

YG Acoustics Hailey 2.2 floorstanding loudspeaker

by Chris Martens

In *Hi-Fi+* Issue 145 (March 2017) Editor Alan Sircom and I decided to review loudspeakers that were contenders for state-of-the-art honours. Alan chose the Wilson Audio WAMM Master Chronosonic, while I opted for the YG Acoustics' four-tower Sonja XV loudspeaker system. Alan and I came away from our listening experiences impressed and delighted by what we had heard and speaking purely for myself I can say without hesitation that YG's Sonja XV was then and still remains the finest, most accomplished loudspeaker I have ever heard. With that said, however, two limiting factors about the Sonja XV do stand out: first, it's a very large speaker system that demands a big space in order to give of its best and second, the XV is dauntingly expensive, with a price tag (\$265,900) north of a quarter of a million dollars. For me, then, and probably for many of you, a key question is this: can the various technologies that make the XV the sonic wonder that it is be scaled downward to loudspeakers smaller in size and lower in price.

The unequivocal answer to that question is that yes, Sonja XV technologies can be scaled downward with excellent results—at least to a point. First came the Sonja XV Jr, which is mostly identical to the big XV, but with fewer woofer modules and an appropriately reworked crossover network, allowing for much shorter speaker towers and a concomitant price reduction. Next came the Sonja 2.2 (as reviewed in *Hi-Fi+* 155), which is essentially an original Sonja 2 that has been 'turbocharged' with essentially all of the technologies that make the XV so special. Importantly, the Sonja 2.2 demonstrates that nearly all of the desirable sonic qualities of the XV can be distilled down into a two-loudspeaker system (rather than a four-tower system), and one priced below \$80,000. Naturally, this leads to an inevitable follow-on question: can XV technologies successfully be scaled down even further?

The answer to that question is here in the form of the new Hailey 2.2 (\$46,800), which is a three-way, 3-driver, modular loudspeaker fitted out with XV-inspired improvements. The Hailey 2.2 features an upper tweeter-midrange enclosure that sits atop a lower acoustic suspension-type woofer module. Early on, I had been under the impression that the Hailey 2.2's upper and lower modules would arrive in separate crates that would eventually be stacked upon one another during installation and assembly, but this isn't the case. Instead, the Hailey 2.2's modules are locked together at the factory so that each Hailey 2.2 arrives as a completed loudspeaker ready to be moved into position for use.

Company founder Yoav Geva based the Hailey 2.2, like all YG Acoustics loudspeakers, on a number of essential 'building-block' technologies he has ▶



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► painstakingly developed over time. As a starting point, all cabinet enclosure panels are CNC machined from solid aircraft aluminium and are fastened together using aircraft-type “vibration-free pressurised assembly” techniques. Internally, the cabinets use YG’s proprietary FocusedElimination™ anti-resonance technology, which is said to keep “mechanical losses lower than any competing speaker, by combining the minimised turbulence of a sealed design with the low friction otherwise associated with enclosure-free concepts.” At first glance the illusion is that the Hailey 2.2 enclosures are composed of carefully joined flat metal panels, but a closer look reveals that the cabinets surfaces actually use an artfully blended combination of subtle, graceful compound curves. The cabinet sides are surface finished to a satin sheen and then anodised in jet black (although YG has occasionally experimented with other anodised colours on a very limited production basis). Interestingly, YG’s speaker enclosure designs result in part from input from Porsche Design.

Each Hailey 2.2 uses a 7.25-inch mid-bass driver and 10.25-inch woofer, both of which feature proprietary YG BilletCore™ diaphragms, which are machined out of thick cylindrical billets of aircraft-grade aluminium and given black anodised finishes. Although this might seem an unnecessarily difficult and complicated way to manufacture driver diaphragms, YG maintains that machined diaphragms allow more precise dimensional tolerances and the use of complex 3D diaphragm shapes that improve rigidity and resonance control. Further, YG says, the machining process imposes fewer stresses on the aluminium materials used and makes for greater long-term structural integrity, meaning owners can expect years of trouble-free use without any sonic degradation over time. The Hailey 2.2 woofer is housed in its own dedicated acoustic suspension enclosure, while the mid-base driver resides in a sealed upper enclosure along with the tweeter.

Importantly, the Hailey 2.2 employs the very same BilletDome™/ ForgeCore™ tweeter used in the Sonja XV, which is arguably the finest piston-type tweeter on the planet. What make this tweeter special is the fact that it uses a hybrid design that combines a fabric dome (chosen for its desirable damping properties and smooth roll-off characteristics) with a precision-machined and ultra-low-mass (30 milligram) aluminium support frame that fits within the fabric dome, adding tremendous rigidity and strength. The upshot is a tweeter that offers better high-frequency extension than either a conventional fabric or metal dome tweeter could provide. Meanwhile, the term ForgeCore™ speaks to the fact that elements of the tweeter’s motor structure have been CNC-machined to receive special 3D geometries said to minimise distortion and to impart “a sense of ease to the sound”. Stated simply, the BilletDome tweeter is an essential key to the Hailey 2.2’s sound, in that it gives the speaker fast, highly detailed, and sharply focused highs, with profoundly extended high frequency response that is unflinching and smooth. ►



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and ViseCoil™ low-frequency inductors in the crossover network. You might expect that these changes in the Hailey 2.2 would yield an incremental improvement in sound quality vis-à-vis the original Hailey, but to my ears the change was much more profound than that.

For my listening tests YG Acoustics installed the Hailey 2.2's in my home reference system, which consists of a Rega Osiris integrated amplifier and Isis CD player, an AURALiC Aries wireless bridge and Vega G2 DAC, Furutech cable and power conditioning equipment, and Auralex, RPG, and Vicoustic room treatments. Special thanks go to YG's Dick Diamond, who spent the better part of a day installing and then carefully positioning the speakers in my medium sized room.

From very beginning it was easy to hear the familial ties between the Sonja XV, the Sonja 2.2, and the Hailey 2.2. All three share similar and in some respects identical positive sonic characteristic, so that in a sense to describe one model among these three is more or less to describe them all. The only really substantial differences involve absolute dynamic capabilities and sizes of the spaces for which each speaker is optimised. The Hailey 2.2 proved ideal for my medium-sized room.

Like the XV and Sonja 2.2, the Hailey 2.2 conveys a sense of extraordinary sonic transparency, meaning the speaker will show you low-level transient, textural, and spatial details in recordings that you perhaps never knew existed. At the same time, though, the Hailey 2.2 consistently sounds smooth and natural, never edgy, analytical, or harsh. This is the beauty of the BilletDome tweeter in action.

As an example, listen to 'Vent poussière à L.S.' from Henri Texier's *Remparts D'Argile* [Label Bleu, 16/44.1] and not ▶

▶ Crossover points are placed at 65Hz and 1.75kHz. YG points out that the Hailey 2.2 crossover network topology was developed through use of the firm's proprietary DualCoherent™ CAD/CAM design software, which offers the singular ability to co-optimize the loudspeaker's frequency response and phase coherency simultaneously (other packages can typically optimize one or the other, but not both at once). The Hailey 2.2 crossover network is fashioned from extremely high quality parts mounted on extra-thick circuit boards whose traces are milled—not photo-etched—into the surfaces of the boards. The special parts used in the crossover include YG's custom-made ToroAir™ air-core inductors and the same types of massive, vibration-resistant ViseCoil™ bass inductors first created for the Sonja XV. These inductors use a vise-like clamping mechanism to all but eliminate audible inductor noise and hum, thus yielding low bass response that is uncommonly pure-sounding and articulate.

In a nutshell, the Hailey 2.2 represents a careful downsizing of the design concepts that worked out so well in the Sonja XV and then the Sonja 2.2. Once again, the Hailey 2.2 benefits from the two distinguishing technical features that set the Sonja XV apart; namely, use of a BilletDome™ tweeter

▶ both the instrumental textures and timbres you are hearing, plus the spatial characteristics of the recording. The track opens with delicate, shimmering high percussion from Tony Rabeson accompanying a sweet, meditative clarinet statement from Sébastien Texier. Later, Henri Texier enters with a thoughtful and carefully restrained acoustic bass contribution that echoes the phrasing of his son Sébastien's clarinet lines. Through this all, the YGs make the instrumental voices sound very nearly real, with dead perfect tonal colours and textures, realistic (but not overwrought) dynamics, and an uncanny sense of focus. The Hailey 2.2s also served up a masterful combination of imaging specificity (the instruments sounded reach-out-and-touch them present in the space) and believable soundstage scale. In fact, in my room the stage extended far to the left and right of the speakers with apparent stage depth that extended well beyond the back wall of my listening room.

Second, the Hailey 2.2s, like their bigger YG brethren, proved to be decidedly full-range loudspeakers that are capable of terrific extension at both high and low frequency extremes. For an example of this try Nils Frahm's 'Chant' from *Solo* [Erased Tapes Records, 16/44.1], where you will hear Frahm performing on both acoustic and electronic keyboards, with some left hand passages presenting forceful and exceptionally low-pitched bass information. The Hailey 2.2 handled these passages, and especially the low bass elements, with rock-solid power and precise pitch definition—all while maintaining grace and composure (as if the speaker was really not having to work very hard). Yet the speaker never sounds bass heavy; on the contrary, its low frequencies offer equal measures of power, refinement, and control. This is a rare combination of virtues and a joy to hear.

Third, the Hailey 2.2's offer energetic and expressive dynamics—subject only to the constraint that they should be used in appropriately sized spaces for best results. In my mid-sized space the Hailey 2.2's offered dynamic agility aplenty and more sheer dynamic clout than I really needed. To hear how the YG's dynamic agility and energy can bring a track alive, listen to 'Ice Pick Mike (Movie Version) from Lalo Schifrin's soundtrack to the movie *Bullitt* [Aleph Records, 16/44.1]. This is an oldie but goodie recording from the 1960's, yet the YGs present it with all its power, clarity, intricacy, and dynamic drive intact. What is more, the Hailey 2.2s manage to make the track sound fresh and new, not dated or 'worn out'. Put on the track and in seconds you'll imagine you are prowling the streets of San Francisco in a British Racing Green 1968 Ford Mustang, looking for bad guys driving a black Dodge Charger. The YGs are that kind of vivid.

Last but not least, the Hailey 2.2's are capable—on good material—of delivering vivid, breath-taking, wraparound 3D imaging. I first noticed this quality on Elbow's 'Honey Sun' from *The Take Off and Landing of Everything* [Concord, 16/44.1]. This deceptively simple recording features a primary vocalist front and centre, with backing vocalists positioned far to left and right and a little behind the primary vocalist. On the song's choruses, however, the imaging (and the all around dynamic envelope) shifts to that backing vocalists and instruments now are even farther to the left and right and positioned well ahead of the primary vocalist—almost as if they are performing from the sides of the room. Through the YGs the presentation was so eerily realistic that I

TECHNICAL SPECIFICATIONS

Type: Three-way, three-driver, modular floorstanding loudspeaker with sealed acoustic suspension cabinet enclosures

Driver complement (per loudspeaker): One approximately 10.25-inch BilletCore woofer, one approximately 7.25-inch BilletCore mid-bass driver, and one approximately 1-inch BilletDome/ForgeCore tweeter

Frequency response: 20Hz to above 40kHz, ± 1dB in the audible band, ± 5° relative phase throughout the entire overlap

Impedance: 4 Ohms nominal, 3 Ohms minimum

Sensitivity: 87dB/2.83V/1m 2 ω anechoic

Dimensions (H×W×D): 122 × 33 × 54cm

Weight: 76kg per channel, unpackaged

Price: \$46,800/pair or £53,000/pair

Manufacturer Information:

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URL: www.yg-acoustics.com

UK Distributor: Padood

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found myself involuntarily looking for sound sources at the sides of the room that I knew, in an intellectual sense, were not really there. Stereo imaging just doesn't get much better than this.

The Hailey 2.2 shares more than a few sonic characteristics with the state-of-the-art Sonja XV. It is a terrifically revealing and musically expressive loudspeaker that is scaled perfectly—UK and European readers please take note—to deliver extraordinary results in moderately sized listening spaces. To hear them is to want them. +