A for BRIO

Rega's venerable Brio amplifier has undergone major changes. Paul Rigby reviews the Brio-R

The problem with the Rega Brio, the original Brio that is, was that it was almost too good. In the past, Rega had tried to change it, sometimes dramatically, but without success. The amplifier hit an almost unfathomable sweet spot that defied major change. "We always wanted to try to have the cheapest possible, high quality, simple amplifier that a hi-fi novice could have coupled with a turntable and a pair of speakers. The Brio has always filled that area," said Rega owner and co-founder, Roy Gandy.

Over the years, the amplifier has received tweaks to enhance its core design. "For the Brio 3, everyone loved the sound quality but it was getting to the point where a remote control was demanded. We were considering giving the Brio a refresh but we were faced with demands which boiled down to: retaining the sound quality and adding a remote control but without adding to the price." A tough request.

Adding a remote control option that would not impinge on sound quality was going to add £100 of anyone's money onto a future Brio update. So Gandy looked towards the company's new DAC for guidance and found it in that product's small physical footprint. "We thought that people would want an amp to partner the new DAC. If that amp could be a Brio then we could halve the case size, shrinking the Brio into the smaller case via the utilisation of surface mount technology, thus saving the required cash to retain the price point".

Job done then, eh? Well, not quite.

Enter Rega's electronic designer and inveterate tweaker, Terry Bateman who, in addition to fulfilling the brief for a new project, will often present a range of additional options. In the past, these have taken the form of alternative designs. Gandy wasn't surprised to find, sitting alongside the basic, shrunken-boarded Brio, an additional, simple, aluminium box. Bateman piped up with, "Can we also listen to this?"

Gandy did just that and was disappointed. He liked the sound of the experimental variant but Gandy knew, without peering inside the box, that Bateman had squeezed a couple of valves inside to produce that signature, analogue sound. Knowing that Rega, as a company, was not set-up to commercially exploit valves just yet, Gandy was about to let Bateman down as gently as he could when he then listened to a familiar piece of music through the experimental box, one that Gandy knew would trip up any valve amp. "Playing this track, however, I was gobsmacked because it made the music sound even clearer. I then found out that the box didn't hold a valve amp at all. It was fully solid state. It shocked me."

Bateman had, in fact, used the experimental Brio design to implement a theory, one that Bateman had read about in an old electronics magazine from 1969, that proposed a concept for a Class A circuit using transistors that didn't produce the usual amount of heat. At that time, the design was only conjecture but Bateman decided that the time had come to see if the premise could match practice. Gandy believed now that it could and decided to dump the original Brio 'tweak' to mass produce Bateman's theory-buster.

The result is the 50W Brio-R, a Class A/AB or quasi Class-A amplifier, "Basically, the driver transistors are working in Class A but the power transistors are working in A/B. That's the simple way of describing it," said Gandy.

On the inside is a motorised ALPS volume control for the new remote that sits next to a combination of standard and surface mounted components. The toroidal transformer is surrounded by electrolytics (they're not in the signal path), polyester and polypropylene capacitors, "Every path is thought about in terms of sound quality and value for money. Polypropylene caps are also large, so the small case might not allow them to be used. In which case we use electrolytic," said Gandy.

To keep the distortive noise down, Rega has thought about the proximity and screening of low voltage parts of the amp to the transformer. Tough in a small case, "In the Brio-R, the transformer features a bespoke design supplied by a company that used to share our factory space. We tested around 20 toroidal prototypes."

Available in black and silver, spanning 80x218x325mm and weighing in at 6kg, the front of the Brio-R features a volume pot, input selector and power switch. On the rear are five inputs plus an MM phono connection and a single pair of speaker connectors adjacent to a power plug.

An Alps motorised volume control can be seen bottom right, and to its left a big toroidal mains transformer. Input relay switching is used.

SOUND QUALITY

My listening tests began with vinyl and the original 1964 RCA LP, 'This Is Ethel Ennis', played on a T&A G10 turntable fitted with an Audio Technica AT-440 cartridge, connected to a Trichord Dino external phono stage. The first impression of the Brio-R via the jazz-vocal piece, 'He Loves Me', is its clarity. There is an open and spacious way that the Rega presents music to the ear. I felt that each instrument within the backing orchestra could not only be heard in full but that all angles of each instrument were on view. This was partly due to a reduction in 'distortion', removing the noise that often fills in the gaps. With this removed, the sound stage was able to present the instruments in a more articulate manner, adding space and a supreme sense of order that Brio-R brings to music. It gave the amplifier a calming, unhurried presentation.

> "the Brio-R gave his delivery an innocent simplicity that contrasted well with the power of the percussion and the firm, passionate bass line"

The Brio's bass was not especially stronger or more impressive quality wise than a reference Cambridge Azur 650A but the Brio-R did present a detailed and fully formed suite of low frequencies. Drums exhibited more character and tonal information, while the mids were incisive. Sax and trumpets were crisp but also retained impact during their attack, while strings were swathed within a blanket sweetness.

Treble was remarkably light and ethereal in its approach. Cymbals tended to float over the soundstage yet the cymbal strike was notable for its crisp nature. All this was impressive for an integrated amp within this price point.

Playing DJ Food's 'Kaleidoscope' and 'The Ageing Young Rebel', this beats-orientated electronica track utilised old samples to form a musical concoction based on modern bass beats and bass-heavy vocal speech from the unique delivery of Ken Nordine. The latter was both distinct and clear in its presentation making the articulation of the vocal far clearer than many other amps in this price point. The lowering of the noise floor meant that the vocal subtleties were noticeable, improving intelligibility.

Bass may not have been heavier or appreciably stronger in its inherent form but what it did have was a sense of focus that allowed the lower frequencies that were already present to be more easily recognised.

What was also noticeable was that bass didn't fight or attempt to encroach upon the mids. Mids were, in themselves, informative and well structured within the sound

The small rear panel carries 4mm speaker terminals and a small row of phono socket inputs, including Phono MM.

stage. Higher frequency synths were clean and tight with plenty of space to manoeuvre while cymbal work was both fresh and firm in its attack.

Moving to CD and Stevie Wonder's 'I Was Made To Love Her', the pedigree of the Brio-R was apparent from the first few notes of Wonder's harmonica. Instead of hearing the normal compressive emphasis on this track that can sometimes give this song a brighter tone, the Rega calmed the waters due to its low distortion approach to music. The space afforded to the soundstage also produced a clearer and more recognisable presentation. Instrumental separation on this early mix not only gave the vocal a richer and more emotional delivery but also teased apart the backing band into a more individual instruments.

Moving to Porcupine Tree's 'Buying New Soul' from the 2001 'Recordings' album, the cello present on the introduction was placed in an atmospheric environment, its woody resonance providing a rhythmic generosity to the track.

Lead vocalist Steve Wilson's voice is not the strongest or most emotive but the Brio-R gave his delivery an innocent simplicity that contrasted well with the power of the percussion and the firm, passionate bass line. The amplifier was also able to keep its head during the turbulent crescendos, retaining good instrumental separation.

Plugging the turntable into the Brio-R's built-in MM phono amp instead of the Trichord Dino was intriguing. The Brio didn't have the richness of the Dino and, in comparison, there was an element of midrange strain in the Brio-R but this was nitpicking. Considering that the Brio was up against a high quality budget phono amp, it performed remarkably well. The Brio-R's phono amp retained dynamic events and my interest in the midrange. There was enough fragility in the treble area to add a layer of filigree detail. Strong bass textures imbued the amp with a sense of low frequency authority.

CONCLUSION

The Rega Brio-R only offers a small footprint but still manages to provide a full suite of inputs and associated features. More importantly, however, the sound quality is remarkably good for an amplifier at this price point. It is no exaggeration to say that the Brio-R would sit easily within a more expensive hi-fi chain and would not sound out of place. Hence, for those looking to upgrade their kit in the future, the Rega provides a solid basis or heart to a more expensive hi-fi chain. Offering great value for money, the Brio-R represents the very best in budget amplifier design.

MEASURED PERFORMANCE

The little Brio R produced 55 Watts into 8 Ohms and this rose to a healthy 90 Watts into 4 Ohms. As most loudspeakers now use 4 Ohm bass units the Brio will be able to deliver 90 Watts maximum and will go loud. Damping factor was very high so bass will be very tight, and not fulsome.

Distortion levels were low at low and high power outputs, right across the audio band. Our quoted value of 0.1% is for 1 Watt output at 10kHz as this is where crossover distortion makes itself known, but with second and third harmonics dominant, as our analysis shows, and maintaining a steady pattern relative to each other, the Brio R will sound smooth and free from coarseness.

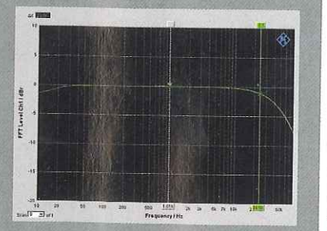
Frequency response was band limited at both ends of the spectrum, rolling down below 20Hz and above 24kHz, via Aux etc.

The MM phono stage was accurately equalised, but a warp filter rolls off bass below 30Hz and treble again rolls down above 20kHz. Rega are consistent in this design approach as it removes what they see as unwanted signals. MM sensitivity was quite high, measuring 2.3mV.

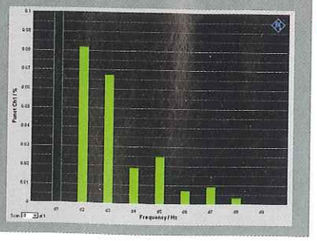
The Brio measured well all round. It is band limited like all Regas and this does give a tidy, clean presentation. There is plenty of power for so small a package too. NK

Power	55watts
CD/tuner/aux.	
Frequency response	20Hz-kHz
Separation	87dB
Noise	-89dB
Distortion	0.1%
Sensitivity	220mV
Damping factor	127
Disc MM	
Frequency response	Hz-kHz
Separation	68dB
Noise	-73dB
Distortion	0.1%
Sensitivity	2.3mV
Overload	100mV

FREQUENCY RESPONSE



DISTORTION



VERDICT £

Based on a classic design, the Rega Brio-R provides top sound quality and great value for money in a small package.

REGA BRIO-R £498
Rega Research Ltd
www.rega.co.uk

FOR
- low distortion
- clarity
- detailed mids
- small footprint

AGAINST
- dim display LEDs