

PS Audio Stellar M1200

This flagship monoblock is not only more powerful but features significant design enhancements over other Class D amplifiers in the Stellar range, including a tube input...
 Review: **Mark Craven** Lab: **Paul Miller**

The best of both worlds' is an oft-used rallying cry in the hi-fi industry, rolled out to extol the virtues of everything from compact loudspeakers with big bass output to digital network players with phono stage inputs. It's also the self-proclaimed *raison d'être* of PS Audio's Stellar M1200 monoblock amp. Sold in pairs for £6000, this recent addition to the Stellar range combines a high-power Class D output stage with Class A vacuum tube input, in pursuit of both efficient speaker-driving muscle and spine-tingling musicality.

It certainly appears up to the challenge of providing sufficient grunt. The claim here is of a 'minimum' 600W/8ohm and 1200W/4ohm – figures not typically found at the price [see PM's lab report, p67]. This is more juice than you're ever likely to need, but the Colorado-based brand claims it is fundamental to the amplifier's appeal: 'The over-the-top high power output of the M1200 exists not to match a small handful of power-hungry speakers, but, rather, to act as the perfect uncompressed power source for even the smallest, most efficient of speakers on the market'.

GETTING INTO STELLAR

The Stellar series is PS Audio's entry-level, launched in 2017 with the £1350 S300 stereo power amplifier, £1550 Gain Cell DAC/preamp and £2700 per pair M700 monoblocks [HFN Apr '20] followed more recently by the £3000 Stella Strata integrated, £2500 Stellar Phono Preamp [HFN Feb '20] and the M1200 here.

What differentiates the M1200 from its more affordable monoblock stablemate is not just the promise of additional power – the M700 is rated at a 'mere' 350W/8ohm – but its hybrid design. So, while the M700 features the brand's 'Analog Cell' technology, which it describes as a 'Class A

MOSFET input stage [that] closely mirrors the sonic characteristics of a vacuum tube', here you have the real thing – a 12AU7 triode fed by its own power supply.

A hybrid amplifier architecture also features within PS Audio's flagship BHK series of mono and stereo models [HFN Jul '16] though these are a mix of tubes and power MOSFETS. The tube/Class D blend of the M1200 is distinctive and described as a 'dream project' by lead designer Darren Myers. The chosen Class D power module is an upgrade over the M700, using ICEpower's latest 'Edge' circuit design to enable a more predictable response/distortion behaviour regardless of loudspeaker load [see PM's boxout 'Living on the Edge', p65].

Otherwise, the M1200's styling follows the trend set by other components in the Stellar range. Indeed, the amplifier looks almost identical to the M700. The chassis is the same width (432mm), and while a

shade taller it's slender enough to make placement simple, the two easily stacked and placed on a shelf or in a cabinet.

PLAYING IT COOL

The Class D design informs its form factor: there are no razor-sharp heatsinks to be careful of here, just vents on the top and sides for passive cooling.

It also allows the amplifier to be lightweight (12kg) and energy efficient, having an idle power consumption – confirmed by Editor PM – of 29W.

The steel casing (available in black or silver) is reasonably pretty, but some might want a little more overt style from their system powerhouse – there's nothing to blemish the front fascia beyond a button with company logo. When pressed, this flashes blue as the amp's tube stage gets into gear and stays a solid blue until pressed again to put the M1200 into 'Output Disable Mode' – preserving the

'Hip-hop, dance, to live jazz – the M1200s had a whale of a time'



RIGHT: The M1200 combines a 12AU7 triode tube-based line input [top left], fed from a linear PSU, with an ICEpower ICEedge 1200AS1 mono Class D amplifier module [bottom], incorporating its own switchmode PSU



lifetime of the triode when the amp is in standby. This logo also flashes blue if the amp's protection circuit is tripped.

The rear panel is uncluttered [see p67]. On the left are an IEC socket and power switch, while on the right is a screw-in panel granting access to the M1200's tube. Between are two sets of speaker binding posts, enabling bi-wiring, plus a ground terminal and balanced XLR and single-ended RCA line inputs. There are also 12V trigger sockets for system integration.

I made use of the M1200s' cool demeanour by installing them stacked and laced to Bowers & Wilkins 705 S2 standmounts and then to some three-way

tower speakers. PS Audio's BHK Signature Preamplifier was used to feed sources including a Bluesound Vault 2i music server and Oppo UDP-203 universal disc player.

STEEL 'N' SILK

This slender monoblock amp is not solely devoted to room-shaking power. It has that capability, but appreciation of its punch comes with an appreciation of its grace. The sound is a confluence of steel and silk – fast, rhythmic and able to respond astutely to the shifting

ABOVE: PS Audio's Stellar range plays it slender and simple, its substantial casework split into upper and lower half shells. Class D modules run cool so there's no need for external heatsinking

dynamics of music. A smooth treble lifts it high above the realms of the rough-and-ready, and there's an energetic delivery of the midband. But the star attraction – the one that gets your blood pumping right away – is its exceptional bass handling.

To check my Bluesound Vault 2i was behaving itself, I fired up, at random, Chris Rea's 'Daytona' [*The Road To Hell*; Tidal Master]. After no more than a second I had stopped worrying about my network connection and started focusing

on the music. This gentle, mid-tempo homage to a Ferrari race car (complete with tyres squealing over the outro...) arrived with a slippery, fluid and authentic bass sound that I wasn't prepared for, the kind that has you wondering why you haven't always done your listening through 600W monoblock amplifiers.

POUND FOR POUND

The B&W speakers are no slouch when it comes to low frequencies, but with the Stellar M1200s behind them they acquired a new identity. It wasn't just a case of 'making standmounts sound bigger', but making them sound more assured. Nor did this bass sound too dry or rich. I felt like Goldilocks on her third bowl of porridge...

This fulsome bass is the foundation for the M1200's other charms. Rea's composition is relatively sparse, giving focus to the piano, vocal and isolated flourishes of percussion. On the surface there's perhaps not much going on, but ➔



LIVING ON THE EDGE

In our review of PS Audio's Stellar M700 monoblocks [*HFN* Apr '20] I showed how its choice of ICEpower (now autonomous from its B&O parent) module brings with it some familiar foibles of 'traditional' Class D amplifiers. Specifically, the module's inductive output filter – an inescapable reality of Class D operation – causes a rise in output impedance at ultrasonic frequencies that impacts on both distortion and response that varies with *loudspeaker* load.

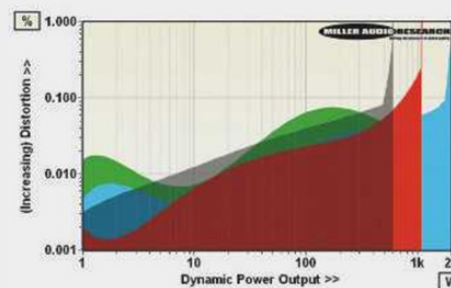
These are issues long-since dealt with by the competing Hypex UcD, Ncore and Eigentakt Class D modules developed over many years by designer Bruno Putzeys [see *HFN* Jun '17, Jan '19 and Aug '20, respectively, for examples]. Key to the Hypex modules' insensitivity to speaker load impedance is their 'wrapping' of this self same filter network within the amplifier's feedback loop.

However, tucked away under the long list of innovations claimed for ICEpower's latest 'Edge' version of its technology [stereo card pictured above, and now scalable over an impressive 50W to 7kW range] is the following revelation: 'all important feedback nodes in the audio path are routed to external pins of the controller creating a flexible and future-proof design... enabling our partners to implement their own proprietary modulator and feedback loops using ICEedge'. This is exactly what PS Audio engineer Darren Myers has achieved, ensuring the M1200 is not only more powerful than the M700 but also significantly more consistent and predictable in its performance with different partnering loudspeakers. **PM**

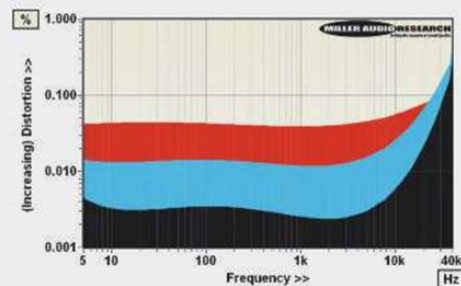
PS AUDIO STELLAR M1200

Although this latest M1200 monoblock offers exactly the same +30.6dB gain as PS Audio's M700 [HFN Apr '20] its performance differs in several important respects. Power output is necessarily increased courtesy of the 1200-series ICEpower module, from 365W/8ohm and 715W/4ohm for the M700 to 628W/8ohm and 1246W/4ohm here. As expected, the Class D architecture yields no advantage under dynamic conditions, in fact the 'TCCCL' (Temperature-Compensated Cycle-by-Cycle Current Limit) regime actually caps the output at 597W, 1080W and 1985W into 8, 4 and 2ohm, 'falling' to 1311W/1ohm, or 36A [see Graph 1, below]. Either way, the M1200 will not run short of breath...

As we saw with the M700, the M1200 shows a trend of gently rising distortion with increasing output – the triode tube input only adding some slight 'colour' here – from 0.0029%/1W to 0.012%/10W, 0.038%/100W and 0.14% at the rated 600W/8ohm. The 1200AS1 Class D module is optimised for best performance/lowest THD into 4ohm [again, see Graph 1] but distortion is otherwise maintained at an impressively consistent level vs. frequency from 20Hz-4kHz, increasing thereafter to 0.065%/20kHz/10W [see Graph 2]. This new module is quieter than that used in the M700, the 83.9dB A-wtd S/N ratio besting the latter's 76.1dB by some margin. I discuss the M1200's much reduced sensitivity to speaker loading in my boxout, p65, but the practical result is a flat ~0.026ohm output impedance from 5Hz-5kHz, rising only gently thereafter to a maximum 0.83ohm/95kHz (10x lower than with the M700). The frequency response now extends from 2Hz-25kHz (-1dB) and to -0.65dB/20kHz and -7.05dB/100kHz largely independent of loading. PM



ABOVE: Dynamic power output versus distortion into 8ohm (shaded trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 36.2A



ABOVE: Distortion vs. extended freq. at 1W/8ohm (black), 10W/8ohm (blue) and 100W/8ohm (red)

HI-FI NEWS SPECIFICATIONS

| | |
|-------------------------------------|------------------------------|
| Power output (<1% THD, 8/4ohm) | 628W / 1246W |
| Dynamic power (<1% THD, 8/4/2/1ohm) | 597W / 1080W / 1985W / 1311W |
| Output imp. (20Hz-20kHz/100kHz) | 0.024-0.055ohm / 0.83ohm |
| Freq. resp. (20Hz-20kHz/100kHz) | +0.0dB to -0.65dB/-7.05dB |
| Input sensitivity (for 0dBW/600W) | 83mV / 2093mV |
| A-wtd S/N ratio (re. 0dBW/600W) | 83.9dB / 111.7dB |
| Distortion (20Hz-20kHz, 10W/8ohm) | 0.0115-0.065% |
| Power consumption (Idle/Rated o/p) | 29W / 707W |
| Dimensions (WHD) / Weight | 432x95x330mm / 12kg (each) |



ABOVE: The M1200 offers balanced (XLR)/single-ended (RCA) ins alongside parallel sets of 4mm speaker outlets (these are 'floating' so must never be connected to gnd., such as an active sub). Note removable panel for access to the triode tube [far right]

the Stellar duo seemed to cherish each aspect, bringing a pristine feel to woodblock hits and a sublime delivery of the timbral characteristics of the piano.

'Daytona' is music for a lazy Sunday afternoon, so next up was some music for a lively Friday night. AC/DC's 'Thunderstruck' [The Razor's Edge; EPC 510771 2] and the title track from Trivium's *What The Dead Men Say* [Tidal Master] gave these amps reason to let their high-power hair down. The former scatters pounded floor toms throughout its lengthy intro, and they sounded as big as I had hoped, gently decaying to leave just air in their wake.

BOXING CLEVER

The latter track positively erupted, the amplifiers creating a searing midband with Matt Heafy's sinewy guitar tone brought to the fore, and drums again hitting with the speed and aggression of a champion boxer. The smoothness of the M1200's upper ranges helped here, taking some of the edge off the avalanche of distorted guitar and making this track more than palatable.

The resolution and nuance on offer comes with the usual caveat. Lower-quality sources sound like, well, lower-quality sources. Soundstaging and production differences are illuminated by the M1200's transparency, rather than buried under its own character.

That said, I found it pleasingly genre agnostic – there wasn't anything the M1200 didn't have a whale of a time with, from hip hop and dance music to live jazz and orchestral pieces. Across them all, the same qualities came to the surface: weighty but uncoloured bass, impressive agility, and a real grasp of tonal subtleties.

From the off, Billy Joel's 'Travelin' Prayer' [Piano Man; Mobile Fidelity Sound Lab, 88.2kHz/24-bit FLAC]

sounded up-tempo and deliciously pointy, without smearing the staccato bassline or rat-a-tat percussion. The tongue-twisting lyrics tumbled out, followed by the frantic plucked banjo of Eric Weissberg, and as the track varied in instrumentation, the M1200's mastery of it didn't. Honky-tonk piano, mouth harp and violin were interwoven into what proved to be a foot-tapping musical medley.

Similarly impressive was the PS Audio amplifier's evocative rendition of Howard Shore's 'The Breaking Of The Fellowship' [The Lord Of The Rings: Original Motion Picture Soundtrack; Tidal Master], a more sedate track with string and brass layers, and breathy choral motifs, that served to emphasise the M1200's calmer side.

Here the London Philharmonic spread out, with a generous space and depth to the soundstage that enabled me to visualise the throng of players. Conversely, the pulsating electronic beats and synth stabs of 'Fuego' by KOAN Sound [Tidal; 44.1kHz/16-bit] appeared to flit in and out of my vision, split-second bursts of energy benefiting from the Stellars' transient power. ☺

HI-FI NEWS VERDICT

With its tube input and uprated ICEpower output stage, the M1200 is something of an outlier in the entry-level Stellar series, yet PS Audio's 'thinking-outside-the-box' design pays dividends. From a package small enough to easily share shelf space with the rest of your system comes a performance that's big and bold – yet also impressively emotive and refined. The best of both worlds? I think it just might be.

Sound Quality: 86%

