ingredient. The material looks like carbon fiber with its woven structure but is brown rather than black in its raw form. It can, however, be dyed any color including black to emulate the look of carbon fiber.

Which brings us to the Wilson Benesch Omnium loudspeaker and its cabinet made from this new bio-composite material. The $149,000 Omnium is the company's second-from-the top model and a direct descendant of Wilson Benesch's $225,000 Eminence that I reviewed in Issue 294.

Design

The Omnium is a two-and-a-half-way, nine-driver loudspeaker housed in a tall slim enclosure. It features the same design philosophy, drive units, and cabinet construction as the Eminence but in a slightly shorter cabinet with one fewer drive units. Rather than reinvent the wheel with the Omnium's technical description, I'll include a modified version of the description I wrote for the Eminence, as the two speakers are that similar in design and construction.

The Omnium is packed from top to bottom with extremely advanced materials and ingenious designs. Starting with the enclosure, it is an evolution of the A.C.T. (Advanced Composite Technology) cabinet Wilson Benesch developed in 1994 for its first speaker (which was itself based on the A.C.T. plinth for Wilson Benesch's turntable in 1990). This latest version builds on that foundation, maintaining the curved monocoque structure built from bio-composite panels around a high-compression

core. The new enclosure, designed with FEA (finite element analysis), features a sandwich of bio-composite panels around a proprietary new core material that reportedly increases the stiffness-to-damping ratio by 30% compared with the previous A.C.T. enclosure. The combination of the extremely stiff bio-composite panels around a highly damped inner core both resists and damps resonances so that the cabinet is an inert platform for the drivers. The cabinet's shape is based on the curvatures found in nature, which exhibit the maximum strength for a given thickness. Wilson Benesch says that this new A.C.T. enclosure is one of the lightest, stiffest, and best damped structures ever manufactured.

The boat-tailed enclosure terminates in a thick piece of aluminum that runs vertically up the entire cabinet height, a component Wilson Benesch appropriately calls the "backbone." The baffle is also machined from aluminum. Viscoelastic damping material couples the various cabinet parts to suppress resonances. In addition, the direction of the bio-composite weave directs energy down the fibers and into the viscoelastic material that connects the cabinet sections. The bio-composite panels and inner core are mutually self-damping, as are the interfaces between bio-composite panels and the aluminum baffle, backbone, and foot.

The enclosure is shipped in two parts and assembled at installation. The lower enclosure is bolted to a massive aluminum plate that has been artfully machined into a sculpture that suggests flowing water. The aluminum plate, which Wilson Benesch calls the "foot," is machined from a 265-pound aluminum billet. Seven hours on a CNC machine turns the raw slab into an elegant, finished shape. The speaker is anchored to the floor with four vertical "kinematic bearings" designed by Wilson Benesch and first used in the A.C.T. tonearm in 1991. Each bearing is composed of a finely threaded stainless-steel shaft 28mm in diameter that screws through a corresponding threaded hole in each corner of the foot. The top of this shaft is a large round hand-wheel that allows you to turn the shaft and raise or lower that corner of the foot. The other end of the shaft is the business end; it terminates in a 12.5mm steel ball that rests in the middle of three other 12.5mm steel balls that are held captive in a cup that sits on the floor. The steel ball on the shaft is held precisely between the three steel balls in the cup, eliminating any motion (see inset photo). The contact points for the speaker's 309-pound weight are less than one square millimeter, resulting in a downward force of hundreds of tons per square inch. This design, called kinematic coupling, was developed by James Clerk Maxwell in 1871 and is used in a range of industries where precise alignment between two parts that can be separated is required.

At the speaker's other end is a bio-composite top piece whose odd geometric shape is designed to reduce interference in the wave launch from the baffle and to diffuse reflections. It was created by converting sketches into a clay model and then laser-scanning the model into a 3D digital image that could be analyzed and manipulated in software.

The cabinet has been made as small as possible, so that its sonic contribution is minimized. The smaller the cabinet, the easier it is to damp, and any resonances that remain will produce less unwanted cabinet sound. The narrow baffle and its curved shape also reduce diffraction. Despite the cabinet's relatively modest size, the internal volume is considerable, owing to the thinness of the bio-composite structure. The speaker has a very small visual presence when viewed from the listening position.

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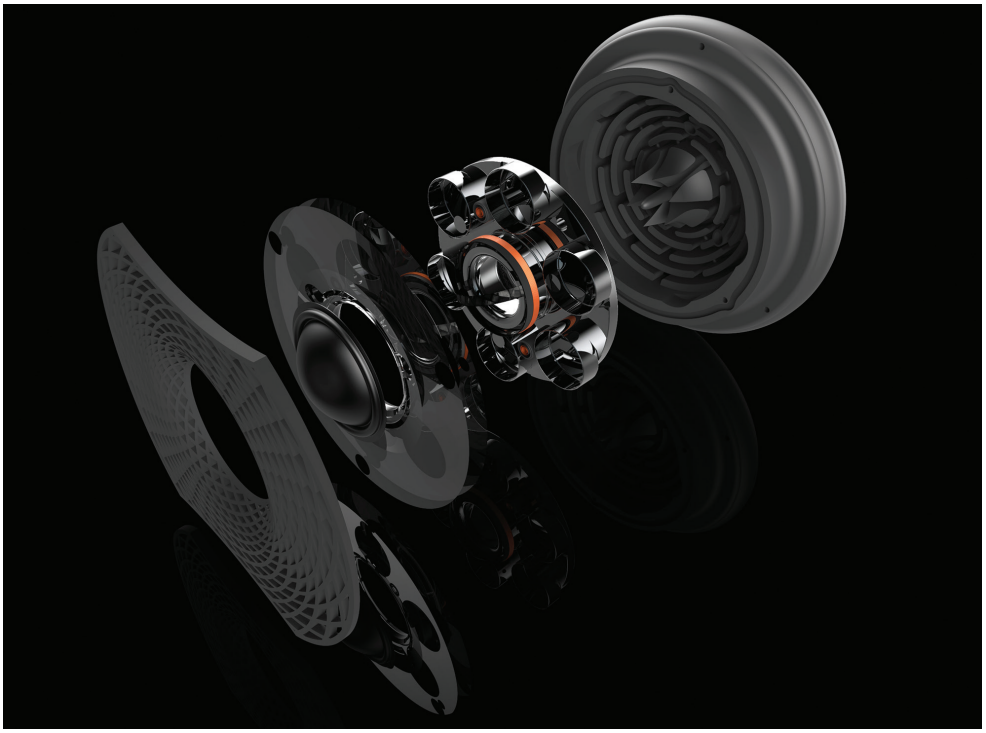
The drivers, and the way they are deployed, are equally innovative. All the drivers are designed and built in-house. The most salient aspect of the driver configuration is the isobaric woofer array and its backward-facing drivers. The two 7" woofers you see at the bottom of the baffle are mated to identical drivers inside the cabinet that you don't see, with their cones facing each other. Because the two drivers in the isobaric pair are driven by the same input signal, they move in unison. As the two facing drivers move together, the woofer you hear (the one you see on the baffle) doesn't have to contend with the springiness of the air inside the enclosure, as occurs with all other loading techniques. Indeed, "isobaric" means "equal pressure," and isobaric loading is technically known as a "constant-pressure chamber" configuration (the "constant pressure" referring to the air pressure in the space between the two woofer diaphragms in the isobaric array). A woofer loaded in this way has a very low resonant frequency, allowing the system to extend very deep in the bass yet still maintain very fast transient response. The isobaric array's ability to start and stop very quickly not only results in better transient performance in the bass but also allows the low-frequency section of the speaker to better integrate with the transient speed of the midrange and tweeter. In other words, isobaric loading prevents the common affliction of a big slow woofer lagging behind a smaller, lighter, and faster midrange driver, creating an audible discontinuity. Wilson Benesch says that the isobaric array in the Omnium has a better step response (how quickly the cone accelerates in response to a steep input signal) than the midrange driver, which is unheard of. A guiding principle at Wilson Benesch throughout its 30 years of building loudspeakers is that transient performance is of paramount importance to fidelity. The company has always deployed small woofers with very powerful magnets that can start and stop very quickly—like a 500-horsepower engine in a lightweight sports car.

Besides superior transient response and better integration with the midrange, another reason Wilson Benesch chose such diminutive woofers for its top models is that the mounting holes in the enclosure can be smaller. Smaller holes don't compromise the cabinet's rigidity as much as larger openings. In addition, a smaller hole results in less energy from the driver's backwave emerging through the driver and out into the room where it colors the sound.

Unusually, particularly for a large reference-class loudspeaker, the 7" midrange driver is run full range, with no crossover components between your amplifier's output terminals and the midrange



driver's voice coil. Removing inductors and capacitors from the signal path, particularly on the midrange driver, confers enormous advantages in clarity and immediacy, but places quite a burden on that driver, particularly in a large full-range system like the Omnium. The 7" driver's excursion limits will define the entire speaker's maximum output level and ability to reproduce low-bass transients. The design goal of running the midrange driver full range likely dictated the use of a 7" cone, which is rather large for a midrange.

The tweeter is the same all-new design created for the flagship Eminence, but based on a classic Wilson Benesch approach that cleverly addresses the dilemma of the relative merits of soft domes and hard domes. Soft dome tweeters don't ring like hard domes, but their break-up mode occurs within the audible spectrum, typically at 18kHz. At that frequency, the dome's motion ceases to be pistonic; parts of the dome are moving forward while other parts are moving backward. Wilson Benesch addresses this problem by mounting a strip of carbon fiber across the dome surface that strengthens the dome and shifts the first break-up mode to 30kHz. In addition, the carbon fiber helps to damp resonances in the dome. (The tweeter's voice coil also features a carbon-fiber strip to increase its rigidity.) Wilson Benesch calls this hybrid dome structure the Semisphere.

The Semisphere diaphragm has been coupled with a new technology that Wilson Benesch calls the Fibonacci Element. This is a tweeter faceplate formed in an intricate lattice structure (see inset photo). The Fibonacci Element reportedly precisely controls the constructive and destructive interaction of the direct sound from the tweeter and reflections from the tweeter faceplate. The result is reportedly extremely flat frequency response. According to Wilson Benesch, the typical flat tweeter faceplate introduces many small frequency-response irregularities in the treble. The Fibonacci Element is made through "additive manufacturing," also known as 3-D printing. The tweeter is decoupled from the baffle by a damped substructure that you can see through the lattice.

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The other drivers are the latest versions of Wilson Benesch's Tactic drive unit, introduced in 2001. The Tactic name is derived from the cone material, isotactic polypropylene. Isotactic polypropylene differs from conventional polypropylene (widely used in driver diaphragms in the 1970s) in that rather than being a homogeneous material, it is made from woven polypropylene fibers, a technique that increases the material's stiffness five-fold. Conventional homogeneous polypropylene has very good self-damping but lacks stiffness; the new material reportedly realizes polypropylene's high damping while overcoming the stiffness problem. The isobaric woofers, lower-bass drivers, upper-bass drivers, and midrange all feature isotactic polypropylene cones. The two upper-bass drivers and midrange also include a Fibonacci Element dustcap.

The Ominum's concept is decidedly different from other statement-level loudspeakers, reflecting the sonic priorities of its designer. The technology behind the speaker has been meticulously researched and represents the culmination of 30 years of building loudspeakers. It's worth noting that one can trace the Omnium's fundamental design goals, and the technology that realizes them, back to Wilson Benesch's first loudspeaker. Finally, the execution is exemplary; I got the impression that no corners were cut to save cost. You can think of the Omnium as a slightly smaller and less expensive version of the flagship Eminence. With the introduction of Wilson Benesch's new IGx Infrasonic Generator, the Omnium with a pair of IGx's costs less than the Eminence.

Because of its small footprint, the Ominum will fit in many rooms where a conventional flagship speaker would look bulky or imposing. A variety of natural wood finishes, along with different bio-composite colors (that look just

like colored carbon fiber), will also help the Omnium integrate visually with the décor.

IGx Infrasonic Generator: Don't Call it a Subwoofer

Wilson Benesch takes a radically different approach to bass reproduction, not just in its loudspeakers but also in its product that most would call a subwoofer. Wilson Benesch refers to this external dedicated bass-reproduction device as an "Infrasonic Generator." In my review system, the Omnium was augmented by two of the company's all-new IGx Infrasonic Generators. The IGx is an evolution of the company's Torus, a product that was a turning point for how subwoofer-averse Jonathan Valin viewed such devices (see his review back in Issue 170, March 2007).

In considering Wilson Benesch's bass-reproduction technology, watching company representative Luke Milnes set up the system (a *very* judicious hand on the IGx's gain knob), and from my own listening to the result, it seems as though the company's foremost consideration is akin to the Hippocratic Oath—first, do no harm. That is, Wilson Benesch has prioritized avoiding the common loudspeaker affliction of bass bloat and compromised low-frequency transient fidelity. Any slowness, overhang, or resonances in the bottom end are anathema, and the company has gone to extraordinary lengths in engineering such flaws out of their products. Wilson Benesch has taken this idea to the extreme in the Omnium and in the IGx Infrasonic Generator.

The IGx shares the same fundamental design approach of the Torus, housing a large (18") upward-firing woofer in a round enclosure and driving that woofer with a novel motor design. That motor consists of a round 35-pound central steel core vertically positioned in the enclosure into which two powerful neodymium magnets are mounted. One of these motors protrudes above the diaphragm, covered by a chrome cap (you can see it in the photo; it's what gives the IGx the "hubcap" appearance). The other motor is mounted just below the driver. Attached to the diaphragm are two 82mm coils, each one positioned around a motor. This dual-motor design creates a push-pull mechanism, with one motor pushing the diaphragm and the other pulling it.

The diaphragm is made from an extremely lightweight and stiff material that is a combination of carbon fiber and Polyethylene Terephthalate (PET). Wilson Benesch worked with two carbon-fiber weaving companies to develop this proprietary material. Significantly, the diaphragm is a solid piece of material, not a patchwork of carbon-fiber as is often seen. Wilson Benesch claims that the IGx's diaphragm is the stiffest, lightest, and most highly damped dynamic drive unit diaphragm ever made. In addition, a new surround material reportedly reduces frictional losses.

This design is very different from a conventional woofer in which the cone is attached to a voice coil and mounted in a basket, suspended at the outer edge by the surround and inside the speaker around the voice coil with a spider that maintains the diaphragm's alignment in the basket.

The IGx's unique design removes the parts that inhibit woofer motion (particularly the spider) and couples a very light diaphragm directly to a massive push-pull motor, resulting in an iron-grip over the woofer's motion and very fast response. The IGx's driver is contrasted with a comparably sized conventional woofer that is driven by a single motor (rather than the IGx's dual-motor push-pull design), has a heavy diaphragm, and operates under the burden of a stiff surround and spider that inhibit its motion. The IGx's design displays extremely innovative engineering—no other low-frequency transducer is even remotely similar in design.

Looking at the IGx in practice, the unit can be driven by line-level signals on RCA or XLR jacks, or from the output terminals of your power amplifier via a cable with a Speakon connector on one end and bare wires on the other. This seems to be WB's preferred arrangement; this high-level connection is how Luke Milnes set up the review system, although I had a second preamplifier output at the ready. System controls include a gain knob (-30dB to +60dB), low-pass crossover frequency (30Hz–90Hz), and phase control. The IGx is designed to augment the bass output of Wilson Benesch's main speakers, which are run full range. That is, no external crossover is required to divide the frequency spectrum and high-pass filter the main speakers.

The IGx's internal amplifier power is rated at 100W continuous, or 500W peak. In an era of multi-thousand-watt amplifiers in subwoofers, 100W continuous and 500W peak output may not seem like much. But it's plenty for the IGx's high-sensitivity drive unit. The term "infrasonic" in the product name isn't hyperbole; the -3dB point is specified at an astonishing 5Hz. If you think about a very large diaphragm (18") with a long excursion, you can see the IGx's potential for reproducing very high levels of very low bass. In normal use, however, the IGx isn't operated anywhere near its limits.

The IGx is based on the same motor and diaphragm concept as the Torus but realized with much better parts and implementation. For example, the Torus's enclosure was made from MDF; the IGx is made from extruded aluminum panels mated to a massive aluminum base that is machined from a solid aluminum billet. Although only slightly taller than the Torus, the IGx has nearly double the internal volume thanks to the thinner (but stiffer) aluminum enclosure. The IGx also features 13mm steel ties across its vertical axis and a large, 8mm, precision-laser-cut steel cross brace in the horizontal axis. The bottom plate is

machined from 110-pound aluminum billet. This structure adds mass at the lowest point of the IGx and contains the electronics that drive the IGx. The vertical braces attached to the top ring and this base are under high tension to strengthen the enclosure. Finally, a magnetic fitting grille can be placed on top of the IGx.

Listening

Luke Milnes from Wilson Benesch and Brian Ackerman, WB's U.S. distributor, visited to set up the Omnium and a pair of IGx Infrasonic Generators. You can find a video on *The Absolute Sound*'s YouTube channel of Luke discussing the speaker in my listening room after we finished the setup. The review samples were finished in a stunning Aventador Blue, the same color found on Lamborghinis.

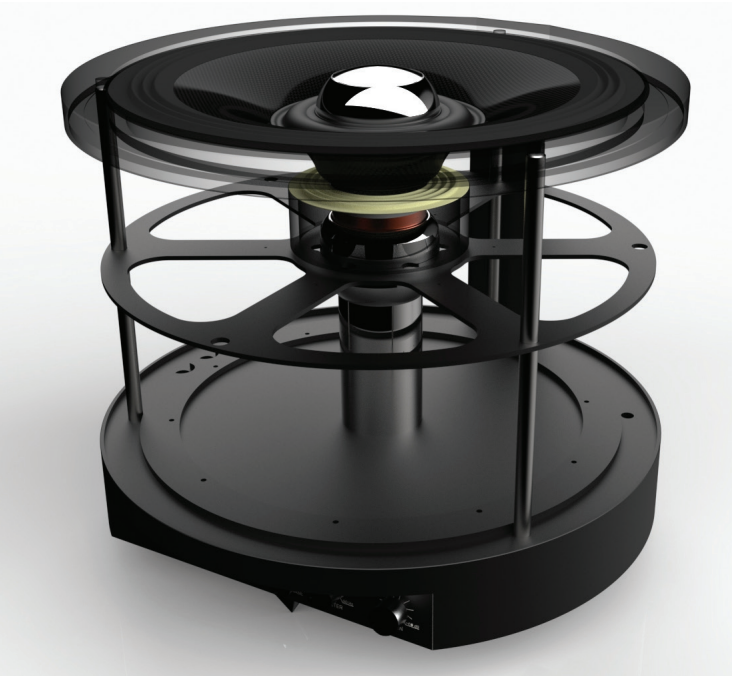
Not surprisingly considering their design similarity, the Omnium sounded very much like the Eminence. That sound is characterized by an extremely smooth tonal balance, tremendous transparency, low coloration, and whip-fast transient reproduction. Although it's been five years since I heard the Eminence in my room, and my associated equipment is different, I nonetheless had the impression that the Omnium may have a slightly more refined sound, with superior resolution and an even quieter enclosure (if that's possible).

The Omnium's design priorities—whip-fast transient response, dynamic agility, speed, and articulation—were on full display. This is a very lively and upbeat-sounding speaker, with a sense of life, immediacy, and vitality owed to its transient fidelity. It prioritizes detail and speed over tonal density, resulting in an "illuminated from within" quality that fosters the impression of transparency and an expansive sense of space and bloom in the top end. The attacks of notes are rendered with tremendous speed and precision. Adding to this impression, decays are quick and clean, with no overhang. The transient suddenly appears and then vanishes instantly. For example, listen to Hans Theessink's acoustic guitar on the superb album *Jedermann Remixed*; it has a sense of presence, of the instrument being in the room right in front of you, that is startling. The speaker has a directness and palpability through the midrange that create the impression of nothing between you and the musicians. Indeed, the decision to run the midrange driver full range, with no crossover components in the signal path, appears to have paid dividends in this area. Snare drum has a lot of snap and speed, with an emphasis on the "pop" component of the stick hitting the drumhead and the snares rather than on the lower-frequency resonance of the drum itself. Percussion was rendered with lifelike immediacy and resolution. Not only does the Omnium reproduce transients with high precision, but it also reveals inner detail that conveys the mechanism by which the sound was made—wood on wood, wood on metal, metal on metal, etc.

A few other speakers also exhibit this transient speed and low stored energy, but what distinguishes the Omnium is that this dynamic agility extends across the entire spectrum, from the low bass to the top treble. Often, a fast-sounding speaker exhibits a dynamic discontinuity, sounding quick in the midrange and treble but with the bass lagging behind, not just on attacks also on decays, the bass energy hangs on longer than it should. This phenomenon robs music of its propulsive, upbeat character and imparts a murkiness that is a constant reminder that we're hearing a reproduction rather than the music itself. The Omnium doesn't suffer from this common malady, instead sounding just as fast (in attack and decay) in the bass as in the treble. The speaker has amazing dynamic coherence from top to bottom, giving the impression that it has vanished from the playback chain. It also seems to reproduce the full amplitude of transients rather than compressing peaks. The musical effect of removing slowness and thickness in the bass is to convey a lifelike sense of clarity, energy, and upbeat music-making.

All audio components, particularly loudspeakers, exhibit tradeoffs in which optimizing one area of performance comes at the expense of other areas. The designer is aware of these tradeoffs and pursues a technological approach that he believes best serves the music. In the case of the Omnium, what's traded away for this spectacular dynamic performance and coherence is midbass warmth and power. The speaker is lean, tight, precise, and articulate—like an ultra-lightweight sports car with nimble handling. To continue the automotive analogy, the Omnium isn't a cushy highway cruiser. This isn't a speaker with fullness, body, and density of tone color in the midbass. Acoustic bass is reproduced with tremendous resolution of timbral detail and dynamic nuances rather than visceral physical power—Brian Bromberg's solo bass performance on "Blue Bossa" from his album *Wood II* is one example. You hear what the bass player is doing (with great precision) rather than feel it.

The addition of a pair of



IGx Infrasonic Generators provides a stronger tonal foundation, grounding the speaker with a greater sense of gravitas. The pair of IGx's brings up the very low end and adds fullness and weight. But their addition isn't what you would come to expect if you've added conventional subwoofers to a loudspeaker. Rather than take over the bass duties of the main speakers and dramatically alter tonal balance, coherence, and dynamic continuousness, the IGx's contribution is much more subtle. To its credit, the IGx exhibited exactly none of the downsides of subwoofers—a discontinuity between the subs and main speakers and a disjointed rendering in which the low bass sounds slow and ponderous. Rather, the IGx blended with the Omnium absolutely seamlessly, making the entire speaker system sound "of a piece" to a degree I haven't heard from other four-piece speaker systems. The IGx is very subtle sonically, but the musical effect is profound, adding back the missing tonal foundation of the Omnium alone. The IGx also expanded the sense of space that comes from reproducing low-frequency spatial cues.

The IGx's crossover was set to 35Hz (by Luke Milnes) in my system, reproducing only the bottom-most octave. The midbass was unaffected, meaning that the complete system still favored speed and precision over muscular authority. One plus side of this leaner tonal balance is the complete absence of thickness, lag, bloat, and lumpiness in the bottom end. Some speakers seem to have a constant drone in the bass that's unrelated to the music—not the Omnium. In addition, the Omnium will likely be easier to position and optimize than speakers that have a generous midbass. The common scenario of setting up speakers in a room and then working to reduce bass heaviness is not likely to be a problem with the Omnium.

As I mentioned, the Omnium's midrange was extremely transparent, a combination of many factors but perhaps largely because it is run full range. In addition to this transparency, the mids were highly resolving of instrumental timbre and of the micro-detail that infuses textures with lifelike realism.

The treble is beautifully detailed and resolved without excessive brightness. Indeed, the Omnium's tweeter delivers a full measure of treble energy yet lacks the hard and brittle character of many of today's hard-dome tweeters. Cymbals were infused with the shimmer and decay you hear in life, rather than sounding like bursts of high-frequency energy.

Interestingly, I thought that the Ominum's superb transient fidelity contributed to the speaker's outstanding soundstaging. The suddenness of instrumental attack infused images with an immediacy and palpability that fostered the impression of the instrument existing in space in front of you. The overall perspective was a bit on the immediate side, but with excellent rendering of depth and hall size.

Conclusion

Wilson Benesch has pursued a different approach to loudspeaker design, an approach refined and evolved over the past 30 years. The company has prioritized transient fidelity (particularly in the bass), very low stored energy, and reduced resonances, qualities exemplified in the new Omnium. Wilson Benesch has invented some novel technologies to pursue these goals, along with uncompromising execution. The Omnium is a fully realized expression of the company's values.

The Omnium has the ability to apparently disappear as a sound source. It does this through its tonal neutrality and absence of coloration, sense of immediacy and palpability, ability to throw a soundstage completely detached from the speakers, and significantly, its complete lack of the heaviness and slowness in the bass that so often call attention to the speaker as a sound source. The speaker is quick and detailed, with that speed extending all the way to the lowest bass with no dynamic discontinuity. It's quite a trick, and one that defines the Omnium. The tradeoff is a midbass that favors articulation over tonal warmth, weight, power, and body. This isn't a speaker with a visceral bass impact that involves your whole body in the music.

The IGx Infrasonic Generator restores the missing tonal foundation in the very bottom end and does so, remarkably, without compromising the qualities that make the Omnium so special. The IGx has none of the usual downsides of conventional subwoofers, augmenting the bass with absolutely zero compromise in the overall presentation. It is essentially invisible sonically but gives music a greater sense of tonal gravitas. Because the IGx operates below about 40Hz (in typical installations), the Omnium's midbass is unaffected—it is still fast and lean rather than warm and weighty.

If you are considering a speaker in this price range, the Wilson Benesch Omnium should be on your short list. It takes a different approach, technically and sonically, to the question of how to create a loudspeaker that most faithfully and engagingly reproduces music. tas