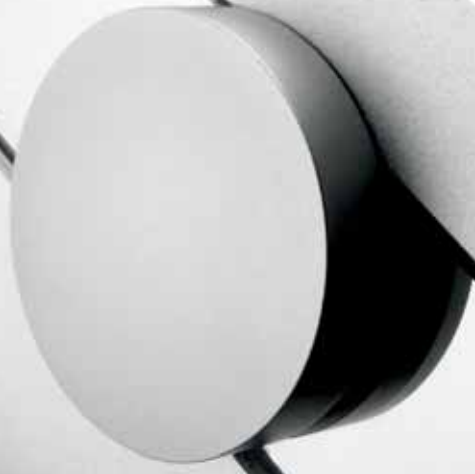


ASTINrew

pre-amplifier

on/off

phono
A
main



ASTINrew

source selector

cd

tuner

tape

aux-1

aux2

MP3

100.7 FM

ASTINtrew AT 1000 Valve Pre-amp and AT 5000 Hybrid Power Amp

by Jimmy Hughes

In retrospect, it's amazing when you think that tube amplifiers went from total market dominance to virtual extinction in just a few years. By the end of the '60s, none of the main UK amplifier manufacturers – Quad, Leak, Rogers, Radford, Armstrong – were making valve amps. Did the government suddenly pass a law banning the use of tubes?

True, transistor amplifiers had been around for some time – since the dawn of the '60s. But none of the early attempts were reckoned to be any good. It wasn't until the silicon transistor became readily available in the mid '60s (replacing the earlier Germanium type) that valve amplifiers were finally usurped. The rest, as they say, is history...

Except that tubes rose from the dead in a manner comparable to that of Lazarus. Nowadays, the would-be purchaser of a hi-fi amplifier is faced with a wide choice of valve or transistor designs – and even (as here) amplifiers that combine transistors and valves. But, why did valves suddenly go out of fashion so quickly and decisively?

The main benefits of transistors were reckoned to be reduced heat, smaller size, increased reliability, lower cost, less noise, and the elimination of the output transformer. On top of that, transistor amps measured better – and back then hi-fi enthusiasts and reviewers tended to treat specifications seriously: If it measured better, that meant it sounded better.

A decade or so earlier, Harold Leak had established 0.1% distortion as the benchmark of technical excellence. The new breed of transistor amplifier were soon offering distortion levels of 0.01% and lower. Not to mention reduced noise (particularly hum), wider band-

width, and significantly increased power.

The availability of small amps with high output power was attractive for other reasons. The 1960's saw many hi-fi enthusiasts abandon their large efficient single mono loudspeaker to go stereo with two smaller much less efficient enclosures. Suddenly, power output was an issue.

10W might've been entirely adequate with a speaker offering 96db+ sensitivity, but it wasn't much good for those in the low 80dB range.



Loudspeaker manufacturers, realising that few listeners could accommodate two big speakers, set about making smaller ones, sacrificing efficiency (sensitivity) to achieve a semblance of bass response.

But traditionally, the heart of the valve verses transistor contest was a choice between something that sounded rich warm and inviting (valves), compared to the crisp warts-and-all 'accuracy' of transistors. Many felt that valve amps sounded 'better', but transistor amps were more correct and truthful – even if the sound wasn't as good!

This sort of ties in with the deference paid to measurements. If a hi-fi component had measurably lower distortion, wider bandwidth, greater power, and lower noise, it HAD to be better. And, if it didn't sound terribly

good? Er, well, that was down to its, er, transparency and openness showing up faults that 'lesser' amplifiers obscured...

I mention all this because, for those of us of a certain age, it's difficult to throw off the received valve/transistor stereotypes and listen without prejudice. For while it might've been true that '60s valve amps (like the Quad and Radford) sounded warm and euphonic, and many of their transistor successors were bright and steely, this isn't the case today.

Indeed, it's long been my belief that many designers deliberately go out of their way to produce products that don't conform to the accepted stereotypes.

Thus, today you have valve amps that sound amazingly sharp, dynamic, brilliant and highly detailed, and transistor designs that sound rich smooth warm and rounded.

So, what might one expect from an amplifier that combines valves and transistors? Could a marriage of the two create the perfect compromise? ASTINtrew components mix the both technologies. The range includes a CD player, separate pre and power amp, and a forthcoming integrated amp. They're UK designed and made in China.

The power amp features a solid state output stage with tube drivers. Thus you get fairly generous power output levels (50W RMS – 140W peak with 95W RMS into 4 Ohms), with (relatively) compact dimensions and low running temperatures. The pre-amp mixes tubes with electronic volume control.

The loudspeaker output is, of course, direct-coupled, thus avoiding the component believed to limit the performance of valve power amps – the dreaded output transformer. ►

► Going back to the late '60s, many viewed the elimination of the output transformer as sufficient reason on its own to justify the move away from valves to transistors.



The output transformer was seen as a Bad Thing; all that nasty peak-level saturation, phase shift, and restricted bandwidth, not to mention cost and weight. Yet while these criticisms were (and are) true to a degree, a good transformer can deal with the first three, if not always the last two!

Speaking personally, I like the sonic effect produced by transformers. If well designed and properly made, their benefits far outweigh their limitations. Indeed, it's long been my belief that much of the velvety smoothness and fluidity of valve power amps is attributable to the use of an output transformer.

So far as my review schedule went, the ASTINtrew followed on from the Consonance Reference 1.5 and Cyber 300b combination – a 'proper' transformer coupled all-tube power amp and passive transformer-coupled pre-amp. This had produced a weighty refined presentation of great smoothness and ease.

With the ASTINtrew, first impressions

were of a sharper more immediate presentation, with a brighter tonal balance and crisper attack. It sounded clean, lucid and detailed – like moving 10 or 15 seats closer to the players in a concert hall. The sound had energy and impact,

yet still sounded smooth and integrated. I liked it.

The Consonance combination impressed me with its exceptionally smooth and refined sonics. It had a big powerful bottom end and rich sweet highs. There was a sense of effortless ease that made the music sound relaxed and comfortable, yet the sound did not lack brilliance or bite. It could be very detailed and articulate when necessary. The ASTINtrew combination sounded slightly leaner and more assertive. The presentation was noticeably brighter and livelier, but in a nice way; the sound was clean, open, and impressively sharp and detailed. It had a leaner tighter bass than the Consonance, with greater firmness and control.

Although the hybrid amp lacked the rich billowing voluminous bass quality of the Consonance, to its credit it always kept things under control. With the Consonance, the bottom end could

sometimes be too fulsome. Here, the bass sounded deep and clean, with plenty of power and drive. It had a tighter drier quality

After living with the lower powered Consonance (just 10W with the wind blowing in the right direction) and accepting its limitations in terms of wattage, the ASTINtrew offered plenty of muscle. The loudest peaks were handled with grace, and there was no sense of strain during heavy passages.

The heavy heatsinks either side of the case led me to anticipate hot running, but the casework only gets a little warm during use. Perhaps if I'd really pushed the amp to its limits the temperature would have risen more, but for normal domestic use and average volume levels using medium efficiency speakers there's not much heat.

Internally, the power amplifier is of dual mono design, each channel having a separate circuit board powered by individual mains transformers - large 300VA toroidals. With the pre-amp, there's a single smaller transformer with the left/right channels housed on a single circuit board.

Some mains transformer buzz can be heard from both components – not serious, but apparent if you sit close-by the units.



The power amp – with its two larger transformers – is slightly noisier than the pre-amp. The casework does not vibrate in sympathy, by the way – the noise comes solely from the transformers themselves. ►

► The casework is substantial and well finished, enhancing the impression of first-rate build quality. It's made from alloy, except for the steel base section. The top covers are fitted with ventilation slots, but in practise these are hardly necessary as both pre and power sections run fairly cool.

Unusually, the pre-amp's tape record output is linked to the volume control – normally it's a fixed output – meaning you could use this as an output instead of (or as well as) the standard pre-amp output. ASTIntrew suggest you consider bi-amping by adding a second At-5000 power amp – and this could be driven from the Record Out sockets.

Now, it may've been imagination, but I noticed a slight but noticeable difference in sound quality between the two outputs when comparing them. Basically, the Record Output seemed slightly sharper and a fraction more dynamic. I also tried listening to the other line inputs compared to the CD input, and felt Aux 1 sounded a touch sharper and more immediate.

While the differences weren't huge, there were small but noticeable gains in sharpness and immediacy as a result. Similarly, there was a slightly difference between the two sets of loudspeaker outputs on the power amp – Set A (direct wired to the circuit board) sounding slightly sharper and cleaner than Set B.

I really liked the At-1000's electronic volume control, which gave precise gradations with numerical indication from 0 to 96. It operates smoothly and noiselessly, allowing exact repeatable level settings. The pre-amp is fully remote controllable – input selection and volume level – but there is no left/right stereo balance adjustment.

For headphone listeners the At-1000 is unusually comprehensive with both 1/4in and 3.5mm jack sockets powered by a high-quality single-ended class A

amplifier. There's also a convenient front panel input jack socket for your MP-3 player. The pre-amp has a maximum output voltage of 20V RMS and a gain of 18dB.

All inputs have an impedance of 47k Ohms, while the output impedance is 600 Ohms. Both are unbalanced. The claimed S/N ratio is 95dB, and in use the amp is very quiet.



All input switching is electronic. There's no high-gain equalised input for turntable by the way – you'd need to add an outboard phono-stage to play vinyl LPs.

Both pre and power amps employ pairs of ECC82 (12AU7) tubes said to have a life of at least 20,000. Regarding the valves/transistors issue, I feel hard pushed to say which side of the fence the At-1000/At-5000 comes down on. In terms of sound, it doesn't scream Valve or Transistor at you. Essentially it's a very good natural sounding amplifier that delivers clean well-balanced results.

I liked its crisp incisiveness, yet also appreciated its smoothness and lack of brashness. It's a very neutral sounding amplifier, combining the precision and control you'd expect from a good transistor amplifier with the smooth liquidity and spaciousness of tubes. There's a certain 'rightness' to the sound

Overall, I'd say its sonic presentation leans slightly more towards transistors than tubes – by which I mean it avoids

the warm euphonic glow and golden richness of the valve stereotype. Yet don't infer that the sound is tonally hard or lean. As I said, the At-1000 and At-5000 combination is actually very neutral and truthful sounding.

It has the refinement needed for naturally miked recording of acoustic music – vocal or instrumental – and the power and attack for rock. At the price - £535 for the pre-amp and £697 for the power amp - the combination represents very good value.

While there might be better out there, you're going to have to spend a lot more to get something that truly beats the ASTIntrew. It's certainly an amplifier I'd be happy to live with. ➤+

TECHNICAL SPECIFICATIONS

At 1000 Pre-amp

Type:	Valve line-stage
Valve Complement:	2 x ECC82 (12AU7)
Inputs:	5 x line level 1 x mp3
Input Impedance:	47 KOhms
Outputs:	1 x pre-out 1 x tape 2 x headphone
Output impedance:	600 Ohms
Dimensions (WxHxD):	430 x 128 x 390mm
Weight:	7kg
Price:	£535

At 5000 Power Amp

Type:	Hybrid dual mono power amp
Valve Complement:	2 x ECC82 (12AU7)
Inputs:	1 pr single ended
Input Impedance:	47 KOhms
Outputs:	2 pr Binding posts/ch
Rated Power:	50W/8 Ohms, 100W/4 Ohms
Dimensions (WxHxD):	430 x 128 x 390mm
Weight:	13kg
Price:	£697

Manufacturer:

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