

YG Acoustics' Design Philosophy and Technology

by Dick Diamond



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are made in the scientific domain. The speakers are never altered to reflect the disposition or preferences of any listener or subjective acoustical leanings. YG Acoustics, and countless others, have found that this philosophy produces speakers that are believably accurate and emotionally warm and moving.

The overriding design philosophies employed at YG Acoustics are certainly somewhat similar to the current consensus regarding the state of the art, but also offer some significant philosophies that are not conventional or practiced elsewhere in the industry. Like others, YG Acoustics' goal is to transport the listener to the original event, without modification, alteration or bias—to be as true and transparent to the source as humanly possible. Having said that, YG Acoustics' departure from the norm lies in the fact that we are absolutely driven by the relationship between scientific analysis and the human experience provided by music. YG Acoustics believes there is a technical reason behind something that sounds great—and lifelike. The key to this lies in the fact that we do not voice our speakers. YG Acoustics speakers are engineered to be the most technically perfect available. We also believe that the proof is in the hearing and emotional response provided. YG Acoustics therefore verifies a new design by carefully listening to ensure that the speakers are performing as indicated by measurement. If anomalies are felt to be present while listening we go back to the suite of measured data to find correlations. Once the concerns are identified corrections

To assure that we can produce according to the strict YG Acoustics' ideals, our loudspeakers employ six significant technologies. Technologies that support the musical performance customers have come to love and appreciate.



The **enclosure** has been designed to offer no voice; to not speak or resonate in the presence of music. Aircraft grade alloy was selected, not because of a love affair with metal, but because no other practical material offered this degree of rigidity and, thanks to YG Acoustics' Pressurized Assembly, lack of resonance. CNC-machined in-house to amazing tolerances, the enclosures are precise, airtight and silent. When measured with extremely sensitive test equipment no other cabinet material offers such low incidence of vibration. Moving to the interior of the cabinet, the absolute control of any internal resonance concerns is handled by YG Acoustics' **FocusedElimination™** technology, which slays these oscillating “gremlins” at the source.

The drivers, specifically the mid/woofer and subwoofer cones, must accelerate without deformation - requiring absolute rigidity. YG Acoustics' **BilletCore™** drivers are slowly carved from solid billet aluminum into precision cone shapes and are the most rigid drivers currently available. The **ForgeCore™** tweeter, with its innovative internal geometries, offers vanishingly low distortion for pure, natural high frequency reproduction.

The famous YG Acoustics **DualCoherent™** crossover technology, designed with a proprietary algorithm, is the only technology producing speakers optimized for perfect relative phase *and* perfect frequency response. The result is the flattest frequency response we have seen measured along with the best relative phase ever observed in independent measurements. Assisting this crossover to produce the most distortion free signals are some very special components: custom Mundorf® capacitors and resistors, in-house machined circuit boards and, most notably, is the use of in-house wound **ToroAir™** inductors. These leading-edge toroidal inductors prevent the cross-contamination of electromagnetic energy from spoiling delicate high frequency detail and nuance.

In summary, it is the execution of these cutting-edge technologies that resides at the heart of every YG Acoustics loudspeaker.

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