

Pure Sound T10/P10 (£320/£600)

With its vacuum tube phono amplifier and moving-coil matching transformer Pure Sound offers a taste of high-end analogue bliss for those on a tight budget

Review: **John Bamford** Lab: **Paul Miller**

A ficionados of vinyl replay may recall Audio Innovations' highly regarded P2 phono amplifier of the late 1980s. Its design was largely the work of Guy Sergeant who worked for the Audio Innovations company for ten years until it was acquired by the Audio Partnership in 1996. Way back then the P2 cost the princely sum of £750, illustrating that while there are plenty of cheap 'n' cheerful separate phono amplifiers on the market, those employing valves have always cost a pretty penny.

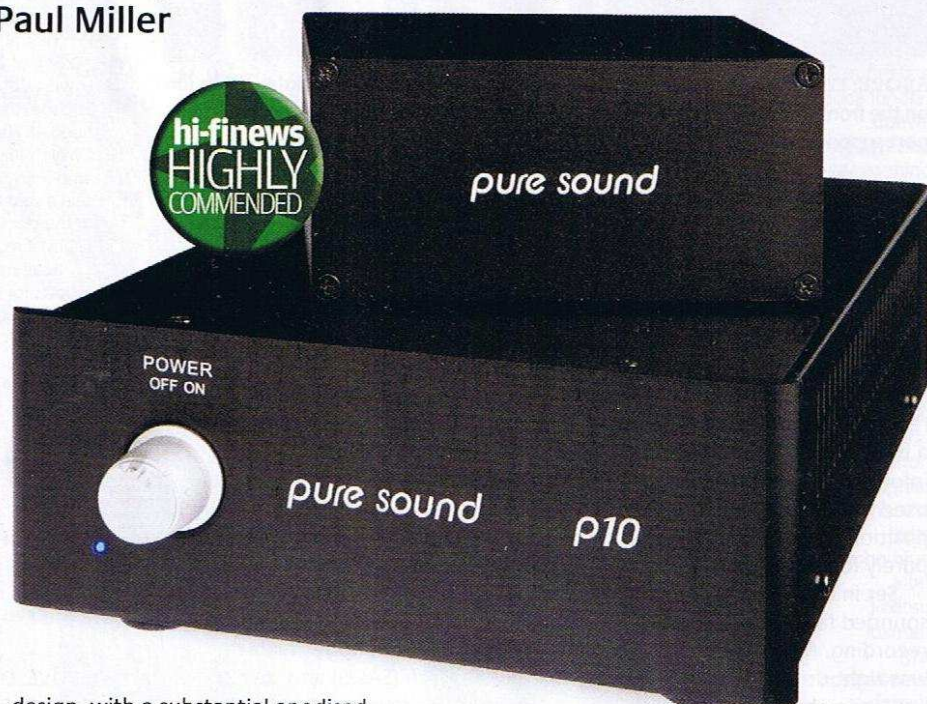
Guy Sergeant subsequently went to work for JPW, prior to creating his own Pure Sound brand of valve electronics. Its range of amplifiers may not win awards for svelte styling, nevertheless they are designed with a sensitive ear for sound quality and tend to be keenly priced thanks to manufacture in China. Pure Sound's manufacturing partner is a specialist producer of transformers, based in Guangzhou, around 75 miles northwest of Hong Kong.

PART SOLID STATE

Designed to partner Pure Sound's line amplifiers, the P10 phono amplifier is a moderately compact affair for a tube

IN SEARCH OF PURITY

Pure Sound's valve amplifier designer Guy Sergeant is something of a connoisseur of transformers, having collected and auditioned a variety of vintage studio microphone transformers over the years from the likes of Altec, UTC, Dukane, McMartin, Pri-Tec and Tamura before specifying the design of his own transformers for the T10. 'Listening to them proved highly informative,' he says. 'Some of the older classic transformer designs have a beautiful way of reproducing tone and it was that sound quality which was being pursued.'



design, with a substantial anodised faceplate and rotary on/off switch with blue power-on status LED. Under the folded steel cover it employs two valve stages with a passive filter network between them to apply RIAA equalisation. The input valve is a high gain ECC83 while the second stage is a lower gain ECC88, the audio circuitry employing no negative feedback and being all point-to-point wired using close tolerance metal film resistors and polypropylene signal coupling capacitors.

Unlike that of the old P2, the power supply in the P10 is a compact solid state design to keep cost – and size – to sensible proportions. The supply uses two transformers, one for the valves' filaments and the other for the high voltage rails. The filaments are DC heated in order to keep hum levels to a minimum and, indeed, in use the P10 proved to be virtually silent even when my Levinson No383 integrated amplifier was wound all the way up to 11.

Of course, owners of high output cartridges might use the P10 on its own [see Lab Report], while step-up transformers are required for use

ABOVE: Pure Sound's standalone T10 transformer is unnecessary for very high output MMs. Styling is minimalist, the P10 just showing power on with a blue LED

with low output moving-coil pickups. Rather than trying to shoehorn a pair of transformers inside the case of the P10 – requiring substantial magnetic shielding, which Guy Sergeant claims can be detrimental to sound quality – instead he builds a standalone 'T10' transformer unit to accompany the P10. The T10 features two custom designed transformers wound on mu-metal cores, rear panel switches (one for each channel) allowing the cartridge to be presented with either a 36ohm or 144ohm load. These settings equate to 1:36 (31dB) or 1:18 (25dB) of gain which cover the requirements of most moving-coil cartridges.

AN IDEAL BALANCE

Think again if you imagine that a valve phono stage might typically sound warm, syrupy and euphonic. What was striking about the sound of the T10/

LAB REPORT

PURE SOUND T10/P10 (£320/£600)



ABOVE: Gold-plated RCA sockets are used throughout. The P10 features an earth lift switch to obviate hum loops should they occur, while the T10 offers a choice of 36 or 144ohm loading

P10 combination from the outset was the vibrant immediacy of the sonic picture it presented. With an Audio Technica 'OC9 moving-coil fitted to my Townshend Rock Reference/Excalibur turntable the sound of Joe Cocker's *Sheffield Steel* [Island ILPS 9700] was tremendously forthright, the bass and drums of Sly and Robbie's rhythm section sounding fast and crisp while Cocker's husky vocal was vivid and intensely textured.

In similar fashion Eric Clapton's classic performance of 'Double Trouble' from his 1979 *Just One Night* 2-LP live set [RSO RSDX 2] sounded 'fresh' and brightly lit, with plenty of space and atmosphere combined with the type of raw bite you'd expect of a rock band. The closely miked toms of the drum kit and sizzling cymbals possessed believable resonance and texture with natural decay, the overall sound combining an ideal balance of tonal substance and fine detail.

LITTLE TO CHOOSE

Listening to David Torn's *Cloud About Mercury* LP [ECM 1322] revealed a correspondingly detailed and analytical presentation of the multiple layers of instrumental and electronic sounds. Mark Isham's trumpet playing leaped out of the soundstage with penetrating power, free of any sense of strain and with lifelike 'body' and dynamics. Leaving the album on the platter I compared the sound of the T10/P10 combo with RCM Audio's excellent Sensor Prelude phono amplifier: considerably more expensive at £1700 [see *HFN* Nov '09]. In

terms of information retrieval and imaging there was little to choose between them – a great result for the Pure Sound given its lower price tag – but where the RCM sounded 'thicker' and more meaty in the bass the Pure Sound came across as leaner and more agile. The tonality and energy of bass information was markedly different between the two – and which one you'd prefer would depend on the general balance of your hi-fi system.

So while there is plenty of colour and texture to instrumental timbres, with power and bass weight aplenty when demanded, Pure Sound's T10/P10 adds not an ounce of warmth or bloom. Rather it sounds nimble and explicit, managing to provide bags of detail – and thankfully without highlighting surface noise on less than perfect records. Whatever kind of music it is given to reproduce, it's an exciting and involving performer. ☺

HI-FI NEWS VERDICT

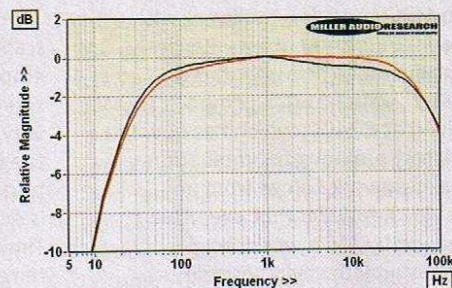
While not inexpensive, Pure Sound's T10/P10 combination is nevertheless competitively priced given the performance on offer. But remember to budget for good quality screened interconnects, keeping them as short as possible. With its quiet background noise and stark, explicit, hear-through quality it will have you perched on the edge of your seat as its eager and intense music making is, I feel, highly infectious.

Sound Quality: 80%

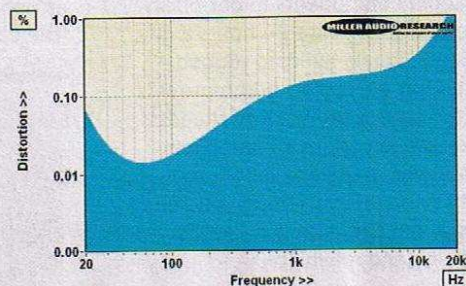


Compared to 'reference' solid-state phono amplifiers from the likes of Lehmann and PS Audio, this tube-based model from Pure Sound is both distinctive and characterful. Specified at x100 or 40dB, our P10 offered about half this gain at 34dB (x50), requiring a full 5mV from a high output MM to yield 250mV from the P10's outputs. The 88.5dB A-wtd S/N ratio is impressive, however, while the additional 26-31dB gain available from Pure Sound's T10 step-up transformer allows a 1V output from the P10 with MCs offering just 0.5-0.6mV. There's plenty of input margin too – in excess of 130mV before distortion exceeds 1%. That said, distortion is almost purely 2nd harmonic in nature but increases in line with output level, from 0.015% at 100mV to 0.098% at 1V and 0.5% at a full 5V output.

The combined gain of the ECC83/88 triode stages is far higher in order to accommodate the passive RIAA equalisation. This, and the lack of overall compensation, probably explains the swift increase in distortion at HF, reaching 1.5% at 20kHz for a 1V output [see Graph 2, below]. Neither is this gain precisely matched as our P10 had a channel balance error of 1.4-2.2dB, increasing at lower frequencies. Furthermore, and despite the use of close-tolerance passives, the response differed in 'shape' by about 0.5dB between channels, showing a slight loss of 'presence' [see Graph 1, below]. Unfortunately its excessive 3-4kohm output impedance, increasing to 21kohm at 20Hz, will only exaggerate the loss of bass when used with conventional amps. Readers are invited to view a QC Suite test report for Pure Sound's P10 phono amp by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



ABOVE: RIAA-corrected frequency response from 5Hz-100kHz. Bass roll-off will be obvious unless partnered with a high input impedance (typ. valve) amplifier



ABOVE: Distortion increases with frequency (MM sensitivity, 47kohm loading), at 1V output

HI-FI NEWS SPECIFICATIONS

Input loading (P10/T10)	47kohm/100pF 36-130ohm
Input sensitivity (re. 0dBV)	19.7mV
Input overload (P10)	130mV
Maximum output (re. 1% THD)	>5V
A-wtd S/N ratio (re. 5mV in)	88.5dB
Frequency response (20Hz-20kHz)	-4.2dB to -0.7dB
Distortion (20Hz-20kHz, re. 0dBV)	0.017-1.47%
Power consumption	12W
Dimensions (WHD; T10/P10)	70x145x145mm/90x215x360mm