

TRIOLOGY

931

Headphone Amplifier





# 2

The way we listen constantly changes and evolves, more of us are now interested in quality headphone listening than ever before. Following the overwhelmingly positive reception of the 933, which exceeded all our expectations, we decided to make a headphone amplifier with a wider reach.

The brief for the 931 project was short but demanding: keep all of the essential elements that make the highly acclaimed 933 so successful, but at a significantly lower cost.

There is real challenge in engineering and manufacturing a design without raising costs and also keeping compromise

at bay as much as possible. We are extremely proud of the result. The 931 may be affordable, but its performance and quality is still pure Trilogy.

The small, light drivers found in headphones are very closely coupled to the ear and as a result are ruthlessly revealing. They require

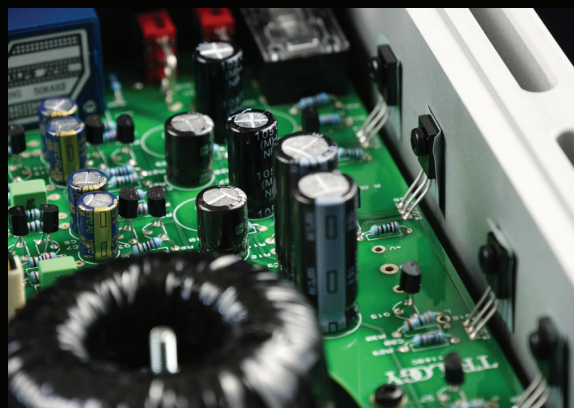


# 3

a completely different design approach to moving the multi driver, complex load of a loudspeaker in a listening room.

The 931 is a fully discrete design, no generic integrated circuits or op-amps are used. Designer Nic Poulson could then use all his skills in analogue design to control all the active circuit's crucial parameters, optimising performance for this intended application only.

Like its bigger brother the 933, the audio circuit operates in pure single ended Class A with active constant current sources. Each channel has a single continuously biased output device. The



main benefits of this topology are that the output is free from crossover distortion, and the device is held at a constant temperature. An oversized linear power supply is implemented with a custom low flux density toroidal transformer and low ESR reservoir capacitors. This provides a low noise supply for the active circuitry with generous operating headroom.

All these elements combine to give excellent small signal resolution while maintaining good drive capability for any type of headphone.

On the CNC machined aluminium front panel a 6.3mm type B stereo jack provides the output. There are toggles



# 4

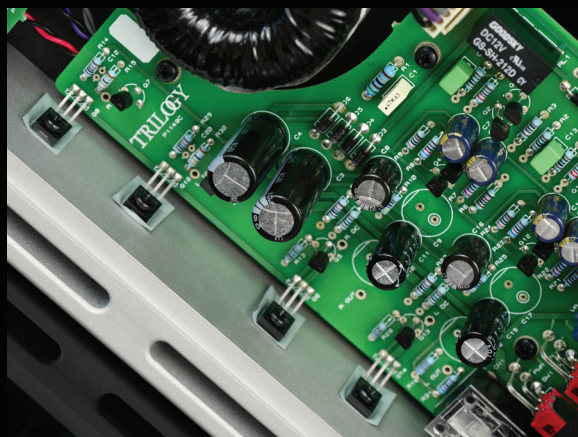
for power and input select for two stereo line inputs. A quality ALPS volume control is coupled to a beautifully weighted custom machined control knob.

The rear panel offers the user two selectable stereo inputs via high quality gold plated phono connectors and the fused IEC mains inlet.

The 931 can connect easily to any existing preamplifier or directly to two stereo sources as a standalone solution for

high resolution headphone listening.

We have maintained the same painstaking attention to build quality with the 931 as with all our designs. Quality components from branded sources are used throughout. Assembly is totally by hand in our UK workshops.



The output devices dissipate enough heat to need heatsinking. An extruded off the shelf heatsink would serve here, but we chose to employ a custom CNC machined

# 5

part. Semiconductors are sensitive to mechanical vibration and their operating characteristics vary with temperature.

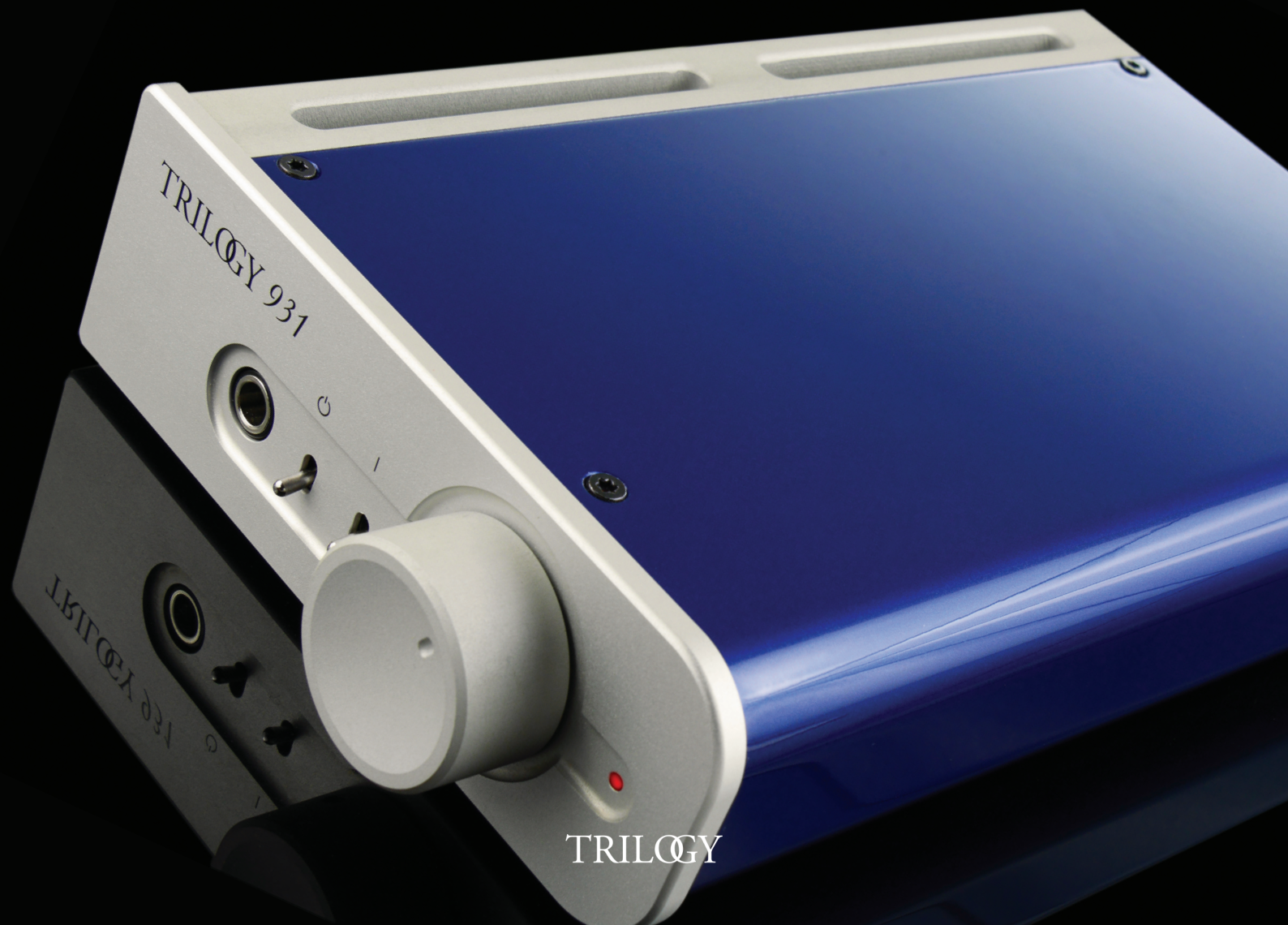
By attaching the output devices to a high mass with low mechanical resonance and large thermal inertia, the increase in resolution more than offsets the increased manufacturing difficulty.

The standard finish is a soft natural silver, enhancing the quality of the beautifully finished casework. Our lustrous paint finishes are a luxurious

option for those wishing to add their own individual touch. A vast range of custom colours can be specified for your 931 through our Chameleon System.

Intelligent design can overcome the constraints of finite resources. The 931 carries all the traits that make its bigger brethren such involving musical performers.

Delivering natural sound, detailed, spacious and communicative and a joy to own, the 931 is indisputably Trilogy through and through.



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# 6

## 931 Specifications

Size	140*237*50 (W*D*H)
Size including connectors	140*244*50 (W*D*H)
Weight	1.65 Kg
Power consumption	16 Watts
Inputs	2 Stereo line 4 RCA phono sockets
Input Impedance	≥50K Ohms
Gain (max)	18dB
Frequency response	20-20KHz +/- 0.5dB
Output impedance	≤ 10 Ohms
Output Power	800mW into 60 Ohms / 200mW into 300 Ohms
Distortion (THD)	≤ 0.05% 10mW into 300 Ohms
Signal to Noise Ratio	≥ 85dB A Weighted
Phase	Phase correct (non inverting)

Specification subject to change



TRILOGY

GY 931



Designed & Manufactured in London, England

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