

The Holy and the IV – The PrimaLuna ProLogue Eight Upgraded

Neville Roberts

Following David Price's review of the PrimaLuna ProLogue Eight valve CD player, Neville Roberts tries out the latest upgrade to emerge from Herman van den Dungen's Durob Audio.



In the July 2008 issue, our editor reviewed the ProLogue Eight valve CD player, the latest in the ProLogue series of Hi-Fi separates from PrimaLuna. PrimaLuna comes from the same Dutch firm that brought us the AH! Njoe Tjoeb 4000 valve CD player and the valve-based SuperTubeClock that I reviewed last year.

For starters, the ProLogue Eight incorporates the same tiny triode-based clock used in the SuperTubeClock. The theory is that a valve clock produces an ultra-clean sine wave that effectively eliminates jitter, resulting in a significant improvement to the sound of a CD.

The player also sports a 'state-of-the-art' Burr Brown SRC4192 upsampler and Burr Brown PCM 1792 DACs (digital to analogue convertors) as well as employing custom designed isolation transformers. On the vacuum front, the player has a dual-mono, zero-feedback output stage using one 12AX7 and one 12AU7 (ECC83 and ECC82 to you and me) per channel, with each being supplied by a separate 5AR4 (GZ34) valve-rectified power supply – six valves in total. The valve circuitry utilises a slow start circuit for extended life of sensitive components, plus a reduced chance of valve failure from thermal shock.



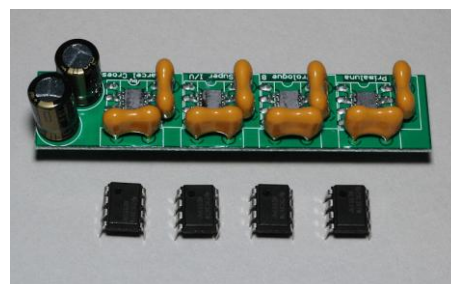
The result is certainly impressive and I agree with David Price that the PL8 has arrestingly natural timing, dizzying amounts of detail and organic musicality. Although David felt the PL8 had "prosaic styling", I have to say that I rather like the solid feel of the unit, which to me oozes quality (sorry David!), but I'm not very good at aesthetics and I guess it's all down to personal taste! For the record, my wife agrees with David!

So it's clearly a pretty good unit as it stands, but where can you go from here?

Fitting an IV in a VIII

The answer is to fit a Super I/V op-amp kit! PrimaLuna claim that, to the best of their knowledge, the Super I/V Board Plus incorporates a new type of op-amp that has never been used before by an audio manufacturer. For an extra £139 on the cost of the standard unit, you get:

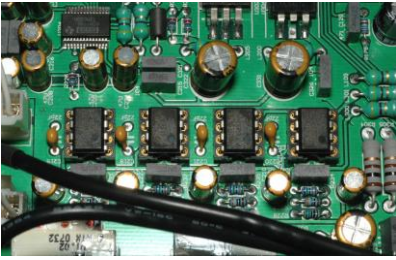
- Slew-rate upgrade from 13V/ μ S to 100V/ μ S
- 50% noise reduction
- Tenfold improvement in the bandwidth



Having got my soldering iron sharpened ready for the promised task of installing an upgrade, I was a little disappointed to find that the job was so easy! Simply turn the CD player over, remove the eight screws that secure the base plate, pop out the four original NE5534 op-amps and replace with the special Super I/V op-amp board!

The Super I/V Board Plus is an upgrade to the standard current to voltage (transimpedance) amplifier which takes the current output from the DACs and converts it to a low impedance voltage source to feed the output valve drivers and is a crucial part of the audio chain. Therefore, from a theoretical point of view, an upgrade of the I/V components should improve the sound quality. £139 is a relatively small sum to invest in to upgrade a £1,849 CD player, but is it worth it?

The Ubiquitous “Before and After” Tests



It was a simple matter to replace my Njoe Tjoeb 4000 valve CD player (from the same stable as the PrimaLuna range) with the standard ProLogue Eight in my system. The protective grill covering the valves was, of course, removed so I could enjoy the sight of the array of 6 glowing bottles, each resplendent with



a personalised PrimaLuna logo stamped on the glass - no doubt designed to enhance my listening pleasure! My well-spun copy of Vivaldi Violin Concertos Op.6 (Decca 455 653-2) was placed on the CD tray and, having depressed the Stop/Open button on the front panel to load the CD, I was ready for some serious listening.



The ProLogue Eight in its standard form offered a highly detailed presentation with clear and well defined strings, and no signs of harshness. Moving onto vocals, Cecilia Bartoli - The Vivaldi Album (Decca 289 466 569-2) is a pretty demanding CD for any system and the ProLogue Eight responded well to the extreme changes of tone and tempo in the recording as well as the breathtaking vocal gymnastics of Cecilia Bartoli.

Moving to something a bit more modern, Gordon Giltrap's guitar playing on Airwaves (La Cooka Ratcha LCVPI08CD) produced a crystal clear performance on the ProLogue Eight.

Time to switch off, replace the protective cage to allow the player to be safely turned upside-down and swap the four op-amps with the Super I/V op-amp board. Re-listening using the same set of CDs, by comparison it became evident that the midrange had been slightly lacking with the standard op-amps fitted. Also, the bass was now much more extended and tighter with the new board. The overall effect was a huge improvement in the realism of the various performances. A sense of realism, which is characteristic of LPs, is what I am looking for in audio reproduction. The sound was altogether more believable with an expansive sound stage of extremely well-balanced instruments. In fact, this improvement was so great, I had to re-fit the original op-amps to check that I wasn't kidding myself.

Oh dear, it was as though I had torn the heart out of the poor machine! In comparison, the same CDs sounded a bit thin and there was evidence of bass roll-off – particularly on the Gordon Giltrap. The sound stage front to back collapsed by about a metre or two and the sense of realism definitely diminished. I can summarise all this by saying that the overall effect was more CD-like! The Super I/V board was swiftly replaced to restore the beast to its former glory!

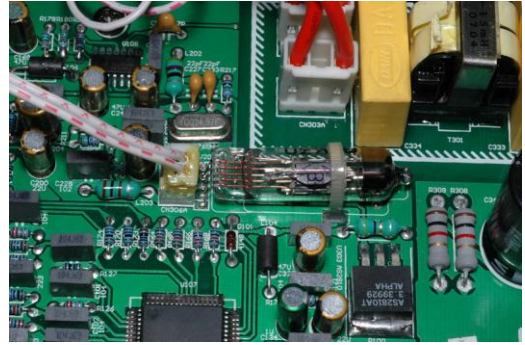
So, in conclusion, the Super I/V op-amp board is not just a worthwhile upgrade – I would say it is a 'must have'. For the price, it really is a 'no-brainer'!

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The SuperTubeClock

As the old saying goes: the secret of good comedy is in the timing – and this is also true of good CD players!

According to Marcel Croese, the technical whizz behind the SuperTubeClock and indeed the ProLogue series, the problem is that the undesirable switching transients, inherent in solid state clocks and particularly bad in CMOS materials, will inevitably cause jitter in the clock output. This jitter, along with the high solid-state background noise, is directly modulated into the sine wave of the oscillator itself. The part of this jitter located in the audio spectrum gives rise to the distinct signature of the digital sound that we have come to know - and hate! The trick is to end up with a very fast square wave enabling the clock to provide extremely accurate timing, but without noise or jitter in the clock itself.



Valves are well-known for their very linear operation and their very low noise and distortion products. The SuperTubeClock incorporates a sturdy and stable long-life mini-triode which is used to produce an ultra-clean sine wave. This is then shaped into a square wave with excellent speed, accuracy and jitter properties. Specifically, it is claimed that the parasitic noise in the 10Hz to 100kHz region is much lower with the SuperTubeClock than with any other clock. It is this noise is considered to be the determining factor for the audibility of jitter. The absence of this jitter should result in a reduced sense of the “digital” sound of a CD.

Our listening tests confirmed that the SuperTubeClock does lower the noise floor of a CD player, making it sound instantly smoother, more transparent and more detailed. Noel's measurements confirmed this as he said he had never measured narrow band jitter levels down to 5pS before!