

Magico M9

floorstanding loudspeaker

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Magico's latest flagship floorstanding loudspeaker, the M9, is part of a revolution in loudspeaker design. The gloves are truly off now. This is not the kind of product that you hear at a show, or even at a dealer. No, this is the kind of product that you need some runway to get at. This is the one- or two-per-continent product that is the stuff of audio's biggest big hitters. Yes, that comes with a price tag that just keeps going for a few more zeros than usual, but with it you get more than just yacht-fi exclusivity. You get state-of-the-art performance; the kind of domestic audio sound you won't get at any other level.

That sounds like hyperbole, until you start to look at the specifications of the Magico M9 up close. First, there's the sheer physicality of the speaker. It stands 2.03m tall (that's 80" or 6'8 in Imperial measurements). Each loudspeaker weighs 454kg (that's 1,000lbs, or half a short ton per channel). Using the 'banana for scale' measurement system of the internet, that's nearly 11 bananas tall and weighs around 4,000 bananas. Put another way, each Magico M9 is roughly the size and weight of a grizzly bear standing on its hind legs, but the M9 is not as furry and is considerably less likely to tear you apart.

No compromise composite

Maybe a 454kg enclosure is understandable, given Magico's use of large aircraft-grade aluminium panels. Except this isn't just an aluminium enclosure. It uses a carbon-fibre skin on the inside and outside of the enclosure, with a unique aluminium honeycomb core, hitherto used mostly in the aerospace industry. In aerospace, the honeycomb is sandwiched between two thin aluminium sheets. This produces a material that is exceptionally stiff and strong yet lightweight for its size and thickness. It's used in the latest generation of passenger jet wings for this reason (and because it can withstand large bending forces).

Aluminium honeycomb materials are not new; the concept was first developed during WWI and has been used outside the military and aviation sectors for almost

half a century. However, these were aluminium-faced panels. The world had to wait for bonding technology to catch up and produce a material with carbon-fibre faces that both looks and sounds good.

If you are a loudspeaker company seeking a material that improves the rigidity and stiffness of aluminium, bonding carbon fibre sheets to an aluminium honeycomb makes a near-perfect enclosure material. Given that this reduces overall weight compared with solid panels, and the M9 weighs 454kg per speaker, an M9 with a solid aluminium enclosure would be impractical. As a rough guess, you'd be looking at a loudspeaker weighing close to 600-700 kg, which would require most prospective buyers to reinforce their floors.

Of course, this is Magico we're talking about, and using innovative materials for the enclosure is never enough. If a solid aluminium enclosure sounded better, well... you'd better start reinforcing that floor. The material has been chosen because it improves the sonic performance of aluminium.

However, although this carbon fibre and aluminium honeycomb material is used in some sections of the cabinet, the front baffle (and the front-to-back tensioning rods) are made of solid 6061 T6 aircraft-grade aluminium. In addition, constrained layer damping is used throughout the enclosure, and the whole package sits on MPOD feet, which also use constrained-layer damping.

More honeycombs

We're not done with the aluminium honeycombs just yet. The eighth-generation Nano-Tec loudspeaker cones in the single 6" (150mm) midrange, the two 11" (280mm) mid-bass and two 15" (380mm) bass drivers also feature an aluminium honeycomb core, sandwiched between graphene/carbon-fibre skins. This composite didn't exist before 2020 and is so stiff that the tooling used to shape the cones must apply a huge force (around 12,000kg of pressure). The result is drive units that behave more like a pure piston than previous Magico Nano-Tec cones. They also feature oversized, vented titanium voice coils (three, four, and five inches in diameter, respectively) to help dissipate heat generated in the voice coil when the piston motion becomes intense.



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With all the changes to the fundamental materials science in the enclosure and the midrange and bass cones, don't think the tweeter got a free pass from previous generations. The M9 still uses a 1.1" (28mm) beryllium-diamond dome tweeter, but recent improvements to the chemical vapour deposition process have led to even greater refinement over its predecessors. Put simply, same diamond, less weight.

What's in the box?

The Elliptical Symmetry Crossover (ESXO) network developed over the years for Magico's current line of loudspeakers applies here, too... mostly. This is a fourth-order Linkwitz-Riley crossover network with 24dB/octave target slopes but incorporates proprietary techniques to preserve bandwidth without increasing intermodulation distortion.

However, managing the crossover between those 11" and 15" drivers is a herculean task for even the largest amplifier. It would require the amp to fight its way past large inductors and capacitors, resulting in substantial performance loss. So, the company developed a variant of its Magico Analog Crossover (or MXO) specifically for the M9. This external box – itself the size of a decent power amplifier, with a similarly sized power supply and hitherto used with Magico's Titan 15 subwoofer – is a fully balanced design that also uses a Linkwitz-Riley fourth-order crossover network with a steep 24dB/octave slope at the 120Hz crossover frequency. The MXO includes precision stepped attenuators ($\pm 12\text{dB}$ with 0.5dB steps), and phase adjustment allowing the end user to fine-tune the loudspeaker system relative to the room.

The addition of the MXO means each channel of the Magico M9 requires an amplifier to drive the mid-bass, midrange, and treble sections directly, and a second amplifier to drive the bass drivers with the MXO in its signal path between preamp and power amplifier. That makes the system part active. If you are using mono power amplifiers, each with its own power supply in a separate chassis, that's a lot of boxes!

Care and feeding

It goes without saying that a loudspeaker in this class demands equally top-class partnering products. There is no second-best allowed here. While this isn't a starkly revealing loudspeaker in the strict 'living musical autopsy' sense we sometimes see at the highest of high-end >>



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» peaks, the Magico M9 is an uncompromising loudspeaker and expects the same performance from its electronic counterparts. It may have a fairly innocuous 94dB sensitivity and a not-too-punishing nominal impedance of four ohms, you need a system that is painstakingly accurate across its entire 18Hz-50kHz range, or you'll never get the full benefit of what the M9 can really do. Similarly, although Magico states a power handling range from 20W to 2kW, I'd go for more power where possible. Those drivers need some oomph behind them. I'm sure it will sound fantastic with a smaller set of power amplifiers, but you'll miss out on some of the scale and reach of the M9 in the process.

The wrong perception

There's a perception about yacht-grade audio; that it's all about the 'show' and not about the 'go'. People who spend hundreds of thousands on good audio don't really appreciate it in sound quality terms and it's all about the bling. And, when they eventually play the system, they play it loud and hard... to the severed heads of their enemies.

This notion suffers from one minor flaw. It's complete bullshit!

People who have a seemingly inexhaustible supply of liquid assets to spend on luxuries tend not to show off their wealth with gaudy and vulgar displays of audio equipment. Aside from the fact that many who have that inexhaustible supply of liquid assets rarely make gaudy and vulgar displays of wealth anyway (they don't need to), audio is not as obviously 'bling' as that Richard Mille watch or that original Andreas Gursky on the wall.

Audio is a more solitary, in-head pursuit. Yes, there are some super high-end audiophiles who regularly

meet and – like any hobby – they will want to show off their latest project. But the motivation that drives an audio enthusiast with a few hundred burning a hole in their pocket is no different when that 'few hundred' becomes 'a couple of million'. The names change, the system (and room) get a lot bigger, but the impetus is identical.

However, all this being said, there is a kernel of truth

to the original statement, but it applies universally; that first listening session tends to be a little 'overblown'. You play too loud and you play things to impress, even if the only person you are trying to impress is 'yourself.' And that's where the Magico M9 shows a rare sense of maturity.

Sure, the Magico M9 has all the drive and energy to portray music red in tooth and claw when needed. But it keeps that in check for when it's needed. In fact, the M9 shows just how easily most loudspeakers can get carried away with the performance, when all they really need to do is act like accurate transducers. It will sound like a paradox to those who haven't heard what it can do, but the Magico M9 is impressive in the way it doesn't seek to impress.

Victorian children

Loudspeaker cabinets should ideally behave like Victorian children. No, that doesn't mean they should be forced up chimneys, or perform elaborate song and dance numbers about starvation and pickpocketing. The English Victorian proverb – "Children should be seen and not heard" – applies better to loudspeaker cabinets. A good, sealed enclosure lets the internal air volume act as a spring, ensuring the bass is fast, taut and accurate. It should prevent the build-up of internal standing waves and hold the drive units precisely »





A bass that is refined and discreet enough to stay silent when it is not needed, but bring 'force of nature' scale and intensity when called upon.

» in place while minimising reflections from the drivers' radiation patterns. What the Magico M9 teaches us is just how far most loudspeakers still have to go to get to that ideal. Most of them sing along to the music; even to an infinitesimally small degree. It's only when you hear what a really quiet cabinet does (or, more accurately 'doesn't') that you understand just how far we still have to go.

This absence of cabinet intrusion doesn't signal; it creeps up on you. This is a wholly good thing. If you immediately notice this kind of disappearing act, something is wrong. Instead, over a period of a few minutes, you gradually notice just how little extra flavouring is added to the musical mix. Even by the standards of already uncolored, unintrusive cabinets, the M9 takes away those last scintillas of intrusiveness. And by the time your brain attunes to that absence and recognises it for what it is, you also realise there is no going back.

Put simply, the M9 is the closest you'll get to hearing just the drive units in their optimum setting. Making a pair of two-metre-tall, one-metre-deep loudspeakers with a combined weight of over 900kg 'disappear' is a big ask, but in listening to the M9, you get a sense of a near-point-source loudspeaker with plenty of solidity but without the sonic presence of a cabinet.

The point-source effect ceases the moment you play something with some dynamic range, as you get the full scale and energy of the orchestra (or band). You can easily flip between metal,

folk, full Mahler wig-out orchestral intensity, sweeping Zimmer-esque film soundtracks, electronica, small-group jazz and Canadian microtonal weirdness in a single session. The Magico M9 takes it all in its stride.

It's difficult to pick out high points in the M9's performance, because they are all high points. However, that effortless, peak-treble coupled to a fluid and articulate midrange, all underpinned by a bass that is refined and discreet enough to stay silent when it is not needed, but bring 'force of nature' scale and intensity when called upon... that is something to be experienced.

It's also worth experiencing the soundstaging properties of the M9, as they are exceptional. It's not just 'wide of the boxes', nor is it just 'deep'. It's room-expanding; close your eyes, play a well-recorded piece that is not afraid of the hall. The classic Decca recordings from the late 50s and early 60s are perfect examples; I played my go-to overture to *The Pirates of Penzance* by the D'Oyly Carte opera company and the Royal Philharmonic Orchestra from 1957, and then just kept going. The sense of space around the orchestra and the feeling of being in the hall itself was palpable, but when the singers took the stage it suddenly became something way more. You could hear stage directions as they moved around the stage, not only the creaking of the boards, but also the air movement; the M9 is that resolving.

While Gilbert and Sullivan have a fine sense of rhythm (no one can write a patter song like the 'Major-General's Song' without knowing how to keep »





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» a good beat), electronica is a bit of an acid test for ultra-fi loudspeakers. They often play the music with incredible detail but can remove some of the sense of purpose and speed from fast, granular, low-end square-wave bass beats. Here, the M9 passed with flying colours. It had the depth and energy to leave Trentemøller’s ultra-deep bass tones just as menacing as they should be, but with the added speed and drive to cope even with Squarepusher-esque glitchy rhythms.

Last, and by no means least, is the M9’s vocal articulation. This is excellent. It’s also in this key section that some of the differences in performance between these ultra-fi loudspeakers emerge. Magico is all about resolution and detail, and ‘the feels’ come from that information. Others are all about performance, and resolution takes more of a back seat. These are nuanced in the extreme; this makes the M9 sound ‘cool and emotionless’ and its rivals ‘impassioned but veiled’, and neither is true. It’s just that, in the Magico sound, the head rules the heart in listening, and that remains just as true in the M9.

In short, when it comes to the Magico M9, while it might cost an arm and a leg (or, in Elon Musk’s case, a toenail clipping), you’ll happily put up with being called ‘Mr Stumpy’ to live with a loudspeaker this accurate.

No trivial approach

So, is there a downside? Only that this isn’t the kind of loudspeaker you can approach lightly. It’s taken several years to hear a pair. I had to travel over a thousand miles to hear them and to visit a private villa in a secret location straight

out of a Bond movie (no, it wasn’t inside a volcano). You will probably need to restructure part (or even ‘all’) of your system to make them sing. It’s the sort of installation that requires piano movers and a lot of tuning. And if you are planning to use them on the top floor of an older building with creaky floorboards, narrow staircases, no lifts, and small windows... you are going to need some fairly intensive structural work to the property before the M9s happen. But the point is... all these things are worth the effort.

Magico has a loyal following. Those who like what Magico does will stay with the brand. That’s not cult behaviour; it speaks to the company’s consistency and quality. The brand makes extremely accurate loudspeakers, and as you climb the Magico ladder, you get more bandwidth, more headroom and greater accuracy. And the Magico M9 takes that to the highest possible level. If ‘hi-fi’ really is about ‘high fidelity’, you don’t get anything more faithful to the original signal than the Magico M9 loudspeaker. +

Technical specifications

Type: Four-way, six-driver, part-active, sealed-enclosure floorstanding loudspeaker

Driver complement: One 1.1” (2.8cm) Diamond Coated Beryllium dome tweeter, one 6-inch (150mm) Gen 8 Magico Nano-Tec midrange cone with aluminium honeycomb core, two 11-inch (280mm) Gen 8 Magico Nano-Tec mid-bass cones with aluminium honeycomb core, two 15-inch (380mm) Gen 8 Magico Nano-Tec bass cones with aluminium honeycomb core.

Sensitivity: 94 dB

Impedance: 4 ohms

Frequency response: 18Hz-50kHz

Power handling: 20 W (min) to 2000 W (max)

Dimensions (HxWxD): Loudspeaker: 203 x 74 x 102cm)

MXO Crossover:

MXO Crossover power supply: 20 x 51 x 46cm

Weight: Loudspeaker: 454 kg per speaker

MXO Crossover: 18kg

MXO Crossover power supply: 27kg

Price: £840,000 per pair

Manufacturer Magico

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