

PHONO STAGE

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Parasound Halo JC3+

This latest evolution of a much-loved phono stage offers increased flexibility for better cartridge matching, but has it retained its predecessor's widely acclaimed sound?
 Review: Nick Tate Lab: Paul Miller

Ever since the world rekindled its once-mighty love affair with the vinyl LP – following the two decade-long hiatus in which digital discs ran rampant – we have seen a profusion of new phono stages being launched. From the moment the hi-fi world realised that they could and usually did sound better than the phono boards built into pre and integrated amps, the market hasn't looked back. Indeed, by the turn of the new millennium, there seemed to be more such devices than there were conventional preamps.

These days then, the launch of a new phono stage is no longer an excuse to roll out the red carpet and set champagne corks popping. Three years ago however, one design did surface that was really rather special – Parasound's Halo JC3. The company's one and only such product, it was built so sturdily that it put practically all of its price rivals to shame, plus many more expensive designs too.

NO COMPROMISE

Yet this wasn't just a case of window dressing, because inside this beautifully finished unit, it was just as lovingly executed. Carefully compartmentalised and heavily shielded to reduce noise, and looking more like a piece of high-end audio than a mid-fi product, it also offered some rather esoteric features including a choice between balanced and unbalanced inputs and a proper mono switch for the enjoyment of early vinyl pressings.

Its distinctive build, obvious attention to detail and useful facilities – plus a highly enjoyable sound that garnered critical acclaim from all around the world – meant that the JC3 built itself quite a following. The enthusiasm that the JC3 generated was tempered by what some vinylistas thought was one serious omission – its lack

RIGHT: The left and right channel RIAA stages are populated onto 24KT-plated PCBs and screened inside separate black alloy extrusions. The substantial, filtered power supply is partitioned behind a 'wall' of mild steel

of variable cartridge loading. In truth, most users of modern pick-ups don't really need this facility, which is why designer John Curl decided to omit it in the first place. The reasoning was that as well as adding complexity, which can compromise sonics, it increases cost with no automatic benefit.

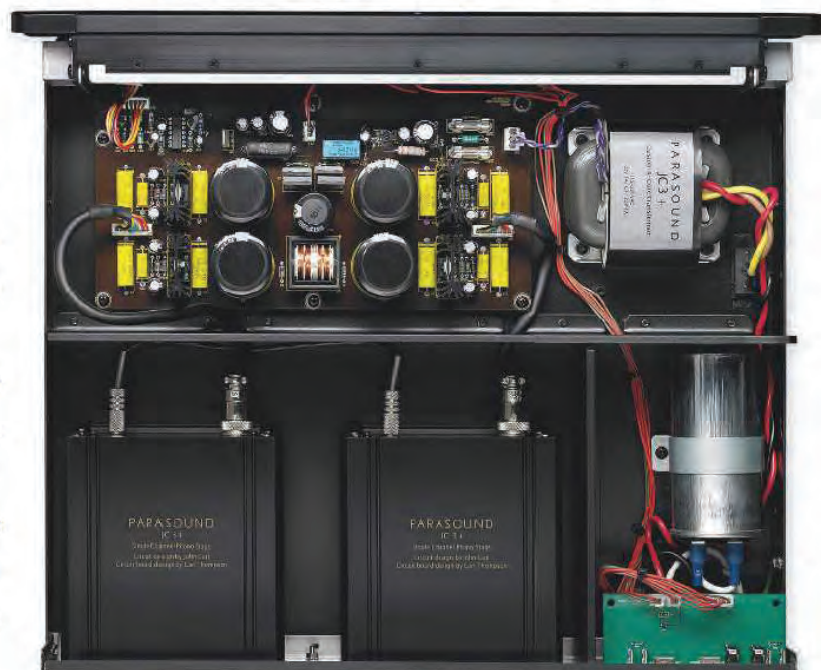
Compared with fixed resistors, potentiometers are generally noisier, which is the last thing you want in a (phono) preamplifier handling microscopic signal voltages. Now though, the designer has decided that it is possible to offer improved flexibility without sullyng the sound, and has come up with the Halo JC3+, pitched at £3300.

As well as adding independent load adjustment for moving-coil cartridges, the unit's dual mono phono module circuit boards have been improved, and the power supply has been updated too, says the manufacturer. The load varying

potentiometers found on the unit's rear panel are made by Vishay (which is known for the excellence of its electronic components) and produced to a precise design specified by John Curl. These special low-noise, dual-gang pots give fine adjustment capability for each channel from 50-550ohm. There's also a switched 'default' position, should you not wish to stray from the fold.

CHANGES IN GAIN

While the unit was being redesigned to offer this facility, the opportunity was taken to make other improvements too. The spectrum of thermal noise in the resistor that loads the input stage was narrowed, says Parasound. The circuit board designer Carl Thompson tweaked the phono module printed circuit board to further optimise the sound, and 24KT gold-plated copper circuit traces are now used.





As a result, the company claims a significantly improved signal-to-noise ratio, with slightly better MM gain [see PM's Lab Report, p49]. The MC gain has been dropped because it was thought a little excessive with some high output moving-coils. Improved power supply capacitors are fitted, and the new R-core power transformer is said to be over 80% larger than that in the JC3.

In use, the Parasound has the look and feel of a luxury product, and is quite large compared to some rivals. Ergonomically excellent for a phono stage, its thick, curved alloy front panel has just a power switch (no need to fiddle around at the back when switching on) and a mono switch, plus an illuminated logo.

At the rear are both RCA phono and XLR inputs, the latter for those running a balanced vinyl front end – this mode certainly has its devotees and many will find it useful.

Those load-adjusting potentiometers (one for each channel) will obviously have real appeal to folk who wish to experiment, and/or turntable fans running multiple decks. Fixed MM and MC gain confers less flexibility though – various rival phono stages offer this and some will miss it, not least because cartridge output has varied a lot over the decades. One might expect that the type of buyer who is attracted by

variable loading would want a choice of gain settings too...

A FLAVOURSOME SOUND

The JC3+ is one of the most interesting phono stages I have heard in a good while, because it doesn't easily fall into one of two traditional camps. Some are romantic, warm and musical – and invariably opaque sounding with it – while many others show great resolution with a highly translucent quality but often fail to get the musical juices flowing, so to speak.

The JC3+ combines the best of both worlds, and in doing so doesn't stumble into any other traps. Essentially, it's an unerringly clean and crisp, modern-sounding design, yet one that remains fully able to communicate the alluring sound of vinyl replay.

With the JC3+ hooked up to my Michell GyroDec turntable, SME Series IV tonearm and Lyra Dorian moving-coil, listening commenced (after a suitably long settling-in period) with the title track from Joan Armatrading's *Me, Myself, I* [A&M Records AMLH 64809], which is a classic late-1970s rock epic made when analogue recording was in its full pomp. The phono stage showed its very low noise levels,

ABOVE: Despite the generous feature count, the JC3+'s front panel confines itself to a power button and a mono switch for those with early LPs. It comes in a choice of black or silver

making the opening solo vocals appear to come out of nowhere. It carried the opening drum strikes powerfully too, the reverberation audibly bouncing off all four corners of the studio booth in which the drum kit was recorded.

Within just a few bars of the song starting, it was clear that this phono stage had real ability. Then as the first verse started in earnest, I found myself marvelling at its combination of intricate detailing and foot-tapping musicality. Rhythmically propulsive, full of life and with an obvious love of its job, the Parasound powered the song along


'I found myself marvelling at its foot-tapping musicality'

in a most engaging way.

Tonally, it is commendably neutral and revealing of genuine tonal colour. I was able to get a real sense of the richness of Armatrading's voice, for example – it didn't present as just another sterile, processed sound. The Lyra moving-coil cartridge can come over as slightly bright and analytical with the wrong ancillaries, so this was all the more impressive.

Indeed, the JC3+ was able to impart the inherent 'flavour' of a recording with consummate ease. For example, the lush early '70s soul strains of Isaac Hayes' 'Shaft' [from *Shaft OST*, Stax 2659-007] sounded dramatically warmer and more sugary than the quintessentially late '70s dry rock sound of Rush's 'The Spirit Of Radio' [from *Permanent Waves*, Mercury SRM-1-4001].

This is one of the standout qualities of this phono stage; there's no one single type of music it thrives on, or is voiced for. Rather, it matter-of-factly tells you about the recording you're listening to, then steps aside to let you enjoy it.

Rush's 'The Spirit Of Radio' is a quite complex track and I was delighted by 

THE HALO EFFECT

Parasound has something of a superstar designer. John Curl has worked at the top of the American hi-fi industry producing highly respected products since the 1970s. Responsible for such classics as the Mark Levinson JC-2 preamp and the SOTA head amp, he also created the Vendetta Research phono preamp. He started his career at Ampex working on tape recorder design, and then subsequently on video machines. He then moved deeper into the music industry, designing and building sound systems for Grateful Dead concerts. He worked on a variety of pro and home audio projects, and then met Parasound's Richard Schram in 1989. Since then the two men have worked together, with Curl responsible for all of the company's high-power amplifiers, and various other circuit applications too. John Curl's hand has touched all of Parasound's current three ranges, to one extent or another, and the Halo range – from which the JC3+ is taken – is designed to offer high-end performance at an affordable price.

LAB REPORT

PHONO STAGE

PARASOUND HALO JC3+



ABOVE: The finely finished rear panel offers the choice of unbalanced RCA phono or balanced XLR inputs, plus cartridge load adjustment potentiometers, MM/MC switching and a ground terminal. A master mains switch sits next to the IEC inlet

Bearing in mind this updated and uprated JC3 phono stage is authored by none other than John Curl and Carl Thompson you'd expect the '+' to be something special – and it is, though not without some 'character' of its own. The MM gain is quoted as 'increased from 47dB to 48dB' although our sample offered +50.3dB via the RCA outputs and +56.3dB via the balanced XLRs. This represents a sensitivity of 3.0mV (re. 0dBV) which is arguably too high for some of today's beefier MMs from Ortofon, particularly when the input overload of 31.5mV represents a headroom of just +16dB (re. 5mV/cm/sec). A headroom closer to +20dB would give greater margin when replaying the hottest LP cuts while the fixed gain confers a maximum (balanced) output of nearly 20V – so keep the amplifier's volume control handy at all times!

the ease with which the Parasound picked through it. It's a compressed recording with close-miked vocals, a tight, heavily damped drum kit and lots of electric guitars running through multiple effects pedals.

On a poor hi-fi system it can appear a little long-winded and overblown, but the JC3+ was having none of this. It scythed through the mix like the proverbial sharp knife through butter, but never sounded workmanlike or especially forensic, hitting just the right balance between detail retrieval and the ability to communicate the innate musicality of the song. Neil Peart's virtuoso drum work was a joy to behold, and I found myself relling in its percussiveness and power.

I have heard many phono stages give a crisp and detailed rendition of this track, and some serve up a warm and sweet and musical reading, but few can combine both aspects in this way.

LIKE AN OPEN WINDOW

As well as sounding fast and lithe, this product also boasts excellent spatial resolution. It seems to suggest a master tape-like ease, and is able to locate soundstage images – left to right and fore and aft – with great precision.

The same applies for its moving-magnet input too: a Goldring G1042 cartridge sounded far better than expected. Admittedly the soundstage came over as rather flatter by comparison, and a little curtailed in scale from left to right – but this was down to the relative abilities of the cartridges, rather than the phono stage.

So it's a very revealing device, and yet it doesn't get too analytical. A pressing of Donald Byrd's 'Lhasa's Dream' [from *Street Lady*, Blue Note Records 7243 8 53923 1 3] was lots of fun, with an underlying confidence to the sound which

completely belied the modest magnetic cartridge being used.

Although the JC3+ is obviously a solid-state design – it doesn't have the warmth or velvety patina of a tube phono stage, or indeed their associated slightly lazy, hazy demeanour – there is none of the tonal brittleness that some transistorised designs possess. It offers an admirably taut and controlled bass, which is strong but not overblown, and a smooth and transparent midband completely devoid of that characteristic solid-state sheen than many competitors possess, and a delicate yet well-resolved treble.

At no point in the frequency spectrum is there any kind of obvious peak, or hardness, or sense of coloration – which is an excellent trait for something that isn't quite in the 'superfi' bracket.

It acted like an open window on the Donald Byrd track, exposing the distinct sound of the studio with its rather rudimentary four-track analogue recorder, yet it let the music soar out and beguile the listener too. That's quite a trick, and something that will endear it to music lovers of all persuasions. ♪

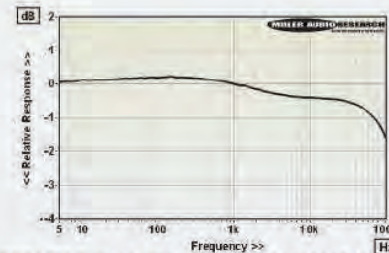
HI-FI NEWS VERDICT

There is no shortage of phono stages on sale at the Parasound's price point, but the Halo JC3+ stands out. A beautifully designed and built package, it boasts a good – if not totally comprehensive – range of facilities. Best of all is its superb sound quality; I have heard few better designs at any price, and the fact that it's able to achieve this for a sensible sum of money makes it an exceptional product.

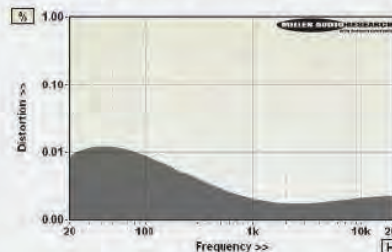
Sound Quality: 89%



The MC input(s) now have lower gain in the JC3+ for exactly the same reason, the +64.7dB equating to an input sensitivity of 583µV while the 6.1mV input overload represents an improved headroom of +21.7dB. Parasound rates the A-wtd S/N ratio of both MM/MC inputs at 87dB but our figures are 88dB and 72dB, respectively, which is closer to what you might expect given the ~14dB difference in MM/MC gain. The corrected RIAA response is close to the ±0.2dB spec. – our sample showing a broad mid-bass boost of +0.2dB with a 'sweetened' treble down -0.4dB/10kHz and -0.5dB/20kHz [see Graph 1, below]. Distortion is very low right up to the point of input overload, max'ing out at just 0.012%/50Hz but holding below ~0.002% from 1kHz-20kHz [see Graph 2]. Readers may view a QC Suite test report for Parasound's Halo JC3+ MM/MC phono preamp by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



ABOVE: RIAA-corrected frequency response from an extended 5Hz-100kHz at 0dBV via MM input



ABOVE: Distortion versus frequency (20Hz-20kHz) at 1V out. THD falls with output to 0.001% at 10V

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm / 50-550ohm
Input sensitivity (MM/MC, re. 0dBV)	3.04mV / 583µV
Input overload (MM/MC, re. 1% THD)	31.5mV / 6.1mV
Max. output (re. 1% THD) / Impedance	19.6V / 195ohm (balanced)
A-wtd S/N ratio (MM/MC, re. 0dBV)	88.1dB / 71.5dB
Frequency response (20Hz-20kHz)	+0.2dB to -0.45dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0017-0.012%
Power consumption	3W
Dimensions (WHD) / Weight	437x105x350mm / 0.6kg