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Hi-Fi Choice

PASSION FOR SOUND

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Giant killer

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From CD to HD: Why Olive's touch-screen server won't compromise on quality



Streets ahead

Our verdict on Bowers & Wilkins' headphone debut



Steps to heaven

Entry-level ARC amps put high-end audio in reach

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Vamp it up

Paul Messenger discovers an affordable route into Audio Research ownership, the legendary name that never lost its faith in valves

US legend Audio Research was one of very few to stick loyally with valves – or vacuum tubes, as the Americans prefer to call them – when the rest of the hi-fi industry was rushing to embrace solid-state electronics. It can also fairly be called the father of US ‘high-end’, setting just such an agenda through the early 1970s with legendary ‘super amps’ like the 150-watt per channel all-valve D150.

Hindsight shows that yesterday’s heretic has become today’s prophet and now that valve electronics are making a determined comeback, Audio Research holds the high ‘I told you so’ ground.

Through forty years of continuous production and development, Audio Research has probably learned all there is to know about making valve amps ‘for life’ and has certainly built up an impressive portfolio of mostly amplification components.

Ancient and modern

The LS17 preamp is a clever combination of microprocessor control with solid-state components used for the power supply, while the active circuitry combines FETs with a couple of Russian 6H30 double-triode valves (adorned with lossy damping rings). The consequence is arguably the best of both worlds, combining the benign thermionic

sonic signature with the convenience of full remote control alongside reasonably comprehensive facilities.

Curious combination

At first – and indeed at second – sight, this separate preamp/power amp is not necessarily the most logical partnership. That’s because the LS17 stereo preamp has balanced as well as single-ended inputs and outputs, whereas the VS60 stereo power amp has only one pair of single-ended input connections.

The debate over the comparative advantages and disadvantages of single-ended and balanced connections has raged for years and never been satisfactorily resolved. Despite extra cost and complexity, US brands have long favoured balanced connections, whereas UK companies tend to prefer the simpler single-ended approach. I’m not taking sides here, but was surprised to find that the VS60 lacked balanced inputs.

Push-button

Presentation is classic ARC, combining a thick oversize silver-

DETAILS

PRODUCT:
Audio Research
LS17 and VS60

ORIGIN: USA

TYPE: Preamp and
power amp

WEIGHT:
LS17 5.9kg
VS60 14.7kg

DIMENSIONS:
LS17 (WxHxD)
480x130x300mm
VS60 (WxHxD)
356x178x356mm

FEATURES:
• (LS17) Remote control
• 2x 6H30 double-triode valves
• Linear display
• (VS60) 50 watts per channel
• Power valve bias adjustment
• 4 or 8ohm matching
• Optional cage

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alloy fascia with steel casework, perforated for ventilation. The large oval knobs either side of the central display provide hands-on volume control and selection for the five main inputs, while four push-buttons select power, muting and the monitor and processor override inputs. The electronic volume control is also very well conceived, the 20-lamp display tacking 104 individual steps. Indeed, the only obvious omissions from our point of view are a mono switch and a balance control.

In practice, of course, the real control surface will be the remote handset and the LS17R supplied here is an object lesson of how to do it properly. It's small, light in weight, and has just the minimum number of buttons needed to operate the available functions. Which, if you consider the numerous button-laden handsets which are bulky, heavy and pretentious in design, is exactly what is required.

Easy connections

The rear socket array consists of two stereo pairs of balanced XLR inputs – only really of much use to those who have sources with balanced outputs – plus seven pairs of phono sockets. The latter comprise just three 'regular' stereo input pairs, a quartet for tape recorder output and



TALKING POINT
ALTHOUGH this review has focused entirely on the LS17/VS60 pre/power as a combination, it's interesting to consider these separate components as individual units in their own right. Which is more important to the sound of the system as a whole? Both play an important role and each imposes its own individual character on the sound. The LS17 preamp is sonically sweeter and more transparent. Using a VS60 with an inexpensive passive preamp is an alternative temptation, but ultimately a power amp is only as good as the signal it's provided by a partnering preamp. So given an either/or choice, our vote would go to the LS17.

monitoring, as well as an input pair for AV processor connection (which presumably by-passes the volume control and supplies full gain). The three volume-controlled outputs include one pair of single-ended phonos and two pairs of balanced XLRs. A regular 13-amp IEC 'kettle' mains input and a 12-volt 'trigger' make up the full complement.

The 50 watts per channel VS60 stereo power amp is rather simpler. The front has just an on/off toggle with tell-tale LED, while the busier back has one pair of single-ended phono inputs. Three speaker terminals for each channel allow matching to either four-ohm or eight-ohm speakers and don't accommodate the four-millimetre 'banana' plugs popular in Britain – it's spades or bare wires here.

“Audio Research has probably learned all there is to know about making valve amps ‘for life’.”

There are also four pairs of bias test jacks, to provide accurate adjustment for each output valve, 12V 'trigger' in/outputs and a 13-amp IEC 'kettle' mains input. A cover for the valves and transformers is an optional extra.

Reassuringly expensive

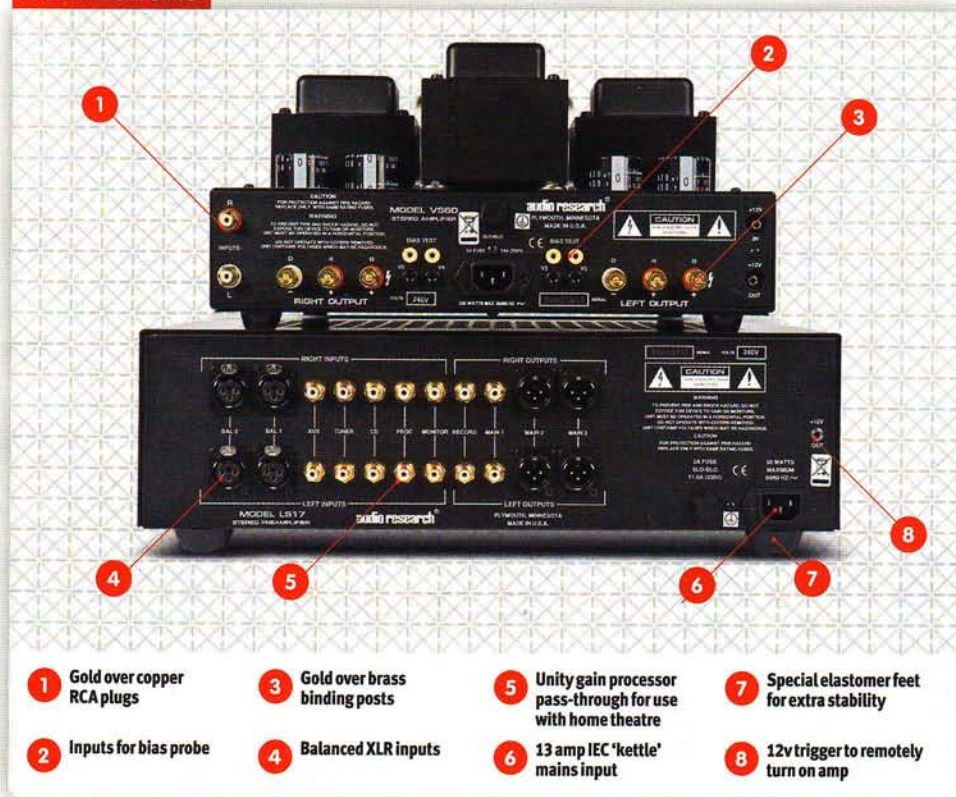
Audio Research amplification is far from cheap. The two components reviewed here cost £3,575 and £3,063 for the preamp and power amp respectively, but those figures are far below the truly extravagant price tags that are all too often hung on high-end equipment.

We don't have price-equivalent data for this combo and its immediate predecessors, but have managed to compare the price of the current VS60 integrated model with the earlier VS55. Over the course of no fewer than six years, the £2,895 '55 has morphed into the £3,370 '60 – an increase of a mere 16 per cent, notwithstanding the performance upgrade and the recent collapse in the value of sterling.

Magical Voices

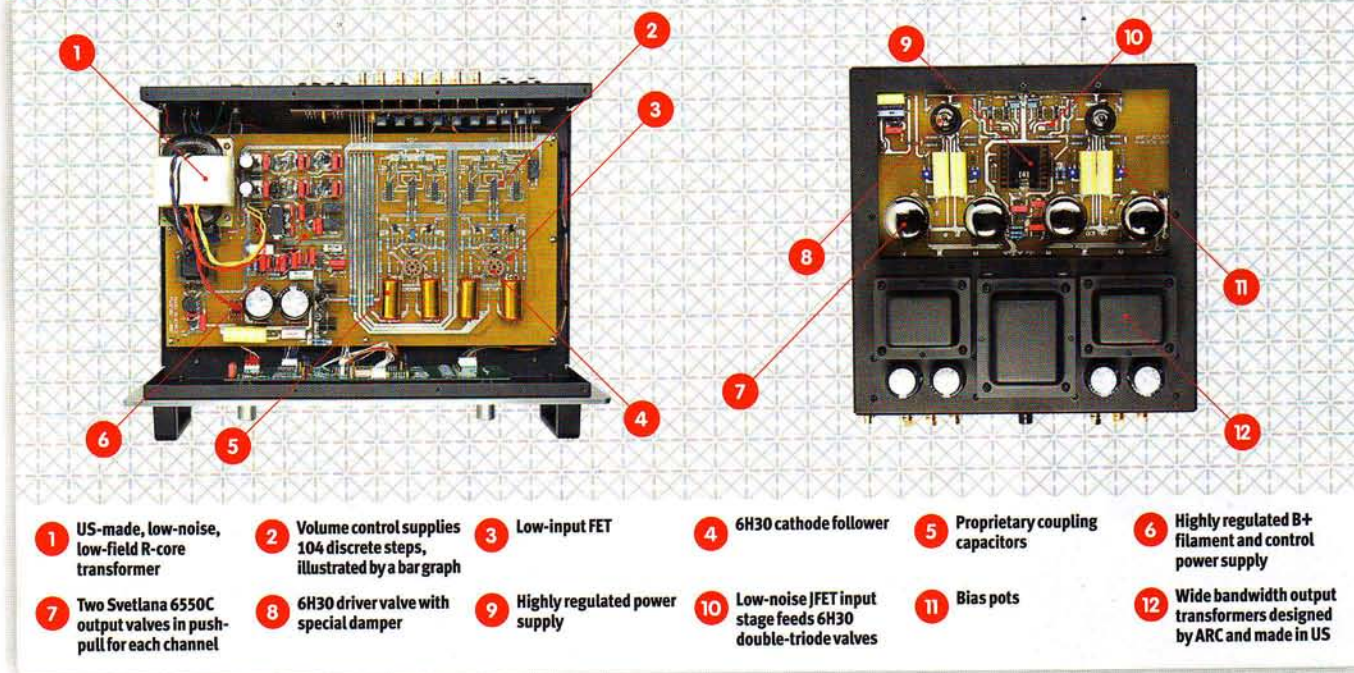
We were very impressed by the Audio Research VS55, when it debuted six years ago. A commendable performer with an excellent feature list, the model has now been replaced in the ARC ▶

CONNECTIONS



- 1 Gold over copper RCA plugs
- 2 Inputs for bias probe
- 3 Gold over brass binding posts
- 4 Balanced XLR inputs
- 5 Unity gain processor pass-through for use with home theatre
- 6 13 amp IEC 'kettle' mains input
- 7 Special elastomer feet for extra stability
- 8 12v trigger to remotely turn on amp

HIDDEN TECH



- 1 US-made, low-noise, low-field R-core transformer
- 2 Volume control supplies 104 discrete steps, illustrated by a bargraph
- 3 Low-input FET
- 4 6H30 cathode follower
- 5 Proprietary coupling capacitors
- 6 Highly regulated B+ filament and control power supply
- 7 Two Svetlana 6550C output valves in push-pull for each channel
- 8 6H30 driver valve with special damper
- 9 Highly regulated power supply
- 10 Low-noise JFET input stage feeds 6H30 double-triode valves
- 11 Bias pots
- 12 Wide bandwidth output transformers designed by ARC and made in US

line-up by a VS60, which is quite closely related to this LS17/VS60 combo: a VS60 is essentially an integrated version of the VS60 power amplifier, albeit with a simplified passive preamplifier).

Regrettably, six years is far too long to attempt to establish what, if any, advantages this brand new combo has over its integrated predecessor. And, unfortunately, there was also nowhere near enough time available to carry out the full 600-hour (!) 'breaking-in' period that Audio Research recommends these components need, in order to achieve their very best sound quality.

Shivers up the spine

But we can say that we were immediately transported into a familiar comfort zone. Valve amps always seem comfortably able to

deliver a midrange purity and realism that's clearly and obviously superior even to far more costly solid-state amplification and this LS17/VS60 combo does precisely that. The sheer realism of a beautiful human voice, such as mezzo soprano Sarah Connolly singing Purcell's *Dido's Lament*, sent shivers up our spine when we heard it on the radio recently. It even worked surprisingly well via 'Listen Again' over the internet!

Some limitations became more obvious when playing wider bandwidth rock material. After all, this pre/power combo costs just two-thirds the price of Audio Research's top Reference 5 preamplifier, so it's bound to involve some compromise and these are most obvious towards the extreme top and bottom of the audio band. The low bass lacks a

HOW IT COMPARES

THERE ARE distinct differences between the way British and American hi-fi cultures have evolved, most obviously in the techniques and approaches to the connections.

Most UK power amps have multi-way socket/binder speaker terminals which can accommodate not only spade or bare wire connections, but also the spring-loaded 4mm plugs that are commonly fitted to UK speaker cables. This ARC VS60, however, could only accept spade or bare wire terminations.

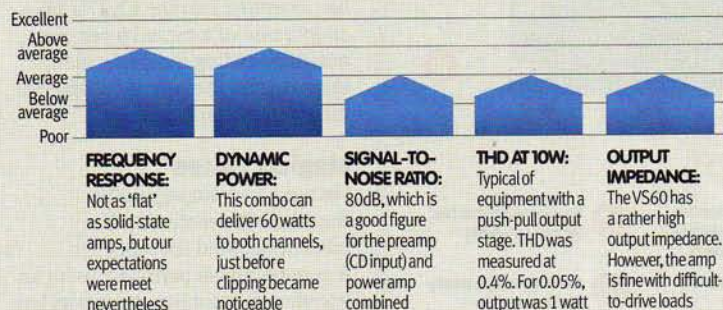
Likewise, balanced XLR inputs are relatively common on US kit – the LS17 has four pairs in toto – but comparatively rare on British equipment, which (outside the ProAudio sector) has always favoured the simpler single-ended RCA phono socket.

little poise, has a slight tendency to thump and to gloss over the fine textures that distinguish the fine detail of instrument differences. And although the top end is beautifully tidy, it's also perhaps just a little too restrained – lacking some of that all-important sparkle.

Imaging is delicate, spacious and airy, free from any obvious boxiness or coloration and always well-detached from the PMC IB2i speakers we use for reference. However, focus does seem a little vague and weak and this seems to be an effective pointer to the overall sonic character of this amplifier, which is delightfully sweet and transparent, but also just a little soft around the edges. The total experience is certainly very listenable and enjoyable, but also a little lacking in tautness and dynamic tension. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Wonderful midrange dynamic expression, especially when reproducing the human voice
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Loses some definition and lacks grip
- BUILD QUALITY** ★★★★★ **WESAY:** This mature valve combo has intelligent ergonomics and sounds very easy on the ears
- SPECIFICATIONS** ★★★★★

OVERALL

