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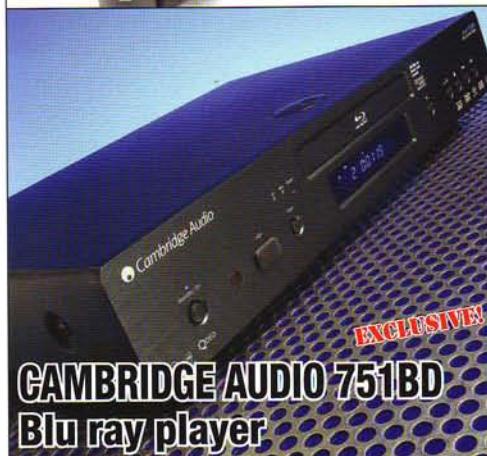
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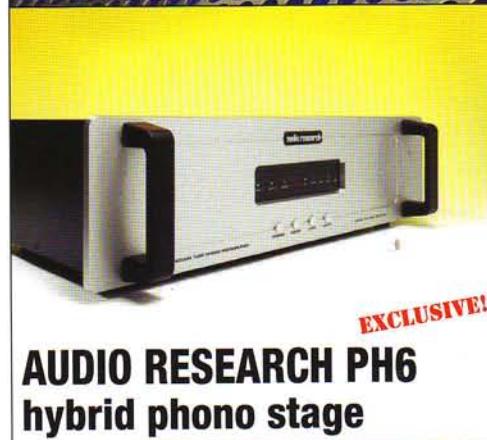
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hybrid phono stage



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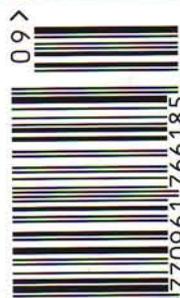
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10 PAGES OF LETTERS - THE BEST WINS A PAIR OF KEF IQ30 LOUDSPEAKERS! (UK ONLY)



Two For One

David Price tries an interesting new hybrid transistor and valve phono stage from Audio Research, the PH6...

The past ten years has seen an exponential growth in the number of phono stages on the market. It wasn't *that* long ago when the QED Discsaver, EAR 834P and the Michell ISO were all you got to choose from, but now there's a vast range from big name manufacturers and tiny specialists alike. Whilst the great majority are solid-state, there's a growing number of tube designs around, but few are hybrids like the Audio Research PH6. It's an interesting approach which risks offending purists of both the solid-state and thermionic persuasion, but then again it has advantages all of its very own...

The PH6 uses a high gain discrete J-FET transistor input stage, with constant current stabilisation and no overall feedback, but it then follows this up with two 6H30 twin triode valves in the gain and output stages. The circuit design is interesting; the solid-stage input stage lacks moving magnet/moving coil switching, but allied to the tubes the claim is that there's enough gain (58dB) – and sufficiently low noise – to work with either MM or MC

cartridges without the need for a (sound degrading) extra gain stage or any form of step-up transformer (which can again dilute the sound, especially if it's of poor quality) [see MEASURED PERFORMANCE].

The unit also features a wide range of cartridge loading choices, from 47K Ohms through 1000, 500, 200 or 100 Ohms. These are switchable from the front panel, along with a mono switch and muting, plus the main power switch, and this is all duplicated on the remote control so you can fiddle with your impedance from the comfort of your listening chair, should you be that way inclined! The panel is sparse and to the point; there's a pair of RCA phono inputs and outputs and an earth terminal, plus an IEC mains input. Very sadly in my book, for a product of this price, there are no balanced connections. Inside, it's a pretty complex beastie, with discrete passive circuitry of good quality (Japanese Nichicon capacitors, for example) and decent Sovtek tubes (complete with rubber tube dampers) which are said to give a life of over 4,000 hours. It's all very

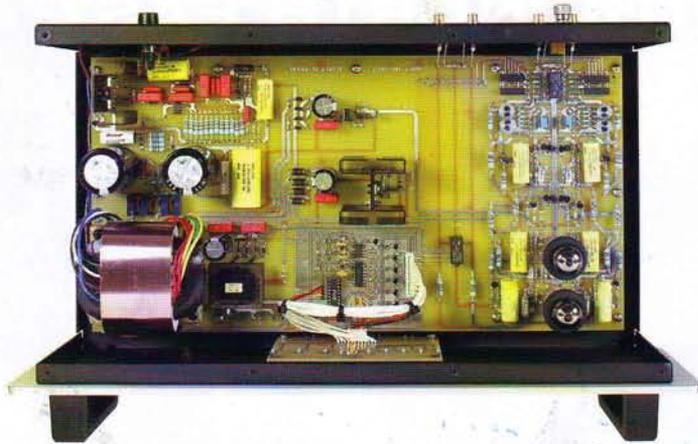
neatly laid out with hand-soldered connections. All metalwork, boards, transformers and major parts are American-made and sourced, the company says. Outside, it's a well finished product firmly in the Audio Research *oeuvre*, with sturdy fascia controls and a decent pressed steel case. A choice of black or silver fascia and/or handles and aluminium buttons is offered. Vital statistics are 470x132x254mm and 5.1kg.

SOUND QUALITY

The first cartridge I tried with this phono stage was a van den Hul Frog moving coil, with a quoted output of 0.65mV and optimum loading of 200 Ohms. The PH6 generated a decent gain through my reference Musical Fidelity integrated, with no sense of any mismatch, and with the right impedance dialled in, it was soon very apparent that I was listening to an Audio Research! Just as Naim or Linn or Meridian have a distinctive 'house sound', so does the Minnesota manufacturer; I've heard it across every product the company makes and it's never less than enjoyable and engaging. It sort of keeps you on your toes; there's no sense of you being able to use the PH6 for background music. Instead, you get a big, bold and brusque sort of sound with so much going on.

The eighties pop of Spandau Ballet's 'I'll Fly For You' was absolutely





perfect for the PH6. It's a slick analogue recording with characteristically nineteen eighties 'big hair and shoulder pads' production; everything's all up there in lights for you, underpinned by a big thumping drum sound and crisp hi hat cymbal work. The Audio Research showcased this superbly, conveying the power of the bass guitar, the tight thump of the bass drum and the tautly tensioned snare drums brilliantly; it served up a big rock sound the like of which you'd expect standing in the middle distance at Wembley Stadium. There was a physicality here that makes the PH6 more than just a domestic hi-fi product; its grip and punch reminded me more of a pro audio design.

Metro's 'Criminal World' is a rare slice of mid-seventies art rock in the mould of the great Be Bop Deluxe, beautifully recorded as so many albums of the time were. It's relatively unprocessed, with sparse overdubs, giving a very clean and direct sound. Again the PH6 relished it, proving brilliant at catching the leading edges of the guitars and drum work, whilst retaining quite a warm and fulsome tonality. Here I could really hear its hybrid design working to good effect; it didn't sound as pronounced across the midband as a solid-state stage in the mould of the Whest PS.30 RDT, nor was it anywhere near as soft and effusive as, say, an Icon Audio PS3. Instead it trod an interesting and very convincing middle line between the two. Vocals in particular were far creamier and more full bodied than the similarly priced Whest, with greater stage depth too. Yet there was still a lot more grip than the all-valve Icon Audio.

Fearing that this was solely a 'rock' phono stage, I quietly slipped on The Crusaders' 'Chain Reaction', a slick piece of jazz funk from 1975. The Audio Research didn't mind one jot, getting straight into the groove of 'Creole', showcasing the sublime guitar work of Larry Carlton, carrying Joe Sample's glittering Fender Rhodes keyboards beautifully, and providing a surprisingly delicate texture to the trombone of Wayne Henderson and

the sax of Wilton Felder. Indeed the brass section was surprisingly well carried, with a lovely rasp that comes only from the best analogue – it sounded 'reedy' but never descended into hardness, as it invariably does on CD. This track, and indeed the whole album was beautifully resolved, with 'I Felt the Love' demonstrating the PH6's fine timing; it's as accurate as a Swiss train and no less tidy. Again, I found the combination of tubes and transistors most convincing – I'd feared the worst of both worlds but instead there were many of the good points of each in evidence. Indeed the only downside here for me was the slight tendency for the PH6 to sit on dynamic peaks; this wasn't in any way obvious, but still sometimes I felt I was only getting nine tenths of the impact of a strongly struck snare drum, for example.

Switching to a Lyra moving coil and the PH6 correctly informed me that this was a slightly toppy cartridge with a forensic 'eye' for detail. Suddenly the Audio Research sounded cleaner and more clinical, lacking a little of the musicality it had before via the vdH Frog, but majoring out on detail resolution. My Deutsche Grammophon pressing of Beethoven's Pastoral Symphony (Karajan/Dresdner Philharmonic) was delivered with superb ambience and air, the PH6 never sounding strident even on this slightly edgy DMM recording. My only reservation was with the frequency extremes. Low bass is just a touch too loose for my ears, spoiled by high quality all-solid-

state designs, and there's a slight lack of space and delicacy to the very highest notes; the Audio Research gives a lovely hi hat cymbal sound but there's not quite delicacy of Emille's Allure all-tube design for example, or even ANT Audio Kora 3T Ltd. for that matter. It's a slight criticism, but a pertinent one considering its hefty price tag.

CONCLUSION

For some reason I'd feared that the Audio Research PH6 would sound like a basic transistor phono stage with tubes tacked on the end for reasons of fashion or marketing. I was wrong, as it proved much more than this. Indeed it has its very own distinctive sound that actually improves a little on both tubes and transistors taken in isolation, without losing too much of their respective charms. The result is an expressively musical, animated and lively sounding device that's nevertheless smooth and sweet to listen to. I'd say it's in its element with powerful pop, rock, jazz and soul – lending them as it does an expansive and engrossing sound. If this sounds like your kind of phono stage, then an audition is absolutely essential.

VERDICT

Big, powerful and musical in the classic Audio Research mould, this phono stage nevertheless demonstrates real subtlety and poise too. An excellent high end design then, but commensurately expensive.

AUDIO RESEARCH

PH6 £3,368

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FOR

- large, powerful sound
- pleasingly full tonality
- timbral accuracy
- pacey rhythms

AGAINST

- no balanced option
- loose frequency extremes
- cartridge matching issues

MEASURED PERFORMANCE

The PH6 comes with valves not in place, packed in foam under the top cover. Fourteen screws must be removed to insert them, a dealer task, although a screwdriver is supplied.

With cover off it is apparent that this is a transistor preamp that uses discrete devices, not ICs, plus a valve output stage able to swing a huge output, 56V in this case. This gives the PH6 enough working range to offer MC gain whilst still being suitable for MM cartridges. However, with MMs, volume will have to be turned right down on an accompanying amplifier and, if it has an input buffer stage (e.g. Naim) then overload will likely occur. I have measured 35mV from an Ortofon 2M Red, for example, and this will produce a massive 27V out from the PH6!

On the other hand, 58dB of gain is enough only for high-ish output MCs, such as those from Ortofon. Very low output MCs, from Goldring and Linn for example, need more gain than this, some phono preamps offering 70dB. So the PH6 is unusual in topology, but it has the merit of simplicity, but absence of an input transformer able to exploit low output MCs means noise is low at 0.14µV in, but 5dB higher than the 0.08µV or so common with input transformers.

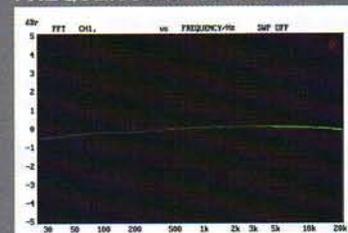
Frequency response was flat across the audio band our high resolution analysis shows, with just a slight roll down at low frequencies. However,

full gain was maintained right down to below 1Hz; there is no warp filtering.

The PH6 measured well but its unusual topology needs to be borne in mind as it brings with it some limitations. NK

| | |
|----------------------|-------------------|
| Frequency response | 1Hz-50kHz |
| Separation | 93dB |
| Noise (e.i.n. A wtd) | 0.14µV |
| Distortion | 0.009% |
| Gain | x775 (58dB) |
| Overload | 70mV in / 56V out |

FREQUENCY RESPONSE



DISTORTION

