

EQUIPMENT REVIEW



TrilogY 933 headphone amplifier

By Alan Sircom

As a Londoner, it's a moment of rare joy that I come across a product made in my hometown. With the inevitable drift eastward, making things in one of the most expensive cities in the world seems untenable, despite the infrastructure and availability of skilled workers London brings to the table. TrilogY Audio is one of the few exceptions; its products are designed and built in London to uncompromising standards. The new TrilogY 933 headphone amplifier typifies that stance.

The headphone amp is a two-box design. The business end is made out of a solid billet chassis, designed to look cool and reduce any potential deleterious effects caused by resonance and microphony. By making the top, sides front and rear from a single billet of aluminium, it looks fantastic, and the device has just two sets of stereo phono inputs, a 1/4" jack output and a captive lead reaching to the power supply.

This second box is more blunt in design, a folded aluminium case with two green LEDs at the rear and not a lot else. There isn't even a power switch. Nic Poulsen, TrilogY's chief designer, is very much a valve man, and very much a power supply man (his other business is ISOL-8). So, when it comes to designing a power supply for a device, he doesn't just go for the simple switch-mode PSU or even a transformer-coupled device. He goes for full choke regulation. This is basically an inductor that, because it tends to resist any short-term changes in current flow, a choke will smooth out ripples in the voltage waveform. Think of it like a really good filter, feeding the main circuit exactly what it needs to sound good. It's essentially the same choke regulated power supply used by TrilogY for its phono stage, but with different voltage demands.

Back to the amplifier box. Under that case is a pure class A, fully single-ended design, with just one output device per channel. Unlike many – even many surprisingly expensive – headphone amplifiers, this is an all-discrete design, without an op-amp in sight. TrilogY doesn't just laugh in the face of op-amps, it tweaks the nose of component quality. There is no such thing as 'good enough' inside the 933. Every component on the board – as well as the board itself – is of the highest quality and closest tolerance. This is because through a barrage of listening tests through a range of headphones, TrilogY found that even more than in conventional audiophile components, the smallest changes yield massive differences in performance. So swapping out those expensive Mundorfs with cheaper capacitors might lower the cost, but it slightly undermines the performance at the same time, and if you are looking at just shy of two grand for a headphone amp, any use of the word 'undermines' is unacceptable.

Perhaps the most controversial choice in the product design involves the absence of controls on the 933 itself. If you lose the remote, the 933 will just sit there like a brick, because there is no on-amp volume, balance, source selection, mute or even standby button; it's all on the remote and the remote ▶

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▶ only. Aside from the headphone jack, all the front panel has is a simple red LED volume display (which ramps up and down when the amp is warming up), a remote eye and a source indicator light. Not even a power switch: minimalist in the extreme.

The logic behind this is three-fold. First, fitting such things to the front panel would necessitate a bigger case, which means a higher price to the end user. Second, Trilogy looks upon this as a headphone upgrade for an existing system, rather than the ultimate desktop amplifier, so it's likely to be in situ in the equipment stand rather than within arm's length. Finally, the current crop of motorised volume pots just didn't sound as good as the 933s system; I guess you could go to an exotic ladder-resistor array, but with that also comes extra expense. When it was field tested among the desktop warriors who frequent deep-geek headphone sites, this wasn't seen as a negative element to the design, despite many holding the remote inches from the remote eye. It's more of a bold step than a deal-breaker, in my opinion.

From the get-go, Trilogy wanted to make the 933 the headphone amplifier that can drive even the toughest headphones. OK, so not electrostatic headphones (which require an energiser/amplifier, not simply an amplifier). The company didn't want the amp to be phased by 'the sound of clipping' beast headphone loads, so it made sure it was capable of driving the infamous HiFiMAN HE-6 headphone, figuring that if you can make a decent noise from these headphone amp crushers, you can make two half-bricks with a headband come to life. While there may be some notional future headphone that has a load so punishing that it needs a kilowatt power amplifier to move it out of first gear, in the real world, the Trilogy 933 can power absolutely anything with ear buds or headphones that isn't a Stax.

To demonstrate this, Trilogy supplied a pair of the aforementioned HiFiMAN HE-6 headphones-in-search-of-an-amplifier and it jumps that particular hurdle without a care in the world. It not only controls them, but can happily play them at high levels without either a change in tonality or smoke bellowing out of the nearest vent. Most headphone amps will either sacrifice volume, or make the tonal balance tilt out of kilter, or simply give up the ghost faced with trying to play the HE-6 at a fair lick. This simple 'play Metallica's 'Enter Sandman' at high volume and see what happens' test is a surprisingly sure sign that the Trillogy 933 can take anything and everything you throw at it without even the slightest grumble. On more 'real world' cans – including semi-pro and pro studio and location models from Sennheiser and Sony, as well as less punishing HiFiMan models – the 933 simply allows them to do what they were made to do, and end up sounding better than you expect them to sound. That said, I suspect most people will end up using the 933 with top end headphones and the amp's ability to let them fly too makes it a default choice for serious in-head listening.

It's a supremely clean sounding headphone amplifier, albeit ever so slightly pitched more toward the warm/clean rather than the etched/clean. In fact, I'd be more ▶



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- ▶ comfortable with classing this as accurate or neutral and clean, just with enough body to prevent incredibly detailed (or very dark sounding) headphones dominating the sound.

It's also supremely reactive to the music playing. It needs to be; compared to a loudspeaker amplifier, those headphone transducers are very low distortion and extremely lightweight, and as a consequence they frequently have the speed of an electrostatic loudspeaker and the dynamic drive of cone and dome designs. The 933 reacts accordingly, and this gives the headphones on the end of the amp a sense of freedom and insight and balance that can sometimes be found wanting.

The thing about the 933 is it isn't an amplifier that leaves its mark on the music. It lets the source and the headphones do that. Which is precisely what any good headphone amp should do. The difference being the 933 can do it with any headphone you plug into it, which is precisely what most headphone amplifiers don't do. There is a house 'Trilogy' sound – extremely musically engaging, detailed, dynamic and controlled, especially in the very full bass – but most of that is just another way of saying 'uncoloured'. If there is a characteristic aspect of the sound, it's in the imagery. The 933 limits the lateralisation effects inherent to headphones (where sounds appear eerily inside your head... although most of this is a function of the headphones rather than the amplifier), but it doesn't have pin-point precision of image. Instead, the Trilogy sound goes for the whole instead of the sum of the parts. The sense of staging is natural and enveloping, not broken into its component parts. The 933 needs a good signal – the Eximus DP1 was a perfect partner – but when suitably partnered gives a performance that is likely all you'll ever need from a headphone amp, unless you have a burning desire to go balanced.

It's odd. Two grand doesn't buy you much in the way of amplifiers in the high-end arena these days, but with the Trilogy 933 you get one of the best – if not *the* best – headphone amplifiers money can buy. Audiophiles are slowly coming to realise the potential of in-head sound and headphone users are beginning to understand what high-end values can do for their listening pleasure. And straddling those two factions is the Trilogy 933. Try it, your ears will thank you. +

TECHNICAL SPECIFICATIONS

Inputs: 2x RCA single-ended
Output: ¼" headphone jack
Input impedance: ≥ 20kOhms
Output impedance: ≤ 3 Ohms
Gain (max): 19dB
Power output: 800mW into 300 ohms
250mW into 60 ohms
Frequency response: 15Hz-120kHz
±0.5dB
THD: ≤0.05% 10mW into 300 ohms
S/N ratio: ≥85dB, A weighted
Phase: Phase correct, non-inverting
Dimensions (933 amplifier, WxDxH):
15x22x3.8cm
Dimensions (PSU, WxDxH):
13.2x22.5x5.7cm
Weight (package): 5.7kg
Price: £1,995

Manufactured by: Trilogy Audio
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