

# Quad PA-One Headphone Amplifier Review Can an old dog learn new tricks? Review By Panagiotis Karavitis

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**Can an old dog learn new tricks?**

**Review By Panagiotis Karavitis**

It brings me joy to review the Quad PA-One headphone amplifier (£1299, or around \$1750 USD). The Quad PA-One is a stereo vacuum tube amplifier with 24-bit/192kHz DAC and two headphone plus analog preamplifier output. Unless you have been living on the moon for the last ten years or so, chances are you own at least a pair of headphones. Worst case scenario? You have the ear buds that were included with your cellphone. Normality these days? If you are an audiophile, or should I say a head-fier, then you probably have several cans for each occasion and musical genre. Given that you have a couple of headphones, or you are about to invest in your first pair after all the buzz surrounding personal fidelity, the next logical step is a dedicated headphone amplifier. Yes, because if you want to play this game the way it was intended to be, driving your cans with nothing but a cell phone or your laptops output won't get you to headphone nirvana.

Yes, a headphone amplifier such as the Quad PA-One as reviewed here is in the order of the day. Or maybe you already have one. A solid-state design that has enough juice to spin your cans? Are you satisfied with what you get? Is it a pleasant sound, one that has "meat" and keeps you going for many hours without listening fatigue? Or maybe after a couple of your favorite records you need a brake to set your ears back to zero?

Headphones are more than just a trend, as we speak they rule the audio industry along with high



resolution music and vinyl renaissance. Actually headphones go all along with hi-res audio as many of the recent amplifiers come with built in DACs. The guys over at Quad, who make the Quad PA-One, have read the numbers. They have seen the light of personal fidelity and decided to produce their first ever dedicated headphone amplifier. And though Quad makes a complete line of solid state products under the "Elite" series if you ask friends who have been around for a while they will tell you one thing only: Quad is a legend in tube amplification. Now the "legend" thing has lost some of its value, everybody who has been around in the audio industry for more than a decade considers his company a legend. Legend this, legend that, legendary performance, you name it- it has a "legend" written somewhere on the marketing brochure. Then there is Quad, established by Peter Walker in 1936.

In 1936, as almost 90 years ago. Originally named S.P. Fidelity Sound Systems, then Acoustical Manufacturing Co. Ltd. the company initially developed public address systems. In 1941 the factory was bombed and Walker had to move production from London to Huntingdon. Then in 1950 the launch of the first "Quality Unit Amplifier Domestic" and the acronym Quad found its place in the company's consumer products. What definitely put them on the map were the ESL 57 electrostatic speakers and a series of tube amplifiers starting with the historic model "II".

### The Looks Of A Legend

The PA-One in terms of exterior design has "QUAD" written all over it. Literally. The Quad name and logo are printed on the transformers cover and on the front plate but even without those the potentiometer and buttons are typical and can be found on the entire "Classic series" range of products. Even the color is Quad's all time classic "Lancaster gray".



Underneath the big volume knob a sliding lever manages channel balance, a feature less and less found in today's electronics. Three led illuminated buttons offer input selection (one line, one balanced and one for the three digital options: USB, TosLink Optical and S/PDIF coaxial). A toggle switch helps selecting high or low headphone impedance with high being above 100 Ohms. Also on the front plate two 1/4 inch headphone jacks, with the PA-One being able to drive both contemporary with no noticeable effects on the power output.



On the back you will find one balanced input (pin 3 running "hot"), one line input and the single ended pre out along with the aforementioned digital inputs. Also on the back the power switch and IEC power inlet, all clean and tidy arranged.

The tubes are positioned in front of the transformer's casing and consist of a pair of 6SL7 driving a pair of 6SN7 in cathode feedback topology (no global feedback for the PA-One). Though both these double triodes look similar and pin out is identical the gain provided is different, so make sure not to swap them! Rectification is done by a single EZ81 and this makes the PA-One an all tube design with point to point wiring for the valve section. The five tubes are nicely covered under a protective grill fixed with four screws on the top plate. Quad provides a special, extra-long screwdriver for removing the grid but I would suggest doing so only in case of tube replacement. Output transformers are double C-core type made from high permeability steel. Power output is specified as 500mW @ 32 Ohm.

Overall built quality is nice; in fact the PA-One gives impression of a solid piece of gear that will last for years. Packaging was typical for this price range, a carton box with sufficient ethafoam making sure

nothing will happen during transportation. User manual is well written with lots of images that will walk you through the driver installation for the DAC section.

At the heart of Quad PA-One lays the well-known Cirrus Logic CS4398 DAC chip capable of 24-bit/192kHz conversion as found on Quad's Platinum player and guess what? The company promises minimum jitter and absolute accuracy! In order to squeeze out as much performance as possible from the DAC they have engineered the power supply section using four stages of regulator circuit which should help to minimize the ripple of the DC line. High quality capacitor such as Wima and Nichicon complete the promising package.

### **The Closest Approach To The Original Sound?**

This has always been the company's motto and I was eager to see if the PA-One would live up to it. And for a new classic I will describe my listening sessions starting with another classic, the return of Leonard Cohen in the charts with the album *Popular Problems* (Sony). This is a 100% pure Cohen distillate, both in terms of music and lyrics. The 80 year old Cohen might have a walking stick in the cover picture but his way of singing emotions and ideas is not to be easily found on the younger generation of "artists". Few instruments arranged in nothing but the absolute necessary to provide musical background for Cohen's voice, which emerged in a wise man's fashion. The slightest dark character emerged from the Quad, despite the LCD-Xs being the sparkiest of the Audeze range. But Cohen's poetry is tailor made for this tube headphone amp. His voice sounded majestic, deep and involving.



From the Canadian Cohen to the Irish artist Hozier and his single "Take Me To Church" [Columbia]. Dramatic interpretation expressed in an equally dramatic manner from the PA-One/ Audeze LCD-X combination despite the track being compressed. The Quad had no problem in resolution with Hozier's guitar always being well focused and providing the typical electroacoustic timbre. At the same time the

PA-One managed to hide some of the nastier passages, taking away the edges from the recording but leaving all the "air" intact. For comparison reasons I used the similarly priced Burson Conductor (headphone amplifier and 24-bit/192kHz DAC) in the latest iteration with the CMedia receiver connected with a second identical USB cable to my PC. Switching the necessary drivers from Foobar's interface was rather fast and provided excellent ground for comparisons. The guitar sounded better through the Quad amplifier, maybe because of the instruments inherent distortion which matches the tube harmonics? Perceived soundstage was also wider and overall playback gave the impression of being alive, it simply sounded right to my ears.

For something more complex let me talk to you about Ole Bull's Concerto Fantastico [2L -067-SABD]. Written in the middle of the romantic era by this Norwegian Paganini and performed here by Annar Follesø with Ole Kristian Ruud conducting the Norwegian Radio Orchestra, this is a masterpiece of intimacy reflecting the Scandinavian character of the composer with elements of lyric expression mixed with demanding technical passages. Despite this recording being little to no compressed at all the PA-One managed to drive the Audeze LCD-X cans with ease with the volume knob comfortably set around 11 o'clock. Power output should be enough for all but the most demanding headphones and even during bursts of energy coming from the Norwegian Radio Orchestra there were no particular signs of stress coming from the tube amplifier. The Burson provided a tighter grip on certain passages but this was to be expected from the beefier solid state design. Macro-dynamics were also wider with the Aussie amplifier but the Quad performed in a more intimate and touching manner, closely connecting the listener to the performers.

### **The "Serious" Audiophiles Do A Couple Of Things**

Half the fun of possessing tube gear comes with tube rolling. The stock ones provided by Quad with the exception of the JJ rectifier are of Chinese origin and I would not dare to call them anything more than "entry level quality". Besides picking up some microphonics when the chassis was touched they also presented ringing for several minutes when the amplifier was turned on. Besides the self-noise issue the Quad performed rather well even with the stock tubes but I went on and swapped the rectifier right from the start as the JJ was the noisiest of the pack with a Tesla EZ81 which gave some sparkle to the sound besides being much quieter. Having in hand a pair of Melz 6N8S (Russian 6SN7 equivalents) and a pair of Kentucky Radio VT-229 I ended up doing many of my listening sessions with these as it added to the sound in terms of clarity, definition and a touch of high frequency extension. Mids were pretty much on par while bass got more focused. For those who will buy the PA-One I would suggest replacing the complete tube set with better ones, only by doing so you will understand what the Quad is truly capable of.

Besides tube rolling I remember reading that serious audiophiles use their headphone setups for vinyl playback too. Not sure if I candidate as one but resisting the way that balanced input was staring at me was beyond my forces. After plugging the ASR Basis Exclusive phono stage to the PA-One via Synergistic Research Element Copper balanced cables I reached for one of the latest entries in my

collection, Liszt's *Dante Symphony* [HMV/MelodiyaSXL 30234] with Boris Khaikin directing the Bolshoi Theater Orchestra and Chorus. This massive, earth shaking work will wreak havoc with many systems but the PA-One showed its full potential with no particular signs of congestion or hazy sound. Part of the merit should go to the LCD-Xs, the most capable headphone in the Audeze range when it comes down to transient response, treble and bass extension. Liszt demands a complete set of woodwind, string and percussion instruments in order to create the "Inferno" and the PA-One transmits this thunderous performance in a convincing way. The match exceeded my expectations as the tube warmth was palpable without ending up being too syrupy. Articulation was good rather than excellent with a slight coloration of the 3<sup>rd</sup> and 4<sup>th</sup> octave, still nothing major.



Last but not least among the PA-One's features is the possibility of using it as a pre-amplifier and drive a power amplifier or maybe a couple of active speakers directly. This is more of an added bonus for potential buyers who are only now entering the high fidelity universe or maybe for those who would like to taste what tube preamplification sounds like in their systems. The headphone and 24-bit/192kHz DAC section alone are worth the £1299 ticket and the wide connectivity options can only make this package even more attractive.

### **Instead Of The Typical Conclusions**

This is where I would normally draw some conclusions trying to sum up the character of the PA-One. Instead let me go back to my listening sessions for a moment. While looking for bibliographic elements for Sharon Kovacs and her first big single, "My Love" (Warner music) I stumbled upon an interview where she depicted her influences and musical style in the following manner: "That gloomy sound is caused by my voice and the arrangements, but also by the fact that we write everything in minor. I like moodiness; my music has got soul." I could not find better words to describe the Quad PA-One.

### **Associated Equipment During Review**

Audeze LCD-X planar magnetic headphones, Sennheiser HD-600 headphones

Burson Audio Conductor Headphone amplifier and 24/192 DAC

Synergistic Research Element Copper balanced cables

Belkin Gold Series Hi-Speed USB 2.0 Cable

ASR Basis Exclusive phono stage with external battery akku

Garrard 401 turntable with SAEC 308L tonearm and ZYX 1000 airy3 X moving coil cartridge

Windows 7/64 PC with Foobar2000 audio player