

# BLACK MAGIC



US company Magico has excelled itself with the new S3 loudspeaker: it delivers extreme detail and is highly musical at the same time. How has it been achieved?

I've no idea how often we've used "Saturday Night" by the Red Norvo Quintet for listening tests. The live recording by the legendary 'Prof' Keith Johnson, almost 60 years old and available on STEREO sound test CDVI, is part of our standard repertoire, simply because many decades on there are hardly any more authentic-sounding Jazz recordings. This time, however, it was special.

Free and unrestrained, the band was standing before us between two pillars, each about 122 cm high and weighing 68 kg: the Magico S3 loudspeakers. Bone dry, but with substance and impact, the sound was so real I felt I could hear the consistency of Red Norvo's hard rubber mallets as they struck his vibraphone, with the other musicians perfectly staggered around this dynamically pulsating center, in a tonally homogenous soundscape.

There was no trace of artificial lightening in order to feign resolution – on the contrary! – but the most impressive thing for me was the softly perceptible audience in the background for the duration of the entire piece. Many top speakers mask this ambience more and more at increasing volumes after a somewhat reserved beginning, and some even make them disappear completely, but the S3 not only preserves the separation between audience and band but also lets you feel nuances in the soft murmuring.

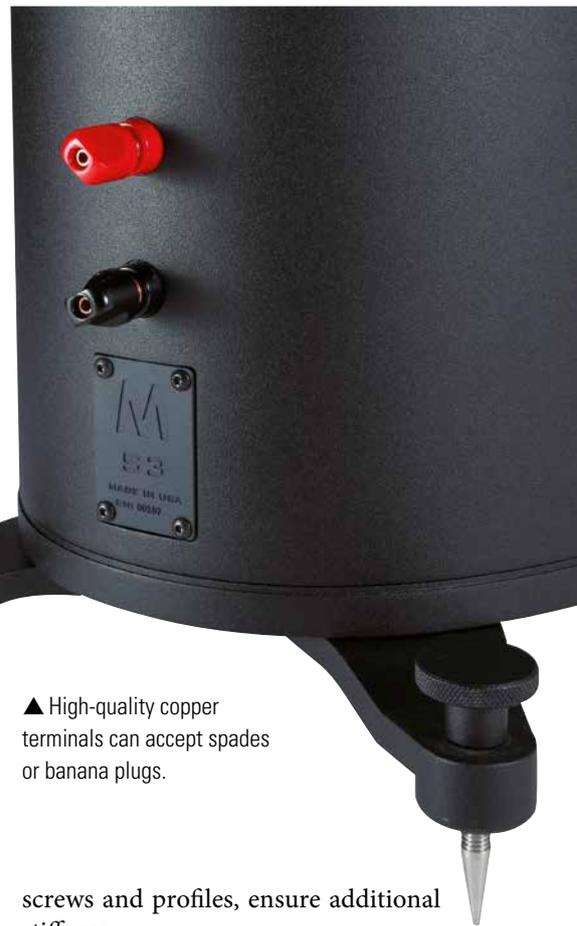
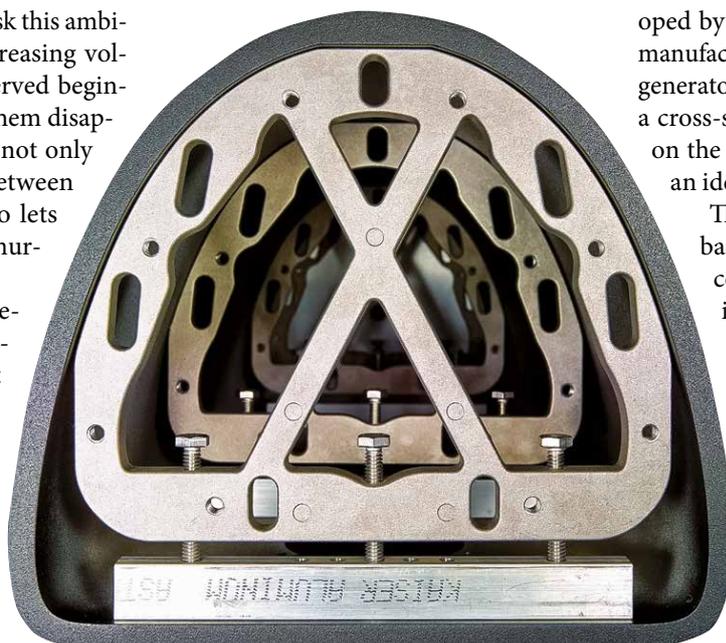
This impression of unrestrained three-dimensionality was so sustained that one of my colleagues asked me whether the S3s were connected out of phase: they weren't, of course, as witnessed by the fact the sound was so spacious, yet so solid, and the bass both tight and full.

That performance is just one of the masterpieces with which the Magico speakers delighted us over the duration of several listening sessions. Indeed, I could fill this piece with any number of highlights to underline the capabilities of this extraordinary speaker. But no: the technical background of the Bay Area company located near San Francisco is much too interesting.

Listen, and it's clear the S3 is a product of passion, but one is based on skill and calculation: for instance, Magico founder and mastermind Alon Wolf determined the parameters for the shape of the one-part, extruded aluminum housing using sophisticated analysis programs. Its thickness – a good 12 mm – and other dimensions could not have been different and still delivered perfect performance, while internal metal braces, mounted rock-solid with

**KEYWORD**

**Analysis programs:** Used to simulate technical parameters based on constructive conditions and changes down to the smallest detail.



▲ High-quality copper terminals can accept spades or banana plugs.

screws and profiles, ensure additional stiffness.

**Chassis road trip!**

Sounds like a lot of work? Wait 'til you hear the journey behind the drivers! The cones of the two newly-developed 20cm woofers and the midrange unit, derived along with the tweeter from the larger S5, consist of three layers of carbon: produced by a US manufacturer, they're fused into a sandwich using a special process developed by a German company which also manufactures rotor blades for wind power generators. This produces a material with a cross-section able to adapt to the load on the diaphragm, designed to achieve an ideal mix of stability and lightness.

The carbon sandwiches then go back to California where they are coated with fine carbon particles in a "Nano-Tec" process, to further to increase their rigidity even more. Then they return to Germany again where creases

◀ Internal braces affixed rock-hard increase the stability of the metal housing.



▲ The medium range drivers are the same as those used in Magico's larger S5 and sit in their own aerodynamically calculated chamber. Cone and magnet system are firmly anchored by the chassis.

and weaves are added according to Wolf's specifications. Then final assembly begins in Morel's high-end manufacturing plant in Israel under the supervision of Magico's driver expert Yair Tammam. The midrange drivers are framed rigidly, and the woofers equipped with a powerful double magnet system in a chassis with aerodynamically-designed braces: these hardly interfere with the rearward radiation, let alone reflecting it back into the cone. We could similarly elaborate on the design of the tweeter, which is equipped with a super-light and yet stiff beryllium membrane.

Only then are the completed drivers ready for final assembly, which happens in Magico's spotless factory in California and brings together this select driver quartet with the aluminum monocoque enclosure, designed to minimize diffraction and resonance while reducing the need for damping materials housing, and ensuring the pin-point sound of the S3. This precision is certainly aided by the fact that this is not the usual bass-reflex construction but rather a sealed 'box', Alon Wolf believing that this gives him maximum control including a rapid decay behavior, which the non-trailing impulse response confirms.

In addition, the speaker is designed to be easier to set up and place in the room than the more conventional reflex

models, and our experience was that the bass reproduction changes less than usual when moving the speakers around in the room. However, the audible differences in the size of the sound, the gradations of depth and overall solidity led to us correcting the position of the S3 a few millimeters here, and a few degrees there.

And here's an extra tip: in order to achieve the maximum internal rigidity and the most accurate sound, you should level the Magicos perfectly using a bubble level, which is easy thanks to the grippy adjustment screws on the spikes and just requires a bit of diligence. After that one should tighten the flat lock nuts with a No. 18 wrench so that they stay firm and tilt-free. By the way, the 'outriggers' carrying the spikes attach to the underside of the speakers using three bolts apiece.

In terms of connections, the Californians refuse to follow the trend for biwiring, and so fit only one set of copper terminals, meaning there's no need for 'split' cables or potentially sound-devouring bridges and adapters. Okay, so you can't biamp them, but the S3 speakers will thrive on the end of single wires from a good amp: the efficiency is relatively high at 88 dB and the impedance curve is uncritical, especially in the risky bass range (see measurement results).

### Non-technical sound

And this brings us back to the sound booth, where the Magicos went to town: every facet of the sound was on the money, giving the system as a whole a fascinating aura. In view of its functional but somewhat 'technical'-looking design, the sweetness and gentleness of the S3's sound might come as a surprise, but in



▲ The housing of the S3 is extruded under high pressure.



▲ The S3 is one of the smaller Magico speakers: here's boss Alon Wolf with the ultimate super speaker, the Q7 – 380 kg/unit, 220,000 Euro/pair.

the longingly-sumptuous Adagio of Gian Carlo Menotti's violin concerto (Reference Recordings), a gripping work of the modern repertoire, the Magico enchanted with a glowing timbre. In an almost dream-like manner, Ruggiero Ricci's smooth violin soared, while the radiant-colorful orchestra wafted over from the depth of space.

Beautiful and gripping, the connection of gentle resolution and intensity did not miss its mark, with the S3, radically designed down to the minutest detail, sounding impressively non-technical and allowing the music to unfold all the more freely.

And this also works when things go a little crazy: we changed from the sentimental Menotti concerto to peppy pop

## TEST-COMPONENTS

TURECORD PLAYER: Transrotor Rondino nero/5009/Figaro
PHONO PREAMP: Brinkmann Edison
CD PLAYER: T+A MP3000HV
PREAMP / POWER AMP: Acoustic Arts Tube-Prell MK2/AmpII MK2, Octave HP700/MRE220
POWER AMP: T+A PA3000HV, Symphonic Line RG9 HD
SPEAKER: B&W 802D3
LS CABLE: HMS Gran Finale Jubilee, In-Akustik LS-240

in the form of Monty Alexander's impulsive "Moanin'" (sound test CDVI), which captivates with its rhythms and hearty punch, and soon realized that the watchword here was 'the louder, the better'! It's incredible how coolly the Magicos can drive the beat while the performance remains clean and relaxed.

It impressed, too, with Maria Pihl's omnipresent "Malvina" (ditto): the full, slightly cloudy but yet contoured bass, the homogenous voice, the finely chiseled highs, and the synthesizer clouds like rising dust in the background – all parts showed a perfectly cultured sound we've rarely experienced. As analytical as the S3 is, its ability to preserve audiophile and musical connections is one of its most striking and noticeable characteristics: nothing falls apart or appears vague, and all elements are refined in a fascinating manner.

Of course, the Magicos make differences between source devices, amps, or cables explicit but the speakers always preserve their inherent character: whether with Accoustic Arts' emphatically linear preamp / power amp combination, the sheer drive of the T+A power amp or the peppy amp-combo by Octave, the S3s showed only a slight shift in the sound coordinates in the respective direction, while maintaining their 'rightness'.

### Extremely low distortion

The marvelous frequency response of the Magicos exhibited a minimum decrease towards the higher range, which practice showed to be pitch perfect. Such a radically open and transparent speaker, its stiff aluminum backbone preventing rounding inaccuracies and smearing, probably needs this hint of gentleness in order not to become annoying, especially with only average music like pop recorded with too much presence. The design very securely supports the elegant smoothness of the Magico.

There is much more that helps create this impression. The enclosure's lack of parallel walls, preventing disruptive standing waves, and the outstanding drivers, are responsible for the fact that the S3s have the lowest distortion values we have ever measured. In fact, if we didn't know better, we might even believe some black magic went into these fantastic speakers.

*Matthias Böde*

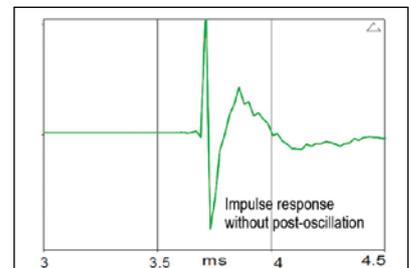
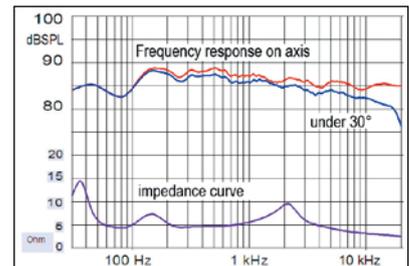


## MAGICO S3

Pair starting at € 29,900  
(powder coating in four colors, paint for € 3360 surcharge)  
Dimensions: 30 x 122 x 30.5 cm  
(WxHxD)  
Warranty: 5 years  
Contact: Audio Components  
Tel.: 040/401130380  
www.audio-components.de

The people at Magico rethought many parts of speakers and found uncompromising solutions. This makes the S3 exceptional, and we feel that the hefty price tag is completely justified in view of effort and result.

### MEASUREMENT RESULTS



Nominal impedance	4 Ω
Minimal impedance	2.4 Ω at 20,000 Hertz
Minimal impedance	14 Ω at 36 Hertz
Nominal sound pressure (2.83 V/1m)	88.3 dB SPL
Power for 94 dB (1m)	8.7 W
Lower cutoff frequency (-3 dB)	<30 Hertz
Distortion at 63 / 3k / 10k Hz	0.1   <0.1   <0.1 %

### LAB COMMENTS

Outstandingly smooth frequency response with very slight but steady decrease toward the upper ranges. Good dispersion, the volume decrease in the high range remains low below angles of 30 degrees. Still, the S3 should be directed at the listener. Exemplary impulse response: the speaker is pin-point accurate and does not resonate. Sensationally low distortion values over entire audible range.

### STEREO - TEST

SOUND QUALITY	98%
PRICE/PERFORMANCE	
<b>EXCELLENT</b>	