

Parasound Halo JC 1+ Mono Power Amplifier

Reviewed by Chen Haichua, HiFi Review Magazine, Hong Kong

“The following comments/review are only for a group of audiophiles/readers who are pursuing good sound quality as well as good value products for their reference!”

If you ask yourself whether you don't care about the psychological added value of buying famous brand products, and if showing off doesn't give you a pleasant feeling, then it is cost-effective.

Like the saying about food if you're the type of the person who appreciates ample portions and very good value you shouldn't overlook this pair of monoblock amplifiers. First you have to decide if you can welcome such a large pair of mono amplifiers? How big is it? It is about 17.5 inches wide, 7.7 inches high, and 20 inches deep. If this works for you, and you are inclined to own a large pair of mono amplifiers, then congratulations!

The legendary designer

This large pair of Parasound monoblock amplifier, JC 1+, has a power output of hundreds to thousands of watts (450 watts @8Ω / 850watt@4Ω / 1300watts @2Ω) It costs you no more than HK\$130,000 or HK\$140,000. These numbers alone are certainly not enough to convince you as audiophiles have requirements for sound quality, but the famous guy behind the JC 1+ and his reputation should be enough to convince you.

JC on the model of JC 1+ is an abbreviation of John Curl. In the eyes of average audiophiles, John Curl isn't have a high profile, but in the electro-acoustic engineering field, he is revered world-wide, and it can be said that he is one of the most respected

circuit designers in audio history. Any terms such as the respectable and admirable person or a legendary person etc., can all be used to describe him. He deserves his reputation! How significant is he? In the 1970s, he designed the "the mutual compensation differential input" circuit topology which not only wrote a new standard for high-fidelity audio, it has even impacted the design and application of today's amplifier circuits.

Continuous R&D work

John Curl is a freelance, specialized designer, and his footprints are all over the professional and consumer Hi-Fi audio fields. Many different audio companies have his presence. His major strength is in the design of analog amplifiers. The professional master tape recorder he designed is highly regarded and favored by the audiophile recording companies such as Mobile Fidelity and Wilson Audio. As to the Masterpieces on consumer's HiFi products, including the design of the Hi-End classic Mark Levinson JC-2 preamplifier, the legendary Vendetta Research SCP-2 phono amplifier and SOTA phono amplifier. John Curl continues design, research and development. In recent years, he designed the Constellation Audio phono stage and occasionally advises Abington Audio's design team. However, if you want to count those who have the closest and longest cooperation and relationship with John Curl, Parasound stands out. Back in 1989, Parasound invited John Curl to design amplifiers for them. This enabled the master's Hi-End design to also be enjoyed by audiophiles at affordable prices.

Renowned and illustrious

Although Parasound products are not too pricey for consumers and have a wide range of products, don't misunderstand that it is a price tag product. It's a cost-effective brand that I have known and experienced for the past 30 years!

In 1992, the Thiel CS2.2 speaker was a smash hit entry level floor-standing speaker that performed very well. Because of the passive radiator bass and extremely low impedance it demanded a substantial power amplifier. However, a model designed by John Curl, the Parasound HCA-2200 stereo power amplifier which was sold for only over ten thousand HK dollars, with its Ultra High Current design, drove the CS2.2 so well that, as the saying goes, quiet like a virgin and fast like a rabbit - it could easily

reproduce a big symphony orchestra music. It challenged most power amplifiers costing many times higher.

Parasound and John Curl

As the various Parasound amplifiers designed by John Curl have not only earned an excellent reputation, they sell very well. Thus, Parasound commissioned him to develop a new generation of flagship model in 2000. Finally, three years later, the JC 1 mono amplifier was launched. This flagship power amplifier sold well for 16 years. Over time, numerous consumers requested an improved version of the JC 1. In fact, JC 1 owners were totally satisfied with its performance, yet it's human nature to still want the better. Nevertheless, both Parasound and John Curl did not want to launch a new model without design breakthroughs and significantly improved performance.

New dedicated R-Core transformer

In early 2014, John Curl finally had the idea of significantly improving the performance of the JC 1, Parasound immediately commissioned six hand-made experimental prototypes, one after another, to evaluate the new design. After measuring and listening, it was confirmed that in all respects the new design was significantly better than the JC 1. It then took an additional five years to complete development before the new JC 1+ was born officially.

To improve on the JC 1, John Curl added a dedicated R-core power transformer for input and driver stages. John Curl explained that input stage distortion is often caused by insufficient power supply voltage, and the power supplies for the input and output stages in most amplifiers share the secondary of the main transformer. Thus, whenever the amplifier is playing at high volume, it can cause distortion. The JC 1+ added the R-Core power transformer dedicated for the input stage, which speedily and smoothly with high speed "soft recovery" bridge diodes and Nichicon filter capacitors to provide $\pm 89V$ voltage and 22,400uF in total. When the output stage voltage peaks, it is more capable to generate a rock-solid $\pm 112Vdc$ energy without compromising the input stage.

180 amperes peak current

John Curl is a master at eliminating electronic noise, so he specified Bybee Music Rail active high frequency noise filters to virtually banish noise on the input and driver stages. The input stage FETs are Toshiba J-FET (2SJ74P and 2SK170N) are matched by hand to further ensure its linearity. Even the input stage printed circuit board substrate can affect sound quality so he specified FR408, which was invented for supercomputers and aerospace applications. Finally, additional shielding is added to isolate internal stray noise from the input stage.

To drive low impedance speakers does not necessarily require more watts, but it absolutely requires much higher current. The JC 1+ output stage employs 24 Sanken 15A/230V/60Mz) bipolar transistors totaling 180 amperes, 25% more output devices than the JC 1. This increases peak current output by 33% to 180 amperes. To enable the JC 1+ output stage to conduct much higher current the copper traces of the N and P channels circuit boards are twice as thick as in the JC 1. To support such enormous current required a more substantial transformer. The JC 1+ toroid transformer is an enormous 2.1KVA and weighs 30 pounds, 30% greater than the JC 1 power transformer. Developing such a power transformer without any distracting vibration is quite challenging and eleven massive transformer samples were built by hand before the transformer was approved successfully created for the required power. This was achieved with a specially designed (and expensive) silicon steel core.

198,000uF capacitance

In order to achieve greater dynamics, the power supply of the JC 1+ upgrades the filter capacitor array from four to six premium Japanese 33,000uF Nichicon Gold Tune capacitors. Its 198,000uF total capacitance is 50% greater than the JC 1 with only 132,000uF. Many people believe that Gold Tune capacitors are one of the best capacitors for high power output design. Although this Gold Tune capacitor is no longer available Nichicon continues to produce them exclusively for Parasound.

In addition, JC 1+ has added a selectable gain control (29dB-Normal gain or 23dB-Higher gain) feature to optimize performance with line stage preamps that have different output gains and L and R channel volume control tracking, or with high or low sensitivity loudspeakers. The JC 1+ still has selectable bias as in the JC 1 (Normal) or (Low) to change the level of pure Class A power ratio. The former bias is 25 watts of pure Class

A, and the latter is 10 watts of pure Class A. The manufacturer says the purpose of this function setting is to reduce its working temperature when necessary, the impact on the sound quality is virtually impossible to notice...so and so. Of course, for this audition, I chose (Normal) bias voltage, that is, the first stage power is within 25 watts in pure Class A.

Just as it ought to be

Connect the JC 1+ to the Soudation 325 preamplifier, and then connect with Audio Note ISIS speaker cable to B&W 802 D3 loudspeakers, and plug the power cords of the two JC-1+ into the Analysis Plus Power Oval 2 Mk2. Then that is, the complete system is right and there is no strong personality in the sound reproduction of this match.

Just turn on the system, listening to the system of JC 1+ through the 802 D3. Nothing strange to make me feel something is off, nor did I notice any particular frequency. It was actually everything coming the right way, and it didn't make me feel suspicious or critical of the sound reproduction. In fact, enjoying music puts me in a good mood. At work from time to time I have to take a break to deliberately pay attention to the sound performance of JC 1+.

Seeing that the JC 1+ offers 450 watts of power output under an 8Ω load, on top of my certain knowledge and confidence in Parasound, there' was no reason to be conservative at the beginning of the recording of both the solo and chorus and also the organ of Nidaros Cathedral Girls' Choir "Magnificat-Fecit Potentiam". Female chorus is bright with good quality, smooth without fault or obscuring the slight differences amongst the singers. It also restores flesh and blood as well as the liveliness of the chorus, plus the female soprano and the organ, it's like gradually introducing and constructing a spiritual feeling.

A giant killer!

It must be mentioned that the JC 1+ ability to play back the organ is not only from the 802 D3 in the room size of 450sqft which is the large room at our magazine house, it has clearly created a pipe organ in the "immersion" from low to extremely low frequency. The most impressive performance is the deep bass, and the nuances between the change of tones; I can't tell if it's the more potent input and driver stages

with the dedicated R-Core toroid transformer as mentioned by the manufacturer; its distortion is still negligible at low level with a high sound pressure level. Just listening to this pipe organ is enough to reinforce that the JC 1+ leapfrogs challenges from Hi-End audio power amplifiers, making it eligible to be giant killer!

Flawless

The content of the "Blue Coast Collection 3", "Rolling In The Deep" is as detailed when reproduced by the JC 1+ I as is cooking with the right ingredients, under the right heat, the texture of soft and hard, and the delicate taste is. The cello plucking changes in strength, quantity and quality. The blues performance of Melissa Reese is strong but not greasy against the guitar, and the tone of the violin solo, while coarse, gave the feeling of country folk songs just like Melissa Reese expressing her unhappiness - a bit of uninhibited provocative emotion with regret, just like an emotional booster. The accompanying vocalist, Keith Gruninger, with his mature and down-to-earth voice, expresses emotion with less detachment to see-through the artist, is exactly the contrast of Melissa Reese's persona.

Absolute beauty and passion

My audition is never complete without listening to Hélène Grimaud performing the Rachmaninoff No. 2 Piano Sonata. An "all is fine" feeling returns, as if you don't hear an emphasis on a particular frequency band, it is the right way. I feel a great performance with a grand piano in front of the hall, and the exquisite touch of the keys, when the high pitch is bright and clear, the midrange is lively, mid-bass to low-bass is powerful and solid, the overall eclectic in beauty and passion.

New sensations

To playback another recording of a violin solo, Isabelle Faust "JS Bach—Sonatas & Partitas", aiming to further experience the pure Class A power output of JC 1+ and its low noise level. Reproduction of a violin may not even require 1 watt. Therefore, JC 1+ must be amplified in the pure Class A range, and it is also the vitality

of a pure Class A power, the sense of flesh and blood, the coherent and smooth tone of the piano, showing its vitality.

Even the harmonics and the hall ambiance have a vivid sensation and benefit from the JC 1+ lack of background noise. To let the sound and music in the signal appear more detailed and exquisite, picturing details of this solo violin recording are richer, and the interpretation is like constructing a more three-dimensional Zen garden and more encompassing.

Value for money

It is still the most realistic way of talking, as if you are single-mindedly pursuing the same quality. At the same time, more emphasis is on good value for money - pay less for a high return - and overcome the problem of difficult to drive low efficiency loudspeakers. The JC 1+ at only a hundred something thousands (HKD) for a pair, should be the most assured and reliable choice on the market today. It's meaningless to talk about the JC 1+ if you haven't heard it in person - you'll never be able to appreciate it any other right way. Steady, high-level performance, and priced so low!

Hong Kong Distributor: Sound Concepts Ltd.

Suggested retail price: HK\$140,000 / pair