

TRILOGY  
USER MANUAL

*H1*

# THANK YOU

## Welcome

Firstly, thank you for purchasing your Trilogy Audio Systems SPD H1 Electrostatic 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 a clear understanding of its operation and learn to care for it correctly. In turn, it will reward you with a lifetime of outstanding performance.

The H1 is the first product from our Special Products Division (SPD). Launched in 2017, SPD is a subsidiary of Trilogy Audio Systems dedicated to the design and manufacture of high end components that would normally fall outside or the usual Trilogy range.

All SPD components will be hand crafted by myself. Each product will be hand assembled, tested and auditioned prior to dispatch. Such production processes mean that SPD components will be limited in terms of numbers produced.

Every SPD design will use the highest quality materials and finishes to ensure it lasts a lifetime.

Such dedication ensures each model manufactured is personal to its owner. Ensuring pride of ownership.

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Nic Poulson.  
CEO Trilogy Audio Systems.  
[www.trilogyaudio.com](http://www.trilogyaudio.com)



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## Introduction

We prefer that your Trilogy dealer delivers, installs, sets up and explains your H1'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 H1 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 H1. 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 H1. 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.

The carton contains:

Trilogy SPD H1 Electrostatic Headphone Amplifier

**I S O L - 8** IsoLink Wave power cord

Owners manual

RC-S remote control and two AAA batteries.

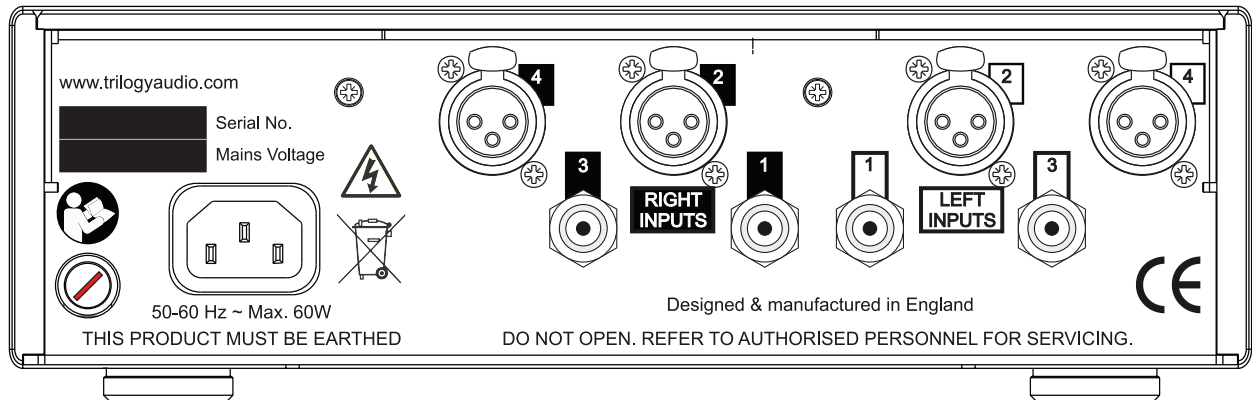
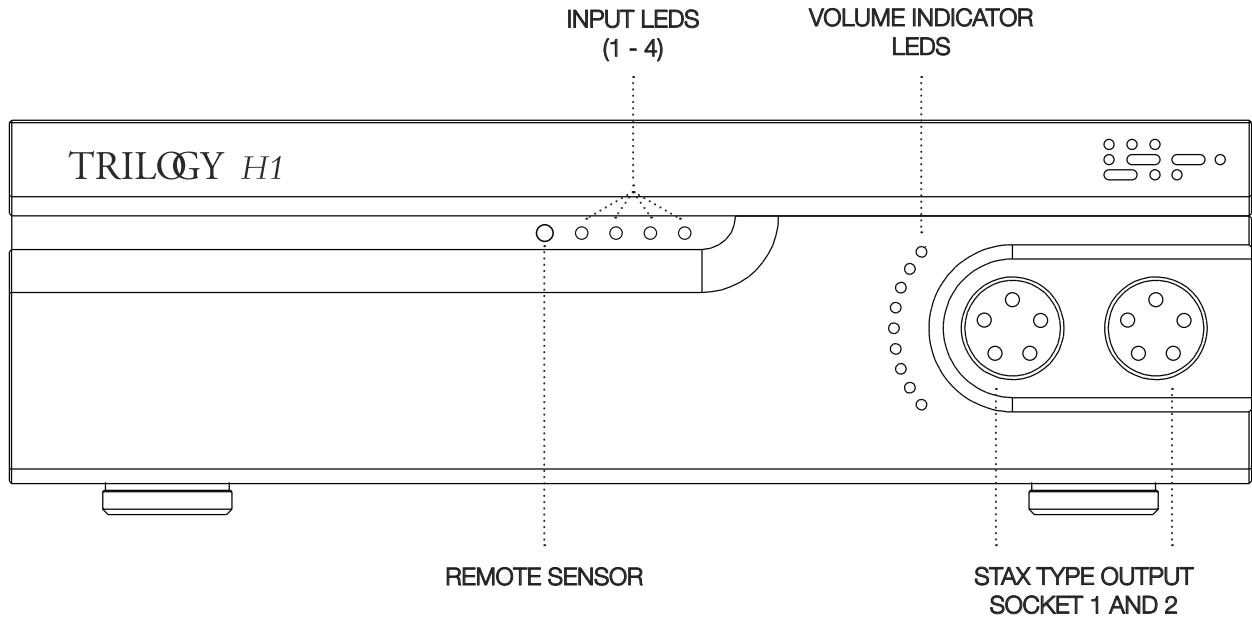
## Environment

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 H1 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 H1 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.

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## 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 4 remotely selectable line level stereo inputs. There are two RCA single ended (1&3) and two XLR balanced (2&4) inputs. Typical line level sources such as CD players, phono preamplifiers, tuners or preamplifier outputs can be connected directly to the inputs.

The H1's output is via two "Stax type" sockets and is suitable for Stax Earspeakers and some other brands of electrostatic headphones only. They are connected in parallel and are not independently controlled.

WARNING! Do not attempt to plug any other type of headphone into the H1, damage or injury may result.

WARNING! Plug the Earspeakers or electrostatic headphones into the H1 before switching on.

When using extension leads make sure these are plugged in before switching on.

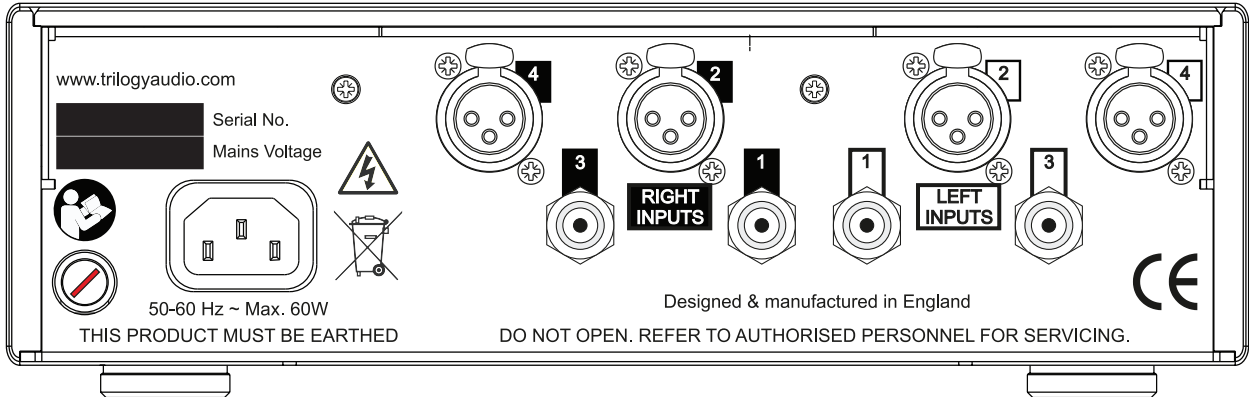
If you are in doubt about the suitability of your Stax Earspeakers or other electrostatic headphones, seek advice from your Trilogy dealer.

## Remote Control

Note that the H1 is **remote control only**. Control of the H1 is not possible without a remote control.

Operation is via the supplied RC-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 system remote control, consult the PRC manual.





## Power Supply

The AC input voltage has been set for the country it was purchased in. Check that the label on the rear panel matches your AC supply voltage before plugging into the IEC inlet. 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 unit 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 H1, avoid adapters. To realise your H1's full potential we recommend high quality mains conditioning. See [www.isol-8.co.uk](http://www.isol-8.co.uk) for more on power supply and system solutions from our acclaimed sister company.

The fuse holder adjacent to the IEC inlet carries a ceramic 20mm fuse. If the unit stops working, check and replace this fuse with one of the same type and value if necessary: 800mA T for 230V and 240V versions or 1.5A T for 100V and 120V versions. 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.**

It can be left connected at all times. However, if the H1 is not being used for extended periods of time, switch off or unplug at the mains outlet.



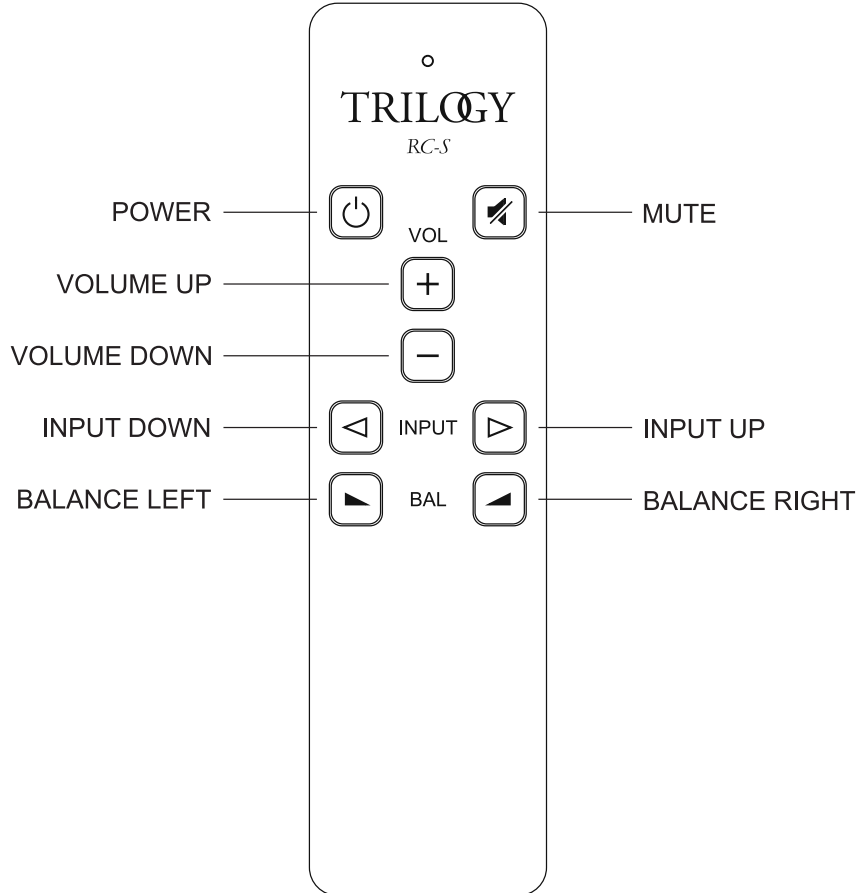
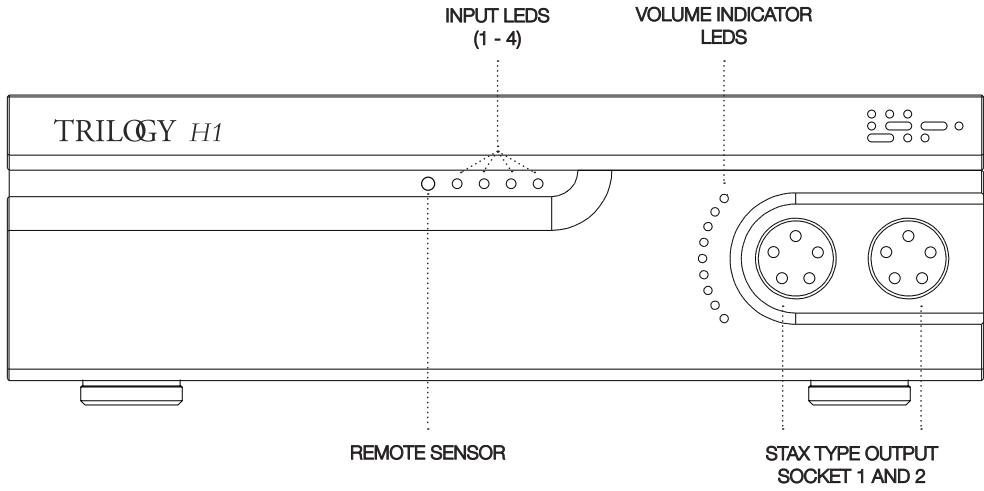
## About Listening with Headphones

### IMPORTANT!

The H1 is capable of delivering high sound pressure levels through your headphones. 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

The first time power is applied. Input 1 LED on the front panel will light dimly indicating the unit is in standby. Press the power button on RC-S and the H1 will enter warm up, the volume LEDs will cycle up and down to confirm. Once the warm up sequence is completed the Input 1 LED will light continuously and output will be available at the minimum volume level.

The H1 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 LED(s) 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 the 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 H1 will then revert to displaying the set volume after a short period of time.

**Balance right:** Moves audio balance right.

The H1 is available as a Direct Mode Version which has no volume control elements and is therefore of fixed gain. If your H1 is the DMV, the minimum and maximum volume indication LED's will remain lit, flashing simultaneously should you try to increase or decrease the volume setting, adjust balance or mute.

As with all high resolution audio equipment, a period of break in is required from new before the unit will achieve its full potential. After a period of roughly two weeks the H1 will reach full performance. In addition, electrostatic headphones take time to stabilise their charge once energised. This is typically a minimum of a couple of hours.



## 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

The H1 uses thermionic valves or vacuum tubes for amplification. They are the key component in realising its very high performance. Valves have a finite lifespan and will need replacing during the lifetime of the headphone amplifier. This lifespan depends on how long and how hard they are used. In typical use, small signal valves can last for 5000 hours. Frequent switching on and off reduces valve life.

Please bear in mind that some failures can occur early on in a valve's working life, usually due to mechanical stresses that can occur during shipping. This is not a reflection on the headphone amplifier's design but is an inherent characteristic of all valves, and is impossible to predict even during the factory burn in period. The good news is considerate circuit design and modern manufacturing methods mean that valves are now typically very reliable once established in service.

It is good practice to replace the valves inside your H1 at around 5000 hours to prevent sudden loss of a signal path. If you are in any doubt your Trilogy dealer will help you assess whether your valves need replacing and fit them for you.

If your amplifier exhibits noticeable loss of performance, extreme sensitivity to vibration or becomes excessively noisy then new valves should be fitted by your authorised Trilogy dealer.

There are no user serviceable parts inside. Do not open or attempt to repair the unit. Refer to your authorised Trilogy dealer for servicing.

## Declarations

This product is guaranteed against defects in material and workmanship for 3 years from the date of purchase. This Guarantee excludes valves which are guaranteed for 6 months from date of purchase. 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 H1 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 H1 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

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<b>Electrostatic</b>	A electrical charge or field. In electrostatic headphones, movement of a diaphragm is caused by varying the potential difference within this field.	<b>Power</b>	The combination of voltage and current delivered by an amplifier into an electrical load of specified impedance.
<b>AC</b>	Alternating current: The electrical polarity reverses over time. Used mostly for high voltage power transmission such as mains.	<b>DC</b>	Direct current: The electrical polarity is constant. Used mostly for powering active circuits.
<b>Burn In</b>	Period of time which a new assembly takes to reach mechanical and electrical equilibrium.	<b>Gain</b>	The ability of a circuit to increase the power or amplitude of a signal from the input to the output.
<b>Impedance</b>	The complex electrical resistance the headphone presents to the amplifier.	<b>Magnetic Field</b>	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.
<b>Sound Pressure</b>	The volume of sound received by the ear.	<b>Class A</b>	A circuit topology where the music waveform is amplified using active devices which remain continuously biased throughout the waveform cycle, eliminating crossover distortion.
<b>Sensitivity</b>	The efficiency of the headphone in turning electrical energy into acoustic energy.		

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## Specifications

Size	260*392*88(W*D*H)	Inputs (single ended)	2 pairs of RCA phono sockets
Size incl. connectors	260*405*88 (W*D*H)	Input Impedance (single ended)	33K Ohm
Weight	6.7Kg	Input Impedance (balanced)	66K Ohm
Packaged Size	590*510*260	Gain (maximum)	56dB
Packaged Weight	9.2Kg	Frequency response	10-50KHz +/- 0.5dB
Power consumption	55 Watts	Phase	Phase correct (non inverting)
Power consumption (standby)	1 Watt	Bias Voltage	580VDC
Inputs (balanced)	2 pairs of XLR 3pin female	Valve complement	4* 6C3PI, 2* 6H6PI

SPECIFICATIONS SUBJECT TO CHANGE

## Returns

Should it be necessary for your H1 to be serviced or have replacement valves, 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 H1s 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  
   PO Box 56402  
   London SE3 7WQ  
   United Kingdom

Or email;                                [sales@trilogyaudio.com](mailto:sales@trilogyaudio.com)

Please visit our web site;        [www.trilogyaudio.com](http://www.trilogyaudio.com)

## Acknowledgements

We strive to make Trilogy products unparalleled 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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