

# GamuT RS3

It's the baby in the restructured company's new flagship range, with optional stand – how does it sound?

Review: **John Bamford** Lab: **Keith Howard**

**T**he start of 2014 marked the beginning of a new era for Denmark's GamuT audio. For the last few years the firm has been a wholly owned subsidiary of Kvist Industries, a global supplier of wooden components for high quality furniture, but following a management buyout at the end of last year it is now an independent company. Says GamuT: 'Kvist Industries is still the biggest single stockholder. But now also the employees as well as a group of investors own their part of GamuT A/S.'

Since the company's restructuring its first product introduction is a new flagship range of loudspeakers, the 'RS' (Revised Superior) series. Nothing that GamuT designs and manufacturers falls into the budget-priced sector: its electronics and loudspeakers are all decidedly 'high-end' both in performance and when it comes to price.

Last year we tested the £8500 M5 floorstander [*HFN* Apr '13] from its middle-range M'inenT series. Meanwhile the company's Superior models – the 'El Superiores' first introduced in 2007 – are cost-no-object designs which GamuT's engineering team has now further refined with improved enclosures and revised internal networks. The RS3 is the baby in the series. Priced at £11,823 it's a compact two-way bass reflex 'bookshelf' speaker. Moving up the range are the RS5 and RS7 floorstanders at £23,100 and £29,050 respectively. The series is topped off by the £74,000 RS9 flagship standing nearly 1.7m tall and weighing 185kg.

As with all models in GamuT's Revised Superior range, the RS3's curved enclosure – which tapers to the rear – is formed of pressed solid wood panels (five layers, each 2mm thick) over multi-layered Finnish birch plywood. This is finished in a choice of white oiled ash or black coloured ash.

Says GamuT: 'Form pressing minimises the need for panel damping by leaving an inherent force in the structure that in itself causes faster decay of unwanted vibration.'

Air pressure within the enclosure is controlled and guided by a fan-shaped reinforcement structure running the full height of the cabinet, which aims to time align the coupling to the port opening. The port which vents at the rear is made of 5mm-thick aluminium.

Below the port are two sets of seriously chunky input terminals for bi-wiring/amping: a proprietary design featuring a pressure insert for clamping bare wire – GamuT's preferred termination for minimizing contact resistance. Naturally the terminals are compatible with spade connectors and 4mm banana plugs as well.

## RESONANCE CONTROLS

As in the M'inenT M5, which Adam Smith auditioned last year, the RS3 employs

Scan-Speak Revelator drive units which GamuT tweaks in-house. The bass/midrange driver is a 7in unit with a compliant rubber surround and paper cone, featuring radial 'slices' filled with damping glue. This is

claimed to reduce the diaphragm's breakup modes in the critical midband region and reduce distortion.

It hands over at 2.15kHz to the Revelator tweeter, a 1.5in double ring radiator design rather than a true dome, to which GamuT adds its own stainless steel waveguide, shaped to aid dispersion and clamp the centre of the dome. This aims to reduce cancellation effects and smooth the overall output, as well as extending bandwidth to something approaching 60kHz.

GamuT describes its crossover as a Non Resonant Linked Impulse network, designed to align the drivers in the time domain and optimise their resonant behaviour – and that of the circuit itself.

**RIGHT:** Scan-Speak Revelator drivers are modified and treated by GamuT in-house. The 7in 'sliced cone' bass/mid unit crosses over at 2.15kHz to a double ring radiator tweeter with stainless steel waveguide

'The RS3 captured the sax's honk and echo-laden guitar with perfect attack'





## THE WHOLE GAMUT

Denmark is famous for its passion for sound and boasts a long history of audio engineering excellence. GamuT is a central player, becoming renowned for its high-end audio electronics before branching out into loudspeaker design and manufacturing in 2005. Its chief designer is Lars Goller, who started out in the Technical University of Denmark's audio engineering programme. Over the years he has worked on design projects for several of Denmark's most respected specialist firms such as Dali and drive unit manufacturers Vifa and Scan-Speak. GamuT's flagship system – comprising its D3i preamp, two M250i monoblock power amps and RS9 floostanders, driven by the CD3 CD player – costs £103,000 before you add interconnect and speaker cables! Says GamuT: 'Of course we measure everything we can. But it's always the human ear that has the last word.'

Resonance control is clearly a major factor in every aspect of the speaker's design. GamuT has its own range of precision-made cables called WormHoles which are pretty serious: a 3m pair of WormHoles Signature speaker cables cost £3536 (add £605 per stereo metre). It comprises individually insulated conductors surrounded by a woven insulation, all inside a second cover containing copper threads within it. The company says its design helps optimise impulse behaviour and effectively terminates unwanted stored energy. It's this cable that's used for internal wiring throughout both its M'inenT and Revised Superior ranges.

GamuT's 660mm-tall column stand adds substantially to the price of owning the RS3 – at £3536 it costs as much as many a good speaker – but you wouldn't want to be without it. Again, it's made of multilayered birch plywood with a lamination of form-pressed wood to complement the RS3 perfectly, with a recess at the rear of the pillar in which to channel cables. Short aluminium outriggers extend from each corner of the base to increase stability, through which inverted cone spikes are threaded, adjustable from above with an Allen key.

The quality of the metalwork is exquisite, right down to the little 'coasters' for siting the stands on hard floors. They feature rubber o-rings inserted into a groove on the underside to damp resonance and prevent scuffing.



## BEYOND BOUNDARIES

Site a pair of RS3s in free space and they can throw up a sound image extending way beyond the confines of their cabinets. My room is approximately 16x25ft yet the RS3 'drove' it surprisingly satisfactorily, serving up a subjectively powerful and deep bass which belied its compact dimensions. There's a hint of

boxiness, a tubby upper-bass bloom that I couldn't quite dial out; nevertheless the RS3 is an easy-going speaker to listen to for hours on end. High frequencies appear exceptionally relaxed and extended, combining vivid crispness with an unforced naturalness that's open and airy.

There's nothing hectoring or aggressive in the RS3's musical presentation. In fact some listeners might consider it rather laid-back in personality. Images appear created across and behind, rather than forward of, the loudspeakers' plane, which helps create an appealingly deep soundstage. The RS3 is also a fine communicator of rhythm and pitch, allowing effortless observation of dense musical adventures such as Aufgang's 'Channel 7' and 'Channel 8' from the French experimental band's eponymously titled album of 2009 [Infiné iF1006].

## DETAIL LOUD AND CLEAR

Separating clearly the percussive elements of piano and myriad electronic keyboards in these grand operatic-sounding pieces, in which classical themes blend with prog-rock and drum 'n' bass-style rhythmic complexity, the GamuT appeared unflustered by the density and allowed details such as the sound of the compositions' bells and percussion to ring out loud and clear.

By the time I'd allowed the Aufgang album to play on to the baroque-feeling 'Barock' I became particularly appreciative of the speaker's HF civility, the jangling piano lines of composer Francesco Tristano which underpin the music were clearly delineated throughout the piece.

Aufgang's recording isn't hi-fi show demonstration quality in the manner of, say, Wesseltuft & Schwartz's *Duo*, however the RS3's innate clarity through the frequency range revealed the natural timbre of the piano most vividly. The speaker proved so wonderfully





**LEFT:** 5mm-thick aluminium reflex ports at the rear of the cabinet. The substantial bi-wire/amp terminals are GamuT's own, designed to minimise contact resistance

low frequencies, the speaker kept the music's bass lines firmly in check. Not that the album is particularly demanding, it turned out. But it will sound like a relentless cacophony on less-than-civilised-sounding playback systems, so it's challenging in that respect. The RS3 told it like it was, punching out staccato rhythms and capturing the sax's honk and echo-laden guitar with perfect attack.

### ARTICULATE GRIP

It sounded sublime when reproducing the velvety vocal cords of baritone Gregory Porter whose 'No Love Dying' from *Liquid Spirit* [Blue Note 0602537410538] was delivered with commendable articulation. The RS3 held everything in place, only that slight honk in the upper bass belying its diminutive stature. The rumbustious title track was taken in its stride, however, the compact GamuT remaining composed as the parping contributions of the accompanying brass and reed ensemble augmented the track's dynamic hand claps and percussive honky-tonk piano.

Hear the RS3 playing tonally rich and sweetly-balanced recordings such as 'Thanks To You' from Boz Scaggs' *Dig* [Virgin 10645 2 1] or James Taylor's 'Line 'Em Up' from *Hourglass* [SACD issue, Columbia CS 67912] and you might just be seduced by the RS3's conspicuous wow factor. ☺

descriptive of the textures and timbres of acoustic and electronic sounds that it was never anything other than wholly captivating.

Almost for a laugh I challenged the baby 'El Superiore' to entertain me with Dub Syndicate's *The Pounding System (Ambience In Dub)* [On-U Sound ON-U CD 0018]. It wasn't that the speaker couldn't pound: the RS3 made a fine stab at delivering the reggae bass line in 'Hi-Fi Gets A Pounding Parts 1 & 2' and, later in the album, 'Hi-Fi Gets A Pounding Part 3'. Again, because it doesn't try *too* hard and maintains a firm sense of control of

### HI-FI NEWS VERDICT

GamuT's 'El Superiores' are undeniably expensive, even this smallest standmount in the RS model range costs as much as many manufacturers' statuesque floorstanders. However it's beautifully built and sounds extremely refined, its gentle sound balance and innate musicality encouraging prolonged listening. The RS3 is a tremendous compact monitor for a small room if the price isn't a barrier.

Sound Quality: 75%

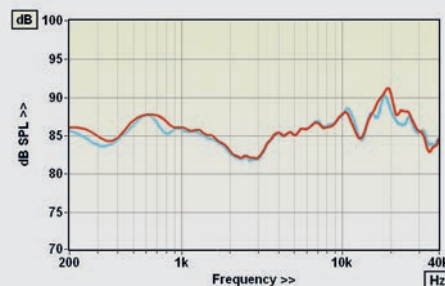
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## LAB REPORT

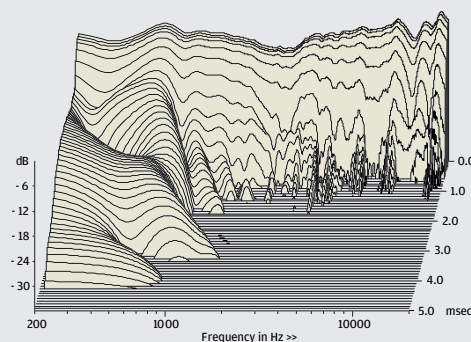
### GAMUT RS3

GamuT claims 87.5dB sensitivity for the RS3 which is close to what we obtained by simply averaging our FFT response data (87.2dB) but exceeds our pink noise figure of 85.9dB, which suggests that 86dB is actually a more representative figure. The upside of this modest sensitivity is that the RS3 presents a relatively benign load to its amplifier. The 5ohm nominal impedance chimes well with our minimum measured modulus of 3.9ohm (GamuT claims 4.0ohm), and impedance phase angles are sufficiently well controlled that the EPDR (equivalent peak dissipation resistance, which takes into account the effect of both modulus and phase) dips to a low of 1.9ohm at 102Hz – higher than typical of modern floorstanding competitors.

Measured at tweeter height, the 1m forward response [Graph 1, below] has quite a marked suckout between 2kHz and 3kHz and a gently rising trend thereafter, as a result of which the response errors are a little on the high side at  $\pm 4.6$ dB and  $\pm 4.3$ dB respectively for the pair, 200Hz–20kHz, although listening a little off-axis will tame the treble. Over the same frequency range the pair matching error was also mildly disappointing at  $\pm 1.6$ dB but the largest errors occur in the octave above 10kHz, below which the figure is a more typical  $\pm 1.0$ dB. In another payback for the modest sensitivity, its 49Hz bass extension ( $-6$ dB re. 200Hz) is a good result but the diffraction-corrected near-field measurement shows a peak of about 3dB at 90Hz and there is a severe resonance within the port output at around 700Hz. By contrast the cumulative spectral decay waterfall [Graph 2, below] evinces fast initial energy decay and well controlled treble resonances. KH



ABOVE: Upper mid suckout is evident on the forward response along with a 'brighter' presence and treble



ABOVE: Cabinet resonances are very well controlled as are those associated with the bass and treble drivers

### HI-FI NEWS SPECIFICATIONS

<b>Sensitivity</b> (SPL/1m/2.83Vrms – Mean/IEC/Music)	87.2dB/85.9dB/85.3dB
<b>Impedance modulus min/max</b> (20Hz–20kHz)	3.9ohm @ 160Hz 20.3ohm @ 74Hz
<b>Impedance phase min/max</b> (20Hz–20kHz)	$-53^\circ$ @ 85Hz $31^\circ$ @ 64Hz
<b>Pair matching</b> (200Hz–20kHz)	$\pm 1.6$ dB
<b>LF/HF extension</b> ( $-6$ dB ref 200Hz/10kHz)	49Hz / >40kHz/>40kHz
<b>THD 100Hz/1kHz/10kHz</b> (for 90dB SPL/1m)	0.8% / 0.2% / 0.4%
<b>Dimensions</b> (HWD)	400x226x456mm