

hi-fi+

Review from Issue 60



# Loud and Proud...

## The Magico V3 Loudspeaker

by Alan Sircom

There's a move by our nanny state to rid us of all the things we use to relax after a long day in the office/boardroom/bedroom/inventing a country or two. Wind down with a nice cigar? Think of the carcinogens. Chill out to glass of Chablis? Make sure you check your alcohol intake. How about a fine meal? Watch out for bad cholesterol and free radicals. Dour Gordon and his un-merry men seem to want us to be in a state of constant upset. Sod 'em... the Magico V3 is the cure. Stick on a pair of these masterpieces at the end of the day and musical passion will soon take over, washing away any politically correctness in the process.

This is a new and titanic floorstanding design, that at first inspection looks chunky and well constructed, but thoroughly conventional. That is, unless you happened to try and move them. A speaker standing just over 1m tall and 38cm deep shouldn't weigh 72kg. I mean, that's nigh on 11st 6lbs; roughly equivalent to a fight-ready Chris Eubank per channel, without the cane and monocle. Worse, there's not even a large port to act as grab handle – the Magico V3 is a big deadweight, despite being the Company's lowest priced product!

That weight comes from the extensive use of aluminium. Normally praised for its lightweight characteristics, in fact what's really appealing about aluminium is its rigidity. So when the front baffle is made from



an inch thick billet of aluminium, CNC milled and anodised (not painted... Magico laughs in the face of paint and tweaks the nose of piano

gloss), and then held to the rear panel with tensioning rods, you are looking at something that makes conventional baffles seem as stiff as wet paper. It could also double up

as spare armour for an Abrams tank in a pinch.

Those tensioning rods hold in place the inch thick sheets of ply that form the top and sides of the cabinet. Unusually, the ply is set side on, forming the almost zebra-stripe patterning on the sides of the cabinet. It's a faintly old school look, reminiscent of bold 1950s furniture, but a successful one at that. OK, so it might not be the hi-fi equivalent of the Eames chair, but it's got the makings of a timeless design, all the same.

Disregarding the tweeter, which is 'merely' a 25mm ScanSpeak ring radiator, the 150mm midrange and the pair of 180mm bass units are all in-house designs. The tweeter and midrange are mounted at the top of the design, the pair of bass drivers toward the bottom. The drive units feature a hefty neodymium magnet coupled to a titanium voice coil. More interestingly, the cones themselves are made of Rohacell (the stuff helicopter rotor blades are made from) coated with a layer of carbon nano-tubes. The ►

▶ resultant material – Magico calls it Nano-Tec – is disturbingly stiff for its mass (you could easily load a cone with 1.6 standard Eubanks standing on it without stress). So, it's as near a perfect piston as you'll find in a set of speakers.

All four drivers are set into the inch-thick aluminium front baffle; the ScanSpeak tweeter is mounted conventionally, but the Magico units are clamped to the rear of the front baffle. This gives the speaker two advantages over normally mounted drivers; it reduces diffraction problems resulting from the speaker's frame and provides a more consistent junction between driver and baffle (as well as minimizing the likelihood of the drivers' screws working loose over time).

Naturally, the crossover has its own 'first' to its name too. It's the first to feature the company's own Elliptical Symmetry Crossover (ESXO) design, but no-one seems to know what this means (asking the proprietor Alon Wolf is not much help; he does understand what ESXO means, but attempts to disseminate the idea to this puny human were met with a blank, open mouthed expression) but I'm sure it's very, very clever. It is also – as you might expect – packed with audioyummy components. In fact, Magico claims the components cost in the crossover alone is greater than the cost parts of whole speakers from some competitors.

Okay, so by now you'll have

deduced that Magico are not averse to blowing their own trumpet. Other companies have bolted or clamped speakers to the back of the baffle – some have even mounted the drive units to the rear of the cabinet. Magico is not the first company to have used aluminium and chunks of real tree in place of veneer. It's not the first brand to sport drive units with cones featuring state-of-the-art materials science (while carbon nanotubes are hardly news) and using extremely high-grade components in the crossover is not patented by Magico. Indeed,

the Eben C1 reviewed on page 32 takes many of these ideas just as far and in some cases further. But speakers like the C1 and Magico's V3 are definitely exceptions to the rule, exhibiting a thoroughness in their design and construction that genuinely sets them apart from the crowd. Magico might well be accused of sounding their own fanfare, but then at least they've got something to shout about.

It would be interesting to see the Magico team

at work; there's a perfectionism that borders on obsessive-compulsive disorder here. Not the OCD that causes people to wash their hands 32,000 times a day, but the benign, engineering superhero kind of OCD that keeps a designer awake night after night wondering whether the crossover board should be moved half an angstrom to the left. Nothing whatsoever is left to chance.

Including, of course, the sound quality.

Naturally, when you are putting together a system with a pair of ultimately perfectionist speakers on the shouty end, the rest of the chain needs to

be beyond the pale too.

We used a Metronome Technologies Kalista Reference CD transport and C2A converter, a Krell Evolution 202 pre-amp and a DarTzeel NHB-108B power amp, with similarly take-no-prisoners ancillaries. Heady stuff indeed. Briefly swapping out the Metronome four-boxer for a Mimetism 20.1 CD player showed how good the Magico's are at resolving the differences between players, and how good the Metronome really is, but the basic magic of the Magico remained untarnished. However, choose your system carefully remains the key phrase here and well-chosen systems will return a stunning performance. There's a sense of 'active relaxation' here, that you will struggle to find elsewhere in audio. No, really... most speakers at this level stress the 'active' or the 'relaxation' side, producing a sound that is laid back ▶



► or monitor-like. Not that there's anything wrong with either accent, but the Magico adds a new set of instructions to the audiophile's guide to life.

It's a strange thing; these speakers bypass all those intellectual bits and grab you by the music gland. You'll mostly notice this when you switch off a track, if you can. There's a sense of loss, real loss if you have to pull yourself away from the music. If you are playing a piece of music and decide to change tracks mid-way through, everyone in the room (including you yourself) will moan at you like a sullen teenager. Even on your own, switching off a piece of music while it's playing seems like an act of musical debasement.

Moreover, you'll find it impossible to listen to one piece of music, or one genre, one track simply leading to another. On came Leslie Feist, which through some strange intrarogation of the anterior musicmix organ, led oh so naturally to the late, great Jeff Healey playing 'Jambalaya', which begat Jerry Lee Lewis playing the same thing, and that brought us round to Ray Lamontagne and that begat... and so on through protracted listening sessions that went through the collection sideways, backwards, up, down then flipped back for another go at sideways again.

This speaker makes the sort of deep-noodle modern jazz that I sometimes listen to palatable to non-jazzers. Well, sort of... at the very least, it makes it less vexatious. There's a stopwatch test with hardcore jazz; on mere mortal hi-fi, it can take a minute or less before people start looking round, checking watches, shuffling feet and asking polite questions. Occasionally, you might get a couple of minutes before the shoe-gazing kicks in. Here, the inability to pull away from the music made even the likes of The Blessing get well into a whole track before anyone begins to twitch.

Now this really is rare stuff. The very, very live Popa Chubby rendition of 'Red House' via the V3s is remarkable on so many levels. First, there's the fact that they can handle it at almost gig sound pressures. Then there's the fact that they can define all the information (and there's one heck of a lot of that, everything from Chubby's Pro Reverb amp straining to live through the night, to the sheer intensity of solos setting off the snare drums's spring, plus all the hiss and crowd noise) but do so in a way that makes you just wish you were there, watching the fat boy spank that Strat. But, perhaps more than that, it's the way you can get to hear the way the drummer works his way around the cymbals so cleanly and clearly. You know when he hits the crash, and it sounds clearly different from the splash.

This cymbal-related inner detail happens with other speakers (and in fairness, this level of detail doesn't just apply to cymbals, it's just that they are usually lost in a sea of vaguely cymbal-related noise) but often in an analytical, sterile way. Here, the music is simply kept in pace by the rhythm section.

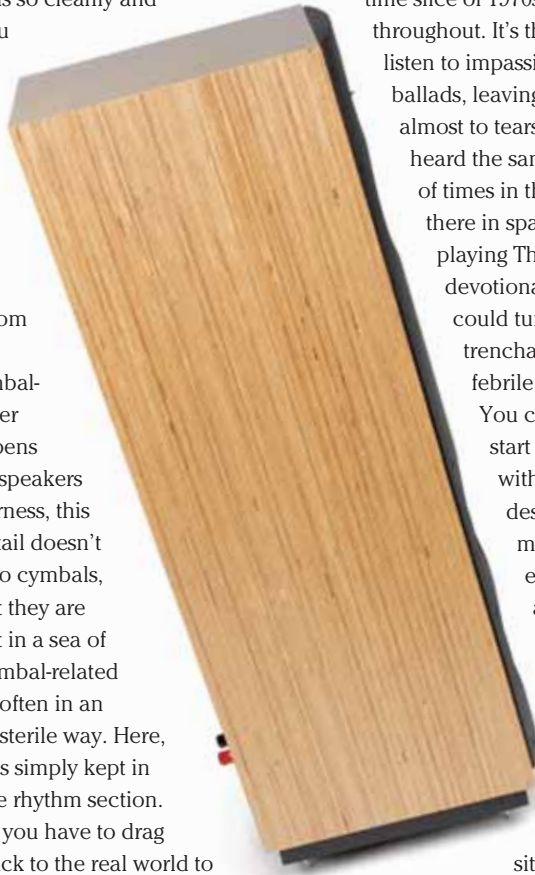
You feel you have to drag yourself back to the real world to even begin to talk in audiophile terms, and it almost feels an affront to the sound of the speaker to do so. It is supremely detailed, masterfully so. It presents an image as good as you'll find in audio, it's coherent,

articulate, keenly dynamic, precise and temporally spot on. It does all the things you want to hear in audio and then some. From a hi-fi buff perspective, it has all its ducks in a row.

It just has more ducks.

Those audiophile sensibilities add up to a fraction of what this speaker does. There's a level of musical communication that fails to make it into word-form; an atavistic hairs-on-the-back of the neck experience that we get when we listen to music on some level far beyond the cerebral. This is music – whatever music – at its most fundamental, moving us on levels that only occasionally stir in hi-fi. It's not just foot-tapping on some common time slice of 1970s rock; it's there throughout. It's there when you listen to impassioned folkie ballads, leaving you moved almost to tears despite having heard the same track dozens of times in the past. It's there in spade-loads when playing Thomas Tallis devotional music, which could turn the most trenchant atheist into a febrile God-botherer. You couldn't even start to play Wagner without the desire to sweep majestically eastward and annexe something. Consider this a warning. Do not, under any circumstance, sit down to listen

to a piece of music through the Magicos if you are hungry, tired, thirsty, in need of a comfort break or have some work to do. Because if you do, you'll sit in rapt discomfort unable to drag yourself away from the music ►





▶ for as long as the music is playing. This is no small point; I listened to the whole of the *Isle of the Dead* with a painfully three-coffee full bladder, absolutely unable to back away from the musical experience. Those were simultaneously the longest and shortest 20 minutes I've encountered in a very long time.

No speaker is without flaw, and that includes the Magico V3. Here, given the size, weight and driver configuration, you might be forgiven for expecting a bit more extension down at the subterranean end of things.

It's not bass light by any stretch of the imagination, but at the price of admission, many rivals deliver a few key cycles per second lower than this speaker. But here's the thing: in most cases it won't matter one iota to the

listener. Instead we get a speaker that has the same ethos, the same character from where it starts doling out the frequencies until it stops; no little lifts or dips, no covering its tracks or trying to hide (this is so profound, many will mistake the speaker for sounding relaxed in the mid-band,

where really they are too used to speakers sounding mid-forward). If anything, the bass acts as the Magico graduate exam, but for the listener, not the speaker; if you find yourself

looking to that bit below 32Hz and cannot get past that point, it means one of two things – either you are a fan of dub reggae versions of Leftfield tracks played on church organs, or you've reached the point where you confuse the medium with the message.

The rest of us will be too busy playing music on the V3 to notice.

If there's a major criticism of the speaker, it's that it is the most expensive speaker you will ever buy, because it will end up costing you a fortune in polycarbonate.

And it will affect your friends similarly.

Here's how; you invite a friend over, they hear your CDs and have to buy about half your collection. Then they come over with a suitcase full of ▶



### In his own words...

People say dog owners start to look like their pets. In this case, Alon Wolf of Magico is very like his loudspeakers; outspoken, self-assured and – just maybe – right. I asked him how Magico came into being and what processes go into making a truly world-class loudspeaker...

**AS:** Why did you begin to design loudspeakers?

**AW:** The process started from frustration. I've been buying loudspeakers for almost 30 years now and I've always taken them apart and tried to improve on them. About 15 years ago, some people heard what I'd been doing and liked it enough to ask if I could build loudspeakers for them. Every time I built someone something, I learned a little



more in the process and improved the speakers. Five years ago, a distributor in Hong Kong asked me to build the ultimate two-way. So, I built the Mini, which because it was built properly, threw people off – no one had heard a two-way standmount design that has more extension than a lot of big speakers, and more resolution than anything else that was out there. The guy in HK backed down thinking it was too expensive, but others started buying it, then the Absolute Sound heard it, and the rest is history.

**AS:** The V3 cabinets are extremely heavy. How and why?

**AW:** You want your bass driver to be mounted in a stiff enclosure so that the resonant frequency of the structure will not interfere with the band pass of the bass driver. You want to damp the midrange, because you want the resonant frequency to be outside that driver's

▶ their own CDs, half of which you will end up having to buy as well. Your friend brings a friend... Pretty soon, Amazon will set aside a delivery van especially for you. If there had been ten pairs of these speakers dotted around the country a couple of years ago, Fopp would still be doing a brisk trade buying up old Our Price sites. A hundred pairs of these around the country and we could put the music industry back on its feet.

In short, the V3 is a speaker that has lofted the brand into the company of the very, very best that audio has to offer. To some, that might seem cocky and arrogant of the Magico people; a brand should spend decades working its way up to hanging out with the best. But if so, it's the cocky arrogance of one who knows they have something to be cocky and arrogant about. It's the swagger of a 100m Olympic Gold medallist, the confidence of the

Formula One winner, the surety of a mathematician, knowing they've just submitted a prize-winning thesis.

For the rest of us, those not possessed of such precocious talents, that's a humbling thing to be around, and that's what most comes with the Magico V3. It's not one of those speaker systems that will be forgotten; it's not a speaker system that lets you do that. It's also the breathlessly rare sort of speaker that flattens any of those inverted snobbery arguments about 'the law of diminishing returns'. This is one of the best, and that shines through whatever the price, and whatever you think about the price.



#### TECHNICAL SPECIFICATIONS

Type:	Three-way sealed box loudspeaker
Driver Complement:	25mm ScanSpeak Ring Radiator tweeter 150mm Nano-Tec midrange 2x 180mm Nano-Tec woofers
Bandwidth:	32Hz-40kHz ±3dB
Sensitivity:	89 db
Impedance:	4 ohms
Dimensions (WxHxD):	300 x 1050 x 380mm
Weight:	72kg ea.
Price:	£24,900 per pair

#### UK Distributor:

Absolute Sounds  
Tel. (44)(0)20 8971 3909  
Net. [www.absolutesounds.com](http://www.absolutesounds.com)

#### Manufacturer:

Magico LLC.  
Net. [www.magico.net](http://www.magico.net)

range. And you want mass, so that the tweeter will not excite the structure. An MDF box is damped – and can be massy if you make it heavy enough – but it hasn't got the stiffness. Aluminium is a very good material to build a loudspeaker box from, but you need to make it big to get the mass. The energy you lose to the box is minimal. With models like the V3 and the Mini, we mount the drivers on thick aluminium plates for the stiffness then couple it to the birch ply for the damping. And that makes a massy cabinet.

**AS:** How much research went into designing the drive units?

**AW:** We have a museum with just about ever driver that was ever made, that's how we figured out what we could use. That's part of the reason Magico doesn't use beryllium tweeters or diamond tweeters, or ribbons – no matter how good they are, they stand out. We don't necessarily do everything in house – a helicopter rotor blade manufacturer makes the Nano-Tec cone material for example – but everything other than the tweeter (a ScanSpeak Ring Radiator) is our proprietary design.

**AS:** You mentioned Nano-Tec just now. What's the technology behind the material?

**AW:** The Nano-Tec sandwich cone is made of an asymmetrical carbon nano-tube polymer composite. If you put it upside down on the floor and stand on it – with someone on your shoulders – it will not buckle. It's only seven grams! It's the stiffest composite that I know of. So you can build cones that stay pistonically throughout the entire audible range.

**AS:** Why do you mount the bass drivers to the rear of the baffle?

**AW:** Everything that we do is coupled to metal, the coupling is almost perfect and it will stay that way, because it's coupling metal on metal. There's no hardware that sees wood at any moment in that speaker. This is because when you bolt the driver to an MDF baffle, you cannot go past three Newton-pounds torque without damaging it, but on our aluminium cabinets, we go up to 11!