

# Marantz SA-12SE/PM-12SE

This SE version of Marantz's former 'Japan only' SA-12/PM-12 player/amp combo borrows very heavily indeed from the costlier KI Ruby series, but saves £1000 into the bargain

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

So what do we have here? The new SA-12SE SACD/CD player and PM-12SE integrated amplifier, selling for £2999 apiece, are the latest in a long line of 'special edition' products from Marantz. Its family tree includes 'Original Special Edition' models, when other brands got in on the 'SE' thing, and the 'KI Signature' versions tuned by the company's late Brand Ambassador, Ken Ishiwata.

The formula is a familiar one: take products already in the company's catalogue – in this case a player and amp sold on the Japanese domestic market over the past couple of years – and apply to them some sound-enhancing tuning, along with premium pricing. It's a common misconception that all this started with the launch of the CD-63 KI Signature back in the mid-1990s, but in fact the idea predates that model by some margin.

Back in the early days of CD, the company found itself with large stocks of 14-bit players when some rivals were trumpeting their then-new 16-bit technology, and a decision was made to 'premium-ise' the players rather than sell them off at bargain prices. Some tuning was applied (along with a badge) and the rest, as they say, is history.

## BUILT FOR AUDIO

Fast-forward to the present, and there's an interesting conundrum. Within a few weeks of the launch of the '12SE models we have here, Marantz also announced its new '30 series. Not only do these have similar prices to the '12SEs and a similar specification, but an entirely refreshed 'look' [see p22].

There's an analogue-only integrated amplifier, like the PM-12SE, and an SACD/CD player with digital inputs, the SACD 30n, that builds on the SA-12SE's feature set with integrated network playback. An in-depth *HFN* review of those two

**RIGHT:** The SA-12SE's SACDM-3 transport plays SACDs, CDs, and CD/DVD-ROM discs. A toroidal transformer [left] feeds linear PSUs for all circuits, including digital upsampling, conversion and the HDAM-SA2 output [top right]

will follow in the fullness of time, but for now the main question is where the new SA-12SE and PM-12SE fit into the current Marantz lineup of products.

The obvious answer is that they're more affordable counterparts to the flagship SA-10 player and PM-10 amplifier [*HFN* Mar & Aug '17].

Those heavyweights sell for £6499 and £7499 respectively, though at the time of writing it wasn't too hard to slice £500 off each of those prices, while the 12 series models show more than a little of their range-topping technology trickling down to more sensible levels of the range.

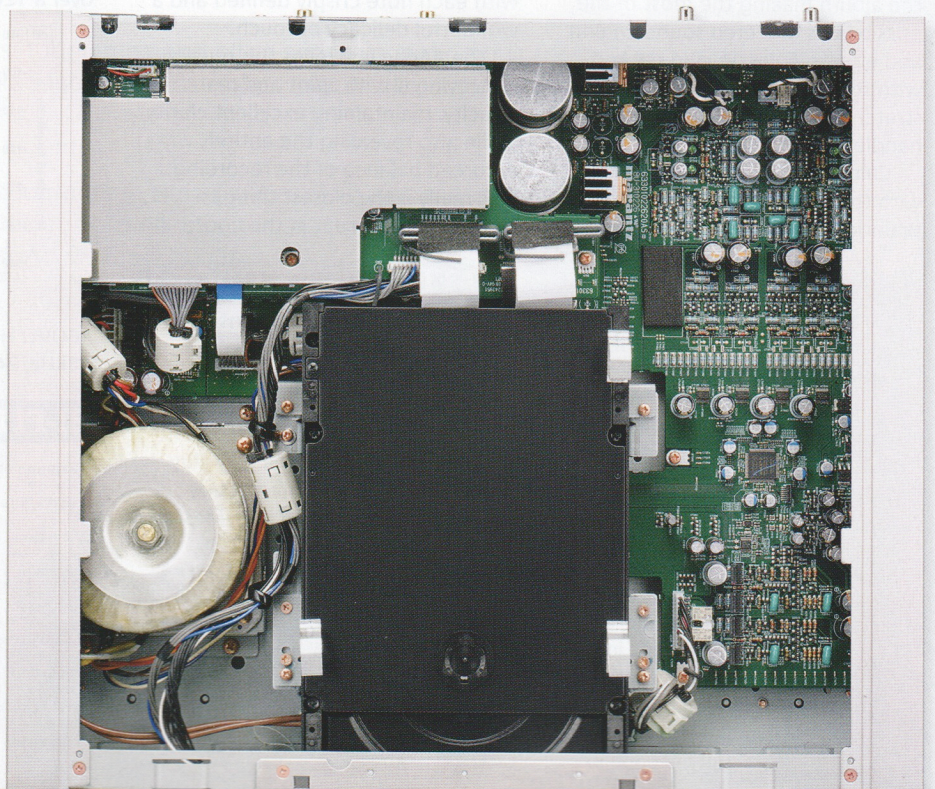
For example, the player employs a dedicated 'built for audio' disc mechanism – when many machines now use generic DVD-ROM transports – and also the Marantz Musical Mastering (MMM) digital

signal path, involving the upconversion of all digital signals to DSD.

## STAR FEATURE

The amplifier, meanwhile, uses a dedicated Marantz phono stage to provide for both MM and MC cartridges. And there's another twist, described thus in the promotional material for the 12SE: 'Our dedicated in-house Sound Masters occasionally identify products with higher potential than expected, then hone them into Special Edition models through extraordinary attention to detail... Drawing also upon achievements made while developing the acclaimed KI Ruby series, the Marantz Sound Master together with our European sound engineers have meticulously crafted the new 12 Series Special Editions.'

'Cosmetics  
aside, the 12SEs  
might each pass  
for a KI Ruby'





Now while I can see all that, comparing the products here with the KI Ruby designs [HFN Jan '19], launched a couple of years back, it's hard not to think that 'drawing on' them might well have involved the use of a photocopier. To put it charitably, there are more similarities than differences between the two series, both externally and internally, and with copper plating of the chassis, an engraved signature and an ersatz gemstone inserted, the '12SEs could easily pass for the KI Ruby models...

PM's lab work [p57] also highlights the similarities in measured performance, although this could be to some extent attributed to the use of the same Hypex Class D power amp modules in both series' integrated amplifier [see PM's boxout, below]. However, the good news is in the

pricing, for the SA-12SE and PM-12SE are each £500 less than the KI Ruby models. While that SACDM-3 transport (also able to play compilations on CD- or DVD-ROM) is definitely a star feature of the SA-12SE, the heart of the player are the 'MMM-Stream' and 'MMM-Conversion' systems.

#### HYPEX HALLMARK

All LPCM inputs are handled as LPCM – with a choice of two digital filters – but the final act of conversion sees everything upsampled to a very high-rate DSD bitstream before low-pass filtering reveals the analogue waveform. Digital inputs up to 384kHz/32-bit and DSD256/11.2MHz are accommodated while, downstream of the digital chain,

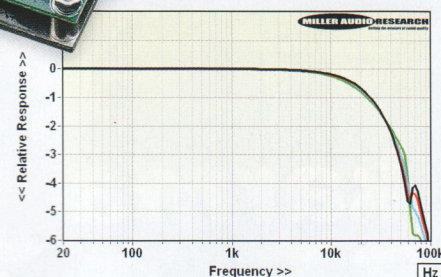
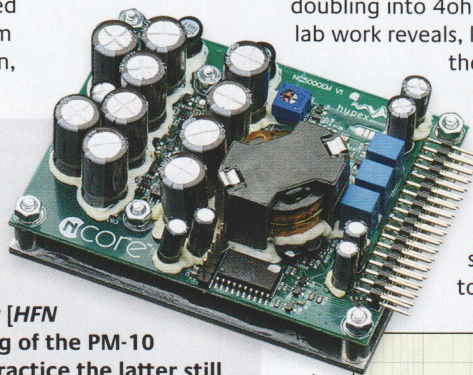
**ABOVE:** SA-12SE [top] hosts standard track access controls while the PM-12SE [below] has volume and input selection. Both include extras that are enabled by the IR remote [see p57]

the player uses Marantz Hyper-Dynamic Amplifier Modules, or HDAMs, here in SA2 and SA3 versions. This includes the player's dedicated headphone amplifier that employs Marantz's HDAM-SA2 op-amps.

HDAMs also feature in the preamp stage of the PM-12SE amplifier, along with the Hypex Class D amplifier technology now becoming a hallmark of all the company's upmarket designs. Here it's specified as delivering 100W/8ohm, doubling into 4ohm – although as PM's lab work reveals, like the PM-KI Ruby and the PM-10, it comfortably exceeds this conservative specification. Separate power supplies right the way back to the transformer are used for the pre and power stages, with a dedicated toroidal for the preamp →

#### THE CLASS D CORE

Marantz's adoption of the Ncore power amp modules and switchmode PSU now extends across three seasons of its products, the association with technology brand Hypex beginning with the PM-10 [HFN Aug '17]. Bridged pairs of NC500 modules were employed in the high-specification PM-10, trimmed down to single modules in the PM-KI Ruby [HFN Jan '19] and the PM-12SE here. However, while 200W rating of the PM-10 was halved to 100W/8ohm for the 'Ruby and PM-12SE in practice the latter still achieves close to double this figure [see Lab Report, p57]. Class D also brings with it very high efficiency – the PM-12SE drawing just 255W from the wall when delivering 2x100W/8ohm. Furthermore, while less sophisticated H-bridge Class D amplifiers suffer from a load-dependent frequency response (changing with your choice of speaker), the single-ended 'global feedback' Hypex modules ensure a more consistent and predictable performance [see right for responses into 8, 4, 2 and 1ohm – black, red, blue and green traces, respectively]. PM





**ABOVE:** Marantz's MMP phono stage and HDAM-SA3 preamp section occupies a full third of the amplifier [right] while a small toroidal transformer [centre] feeds both linear [bottom] and switchmode PSUs [top left], the latter for the pair of Hypex power amp modules [top centre]

and a switchmode supply for the Hypex power amp. In addition to that Marantz Musical Premium Phono EQ system, the amp has four line-ins including two tape loops, and direct power amp input sockets.

Furthermore, the amplifier can be reconfigured into 'bi-amp' mode, in which case the same mono input is output from both left and right channels. Used in what Marantz calls 'Floating Control Bus System' mode, up to four PM-12SEs can be connected together to power suitable loudspeakers. A headphone output is also provided, as are 'hidden' tone/trim (balance) controls. The latter are accessed via the 'Sound Mode' button on the remote handset supplied with both units, while a filter button allows the user to switch between the two digital filter options that are available on the SA-12SE SACD player.

### GUTS 'N' GRIP

If all of the above has you thinking the SA-12SE/PM-12SE combination might sound just the teensiest bit like its KI Ruby counterparts, you wouldn't be wrong. Indeed, what this pairing delivers is very much the 'Marantz sound', complete with its focus on the music, imaging and performance – in other words, a highly

involving presentation – along with the power and control to drive even demanding loudspeakers.

While the balance is warm and rich, this isn't achieved at the expense of the openness of the midband or treble, meaning that while mainstream recordings with a rather brash edge are flattered almost to the point of listenability, the way this combination handles a good mastering job can prove extremely captivating.

What's more, the effect of the Marantz Musical Mastering chain within the player, allied to the guts and grip of the amp, goes a long way to closing the gap between music played on CD or in PCM through the digital outputs and the same content in DSD, either from a computer or straight off a disc. If the Filter 1 setting is a little too smooth for you, you can perk things up a little with the Filter 2 option, which I found helped a bit with dense orchestral recordings such as the classic du Pré/Barbirolli Elgar Cello Concerto [EMI CDC 7 47329 2], opening up the internal detail of the LSO and focusing the soloist rather better.

The same goes for Pink Floyd's 'Shine On You Crazy Diamond' [*Wish You Were Here*; EMI 7243 5 29071 2 0], with the somewhat shut-in later part of the piece

*'Drums benefit from the big, rich punch of the Marantz 12SEs'*

## RAINER FINCK

During the course of our exclusive review, editor PM spoke with Rainer Finck, Marantz's Senior Acoustics Engineer (Europe) and the man responsible for implementing Hypex's Class D technology in its recent series of amplifiers. 'It took us several years to find a good quality Class D module that met Marantz's audio standards', recalls Rainer. 'Our solution, developed in cooperation with Hypex, was first introduced in the PM10 amplifier.'

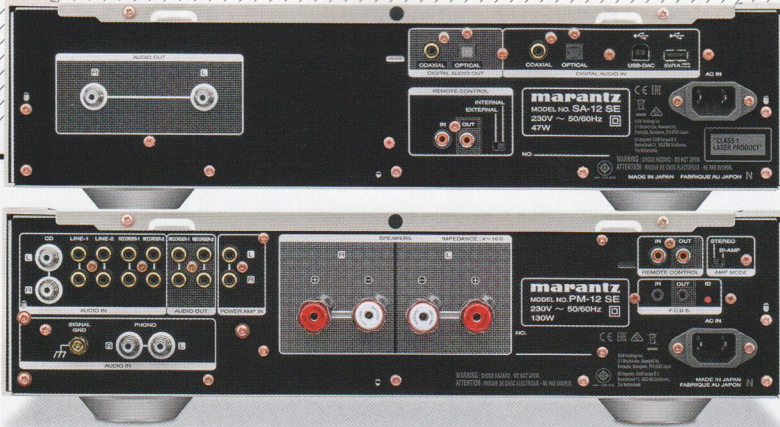
Marantz is not alone in choosing a Hypex, nCore or even the very new Eigentakt Class D module [see NAD M33, *HFN* Aug '20] – all from the pen of Bruno Putzeys – but every brand has its 'twist'. 'The key to retaining the "Marantz sound" while using Class D', reveals Rainer, 'lies in how the Hypex modules are driven. Engineering the ideal analogue predriver/preamp stage and power supply is fundamental'. And what of the latest Eigentakt modules? 'We are always looking for ways to improve the performance of our products further, so we continuously evaluate all kinds of new solutions available on the market.'

Marantz is on something of a roll with new players and amplifiers, having just announced a 30 series [News, p22]. 'Yes, while the 10 and 12SE are our reference series the 30 range is the beginning of a new area for our core products. There's a lot of trickledown from the 10 series and KI Ruby separates here, and this new design will be used to replace our 8000 series, 7000 series, and so on, over the next few years.'



# LAB REPORT

## MARANTZ SA-12SE/PM-12SE



**ABOVE:** SACD player/DAC [top] has optical/coaxial and USB-B/USB-A digital inputs plus optical/coax digital outs and analogue outs on RCAs. Amp [below] has MM/MMC plus three line ins, two tape loops, a power amp in and 4mm speaker binding posts

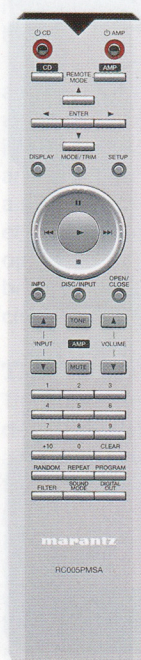
gaining a bit more sparkle with the Filter 2 setting. The drums benefit from the big, rich punch of the Marantz pairing, and the soundstaging is opened up a bit. And the same track played from LP, albeit with a modest Rega record-playing front end, showed just how substantial, and yet fluid, that in-house phono stage sounds.

That held true with one of my favourite vinyl recordings, Britten's *Peter Grimes* [Decca SXL 2150-2]. While a little noisy from repeated playing, the full-blooded sound from the three-disc box set put up a pretty strong showing via the phono stage, even against the much later 96kHz/24-bit digital release.

### DEFT TOUCH

The beauty of the 'Marantz sound' – and this is as true when you slot the amp or player into another system as it is when the two are used together – is that it manages to deliver so much of what's on the recording without ever sounding forced, processed or artificial. Yes, there undeniably is a Marantz sound, perhaps most noticeable in that generous, warm, speaker-flattering bass but also in the rendition of detail across the entire frequency range. It's all about control and restraint, both

**LEFT:** System remote control governs both '12SE components, providing access to 'extras' including set-up, digital filters, tone controls, etc



in the player and amp themselves and the way the latter grips and drives loudspeakers. But all this is achieved without giving the listener any overt signs of what's going on. Instead, the focus is always on the music, and the sense that more of the recording is being revealed.

Whether it's a clever sleight of hand, or just an awareness of how many listeners want their music to sound – that mixture of 'artists in the room' and a sense of massive power delivered with a deft touch – it's hard not to argue that Marantz has got this presentation down to a fine art. While both the SA-12SE and PM-12SE are some way above the mass market, and well into that territory where consumers might be thinking of more esoteric brands, and maybe even of separate DACs or pre/power amplifiers, there's no denying that these new arrivals are fuss-free and easy to use.

Furthermore, they look the business in their choice of black or 'silver gold', and are very unlikely to leave their buyers feeling shortchanged. In other words, they're very typically Marantz, and none the worse for that.

### HI-FI NEWS VERDICT

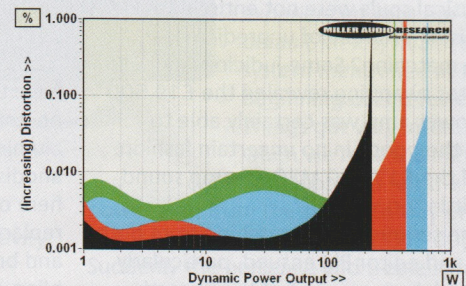
Tried and tested components, plus the familiar sound quality: this may not be the most adventurous move Marantz has made in its near-70-year history, but there's nothing wrong in giving the customer what you think they want. And with their rich yet detailed presentation, effortless musicality and beautiful build quality, these Series 12 Special Edition models remain a very attractive buy.

Sound Quality: 85%

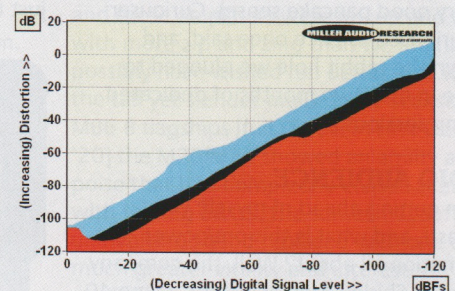


Employing the same Ncore NC500 Class D amp module as the PM-KI Ruby [*HFN* Jan '19], the PM-12SE shares a very similar but marginally superior performance, offering slightly higher power, lower distortion (0.0008% vs. 0.0015% re. 1kHz/10W) and an improved A-wtd S/N ratio (80.7dB vs. 79.6dB re. 0dBW). Once again, the modest 100/200W 8/4ohm rating is exceeded to the tune of 190W/310W, with 228W, 433W, 645W and 355W achieved under dynamic conditions into 8, 4, 2 and 1ohm loads [see Graph 1, below]. As we've seen before, the Class D module's reactive filter network still causes both an increase in output impedance and distortion at very high frequencies (to 0.035%/20kHz/10W) but the response remains unaffected by loading and is almost identical to that of the PM-KI Ruby [see boxout, p53], reaching out to -0.65dB/20kHz and -7.1dB/100kHz.

Marantz's partnering SA-12SE player offers a 2.0V analogue output (2.5V with SACD) coupled with a healthy 107dB A-wtd S/N ratio and distortion that's just 0.0002-0.0003% (20Hz-20kHz) with Filter 1 [see Graph 2] and fractionally higher at 0.0005% with Filter 2, a corrected-phase 'fast' type. The response (and stopband rejection) depends on your choice of digital filter: 'Filter 1' is a linear phase, slow roll-off type that trades minimal pre/post ringing against a mere 4.1dB image rejection and a roll-off of -4.9dB/20kHz (CD), -7.3dB/45kHz (96kHz files) and -14dB/90kHz (192kHz files). 'Filter 2' has a flatter response trend reaching out to -1.45dB/20kHz, -4.9dB/45kHz and -20dB/90kHz. SACD/DSD64 media stretch out to -0.7dB/20kHz, -3.0dB/50kHz and -13dB/100kHz. Jitter is low with 24-bit LPCM inputs at 55psec, and just 35psec with SACD/DSD64. **PM**



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 18.8A



**ABOVE:** Distortion versus digital signal level at 1kHz (S/PDIF & USB, red; CD, black) and 20kHz (CD, blue)

### HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	190W / 310W
Dynamic power (<1% THD, 8/4/2/1ohm)	228W / 433W / 645W / 355W
Amp freq. resp. (20Hz-20kHz/100kHz)	+0.0 to -0.65dB/-7.1dB
CD freq. resp. (20Hz-20kHz, Filter 1/2)	+0.0 to -4.85dB/-1.45dB
Digital jitter (CD / USB / SACD)	126psec / 55psec / 39psec
A-wtd S/N ratio (Player/Amp)	107.0dB (0dBFS) / 80.7dB (0dBW)
Distortion (20Hz-20kHz; Player/Amp)	0.0002-0.0003%/0.0009-0.035%
Power consumption (Player/Amp)	28W / 256W (38W idle)
Dimensions (WHD, Player/Amp)	440x123x419/453mm