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Speaker Focus

YG Acoustics Hailey 2.2 Loudspeaker

Sweet Spot

Kirk Midtskog

YG Acoustics has a solid reputation for making an excellent line of high-performance loudspeakers. Since the company's founding in 2002, aluminum has been YG's calling card—specifically, precision CNC-machined, aircraft-grade aluminum. All of its cabinets, and even its driver cones, are made in house from aluminum billet. The dome of its patented tweeter, however, is *not* made of aluminum—well, not entirely. The unique hybrid tweeter, used in all models from the Hailey 2.2 on up, has a special soft-dome membrane integrated with a very light, strong supporting frame made of . . . yes, machined aluminum. There are other unique YG features and technologies, most of which are found in the Hailey 2.2, which is why, as you will see, it is a candidate for the best-performing model for the money in the line.

YG uses high-grade raw materials, top-tier crossover parts, skilled U.S. labor, and state-of-the-art milling and turning equipment to make its products—all of which carry considerable costs. The \$46,800 Hailey 2.2, as expensive as it is, represents significant trickle-down-availability of almost all of the engineering features that were formerly only found in the company's upper models like the \$265,900 Sonja XV. The performance level across the YG line is mostly a matter of scale; the fundamental technologies and the company's precision manufacturing are the same throughout its offerings—that is to say, executed with near fanatical attention to detail and quality.

Technical Elements

So, what we have in the Hailey are the following features. First and of primary importance is what YG calls the DualCoherent crossover. This proprietary design is based on a digital-signal-processing algorithm applied in the analog domain to simultaneously produce near-flat frequency response and near-zero relative phase among the different drivers—in this case, a three-driver, three-way design. (Usually, either good frequency response or phase performance is sacrificed, one for the other, in analog crossovers.) This crossover—created by founder Yoav Geva—was the initial brand-defining technology that helped launch YG in 2002. Second, in-house machined aluminum bass and midrange cones, called BilletCore, have strategically placed micro-ridges, both radially and concentrically, on their backs to provide stiffness while minimizing weight. This improves transient response and reduces distortion by minimizing cone flexing during demanding musical passages. Third, as I already briefly mentioned, the



tweeter is a patented Billet-Dome with a YG ForgeCore magnet and a proprietary soft-dome membrane that is bonded to a very lightweight, strong, acoustically transparent aluminum “air frame.” This hybrid dome has the strength to maintain its shape under much greater stresses than any other soft-dome tweeter, thereby reducing distortion while also avoiding the metallic “ringing” usually associated with metal tweeter membranes. Fourth, low-pass bass inductors are YG's own ViseCoil units with massive vise-like frames that are apparently much stronger than those in any off-the-shelf inductors available. YG says these inductors “reduce re-

sidual loss and improve linearity for greater bass impact, and [present] an easier job for most amplifiers.” Fifth, YG also makes its own toroidal air-coil inductors for other parts of the crossover, called ToroAir, which are also said to reduce distortion. Sixth, as mentioned, all YG cabinets are machined from aircraft-grade 6061-T651 aluminum. The following is from my 2015 review of the earlier Sonja 1.2: “Machined aluminum provides several advantages as a cabinet and cone material: good strength-to-weight ratio, relatively high resistance to environmental factors such as corrosion and high temperature (helpful when machining-friction

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Specs & Pricing

Driver complement: One 1" YG BilletDome tweeter, one 7.25" YG BilletCore mid/woofer, one 10.25" YG BilletCore woofer

Frequency response: Useable output from 20Hz to above 40kHz

Sensitivity: 87dB (2.83V/1m anechoic)

Impedance: 4 ohms nominal, 3 ohms minimum

Recommended amplifier power: Minimum, 60 watts

Crossover points: 65Hz and 1.75kHz

Cabinet: Aircraft-grade milled aluminum

Dimension: 13" x 48" x 21"

Weight: 167 lbs. each

Price: \$46,800 per pair, available in black finish (silver finish by special request)

YG ACOUSTICS LLC

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Associated Equipment

Analog source: Basis Debut V turntable & Vector 4 tonearm, Benz-Micro LP-S MR cartridge

Digital sources: Hegel Mohican CDP, HP Envy 15t running JRiver MC-20, Hegel HD30 DAC

Phonostage: Simaudio Moon 610LP

Linestages: Ayre K-1xe, Hegel P30, Constellation Audio Virgo III

Integrated amplifier: Hegel H390

Power amplifiers: Gamut M250i, Hegel H30

Speakers: YG Acoustics Sonja 2.2, Dynaudio Confidence C1 Signature

Cables: Shunyata Sigma signal cables, Nordost Heimdall 2 USB, Shunyata Alpha S/PDIF and AES/EBU, Shunyata Sigma NR power cords

A/C Power: Two 20-amp dedicated lines, Shunyata SR-Z1 receptacles, Shunyata Triton v3, and Typhon power conditioners

Accessories: PrimeAcoustic Z-foam panels and DIY panels, Stillpoints Ultra SS

heats the stock), and the ability to be machined into a wide variety of custom shapes to very precise tolerances. Aluminum also has relatively good resonance-damping characteristics when properly constructed."

The only feature included in the current upper models

but *not* in the Hailey 2.2 is YG's cabinet-in-cabinet enclosures. This double-cabinet construction uses a complete inner cabinet, with its own joints, that is carefully fitted into an outer cabinet to create a very rigid, self-damping enclosure. It simply would not be possible to use a double-cabi-

net enclosure and keep the Hailey's price anywhere near \$46,800. YG employs additional design elements, like resonance-control analysis to precisely place internal bracing and keeping the use of internal soft damping material to a minimum, but we have limited space, so I will leave it at that for now. (For more information about YG please refer to the YG section in *The Absolute Sound's Illustrated History of High-End Audio, Volume One: Loudspeakers*.) I will add that YG's manufacturing facility in Arvada, Colorado, just outside of Denver, is impressive, indeed. Several large, expensive CNC machines from Germany and Japan are strategically placed in its 12,000 square-foot factory. (Founder and Chief Engineer Geva is a certified machinist, by the way.) There is also a large acoustically treated listening room for product demonstrations and R&D testing.

The Hailey 2.2 has upper and lower cabinet modules. Both are sealed, air-suspension designs. An upper module houses a 7.25" BilletCore midrange driver positioned below a 1" BilletDome hybrid tweeter. A much larger lower module houses a single 10" BilletCore bass driver. The two modules form complete cabinets on their own, but they come attached to each other from the factory. The overall look of the Hailey, to my eye, has pleasant proportions with gentle curved lines suggesting understated elegance. As has been the case with all YG models since about 2015, Porsche Design had some input with the aesthetics.

Listening

The first thing that struck me about the Hailey was that it had the usual YG characteristics of tonal neutrality, inter-driver coherency, and musical swing even though it had just been hooked up. I knew it would only get better with time. I should know, as I have been using a pair of the next-model-up Sonja 2.2 since 2017 as my primary reference, and before that the Sonja 1.2 for two years. After ample break in, the Hailey did get better, but it was certainly not out of sonic kilter right out of the crate. Dick Diamond, whom our own Jonathan Valin has called "the nicest man in audio," came out to do the setup. He recommended that we place the Haileys right where the Sonjas had been. Just a bit of tow-in tweaking, and we were done. BTW, this consistency in a brand's sonic characteristics across its product line is not a given. I have heard fairly significant differences in various models within other marques' speaker lines.

The second impression was just how lively the Hailey sounded. It had a vividness that made recordings sound involving and exciting. The dynamic snap of a well-recorded drum kit, for example, had evocative clarity while still maintaining composure during demanding passages. This was not accompanied by any forwardness, etch, or unnatural forcefulness. Music simply had more presence than I expected. I am not sure why this crept up on me, as the Sonja is also musically expressive. Maybe it was because I had already shifted my expectations downward to account for the Hailey's significantly lower price—\$30k less, actually—than my references. (More on this later.)

This vividness also came across, no doubt, due to the Hailey's notably high overall resolution. With near electrostatic-like speed and fine detail, the music had ample texture, and subtle timing shadings remained intact—sometimes to wonderful ef-

Speaker Focus YG Acoustics Hailey 2.2

fect. Brush strokes on quiet jazz material and fingering sounds on an acoustic guitar were reproduced with ample facility. I am pretty sure this fine resolution and presence was partly coming from the contribution of the BilletDome tweeter. Now, I have not heard the pre-BilletDome predecessor Hailey 1.2 in a while, and it was in a different system; so, I can't speak directly to the new hybrid tweeter's effect specifically in the Hailey 2.2. However, I am familiar with this same tweeter difference in the Sonja. I believe there is a parallel, and can verify that, indeed, the Sonja 2.2 has more detail and presence than its pre-BilletDome 1.2 predecessor. There was also a greater sense of relaxed smoothness combined with higher resolution, in the Sonja 2.2 vs. the 1.2. It would not surprise me, then, if this is also the case between the older and newer Haileys.

The third observation was just how similar the bass performance in the Hailey was to that of the Sonja. It makes complete sense when one considers they use the same 10" driver, and their respective bass modules have the same internal volume. The Sonja bass module's *outer* dimensions are larger (and it weighs a lot more) because it has a double-cabinet enclosure. There are sonic differences in the bass between the Hailey and Sonja, which I will cover later, but I was very impressed by just how much heft, agility, and tunefulness in the low end the Hailey 2.2 brings to

its game. The Hailey also gets you a lot of the Sonja's dynamic performance and transient response but for \$30k less—that is to say, fantastic dynamic range and wonderful start/stop control.

Bass extension was quite deep and well defined. In my Sonja 2.2 review, I called its bass extension “full range, for all intents and purposes in my setup.” It follows, therefore, my sense of the Hailey's bass is the same. I have learned, though, that “full range” can mean different things to different people. So, to be a little more circumspect here, let me say I have heard low bass on synthesizer or concert organ reproduced with greater amplitude and clarity only on the most ambitious speaker systems or those with subwoofer reinforcement. To put it another way, I have never heard a familiar bass-loaded recording from a mega-system, at an audio show for example, that the Hailey can't also come fairly close to reproducing in my system. Mind you, I have a small/medium room made of very heavy-duty construction materials (mostly concrete) and only one small window; so, there are hardly any size, materials, or room proportions elements that would typically reduce bass presence. The other demos I refer to were done in much larger spaces under more demanding conditions. Even so, the Hailey's bass performance is impressive for a fully passive, three-way loudspeaker in a 48" tall enclosure.

As sealed cabinet, air-suspension designs, YG speakers don't have the same likelihood of inducing bass bloat or exaggerated “room loading” that some similarly sized ported speakers do. The extra

bass energy released from rear-ported speakers interacts more readily with room boundaries and can cause some parts of bass response to be elevated and others to be attenuated through acoustic standing-wave action. Theoretically, there can also be small timing delays at the listening position, with some rear-ported speakers, between the drivers' initial front-firing sound waves and the drivers' back waves as they make their way through the cabinet and out of the rear port and then are reflected by the room's back wall and then finally reach the listening position. I find the YG air-suspension approach to bass reproduction to work really well in a wide variety of rooms, because such speakers are easier to place for simultaneously good bass response, overall tonal balance, and sound-staging. At the end of the day, I still like a lot of ported speakers and basically remain agnostic on the issue. I have achieved excellent results, though, with YG speakers in my room and have heard similarly good results in other rooms.

The Hailey 2.2 also imaged really well in all three dimensions. In fact, the first observation a friend of mine—also an owner of YG speakers (Sonja 1.2)—made upon hearing the Hailey was, “They image like crazy.” The side-to-side sweep was continuous and impressively wide, well beyond the outer enclosure panels. Depth was also very good, extending rearward farther than the back wall (which was about 5' from the tweeters). Soundstage height was quite high for a 48"-tall speaker, extending at least 22" above the cabinet on some re-



Speaker Focus YG Acoustics Hailey 2.2

cordings. This made the Hailey capable of creating a cuboid of sound that nearly filled the entire speaker end of my room—and seemingly beyond the room's 12.5' width on some recordings. If I closed my eyes, or listened in the dark, the illusion of the speakers not being the sources of the sound became quite convincing. Individual images were focused and had sufficient 3-D solidity to avoid the too-common flatness that can diminish recorded music's "completeness" or physical presence.

If you have a large room, and your musical taste hews to the truly grandiose, you will probably prefer a larger loudspeaker. In my setup, though, the Hailey did not favor or underserve any genre or scale of music. It delivered the exhilarating forcefulness of driving rock such as Tool's *Lateralus* and the stirring grandeur of large romantic-era orchestral works like the Saint-Saëns Symphony No. 3 just as well as it communicated the subtle beauty of a Bach partita or the contemplative expanses of Bobo Stenson's trio. After one considers all the engineering, manufacturing, and technical acumen that goes into a given audio product, it must serve music reproduction as an artful expression; the Hailey 2.2 did a great job of "doing justice" to my music collection.

So, if you haven't noticed, I keep tiptoeing around a pivotal question. If the Hailey 2.2 is so close in overall performance to that of the \$30k-more-expensive Sonja 2.2, at least on the face of things, why bother with the Sonja? Save the money, right?

Let me just say, upfront here, the Sonja is a better speaker across the board, but not necessarily in its basic performance envelope like frequency extension or dynamic range. Those elements are fairly similar. The main difference lies in *how* the Sonja makes everything sound a little more real, more 3-D, more nuanced, and simultaneously more relaxed as well as higher in overall resolution. It does those things, in my mind, by creating a more coherent and controlled presentation. It is not that the Sonja is reserved in some way; it is, in fact, a wonderfully evocative speaker. The Sonja 2.2 just sounds more musically accomplished, if you will. Perhaps it is the result of better inter-driver

blending among the Sonja's two 6" midrange drivers and the tweeter in its D'Appolito configuration compared to the Hailey's single 7.25" midrange driver and its tweeter. Maybe—and more likely—the cabinet-in-cabinet enclosures used in the Sonja allow for a more stable platform from which the drivers can function. The Hailey does not lack musical sophistication or nuance at all on its own terms. Only through direct comparison to its more expensive stablemate, does it sound a bit less refined. In its own right, the Hailey is a really good speaker.

In some ways, I can understand how some listeners might actually prefer a few aspects of the Hailey's per-



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YG Acoustics Hailey 2.2 **Speaker Focus**

formance to the Sonja's. As inconsistent as this may seem after I just gushed about the Sonja, let me clarify. The Hailey has three small sonic differences, when directly compared to the Sonja, that might work better in some systems and to some listeners' tastes: First, the Hailey has a little more lower-treble presence that tends to make some music sound a tad more lively. Second, the Hailey has a slightly taller sound stage. And third, the Hailey seemingly has a bit more weight in parts of the low bass, although, this could be the result of the Sonja's cleaner, slightly more articulate bass presentation, which skewed my perception of added bass weight in the Hailey. I

am splitting hairs, here, but I want to offer these observations as potential characteristics that might make the Hailey really appeal to some listeners' tastes. Do I think the Sonja is better? Yes. Is it worth the extra \$30k? If one has the financial means, yes. The Hailey represents YG's price-to-performance sweet spot for those folks who find that the differences outlined above suit their systems and listening preferences. For others, the Sonja's better 3-D depth portrayal, better resolution of fine detail, and beguiling musical charms will win the day and justify its higher price. At the risk of sounding as though I am equivocating, I honestly see both models as the heart of the company's

product line. The price/performance pivot zone is right between the Hailey and Sonja depending on your sonic preferences. Some people will tip one way or the other and have perfectly good rationales for their choice—provided they are in the market for speakers of this type and price in the first place, of course. In terms of the Hailey's position in the broader loudspeaker market, it is most definitely competitive.

Conclusion

The Hailey 2.2 is a musically expressive, revealing speaker capable of deep-reaching, tuneful bass and agile, wide-ranging dynamics. It creates focused images within an expansive soundstage into which the speakers sonically disappear as sound sources. It reproduces power music like grand orchestral passages and hard-driving rock very well, as is also the case with subtle solo acoustic works (and all other kinds of music, for that matter). The Hailey is the lowest-priced model in YG's line to offer all of the company's defining engineering features except the cabinet-in-cabinet enclosures found in all the models above it. As such, it is a compelling way for listeners to enjoy most of YG's technology at a significantly lower price. It is a fine example of trickle-down technology yielding good results. The Hailey 2.2 deserves to be on your audition short list at its price level. Another fine loudspeaker from YG and another recommendation. **tbs**

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Manufacturer Comments

Miyajima Infinity Mono Cartridge

Thank you to TAS and Jacob for a very accurate and honest review of a cartridge I believe to be the best in the world—it just happens to be mono only! I offer all Miyajima phono cartridges with a seven-day full-money-back trial in your own system. You have nothing to lose by trying one. I believe Miyajima cartridges are the only cartridges available on a trial basis.

I highly recommend that the Infinity be paired with the Miyajima Labs ETR Mono Step Up. This is a true single-coil transformer with variable loading as well as input- and output-impedance settings. These settings allow users to fine-tune their mono setups by ear to reproduce the older Columbia, fffs, etc. curves in way that is pleasing to them. This is a “must” for original early mono recordings.

Again, thank you TAS for the fine writing about a great hobby. Everyone stay safe and well.

Robin Wyatt
Robyatt Audio

Air Tight ATM-300R Power Amplifier

I can see that Mr. Olsher has a deep understanding of electric circuit design as well as vacuum-tube amplifiers, and he fully understands our design intention about the local negative-feedback loops we incorporated in ATM-300R.

When we started our product concept of the ATM-300R, we aimed to design an amplifier with “natural and transparent” sound with “Sound Frame with Dignity.” Dick Olsher’s impressions of the amplifier’s sonic performance are in line with these product concepts.

We thank you for reviewing our ATM-300R in your prestigious magazine.

Yutaka “Jack” Miura
Air Tight

YG Acoustic Hailey 2.2 Loudspeaker

A manufacturer experiences trepidation when submitting a product for review that is the less expensive sibling of a product previously covered by a particular reviewer. The reviewer is faced with the worrisome task of analyzing the new product on its own merits and not those of its accomplished family member. When you have a professional of Kirk Midtskog’s caliber your apprehension is relieved. Kirk eloquently covered the qualities of vital importance and skillfully navigated the differences between Hailey 2.2 and Sonja 2.2. BTW, Sonja’s MTM arrangement was referred to as a D’Appolito configuration, which isn’t quite accurate as our associated technologies yield a unique result. We at YG Acoustics offer our sincere gratitude to Kirk and TAS for reviewing and recommending our beloved Hailey 2.2 speakers.

Dick Diamond
Director of Sales & Marketing
YG Acoustics

Raidho TD3.8 Loudspeaker

On behalf of our entire team, I would like to thank Anthony H. Cordesman for his great work in reviewing our Raidho TD3.8 loudspeaker. I am both humbled and proud of his positive words. It is very much appreciated.

Benno Baun Meldgaard
Chief Design Engineer
Raidho Acoustics

Magna Riser Ascension Speaker Stand

Thank you for reviewing our Magna Riser Ascension stand. I think Wayne well captured the sonic characteristics I strived for.

There are a few more details that could be shared with readers. The Ascension is the result of about one year of R&D. Included in the design is the use of our version of constrained-layer damping, interference fit, and metal stress relieving of key components. All Magna Riser models use a unique tuning that requires a left and right tweeter side-foot orientation. Each pair of Ascensions is individually resonance-tuned. We offer two or three different model stands for some Magnepans. Each Magna Riser is sold with a money back offer (see our website for details).

As a fellow Magnepan owner I believe that each purchaser is the best judge of how an audio product performs in a specific system. With hundreds of Magna Risers in owners’ homes no one has ever returned a set because he did not hear the sonic gains our designs provide. Every Magna Riser is a limited edition—hand-crafted and built on request for a specific owner.

Robert Raus
Magna Risers

Groovetracer Rega Upgrades

I want to thank Wayne Garcia for his interest in Groovetracer Products. I was pleasantly surprised when he contacted me to purchase the upgrades. His review is both well written and technically on point.

I would like to add one detail that went unmentioned in the Groovetracer review. There is a sapphire thrust plate mounted on the bottom of the bearing shaft. It is hidden from view once the subplatter is installed. The sapphire thrust plate rotates on the Zirconia bearing ball and provides a very low coefficient of friction. This low-frictional interface greatly reduces micro-vibrational forces, which could be picked up by the stylus and amplified, causing unwanted noise through the speakers. This “jewel bearing” design allows more inner detail to shine through, while producing more accurate low frequencies.

Finally, the concentricity of the subplatter assembly greatly improves speed stability, which results in a more focused soundstage and accurate reproduction of musical pitch.

Frank Smillie
Groovetracer Products