

Rotel RA-1592

The latest 'big integrated' from Japanese hi-fi specialist Rotel promises both a comprehensive feature set and serious value, but does it live up to our expectations?

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

Unboxing the new Rotel RA-1592 it was hard not to leap to a couple of early conclusions. First, this is one big bruiser of an integrated amplifier, and a long way from the slimline RA-10/11/12 models which are the spiritual successors to the amps responsible for building the company's reputation some decades back. Second is that, while this amp may appear to come from the same class as, say, the larger Arcam integrations – in that the amp is physically large and capable of huge output power – the design philosophy is very different.

INTRIGUING PROPOSITION

Selling for £1899, the RA-1592 is no stripped-down minimalist design in the traditional audiophile mould, for while Arcam's A39 and A49 are purely analogue designs, the Rotel comes 'fully-loaded' with just about every input – both analogue and digital – that you could imagine. That it also sells for half the price of the A49, yet offers a similar output, makes it an intriguing proposition. And the value for money thing isn't just about how it stacks up against the opposition.

Indeed, Rotel itself says that the RA-1592 essentially combines the RC-1590 preamp (£1395) and RB-1582 mkII stereo power amp (£1195), and if it lives up to that billing then its price is generous, representing as it does a handy saving of almost £700.

Haul the Rotel's 17kg bulk out of the box and onto the rack, and it's clear that, while the amp is big, it's not quite a leviathan, as it occupies a pretty standard hi-fi footprint, and stands 140mm tall. Think modest AV receiver, and you're just about there, and the RA-1592 has almost as many options as one of those surround-sound devices. There are three line-ins on RCA phono sockets and a single set of balanced XLR inputs, along with a

MM phono stage. Outputs run to two sets of decent combination terminals clad in transparent screw-downs; pre-outs should you feel the need for more power; and two mono subwoofer outputs.

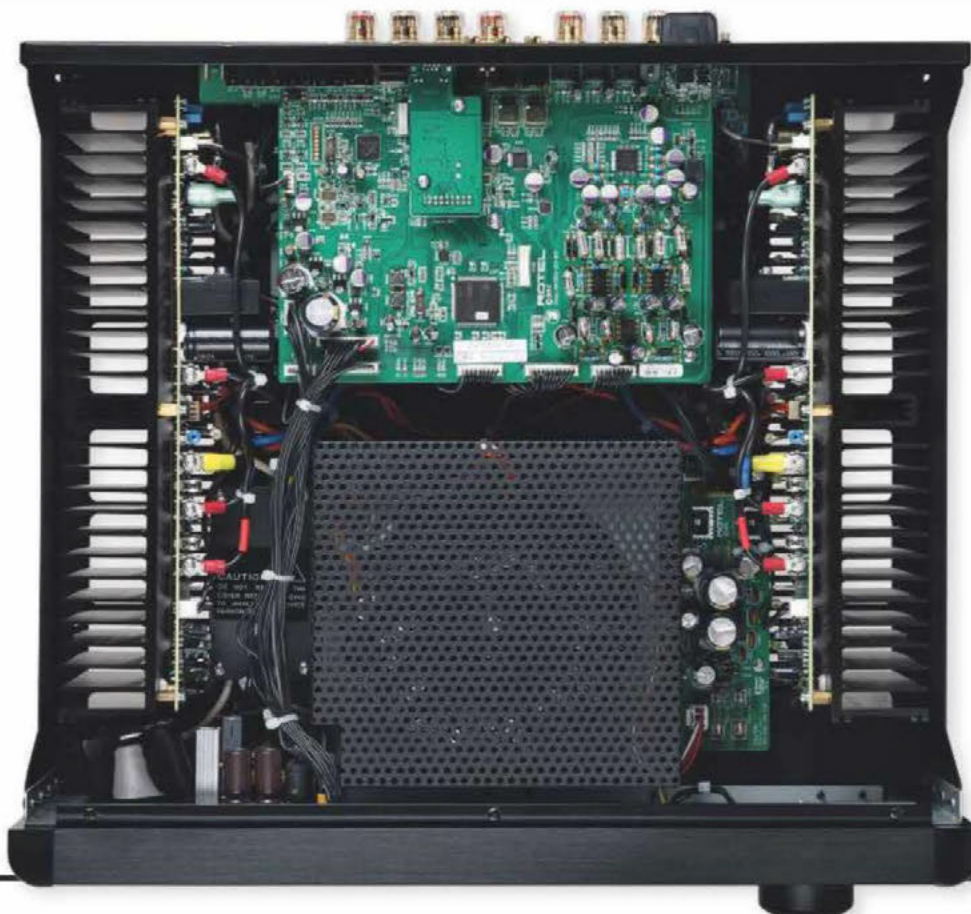
So far, so pretty standard, but then we come to the range of digital inputs where the RA-1592 shows its flexibility with three optical and three coaxial sockets, asynchronous USB, and built-in Bluetooth with aptX. There's even a front-panel USB Type A socket for your iOS or Android device, or indeed simpler USB storage solutions. But if you're getting all excited about that RJ45 socket on the back marked 'Network', hold your horses: it's there for control and firmware updates, not to stream music from your computer or NAS drive or whatever [see Investigation, p24]. In fact, that network connectivity is part

of a wide range of control options on the RA-1592, clearly designed with an eye to custom installation.

USER OPTIONS GALORE

As well as the standard remote control, also able to drive other components from the company, the amp has Rotel Link connections for which cables are supplied, 12V trigger outputs and an input for an external infrared sensor (for use when the amp is used out of sight of the remote handset), plus an RS232 socket.

The amp offers a range of options via a settings menu, either for initial set-up or use on the fly, including tone control bypass, and the option to fix any of the inputs at maximum level, or *any* level chosen by the user to enable integration with an AV processor or receiver. The menu



RIGHT: Rotel has screened the huge linear power supply that feeds its power amp section, the latter encompassing no fewer than six pairs of devices per channel on internal heatsinking



options also offer how a Rotel CD player connects to the amp (analogue or digital) and various display dimming and power saving/standby preferences.

You can also choose whether the USB input operates in Class 2.0, the default for high resolution or, with older computers, in Class 1.0. Drivers for Class 2.0 on Windows PCs are supplied on a CD-ROM with the RA-1592 amp but no drivers are needed for Mac users.

The input supports music replay at up to 192kHz/24-bit, as well as DSD2.8/64 and 5.6/128, either directly or as DoP (DSD over PCM frames).

Digital content is handled by a '768kHz/32-bit' AK4495S DAC from AKM, and the amp has a digital signal sense control system, allowing it to 'wake up' when a digital input is detected, and then power down again when the signal stops.

That would make it a handy companion for, say, one of Rotel's network players – provided the appropriate input is selected,

the user needs only fire up the player to have the amp spring to life.

The rest of the build shows Rotel's characteristic attention to detail when it comes to both circuit layout and component selection – it's a dual-mono design, with the power amp sections

to left and right, their output devices attached directly to the finned heatsinks on either side. A substantial, screened toroidal transformer is located centrally at the front of the chassis, while the power supply uses

custom slit-foil reservoir capacitors.

There's also comprehensive DC, over-current and thermal protection monitoring, which is pretty essential when dealing with an amp able to deliver hefty current [see PM's Lab Report, p55]. However, suffice to say that, even when using the amp hard, I never managed to provoke the 'Amp Protection' warning.

Rotel claims this is the finest integrated amp it has made in its 55-year history, and

'It delivers all the richness without smothering the finer details'


ABOVE: High-quality build, in black or silver, inspires confidence: the RA-1592 hasn't the least cluttered-looking amp fascia around, but the controls are still clear and logical

having lived with it for a while, I see no reason to disagree. Put simply, the RA-1592 has remarkable transparency for an amp at this level; it is capable of fast, attacking rhythmic drive, and will go as loud as any sane person could ever want without any sign of stress or strain setting in.

And then it will go a whole lot louder, again without ever seeming to be working hard: as PM's lab results suggest, this is an amp comfortably able to exceed its paper specification while keeping plenty in reserve for the dynamics of 'real' music.

CRISPLY FOCUSED

Those findings are borne out when listening, and the sound here is more or less a definition of the old 'iron fist/velvet glove' thing, as adept when playing the delicate vocals of the ultra-minimalist – one microphone – self-titled album by Applewood Road in 192kHz/24-bit [Linn Records AKD 579] as it is when powering out driving live Motörhead from the band's just-released *Clean Your Clock* set [UDR UDR062P04] recorded in Munich last November. What turned out to be some of Lemmy's last live performances have a sound that's dense, to say the least, but this fast, gutsy amplifier crashes them out in irresistible style, even if you choose to listen at 'next to the PA' levels.

There isn't quite that smooth, liquid, slightly lush presentation you get from, say, Arcam's A49 at tickover levels – the Rotel remains, crisp, tight and focused even when it's cruising – but when the going gets tough, the RA-1592 conforms effortlessly to that old 'just gets louder' ideal. That means big orchestral works don't faze it one little bit, as is clear with 

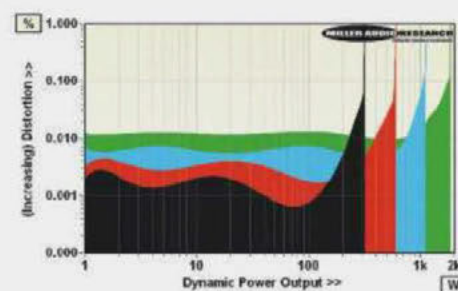
55 AND NOT OUT

Rotel has been making audio products since the early 1960s, having switched from TV import/distribution in 1961 to concentrate on OEM manufacturing, then moving into selling products under its own name. By the end of the 1970s, it had put in place its essential design philosophy of eschewing flashing lights and hyped power output claims – very popular at the time! – and concentrating on simple, logical design, along with close co-operation with specialist suppliers to obtain the components it demanded. This, plus the establishment of a lab facility in the UK for parts selection and final tuning, led to one of the company's most famous 'no frills' amplifiers, the RA-820B of 1982, echoes of which can still be seen in the company's entry-level models of today, which start with the stripped-down RA-10. So is the RA-1592, with its multiple digital inputs, Bluetooth connectivity and custom-installation flexibility, flying in the face of the simplicity on which Rotel built its name? It's certainly a more complex product, agreed, but the answer is in the listening, for this 'full-feature' design has a sound to challenge more than a few 'minimalist' rivals.

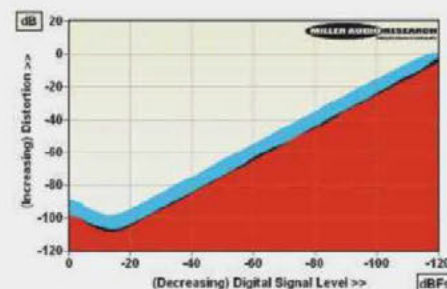
ROTEL RA-1592

When Rotel claims its RA-1592 is really an integrated version of the RC-1590 and RB-1582mkII pre/power combo, I'd not doubt it. We tested the original RB-1582 [*HFN* Feb '11] which delivered 250W/8ohm and 430W/4ohm while this new RA-1592 punched out 2x265W/8ohm and 2x445W/4ohm – all well in excess of its conservative 200W specification. Furthermore the huge power supply ensures there's plenty of headroom to accommodate dynamic peaks: up to 315W, 605W, 1110W and a full 1840W into 8, 4, 2 and 1ohm loads at <1% THD [see Graph 1, below]. That's 42.9A of clean current... Distortion holds to an impressive 0.001-0.003% over a full 200W range through bass and midrange, increasing to 0.017%/20kHz, while the frequency response is ruler flat with mere -0.1dB limits at 20Hz and 100kHz! The A-wtd S/N is a little below average, however, at just 80dB (re. 0dBW).

Measured via its 'pre out' RCAs (2.0V at 0dBfs, volume = 80), the performance of the RA-1592's digital section broadly mirrors that of the RC-1590 [*HFN* Nov '15] including its adoption of the 'Short Delay/Sharp' minimum phase digital filter in the AKM DAC. Once again the responses are very flat, albeit with a -1dB/12Hz bass roll-off at all sample rates and a slight dip to -1.5dB/90kHz with 192kHz media. The A-wtd S/N ratio tops off at 103dB while digital jitter is reasonably low at 180psec (S/PDIF) and 100psec (USB). I should note that the noise floor is 'cleaner' with 48kHz/96kHz/192kHz inputs than 44.1kHz/88.2kHz etc. Otherwise, distortion climbs at the frequency extremes, from a low of 0.001%/1kHz to 0.0036% at 20Hz and 20kHz and with the very lowest distortion achieved at -15dBfs [see Graph 2, below]. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) loads. Maximum current is 42.9A



ABOVE: THD vs. digital signal level over a 120dB range at 1kHz (S/PDIF, red; USB, black) and 20kHz (USB, blue)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	265W / 445W
Dynamic power (<1% THD, 8/4/2/1ohm)	315W / 605W / 1110W / 1840W
Output impedance (20Hz-20kHz)	0.009-0.024ohm (97ohm, pre)
Frequency response (20Hz-100kHz)	-0.13dB to -0.09dB (Analogue)
Digital jitter (S/PDIF / USB at 48kHz)	180psec / 100psec
A-wtd S/N ratio (re. 0dBW/0dBfs)	80.2dB (Analogue) / 102.7dB (Dig)
Distortion (20Hz-20kHz; 0dBW/0dBfs)	0.0011-0.018%/0.0012-0.004%
Power consumption (idle/200W)	45W / 700W
Dimensions (WHD) / Weight	431x144x425mm / 17kg



ABOVE: Four line (one on XLR) and MM ins are joined by sub and preamp outs plus pairs of switched 4mm speaker cable terminals. Digital ins include Bluetooth, S/PDIF (three optical, three coax) and asynchronous USB. Note RS232 and Ethernet IP control

Gustavo Dudamel's self-released download-only album of Wagner with the Simón Bolívar Symphony Orchestra of Venezuela [48kHz/24-bit via Qobuz], where the amp manages to deliver all the richness of the music without smothering the finer details of the score, then lets rip with that characteristic brass and percussion to dramatic effect.

WEIGHT AND SUBSTANCE

Instrumental timbres and textures are a definite strength here, whether you choose to play music at CD-quality, hi-res PCM or even DSD: with the glorious Trondheim Soloists' recording of Benjamin Britten's *Variations On A Theme Of Frank Bridge* in DSD64 [from *Reflections*, 2L 2L-125-SABD] the dramatic opening shows the amp's dynamic surefootedness and power.

Meanwhile the progress through the eleven sections of the work, and through a variety of classical styles from the skittering 'March' to the lush 'Wiener Walzer' and finally the great fugue, allows the RA-1592 to show its ability when it comes to fine detail, rhythmic acuity and realistic weight and substance, while at the same time revealing the focus and soundstaging that's a hallmark of the 2L label.

That speed and control is also much in evidence with Chaka Khan's 'Ain't Nobody' [from her *Epiphany* 'best of' set, Reprise 9362-45865-2], where the RA-1592 drives deep, fast bass-lines, and with the precise engineering of Paul McCartney's *Pure McCartney* retrospective [Concord Music Group/MPL HRM-38699-02], the familiar songs coming up fresh in this 'mixtape for the fans' (as McCartney describes it). The sheer clarity of the Rotel works

well with this kind of set, always finding something new in the mixes, such as the vamping electric piano behind the brass break on 'Listen To What The Man Said' or the beautiful unaccompanied opening phrase of 'No More Lonely Nights', while at the same time allowing you to just kick back and enjoy if you wish. Could one really ask for more?

That's really the secret of the Rotel amp's success. And successful I am sure it will be, for it's a fully-loaded, beautifully built and highly flexible amplifier – even the phono stage and headphone output are very good – with all the facilities most users will ever need, coupled with real-world speaker-driving ability, fuss-free operation and a sound of remarkable openness, weight and control.

It looks as if the tried-and-tested Rotel formula of giving the customers what they want, then throwing in a generous dose of extra ability to ensure buyers never feel shortchanged, is as potent now as it has been for the past half-century. If you fancy a big integrated amplifier to sit at the heart of your system, this one simply must be on the 'to audition' list. ☺

HI-FI NEWS VERDICT

Yes, it's up against some tough competition in the 'powerhouse integrated' sector, but the RA-1592 has the wherewithal to succeed, combining solid power, considerable refinement, flexible input provision and quality build. The near-£1900 price tag may put it well beyond the mainstream mass-market but, compared with some rather more expensive one-boxers, it represents pretty outrageous value for money.

Sound Quality: 85%

