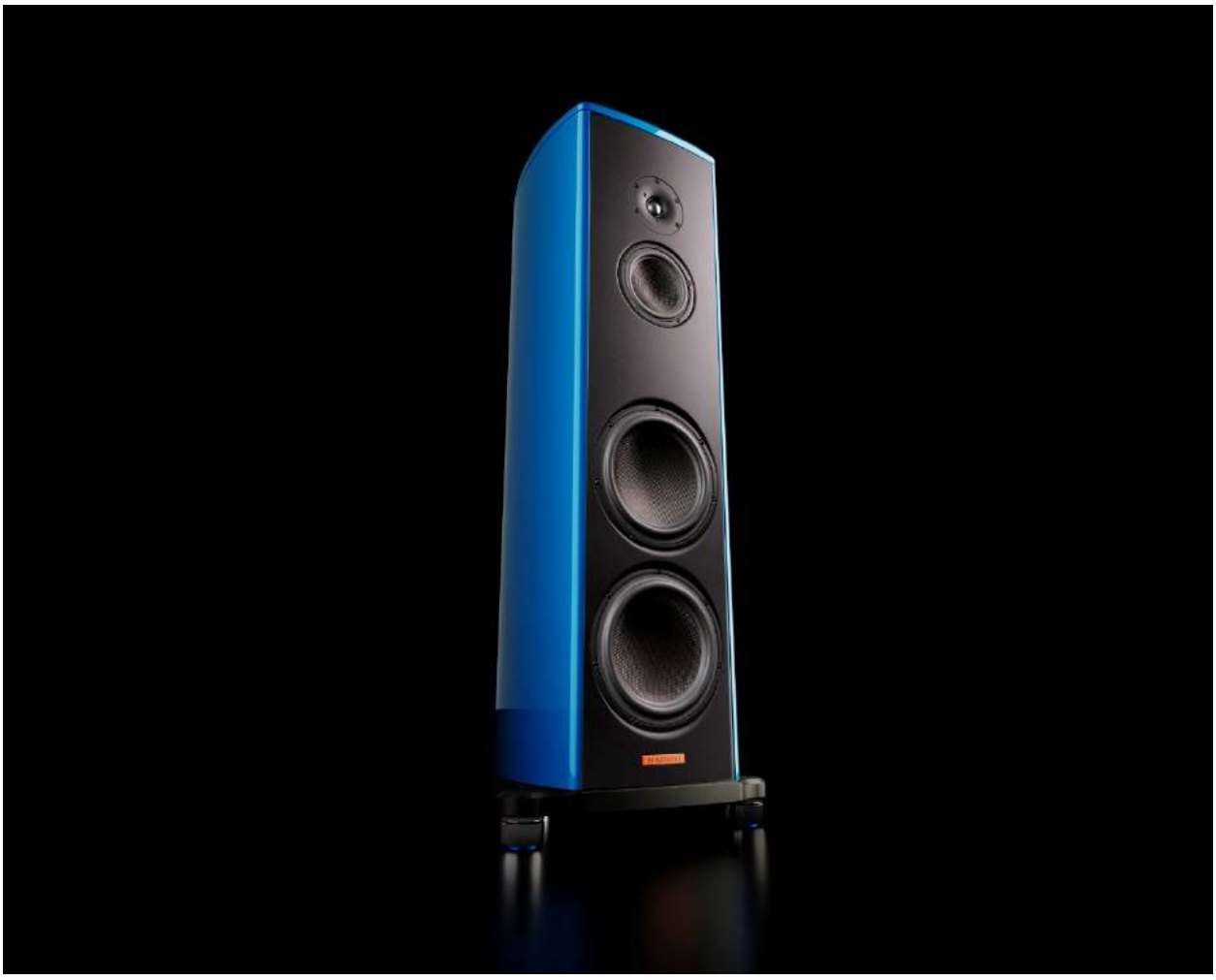
S3

3-Way Floorstanding Loudspeaker System



HAYWARD, CA (USA) // December 2022 // Magico - the leader in high-performance loudspeaker design and manufacture - is pleased to announce the new S3.

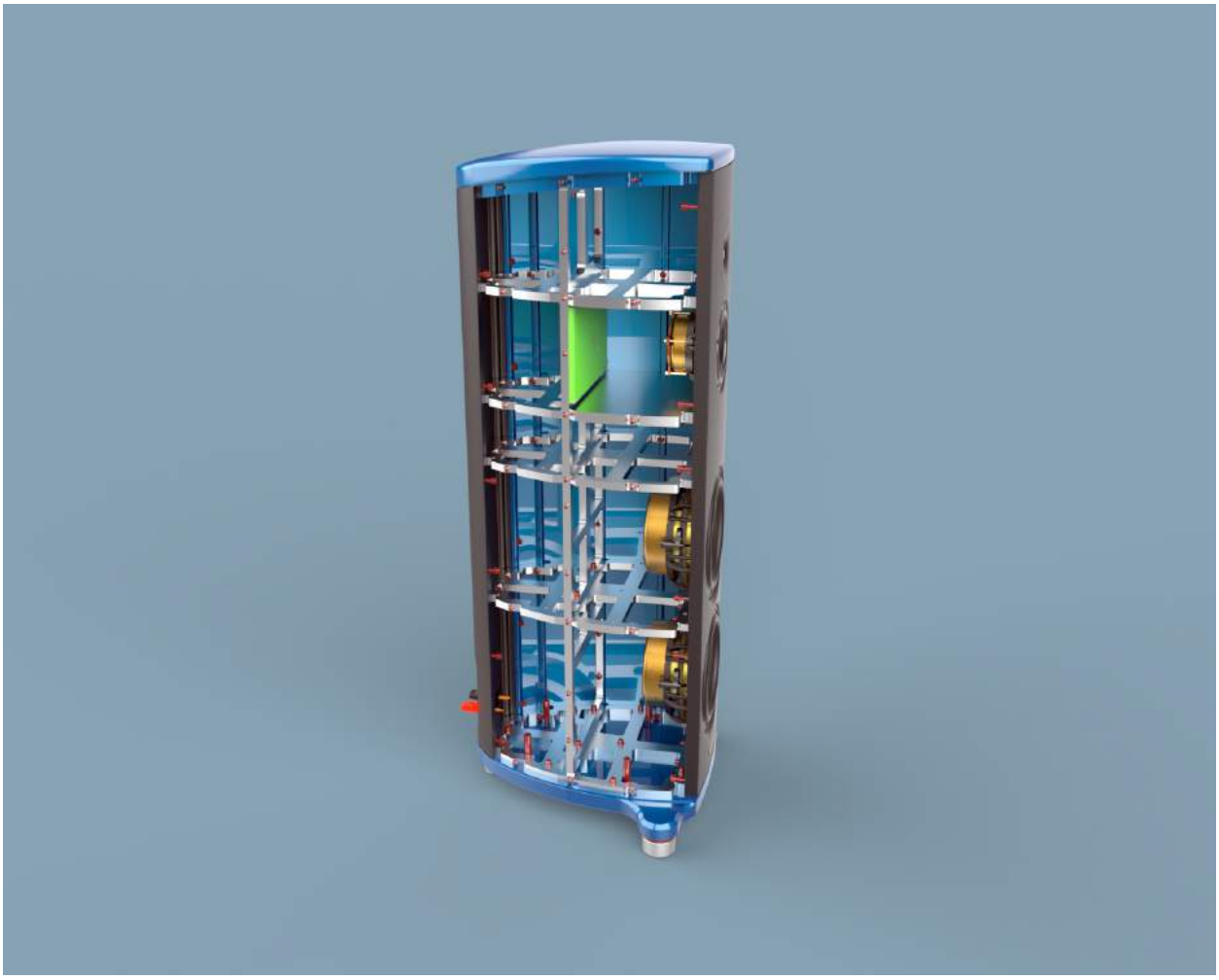
Magico's flagship loudspeaker, the incomparable M9, was as much a *tour de force* engineering exercise as a finished product. The knowledge distilled and technological advances gained in the M9 development have been applied to the new S3, which reaps the rewards of those monumental efforts. With new state-of-the-art R&D capabilities, we set out to redesign the S3 MkII loudspeaker to achieve audible improvements in every parameter. With its new enclosure, drivers and coupling system, the entirely re-engineered 2023 S3 model accomplishes far more than the initial design brief.

The technologies and construction techniques leveraged in the new S3 achieve a purity of sound and measured performance that surpassed our expectations. The new Magico S3 shatters the boundaries of performance for a speaker in its class.

ENCLOSURE TECHNOLOGY

The new S3 features an appearance that is at once refined and fortified. With a newly engineered enclosure assembled from four separate extruded aluminum panels ranging in thickness from 1/2” to 2-inches, the S3’s enclosure is ambitious to say the least. Each panel, including the front baffle, is carefully machined to take on an overall edgeless-shaped perimeter. A massive machined top plate is curved and has an upward pitch to minimize enclosure diffraction and break up vertical standing waves. A thicker and more substantial baseplate incorporates a newly designed 3-point outrigger system with a new foot design that lowers the center of gravity of the speaker and increases overall stability, resulting in a lower noise floor and increased dynamics.

Magico’s new in-house 3D laser interferometry system measures each S3 enclosure panel, up to 1000 points a side, and calculates the aggregate SPL resonance of the entire enclosure. This highly accurate analysis enables us to compare the enclosure resonance contribution in relation to the acoustical output of the transducers and strategically apply internal bracing and damping techniques to optimize the overall sound performance of the S3 in its finished form. The new S3 enclosure is 30% quieter than its predecessor.



ACOUSTIC DESIGN

The Klippel Near-Field-Scanner (NFS) uses a single microphone that rotates around a loudspeaker enclosure that is suspended in free-air. The microphone analyzes the environment space first, and then takes fully automated 3D acoustic measurements (on and off axis) in a minimal amount of time without the need for an anechoic chamber. The 360-dgeree sphere of measurement points are then calculated with the initial room measurements deducted from the equation. The Klippel Near-Field-Scanner provides Magico with unprecedented, highly accurate data and allows us to predict the in-room reflections and response of each loudspeaker in a standard listening room environment. The new S3 greatly benefitted from this uncompromised investment in measurement technology. The result is a speaker with clear technical superiority that results in unparalleled sonic performance.

DRIVER TECHNOLOGY

Three years of engineering research brings a new generation of transducer chassis designs that provide improved mechanical and acoustical parameters. New chassis profiles have been developed for the S3's midrange and bass drivers, which result in ideal stiffness and damping properties to minimize any acoustical contribution by reducing resonant modes while also maximizing air flow. No aspect of the S3's design was left to chance. Magico's commitment to leveraging its R&D resources for the best acoustical performance is unrivaled.

TWEETER HIGHLIGHTS

Using key elements of the M9 tweeter platform, the newly designed S3 tweeter features the vaunted Magico 28mm diamond-coated beryllium diaphragm. Optimized geometry, created using state-of-the-art Finite Element Analysis modeling tools, brings the S3's high-frequency reproduction one step closer to perfection. This was achieved by skillfully leveraging beryllium's physical properties, making the tweeter closer to the theoretical ideal without gaining the extra weight normally associated with a material such as diamond's specific gravity. This applied technology allowed Magico to increase the dome diameter from 26mm to 28mm, improving many aspects of performance and allowing even greater power handling and vanishingly low distortion. Combined with a neodymium-based motor system, new acoustically improved back chamber, and customized shape to integrate into the curved front baffle, the new S3 tweeter registers the lowest distortion measurements possible today from a high-frequency transducer. When coupled with even greater power handling, the S3's tweeter is a technical and sonic marvel.

MIDRANGE DRIVER HIGHLIGHTS

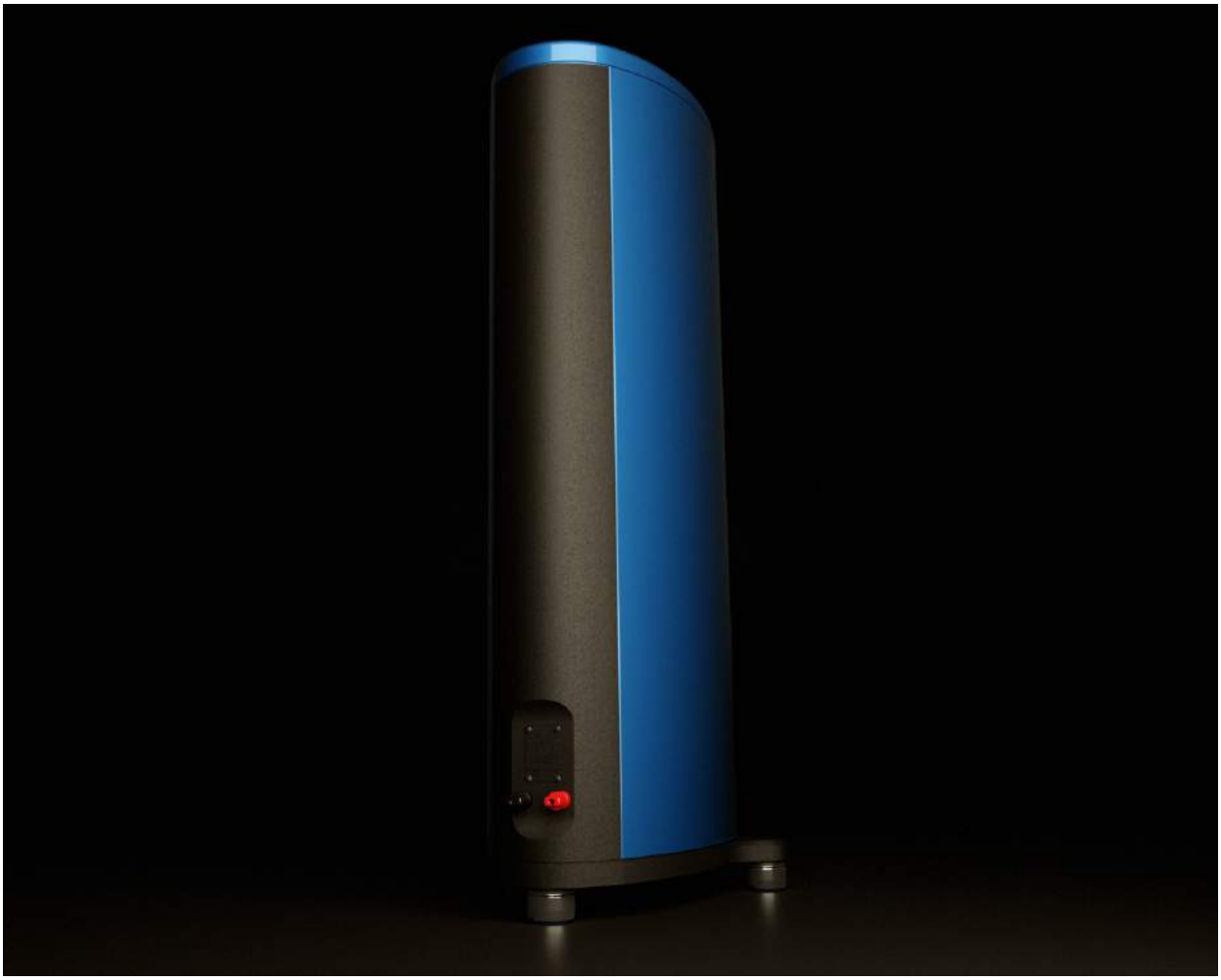
The 5-inch pure midrange driver in the S3 features an advanced cone material formed of a honeycomb aluminum core sandwiched with outer and inner layers of graphene and carbon fiber. This enables wider dispersion characteristics and results in greater midrange transparency. The advanced cone is supported by a customized basket assembly and innovative foam surround, which helps achieve ideal cone/surround integration, faster settling time, and impressively low distortion. The all-new underhung neodymium-based motor system uses two extra-large magnets to facilitate a super-stabilized magnetic field and a pure copper pole cap that minimizes eddy currents and maximizes efficiency. This development in midrange driver technology sets a new benchmark of measured performance in both the frequency and time domains.

BASS DRIVER HIGHLIGHTS

Finite Element Analysis (FEA) provides Magico engineers a single platform to assess acoustical, mechanical, electromagnetic, and thermal properties. This meticulous testing helps minimize distortions in the frequency and time domains. The S3's bass driver has benefitted greatly from this advanced research.

The 9" bass driver in the S3 features an enhanced version of Magico's Graphene Nano-Tec cone. Graphene, a hexagonal lattice of carbon, achieves 50 times the tensile strength of high-carbon steel. The new cone is formed using a honeycomb aluminum core sandwiched by outer and inner layers of CF Graphene, which combine to achieve the highest possible stiffness-to-weight ratio, ideal damping properties, and extremely low distortion. The new bass unit incorporates oversized components including a 5-inch pure Titanium voice coil and huge copper cap with 1/2" of linear excursion. The super-stabilized magnetic field enables the S3 to reproduce superior low bass output (112dB @ 50Hz measured at 1 meter), while maintaining very low distortion and inductance below 0.25m

The new Magico S3: Technical superiority achieved through an uncompromised commitment to the most advanced research and development techniques in the industry. The result is a sonic masterpiece that will reveal more listening pleasure than thought possible at this price point



SPECIFICATIONS

Driver Complement

1	1.1”	MB5FP pure Beryllium, Diamond coated tweeter
1	5”	Gen 8 Midrange driver
2	9”	Gen 8 Bass driver

Sensitivity: 88dB
Impedance: 4 Ohms
Frequency Response: 24 Hz – 50 KHz
Recommended Power: 50 – 750 Watts
Dimensions : 44H” x 17D” x 12W” (17” outrigger)
Weight: 222 lbs

Ship Date: Q1 2023

For more information visit us at www.magicoaudio.com