

D'Agostino Momentum Preamp

Dan D'Agostino has now completed his amplification chain, the fabulous Momentum mono and stereo power amps having a matching preamplifier to partner them
 Review: **John Bamford** Lab: **Paul Miller**

It was in 2010 that amplifier designer extraordinaire Dan D'Agostino arrived at the Las Vegas Consumer Electronics Show clutching drawings of his new power amplifier, a solid-state monoblock named Momentum. The previous year he'd parted company with Krell Industries – the company he'd co-founded three decades earlier and that helped define audio's 'high-end'. Starting afresh he decided to create a new boutique marque, D'Agostino Master Audio Systems. By 2011 the ultra-luxurious Momentum (currently £55k per pair) was a living, breathing product... and it took listeners' breath away.

Auditioning a brace of Momentums certainly brought a lump to the throat of our Ken, who declared, 'It may, perhaps, be the best amp on the planet', when writing about it exclusively for this magazine [*HFN* July '11]. He's not the only audio aficionado to be overwhelmed. Talk to any high-end hi-fi observer about the sound quality of a big pair of loudspeakers, for example, and these days it's not untypical to hear: 'Yeah, but have you heard what they sound like driven by a D'Agostino power amp?' Dan's new monoblock became a cult item in the blink of an eye.

AND NOW THE PRE

A year later saw D'Agostino Master Audio Systems introduce a no less luxurious stereo version of the Momentum [*HFN* Aug '12], now priced at £28,500. Employing exactly the same circuit design but with fewer output devices, and a similarly well-regulated power supply, it delivered a solid 2x240W/8ohm and 2x390W/4ohm in our lab tests (where the monoblock proved capable of a whopping 335W/8ohm and 575W/4ohm) and sounded no less sublime. But what of a D'Agostino preamplifier to partner the Momentum power amplifiers? It's been a while coming... and again we have the 'world first' review.

RIGHT: No IC op-amps are used in the line preamp section (centre of picture) while volume adjustment is achieved via a relay-switched resistor ladder. Tone PCB visible bottom right

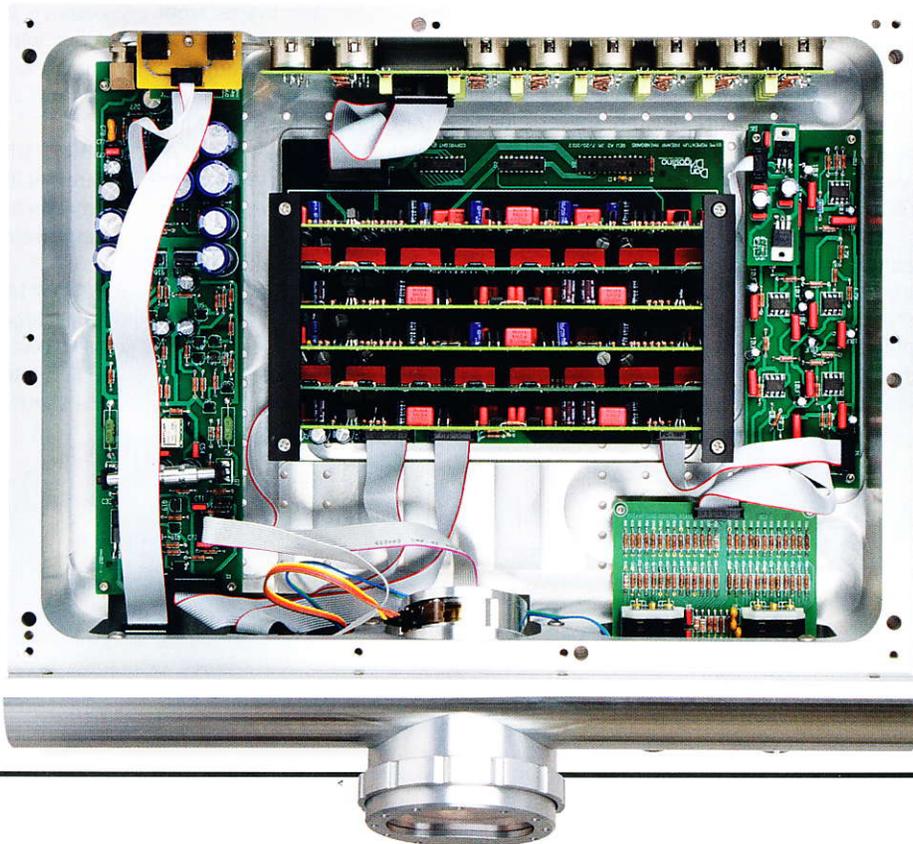
Says Dan with some candour: 'It's taken me a considerably long time to develop. I wanted the Momentum preamp to be sonically non-intrusive and I've been exploring new ground with its circuit design. The topology is a true dual-differential current gain with matching current mirrors on the input and output. It has no feedback and no compensation. The power supply has four regulators and separate grounds for digital and analogue supplies, with two transformers employed for the auxiliary circuits and a separate transformer solely for the audio circuits.'

TWO-BOX? OH YES...

Priced at £32,900 (silver finish: black costs more), it mirrors the power amps with their distinctive 'watch face' displays centre stage – here the outer ring of the circular dial forms the volume control and the watch hand indicates the control's approximate position. Whether

you consider the look of D'Agostino's Momentum components drop dead gorgeous or overly ostentatious will depend entirely on your design sensibilities. Dan makes no bones about his intentions, having said he wanted to make an amplifier that was built like a fine watch both inside and out. Clearly he took inspiration from classic time-pieces such as those of Swiss maker Breguet, whose distinctive arrow-like hands with hollow 'moon tips' were designed in the 1780s.

Even the exposed 'hub' for the meters looks like a watch's balance. And no expense has been spared in the quality of the casework. The chassis is milled from ingots of aluminium and the attention to detail in the build quality is exemplary. Music-lovers of a hair-shirt persuasion might care not a jot about such extravagance, but since D'Agostino's target audience are those used to the finer things in life the quality of finish is immaculate.





At first glance the Momentum looks like an elaborately sculpted single chassis preamplifier. In fact it's a two-box design, with a substantial linear power supply housed in a slim separate enclosure that forms a base platform upon which the main unit is sited. This is an extremely neat solution. Chunky rubberised feet beneath the power supply provide a degree of vibration isolation – as does the machined-from-an-ingot construction – while the preamp's principal chassis rests on inverted aluminium cones that 'park' in small locating indents on the power supply's top plate. DC power from the supply to the preamp travels via a short connecting cable terminated with locking Lemo connectors.

'Yes: a high-end preamplifier that offers on-board tone adjustment'

Under the bonnet the preamp boasts wholly discrete componentry with not an integrated circuit in sight. And, as with the Momentum power amplifiers, Dan has opted for costlier circuit boards with through-hole construction to allow for flexibility in component choice and, he

believes, to provide better reliability and potentially longer life than with surface-mount boards. Volume adjustment is made through a resistor ladder governed by an optical controller.

TONE CONTROLS, DARE WE SAY

Since it is a fully balanced design (like the Momentum power amps) the preamplifier has only line level inputs on XLR connectors. There are six of them, labelled Server, Radio, DAC, Phono, Theater and Dock. That's right: none is labelled CD. Well, you'd hook up a CD player to the 'DAC' input, right? And your computer audio source? That'd go into the 'Server' input, and your smartphone or tablet into 'Dock'. It sure is a sign of the times...

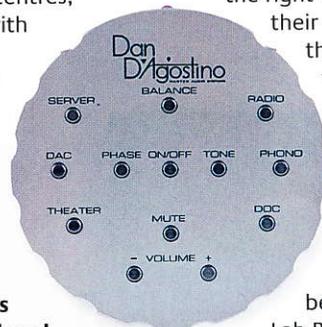
Inputs are selected via push-buttons on the left of the fascia which have coloured LEDs inset in their centres, the colours corresponding with similarly tinted LEDs on the preamp's substantial remote

ABOVE: Fabulous casework oozes luxury. Rotating the outer ring of the watchface dial adjusts volume; defeatable bass and treble controls (right) offer subtle tonal adjustment

controller [shown below]. Switch to the Theater input, which is a pass-through for connecting an external processor, and the level meter alerts you to the fact by swinging over to the far right, indicating that you're at full gain. Below the input selectors are two more push-buttons. The one on the left is the standby on/off switch (whose LED glows orange when the preamp is in standby) and the button to the right of it brings the bass and treble controls into circuit.

Yes, that's right: a high-end preamp with on-board *tone adjustment*. Purists might scoff, while the majority of music lovers will rejoice at having the ability to subtly tweak the tonal balance of dull or overly-bright recordings. Bass and/or treble is adjusted via rotary controls on the right of the preamp's front panel, their $\pm 6\text{dB}$ settings indicated through apertures cut into the thick aluminium fascia. You'll know sure enough when you've activated the tone control circuitry, since the apertures become backlit in white and the LED in the centre of the tone button similarly emits a bright white beacon. The graph in PM's Lab Report [p27] shows how the bass and treble controls can contour the sound, operating not unlike the tilt controls seen on preamps of yore.

The preamp's IR remote controller is a hefty aluminium affair designed to sit on the arm of a chair/sofa or an occasional table. As well as providing direct input



MIX 'N' MATCH?

Time was when it was commonplace for audio lovers to mix separate amplifier components from different brands, indifferent to visual harmony in the pursuit of hi-fi bliss. Of course, there have always been exceptions. Quad 33s and 44s were *usually* partnered with 303s and 405s respectively. And Naim's NAC32 and NAP250 – its flagship components in the 1980s – always went together like bread and jam, as did Naim's less expensive pre/power combos. Today, it seems, it's only DIY hobbyists who don't care what audio components look like when they're side by side in an equipment rack. I tend to blame Sir Terence Conran, whose Habitat stores turned us into a nation of house-proud aesthetes. I should point out that this is no bad thing, since it's entirely logical that the creator of a preamp will have designed it to work optimally with his own power amp.

PREAMPLIFIER

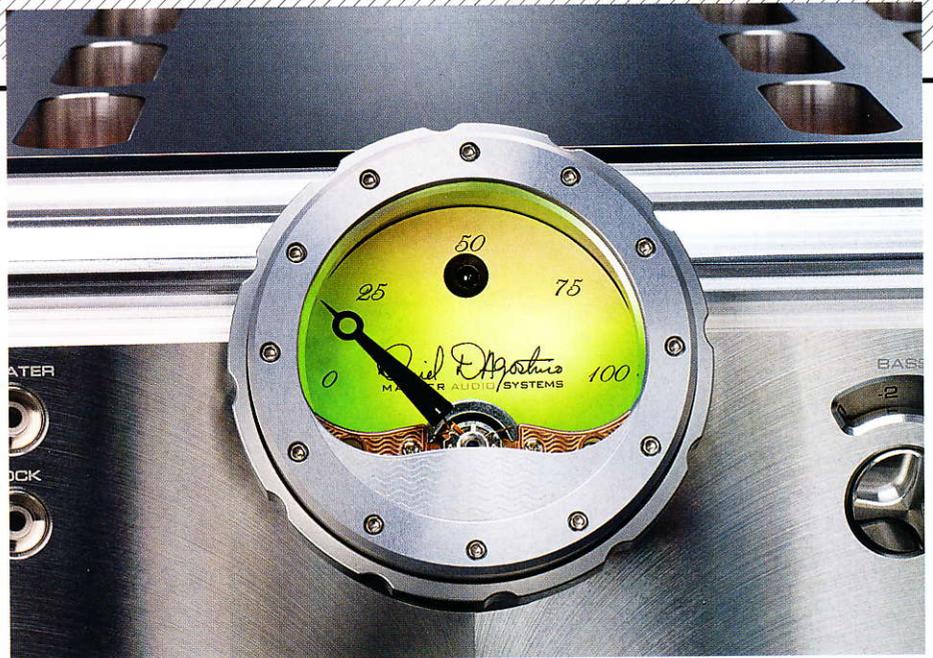
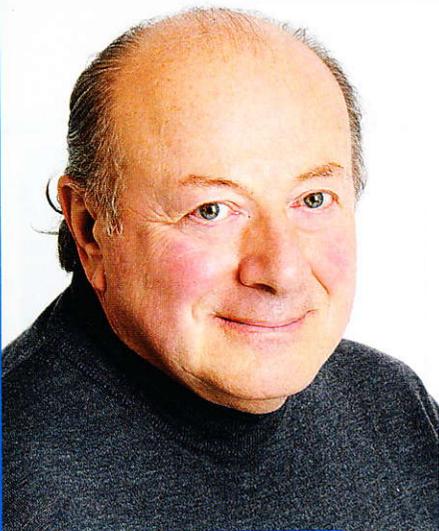
DAN D'AGOSTINO

In starting over with a new venture, Dan D'Agostino has gone back to his roots, building amplifiers in true artisan fashion. D'Agostino Master Audio Systems comprises just five craftspeople hand-assembling the Momentum range of amplifiers in Dan's Connecticut home town.

Now that his amplifier chain has been completed with the Momentum preamp, what comes next? We posed a few questions to Dan, who revealed that a matching phono stage (to hook up to the preamp's appropriately labelled line input) is certainly on his product road map for the near future.

Other than this, he's remaining tight-lipped. Would he consider a Momentum DAC? Apparently not. Says Dan emphatically: 'D'Agostino Master Audio Systems is a small company with limited resources. I intend to keep it quite small, expanding only cautiously as the world market demands. I will leave digital design to masters of the craft, such as dCS and MSB...'

Given that he cut his teeth as a youngster working for Dayton-Wright we suggested that an electrostatic loudspeaker might be an interesting design challenge. 'There will be no speaker designs in my future,' he said. Mind you, he signed off by throwing in something of a teaser: 'All I can say about new D'Agostino products is that I am working on something big!' Hmmm... a Momentum *integrated* amp, perhaps? Your guess is as good as ours...



selection it has additional buttons to reverse absolute phase and set left/right balance. Unfortunately you can't adjust the bass and treble from your listening seat, but the remote does have a button for switching the tone-control circuit on/off.

Briefly stabbing the volume up/down keys allows satisfactorily fine gain adjustment [again, see Lab Report p27], while there's also a Mute button that's not duplicated on the preamp's fascia.

I can't imagine that anyone would buy a Momentum preamplifier and hide it in a cupboard. But in case it's not in direct line of sight with your listening seat an IR extender 'eye' is provided that connects to a mini-jack socket at the rear of the unit. You won't be in the least bit surprised to learn that this is not a typical plastic affair backed with double-sided sticky tape, rather it's set into a solid aluminium block roughly the size of a cigarette packet. Designed to sit on a shelf or on the floor adjacent to your loudspeakers, it will work with a cable run as long as 30 metres.

SOUNDS BEAUTIFUL

Since the preamplifier now completes D'Agostino's amplifier family, naturally we requested a pair of the company's sumptuous monoblocks so that we could hear a Momentum system *in toto*. After all, what other power amplifiers would make more sense? We set everything up in the Editor's media room, connecting them with cost-no-object Crystal Cable Absolute Dream wires [*HFN* Jun '12/Oct '13] to his venerable B&W 802 floorstanders and settled down to listen after the amplifiers had been 'cooking' for a couple of days.

ABOVE: D'Agostino's iconic watchface dial glows green when 'absolute phase' is positive but turns red in phase-invert mode. The hand and scale denote available gain, not output level

On the company's website Dan talks proudly of the fact that some of the world's most prestigious loudspeaker manufacturers use D'Agostino amplifiers to demonstrate their monitors. No wonder: the amps make speakers sound beautiful! Never had I heard our editor's charmingly matured 'Beemers' loading his room quite so sublimely, the sound so graceful, engaging and utterly gorgeous. I use the word 'beautiful' because that's precisely how the 802s made music sound with the D'Agostino amplifier(s) driving them. The

system served up oodles of sumptuous, bold and richly textured bass, an open and clear midband and delicate and refined high frequencies.

All of this lusciousness was combined with an open, wide and

deep soundstage almost completely disassociated from the physical structures of the speakers themselves. Especially in the upper midrange and treble, instruments were arrayed almost magically in a large three-dimensional space that began well in front of the speakers and extended way beyond the rear wall.

The sound of Channel Classics' hi-res recording of Stravinsky's *Firebird* Suite [24/192 download; CCS SA 32112] was breathtaking, the Momentums delivering a thrilling 'whoomp' from the Budapest Festival Orchestra's timpani while describing most graphically the textures and varying timbres of the brass, woodwinds and strings. ↻

'Never had I heard the Editor's "Beemers" sound so sublime'

D'AGOSTINO MOMENTUM PREAMP



ABOVE: Fed via a short umbilical from its outboard DC PSU (doubling as an isolation platform), the Momentum preamp offers six balanced inputs (inc. an HT throughput) and two parallel balanced outputs. Trigger and RS232 support system integration

Usually such precision and vivid detail retrieval comes with a brightly-lit and explicit sound character, but not so with the Momentum combo. So refined and sweet is its presentation that I initially thought it a little softened and gently rolled-off at high frequencies. But no, the aggressive rasp of the brass and transient attack of the pizzicato strings were wholly preserved, yet deliciously 'easy' and relaxed thanks to a sensation of effortless control and precision across the frequency spectrum.

PEPPERED WITH DETAIL

I was startled by the Momentums' delicacy and refinement, not to mention the manner in which it paints wonderful stereoscopic sound images. Joni Mitchell's 1977 epic *Don Juan's Reckless Daughter* album [Elektra/Asylum 8122 74664-2] is a reasonable recording given its era, although hardly audiophile fare due to its typically over-produced sound, awash with artificial reverberation and riddled with all manner of electronic studio trickery. Yet the D'Agostino combo again made it sound beautiful (yes: *that* word once more), the amplifier's transparency making it remarkably easy to hear though the multi-tracked layering of Joni's vocals and acoustic guitars.

Perhaps this was due to the complete absence of stridency, hard-edged glint or treble fizz. Drummer John Guerin's cymbals, struck and brushed, had realistic initial transients and extended, detailed decays. There was no subjective brightness in the high frequencies, yet neither was the sound romantically softened, the realistic twangs of guitar strings remaining faithfully preserved. As for Jaco Pastorius's thrilling bass playing

in the opening 'Overture - Cotton Avenue', the Momentum seemed to have a vice-like grip of the speakers' woofers and delivered firm, deep and revelatory low frequencies.

Ask the Momentum to play a big movie soundtrack such as Harald Kloser's achingly beautiful title theme from *The Day After Tomorrow* [Varèse Sarabande 302 066 572 2] and you'll be swamped in the splendour of the amplifier's deliverance. The recording's thunderous LF often proves overwhelming, but the Momentum held everything together. The orchestration of the piece was at once bold and intimate, the recording's broad soundstage peppered with musical detail that filled the listening room.

Perhaps you're already fortunate enough to own a D'Agostino stereo or two monoblock power amplifiers and have been enjoying their succulent sound. In which case, now's the time to discuss a part-exchange for your existing preamplifier with your dealer and complete the Momentum family. ⚡

HI-FI NEWS VERDICT

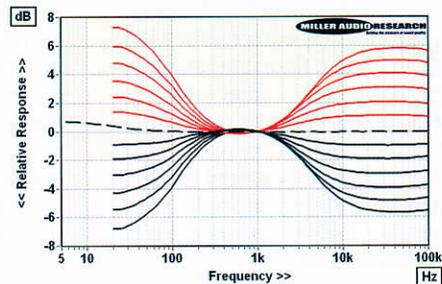
The sound is exquisite, this lavish preamplifier naturally proving to be the perfect complement to D'Agostino's power amp designs. Hearing it combined with a pair of the Momentum monoblocks might make you go weak at the knees, the sumptuously rich and detailed sound every bit as opulent as the products' industrial design. If it doesn't bring tears to your eyes, then clearly you've got no soul!

Sound Quality: 89%

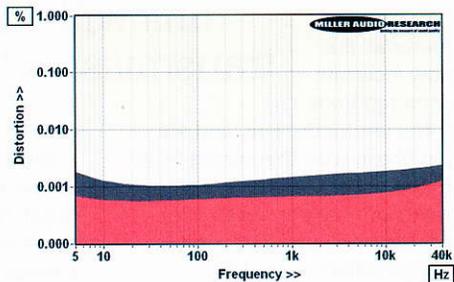


Dan's 'swingometer' indicates the available preamp gain rather than absolute level with '25' representing -35dB (in/out); '50', -12dB; '75', +1dB; and the '100' mark a full +8.2dB or x2.6, even if the legend is just beyond the arc of the needle. Evidently, below '75' the preamp is acting as an attenuator, only offering gain above '75'. The attenuator offers fine 0.5dB steps over the top 26dB of its range with 1dB steps over the middle 22dB and coarser 2dB-5dB steps across the lower 40dB. The total useable range is 88dB. The preamp's response is extended to within ± 0.02 dB out to 100kHz though there's a broad subsonic lift amounting to +0.4dB/20Hz and +0.75dB/5Hz [see dashed trace, Graph 1 below]. Interestingly, stereo separation also falls slightly from ~ 100 dB through mid and treble frequencies to 83dB at 20Hz. The profiles of the six positive and negative bass/treble tone settings are also revealed on Graph 1, their respective max/min frequencies set almost precisely at 20Hz and 20kHz. A subtle but broad adjustment is evidently possible from the ± 1 and ± 2 settings.

Distortion is low and impressively consistent with frequency, albeit lower via the right (0.00065-0.00085%) than the left channel (0.001%-0.0017%) with our sample [see Graph 2, below]. The >20 V maximum output is prodigious (THD rising to 0.2% here) via a usefully low and consistent 390ohm just as the A-wtd S/N ratio is impressively wide at 96dB (re. 0dBV). Thanks to the exceptionally well-screened and filtered DC supply, any residual hum and noise is typically just -99dBV (a mere 11 μ V, unweighted). Readers are invited to view a comprehensive QC Suite test report for D'Agostino's Momentum preamplifier by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Frequency response (5Hz-100kHz, dashed) and ± 1 , ± 2 ... ± 6 tone responses (+, red; -, black)



ABOVE: Distortion versus extended frequency from 5Hz-40kHz at 0dBV (left, black; right, red)

HI-FI NEWS SPECIFICATIONS

Maximum output (<1% THD, 47kohm)	>20Vrms (Balanced)
Maximum input level (<1% THD)	>10Vrms (Balanced)
Output impedance (20Hz-20kHz)	38.6-38.9ohm (Balanced)
Frequency response (20Hz-100kHz)	+0.38dB to +0.02dB
Input sensitivity (re. 0dBV)	388mV (Balanced)
A-wtd S/N ratio (re. 0dBV)	96.0dB
Distortion (20Hz-20kHz re. 0dBV)	0.00065-0.00085%
Power consumption	30W (7W standby)
Dimensions (WHD)	457x178x318mm