

Product Announcement

Unison Research SH

Traditional technology for a modern hi-fi solution.

Didcot, Oxfordshire – 11th March, 2016

Unison Research are expanding on their class-leading knowledge of valve-based hi-fi electronics to produce their first ever dedicated headphone amplifier solution. The SH is a single-ended, two-stage full-valve headphone amplifier designed to accommodate both traditional analogue sources and modern computer-based audio.

Unison Research have created SH in order to cater for the growing world of headphone audiophiles. Headphones have become increasingly important in the high-end home listening environment thanks in part to two main characteristics. First, there is a near-complete absence of environmental resonances while listening to headphones, as the drivers sit within an enclosure that sits on, over or inside the ear. Second, the transducers used in headphone design typically distort less compared to traditional loudspeakers. The SH was, therefore, developed to offer a high-end valve alternative to the many solid-state headphone amplifiers that are currently available, from an established brand.

The SH began with the same basic aim as the coveted Simply Italy integrated amplifier; to produce a world-class sound from a specialised device using the best technology available. However, to suit the particular factors associated with headphone listening, the development team also had to ensure that the amplifier was designed with low noise characteristics and low internal impedance.

The result was a fairly simple linear circuit with low negative feedback that produces an output voltage which is more than capable of driving a wide range of headphones, while keeping distortion low throughout the frequency range. Great care and attention was given to the layout and selection of components for the SH. To compensate for the low negative feedback required in the design, absolute attention was paid to ensure optimal linearity and increased attention on managing noise to a minimal level throughout the electrical path. It's thanks to this design that the SH is able to deliver a consistent, coherent, rich and identifiably "valve" sound character when in use.

The input stage uses an ECC83 valve, while the output stage uses one EL84 (both valves operating in triode mode). The benefits to using this specific combination of valves are two-fold. First, the application requires reduced power compared to how the valves are usually employed, resulting in extended life. Second, the EL84 is capable of producing enough power to also drive the specially-selected output transformer with optimal electrical and sound character.



The SH has two headphone outputs that are connected in parallel (each with their own EL84 valve) for easy switching between headphones, or to accommodate multiple listeners. There is also a "Sensitivity" switch, to ensure the widest possible range of headphones can be comfortably driven by the amplifier. When set to "High Sensitivity", the output voltage from the amplifier is reduced, and at "Low Sensitivity" it is at its maximum. The added advantage of this switch is for maintaining premium sound quality while listening to music at lower volumes, as both sensitivity options will likely work with the vast majority of high-end headphones. The volume stage is entirely passive.

In addition to a standard un-balanced RCA input for connecting any Line-level source, the SH is also equipped with a class-leading USB DAC. The asynchronous USB 2.0 technology is the same as found on the recent Triode 25 amplifier, and supports audio formats up to 384kHz PCM and DSD 128. The patented jitter-elimination circuit ensures a great sonic performance, assisted by the galvanic isolation employed between the power areas of the USB interface and the conversion IC. This additional input option brings SH up-to-date with the latest requirements of computer-based headphone audiophiles.

As with all Unison Research products, R&D and production for the SH took place in-house at the company's Treviso-based facility. The stylish wood front-panel is locally sourced and finished to the highest quality, as with almost all other components. The SH is a stylish, great sounding and meticulously engineered device that will quickly become a must-audition headphone amplifier solution for anyone who takes their sound seriously.

SRP £1,250.00

**The Unison Research SH is available in the UK now with Cherry or Black faceplate.
For a list of all approved retailers, visit the 'Where To Buy' section of henleydesigns.co.uk**

Technical Information

Key DAC Features:

- Asynchronous USB interface compliant to USB 2.0 Audio Class
- Accepts PCM up to 384kHz and DSD up to 128x
- Resolution up to 32 bits
- Latest generation ESS Sabre DAC with jitter eliminator circuit
- Galvanic isolation between USB interface and conversion circuit
- Low phase noise clocks which reside in the "clean" supply domain to preserve low jitter performance

Specifications:

Max. Output Power (THD 1%), High Sensitivity:	0.5V (150Ω), 0.45V (33Ω), 0.4V (10Ω)
Max. Output Power (THD 1%), Low Sensitivity:	1.4V (150Ω), 1.1V (33Ω), 0.6V (10Ω)
Frequency Response:	-0.1dB @ 10Hz / 3-dB @ 50kHz (Low Sensitivity output with 33Ω load)
Input Impedance:	20 kΩ // 100 pF sensitivity 0.67 V: High Sensitivity, (10Ω load) 0.33V out Low Sensitivity, (33Ω load) 1V out
Input Stage:	Pure Class A, ECC83/12AX7 (triode mode)
Output Stage:	Class A, EL84 (triode mode)
Inputs:	1 x RCA Line Level 1 x USB (Type-B)
Output:	2 x ¼" Jack Sockets (in parallel)
Feedback:	16dB
Output Impedance:	6.9Ω
Total Harmonic Distortion:	< 0.2% @ 1kHz 0.5V < 0.8% to 1 V (Low Sensitivity output with 33Ω load)
Power Consumption:	45W
Dimensions (W x H X D):	22.5 x 12.6 x 32.2cm
Weight:	6kg

Notes for Editors

Consumer Contact for Publication

Henley Designs Ltd.
Didcot, Oxfordshire

Tel: 01235 511 166
Email: sales@henleydesigns.co.uk
Web: www.unisonresearch.co.uk



About Unison Research

Unison Research was founded in 1987 by a small group of audiophile enthusiasts, and since that point the company has garnered a reputation as one of the world's leading valve-focused hi-fi companies. Based in Treviso, Italy, they have a strong focus on audiophile electronics with a particular tendency toward integrated amplifier designs.

The current Unison Research range is represented by the Valve and Unico series, with other accessories including phono stages and headphone amplifiers also available. There's something available for any system, and all products maintain the company's historical reputation of paying due diligence to both sound performance and aesthetic appeal. All internal components and almost all the external parts are locally sourced, while all R&D and assembly is still conducted in house; ensuring each item purchased has been hand-assembled and tested by an expert engineer with an intimate knowledge of good sound.



About Henley Designs Ltd.

Everyone has a different interpretation of what good sound is, and at Henley Designs we're no different. We strive to bring customers the best possible selection of hi-fi equipment from a variety of international manufacturers.

Formed in 1997 as the result of a management buy-out of Ortofon UK, Henley Designs Ltd. are one of the UK's premier distributors of quality hi-fi equipment. The brands we distribute are not only highly-regarded in their own right, but they also share a symbiotic relationship with other brands in our portfolio.

For more information, visit www.henleydesigns.co.uk

Press Contact

Simon Powell

Henley Designs Ltd., Unit 11, Moorbrook, Southmead Industrial Park, Didcot, Oxfordshire, OX11 7HP
Tel: 01235 511 166 Fax: 01235 511 266
Email: sp@henleydesigns.co.uk Web: www.henleydesigns.co.uk

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