



Block party

Introducing the amplifier that's forcing everyone to rethink their prejudices about class. **Chris Ward** finds himself enlightened

Only a few years ago, the prospect of reviewing a high-quality Class D amplifier would have seemed far fetched. Class D was commonly associated with cheaper, mass-market products that needed small, low-cost forms of amplification where ultimate sound quality was not pivotal. However, many saw the potential for Class D to have loftier aspirations and Hypex – based in the Netherlands – is a specialist audio manufacturer that raised a few audio eyebrows with its Class D results. With the input of renowned electrical engineer Bruno Putzeys, it pursued an audio quality agenda with the

creation of the NCore amplification module that forms the heart of the new ATSAH 500 monoblock from British company Acousticimagery. If you associate amplifier muscle with the power required to lift them, then the ATSAH 500 is going to surprise you. About the size of a hardback novel and weighing around 2kg, you could put these monoblocks in your hand luggage on a budget airline. The composite ABS case has an understated carbon fibre appearance that looks like it has come straight from a stealth bomber. Build feels reassuringly solid and fit and finish is great. Quality binding posts are able to accept banana plugs,

DETAILS

PRODUCT
Acousticimagery ATSAH 500

ORIGIN
UK

TYPE
Class D monoblock power amplifier

WEIGHT
2kg each

DIMENSIONS
(WxHxD)
200 x 65 x 220mm

FEATURES

- Quoted power: 400W into 8ohm, 700W into 4ohm
- Balanced XLR input
- Soft start circuit

DISTRIBUTOR
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spades or bare wire, but signal input is only via a single Neutrik XLR balanced socket, with the absence of the more common unbalanced RCA input. Acousticimagery can, however, provide inexpensive RCA-to-XLR cables to suit your preamplifier or source components. Power output is claimed at a mighty 400W into 8ohm and a staggering 700W into 4ohm. Much of this power has been achieved through a highly specialised switch mode power supply that has been specifically optimised for the NCore amplifier module. Claiming to deliver up to ±90V DC, this goes some way to substantiate the high output power that's quoted.

Placing the power amplifiers in my equipment rack, I connect speaker cables to the revealing Eminent Technology LFT-8b speakers (*HFC 400*) and experiment with both a Hifi Hangar passive preamplifier (*HFC 389*) ahead of the blocks as well as a balanced feed direct from a reference Audiolab M-DAC (*HFC 368*) via Black Rhodium Sonata XLR interconnects (*HFC 398*). In setting up, the on/off switch is handy, but it would benefit from lighting up when powered on, to

confirm I'm good to go. I'd prefer not to guess with 700W on tap. But set up is very simple and once wired for sound I let everything gently warm through ahead of serious listening.

Sound quality

I kick off with Ratatat's *Cream On Chrome* on CD. The piledriving bass and kick drum locks into its punchy rhythm and it's instantly apparent that these amps mean business. Bass is immensely deep, solid and tight, but very rich in detail. With some quality amps it can become drier as the tautness and detail goes up, but not here. Bass is properly solid, three dimensional with a really organic feel that projects beyond the speakers. Infectious guitar riffs and burbling synths add layer upon layer to the track and the front-to-back depth and transparency is impressive. The introduction of powerful, rasping synths and wailing guitar solos takes the track to a new dynamic level and the amps take the gear change in their stride. This is a track that reaches '11' on the Spinal Tap scale of one to 10 and the ATSAH 500 monoblocks are utterly unflustered.

The understated looks belie the true power of the monoblocks

It's easy to imagine that unbridled power, especially in the Class D domain would be brutal, harsh or unrefined, but the exact opposite is true here. What I'm hearing is unfettered dynamics with the effect on the track being to let the music breathe more freely.

Switching to Leonard Cohen's rather different *Almost Like The Blues* on CD, the opening bass line, piano, congas and maracas project an airy, wide and deep acoustic soundstage that feels very clean and utterly uncompressed. Silences are inky black and tiny acoustic details shine out

revealing the weaknesses of the 1973 recording or the deficiencies of the format, the monoblocks make the most of all available information to create a surprisingly rich and detailed rendition of this Bill Withers cover. Gladys' emotive vocals are properly rounded with loads of air around them and the quality of shimmering high hat, grooving guitars and mellow keyboards builds to an atmospheric, but above all funky performance. If pace, rhythm and timing was the preserve of Class A designs, I can reveal today that its monopoly is over. Class D just got soul.

They enable you to appreciate smaller subtleties way down deep into the mix

like stars on the darkest night. The stripped-back instrumentation is joined by Cohen's moody, gravelly voice and the ATSAH 500 monoblocks succeed in conveying his vocal richness with masses of tiny microdynamic detail that communicates the full emotion of the song without ever sounding dry or brittle. This detail also ensures rock-solid hi-fi imaging. Here, the dynamic power and extremely low perceived distortion of the ATSAH 500 enables me to hear many more tonal subtleties, with far more light, shade and texture than one has any right to expect at this price.

Playing *Who Is She (And What Is She To You)* by Gladys Knight and the Pips as a humble AAC download file, I discover that the ATSAH 500 has the ability to really groove. Far from

With older recordings and weaker formats it's tempting for hi-fi lovers to skip to superior tracks, but with the ATSAH 500 I'm hooked by everything that I listen to, whether it be driving rock, dexterous jazz, lush orchestras or stripped-back acoustic. Bass is rock solid and richly detailed, midrange is clean and three dimensional and treble is extended and grain-free, with the whole performance just sounding right and unfatiguing.

This sound might best be described as 'naturally explicit', being revealing, but also highly nuanced, enabling you to perceive many more musical colours and textures in your music. These monoblocks don't lay a track bare in a brightly lit way that might flatten music. Instead, they enable you to appreciate smaller and smaller subtleties way down deep into the mix. And while this might suggest a potential spotlighting of treble detail, in fact that detail is right through the entire frequency range, with the whole effect being to create a highly joined up, coherent and balanced soundstage that comes across as detailed and focused, yet smooth, ▶

CONNECTIONS



- 1 XLR balanced input
- 2 IEC power input
- 3 On/off switch
- 4 Speaker binding posts

Q&A

John Young

Owner, Acousticimagery



CW: What led you to create the ATSAH 500?

JY: Simple, we wanted to deliver a breakthrough in quality for a price that anyone could afford. We engineered the presentation and economics to arrive at a product for £1,599 per pair. That's not to say we cut any corners, this is a high-quality product and by far the most cost effective way for customers to invest in the NCore experience. We believe performance can only be bettered by our own ATSAH 1200 XS mono at £8,000 per pair.

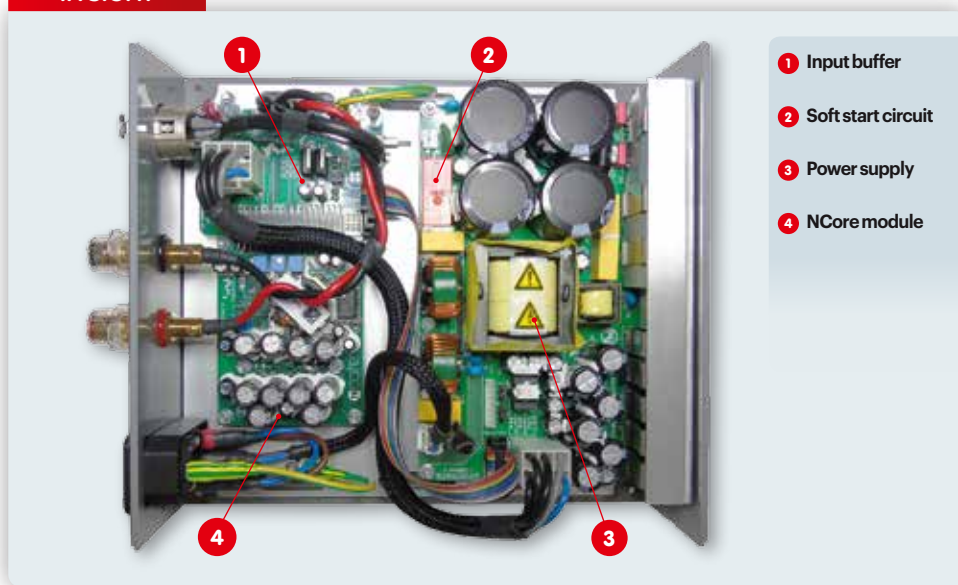
What makes an NCore module so special compared with other Class D designs?

NCore has much lower distortion, noise and output impedance, compared to other Class D amplifiers and far greater efficiency than other amplifier designs. In recent years, while some more traditional audio designers have chased small, uncertain benefits on aged designs, engineers like Bruno Putzeys sought to address very real challenges around Class D, and did so. In the NCore, we believe Class D has overtaken most linear amplifiers on the inside lane. In particular, intermodulation distortion is lower than anything I've seen a linear amplifier do.

Is the power supply key to the quality of this amplifier?

Switch mode power supplies have had a bad press. This one was specifically designed for use with this NCore amplifier module. It has very high efficiency over the entire load range and very low radiated and conducted electromagnetic interference (EMI). The power supply also features an advanced current protection system, which combined with large electrolytic buffer capacitors delivers very high dynamic headroom to the amplifier.

IN SIGHT



- 1 Input buffer
- 2 Soft start circuit
- 3 Power supply
- 4 NCore module

relaxed and emotive. Taken all together, these virtues add up to communicate music beautifully. It's as though a chunk of your brain relaxes so that you can just luxuriate in your music rather than the system's performance. Ironically, this 'music comes first' quality is probably the result of some expert acoustic science and engineering, and I feel sure that this clean and engaging sound is more than likely due to the ATSAH 500 successfully addressing common phase issues and intermodulation distortion challenges.

Put simply, I'm just better able to follow the meaning and emotion of lyrics, the quality and texture of instruments and the skill of singers and musicians. And all with huge dynamic headroom that enables every instrument to find clear space in the mix, with a transparency that lets me hear deeper into the track.

Conclusion

Many may be sceptical that Class D amplification has come of age, and I'd understand any reservations. I was probably in that camp until listening to this amp. The ATSAH 500 is revealing and ultra clean, but it is absolutely *not* sterile, uninvolved, unemotional or unable to get your feet tapping – as could be said of some Class D predecessors. Instead, the Acousticimagery ATSAH 500 is connecting me with music in a highly natural, organic and slightly addictive way, with excellent transparency, pace, rhythm and timing. Vitaly, Class D's historic weakness of varying output impedance across the audio frequency range appears to have been fixed. It seems extremely tolerant

of different speaker loads and will power even the most recalcitrant drivers, with a potential caveat that some full-range electrostatic speakers may not relish having quite so much power on tap.

In practice, the restriction to a single balanced XLR input is not an issue and I understand why it has been chosen for quality and safety reasons. I was initially unsure what to think of a composite body, but seeing it in the flesh I much prefer it to the thin steel of many products and love the price that's been achieved as a result. I also sense that avoiding a metal box could be part of it's sonic magic.

If you love pure Class A power or glowing valves with all of their wonderful, mellifluous inefficiencies, the ATSAH 500 monoblocks may not be for you, but as a triode valve lover myself this is a position I'd urge you to challenge with a listen. If you were listening blind, you may well rate these amps as beyond your budget. When you find out the price, they're probably coming home with you ●



NAD's M22 power amplifier utilises similar NCore-licensed technology within a single stereo box, but the ATSAH's separation into monoblocks with greater power for less money seems compelling. The Cyrus Stereo 200 (HFC 398) also offers a modern take on Class D power for a similar price. Cyrus uses an ingenious impedance detection system that optimises the amplifier for the loudspeaker and cabling it senses, but the ATSAH's extra power and transparent headroom has wowed me more. Considering the ATSAH 1200 is the bigger brother in the range and costs £8,000 a pair, this underlines the bargain these blocks surely are.

Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Plentiful headroom; ultra-clean dynamics; timing; price point
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Lack of RCA input and power light
- BUILD QUALITY** ★★★★★ **WE SAY:** Affordable, transparent power that delivers big dynamics and plenty of emotion
- FEATURES** ★★★★★

OVERALL

