

# audition

equipment review

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## Redgum RGH900p and RGH900-2 Preamplifier/Processor and 5.1 Channel Power Amplifier

**O**ver the years there's not been too many models from Redgum Audio's range that I haven't had an opportunity to play with. But if there's one recurring thing about all of them it's the fact that they've been 2-channel. There was a DVD player that carried the Redgum badge a while ago, but it wasn't around for long and for the most part, the Redgum stable has remained faithfully 2-channel.

Which is fine and after all Redgum is a supporter of The Campaign For Real Stereo, an online quest to maintain and promote the use of real stereo which it sees as under threat from the commercial drive of new consumer technologies. An excellent cause in my opinion. But, Redgum has finally succumb to multichannel audio - sort of. Home theatre's a term that has never really been applicable to Redgum Audio products, but now it is and befitting Redgum's approach and design philosophy, these two multichannel products don't tackle things in the conventional manner.

To be fair, one of these products can trace its origins all the way back to the 1998 Melbourne Home Entertainment Show and five years later it was possible to put together a home theatre system comprising Redgum processing, amplification and speakers. Today, there are quite a collection of home theatre components from Redgum.

2006 now heralds a new set of guidelines for electronics manufacturers and with strict EU Directives in place, a basic means of manufacturing has turned the electronics industry on its head, according to Redgum. The RoHS (Restriction of Hazardous Substances) directive now means a number of metals and chemicals are no longer permitted to be used. One of them's lead - the main ingredient in traditional solder - which means any electronics manufacturer is going to have to change its way significantly. Redgum has done so and is now lead free. One of its first compliant products is one of these - the RGH900-2 Signature Series 6-channel power amplifier.

Originally nicknamed 'The Beast' unpacking the RGH900-2 lets you know why. It's not especially big as far as power amps go, but it's surprisingly

**Surround  
sound from a  
stereo signal?  
Is this a joke?  
Redgum's  
deadly serious**

By Nic Tatham



heavy and packs six channels of powerful amplification into a single box. Redgum's trademark wooden panel sets the completely uncluttered fascia off, but round the back there's an array of inputs and outputs. Beneath the amp sits a curved 'wave' heat sink giving the amplifier a pregnant, but glowingly so look. The new heatsink is also used on other Redgum power amps and it has come about, according to Redgum

Audio's Ian Robinson, partly because of the trend towards lower impedance drivers used by loudspeaker manufacturers. As is the norm in the in-car hi-fi industry with 4-ohm impedance, the same's being adopted in the domestic market and these lower impedances (which are often a lot lower than actually stated) result in the amplifier generating more heat. It has to be dissipated somehow otherwise thermal problems can result. Redgum says its new 'wave' heatsink is ready to tackle the future needs for heat dissipation and claims the RGH900-2 is stable down to 0.25 ohms.

Of course, six channels of MOSFET amplification generating 250 watts each is enough to generate a lot of heat - especially if pushed hard for a period of time. The main problem for any amplifier, especially multichannel ones, is the speaker load and if they are inefficient and/or low impedance, it'll struggle. Redgum ensures that the RGH900-2 has been 'over-engineered' for this reason and has the power supply to cope with tricky speaker demands.

Partnering the power amp is the RGH900p preamp/processor but this is not your typical surround sound

processor. The reason being that it does nothing in the digital domain - this is surround sound analogue style! There are two modes of operation and all that's required is a stereo connection from the source - be it a CD or DVD player. With the latter you have to set the audio output to PCM 2-channel stereo and the proprietary processing is done by the Redgum combination. The decoded signal then has the 5.1 channels 'reconstructed' without the use of artificial delays or compression that's used in typical digital surround processing. Instead the Redgums derive the centre and rear surround channels from the 'phase changes' which are found in all modern recordings of both music and movies for the past 40 or so years. Redgum says it's so effective it'll work with any source from broadcast television, CD, DVD FM radio, MP3, through to video and audio cassettes. Sounds intriguing and I for one was keen to hear it for myself.

Dutifully correcting the output of my Onkyo universal DVD player, I hooked up my KEF Q Series AV speakers to the Redgum power amp and connected the correct channels to the back of the preamp. There's a power remote lead as well that need

## Vital Statistics

### Dimensions:

420 x 360 x 145mm (RGH900-2)

### Weight:

30kg (combined)

### Price:

\$6,500 (matched package price)

### Distributor:

Redgum Audio  
Factory 3/25 Clarice Road  
Box Hill South, VIC 3128

### Telephone:

(03) 9897 1277

### Facsimile:

(03) 9897 1399

### Website:

[www.redgumaudio.com](http://www.redgumaudio.com)

## Techno talk

### Product Type:

Processor/pre/power amplifier

### Number of Inputs:

5 x unbalanced, line-level

### Power Output:

6 x 250 watts RMS (8-ohms)

### Harmonic Distortion:

0.09% (below clipping)

### Intermodulation Distortion:

Less than 0.005% (below clipping)

### Peak Current:

More than 150 amps

### Signal To Noise Ratio:

More than 100dB

### Frequency Response:

0.8Hz-80kHz (-3dB points)

### Recommend Loudspeakers:

4-8 ohm nominal load

### Cabinet Finish:

Solid Redgum wood fascia,  
black gloss steel chassis

Technotalk specifications and recommended retail prices are supplied by the manufacturer

attaching so that the power amp comes to life when the preamp is switched on with the other Redgum trademark - a key. Turning the switch to the right and a small blue power light comes on both components, but I was only getting 2-channel operation. I rang Redgum's Ian Robinson to find out what was going on and immediately he asked if I'd turned the key to the left. Having glossed over the instructions, I'd missed this bit. Doing so, all 5.1 channels clicked in and the power light turns to yellow. These are the two modes I mentioned earlier.

Feeling suitably daft, I set about listening to analogue surround, which has to be said is every bit as enveloping as the digital variety. As sceptical as ever, I was expecting the same sort of result when you listen to music sources through an AV receiver in 'all channel stereo' mode - that is the same signal being delivered by fronts, centre and rears. What surprised me with the Redgum's analogue processing is that there is definite channel steering and effects placement, not just the same sounds coming out of all of the loudspeakers. I remember thinking 'well, bugger me, it really works.'

The Super Audio CD of Bjork's *Medulla* was one of the first discs up and having heard this many a time

processed by the Onkyo's on-board decoding, I was keen to hear what the Redgums made of this very acoustic and stripped down recording. Having played with the manual level controls for the centre, rears and subwoofer outputs, the effect is multilayered, to say the very least. A number of the tracks feature her and the Icelandic Choir singing in their native tongue. Not only singing, but making some odd noises as well. The Redgums do a fine job of spreading the almost ethereal ambience of these tracks with complete unrestrained - they let the music do its job rather than getting in the way of it. There's bags of presence generated too with excellent placement of instruments and vocals alike. Sitting in the midst of things, it's uncanny to think that all of this is taking place in an analogue domain, rather than the digital world of number crunching.

To check that it wasn't a one off and that I wasn't imagining it, I popped in a number of favourite music DVDs. First up was Morcheeba *From Brixton To Beijing* - a nicely produced disc with not bad Dolby Digital 5.1 sound. The Redgums breathe plenty of life and soul into the performance and sure enough, there was a terrific openness and an immersive room-filling spread to the sound. The same was true with Goldfrapp's *Wonderful Electric* live DVD and Jamiroquai doing their stuff at a rain-soaked gig in Verona. The acid test though was Pink Floyd's recent release - *Pulse*. The second disc contains the live rendition of *Dark Side Of The Moon* and it's an impressive sounding DVD. The classics such as *Money*, *Breathe In The Air*, all 10 tracks in fact, are given full treatment by the Redgums and if you didn't know what was going on with the processing you'd swear blind it was being delivered by the latest and greatest type of multichannel audio decoding. I tried it out on my mate down the road, Dave, who's a bit of a Floyd fan also. Sitting him down and putting on the show, he was well impressed with the 5.1 channel sound. When I informed him just what and how it was being generated he couldn't believe it.

Movies too - the big action scenes or quieter more ambient moments - all are replicated with the same sense of space and that immersive soundfield. The savage onslaught at the start of *Saving Private Ryan* or the intricate effects layered within *Magnolia*, all are brought

to the fore by these amplifiers in an utterly convincing and measured manner.

As for the heat, even on a hot day it wasn't a problem. And as for the price, well there's good and bad news. The good is that if you buy a matched pair the packaged price means you get the RGH900p for nix. The bad news is that the RGH900-2 power amplifier cost \$6,490 a pop. Still, with a saving of \$1,190, the package pricing represents great value.

So, nice one Redgum. As is its want, it's done things differently once more and come up trumps. These are the surround sound amplifiers for the 'audiophiles' out there - those that think all digital home theatre gear sounds rubbish. **AVL**

**Ancillary Equipment:** KEF iQ Series loudspeaker system, Onkyo DV-SP702 universal DVD player, Yamaha PDM-4210 Plasma display, Neotech Component Video leads, Nordost Blue Heaven loudspeaker cables, Black Box mains conditioner

## Opinion

The 'Opinion' expressed here is that of the reviewer, summarised in the form of a 5-star rating system, and should be considered as an integral part of the full contents of this **Audition Equipment Review**. As such, each category should be judged on its own merits and not necessarily used as a comparison with other equipment reviews in this, or other editions of **Audio & Video Lifestyle** magazine.

★ Shocker  
★★ Average  
★★★ Good  
★★★★ Excellent  
★★★★★ Perfection

**"...this is not your typical surround sound processor. The reason being that it does nothing in the digital domain - this is surround sound analogue style!"**

### Performance

★★★★★

### Build Quality

★★★★★

### Compatibility

★★★★★

### Value For Money

★★★★★