

hi-fi news

THE HOME OF REAL HI-FI

& Record Review

Exclusive

MICHI MAGIC

**Rotel's star '90s
amps rebooted
& supercharged**

BAT REX 3 DAC

Artisan blend of
custom digital tech
and luxurious tubes

**18
PAGES**
of Music
Reviews &
Features



SIMON & GARFUNKEL
BRIDGE OVER TROUBLED WATER

Primare R35
Flagship phono stage
is an analogue triumph

INVESTIGATION

Classical Cannons

We recommend the best recordings
for the classical music buff

SVS Prime Pinnacle

Floorstanders from the bass kings

Vertere DG-1
'Entry' deck gets into the groove



• **OPINION** 12 pages of letters & commentary • **VINYL RE-RELEASE** Gong's *Camembert Electrique* LP

• **FROM THE VAULT** Wadia 16 CD Player • **VINTAGE REVIEW** Back to the '70s with JVC's JA-S11 amp

• **SHOW BLOG** We report from the Bristol Hi-Fi Show • **READERS' CLASSIFIEDS** Hi-Fi bargains galore

UK £5.25 US \$13.00 Aus \$13.50



9 771472 256257

05

Rotel Michi P5/S5

A sleek new look heralds the return of Rotel's premier sub-brand, and its new control amplifier – or preamp – and stereo power amp have the wherewithal to succeed
 Review: **Andrew Everard** Lab: **Paul Miller**

Michi is back: last marketed in the 1990s, Rotel's elite sub-brand has rejoined the hi-fi fray after a three-year development project, and the establishment of a dedicated facility within the company's factory to hand-build the new products. And I have to admit to a pang of nostalgia for I reviewed the company's RHCD-10 player, slimline RHA-10 preamp and substantial RHB-10 power amp back in the dim and distant, and it was a case of lust at first listen, not to mention sight of the high-quality metalwork with its red-lacquered wooden side-cheeks [see boxout, p37].

Given how high the brand was riding at the time, with class-leading CD players and amplification, that meant the Michi line was, to these ears, very good indeed, and I'd convinced myself that if I ever had the money, I'd have a set in a heartbeat. And then Michi was gone, and we were back to best basic black Rotels. But it seems I wasn't alone in my affection for the range. To my eyes the styling hasn't dated, unlike so many designs of the time, and the fact that the original components are relatively scarce on the usual used platforms suggests those who bought into the range are hanging on to them.

ROTEL REVIVAL

Now, however, the brand has been revived under the auspices of Bowers & Wilkins, but Rotel remains a family-owned project. The initial offering, seen here, comprises the £3299 P5 'control amplifier' – or preamp – and 500W-rated S5 stereo power amp at £5399. There's also an exceptionally powerful M8 monoblock power amp, rated at 1080W/8ohm and 1800W/4ohm, and also selling for £5399. Except, of course, you'll need two for stereo.

These are all very much Michi products, but not 'Rotel Michi' for the M-word is the

only branding you'll find on the gloss black fascias. And the styling is a very long way from the 'cooking' products coming out of the company's own purpose-built factory, on which production has concentrated for at least the past couple of decades.

Indeed, I'm tempted to suggest that the look isn't a million miles from that of the products of Canadian company Classé, which was part of the B&W fold until being adopted as part of the Sound United portfolio. I'm not suggesting there's any connection, but the simple fascia design with large displays and rounded edges subscribes to the same aesthetic – it's purposeful, and undeniably clean.

I first heard the new Michi products in action during the 2019 High End show in Munich, where B&W had the Michi amps

driving its own 800 D3 speakers (we used the same, of course). Given the fact the demo was held in a huge penthouse with a high background level of conversation, what I heard was nonetheless sufficient to pique my interest. Not that I needed much

piquing given my past affection for the Michi brand [see boxout, p37].

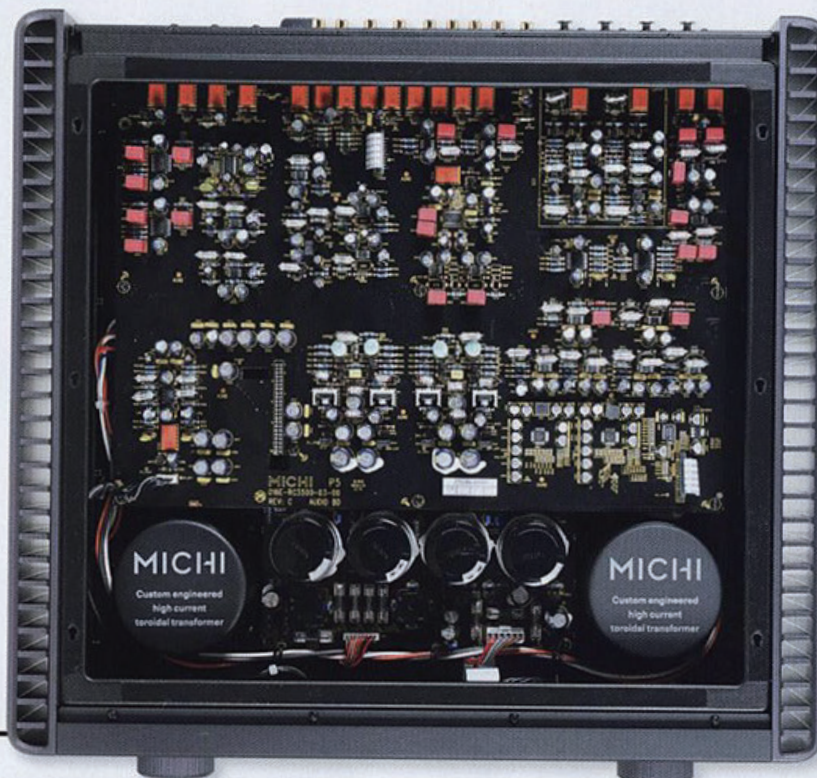
'The S5 is simpler, but tips the scales at just under 60kg'

FULLY FEATURED

So, what do we have here, now that the new Michis have landed? Well, the P5 is a very long way from

those slender preamps of the past, both in looks and facilities. This is a full-featured preamp, designed to form the hub of a modern system, with both analogue and digital inputs, and the 'custom install' features to allow it to be integrated into a complete remote system.

RIGHT: The P5 has two toroidal transformers and 17 regulated supplies [bottom and centre] feeding an AKM DAC-based digital section [far right], MM/MC phono stage [top right] and Class A balanced preamp output [top left]





For analogue sources, the P5 has two sets of balanced inputs, four line-ins on RCAs, and a switchable MM/MC phono stage. There's also one line out, two mono subwoofer outputs (which each output a summed signal from both channels), and a front-panel headphone output.

The digital provision is also generous. In addition to three optical and three coaxial digital inputs, the P5 has a USB-B port for connection to a computer, plus Bluetooth. A network port is also provided, but this is for control over IP and firmware updates, not network audio streaming, while the USB-A socket is only there to power external devices, and has no audio input capability. Other control options extend to a socket for a remote infrared sensor, 12V triggering, and serial RS232. Digital outputs are also provided on both optical and coaxial sockets.

The extensive menu system allows tone control configuration, or bypass, the setting of a fixed level on any input, and the renaming of those inputs. In addition, unused inputs can be turned off. MM/MC phono selection is also buried in these menus, which can be accessed from the front panel or via the slender metal-clad remote handset [see pic, p41].

'VELVET SOUND' DACS

Under the hood the P5 uses a pair of AKM DACs, allowing it to handle content up to 384kHz/32-bit, with DSD, DoP and MQA support via the USB-B connection. The analogue preamp section operates in Class A, the whole enterprise being powered by 17 regulated supplies hung off a pair of toroidal transformers. As

ABOVE: Preamp front panel is simple and clean – source and volume selectors dominate, along with its large, crisp display. Headphone socket is below volume knob, on/standby below display

is the way with Rotel, these transformers are custom-wound in-house in the company's Zuhai factory, and are both potted and placed right at the front of the P5, well away from the audio circuitry.

The S5 power amplifier is, of course, a much simpler animal, if a rather substantial one, standing as it does almost 24cm tall and tipping the scales at a whisker under 60kg. Inputs are provided on both balanced XLRs and RCA sockets, selected by a switch, and there are two sets of solid,

rhodium-plated speaker terminals per channel. If you so desire, the S5's front panel can also show a VU meter, or a choice of three frequency spectrum analyser displays. Thank heavens for the 'display off' option!

The power amp again uses in-house transformers – two 2.2kVA units, feeding a bank of British-made capacitors totalling 188,000µF. The dual-mono Class AB design is of a symmetrical layout, with the two channels in separate fan-cooled housings, and packing a total of 32 high-current output devices. The fan speed is controlled according to the temperature inside the amp

– despite this cooling the S5 can still run warm when working hard, and needs plenty of breathing space.

THE MODEST MAMMOTH

Although relatively modest – at least by the standards of some of the behemoth amplification we've had through PM's listening room in recent months – the Michi combination swiftly sets out its stall once in action. Driving the flagship B&W 800 D3 floorstanders [HFN Oct '16] which, while excellent, are a pretty demanding load and

MICHİ MILESTONES

Launched at the beginning of the '90s, the Michi range – taking its name from the Japanese word for 'direction' – was an attempt to move the Rotel brand into the high-end. This was a status the company had already hinted at with models such as the RC-5000 preamp and RB-5000 of the late 1970s – models that stated on their front panel 'The CONTROL amp' and 'The POWER amp'. In the style of the time, these '5000 models looked very 'technical': the preamp was a fiesta of knobs, flip-switches and sliders – not least thanks to the provision of a ten-fader Octave Equaliser – while the power amp had both VU meters and peak level LEDs, and another battery of switches.

The Michi lineup was a complete change, being subtle in its industrial styling, with a minimum of controls and not a sniff of VU meters. The lacquered side panels emphasised the use of traditional Japanese craftsmanship, with the RHC-10 passive control amp in particular being a masterpiece of simplicity. And the sense of artisanship went even further, each of the three initial models having not just a number, but a name [see inset picture]. Thus the RHC-10 was also known as Takumi (or craftsmanship), the RHQ-10 phono preamp Shih (poetry), and the RHB-10 dual mono power amp, delivering 200W/8ohm, Kokoro (heart).

The Michi range expanded from that initial core in the following years, with the additional models varying between markets. An active preamplifier, the RHA-10, joined the lineup, as did an RHT-10 FM tuner, and there was also a truly huge CD player, the RHCD-10, and a second power amp, the RB-05.



Rotel's definitive statement of a yet higher order of musical performance – the evolution of Rotel's balanced design philosophy.



ABOVE: Front panel of the S5 power amplifier is as understated as that of the preamp – well, except for the prominent display, which can be switched between VU meters and a choice of 'Frequency Spectrum Analyser' readouts, with 8, 12 or 16 bands. Fortunately, it can also be turned off...

don't suffer foolish partnering equipment gladly, the P5/S5 quickly established itself as being able to exert plenty of control while delivering an open, captivating sound.

With sources including our usual dCS

Vivaldi One [HFN Feb '18] and a direct connection from the Melco N1ZS20/2's [HFN Jun '17] USB out into the P5's USB-B input, the Michi sound revealed itself to be not the last word in detail, but at the same time mercifully free from the kind of sting and forwardness some find untenable in ultra-high-end systems. If you're the kind of listener who finds you're reaching too often for the 'brash' and 'abrasive' pages of the hi-fi description lexicon, you're going to be in a much more comfortable place here.

SCOPE AND SCALE

That's not to say the Michi P5/S5 sounds soft or overlush – instead, they deliver a full-blooded, holistic sound in which it seems the hi-fi bag of tricks is put aside, and the music moved up to centre stage

for enjoyment. Which, of course, is just as it should be. Take the audio assault course that is ELP's 'Karn Evil No. 9' [from *Brain Salad Surgery*; Razor & Tie, 96kHz/24-bit] as an example, for here the amplifiers

immediately reveal a sound that's big and bold, with both striking bass extension and speed across the frequency range. This remastered version sounds a lot better than the original, which can be all top and bottom, and via

'These Michi amps simply sweep the listener along'

these P5/S5 amplifiers there's a very good balance of attack and substance.

Perhaps there's not quite the analytical revelation of every thread you'd get with a more overt amplifier, but given the scale of sound being created (by just three musicians, remember) the system does an excellent job of drawing the listener in to the music, and powering it along to exciting effect. Carl Palmer's characteristic 'eleven-tenths' percussion is especially well-handled, feeling taut and full of impact.

With less processed recordings, this natural, generous balance is even more toothsome. The burst of brass opening 'Blowin' The Blues', from Kyle Eastwood's *Time Pieces* set [Jazz Village JV] ➔

LEFT: The S5 is dual-mono right from the 2.2kVA epoxy resin-filled transformers and two UK-sourced PSU reservoir caps (47,000µF each) per channel. Each Class A/B output stage has eight pairs of high-current power transistors on a fan-assisted heat pipe



DAREN ORTH

Interviewing Rotel's CTO, Daren Orth, during the course of this review, the first question was clear – why Michi, and why now? 'The original Rotel Michi series was launched in the mid '90s and was mainly aimed at the home (Japanese) market despite quickly achieving a global reputation', says Daren. 'Twenty-five years later we felt there was nothing of this quality currently in the market, so we embarked on a three-year project to develop a series of completely new and dedicated electronic designs that combine superlative performance with real overall value.'

The parent brand, Rotel, is no slouch when it comes to value-oriented engineering, so how is Michi different from Rotel? 'It would have been easy to simply build a bigger, better Rotel', says Daren, 'however, this would not have been true to the heritage of those original Michi products'. In practice, Rotel's engineers returned to the archives to gain an insight into those 1990s designs before re-imagining them through the lens of modern power supply, digital processing, audiophile component and PCB layout technologies. So where does it go from here?

'The current Michi products are only the beginning – our engineering teams are actively engaged in extending this platform and new models are scheduled for launch later this year. Michi will also extend to digital sources and other options but we don't currently have firm timings on a launch for those products.' Watch this space!

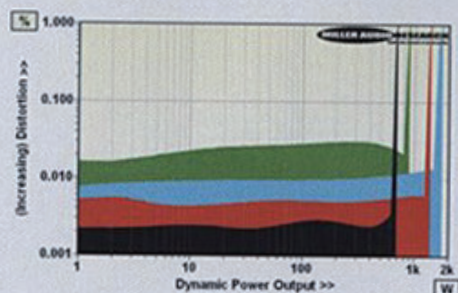


LAB REPORT

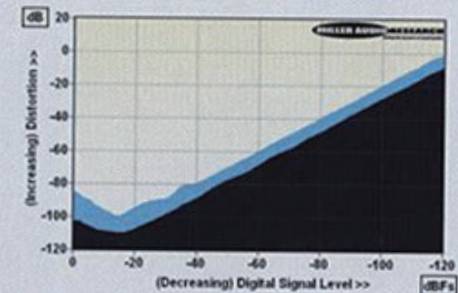
ROTEL MICHİ PS/S5

The exceedingly powerful and yet 'gentle' sound of the S5 power amp is fully explained by the measurements. The 2x500W/8ohm and 2x800W/4ohm spec. is very conservative as the S5 actually delivers 2x670W/8ohm and 2x1.17kW/4ohm with 691W, 1.39kW and 1.78kW achieved under dynamic conditions into 8, 4 and 2ohm. A 30A current limit gives a dynamic output of 902W/1ohm [see Graph 1]. THD climbs slightly with output, from 0.0015% at 1W to 0.002% at 10W, 0.0027% at 100W and 0.0037% at the rated 500W/8ohm (all at 1kHz). Distortion also climbs at HF, from 0.0003% at 20Hz to 0.002% at 1kHz and 0.016% at 20kHz (all 10W/8ohm) and noise is quite low, yielding a healthy 93dB A-wtd S/N ratio (re. 0dBW). But the response is not flat, shelving down above 5kHz to reach -0.4dB/10kHz, -0.65dB/20kHz and -1.0dB/100kHz. This trend is magnified into lower loads, reaching -0.5dB/10kHz, -0.9dB/20kHz and -2.3dB/100kHz into 2ohm.

The P5 preamp offers a maximum 22.6V balanced output, clipping at vol '90' with a peak level digital input. Tested at a 6V (vol '72') the P5 offers a modest 106dB A-wtd S/N ratio, minimal ± 0.1 dB error in linearity over a 100dB range and very low THD – between 0.0002-0.0006% through the midrange over the top 30dB of its dynamic range, increasing to 0.001-0.006% at 20kHz [see Graph 2]. Alias rejection is merely 'average' at 69dB because Rotel has elected for the minimum phase/steep roll-off digital filter option of the AK4490EQ DAC – the impulse test showing no pre-ringing but extended post-ringing. Responses extend out to -0.2dB/20kHz, -1.3dB/45kHz and -3.9dB/90kHz with 48kHz, 96kHz and 192kHz media while its source impedance increases from 120ohm and high/mid freq. to 375ohm/20Hz (bass). PM



ABOVE: S5 Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 30.0A

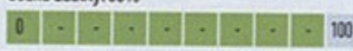


ABOVE: P5 Distortion versus 24-bit digital signal level over a 120dB range (1kHz, black; 20kHz, blue)

HI-FI NEWS VERDICT

Oh, Michi, you're so fine: this new amplifier combination brings a welcome breath of weight, scale and entirely natural music-making to an overpopulated high-end arena, displaying a wide-ranging ability across a broad spectrum of genres. Some may wish for more attack and overt slam, and for every detail unearthed, but Michi is all about the emotion and spirit of the music, delivered on an entirely human scale.

Sound Quality: 88%



HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	670W / 1170W
Dynamic power (<1% THD, 8/4/2/1ohm)	691W / 1.39kW / 1.78kW / 902W
Output imp. (20Hz-20kHz, Pre/Amp)	121-375ohm / 0.016-0.075ohm
Freq. resp. (20Hz-20kHz/100kHz)	-0.23 to -0.63dB/-1.05dB
Digital jitter (USB / S/PDIF)	350psec / 370psec
A-wtd S/N ratio (DAC/Amp)	106.1dB (0dBFS) / 92.8dB (0dBW)
Distortion (DAC, 0dBFS/Amp, 0dBW)	0.0006-0.006% / 0.0003-0.016%
Power consump. (Pre/Amp at rated)	28W / 1.65kW (143W idle)
Dimensions (WHD, each unit)	485x238x465mm / 60kg (total)

ABOVE: The P5 preamp [top] offers MM/MC phono and six line ins (two balanced on XLR), a fixed line out, two sub outs, four preamp outs (two on XLR). Digital ins include six S/PDIF (three coax/three optical), USB-B and wireless BT. Network port is for control only and USB-A for charging. The S5 power amp has balanced (XLR) and RCA ins, trigger connections and two sets of substantial 4mm speaker cable binding posts

570034; 44.1kHz/24-bit] is a real wake-up in its immediacy, and as the track develops it's easy to relish every element, from Eastwood's propulsive bass-line to the stabs of piano and powerful drumming. The sound is bright, breezy and bracing, yet underpinned with weight and substance and, as my listening progressed, so grew my appreciation of the way this pre/power amplifier combination presents music.

LIGHT AND SHADE

Playing the sparky, darting recording of Mozart's overture for *La Nozze di Figaro* [Linn CKD 460; 192kHz/24-bit], and the Michi P5/S5 delivers a rich, ripe sound, yet one with the agility and detail to convey the exuberance of both score and performance. There's no shortage of dynamic extension here, making clear both the light and shade of the orchestra and the playful writing.

Yes, some intimate recordings can sound a little more distant than they might through more forward amps – for example the vocals on Lake Street Dive's 'Better Than' [Bad Self

LEFT: Rotel's elegant Michi remote offers input select and volume plus access to the display and menu options

