

# Allnic Audio HPA-5000XL headphone amplifier

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**A**llnic Audio is the brain-child of Korean valve amp expert, Kang Su Park. He was making valve amplifiers and phono stages long before he founded the Allnic Audio company in 2005. But, in the HPA-5000 and now the HPA-5000XL headphone amplifier, he's excelled himself.

One of the joys of making valve amplifiers for many today is ridding the circuit of transformers. Julius Futterman is credited with the original OTL (short for 'Output Transformer Less') circuit design in post-war America and variations on the theme exist to this day made by companies like Atma-Sphere. But arguably, the best place to use an OTL amplifier is not with conventional loudspeakers, but in the context of a good pair of headphones. Allnic Audio has done just that in the HPA-5000XL; an OTL amplifier, that also takes the next step and goes OCL ('Output Capacitor Less') in the process. This circuit makes a small demand on the user, however; the headphones used should be in the 30Ω to 600Ω impedance range for best performance.

## Strange Brew

The usual array of double triodes in the input stage and output pentodes are not present here; the strange brew of tubes is not simply being arch; it's that once the buffer zone of a transformer is taken out of the mix, the linearity and distortion characteristics of the valves become paramount. So, the HPA-5000XL uses a single 6AN8 as a first gain stage, two E180CC in the second gain stage and a quartet of 7233 power driver valves. All of these are sourced as NOS (new old stock) and only the E180CC is electrically suitable for tube rolling, although a 12AV7 or equivalent is not a sonic match. This does mean you are somewhat locked into rare valve supply options (and Allnic Audio itself) to supply replacement tubes should the need to replace arise, but these are solid designs and should be good for thousands of hours of listening. The core difference between the HPA-5000 and HPA-5000XL is this latest model has balanced input and output.

However, these valves are not only seated in their own protectors (thereby creating a neat and elegant way of passing international legislation without recourse to an

ugly metal cage) but also use Allnic Audio's own 'Absorb Gel' tube damper system, designed to keep vibration away from the potential microphonic propagation factory that is a vacuum tube. The glass protector sleeves can be removed with the supplied Allen key but are best used with the sleeves in place.

The valves/tubes are lined up in a circular pattern and in the middle of them are two little meters and adjustment screws for bias adjustment. This is great and easy to understand, which is a good thing because there is no discussion of this bias system in the manual at all. However, it didn't need rebiasing during the listening test and was happy pumping out almost 5W with a voltage gain of +28dB.

It's a truly balanced circuit, with Allnic Audio's own Positive-Negative cancellation circuit and a precision 41-step single-silver contact attenuator as a volume control. This differs from the usual choices of digital or carbon-film potentiometer, as it allows the HPA-5000XL to claim channel balance accuracy to ±0dB at any volume level!

While it has a pair of combined grab handles and connection protectors at the rear of the case, this is not an amp for rough and ready handling. It's very solidly built in its brushed aluminium finish, but those tubes are sensitive souls and need their beauty sleep instead of being bounced around a lot. You have a 'choice' of balanced and single-ended inputs – one of each – but the input selector is a push-button at the rear of the amplifier itself. If you want to use two inputs, you are advised to turn the volume to zero before changing first, but in fairness, I would consider this a one-input amplifier, and in listening I preferred XLR to RCA inputs. This wasn't a strong preference, however, so if you don't have balanced outputs for your device, it's no big deal. There is a 6.35mm jack and four pin XLR headphone outputs and aside from a similar plastic push-button on the front panel, that's the sum of controls here; no remote, no balance, only the most rudimentary of indicator lighting.

Perhaps the first thing that strikes you about the Allnic HPA-5000XL is that it's surprisingly light. We instinctually see 'valves' and prep our muscles for an uneven 15-20kg lift thanks to all that iron in the transformers. But the Allnic only has a power transformer and thus weighs in at a far more manageable 9kg all told. This isn't a big deal unless you put 20kg lift strength into pulling a 9kg amp from its box, and

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those who have yet to get over the 'heavy is good' phase of audio will automatically like something physically beefier. More fool them!

### Setting the intimacy standard

It's slightly difficult for those not used to OTL amps to understand exactly how they sound, but the HPA-5000XL sets new standards for immediacy and intimacy. Couple the amp with a set of fast-reacting dynamic or planar-magnetic headphones and the sound is almost psychic. It reacts to music as fast as the musician can produce it, whether that be the subtle stick-work of a 1950s Jazz drummer – 'So Tired' Art Blakey and The Jazz Messengers [*A Night In Tunisia*, Blue Note] – or the all-attack, all-release synth-fuelled voices and percussion of 'Numbers (Live)', by Kraftwerk, [*Minimum-Maximum*, EMI/Kling Klang].

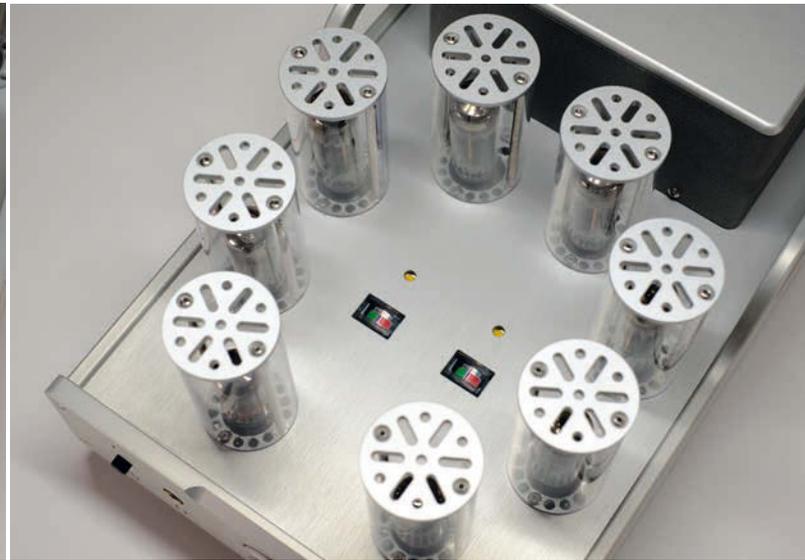
But, past the speed, it's the intimacy that grabs you. Back to Art Blakey, you are there in with the musicians listening

in a setting that just makes you want to take in more and more music. The HPA-5000XL is effortlessly relaxing to a degree that few other devices achieve, almost irrespective of cost. Relaxing is not a codeword here; the amplifier isn't 'laid-back' or 'boring'; if anything, the presentation is slightly forward and clean. However, it's a kind of active relaxation... and when you listen to music through the HPA-5000XL you realise that's not an oxymoron.

As you move from jazz to orchestral music, the same applies. I was doing some late-night digital radio listening through the HPA-5000XL (streamed via a dCS Bartók DAC) when BBC Radio 4 played its famous closing theme 'Sailing By' by Ronald Binge performed by the Alan Perry/William Gardener Orchestra. This recording is slightly older than me, and I've heard it hundreds of times over the years. It's also a surprisingly useful indicator of audio performance; on most systems, it's a slow, sappy, soporific light orchestral waltz designed to send night-birds to sleep, but on a few >>



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» – like the HPA-5000XL – it's a cosy reminder of home to all those fishermen on trawlers waiting for the Shipping Forecast. It's a slightly melancholic, surprisingly evocative beacon home. This should have been the gentle 'go to bed, you idiot' reminder, but instead led to a few heavy-lidded hours listening to Vaughan-Williams, Elgar, Britten and Finzi.

The Allnic rarely puts a foot wrong, whatever the music. It is dynamic and exciting when called for, the sound is very much outside of the headphones (I mostly used Sennheiser's HD 800S and Meze's 109 PRO, which are at different extremes of the HPA-5000XL's compatibility scale), the bass is striking in its depth and precision, vocal articulation and fine detail were first rate.

Perhaps the acid test of a valve headphone amplifier is how 'warm' does it sound on simple recordings. 'Canadee-I-O' by Nic Jones [*Penguin Eggs*, Topic] is a firm favourite of mine; it is deceptively complex folk sung beautifully and with a guitar part that is as sublime as it is outrageously complicated. Valve-like warmth can make this sink into just being 'good' (while too much in the other direction makes it 'a guitar lesson') and the HPA-5000XL strikes an almost perfect balance, with a life-like sound and only a hint of well-appreciated bloom to the bass. Also, while the musicianship is first rate, the recording is a little '1970s' and the slight forwardness and forgiving properties of the HPA-5000XL shine through.

### Conclusion

It's hard not to love the Allnic HPA-5000XL. It's a great looking headphone amplifier that sounds excellent on

everything you put its way. It's deceptively powerful and dynamic sounding too, and so long as you don't try it with super high impedance headphones from a studio, you'll be seduced by the unintrusive sound of OTL-meets-OCL too. +

### Technical specifications

**Type** valve headphone amplifier

**Inputs** One pair unbalanced RCA, one pair balanced XLR

**Maximum input voltage** 5V rms

**Outputs** One 6.35mm headphone jack, one four-pin XLR balanced headphone cable

**Valves** 6AN8 × 1 (New Old Stock, first gain stage, no equivalents); E180CC × 2 (New Old Stock, 2nd stage driver tube approximately electrically (not sonically) equivalent to CV8431, 7062, 5965, 12AV7, 6416, 6829); 7233 × 4 (New Old Stock)

**Frequency Response** 20Hz–20kHz

**S/N Ratio** -68dB (CCIR, 1kHz)

**Output** 5W

**Voltage gain** +28dB

**Optimum headphone impedance** 30Ω–600Ω

**Dimensions (W×D×H)** 23 × 38 × 16.5cm

**Weight** 9kg

**Price** £6,000

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**Manufacturer** Allnic Audio [allnicaudio.com](http://allnicaudio.com)

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**UK Distributor** Lotus HiFi

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