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# D'Agostino MxV Integrated

This new heavyweight integrated blends inspiration from D'Agostino's Momentum HD preamp and MxV power amp into an app-controlled design with modular upgrade path  
 Review: **Ken Kessler** Lab: **Paul Miller**

**I**ntegrated amplifiers are a matter of lifestyle choice, and we've all heard the arguments about why they are either better or worse than separate pre/power combinations. Whatever the sales pitch, pro or anti, the bottom line is that you are choosing space-saving over possible audiophile preferences. With the Momentum MxV Integrated – the other one in the family being the less-costly Progression [HFN Nov '20] – founder and chief engineer Dan D'Agostino is giving you absolutely everything in a single box, for a heady £73,998 in silver or black.

That starting point, however, gets you a line-level-only unit with remote control. Save for one set of RCA inputs, the remainder are balanced, on XLRs. Ironically, despite it being an integrated amp, the Momentum MxV consists of two chassis, but the pair fit together as one. The lower section houses the linear power supplies, fed off a 2000VA transformer, first found in the Momentum M400 MxV amplifier [HFN Nov '22] and said to drive 'a near 60,000µF capacitor bank'. A 30-pin connector on the top mates with a socket on the underside of the preamplifier chassis [see pic, p43] so rhetoric aside, it's a single unit.

**AT YOUR FINGERTIPS**

Then you have to add either one or both of two optional modules if you don't already own a high-end DAC or phono stage, and there is nothing it cannot handle should both be fitted, as in the review sample. The DAC (£11,398) enables streaming, network access and accepts any digital source which can be connected via optical, USB, or coaxial connection.

D'Agostino's iOS-only app can access music stored on iPads, iPhones, etc, and the amp has separate aerials for

**RIGHT:** Volume is adjusted via a relay-switched resistor ladder [centre]. Electronic protection [top left] monitors the main amp with its seven pairs of ON Semi power transistors, per channel, mounted on copper/alloy heatsinks

**FAR RIGHT:** The supply lines, and logic, are carried via a hefty (blue) multi-pin connector

Wi-Fi and Bluetooth, the latter needed for the handheld remote control. The app's screens are self-explanatory, with a directory for music from the Cloud, a local server, or via services on the Internet. This element of the app is less important if you own loads of physical media or have music stored on a server, but as the full use of the Momentum MxV Integrated requires connection to a router – wirelessly or via cable – you might as well make use of the app's features.

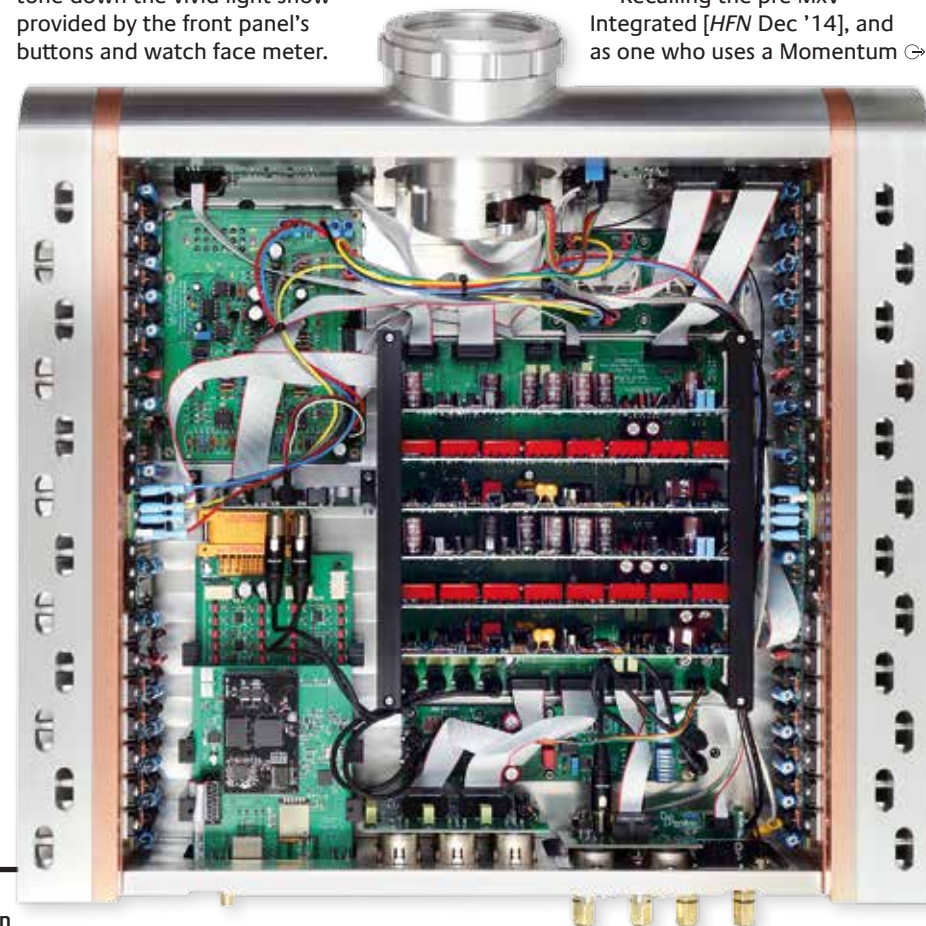
What it offers beyond music access are all of the functions found on the hockey-puck-shaped remote [see p47], including balance, standby, volume, mute, input selection, polarity inversion and a 'dark mode' to tone down the vivid light show provided by the front panel's buttons and watch face meter.

*'Despite being an integrated, it consists of two chassis'*

As for the £5698 phono module, this uses DIP switches for input loading that can be set to 50, 100, 200, 400ohm, 1k or 47kohm. Unfortunately, the DIPs are inside the unit, which requires removing the top cover when you switch between cartridges. Once installed, the phono module takes

over the lone pair of RCA inputs, but you can find RCA-to-XLR adapters online for as little as £8 to use the MxV Integrated's balanced inputs with single-ended sources. I confess that the amplifier being XLR-only didn't bother me because I have a phono amp, an open-reel tape deck and a single-box universal CD/SACD/Blu-ray player with balanced outputs. And believe me: it's generally to be preferred.

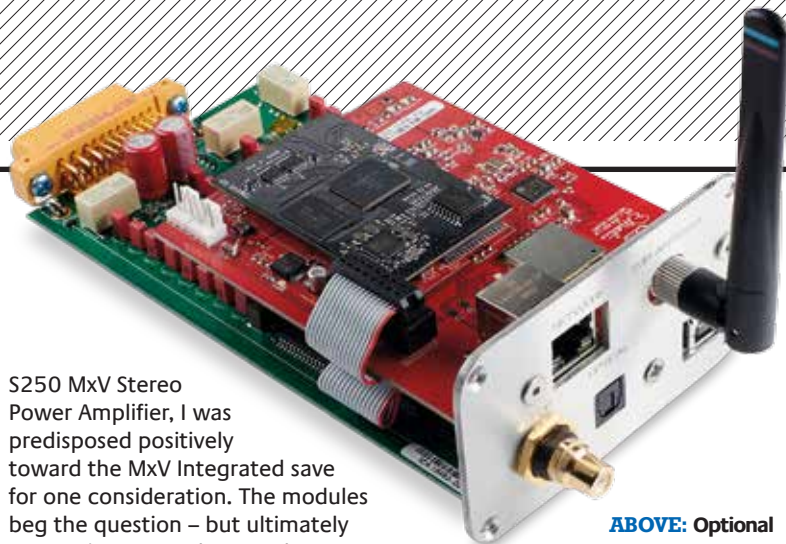
Recalling the pre-MxV Integrated [HFN Dec '14], and as one who uses a Momentum





# LAB REPORT

## MXV INTEGRATED (DIG. MODULE)



S250 MxV Stereo Power Amplifier, I was predisposed positively toward the MxV Integrated save for one consideration. The modules beg the question – but ultimately answer it – as to why one chooses an integrated amp over separates, even if they occupy extra space and AC sockets galore. Quite simply, even if you are blessed with both, it's still only about saving space.

### THE CHOICE IS YOURS

Think about it: fully loaded, this unit leaves little change from £92,000. Adding the modules precludes the need for any extra real estate other than that which the 51kg, 464x241x452mm (whd) lump requires. Only the modules' prices give pause. They are suited to the task, but any audiophile not averse to choosing external components

**BELOW:** The MxV outboard PSU offers four supplies in one, including +5V and +12V for the logic functions, ±18V for the preamplifier section and ±70V, supported by a very large toroid, for the balanced power amplifier

**ABOVE:** Optional digital/streaming module is based on a third-party network audio solution and includes an ESS DAC

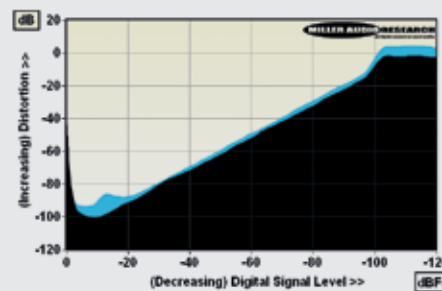
can easily save money and arguably get a better DAC and phono stage.

That, however, defeats the primary *raison d'être* of this integrated amplifier, for only the modules offer 100% guaranteed matching of preamp stage, power amp, all inputs and the elimination of interconnects between them. Furthermore, the MxV Integrated's overkill PSU undermines those who argue that separate preamps and power amps benefit from their own isolated power supplies, because this beast of a product treats the power supply as an art form.

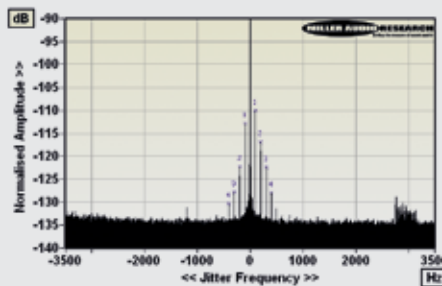
In addition to feeding the amplifier music via the app to test that it worked, my findings are based on better-sounding, physical sources: LPs, CDs and reel-to-reel ⇨

To exclude the possibility of driving the MxV Integrated's power amp stage into clipping (albeit unloaded), the digital streaming module was tested via the headphone output. The balanced preamp output cannot be used separately with the power amp stage muted, but this a common oversight. The max. output of the headphone stage is a healthy 6.85Vrms, albeit at a high 263ohm source impedance but, at *any* output level, the digital module clips with 0dBFS digital inputs resulting in ~0.7% THD. This is significant bearing in mind that much of the modern digital media tested in our HD Downloads section [see p94] is normalised to 0dBFS. With digital data below 0dBFS, distortion drops away instantly to, for example, 0.004%/1kHz/-1dBFS and lower still to just 0.0004-0.0007% (re. 20Hz-20kHz) over the top 20dB of its dynamic range. While data up to 192kHz is passed without downsampling, lower digital signal levels see a 'step' in THD and linearity at *circa* -100dBFS that suggests a truncation to 16-/17-bits – something seen with very early USB solutions. The clipping and truncation are clearly revealed in Graph 1, below.

The latter has an impact on the achievable S/N ratio – a sub-16-bit 89dB (A-wtd, re. 0dBFS/2V i/o) in this instance – while the response extension and useful 76dB stopband rejection are functions of D'Agostino's choice of fast, minimum phase digital filter. In practice the line out response reaches -0.4dB/20kHz, -2.0dB/96kHz and -6.1dB/90kHz with 48kHz, 96kHz and 192kHz media files, respectively, these having a dominant influence over the far flatter response of the amplifier itself [see Lab Report, p47]. Jitter, gratifyingly, is a low ~250psec and inherently PSU-induced in origin [see Graph 2]. PM



ABOVE: Distortion versus 48kHz/24-bit digital signal level over a 120dB dynamic range (black, 1kHz; blue, 20kHz). Note peak-level clipping at 0dBFS



ABOVE: High resolution 48kHz/24-bit jitter spectrum showing low-level PSU-induced sidebands (with mkrs)



## HI-FI NEWS SPECIFICATIONS

Maximum output level / Impedance	6.85Vrms/263ohm (hdphone)
A-wtd S/N ratio (S/PDIF / USB)	88.8dB / 88.9dB
Distortion (1kHz, -1dBFS/-30dBFS)	0.004% / 0.0069%
Dist. & Noise (20kHz, -1dBFS/-30dBFS)	0.015% / 0.0027%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0 to -0.4dB/-2.0dB/-6.1dB
Digital jitter (48kHz / 96kHz)	255psec / 250psec
Resolution (1kHz @ -90dBFS/-100dBFS)	±0.1dB / -4.8dB
Power consumption	95W (1W standby)
Dimensions (WHD) / Weight	464x241x452mm / 50.9kg



INTEGRATED AMPLIFIER

D'AGOSTINO MXV INTEGRATED



LEFT: Fully loaded with its USB-B/optical/coaxial and Ethernet/Wi-Fi streaming module [far left] and MM/MC phono card [right], the MxV Integrated also has three balanced line ins, one pre out and a set of 4mm speaker cable terminals. Control is offered via app and BT remote [see p47]

tapes. I'm sure many of you find great joy in streaming services, but I don't.

TROPICAL SOUNDS

Faced with a plethora of XLR inputs, I didn't hesitate for a second when it came to firing up my Otari MX5050 reel-to-reel. Of late I have been obsessing over the 'loungecore' music of Martin Denny, who peppered his recordings with exotic sounds. *Quiet Village* [Liberty 7 122] is a prime example, with a slick seven-piece ensemble punctuated by unusual percussion.

Denny's interpretation of 'Stranger In Paradise' is suitably tropical, D'Agostino's amp rendering it both airy and crisp at the same time. As was a signature of late 1950s open-reel tape, there's a sheen which the Momentum MxV Integrated preserved, and delivered here with a caress I normally assume to be the sole province of valves. This sounded as lush, full and rich as it has to be to convey the sense of a tropical breeze, while the clicks

DAN'S MXV UPDATES

As Dan D'Agostino [pictured, right] has always supported trickledown developments, so the Momentum MxV Integrated Amplifier combines technology – novel circuit design as much as choice components – from earlier MxV separates. Where it differs from the previous Momentum Integrated [HFN Dec '14] is in its capacity to host aftermarket modules, here in the guise of streamer/DAC and MM/MC phono stages. In base form it is analogue/line-level only, a sensible choice for those with legacy source equipment [see rear shot, above].



In practice, 'MxV' denotes changes sufficiently comprehensive that upgrading the previous version means a return to the factory. The new preamp section is derived from the Momentum HD Preamplifier [HFN Apr '20], D'Agostino's first to incorporate a high impedance J-FET front-end. But the most obvious benefit is its increase in power, a specified 250W/8ohm and 500W/4ohm, up from the earlier model's 200W and 400W, respectively [see PM's Lab Report, opposite]. A new transformer claims over 50% more current output from the same footprint, suggesting greater headroom during dynamic passages. A new winding scheme minimises (hysteresis) power and thermal losses, just as the 53,000µF capacitor bank represents a 60% increase over the original Momentum Integrated – all these features promising gains in output.

For the output stage itself, there's a claimed 50% increase in operating bias, said to directly correlate to better sound quality, while the combination of its enhanced copper/alloy heatsinking and new bias circuit ensures the amplifier becomes warm but never excessively hot. Finally, the output stage features the power transistors originally sourced for D'Agostino's flagship Relentless Epic 1600 Monoblock Amplifier – all 28 of them (seven pairs per channel).

of the woodblocks and the caws of the birdcalls (yes, you read that correctly) were chilling in their authenticity. Best of all, perhaps, was the sense of liveness, which carried over to Arthur Fiedler and the Boston Pops Orchestra's *Pops Christmas Party* [RCA Living Stereo FTC-2022 open-reel tape]. I realise that classical snobs detest the plebeian usage of full orchestras, but that's their loss. Neither I nor Fiedler, for that matter, celebrate Christmas, but the irresistible 'sparkle' to the album even garnered praise from my wife, who wasn't in the same room.

NO LIMITS

Had either recording revealed anything amiss? Nothing whatsoever – especially when it came to impact. There seems a sense of unlimited power to the MxV Integrated, such that I wasn't even for a moment contemplating taking a feed from its XLR pre-outs to drive the S250 Momentum for comparison purposes. I was moving past the audiophilic conditioning that states 'Separates Always Win', as recent sessions with the Trafomatic Rhapsody [HFN Dec '23] also demonstrated. What was emerging was a display of consistency and coherence as valuable as any other area of sonic excellence.

Turning to digital, the mainly unplugged remakes of his back catalogue on Bob Dylan's *Shadow Kingdom* [Columbia/Legacy 19658767492 CD] are tricky ones to employ, because decades (literally) of familiarity with songs such as 'It's All Over Now, Baby Blue' and 'I'll Be Your Baby Tonight' are thrown out with the bathwater. The performances bear no resemblance to the well-known originals, so it's harder to focus just on the sound.

That said, I had played the disc enough times to feel confident about using it, and there was a reward in the way the MxV Integrated handled vocals. Those who have followed Dylan over the past 60 years have heard the changes in his voice – the same applies to all singers, from Cher to

Springsteen to McCartney – and this soundtrack CD most assuredly is Dylan circa-the-2020s. Dan D'Agostino's designs have always viewed music through a micro lens, and the tiniest traces of rasp and richness underscored the more common nasality.

'SNAKE BITE

This ultra-authentic midband paid off in spades when it came to creating a sense of intimacy, the Dylan sessions as cosy as the Boston Pops tape was grandiose. For those who value this element of sound reproduction, that of eliminating the distance between performer and audience, this latest Momentum – especially via the game-changing gains provided by the MxV upgrades – has the same seductive qualities as high-end planar-type headphones. (Which, by the way, are well-served by this amplifier's headphone socket.)

Dylan in turn steered me in another direction, moving from the take-no-prisoners Wilson Sasha DAWs [HFN Mar '19] to the Quad ESL 57s. A slip of the volume control would fry them, so I proceeded with caution, but the coherence of the Quad Electrostatics – believed by some never to have been surpassed let alone equalled – exposed even more texture in his voice. Abetting this acoustic experience were harmonica, accordion, upright bass and other 'natural' instruments, and the Momentum MxV Integrated imposed upon them absolutely nothing in the way of artifice.

Full and rich, it conveyed the sense of a tropical breeze'

All well and good, you might think, this list of silky lounge music and Dylan *al fresco*. Time to test the phono stage with Whitesnake's *Still Good To Be Bad* [Rhino RCV1 695446/603497836925]. 'Lay Down Your Love' was enough to expose the Momentum MxV Integrated's raunchy alter ego, and – luckily – I had moved back to the Wilson speakers beforehand. This track's *a cappella* opening is dangerous if you use it to set your playback levels because it's followed by a barrage of massed guitars. Then the bombshell.

COMING TOGETHER

How could I not know that this amplifier's lower registers would have reach and mass tailor-made for head-banging? Whitesnake shows greater finesse, or rather employs a lighter touch than, say, Motörhead, so it wasn't all screaming and buried meter needles. What iced this (bottom octaves) cake was the layering which gave the drums and bass their own sonic strata.

If that sounds like the flat images of Viewmaster 3D or the antithesis of soundstage or imaging cohesion, forgive my failure to communicate precisely how these layers of sound complement each other. You just know by the way it all comes together that the art of creating a flawless wall of sound isn't solely a skill belonging to Phil Spector. This amplifier rocks. ☺



ABOVE: Styled after D'Agostino's 'watchface' volume control, the BT remote covers off all the MxV's functions

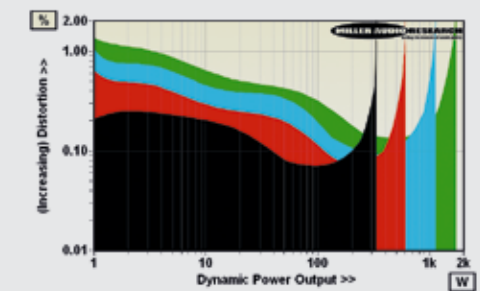
HI-FI NEWS VERDICT

Perplexed as I am about any integrated amp at nearly £100k – and this is not the only one – it's easy to be seduced by the MxV Integrated's sheer convenience. It didn't grumble when driving Wilson Sasha DAWs, drew bass from LS3/5As I'd never heard before, and gave me newfound respect for my open-reel tape deck. So look at it in a different way if you still think separates are superior. They're not.

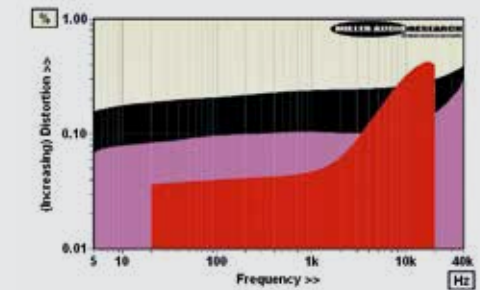
Sound Quality: 85%  
0 - - - - - 100

Up until these 'MxV' revisions, the Momentum Integrated [HFN Dec '14] and later Momentum MLife Integrated [HFN Apr '17] were both rated at 200W/8ohm and 400W/4ohm despite achieving 215W/295W and 255W/365W, respectively. The new MxV Integrated is rated at a higher 250W/8ohm and 500W/4ohm but goes on to deliver 2x275W/8ohm and 2x480W/4ohm even though it retains greater parity with the original Momentum model in its tolerance of very low impedance loads. Under dynamic (music-like) conditions the inaugural amp managed 345W, 635W, 1.07kW and 1.62kW into 8, 4, 2 and 1ohm loads, respectively, while the MxV Integrated offers 340W, 610W, 1.11kW and 1.59kW, respectively [see Graph 1, below]. Bearing in mind the near-decade gap in testing, these figures are essentially identical.

Corrective feedback has been relaxed in the MxV amplifier so distortion is fractionally higher at ~0.2-0.3% (re. 1W, 20Hz-20kHz) but, like other D'Agostino amplifiers, reduces both with warm-up and with increasing power output to, for example, 0.045-0.4% at 100W [also 20Hz-20kHz, see Graph 2]. In this respect, the specified <0.1% THD at 200W output is correct. Again, like other amplifiers in this family, output impedance is a relatively high ~0.35ohm, so while the native response into non-reactive loads is a flat ±0.1dB from 1Hz-25kHz (and just -1.5dB/100kHz), the MxV Integrated's system response will be influenced by the attached loudspeaker load. Once again, D'Agostino's use of a large and very well-screened outboard PSU enables high power and low noise, so the MxV Integrated enjoys an impressive 90.9dB A-wtd S/N ratio (re. 0dBW). PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 39.9A



ABOVE: Distortion versus frequency versus power output (1W/8ohm, black; 10W, pink; 100W, red)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	275W / 480W
Dynamic power (<1% THD, 8/4/2/1ohm)	340W/610W/1.11kW/1.59kW
Output imp. (20Hz-20kHz/100kHz)	0.336-0.370ohm / 0.53ohm
Freq. resp. (20Hz-20kHz/100kHz)	+0.0dB to -0.08dB/-1.5dB
Input sensitivity (for 0dBW/250W)	80.6mV / 1275mV
A-wtd S/N ratio (re. 0dBW/250W)	90.2dB / 114.2dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.090-0.14%
Power consumption (Idle/Rated o/p)	95W / 933W (1W standby)
Dimensions (WHD) / Weight (total)	464x241x452mm / 50.9kg