

Marantz PM-10

For its latest ‘reference class’ offering, Marantz has opted to build a big integrated amplifier rather than a two-box solution. But it’s a design with a difference...

Review: **Andrew Everard** Lab: **Paul Miller**

Established hi-fi practice suggests that, when you get to a certain level, you might want to stop thinking about all-in-one integrated amplifiers and consider a set-up with a separate preamplifier and one or more power amps.

The idea, as we’ve all known for ages, is that splitting audio systems into their component parts – eg, pre/power amps, or even transports and DACs – also separates interference-creating circuitry from more sensitive areas of the design. It also gives scope for dedicated power supplies for each section of a product.

And of course it facilitates future upgrading by swapping out just one component, not the whole thing. Better to change to a bigger power amp, or a superior DAC, for example. The box-swapping potential so beloved of some audiophiles is virtually limitless!

GRAND SCALE INTEGRATED

However, that’s not the way Marantz is thinking, for in replacing its classic SC-7 preamp and MA-9 monoblocks as the company’s reference offering it’s gone for an integrated amplifier in the form of the £6999 PM-10. It’s designed to partner the excellent SA-10 SACD player/DAC [*HFN* Mar ’17] and is the result of a claimed long and painstaking development process designed to ensure it really is a step up from the acclaimed 7 Series models.

So, the PM-10 flies in the face of convention when it comes to macho kit-rack appeal, in that it’s just the one box, not a matching stack of enclosures. This is high-end hi-fi almost anyone can understand, for the SA-10 looks just like a normal CD player, only bigger, while the PM-10 is just like any of Marantz’s integrations, right the way down to the entry-level PM6006 [*HFN* Sep ’16], only again on the grand scale.

RIGHT: A linear PSU feeds the HDAM-based balanced preamp [far right] while switchmode supplies [left] support the bridged Ncore Class D power amps from Hypex [centre, top]

Except it’s not *quite* like those one-box baby brothers, and again departs from the modern norm, in that this is a resolutely analogue-only amp.

In an age when just about every piece of hi-fi equipment, from micro systems to high-end preamps, is sprouting asynchronous USB inputs, LAN ports for streaming and stubby little rubber Wi-Fi/Bluetooth antennae, the PM-10 does no more than take analogue signals in and then punt them out again, only louder.

It’s not hard to see why, for although ‘needs must’ drives the fact that its junior amp models have DACs onboard, Marantz is no great fan of such an arrangement. In practice it prefers to keep things pure and simple by putting all the digital stuff in a partnering player, be it of the CD or the network kind. And when the digital trickery is of the standard found in the SA-10, with

its quad-DSD upsampling and ultra-simple ‘DAC-less’ output stage, it makes perfect sense for the partnering amplifier to leave all the number-crunching there, and concentrate entirely on the task in hand.

HEAVY METAL

So what we have here, as is made clear by the internal layout, is a preamplifier and a pair of monoblock power amplifiers slotted into one (admittedly pretty substantial) box. And while it shares the softly-rounded design that’s now seen across the company’s range this is still one solidly-built amplifier, from its heavyweight copper-plated chassis and thick aluminium ‘body panels’ to the substantial heatsinks within. Even the speaker terminals are solid copper, being a custom-made Marantz item designated SPKT-100+, rather than an off-the-shelf, bought-in part.





And the amplifier is very simple. Indeed, it's starkly obvious all the things this amp hasn't got, so forget app control, for the PM-10 doesn't even have tone controls. Instead you get a phono stage and four sets of line inputs, two sets of balanced inputs plus a direct power amp input (for use, for example, with an external surround processor), a single set of 'record' outputs, those substantial terminals for two sets of speakers or bi-wiring, and a headphone socket with dedicated amp.

Add in the usual Marantz D-BUS remote control loop-through and that's almost it, apart from what Marantz calls its 'Floating Control Bus

System', which enables multiple PM-10s to be used together under the control of one amp's volume adjustment, etc.

For the purposes of this review, though, I'm sticking to what the PM-10 can do as an 'ordinary' stereo amp, principally

'Yes, Marantz's PM-10 will do the "thunderamp is go" thing'

because it proves to be anything *but* ordinary as PM discovered for us on his lab bench [see p49 and boxout]. You see, thanks to its design, which uses a pair of Class D amp modules for each channel, the PM-10 delivers nearly three times its rated 200W! Surely this is the amplifier for which the term 'effortless' was coined.

As you can see from our 'top off' shot [facing page], what's going on inside

here isn't quite what you'd expect to find inside an amplifier like this – the largest board is the balanced preamp section, over to the right and toting the usual Marantz Hyper-Dynamic Amplifier Modules

(HDAMs). Meanwhile the power amp section is relatively compact, using a pair of bridged Hypex Ncore NC500 modules – one pushing, the other pulling – for each channel. Separate power supplies are used for each of the power amp channels

ABOVE: The 'porthole' display harks back to past Marantz models, and the total simplicity of the PM-10's fascia layout is indicative of its no-frills, purposeful internal design

and the preamp, with a fourth for the microprocessor that controls volume adjustment and input selection.

EFFORTLESS POWER

It's an unusual product, but as both PM's lab results and my listening sessions made clear, indisputably a highly successful one, while at the same time still paying homage to the fundamental design of the amplifier system it's been built to replace. This is much more than just another 'big integrated', and having spent some time using it with a couple of very accomplished speaker designs – my reference PMCs and the excellent Q Acoustics Concept 500 [HFN Jul '17] – I found my admiration for it growing almost with every track played.

Indeed, the Q Acoustics speakers were used for the Marantz 10 Series launch in Dec '16, and it's not hard to hear why. The amp and the speakers work exceptionally well together, and with the Marantz SA-10 also in harness, the result is a system much greater than the sum of its parts.

That the player and amplifier were conceived to work together is very clear, but whether using the SA-10 as the source or my usual Naim NDS/555 PS combination, the big, bold and yet beautifully controlled presentation of the Marantz amplifier was readily apparent. And while the majority of my listening was with digital sources, the PM-10 is equally impressive when playing LPs through its phono stage, with excellent warmth and generosity of sound, allied to fine detail delivery.

What's most striking about the PM-10 is the way it manages to present all the 'hi-fi things', including soundstaging, focus, detail and a seemingly limitless dynamic ➔

BUILDING BRIDGES

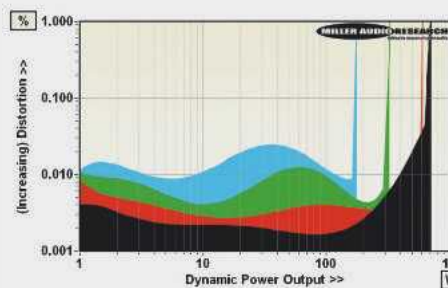
Looking at Marantz's promotional literature for the PM-10 amplifier, I rather suspect that the 200W/8ohm and 400W/4ohm specification was earmarked long before its engineers actually got to work on the design [see Lab Report, p49]. The PM-10's fully balanced preamp and bridged power amp may have been inspired by the MA-9 monoblocks from 2003, but its execution is very different. Inside the PM-10 a switchmode PSU feeds a pair of Hypex Ncore NC500 Class D amplifier modules per channel, one positive-going the other negative-going, in bridged form. This is a first for Marantz and it endows the PM-10 with distinctive qualities, separating it from previous models like the PM-KI Pearl and Pearl Lite [HFN Sep '09/'12], PM-15S2 [Dec '11], PM-11S3 [Feb '13] and PM-14 [Oct '15].

The bridged output confers a higher voltage to support 8/4ohm loads (where it delivers a massive 600W) but without a corresponding uplift in current, output drops into lower impedances. Most bridged Class D types suffer from a load-dependent frequency response (changing with your choice of speaker), but the inbuilt compensation on each Hypex Ncore module ensures a more consistent and predictable performance [see p36]. It's a sophisticated design, and 'clean' too, with far lower noise than most contemporary Class D amplifiers. PM

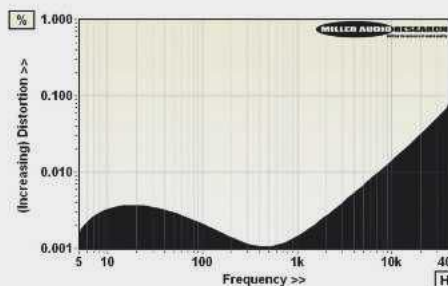
MARANTZ PM-10

I've already suggested that Marantz's 200W/8ohm and 400W/4ohm specification for the PM-10 is pretty meaningless – but it'll be fun to see the figures quoted parrot-fashion in almost every other review! In practice, the bridged Ncore NC500 Class D amps (rated by Hypex at 700W/4ohm in single channel guise) offer sufficient volts to maintain 625-610W from 8 down to 4ohm loads (not indefinitely) and 710-605W from 8 to 4ohm under *dynamic* conditions. Marantz would need a mighty PSU to maintain this into 2 and 1ohm [see the D'Agostino Progression Mono, *HFN* Jun '17] so the drop to 325W and 175W here simply reflects the 13.3A *current* limit [see Graph 1, below]. Still, the PM-10 is nothing short of highly capable and will drive any likely partnering speaker without raising a bead of sweat.

Moreover, its global feedback, extending beyond the low-pass filter network, delivers a flat 0.01-0.02ohm source impedance from 20Hz-20kHz and, unlike traditional bridged Class D amps, ensures the PM-10's response does not change with every change in loudspeaker (impedance). There is an inherent 'sweetening' high treble roll-off amounting to -0.7dB/20kHz (-5.8dB/100kHz) into 8ohm but this holds to 1ohm where a further filter pole at ~54kHz is revealed. Distortion is well managed too, staying within Marantz's 0.005% spec. at 0.0013-0.004% over the full rated 200W bandwidth, increasing thereafter to 0.006%/300W, 0.008%/400W and 0.02%/500W through the midband. THD (plus noise) increases at high frequency and is typically 10x higher at 20kHz [see Graph 2, below]. In more general terms the PM-10 offers a sensibly limited +33dB overall gain (balanced in) and a very wide – by typical Class D standards – 91dB A-wtd S/N ratio (re. 0dBW). PM



ABOVE: Dynamic power output vs. distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) loads. Max current is 13.3A at <1% THD



ABOVE: Distortion (and noise) versus extended frequency from 5Hz-40kHz at 10W/8ohm

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	625W / 610W
Dynamic power (<1% THD, 8/4/2/1ohm)	710W / 605W / 325W / 175W
Output impedance (20Hz-20kHz)	0.011-0.018ohm
Freq. resp. (20Hz-20kHz/100kHz)	-0.2dB to -0.6dB/-5.8dB
Input sensitivity (for 0dBW/200W)	64mV / 905mV (balanced)
A-wtd S/N ratio (re. 0dBW/200W)	91.0dB / 114.1dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.0012-0.032%
Power consumption (Idle/Rated o/p)	53W / 530W
Dimensions (WHD) / Weight	440x453x168mm / 21.5kg



ABOVE: Two balanced (XLR) ins are joined by three single-ended line ins, one MM phono and a tape (recorder) loop on RCAs. The 4mm speaker binding posts offer A/B stereo and bi-amp operation. Wired remote supports system integration

range, while at the same time indisputably having the 'boogie factor', and not just with obviously rhythm-driven music.

That said, it does play the rocky stuff to thrilling effect, as is clear right from the explosive opening of Blondie's *Pollinator* set [BMG 538263402; 88.2kHz/24-bit Qobuz download]. Yes, it helps that the album is clearly a triumph, right from the moment Clem Burke's drums cannon into action, but the way the PM-10 powers out those addictive hooks and Debbie Harry's still-delicious voice with clarity and real punch drags one straight into the music and won't let go.

TOTAL UNFLAPPABILITY

But then this amplifier has that ability with just about everything you choose to play through it. It's not just a matter of getting out of the way of the music and letting it communicate, but rather an assured handling of the signals passing through it that brings out all the magic of a great performance.

Play the glorious Budapest Festival Orchestra/Ivan Fischer recording of Mahler's Symphony No 3 [Channel Classics CCS SA 38817; DSD256] and the sense of the orchestra and the space in which it's playing is remarkable. Change scale to the more intimate live recording of Brahms's String Sextets by Renaud Capuçon *et al* from last year's Aix Easter Festival [Erato 9029588837; 96kHz/24-bit Qobuz download] and the atmosphere adds to the superb playing to striking effect.

Each instrument is clearly defined and placed with precision, but above all what this amplifier does is exercise all that control without any sense of the music being held in check. Instead it's allowed to

flow from the speakers, the power here being employed as much in delivering the speed, rhythmic acuity and 'microdynamic openness' of the music as effectively as shaking your sofa.

Yes, the PM-10 will do the 'thunderamp is go' thing when required, driving speakers cleanly to very silly levels indeed should that be required. But what's more impressive about it is the ease with which it goes about the 'sensible levels' job, always with that sense of having plenty in reserve, and a total unflappability. This isn't a smaller Marantz amp writ large, or even a high-end amplifier tamed.

Instead the PM-10 manages to combine extremely high levels of performance with all the docility and ease of use of one of the company's £500 mass-market models. There's no tweakery or precise set-up required to get the best out of this amplifier, but rather performance 'on tap' – all the hard work has been done for you. That may not appeal to those who prefer to fiddle and adjust before sitting down and listening to their music, but when was the last time you took a screwdriver to the carburettor before going out for a drive? ☺

HI-FI NEWS VERDICT

Moving from a separate preamp/power amp to a one-box solution for its reference model might seem like a retrograde step for Marantz, but the PM-10 offers an exceptionally high standard of performance in a luxurious, user-friendly package. Its massive power and clean, clear sound allies with a generous warmth to make a wide range of music captivating. It carries its serious clout lightly and uses it deftly.

Sound Quality: 88%

