### **CONRAD-JOHNSON LETS THE GAT OUT OF THE BAG**





REPRODUCING THE RECORDED ARTS www.hifiplus.com

JULY 2016 • 137

# NOW IT'S PERSONAL

STAX, NOBLE, TRILOGY, HIFIMAN, AND MORE ... THE FINEST IN-HEAD ENTERTAINMENT!



















## EQUIPMENT REVIEW

# Trilogy Audio Systems 931 headphone amplifier

by Alan Sircom

e loved the Trilogy Audio Systems 933 headphone amplifier when we tested it back in issue 94. It is the company's first 'serious' headphone device; a two-box amplifier that can drive anything with ear cups aside from electrostatics. But, it comes at a price – both financial and technologically; although it's designed to be used at arm's length, it has to be used with a remote control to adjust volume. Nevertheless, the 933 remains one of the best.

I think, however, many would trade a little of the 933's uncompromising performance, for a lower price. OK, so you

lose the balance control, but I think many would be happy with a headphone amplifier in a single box, with a toggle switch to change inputs, and a more conventional volume knob. So long as the cheaper product gives no quarter to either sound quality or ability to drive any headphone that comes its way, where is the problem? And that brings us to the Trilogy 931.

The Trilogy Audio Systems 931 gives surprisingly little ground to its bigger brother, despite costing half as much as the 933. As suggested, the 931 moves from an external separate power supply to a built-in and oversized linear power supply with a toroidal transformer; however, given that Nic



#### EQUIPMENT REVIEW / TRILOGY AUDIO SYSTEMS 931 HEADPHONE AMPLIFIER





"The dynamic range of the 931 is already close to the limits of what many headphones can achieve, anyway."

▶ Poulson, Trilogy Audio Systems' designer, also runs audio power experts ISOL-8 when he's not making amplifiers, he 'knows a thing or two' about power supplies, and the move from external to internal PSU is no great sacrifice. OK, so it doesn't have the choke input power supply of its bigger brother (virtually unique among solid-state designs) and this does make a difference in terms of dynamic range, but the dynamic range of the 931 is already close to the limits of what many headphones can achieve, anyway.

This is not the only scaled down without compromise product in the Trilogy line-up. The company's 906 phono stage draws heavily from Trilogy's top 907 standalone unit. Even the basic casework for both smaller and larger models is similar. And, unlike many brands where the entry-level products are built half a world away, the 931 is built in Trilogy's London HQ. Despite having a rich audio heritage (including a pre-war Quad, Leak, Beard, Gale, and Garrard) to the best of my knowledge only Trilogy, Roksan, and Vertere still build in 'The Smoke' today.

For the 931, the case moves from a machined aluminium clamshell case to a machined aluminium 'spine' of front panel and side heatsink, and a lighter aluminium sleeve. This has the advantage of allowing the sleeve to be finished in one of three standard colours (silver, blue, or black) or even its myriad Chameleon Colour System. As with the 933, this is a two line input device, and the circuit is a pure single-ended Class A design, with each channel having its own continually biased output device. As a Class A design, the 931 runs warm to the

touch, but not 'baking hot': it certainly runs cooler than its bigger brother in use. It has just the one full-sized headphone jack socket, next to a pair of toggle switches (one to power up the device, one to switch inputs); the rest of the front panel is taken up by the volume knob, and a LED power light.

The choice of ALPS volume pot in the 931 against the remote array driven in the 933 is logical, too. It means no more provision for balance control or remote drive, but this cheaper way of attenuating volume allows Trilogy to spend more on getting the best sound out of the 931. The ALPS pot in the 931 is good enough to have been used in some of the world's best preamplifiers, although cast any thought of using this – or any other Trilogy headphone amplifier – as a preamp in its own right; that's not the Trilogy way, and you should use a preamplifier for preamp duties. Note that the use of the term 'other', which suggests there might be more than the two Trilogy headphone amps in the line-up soon...

Operation is simple in the extreme. Plug it to something line level (such as a good DAC), turn it on, put in the headphones, and... wait about 15 minutes. OK, you can play music after about three seconds of powering the 931 up, but it takes about 15-20 minutes to warm through, at which point it starts to sound like it should. And 'like it should' is a combination of valve-like satisfying with solid-state drive and energy irrespective of headphone used. There is a touch of almost British reserve and restraint – in a 'Keep Calm and Carry On' way, rather than a repressed *Remains of the Day* manner – but that is coupled with an ability to really play loud

#### EQUIPMENT REVIEW / TRILOGY AUDIO SYSTEMS 931 HEADPHONE AMPLIFIER

#### "The Trilogy 931's sound borrows more from classic stereo amplifiers than classic headphone amps."

when called upon. Besides, you should expect a bit of British reserve from something made in London.

It's a very well-balanced sound, with a powerful, deep, but not ponderous bass, and a detailed, precise treble. The midrange is extremely natural, liquid, and open, too; this midrange isn't as obviously emphasised as some systems and that might make it seem a little spatially constricted. I don't think this is the case at all; the 931 simply goes for the honest approach, and everything seems in correct proportion. It's perhaps just that the Trilogy 931's sound borrows more from classic stereo amplifiers than classic headphone amps, and that sense of mid-range directness that you get from many amplifiers even at twice the price simply isn't there to the same extent. In truth, I prefer it this way; the overall balance is more approachable especially in long-term listening, and you never feel overburdened by the sound. This can become especially great to hear when you are playing some of the more 'excitable' headphone designs that can quickly become wearing over time.

It's easy for a reviewer to fall into the trap of calling something that gets warm to the touch 'warm' sounding, especially when Class A amplifiers have a predisposition to generate a harmonically rich, valve-like sound. But the 931 does have a harmonically rich sound. The 931 is a master at teasing out musical harmony and the harmonic structure of instruments, and there's no sense of making music seem lush and soft-edged here. Instead, the 931 has that full, rich, and approachable sound people crave in good quality amplification, a sound that is all too rare in the headphone space. OK, so if your musical vision involves heavily processed 1980s power ballads played on Yamaha DX7 synths with cutglass clarity, you might want something more analytical, but one man's 'analytical' is another man's 'harsh'.

That smooth and satisfying sound throws out a wide soundstage, too. This is perhaps not quite as precisely defined as some of the really big hitters (including the 931's bigger brother), but is perfect for giving an orchestra a 'proper' sense of scale, and that doesn't get much bigger than Beethoven's Fifth Symphony [Kleiber, Vienna Philharmonic Orch, DG]. Although this had all the micro-dynamic interplay craved by audio enthusiasts, the presentation was more about the music, and less about the sound it makes. This drew you

#### TECHNICAL SPECIFICATIONS

Type: Single-ended Class A headphone amplifier

Inputs: 2x stereo RCA phono socket pairs

Input Impedance:  $\geq 50 k\Omega$ Output: 1/4" TRS jack socket Output Impedance:  $\leq 10\Omega$ 

Output Power: 800mW into  $60\Omega$ , 200mW into  $300\Omega$ 

Gain (max): 18dB

Distortion (THD): ≤0.05% 10mW into 300Ω

S/N ratio: ≥85dB A Weighted

Phase: Phase correct (non inverting)

Finishes: Silver, blue, or black as standard, 'Chameleon'

Colours on request Size (W $\times$ H $\times$ D): 14 $\times$ 23.7 $\times$ 5cm

Weight: 1.65kg Price: £895

Manufactured by: Trilogy Audio Systems

**URL**: www.trilogyaudio.com

Distributed in the UK by: Symmetry URL: www.symmetry-systems.co.uk

Tel: +44(0)1727 865488

further into the recording, even if not into audiophile grade ultimate stereo separation.

The big caveat with the 931 is more an observation than an outright criticism. The 931 has a lot of very clean power on tap; partner it with a pair of reasonably sensitive headphones and crank it up loud and you are more likely to to mistake your ears relaxing between beats for the distortion that isn't there. Responsible types will know their own limits and keep the volume level on the right side of sanity; sadly, we aren't all quite so responsible, and my first encounter with the 931 was AC/DC related and so damn loud I was, er, 'Thunderstruck' [The Razor's Edge, Atco].

The ultimate test of any headphone amplifier is its ability to get out of the way and leave you with the difference in headphones as the deciding factor in selecting a system. The amp should simply 'get out of the way', but in the real world this is almost impossible. Fortunately, the 931 gets out of the way better than many at the price. It's capable of playing any headphone you can think of this side of electrostatics, it's refined and elegant sounding, and it can play really loud if you let it. Trilogy's 931 is an obvious recommendation.