

Upgrading the Njoe Tjoeb 4000 Valve CD Player - Are Upgrades Really Worth it? Neville Roberts

In DIY Supplement No.64 enclosed with the April 2002 issue of Hi-Fi World, I reviewed the impressive AH! Njoe Tjoeb 4000 valve CD player from the Dutch firm of DE HIFIWINKEL who design and supply the AH! range of products (their web site can be found at <http://www.hifi-notes.com> and their companion site at <http://www.hifi-planet.com> for their own designed AH! products). The standard model I reviewed is fitted with the AH! valve output stage, AC NoiseKiller and SuperCrystal oscillator. The 'Super' version includes, amongst other things, quality feet, a quality mains lead, CD Mat and Tjoeb Ribs for extra damping on the valves. All these items are available as upgrades as well as special op-amps and the latest item to emerge from the AH! engineers - a TjoUpsampler. But do these sort of upgrades really make a noticeable difference or are the manufacturers exploiting the inveterate 'tweaker' in us all? I decided to put all the claims to the test.

Before proceeding, I have heard a number of people express concerns about after sales service if they buy products from another country. In my experience of this company, the courteous service I have enjoyed has been nothing short of superb with items turning up as quickly or quicker than if they had been ordered locally! I would argue that it is easier to place an order via the Web than driving into town and finding somewhere to park, etc. Incidentally, if any readers do not have access to the Web, the company can also be contacted at:

DE HIFIWINKEL BV
Stratumsedijk 67h
5611 NC Eindhoven
The Netherlands

Tel +31 40 211 33 88
Fax +31 40 211 77 34

Anyway, following an exchange of emails with Herman van den Dungen, a founder of the company, a package of 'goodies' duly arrived.

First on the list was to fit the new feet (aka 'Tjoeb Sjoes'). Knowing how important it is to decouple the equipment from its surroundings, I was not surprised to experience a subtle but discernable overall improvement in clarity, especially at higher volumes, with the new feet.



Figure 1. The set of four 'Tjoeb Sjoes'

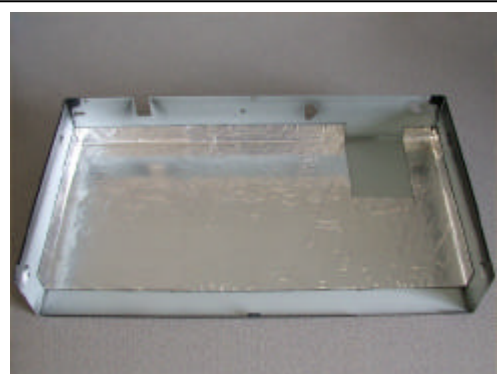


Figure 2. Sound-deadening panel applied to the inside of the lid



Figure 3. AC Direkt Power Cable

This was further to an improvement in clarity I had achieved previously by fitting a bituminous sound-deadening panel to the inside of the lid. The lid of the Njoe Tjoeb 4000 is simply constructed from a thin sheet of metal folded to form the top cover and the addition of a sound-deadening panel noticeably improved detail, especially at lower frequencies. The sound-deadening material can be purchased from car accessory shops and it is self-adhesive and laminated with metal foil.

Turning my attention to the mains lead; it was a relatively straightforward job to replace the standard 2-core lead with the 'AC Direkt' power cord supplied by Herman. Further listening tests revealed a general cleaning up of the sound, with better imaging and detail.

Next up was to fit the 'Tjoeb Ribs' to each valve. These cost just over £3 for both valves and consist of 3 rubber rings that fit over the glass of each valve and are spaced to give each valve a sinister 'Dalek' look! The theory behind this is that microphony induced by external vibrations is effectively 'exterminated'. These rings are relatively easy to quickly remove and refit and repeating this process and playing the same piece of music a number of times demonstrated an overall tighter sound with better imaging, predominantly in the lower registers. Again, this was more evident at higher volumes, as you might expect.

All the above upgrades collectively yielded subtle, but clearly noticeable improvements. Indeed, removal of any one of the above upgrades, although a time consuming process, revealed that each item makes a positive contribution to the listening experience.

Moving on the next item out of the box, I fitted the CD Mat to the copy of Vivaldi Violin Concertos, Op.6 (Decca 455 653-2) I had been using for the other tests and hit the 'Play' button. Before I proceed, I'd better describe where I'm coming from. Whilst a record is a mechanical device, a CD is simply storing numbers that are read by a laser and these numbers are used to define an analogue signal so any changes to the mechanical properties of the CD won't affect the sound, right? WRONG! This is one of those startling improvements that seem to defy logic. Strings sound sweeter - less harsh yet clearer - more

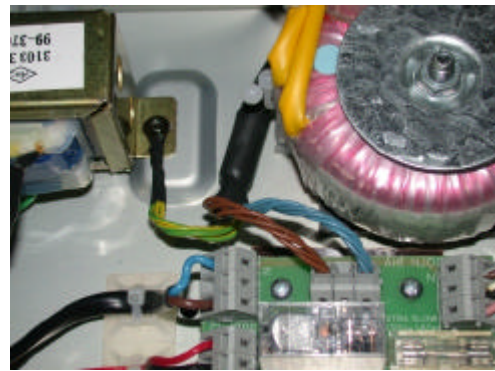


Figure 4. Connecting the power cable



Figure 5. Tjoeb Ribs fitted to one of the valves



Figure 6. The CD Mat is supplied in a jewel case

accurate detail without sounding clinical. The cellos' bass registers were more refined and accurate. This is, in my opinion, a 'must have' addition for any make of CD player and at a little over £10 it is excellent value.

Next for consideration were the op-amps. The Njoe Tjoeb 4000 is supplied with Burr Brown OPA604, but upgrades are available in the form of an Analog Devices AD825 and Burr Brown OPA627; the former is based on a plug-in 'mini board' that sports two silver mica capacitors in addition to the op-amp. A pair of AD825s cost around £19 and the OPA627s cost just under £32.

The two op-amps are fitted in sockets on the PCB to the left of the Philips DAC chip. For anyone who has no experience of fitting ICs into sockets - a word of warning! This has nothing to do with the usual precautions to be observed when dealing with static-sensitive devices (ensure you are earthed, etc.) Do not try and remove the IC by grasping it between your thumb and index finger and pulling. Due to the force you will need to exert to hold it, it will flip round as it comes out of the socket and impale itself in your thumb! This is, in fact, surprisingly painful and tends to elicit little sympathy from other members of the household! Therefore, should this unpleasant event happen, try explaining the two neat rows of holes in your thumb as a snake bite! Anyway, the correct method is to gently slide a small screwdriver between the IC and the socket on one side and gently prise it a little from the socket. Repeat on the other side. Do this alternately until the IC becomes free and then lift it out. To insert, carefully position the IC on the socket being careful to align the pins with the holes using a screwdriver before pressing down. If you don't do this, you run the risk of bending a pin. Should this happen, don't despair. Remove the IC and straighten the pin(s) using a small pair of flat bladed pliers and try again.

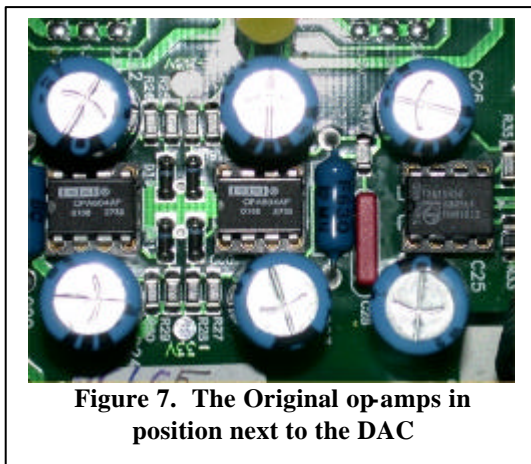


Figure 7. The Original op-amps in position next to the DAC

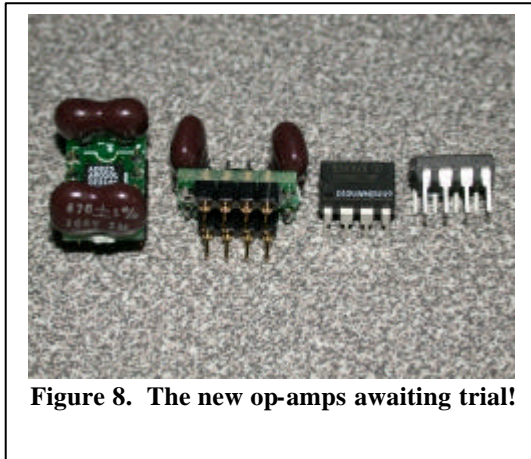


Figure 8. The new op-amps awaiting trial!

Back to the listening tests. Changing the original OPA604s to the Analog Devices AD825, I ran the player for a while to allow the new devices to run-in, as recommended by AH! I then repeatedly swapped over the devices while listening to the first track of BWV527 on Bach Trio Sonatas (Hyperion CDA66843), which has an oboe, a violin and an organ providing the bass line. The 825s yielded a sound that was warmer than the 604s. A very easy sound to listen to - bright, yet laid back, blending the instruments together making you feel the performers were working together and enjoying the music.

Repeating the test with the 604s up against the 627s, the latter device produced a cleaner sound, more detailed and considerably better imaging than either the 604s or the 825s. The bass was much tighter and well controlled. Overall, there was a greater sense of realism with the performers being there with you in your living room. The fingering on the oboe was

clear and you could easily hear the valves on the instrument closing with a gentle ‘click’ in the solo passages! A friend summed up the effect when he exclaimed, “Gosh Neville, your CD player is sounding more *vinyl*”!

Returning to Vivaldi and the last movement from RV105 on a Harmonia Mundi CD HCX3957046 entitled “Seven Concertos”, there was startling clarity with all the instruments. You can hear all the ancillary mechanical noises from the instruments such as the harpsichord that give a striking realism to the sound.

For me, there is a clear winner in the 627s given the kind of music I listen to. I felt the sound of the 604s almost too warm - to the point of melting! However, I can see someone who is into jazz in a cool nightclub with a smoky atmosphere preferring the easy sound of the Analog Devices. Their brighter yet smooth sound may suit the smaller loudspeaker set-up that can be rather clinical.

Next to be auditioned were alternatives to the supplied Philips Jan 6922 valves. In my previous article, I compared these against similar offerings from Sovtek and Harma. This time, it was the turn of some Russian Navigator 6H23 NOS valves and Siemens E288CCs supplied by Herman, costing £38 and £130 a set respectively. Both sets were allowed to burn in for 24 hours by running them with a CD playing continuously before commencing the listening tests. The only way to thoroughly test these, as with my previous valve-swapping experiments, was to undertake the lengthy process of exchanging the valves and allowing them to warm up fully before listening again. It was a credit to the rugged valve bases that they have shown no signs of deterioration throughout these tests.

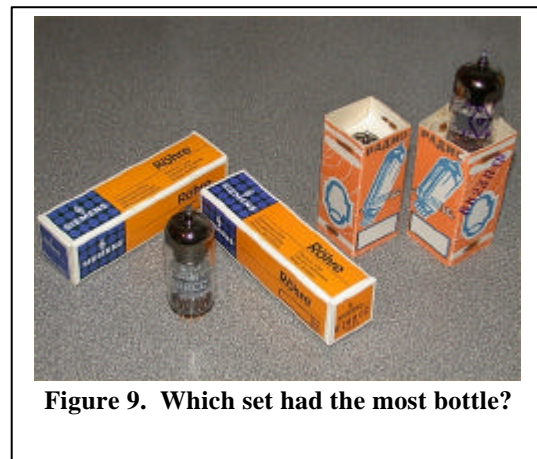


Figure 9. Which set had the most bottle?

So how did they compare against the Philips? I have to say that I really liked the Navigators. The bass was more controlled and there was much better detail, with a very similar sound to the Harmas - lively and energetic. As for the taller Siemens with their gold-plated pins and higher heater current, could they justify their hefty price tag? They too had better control over the bass than the Philips and excellent detail, but a much fuller, open sound. Strings were easier to listen to and the overall sound was more refined. These valves took everything in their stride! Nothing was going to be a problem to them and they handled whatever the CD threw at them effortlessly. They were good and they knew it! My verdict - if you can afford it, these are the valves to go for. If not, try the Navigators - you won’t be disappointed.

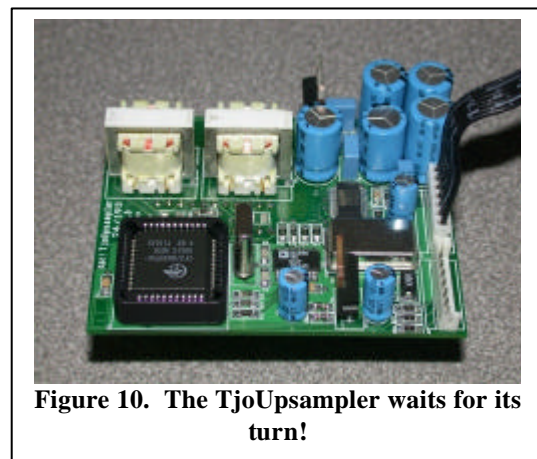


Figure 10. The TjoUpsampler waits for its turn!

Finally, it was the turn of the TjoUpsampler to come under the spotlight. Priced at about £205, this is a 24/192 DAC/upsampler which replaces both the op-amps and the Philips DAC chip and consists of a PCB and a 22 pin connector ‘on stilts’ that fits into the two op-amp sockets. The 6 pins in

the middle of the connector have no connection and the DAC socket is left vacant - this can be seen on the left hand side in the photograph. In addition, the output from the drive mechanism board is unplugged from the Tjoeb board and plugged into the Upsampler which, in turn, connects into the now vacated Tjoeb board socket. This may sound somewhat complicated, but is, in fact, a quite straightforward process.

Another subtle upgrade? I think not! The effect was like removing a veil from the front of the sound stage. All the detail was there - you could hear the breathing of the solo violinist in the aforementioned recording of Vivaldi Op.6! There was considerably more accurate image placement - open and spacious and superb depth. The bass was more extended, yet tighter. Allegros were altogether more thrilling and exciting - there was more going on. Playing a variety of recording confirmed my initial assessment. Choral music is particularly challenging, as this can often sound muddy. Not so with the upsampler! My recording of Faure's Requiem (Decca 436 486-2) left my record deck quaking in the corner fearing it had met its match at last! This will definitely convince even the hardened vinyl addict that there is much more on a CD waiting to be discovered than we thought possible. This is, in fact, reminiscent of records in the 70s when huge strides were made in cartridge design.

In summary, all of the options produced a noticeable improvement in sound quality. Overall, the CD Mat would probably win the prize for greatest improvement at lowest cost, whatever your CD player. This item, along with the ribs, feet, mains cable and a digital output transformer are all included with the 'Super' model for an additional £65 or so, which is a very worthwhile investment. A valve upgrade is definitely worthwhile with the Siemens as worthy champions and the Navigators a good value runner-up.

Clearly, the TjoUpsampler catapults the player into a different league, but if you can't stretch your budget, the op-amps should very much be considered. One of the beauties of the Njoe Tjoeb 4000 is that you can upgrade in stages, as funds permit. In any case, this is half the fun of Hi-Fi - saving up for the next upgrade!

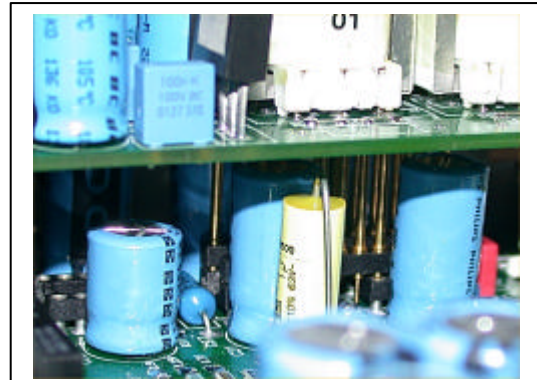


Figure 11. Installing the Upsampler

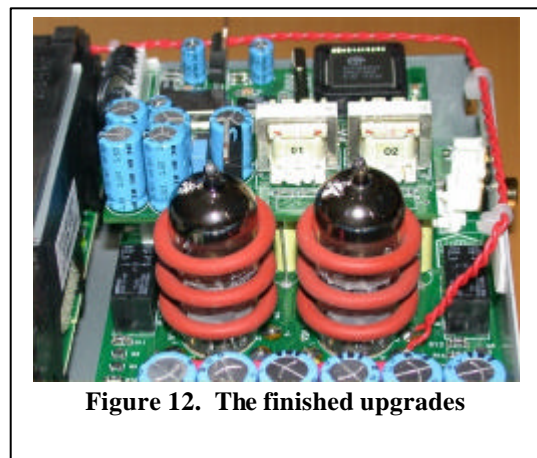


Figure 12. The finished upgrades