

John and Richard with a JC 1 at the Consumer Electronics Show (2003 or 2004)

Here's the story behind the development of the JC 3.

It took me a few years to persuade John Curl to create a phono preamplifier for Parasound. He has played an historic role in the advancement of the art of audio design and his accomplishments as a phono preamp designer are securely in a class of their own. I assured him that we would do our part to build a phono preamp which would surpass customer expectations and set a new standard of performance for the money.

John strongly recommended a new design that would achieve elegance through its simplicity. He designed each circuit so its audio paths could be as short as possible, on very small circuit boards to minimize susceptibility to stray noise. John turned once again to Carl Thompson, his long-time collaborator for circuit board layouts on so many inspired products. Carl designed the circuit boards for John's legendary Vendetta Research phono preamp and CTC Blowtorch preamp and for Parasound's Halo JC 1 monoblock amplifier and JC 2 and JC 2 BP preamplifiers.

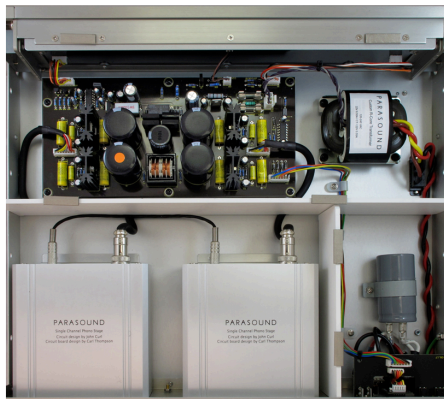
In John's opinion, the majority of MC cartridges are well-served with an input impedance of either 100 ohms or 47k ohms. 47k ohms is also optimum for the high end Grado moving iron cartridges. The three position input load switches were custom made for Parasound and use gold-on-silver contacts to preserve the integrity of the miniscule input signals. I suppose it is a calculated risk to release a phono preamp without lots of adjustments for users to tweak, however I decided to stick with John on this issue and the result has proved to be outstanding.

There is something that's almost magical when music emerges from an utterly silent background. Thus, one of my primary objectives was to make the JC 3 as quiet as humanly possible. While the JC 3's traditional signal-to-noise specs are exemplary, they don't tell the whole story. One needs to consider the noise spectra, which correlates with how you actually perceive noise. The subjective noise level of the JC 3 is extremely low, making it compatible with even very low output MC cartridges.

The passive parts used for the JC 3's RIAA equalization are identical to those used in the Vendetta Research phono preamplifier. The JC 3 active circuit design is based on a specialized application of extremely low noise parts plus FET "helpers" which force them to operate right in their "sweet spot" while using smaller value resistors for the lowest possible noise. The JC 3 is fully direct coupled with DC servos rather than coupling capacitors. The output stages are a true differential balanced design.

Designers of phono preamps often underestimate the importance of the power supply. The tiniest amount of power supply ripple in the audio circuits can easily contaminate the sound and the slightest "pumping" of an under-rated power supply simply sucks the life out of music. The JC 3 power supply is modeled on the JC 2 dual channel power supply with an R-core power transformer. Compared with a toroid transformer, its R-core transformer has less capacitive coupling between primary and secondary windings and provides greater immunity from noise on the AC line getting into the power supply. JC 3 power supply employs ultra-fast/soft recovery diodes, large low-ESR filter caps and a hefty inductor for additional filtering. FET "followers" further isolate each channel's audio circuit from the power supply voltage regulators.

The JC 3 includes a *built-in* AC line conditioner, an extravagance that assures the purest possible sound. The AC line conditioner helps to keep the garbage in your AC power line out of the circuit, out of your music and out of your life.



We added layers of shielding, first by enclosing the left and right audio channels in their own extruded aluminum modules. This also helps keep crosstalk to a minimum.

The left and right channel modules are in turn shielded by two 3/8" thick partitions. These partitions are made of low-carbon "mild steel" which is highly permeable to absorb any stray EMC coming from the transformer and even the wires which run from the AC receptacle. The partitions also separate the two audio sub-enclosures from the power supply board. The JC 2 chassis and rear panel are made of aluminum, rather than steel, to avoid any possible interaction with the audio signals.

The JC 3 includes a stereo-mono selector which can make mono and older LPs more playable. Relays in the left and right channel modules only permit the signals to exit the modules when mono is selected.

Sometimes the only way to eliminate turntable hum is to reverse the direction of the preamp's AC plug. Since AC plugs are not reversible, we gave the JC 3 a polarity invert switch for the incoming AC power. This is an extremely useful feature that appears on only two other phono preamplifiers: the Parasound Zphono and Zphono v.2.

Finally, for your convenience, the JC 3 offers the option of auto turn on/off when it is connected to a Parasound preamp or to any other preamp with a 9-12v trigger output. We even provide the trigger wire.

The entire team at Parasound is very proud of the JC 3. John Curl and Carl Thompson made huge contributions to this project and I continue to learn something new each time I speak with them.

I believe the JC 3 will renew your enjoyment of your library of LPs.

Sincerely,

Richard Schram
President
Parasound Products, Inc.