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PHONO STAGE

MM/MC phono preamp with balanced outputs
Made by: Parasound Products, Inc, California, USA
Supplied by: IOS Company (UK) Limited, Wilts
Telephone: 01249 708641
Web: www.parasound.com; www.ioscompany.co.uk
Price: £2299

AUDIO FILE

Parasound Halo JC3 Junior

'Junior' in name and certainly less substantial in build than its flagship stablemate, this latest take on the JC3 theme turns out to be an even more flexible MM/MC phono stage
Review: **Nick Tate** Lab: **Paul Miller**

Does the world really need another phono stage? Back in the late 1980s the Michell ISO was a rare standalone product, but since then there has been a steady stream of the things, multiplying in numbers like Tribbles on *Star Trek's* USS Enterprise. We're now at the point where it feels as though there are as many designs on sale as there are people to buy them – so any new entry has to have a compelling *raison d'être*.

In the case of Parasound's £2299 Halo JC3 Junior, it qualifies on account of family ties, with its big brother being the excellent £3999 JC3+ [*HFN* Oct '15]. The latter gives the sort of performance that some rivals struggle to beat at twice the price, so with its common parentage there's a sporting chance this new baby will be good. Welcome then, little fella!

A LIFETIME IN HI-FI

Although not quite at the point of being accosted in his local shopping mall for an autograph, Parasound's designer John Curl is well known and respected in the US audiophile community. He's worked at the top of the American hi-fi industry since the 1970s, during which time he created classics such as the Mark Levinson's JC-2 and the SOTA head amplifier, as well as working for Constellation Audio, Audible Illusions and his own Vendetta Research.

John started his career at Ampex designing tape and video machines, then built sound systems for The Grateful Dead, no less. Since he met Parasound's Richard Schram in 1989 he has produced the company's high-power amplifiers, and much more. The JC3+ was his work, and now the Junior brings his philosophy to a wider and more price-conscious market. As Parasound's most accessible phono stage it promises a generous taste of high-end vinyl sound at a saving of nearly £2000.

RIGHT: Unlike the JC3+ with its fully screened dual-mono RIAA modules, the Junior's hybrid network is built onto a single PCB [top right] and powered by a filtered /regulated PSU [lower right] that, by JC3+ standards, is 'stripped down'

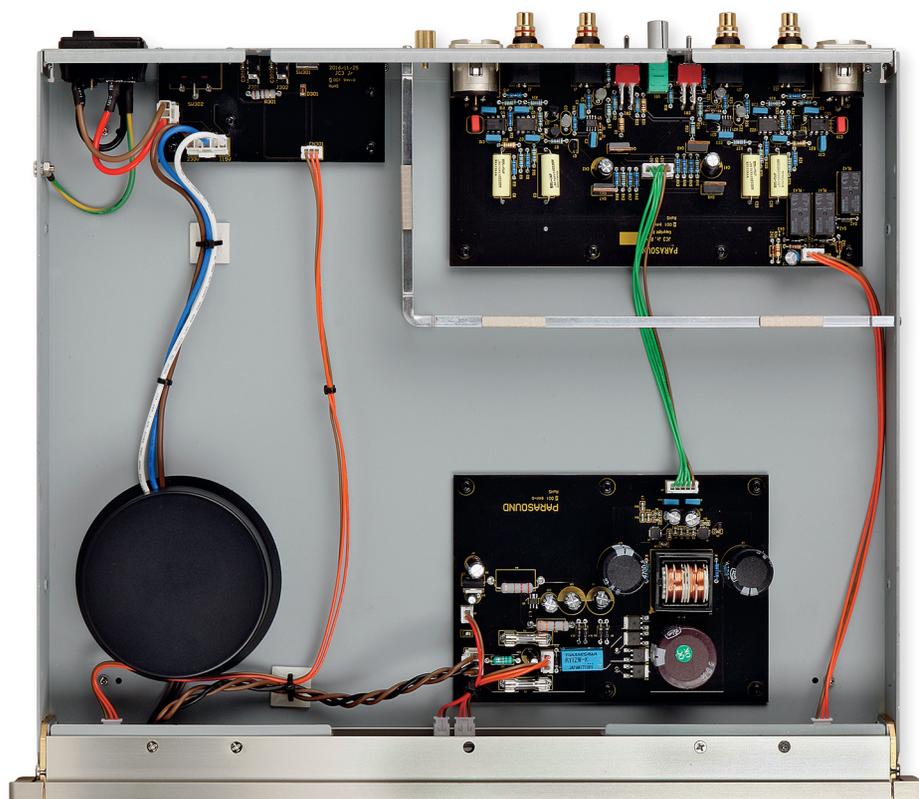
The Junior treads a skilful line between convenience and flexibility, for unlike many phono stages, it doesn't offer cartridge matching via a plethora of fiddly DIP switches. Instead, there's a small section of the rear panel that offers a choice between gain of +40dB, +50dB or +60dB in unbalanced mode (+46dB, +56dB and +66dB balanced) alongside another switch offering variable or fixed impedance loading. The fixed setting is a standard 47kohm, while the variable offers a range between 50 and 550ohm via a small stereo trimpot. The rear panel also helpfully notes that MC cartridges typically require +60dB gain and MMs +40dB, while the middle setting better suits high output MCs or abnormally low output MMs.

This, and the fitment of balanced (Neutrik) XLR outputs, are effectively the only 'deluxe' touches you get for your money. Parasound's JC3 Junior still looks

like a quality product, but anyone coming from the JC3+ can tell it's not quite as luxuriously appointed. The alloy fascia is classy and its steel casework is really well finished in a choice of silver or black, and there's a rack-mount kit available should you wish to use it inside a recording or mastering studio.

Yet the front panel is very much a case of 'less is more' while hosting just power and mono buttons – albeit the two most useful things you can have on a phono stage aside, perhaps, from 'mute'. A mono facility makes the best of legacy, pre-stereo recordings, of course. On standby the blue power LED is dimmed while switching the unit on brings it up to full brightness after a short start-up period.

Inside, things are neatly laid out, with a sprinkling of audiophile components including Vishay Dale resistors, high-speed/soft-recovery bridge rectifiers and





common-mode inductors, all mounted on Carl Thompson-designed PCBs. The same premium RelCaps are used in the RIAA network as John Curl employs in his famous Vendetta phono stage, while Parasound's Richard Schram says the Junior uses: 'the best-sounding and quietest IC op-amp that John Curl recommends'. Both inputs and outputs are direct coupled, with DC servos used to prevent any offset voltage at the output, the company says.

FAMILY LIKENESS

Having heard the JC3+ at length, I knew roughly what to expect from the Junior and wasn't disappointed. There's a distinct family sound, as you might assume, and Parasound's entry-level phono stage doesn't stray from the 'clean and open' formula of its pricier siblings. The stereo soundstage is well proportioned and clearly defined, with strong image location and a good sense of stereo width and depth. Tonally things are smooth and balanced, with no obvious peaks and troughs, and the same slightly well-lit upper midband that shines a crisp white light on the presence band.

The Junior is less detailed and insightful than the JC3+, but its subtly more romantic

and hazy sound is by no means taxing on the ear. In the great phono stage scheme of things – when you consider the romantic sound of some tube designs on the one hand, and the archetypal crisp, spry and etched solid-state sound on the other – the Junior errs towards the latter, but not by a huge margin. Both tonally and in terms of its wider musical performance, it's quite a middle-of-the-road performer.

This is not meant in a pejorative sense – after all, such a description never lessened the beauty of Karen Carpenter's voice! It has the ability to play a wide variety of music – and indeed cope with

Junior dug deep, lasering through those layers of production'

indifferent record surfaces and recordings – and make an earnest and competent stab at producing an enjoyable sound that will take you into the heart of the music. You do not get any sense of the

Junior being a phono stage that likes 'deconstructing' things.

Steve Hackett's 'Shadow Of The Hierophant' [from *Voyage Of The Acolyte*; Charisma CAS 1111] is a slice of quintessential mid '70s progressive rock, very well recorded with a wide dynamic range and a 'dry' tone typical of that period. The Junior carried it with real elan,

ABOVE: With the gain and loading options confined to the rear panel, the JC3 Jr.'s front panel hosts just a power button and a mono switch. Black and silver finishes are offered

giving a great insight into the grain of the vocalist and instruments, and an extremely tactile classical guitar sound. Fed from a Lyra Dorian moving-coil in a Michell GyroDec/Tecno Arm, the glory of vinyl was really on display here.

The Junior's innate transparency and low noise was much appreciated, giving a most vibrant and natural feel to the proceedings with deep bass and sparkling treble. Again it does the trick that its bigger brother performs so well, allowing one to listen right into the soundstage and hear all the different strands of the mix playing together. Even in the most crowded dynamic arenas, this phono stage kept things clean, open and ordered.

Tracking the new Audio-Technica VM530EN cartridge, the moving-magnet input returned similarly impressive results, providing no less entertaining a sound.

ENVELOPING SOUNDSTAGE

Back to the MC, and it was time to put the Junior through its paces on more modern material. One of the other stand-out features of this phono stage is its 'architectural' soundstaging. Its more expensive siblings are stronger still in this respect but the Junior's ability to recreate a vast, cathedral-like recorded acoustic is quite special at the price.

It's not simply the sort of broad, nebulous Phil Spector-like wash of sound that you get from some tube designs. The latter may be very pleasing to those vinyl addicts who love euphony, yet the Junior steadfastly refuses to behave as a sort of vinyl effects processor. Rather, it diligently recreates the borders of the concert hall or recording studio as best it can.

At the price, the result is impressive – 4hero's 'Spirits In Transit' [from *4 Pages*; Talkin' Loud 568 879-1] proved vast and enveloping, with those soaring strings, 

SIBLING RIVALRY

There's some contrast between the established £3999 Parasound JC3+ and this new £2299 JC3 Junior. The difference is immediately obvious in the casings – the latter feels slimmer and lighter and doesn't have individual load selection for each channel on the rear panel. Take the case top off and you'll see that the JC3+ is busier inside with two mono RIAA modules and an R-core transformer, while the Junior has one stereo module and a single toroidal [see picture, p46]. Parasound's Richard Schram says their respective circuitry is 'more similar than different', with both using active/passive RIAA equalisation. He adds that the Junior benefits from lessons learned with the JC3+, so a middle gain option has been fitted to maximise *input* headroom and optimise *output* level, limiting the chance of overloading the input stages of certain preamps and integrated amps [see PM's Lab Report, p49]. Aside from topology and a superior PSU, the JC3+'s other key advantage lies in its 'highly effective' AC mains line filter, notes Schram.



PHONO STAGE



ABOVE: Three levels of gain are offered at +40dB, +50dB and +60dB, the latter suitable for all but the lowest output MCs. Loading is fixed at 47kohm for MMs and variable between 50-500ohm for MCs, and output is via RCAs and (balanced) XLRs

harp and deep double-bass apparently nailed to the boundary wall of my listening room. You could practically hear the drum kit resonating off its booth in the studio. Everything was affixed to virtual 'hard points' in space with great precision, staying in place even during the rousing crescendo.

Although phono stages can't make music sound artificially rhythmic, they often have a negative impact by slowing things down. Some seem to make things appear breathless, others manage to suck the life out of a recording, rendering it dull and devoid of passion. Like its bigger JC3+ brother, the Junior did neither of these. Instead it presented a fast and dynamic face to the world, able to track the subtle accenting in the music while also following its natural rhythm. Annie Lennox's 'Don't Let It Bring You Down' [from *Medusa*; RCA 74321-257171] is a sublime cover of the '70s Neil Young masterpiece but, thanks to its rather dense and compressed '90s production, can sound rather dirge-like.

LILTING PROGRESSION

Not so here, as the Junior dug deep, lasering through those thick layers of production. It proved well able to capture the leading edges of the electronic snare and cymbal sounds and fire them out at great pace; its innate sense of control and grip kept things composed, and it had room to breathe during climaxes, remaining calm and collected.

The Junior doesn't 'throw' rhythm at you – it's not in the business of sounding unnaturally fast – rather it has a strong, controlled, lilting sense of musical progression where everything is kept exactly in its correct place. Yes, there are some tube rivals that present as dreamier and more romantic, but none cut

through to what's in the groove better than this. Put all these aspects together – its insight, control, accurate soundstaging and fine handling of rhythms – and you have a redoubtable performer.

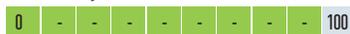
Of course many phono stages excel in one or more of these areas but the JC3 Junior does very well with all across the board. Whether it's the pristine classic electropop of Kraftwerk's 'Techno Pop' [from *Electric Café*; EMI Electrola 1C 264 24 054 4] or the dramatic finale of Beethoven's Symphony No 5 [Philharmonia Orchestra/Karajan; Toshiba/Angel Records AA-8212], you get a well-rounded, cohesive and informative sound.

It invites you in and lets you look around inside, so to speak, while remaining largely impartial about your tastes. Sure enough, spending some £2000 more on Parasound's JC3+ gets you greater image focus, insight and grip, allied to a slightly stronger bass and sense of spaciousness – but there's no doubting that the JC3 Junior's even-handed nature has huge appeal, as indeed does its much more affordable price. ☺

HI-FI NEWS VERDICT

Parasound's Halo JC3 Junior phono stage treads an intelligent line between two sonic extremes. Neither overly euphonic nor too forensic, it remains enjoyably engaging at all times, yet largely agnostic about the music you choose to use. It provides three key gain settings, with sensible cartridge matching options and a mono button to boot. Factor in fine build and finish and it clearly scores at the price.

Sound Quality: 83%

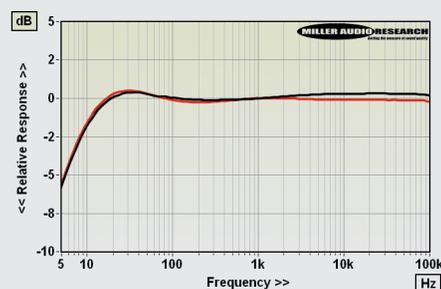


LAB REPORT

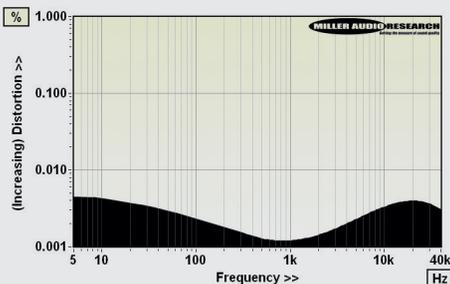
PARASOUND HALO JC3 JUNIOR

A quick comparison between the 'inside shot' on p46 and that of the JC3+ [HFN Oct '15] clearly reveals the stripped-down build of this 'Junior' version. Nevertheless it's almost as if circuit and board designers John Curl and Carl Thompson had read our Lab Report published over two years ago because, in practice, the JC3 Jr offers a broader range of gain settings (three rather than two) and a better balance between its input sensitivities and input overload capacity. The specified +40dB, +50dB and +60dB gain options work out as +46.7dB, +56.7dB and +66.3dB via the JC3 Junior's balanced outputs, equivalent to input sensitivities of 4.58mV, 1.46mV and 486µV respectively.

The lower sensitivity '+40dB' option is better suited to high output MMs from the likes of Ortofon than the +50dB minimum setting of the flagship JC3+ and supports this with a healthier 70mV input overload ceiling – a margin of +22.9dB for a standard 5mV MM (re. 1kHz/5cm/sec). The intermediate '+50dB' option is ideal for lower output MMs and high output MCs where the JC3 Junior will yield its optimum 90dB A-wtd S/N ratio. With both +40dB and +50dB settings, the RIAA-eq'd distortion remains as low as 0.0012-0.012% from 20Hz-20kHz [see Graph 2, below]. The highest '+60dB' option offers a useful input headroom of +23.9dB for standard 500µV MC pick-ups, although the lowest output MCs will not realise the potential 74dB A-wtd S/N ratio. Parasound's penchant for subtly adapting the RIAA response continues here with a subsonic roll-off of -3dB/7Hz (missing in the JC3+) followed by a mild +0.3dB bump in the low bass before reaching out to 100kHz ±0.3dB. The L/R channel imbalance at HF is insignificant [see Graph 1, below]. PM



ABOVE: RIAA-corrected frequency response from an extended 5Hz-100kHz at 0dBV via MM input/balanced output (black = left; red = right channel)



ABOVE: Distortion versus extended frequency (5Hz-40kHz) at 1V balanced output

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm / 50-550ohm
Input sensitivity (re. 0dBV balanced out)	4.58mV / 1.46mV / 486µV
Input overload (re. 1% THD)	70mV / 23mV / 7.8mV
Max. output (re. 1% THD) / Impedance	15.6V / 96ohm (balanced)
A-wtd S/N ratio (re. 0dBV balanced out)	82.7dB / 90.1dB / 73.9dB
Frequency resp. (20Hz-20kHz/100kHz)	-0.1dB to +0.32dB / +0.18dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0012-0.012%
Power consumption	8W
Dimensions (WHD) / Weight	437x64x375mm / 5.9kg