

TRILOGY

933

User Manual

THANK YOU

Welcome

Firstly, thank you for purchasing your Trilogy Audio Systems 933 Headphone Amplifier, we value your custom.

We strive to design and build world class products that stand the test of time. By reading this manual you can gain clear understanding of its operation and learn to care for it correctly. In turn, it will reward you with a lifetime of outstanding performance.



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Nic Poulson.
CEO Trilogy Audio Systems.
www.trilogyaudio.com



CONTENTS

Getting Started

- 4 Introduction
- 4 About this manual
- 5 Unpacking
- 5 Environment
- 7 Connections
- 9 Power Supply
- 11 About Listening with Headphones
- 13 Operation
- 15 Cleaning
- 15 Servicing
- 15 Declarations

Glossary

- 17 Glossary

Specifications>Returns

- 19 933 Specifications
- 19 Returns
- 19 Disposal and recycling

Acknowledgements

- 20 Acknowledgements





Introduction

We prefer that your Trilogy dealer delivers, installs, sets up and explains your 933's operation to you.

However, we still recommend that you read through this manual thoroughly and keep it to hand for reference.

Should any part of this manual or the operation of the 933 not be clear to you, please do not hesitate to contact your Trilogy dealer. If this is not convenient, please contact ourselves directly.

About this manual

From this point on, any information presented on the left hand pages are pictorial representations of the 933. The left hand pages can be considered as additional information to accompany the written descriptions on the opposite pages

Unpacking

Be careful when unpacking your Trilogy 933, it is supplied in three parts:

1. Headphone Amplifier in the solid aluminium case with captive power cable.
2. Series 900 choke input Power Supply.
3. RC-S remote control.

Note that the 933 is **remote control only**. Control of the 933 is not possible without the remote control.

Please ensure that you store all the packaging safely for future use. It is the ideal method of protecting your investment from damage during transport.

Environment

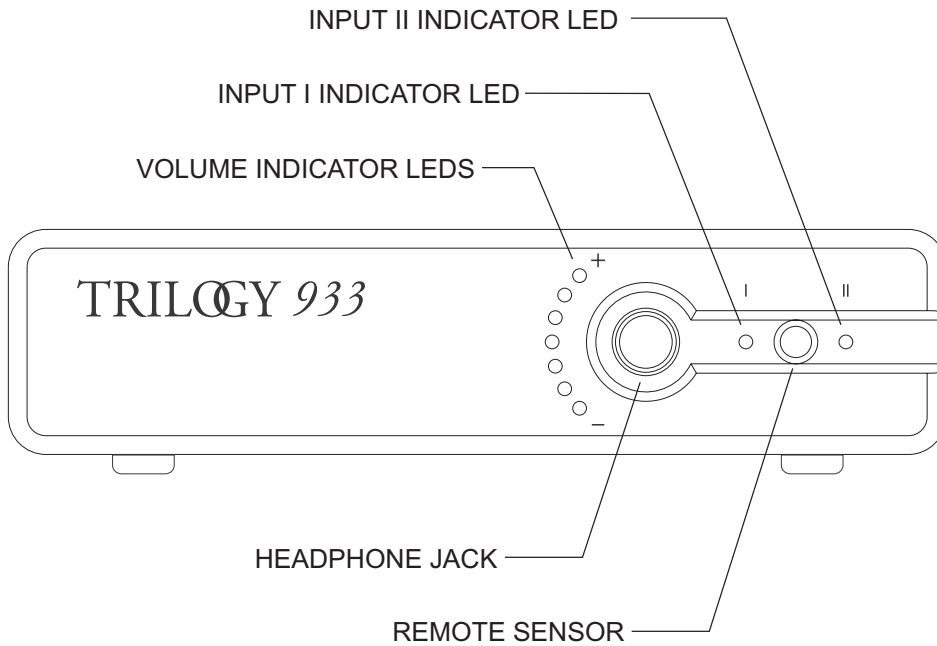
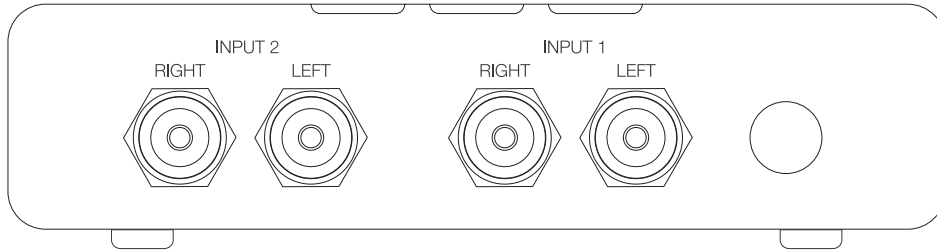
Do not site either unit near liquids, or place liquid-filled containers near the unit. **If any liquid does come into contact with either unit there is serious potential for an electric shock or fire hazard. Immediately pull out the mains plug from the wall socket. Contact your dealer to arrange an inspection before further use.**

The 933 generates heat and is cooled by convection. In operation it will become quite warm to the touch, this is normal. It needs good circulation of room temperature air under and around it. Do not place either unit near sources of heat such as radiators or in direct sunlight. Do not enclose in a cupboard. Do not place directly on carpet.

A flat, smooth surface is required. As with all high resolution audio equipment, your 933 is sensitive to vibration, strong magnetic fields and radio interference. A dedicated high performance equipment platform sited away from other appliances is the optimum location for the Headphone Amplifier.

The Power Supply should be sited a minimum distance of 250mm (0.8ft) from the Headphone Amplifier. The Headphone Amplifier is sensitive to magnetic fields which may degrade performance.





Connections

It is good practice to complete all interconnections before switching the power on to avoid any damage to your headphones.

The rear panel features 2 remotely selectable line level stereo inputs comprising of 4 RCA phono sockets. Red denotes the right channel, black denotes the left channel. Input I and II are functionally identical. Typical line level sources such as CD players, phono preamplifiers, tuners or preamplifier outputs can be connected directly to either input.

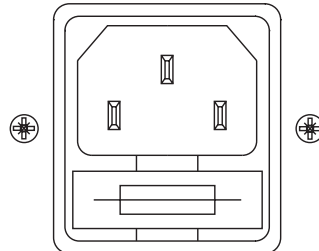
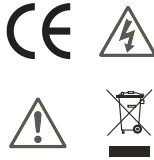
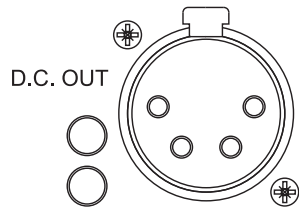
The 933 output is via a standard 6.35mm (1/4") type A jack socket. Most dynamic headphones are suitable for connection; if you are in doubt about the suitability of your headphones seek advice from your Trilogy dealer.

Connect the captive cable on the Headphone Amplifier to the socket on the Power Supply.



Designed and manufactured in England
www.trilogyaudio.com

900 SERIES POWER SUPPLY
POWER INLET



THIS PRODUCT MUST BE EARTHED

50 - 60 Hz ~ Max. 50W
FUSE 315mA T

Power Supply

Warning! Do not attempt to use the Headphone Amplifier with any other DC supply. Damage may result and the warranty will be null and void.

The IEC inlet on the Power Supply provides the unit with power. Connect with the supplied AC input cable. It can be left connected at all times. If the 933 is not being used for extended periods of time, switch off at the mains outlet.

The AC input voltage has been set for the country it was purchased in. Check that the label on the rear panel of the Power Supply matches your AC supply voltage before plugging in. The AC inlet cable provided should be used. If another cable is used, please ensure that you check it is wired correctly.

The wires in the AC input cable supplied are coloured in accordance with the following code:

Green and yellow	Earth
Blue	Neutral
Brown	Live

WARNING! The Power Supply must be earthed. Do not disconnect the AC earth at any time. Danger of electric shock! If in doubt about any aspect of power supply, consult your Trilogy dealer or a qualified electrician.

A direct connection to a mains outlet is best for your 933, avoid adapters. To realise your 933's full potential we recommend high quality mains conditioning. See www.isol-8.co.uk for more on power supply and system solutions from our acclaimed sister company.

The IEC inlet carries a ceramic 315mA T (time delay) fuse. If the unit stops working, check and replace this fuse with one of the same type and value if necessary. If the fuse repeatedly fails, do not use the unit and contact your Trilogy dealer for service.

WARNING! Failure to replace the fuse with the same type and rating will invalidate the warranty and may result in an electric shock and/or fire hazard.





About Listening with Headphones

IMPORTANT!

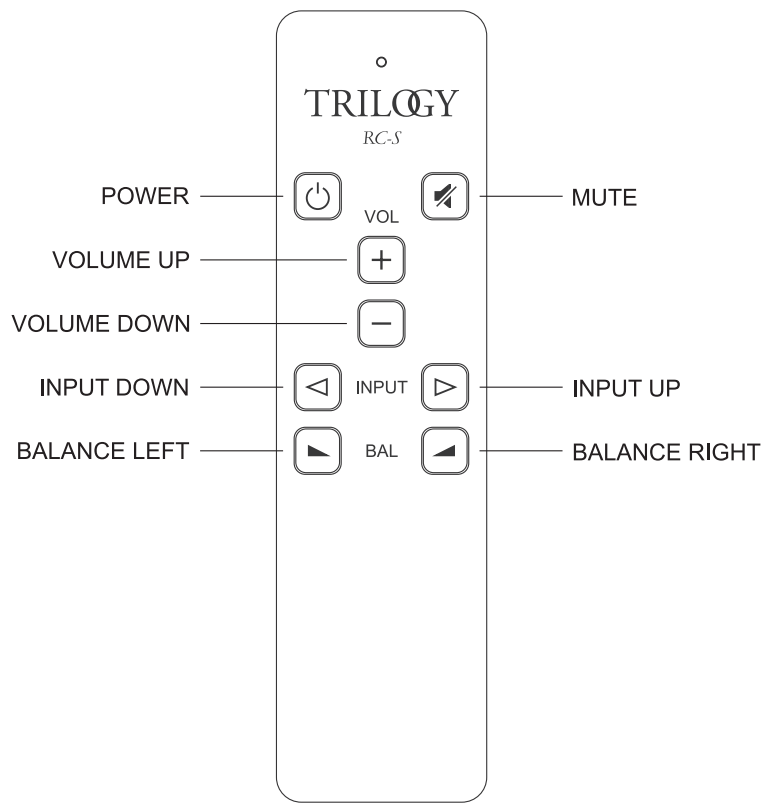
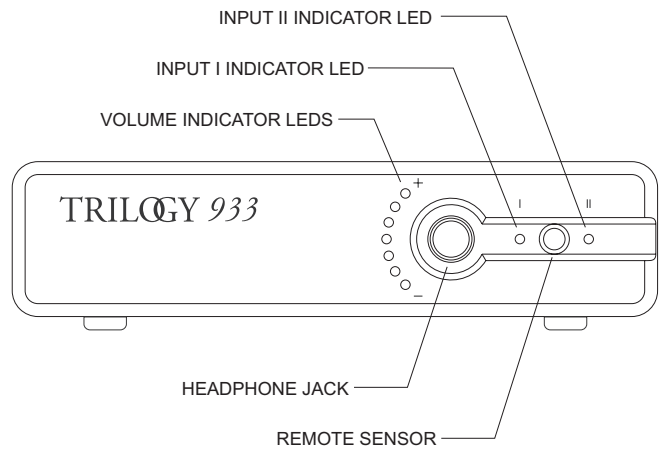
The 933 is capable of delivering high sound pressure levels. Listening at high sound pressure levels may result in permanent hearing damage. The following table is intended as an approximate guide to recommended exposure levels.

Example Source	Sound Level	Max Exposure
Train Passing 10m	90 dbA	8 hrs
Circular saw 1m	95 dbA	4 hrs
Motorcycle pass 1m	100 dbA	2 hrs
Chain Saw 1m	105 dbA	1 hr
Rock Concert 10m	110 dbA	0.5 hr
Police siren 10m	115 dbA	0.25 hr or less

Hearing damage is a complicated issue. Users are urged to familiarise themselves thoroughly with current government recommendations if regularly listening. Listening using high performance headphones with low distortion can be subjectively misleading. The user may not be aware that high levels are being reached. Trilogy recommends caution when setting listening levels.

Operation is via the supplied PR-S remote control. System code 19 Phillips RC-5 infra red codes are used if programming a universal handset. For operation using the Trilogy PRC remote control consult the PRC manual.





Operation

The first time power is applied. The Input I LED on the front of the Headphone Amplifier will light dimly indicating the unit is in standby. Press the power button on RC-S and the 993 will enter warm up, the volume LEDs will cycle up and down to confirm. Once the warm up sequence is completed the Input I LED will light continuously and output will be available at the minimum volume level. Blue light from underneath the Headphone Amplifier indicates that the Class A output stage is operating.

The 993 will remember the last input, volume and balance settings when entering standby or powering down and will reinstate them for the next time it is used.

Power. Toggles between power on and standby. In standby the last selected input LED will glow dimly.

Mute. Toggles output between set volume and mute. Mute status indicated by the current volume LEDs flashing.

Volume up. Increases output volume. Volume indication LEDs light sequentially and in combination to indicate set volume.

Volume down. Decreases output volume.

Input up and Input down. Selects input by scrolling through both available inputs.

Balance left. Moves audio balance left. The volume indication LED's now display the balance setting. The middle LED will always flash to show that balance is being set, regardless of the actual balance setting. The middle LED also indicates the balance is centered. The volume indicator LEDs will then track to show the balance position setting as the button is pressed. The 993 will then revert to displaying the set volume after a short period of time.

Balance right. Moves audio balance right.

The 993 is DC coupled and has DC offset protection. If excessive DC offset occurs the 993 will disconnect the output and double flash all volume indicators continuously. Confirm that the connected equipment does not have excessive DC offset present on its output by disconnecting the input or selecting the other input. If the 993 continues not to operate, return the unit to your authorised Trilogy dealer for diagnosis and repair.

As with all high resolution audio equipment, a period of break in is required from new before the unit will achieve its full performance potential.





Cleaning

Dust the unit regularly with a soft cloth or soft brush. For more stubborn marks make sure the unit is switched off and disconnected from the power supply. Use a slightly damp cloth with a very small amount of mild detergent such as washing up liquid. Do not use a wet cloth.

Be careful when cleaning. Never use abrasives or alcohol based agents, they will harm the surface finish. Do not allow the unit to become wet when cleaning.

Servicing

Your 933 has been designed to provide a lifetime of reliable service and should not need servicing if operating normally.

There are no user serviceable parts inside. Do not open or attempt to repair the unit. Check if the captive DC cable is damaged or shows signs of wear periodically. Refer to your authorised Trilogy dealer for repair if necessary.

Declarations

This product is guaranteed against defects in material and workmanship for 3 years from the date of purchase. This applies to the UK only. Proof of purchase is required.

The Guarantee is not transferable and is offered to the original purchaser only. This guarantee does not limit your statutory rights within the country of purchase.

Failure to comply with any of the above instructions during installation or operation will render the manufacturer's warranty null and void.

Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

The 933 has been tested to ensure that its operation is not adversely affected by normal background levels of radio frequency interference, and that it does not itself generate excessive amounts of radio frequency energy.

If your 933 exhibits sensitivity to nearby radio frequency devices or is suspected of affecting another device, increase the distance between them. If the problem persists, consult your Trilogy dealer.





Glossary

AC	Alternating current: The electrical polarity reverses over time. Used mostly for high voltage power transmission such as mains.
Burn In	Period of time which a new assembly takes to reach mechanical and electrical equilibrium.
Impedance	The complex electrical resistance the headphone presents to the amplifier.
Sound Pressure	The volume of sound received by the ear.
Sensitivity	The efficiency of the headphone in turning electrical energy into acoustic energy.
Power	The combination of voltage and current delivered by an amplifier into an electrical load of specified impedance.
Choke Input	Use of an inductor to provide near constant draw from the power supply rectifier. A conventional capacitor input will draw current in pulses, thus generating noise.
DC	Direct current: The electrical polarity is constant. Used mostly for powering active circuits.
Gain	The ability of a circuit to increase the power or amplitude of a signal from the input to the output.
Magnetic Field	An expression of electromagnetism. When current flows in a conductor a magnetic field is generated in proportion; just as when a conductor is immersed in a changing magnetic field, a current will flow in the conductor.
Class A	A circuit topology where the music waveform is amplified using active devices which remain continuously biased throughout the waveform cycle, eliminating crossover distortion.
Single Ended Class A	The circuit topology used by the 933 which amplifies the music waveform using a single active device operating in Class A. This gives all the advantages of normal Class A operation, plus it eliminates the additional distortion which is due to imperfect matching of multiple output devices, as used by the more common push-pull topology.





933 Specifications

Size (933 Headphone Amplifier)	150*220*38 (W*D*H)
Size incl. connectors (933 Headphone Amplifier)	150*235*38 (W*D*H)
Weight (933 Headphone Amplifier)	1.8Kg
Size (PSU)	132*225*57 (W*D*H)
Weight (PSU)	2.85 Kg
Packaged Size (combined)	330*290*195
Packaged Weight (combined)	5.7 Kg
Power consumption	22 Watts
Inputs	2 stereo line level. 4 RCA phono sockets
Input Impedance	≥ 20 K
Gain (max)	19dB
Frequency response	15-120KHz +/- 0.5dB
Output impedance	≤ 3 Ohms
Output Power	800mW into 300 Ohms 250mW into 60 Ohms
Distortion (THD)	≤ 0.05% 10mW into 300 Ohms
Signal to Noise Ratio	≥ 85dB A Weighted
Phase	Phase correct (non inverting)

Specifications are subject to change.

Returns

Should it be necessary for your 933 to be serviced, please send it in the original packaging to your Trilogy dealer. If this is not possible please contact us directly and request a Return Authorisation Number. Please mark this RAN number on the outer packaging in the space provided.

Please do not send products back to us without this number as we will not accept liability for the product. If a product is not returned to us in its original packaging, after servicing we will return it, in Trilogy packaging and a nominal charge will be made.



Disposal and recycling

At the end of the 933's working life it must be disposed of correctly, it is made to the highest standards with materials which can be recycled wherever possible. Do not dispose to landfill, contact your dealer or Trilogy for information regarding return for correct disposal.

Whilst the information given in this document is correct at the time of printing, small production changes in the course of our Company's policy of improvement through continued research and development might not necessarily be indicated in the specification.

If clarification of any point or specification is required, please refer to your Trilogy dealer.

We welcome your feedback, whether positive or negative, to help us further refine our products.

Please write to; Trilogy Audio Systems
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 London SE3 7WQ

Or fax: +44 (0) 20 8856 0616

Or email; user@trilogyaudio.com

Please visit our web site; www.trilogyaudio.com

Acknowledgements

We strive to make Trilogy products un-paralleled in their quality, reliability, aesthetics and performance.

Only when a product is as perfect as we can make it, engineered with real passion and soul, is it released.

A great many people have worked tirelessly to help achieve this goal, and I would like to take this opportunity to thank Emeka Chigbu, Nigel Crump, Simon Dart, Chris Sims and Simon Quill for their dedication to this project.

Nic Poulson.

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