

Parasound Halo JC5

No shortage of machismo – it has to be an American power amp, right? Parasound's Halo JC5 conforms to some of these stereotypes, but there's more to it than just slam
 Review: James Parker Lab: Paul Miller

There's nothing terribly unusual about a big, hefty US-made power amp: after all, it's almost an archetype of what we think the US high-end is all about. Long cable runs from preamp to power amp(s), short tails to the speakers – it's just the way they do things over there, and at first glance the Parasound Halo JC5 seems to conform to all those preconceptions.

Except it isn't quite what it seems, for while the £6999 amp, available in black or a rather more subtle silver, has the big, bluff looks of a Stateside powerhouse, it's neither that huge nor excessively heavy and is even vaguely sensibly priced when placed beside the five-figure tags you'll find elsewhere. OK, so it will dwarf your average European integrated amp, and £7k is hardly chicken feed, just as its 33kg deadweight means it's a two-person lift.

The latter feat is helped by grab-handles to the rear, hindered by sharp heatsink fins and not much to get hold of at the front. But once you and a willing assistant have it in position – I found my trusty leather rigger's gloves came in handy – it's not exactly a monster, at under 45cm wide (so not much more than a 'normal' hi-fi component) and 20cm tall, putting it in 'big AV receiver' territory. Only the depth may give you some problems when it comes to positioning, as it's just over 50cm front to back, meaning it overhung the shelves on my favoured Quadraspire rack.

MIND YOUR MANNERS

Then again this is a well-mannered big amplifier, despite its 400W/8ohm rating, rising to 600W/4ohm, and capable of handling dips down to 1.5ohm [see PM's Lab Report, p75]. Those heatsinks manage to keep things working reliably without either the assistance of fan-cooling or warning notices to keep animals and

RIGHT: Linear PSU features a screened 1.7kVA toroid [blue] and 66,000µF/100V of reservoir capacitance per channel [four black cans]. A total of six pairs of high current bipolar power transistors are mounted on each heatsink

children at a safe distance, and there's no drama involved in turning the amp on: none of that 'lights dimming throughout the house' or 'now the storm is at its height, throw the switch, Igor' stuff.

Instead, a push on the power button sees its illumination change from the soft blue indicating standby to red for a few moments while the amp stabilises, and then shows a brighter blue when you are ready to play music, accompanied by the illumination of the two channel indicators low down in the centre of the front panel. One other lamp indicates a temperature problem, at which point the amp will drop into protection, something I failed to provoke even during arduous use.

In fact, there's a range of ways to turn the amplifier on: either manually, via a 12V trigger or via (music) signal-sensing.

A potentiometer allows the user to select the sensitivity of this mode of operation, and avoid it being affected by noise on the mains, which might otherwise switch the amp on when not required.

VOLUME CONTROLS

The RCA phono and balanced XLR inputs also have their own level adjustments, not unlike little volume controls, although using these is a little hit and miss given the slight channel imbalance PM also notes in his Lab Report [p75], and the fact the knobs aren't click-stopped to give some precision in their setting. The JC5 includes loop outputs to allow additional amplification to be used, for example when bi-amping suitable speakers, or to feed one or more active subwoofers. However, its input level adjustment doesn't affect the signal level



being output from these sockets, so if you were using two JC5s to drive your speakers, you might have to juggle these little input level controls or, I suspect, leave them all rotated to maximum.

Switches select between the RCA and XLR inputs, with one for each channel, while between this socketry another small toggle allows the user to bridge the amplifier into mono [see p75]. The two red '+' terminals – 'propeller' combination binding posts custom-made by CHK Infinium – are then used for connection to the loudspeaker (and are labelled accordingly). At this point the JC5 becomes a monoblock amplifier rated at a heady 1.2kW/8ohm!

Whether one would ever feel the need for such capacity is open to discussion,

for the Halo JC5 is hardly short of power or dynamic ability in its standard stereo guise, as one might expect of an amplifier based on the John Curl-designed JC1 monoblock power amps. But this isn't a pair of JC1s crammed into one package, as

PM discusses in his boxout, below. Parasound says it is the result of challenging Curl to 'distil the essence of two JC1 monoblocks into a single chassis' in response to demand from customers who 'often tell us they love everything the JC1 offers while wondering if we could deliver comparable performance from a no-compromise stereo chassis, to save money and space.'

The result is an amplifier operating with an enriched bias and claiming to deliver its first 12W in Class A. It uses a

ABOVE: Styling is, to say the least, purposeful, down to the designer logo. A single button controls power on/off, with LEDs for each channel and over-temperature protection

high voltage input stage, a technique not unlike that seen in some T+A amplifiers [HFN May '17], together with substantial reservoir capacitance in the PSUs for the input stage (8,880µF) and power output stage (132,000µF), the latter sourced from capacitor specialist Rubycon. These are visible in our inside shot [p72] alongside the massive (blue) toroidal transformer with its premium grade steel core and separate windings for each channel.

PRODIGIOUS POWER

Parasound rates the JC5 down to 5Hz and that bass extension seems entirely credible when listening, as does the prodigious multi-hundred watt power rating. Be in no doubt: this amplifier can sound totally brutal when the music requires. During the review period I ran it on the end of the excellent Benchmark HPA4 headphone amp/preamp [HFN Nov '18] – which, despite its compact dimensions, is more than up to the task – and discovered the JC5 capable of a massive, yet clearly resolved sound.

With the recent 96kHz/24-bit remaster of Led Zeppelin's *The Song Remains The Same* [Swan Song 0603497862757], it powered out the basslines on 'Dazed And Confused' – yes, all half hour of it – and then thundered through Bonham's workout on 'Moby Dick', phase effects and all. This is one fast, hard-hitting amplifier, and it exerts a superb grip on the speakers (my PMC OB1s in this instance) to make sure they do what it wants, as was clear from the drums pounding the listening room. ☺

'This is one fast, hard-hitting amplifier with superb grip'

THE POWER PUZZLE

In our recent review of Emotiva's XPA-DR2 power amp [HFN Oct '18] I discussed the amplifier design 'trade-off' between the capacity to drive low impedance (4 or 2ohm) speaker loads while also satisfying the need to deliver very high power into more moderate (8ohm) loads. Driving low impedances is all about supplying sufficient current to maintain the voltage across the load, while driving higher impedances is more about supplying the volts in the first place. This is why most 500W+ amplifiers are bridged designs, doubling the amplifier's voltage envelope without complicating the PSU infrastructure.

Parasound's designer, John Curl, has aimed at 400W/8ohm for the JC5 which it achieves – just – with a tried-and-tested complementary output stage rather than two such stages bridged together. Otherwise, the JC5 can be 'bridged' with both left and right channels forming the positive/negative-going halves of a monoblock, rated at 1.2kW/8ohm. In practice, the JC5 uses the longstanding JC1 amp circuit, but with six rather than nine pairs of output devices per channel and a smaller power supply. Hence while both are rated at 400W/8ohm, the JC1 claims 800W/4ohm and 1.2kW/2ohm while the (lower current) JC5 has a specification of 2x600W/4ohm and no formal rating into 2 or 1ohm loads. PM



LAB REPORT

PARASOUND HALO JC5



ABOVE: Small toggles switch between single-ended (RCA) and balanced (XLR) inputs, and bridged mono/stereo power output (on 'Infinium propeller' 4mm binding posts). Auto switch-on is offered plus variable gain (volume) and preamp outputs (RCA)

Although the JC5 is a 'power amplifier', its two gain controls [see rear panel shot, left] and RCA line *outputs* also allow the signal to be intercepted between the 'high voltage' J-FET input stage and the MOSFET/bipolar output stage proper. At full 'volume' the gain potentiometers are still not precisely matched and so our sample had a 0.3dB channel imbalance (28.63dB and 28.95dB gain via balanced inputs). Moreover the internal layout of the JC5 is not precisely dual-mono [see inside shot, p72] so there is a slight difference in noise and achievable A-wtd S/N ratio between left and right channels – 89.4dB and 87.3dB, respectively, re. 0dBW. Otherwise the JC5 is exactly what we might expect – a rugged and low distortion powerhouse that's more than a match for competing sub-£ 10k heavyweights.

Parasound claims Class A operation up to 12W/8ohm for the JC5. In practice its substantial 208W idle power consumption and 42°C heatsink temperature would not lead me to question this specification. The 2x400W/8ohm power rating is only achieved by the skin of its transistors, however, with a full 240V AC mains voltage [see boxout, p73]. On the other hand, its 600W/4ohm spec. is substantially bettered at 2x700W/4ohm while the huge PSU supports 5 15W, 960W, 1680W and 1180W into 8, 4, 2 and 1ohm loads under dynamic conditions at <1% THD [see Graph 1, below]. Distortion is generally within Parasound's loose 0.05% rating at 0.001%/1W, 0.003%/10W and 0.0075%/100W through bass and midrange, increasing to 0.055%/20kHz at 10W/8ohm [see Graph 2]. Meanwhile the JC5's output impedance is a low ~0.02ohm through the audio range and its frequency response an extended 1Hz-48kHz (±1dB). PM

Of course, you don't have to give the JC5 a rock workout to hear what it can do in the power department, for it's just as convincing with the attack and scale of a large symphony orchestra in full flight. This was certainly the case with the recent 192kHz/24-bit Deutsches Symphonie Orchester Berlin/Robin Ticciati recording of Ravel's *Valses Nobles et Sentimentales* [from *Aimer et Mourir*; Linn Records CKD 610].

However a recording such as this also allows the amplifier to show its light touch with the finer details of both the music and the production. But this isn't a Jekyll and Hyde job, with finesse in the first few watts followed by screaming, relentless power when you push the levels. Rather, it undergoes a subtle transformation between the two, maintaining its control as it unleashes all that extra oomph.

EXCITING RIDE

That said, it can get a bit raucous around the edges when *really* pushed, and certainly won't please those who like their music either sanitised or delivered free of nasty shocks. So if you're more of a genteel audiophile listener than a warts 'n all music fan, you might find the sound of the JC5 a bit forthright for your tastes, choice of partnering loudspeaker notwithstanding. But what it lacks in rose-tinted lushness it more than makes up for with the sheer level of excitement it can generate, plus the ability to drive speakers hard while keeping them under control. Nevertheless, the JC5 can still play nice...

Listen to the amp playing something as simple as Chas & Dave's 'Sling Your Hook', the late Chas Hodges' message to the cancer that finally took his life [from the pair's last album, *A Little Bit Of Us*; Rockney COOKCD704], and

the combination of humour and determination is made clear in the performance, the sound giving fine presence to both the vocals and the instruments. If you ever needed convincing of the fine musicianship belied by the knees-up 'songs round the old joanna' misconception of the duo, this will deliver it, and the intimate ambience is clear with the JC5 at cruise level, as is the speed of the amp when Hodges gives it some real Jerry Lee stride on his reading of 'Roses Of Picardy'.

FRESH FROM THE BOX

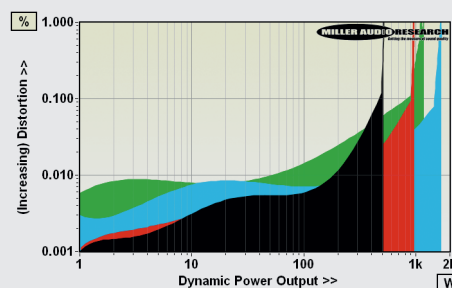
I also noticed that the amplifier doesn't seem to require much running-in or warm-up, the sound remaining consistent whether just powered up from standby or left on for an extended period by bypassing the auto-power switching. But to say it simply comes out fighting would be doing it a disservice because, as we've already discovered, it's far from being a one-trick bruiser.

More to the point is the joyous realisation that the JC5 is an entirely fuss-free performer, requiring no tweakerly or molly-coddling to be heard at its best. ☺

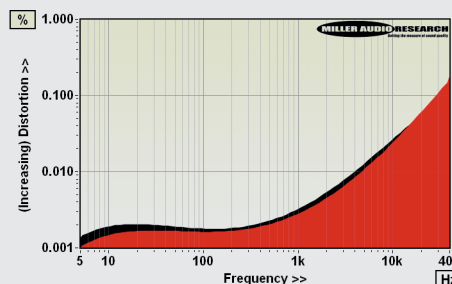
HI-FI NEWS VERDICT

It's more than possible to have an absolute blast with this amplifier. Those who think nothing of using for parties the kind of five-figure system at the heart of which it will sit won't be disappointed in the least – it will just keep on going as long as you can. However, there's so much more refinement than that on offer here, and the JC5 will please even if you never explore the limits of its performance envelope.

Sound Quality: 85%



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 34.4A



ABOVE: Distortion versus extended frequency from 5Hz-40kHz at 10W/8ohm (left, black; right, red)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	405W / 700W
Dynamic power (<1% THD, 8/4/2/1ohm)	515W / 960W / 1680W / 1180W
Output imp. (20Hz-20kHz/100kHz)	0.022-0.040ohm / 0.177ohm
Freq. resp. (20Hz-20kHz/100kHz)	+0.01dB to -0.23dB/-3.1dB
Input sensitivity (for 0dBW/400W)	105mV / 2100mV (balanced)
A-wtd S/N ratio (re. 0dBW/400W)	89.7dB / 115.7dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.0015-0.055%
Power consumption (Idle/Rated o/p)	208W / 1.26kW
Dimensions (WHD) / Weight	448x197x508mm / 33.1kg