

# Audio Research REF 5 (£10,498)

Reference 5 is the name of the new line-level, balanced-and-single-ended flagship preamplifier from Audio Research – and they've even upped the valve quotient

Review: **Ken Kessler** Lab: **Paul Miller**

**P**reconceptions are dangerous. One might assume that one's powers of even-handed assessment, when approaching the latest in a series of *tours de forces* for the first time, will be compromised by positive expectation. Fortunately, my initial exposure to Audio Research's latest preamplifier to bear the 'Reference' name was at a hi-fi show not conducive to close listening, let alone opinion formation. But even with it playing in the background, it was clear that something almost magical was afoot.

A few months later at Milan's TOP Audio, sitting in the 'hot seat' at one of Peter McGrath's legendary demonstrations, I hear it through Wilson's new Sasha loudspeaker. Peter makes his own recordings, this time a breathtakingly lifelike performance of the Mariinsky Orchestra with Valery Gergiev conducting. What piece it was, I do not know, but I experienced more than one the frissons of realism that make you forget about hardware. To use an unjustly maligned term, there was a 'presence' that was both 'vivid' and 'realistic'.

But forget semantics: the performers, the instruments entered the room. The bottom octaves were rich yet airy, the upper registers enjoyed a sheen so natural and free of nasties, I could have sworn that I was listening to mint Quad 57s that had suddenly gained 12dB in power handling. Believe me: the dynamic capabilities seemed limitless, with crescendos as free to soar as the eagles saving Frodo and Sam.

## STAGGERING OPENNESS

But the most overwhelming, nay, staggering component of the sound was the openness. That it was a valve preamplifier achieving this utter freedom from haze would surely antagonise a transistor sister who would listen in disbelief. Mind racing, I could not stop thinking about another pending product:

**RIGHT: Retained** – despite displays available with near-HD resolution – is the drab LCD of earlier REF models; buttons are recessed, knobs are twist-and-hold rather than rotary

Audio Research's first-ever solid-state integrated amp. Would I uncover a case of schizophrenia three or four months hence?

It was tough tempering a favourable predisposition toward the REF 5, especially as I had adored all three of its predecessors. Tougher still was reconciling the sound with other systems in the immediate vicinity, many driven by solid-state preamps. Somehow, Audio Research had closed the gap between tubes and trannies without sacrificing one degree of the warmth that 're-humanises' recordings – especially archly digital ones – a trait intrinsic to the valve experience. It was a near-replay of the REF 3, but the sound was somehow more involving. Perhaps 're-humanising' is the quality that sums up the '5's allure.

As the latest to wear the name, the Reference 5 *had* to improve upon a unit so blindingly competent and coherent that, in the review of the REF 3 back in 2004, I raved about it despite a fluorescent display so grotesque that it detracted mightily from the listening experience. I delivered a seemingly infantile rant about the panel, suggesting that it was enough to kill sales,

but I wasn't being hyperbolic, let alone childish: people make or decline purchases for the slightest of reasons. I maintain that position about the display with the REF 5, only now it's harder to let a mere display panel intrude.

Either way, the REF 3 has enjoyed five years of supremacy, universal acclaim ranking it with the best. The visual differences between the '3 and '5 are minimal, the changes discreet. So, too, the ergonomics, though the '5 is as much a joy to use as its forebear: most welcome is the press of a button on the remote that reduces the display to only nine pixels staying lit in the centre to indicate that the unit is, indeed, active. And those unashamed to be deemed 'audio-neurotics' (myself among them) will savour the facility that shows tube usage by the hour.

As all-valve line level preamplifiers go, the REF 5 adheres to a formula aimed at two-channel purists. Its back is filled with both balanced and single-ended inputs, so owners will never run out of the right connectors. And you do need plenty of both these days: my fave phono stage – the Audio Research PH5 – has only





single-ended outputs, while the Marantz CD-12/DA-12 has balanced, and the steady flow of review products can be either or both. But in every case, where possible, balanced sounded better to these ears: slightly cleaner, with a shade more control over transients' decay.

But sound is why we're here, and it is hard to believe that replacing the REF 3's 6L6GC in the power supply with a 6550C (to partner the 6H30P) was enough to ring in the changes. Maybe the superior quietude should be attributed both to that, the horizontal main board layout and transformers relocated to the sides of the chassis. For the most part, it is a 're-imagined' REF 3, still with a quartet of 6H30P dual triodes in the analogue stage, but enhanced with knowledge gleaned from the new Reference Phono 2.

Once in my system, the REF 5 just slipping into the rack, it was like welcoming back an old friend. My one permanent piece of ARC gear, the PH5 I bought a few years ago, fed an input marked 'phono' – confusing in a line-level device, but indicating that ARC expects its customers to approve of vinyl. Easy to understand why: with LPs as the source, the sound of the REF 5 'blossoms'. I could get all gag-making, telling you the sound opens like a chrysanthemum, but – as

former staff member Ivor Humphreys used to say – 'Steady on, old boy'.

### THE MUSIC'S SERVANT

It's sufficient to know that whatever the source, it was heard in 'naked' form, which laterally led me to the Beatles' *Let It Be ... Naked*, the barely-remembered release from 2003 that offered the Beatles' swansong in its original, pre-Spector form. Although not in the recent box sets, it possesses a clarity through the REF 5 that lifts it above the sound of normal CDs, though it's hard to separate the role of 21st Century mastering from the sound of the primarily unfamiliar mix itself. (Prior to this release, outside of Abbey Road, the pre-Spector performances existed only on bootlegs.) Regardless of the cause of the sonic shampoo, the REF 5 acts as the music's servant, accomplishing precisely what the release was intended to do prior to the 2009 remastering: get you closer to the sound of the Beatles at work.

If any instrument benefited more than others, it was the piano, an increase in naturalness showing how Billy Preston

**ABOVE:** Beefy handles, massive display, tidy row of buttons, two primary knobs just where they should be: the REF 5 shares the aesthetic of its predecessors, unmistakably Audio Research

added so much musical value to what was already the greatest band of all time that he became an honorary fifth member. While the 'humanising' and transparency of the REF 5 are nearly epic in proportion,

one must be careful in likening the gains to those of the 2009 Beatles CDs over the 1987s. The gains are not of that magnitude. But neither are they so subtle as to prevent one from rushing to upgrade.

'Somehow, Audio Research had closed the gap between tubes and trannies'

### THE GRUNGY SOUNDS OF ROOTS

Although my first serious exposure to the REF 5 was classical, I couldn't wait to hear what would happen with the sparse, gritty, grungy sound of Seasick Steve, roots music's latest cult figure. His new disc, *Man From Another Time*, is slightly more polished than its indie label antecedents, but this is the sound of your dream busker, with a beaten-to-bits guitar and overworked practice amp. However much the REF 5's refinement had made me swoon at TOP Audio, it was the sheer force that the system conveyed, magnifying Seasick Steve's ability to make a lone bottleneck guitar (on occasion with the lean accompaniment of trashy drumming) sound like a heavy metal onslaught.

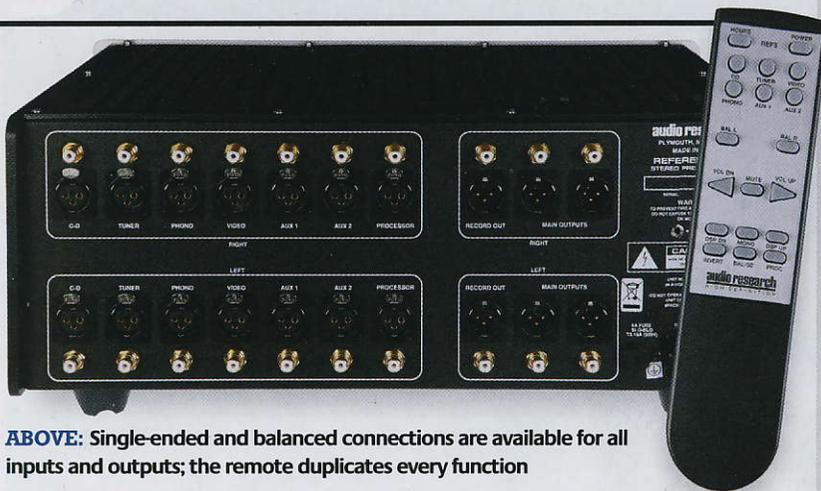
Above it is a gravelly voice oozing texture, one rendered familiar by numerous TV and radio appearances. Considering how little material the CD provides the system, compared especially with a full orchestra, the sound is room-filling and majestic in direct contrast to

## HIGH FIVE

Calling something 'Reference' works only if the product lives up to its name. All of us know that a 'reference' is an arbitrary point by which to judge performance or quality, either better or worse. Here, however, ARC chose it for another common usage: an upper limit against which others are rated, not a mere median point. Blessedly, from the moment ARC launched the Reference range, it has achieved global approval and a perennial place in all of audio's 'A-lists' without reverting to obscene prices – not that the REF 5 is a bargain. But it is only £1000 more than the outgoing REF 3. And what about a REF 4? Simple: '4' is the numerological equivalent of death in many Asian cultures. Like Nokia, Canon and others, ARC has eschewed gracing a model with a '4', for wise commercial reasons. A pity: four has always been my lucky number.

## PREAMPLIFIER

### AUDIO RESEARCH REF 5 (£10,498)



**ABOVE:** Single-ended and balanced connections are available for all inputs and outputs; the remote duplicates every function

expectation. And the mass that the system recreates is the air and space surrounding the performer. It was repeatable again and again, with unplugged solo artists, small ensembles and on live recordings where the hall's contribution hasn't been ignored.

Whether cavernous indoor venues or outdoor concerts augmented with massive PA systems, the REF 5 excels in reproducing three dimensions – still an amazing party trick for two channels. As spoiled as we are by live DTS 5.1 Blu-rays or SACDs, the REF 5 waves the flag for stereo; labelling one of its line inputs 'Phono' is no mere conceit, no simple sop to the hardcore. I even dug out recordings I made of a blues band in a local wine bar, recalling the arched-ceiling cellar I worked in for so many shifts.

Reproducing subtleties of an echo *beneath* the full-on sound of a too-loud band in a crowded, narrow basement is resolution of no mean measure. More impressive still is keeping all of those sounds in proportion, attesting to peerless skill at keeping the dynamic contrasts true to the performance, the reflections retained because they are part of the deal.

But extreme cases only test extremes. I wanted to wallow in AOR, British invasion smashes, 1970s studio treasures. James Taylor's *Sweet Baby James* provided sensational pedal steel and a distinctive voice that both paired and juxtaposed two contrasting textures – one liquid, one velvety. The relationship was preserved with utter coherence. Mono Herman's Hermits reminded the listener, 45 years on, that London possessed some of the most polished studio

musicians outside of the USA, the '5 uncannily layering the sound with vocals to the front.

### THE CARS... AND CARS

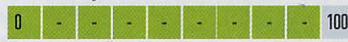
As for the Cars' eponymous debut, well, that's almost cheating, so punchy, so clever, so totally-crafted is the entire set. It makes a typical Queen recording seem sloppy. Transients stopped with irrefutable finality, bass rolled and twanged all at once, the piercing guitar work, swirling synths and weird vocals worthy of a David Lynch character forming a whole that could sound of disembodied parts in lesser set-ups.

The experience has forced me to rethink my entire system. To wit... Some 25 years ago, *HFN/RR's* then-editor John Atkinson decided to forgo the purchase of a sorely-needed car to replace his ageing vehicle, in order to acquire an Audio Research SP-10 preamplifier. I now fully understand his resolve: my 12-year-old estate will need to soldier on for a few more years, for I *must* own a Reference 5. ☺

### HI-FI NEWS VERDICT

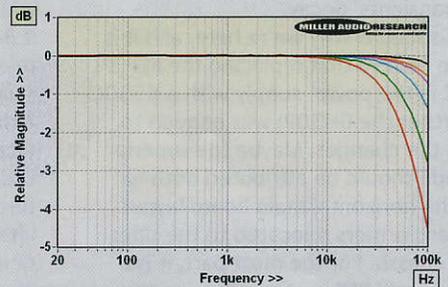
Having heard this preamp in five systems, witnessed how it transcended hostile settings, how it transformed even set-ups with which I was intimately familiar, I have but one observation to make: it is the best valve preamplifier I have ever used. In balanced mode, in an all-valve system, it *is* as the name says: the 'Reference'. But I will still be fashioning a fitted plate to hide that dreadful, Shrek-ish display.

Sound Quality: 89%

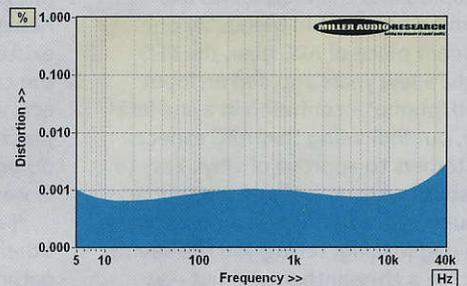


The launch of a new flagship preamp from Audio Research is an important event in any audiophile's calendar, and I'm glad to report that the REF 5 lives up to expectations. The balanced output is capable of delivering over 20Vrms from a 300ohm source impedance with distortion at less than 0.03%. While both channels were well within ARC's specification, the matching of the 6H30P Sovtech double triodes was better on the right here, distortion falling to ~0.0005% at an idealised 500mV output (0.0016% on the left) at 1kHz. Distortion is almost entirely 2nd harmonic in nature with very low 3rd/4th harmonics apparent. The right channel was uniformly lower in distortion versus either level or frequency, achieving 0.0006-0.0028% from 5Hz-40kHz [see graph 2, below] compared with 0.0016-0.0028% on the left. Either result is extremely impressive for a valve preamp and the differences will be swamped by distortion and noise elsewhere in the system.

The REF 5's response was perfectly matched between channels but does vary with volume setting, achieving its flattest -0.23dB/100kHz result at full (+12dB) volume and most rolled-off -4.9dB/100kHz between +6dB and 0dB gain settings (91 to 78 on the display). Graph 1, below, illustrates a variety of responses between +12dB and -24dB overall gain (103 to 31 on the volume display). Channel balance is good to 0.1dB and separation varies from a wide 100dB through bass to 66dB at 20kHz. The A-wtd S/N ratio (balanced in/out, re. 0dBV) of 97dB is well above average for the breed. Readers are invited to view a full QC Suite report for the Audio Research REF 5 preamplifier by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Frequency response vs. volume. Vol 103 = +12dB (black); 91/78 = +6dB/0dB (red); 66 = -6dB (green); 55 = -12dB (blue); 44 = -18dB (purple); 31 = -24dB (orange)



**ABOVE:** Distortion versus frequency over extended 5Hz-40kHz range (1V output, balanced in/out)

### HI-FI NEWS SPECIFICATIONS

Maximum output/Impedance	>20Vrms / 300-550ohm
Input sensitivity (for 0dBV)	224mV
A-wtd S/N ratio (re. 0dBV)	97.0dB
Frequency response (20Hz-100kHz)	+0.0dB to -4.5dB (0dB gain)
Distortion vs. freq. (20Hz-20kHz)	0.00058-0.0012%
Dist. vs. output (1kHz, 100mV-20V)	0.0007-0.021%
Power consumption	124W
Dimensions (WHD)	480x178x394mm