

GamuT D3i/M250i

A no-frills preamp meets power amplifiers offering massive clout from an unusually simple monoblock design. Please keep your arms inside the car during the thrill-ride
 Review: **Andrew Everard** Lab: **Paul Miller**

Provided that you have speakers able to handle it, the £5770 GamuT D3i preamp and £8658-a-piece M250i monoblocks are likely to rearrange not only your expectations of the sheer clout a hi-fi system can deliver, but also some of your furniture – should you decide in a moment of madness to wind the wick up.

After all, the M250i has a rated output power of 250W/8ohm, doubling into 4ohm and promising 900W into 2ohm and... well, you get the general idea. Suffice it to say that the manual explains that 'Somewhere, we have to draw a line between what is a loudspeaker load, and what is a short-circuit. We have set this line at 1.5ohm, which will draw about 47A peak' [see Lab Report, p47].

PHONO PREAMP NEEDED...

The D3i preamp, like all GamuT products, has an internal layout that uses a number of shielded compartments to avoid interference and thus noise: here it keeps the power supply section isolated from all the signal-handling circuitry.

The amplifier's anodised aluminium front panel, available in silver or black, is stripped of all superfluity, leaving just input and volume controls, three buttons and an indicator panel. Inputs are provided at line-level on four sets of single-ended RCA phonos and one set of balanced XLRs (labelled for CD), and while one set of inputs is called 'RIAA' on the front panel and 'MM/MC' at the rear, this is only a serving suggestion – if you want to connect a turntable you're going to need an external phono preamplifier.

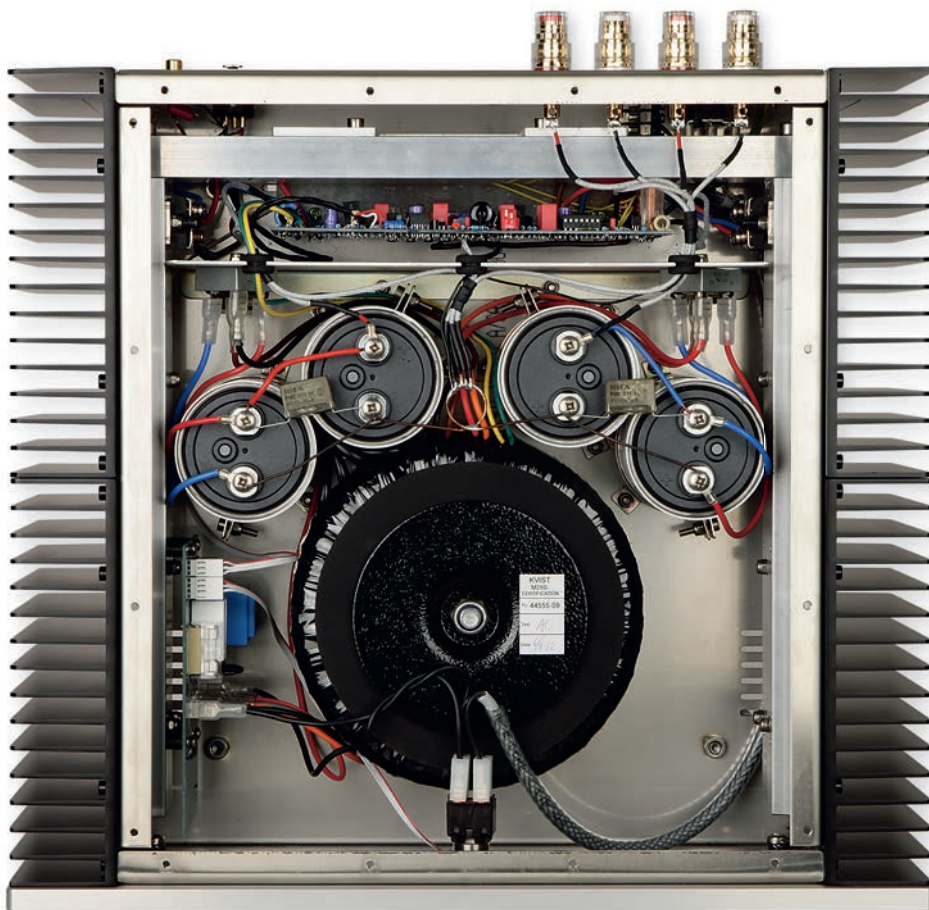
Both the balanced CD inputs and one set of line-ins, marked 'HTH' (for home theatre), can be set to unity-gain bypass mode, avoiding the volume control, using two little rear-panel switches beside the relevant inputs. On the CD input this

'direct' mode must be confirmed by pressing the relevant button on the front panel, just to avoid unleashing full-power signal to your speakers.

Outputs are provided on both RCA phonos and two sets of balanced XLRs, with all socketry from Neutrik and gold-plated, while a remote control for the amplifier and a GamuT CD player completes the features list. The D3i is a dual-mono design, with separate power supplies for each channel, designed for low impedance and wide bandwidth. MOSFET input and output buffering is used, and the feet here are designed to provide compliant suspension for the entire chassis – again, probably wise when the power amps are capable of shaking the room!

Ah yes, those power amplifiers... whereas most designs of this kind use a bank of output devices to develop the wherewithal to drive and control a pair of speakers, GamuT uses just one complementary pair of very large MOSFETs to do the whole job, in the belief that though these industrial-spec devices are definitely expensive, it's the way to go. Why? Well, it says that 'transistors do not carry the same sound characteristics even if they are built together on the same day. So a powerful amplifier made with 32 transistors is more likely to sound like a choir than a single and clear voice.'

Using technology trickled down from the company's RS380M reference amplifier, the M250i uses a similarly massive



RIGHT: A truly massive linear power supply, with independent regulation for both phases, feeds a minimalist power amp stage based around a single pair of high current MOSFETs



power supply and GamuT's proprietary 'WormHole' cabling for its internal wiring.

PROTECTION CIRCUITS

Initial impressions of the GamuT are along the lines of 'Oh, that preamp's not so heavy for nearly £6k's-worth of equipment' closely followed by 'who glued these power amps to the floor?'. So while the D3i is a relatively dainty 12kg, the monoblocks weigh a rather more substantial 38kg apiece, making them a serious challenge to heft onto the equipment rack. (In the end I settled for parking them on a couple of spare paving slabs on the floor.)

'They're equally at home with delicate acoustic recordings'

GamuT suggests that extensive running-in isn't required, although a slight improvement may be noted over the first month of ownership as the capacitors adapt with use. After that, it suggests you

switch on 30 minutes before serious listening, to let everything get up to temperature.

After a day or two of running-in I followed this suggestion, and while I detected a little vagueness when switching on from cold, it's certainly something I could live with for half an hour while the amp played in the background.

The power amplifiers have a monitoring circuit to detect high-frequency distortion

ABOVE: Rotary controls on the D3i govern input selection and volume. The robust, no-nonsense styling carries through to the M250i (one of a stereo pair shown here)

content above 20kHz should you manage to play music loud enough to provoke clipping, and there's short-circuit/low-impedance detection, which will mute the amplifier to avoid it running out of steam. I didn't actually manage to provoke either of these protection systems during my time with the GamuTs, even though I was fairly ambitious with the volume levels at times. Oh, all right then – I was having a ball.

ENTIRELY UNBURSTABLE

You see, the GamuT amps are an absolute riot, not just finding information in tracks lesser amplification merely suggests might be there but, as already mentioned, proving entirely unburstable right up to the limits of what a pair of speakers can handle. They deliver a sound that's loud, proud and in the face when required, but are equally at home shimmering through some delicate acoustic recordings at tickover levels.

There's a choice of 'Direct' or 'Normal' speaker outputs, the latter's Zobel network offering some protection against capacitive speaker and cable loads, the former recommended for the best sound when the amp is used with relatively unreactive loads. If you are going to bi-wire with the M250i then you can experiment by ↪

A KVIST ON POWER

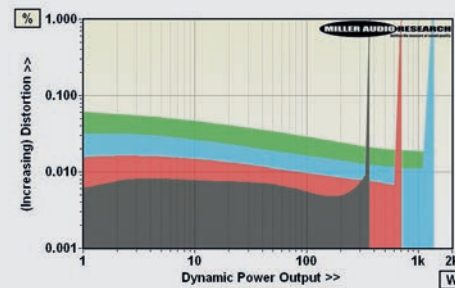
GamuT HQ, in Årre, Denmark, is located within the premises of its parent company Kvist Industries: Kvist's main business is high-end furniture and speaker cabinets, and the two 'met' in 2008 when Kvist started supplying GamuT with enclosures for its El Superiores speakers. The family-run Kvist company bought GamuT International in 2010. GamuT acknowledges that its way of designing amplifiers isn't exactly an exercise in penny-pinching (or should that be krone-cutting?). That's evident in its use of a single pair of massive, industrial-spec MOSFETs rather than paralleled pairs of transistors in the M250i power amplifiers. These hefty FETs come at a price but, as GamuT says (with some candour), 'We don't just look for great components, we look for the *very best*. And if we don't find the stuff we like, we go ahead and specify it ourselves. The end product might have an extra zero on its price tag but we think the performance benefits are undeniable.'

LAB REPORT

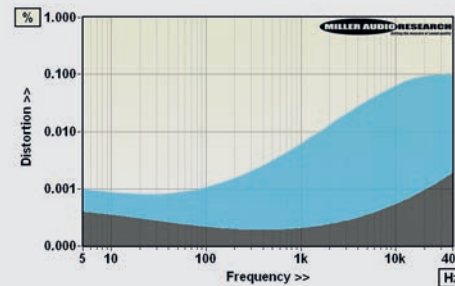
GAMUT D3i/M250i

These are costly, but *very* capable MOSFET-based amplifiers. The D3i preamp offers the lowest distortion of the pair at a mere 0.0001-0.00073% from 20Hz-20kHz, a performance it maintains up to 0.001% THD across its full 17V (balanced) output. The M250i offers a similarly insignificant 0.00085% distortion at low bass frequencies, increasing to a mere 0.0065%/1kHz but a more significant 0.11%/20kHz [see Graph 2, below]. Distortion actually decreases with increasing output, from 0.0065%/10W to 0.005%/100W and 0.0045% at the rated 250W (all 1kHz/8ohm). And the rated output is, naturally, very conservative indeed as the M250i achieves closer to 330W/8ohm and 630W/4ohm in practice with 363W, 704W and 1320W available under dynamic conditions into 8, 4 and 2ohm [see Graph 1, below]. Electronic protection 'limits' the output to 1120W (33.5A) into 1ohm loads.

The pre/power amps share the same (sensibly) tailored extreme HF frequency responses, the D3i reaching -0.5dB/20kHz to -7.2dB/100kHz while the M250i offers -0.2dB/20kHz to -3.3dB/100kHz, the latter measured via its Zobel-free 'Direct' output. The output impedance is uniform at ~0.02ohm from 20Hz-10kHz but increases thereafter to 0.028ohm/20kHz and 0.17ohm/100kHz. The D3i offers a 'flat' 145ohm via its balanced outs across the audioband alongside a fine 0.04dB channel balance and >80dB separation (20Hz-20kHz). It's impressively quiet too, with an A-wtd S/N ratio of 98.1dB (re. 0dBV) that bests the 85.4dB available from the M250i (re. 0dBV). Readers may view full QC Suite test reports for the GamuT D3i pre and M250i power amp by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green). Maximum current is 33.5A



ABOVE: THD versus extended frequency; D3i (1V out, black trace) and M250i (10W/8ohm, blue trace)



ABOVE: The D3i offers phono and four line inputs (one on balanced XLRs) plus outputs on RCA and dual XLRs. The partnering M250i has RCA and XLR inputs plus Direct and Normal (with a Zobel network) 4mm speaker outputs

switching the normal connection to the most reactive arm of the (two-way) crossover. Comparing the two in standard fashion, the Normal outputs do sound just a shade softer in the treble. If I were going to bi-wire, I'd do so using cables 'commoned' into the unfiltered Direct terminals.

But what about that bass? Well, it's not all about pounding drum'n'bass rhythm sections, though the GamuTs will do that with serious intent if that happens to be your thing. Where the quality as well as the quantity of the bass is best heard is when the track is less frenetic, and the instruments more real.

JAW-DROPPING GRIP

Play some close-recorded jazz, such as the title track from Kyle Eastwood's 2013 *The View From Here* [Jazz Village 570020], which opens with Eastwood's bass and Andrew McCormack's piano in unison laying down the riff of the track over Martin Kaine's drums, and the timbre and speed of the bass is superbly realised as a distinct instrument. When they break and go their separate ways, the understated bass line remains metronomic and tightly defined, providing the driving force of the piece.

Play some vintage Queen and for all the histrionics going on in the lead guitar and vocal department, the way John Deacon's bass and Roger Taylor's drums lock together to rocket the music along is inescapable – whether with an early track such as 'Seven Seas Of Rhye' from 1974's *Queen II* [Island 276 425 0] or 'Another One Bites The Dust' from Ludwig's 2011 remaster of 1980's *The Game* [Island 277

175 2]. And with 'High Hopes', the closing track of Pink Floyd's *The Division Bell* [Plg 2896 12], the GamuTs' ability to deliver fine detail in the church bells and ambient sounds of the opening, then turn on the power as the track builds, makes for a thrilling listen – and yes, you can start with it loud and let it just get louder if you want!

Bjork's latest album, *Vulnicura* [One Little Indian TPLP123 1DL] is challenging at standard CD quality, but becomes even more so in 96kHz/24-bit, especially on tracks like 'Black Lake', with its electronic bass coming from somewhere down in the depths. Here, the GamuTs' ability to both grip and drive my usual PMC OB1 speakers was, to put it mildly, jaw-dropping.

Never, in the several years I've been using these speakers, have I heard them deliver bass with this much extension, slam and sheer sofa-shifting ability. The GamuTs are hugely impressive on a technical level – and totally addictive. ☺

HI-FI NEWS VERDICT

Prepare to reset your expectations of what a system can deliver: the GamuTs have all the agility and finesse required for fine sound, but underpinned with a massive sense of unfettered power and total control. By any standards this is an amplifier combination priced well into the high-end, but it's also one worth every penny, taking no prisoners while sacrificing nothing of the visceral thrill of 'real' music.

Sound Quality: 85%



HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	330W / 630W
Dynamic power (<1% THD, 8/4/2/1ohm)	363W / 704W / 1320W / 1120W
Output imp. (20Hz-20kHz, pre/power)	145ohm / 0.019-0.027ohm
Freq. resp. (20Hz-100kHz, pre/power)	+0.0 to -7.2dB / +0.0 to -3.3dB
Input sensitivity (for 0dBV/0dBW)	550mV (pre) / 102mV (power)
A-wtd S/N ratio (re. 0dBV/0dBW)	98.1dB (pre) / 85.4dB (power)
Distortion (20Hz-20kHz, 1V/10W)	0.0001-0.0007%/0.0009-0.11%
Power consumption (pre/power)	17W / 417W (43W, idle)
Dimensions (WHD, Pre/Power)	431x111x420/431x164x470mm