

# Sterling



# Power Amplifiers User Manual

# **Models Covered**

Stereo 12 Watt Mk 1 & 2 Stereo Plus 18 Watt Mk 1 & 2 Stereo Integrated 12 & 18 Watt Mk 1 & 2 Stereo Integrated Remote 12 & 18 Watt Mk 1 & 2 Parallel Single Ended Mk 1 & 2 Push Pull Mk 1 & 2

**Revision 1.40 Sterling** 

Audion International

# Introduction

Congratulations on your purchase of the World acclaimed "Sterling" triode amplifier from Audion.

Your Audion Amplifier is the result of nearly 20 years exhaustive research and development culminating in our current world class product. The chassis is made of anodised aluminium designed to minimise magnetic interference and reduce internal noise to an absolute minimum. All our amplifiers are hand built using only the finest components available. Our Mark 2 range is entirely hard wired offering even better quality.

Our new look and our higher specification Mark 2 range are our guarantee to you of quality.

# <u>Warranty</u>

All of our products carry a 2 (two) year worldwide parts and labour warranty (less delivery charges). All valves/tubes are guaranteed for a period of 6 (six) months. This does not affect your statutory rights.

# **Getting Started**

Upon opening your box you will find:

- 1. Audion Amplifier
- 2. Audion Power cord
- 3. This User Manual
- 4. Product Registration and Warranty form
- 5. Valves/tubes

Please keep all packaging and store in a dry and safe place.

Carefully remove the Audion Amplifier from its packaging and store both the box and the foam in a safe place, should, in the unlikely event that you ever need to return your Audion to us for maintenance, upgrading or servicing. The packaging has been specifically designed to protect your amplifier.

Before attempting to connect your Audion please read carefully and understand thoroughly the contents of this manual. Keep this manual near you when installing your Audion so it is handy for reference.

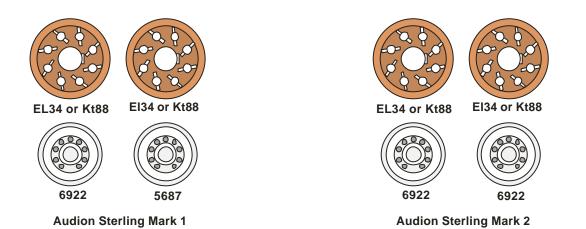
This manual is designed to assist both novice and experienced persons in achieving satisfaction from your Audion. It describes the features and operation

# Please Note.

As with any electrical product extreme caution should be exercised. Do not place your Audion in direct sunlight. There are no user serviceable parts inside. The valves/tubes run <u>HOT</u> in normal operation, under no circumstance during operation should they be touched. If it becomes necessary to replace a valve/tube please allow at least 20 minutes from switching off for the unit to cool.

# Valves/Tubes

You will now need to place the valves/tubes into your Audion. The Sterling Mark 1 and 2 use a E88CC or 6922 in the left hand side front and a 5687 on the right hand side front. All Models use either EL34 or KT88/KT90 valve/tubes in the rear sockets depending on model ordered



If you have never handled a valve/tube before be careful – they are similar in properties to a light bulb and just as easily breakable. In use they can run as hot as a light bulb – SO BE CAREFUL.

The smaller 5687, E88CC or 6922 valve/tube will only fit one way around into its respective socket. Before inserting check that the pins are straight and that there is no physical damage to the glass envelope. A small downward push is all that is needed to insert the valve/tube make sure that the pins align and that the orientation is correct.

The larger rear valve/tubes EL34 or KT88. Both valve/tubes, when viewed from underneath have a notch and will only fit one way into the socket. Look at the socket and align the valve so that the notch aligns with the notch on the socket when viewed from above with the front facing you. A small downward push is required to insert correctly. Do not use excessive force.

All Audion valve/tubes are dynamically selected and where applicable are supplied as matched pairs. All are supplied with a six (6) month return to base warranty.

# Please Note

Inserting the valve/tubes the wrong way around will at the very least damage the valve base pins and may result in a loose valve causing crackling.

WARNING – Do not attempt to remove or replace valves/tubes whilst your Audion is in operation, as by so doing you could destroy the amplifiers circuitry – risk electrical shock to yourself and invalidate your Audion's warranty.

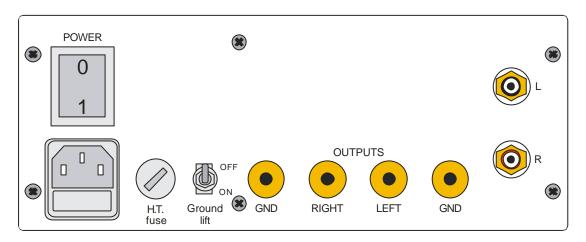
# Installation

# Positioning Your Audion

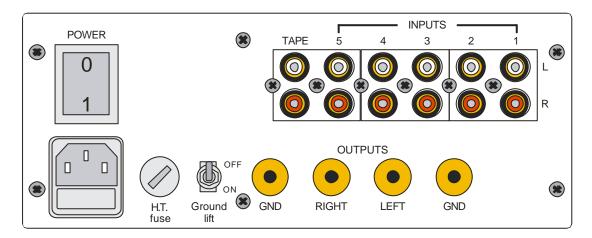
You will probably have in mind the location to place your Audion but remember, valves/tubes get warm and need a good circulation of air.

# Connecting

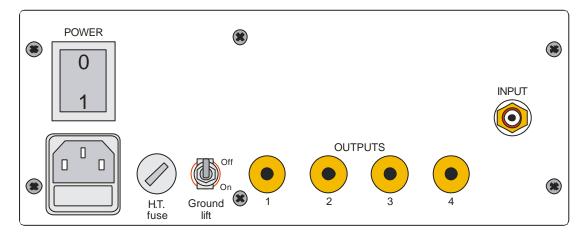
Your Audion is supplied with a power cord for your country of operation. However we recommend connecting your input and loudspeaker cables prior to connecting the power cord.



Audion Sterling Stereo Amplifier Rear Panel Layout



Audion Sterling Integrated / Remote Amplifier Rear Panel



Audion Sterling Mono-block Amplifier Rear Panel

First connect audio input leads to the input RCA connectors. In the case of the integrated / remote models, connect all audio input leads. The top white sockets are for the Left input(s) the bottom red sockets are for the Right channel(s).

Next, connect the loudspeaker cables to your Audion. For all Stereo models the left and right channels are marked by red/black colouring and also ground & channel name; ie. left, right etc. Your loudspeaker cables should be of a suitable quality and connect to the corresponding red/black binding posts of the loudspeaker. To achieve the best from your Audion we recommend that your loudspeakers have an efficiency of 89 db or higher.

Unless ordered specifically all the above models come with an 8 ohm output. The Mono-block Amplifiers come with 2 x 8 ohm

outputs marked 2 x black & 2 x red. These are designed for "Biamping".

The ground lift switch is used to effectively reduce a ground feedback loop and hence noise from some installations.

Finally connect the power cord to a mains electricity supply.

Before proceeding – Are all the connections fitted correctly and securely tightened?

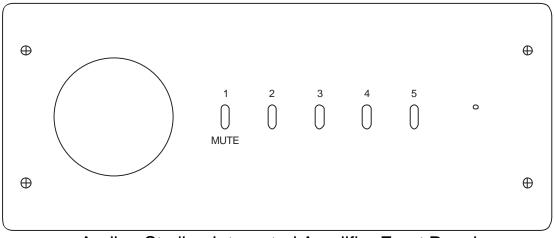
Finally Check again – make sure everything is correct.

# Using your Audion

Congratulations you are now ready to switch your Audion on. But first we recommend turning the volume control on the front panel anti-clockwise to zero. On the rear panel locate the on/off button. Push the button downwards to position 1, this has now turned your Audion on. You will notice if everything has been installed correctly that your valves/tubes are starting to glow, your Audion is now "Warming up". We recommend that an initial few minutes is allowed for the warm up process to take place. A valve/tube will change its audio characteristics slightly once it has reached its nominal operating temperature.

Select your sound source, CD, record, etc. and play. Once your source has started playing adjust the volume control to your required level.

On the Integrated model, the five switches correspond to the five inputs on the rear and can be switched in and out accordingly.





The remote model has three buttons – Up, Down and Record. The up and down buttons change inputs from 1 to 5 and the Record button allows recording via RCA pair No. 6.

In general use your Audion should give many years of trouble free use. The anodised aluminium chassis should be wiped regularly with a clean lint free cloth to remove dust. Under no circumstances should solvent or solvent based products be used on or near your Audion.

Please remember to fill in and return your warranty registration form to us at the address at the end of this manual.

Please Check our website for updates to this manual. http://www.audion.co.uk

Enjoy your Audion.

Have you tried Audion cables.. We have power, loudspeaker and interconnects. They are available in two ranges, The Electron, real high end, totally transparent for the discerning listener and the Proton range for the discerning listener on a budget. Visit our website for up to the minute information

# **Technical Specifications**

#### Stereo Mk 1

Power: 2 x 12 Watts Class A into 8 Ohms at 240V AC Load: 4 – 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: 14 to >34KHz ±1 db Variable >200mV Full output Noise: Sensitivity: Consumption: 130 Watts Tubes: 2 x EL34, 1 x 5687, 1 x E88CC

Stereo Mk 2

Power: 2 x 12 Watts Class A into 8 Ohms at 240V AC Load: 4 - 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: 14 to >40KHz ±1 db Sensitivity: Variable >200mV Full output Noise: < (CCIR) – 85 db Consumption: 140 Watts Tubes: 2 x EL34, 1 x 5687, 1 x E88CC

### Stereo Plus Mk 1

Power: 2 x 18 Watts Class A into 8 Ohms at 2	40V AC Load: 4 – 8 Ohm Nominal
Distortion @ 1Watt: <0.1% No Feedback	Frequency Response: 14 to> 34KHz ±1 db
Sensitivity: Variable >200mV Full output	Noise: < (CCIR) – 85 db
Consumption: 146 Watts	Tubes: 2 x KT88, 1 x 5687, 1 x ECC88

#### Stereo Plus Mk 2

Power: 2 x 18 Watts Class A into 8 Ohms at 240V AC Load: 4 – 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: <10 to >40KHz ±1 db Variable >200mV Full output < (CCIR) – 85 db Sensitivity: Noise: Consumption: 180 Watts Tubes: 2 x KT88, 1 x 5687, 1 x E88CC

#### Stereo Integrated / remote 12 Watt Mk 1

Power: 2 x 18 Watts Class A into 8 Ohms at 240V AC Load: 4 – 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: 14 to >34KHz ±1 db Sensitivity: Variable >200mV Full output Noise: < (CCIR) - 85 db Consumption: 130 Watts Tubes: 2 x EL34, 1 x 5687, 1 x E88CC

# Stereo Plus Integrated / remote 18 Watt Mk 1

Power: 2 x 18 Watts Class A into 8 Ohms at 240V AC Load: 4 - 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: 14 to >34KHz ±1 db Sensitivity: Variable >200mV Full output Noise: < (CCIR) – 85 db Consumption: 146 Watts Tubes: 2 x KT88, 1 x 5687, 1 x E88CC

#### Stereo Integrated / remote 12 Watt Mk 2

Power: 2 x 18 Watts Class A into 8 Ohms at 240V AC Load: 4 – 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: 14 to >40KHz ±1 db Sensitivity: Variable >200mV Full output Noise: < (CCIR) – 85 db Tubes: 2 x EL34, 1 x 5687, 1 x E88CC Consumption: 160 Watts

# Stereo Plus Integrated / remote 18 Watt Mk 2

Power: 2 x 18 Watts Class A into 8 Ohms at 240V AC Load: 4 - 8 Ohm Nominal Distortion @ 1Watt: <0.1% No Feedback Frequency Response: <10 to >40KHz ±1 db Sensitivity: Variable >200mV Full output Noise: < (CCIR) – 85 db Tubes: 2 x KT88, 1 x 5687, 1 x E88CC Consumption: 180 Watts

< (CCIR) – 85 db

# Parallel Single Ended 30 Watt Mk 1

Power: 30 Watts Class A into 8 Ohms at 240V	AC Load: 4 – 8 Ohm Nominal
Distortion @ 1Watt: <0.1% No Feedback	Frequency Response: <10 to >34KHz ±1 db
Sensitivity: Variable >200mV Full output	Noise: < (CCIR) – 85 db
Consumption: 134 Watts per unit	Tubes: 2 x KT88, 1 x 5687, 1 x ECC88

#### Parallel Single Ended 30 Watt Mk 2

Power: 30 Watts Class A into 8 Ohms at 240V	AC Load: 4 – 8 Ohm Nominal
Distortion @ 1Watt: <0.1% No Feedback	Frequency Response: <10 to >40KHz ±1 db
Sensitivity: Variable >200mV Full output	Noise: < (CCIR) – 85 db
Consumption: 160 Watts	Tubes: 2 x KT88, 1 x 5687, 1 x E88CC

#### Push / Pull 45 Watt Mk 1

Power: 45 Watts Class A into 8 Ohms at 240V	AC Load: 4 – 8 Ohm Nominal
Distortion @ 1Watt: <0.1% No Feedback	Frequency Response: <10 to >34KHz ±1 db
Sensitivity: Variable >200mV Full output	Noise: < (CCIR) – 85 db
Consumption: 160 Watts	Tubes: 2 x KT88, 1 x 5687, 1 x ECC88

# Push / Pull 45 Watt Mk 2

Power: 45 Watts Class A into 8 Ohms at 240V	AC Load: 4 – 8 Ohm Nominal
Distortion @ 1Watt: <0.1% No Feedback	Frequency Response: <10 to >40KHz ±1 db
Sensitivity: Variable >200mV Full output	Noise: < (CCIR) – 85 db
Consumption: 160 Watts	Tubes: 2 x KT88, 1 x 5687, 1 x E88CC

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