



**GlenSound**

# **GS-HA013**

## **BATTERY POWERED PORTABLE HEADPHONE AMPLIFIER**

### **PRODUCT DETAILS**



# GlenSound Electronics Ltd

Thank you for choosing a new GlenSound product.

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Information contained in this manual is subject to change without notice, if in doubt please contact us for the latest product information.

If you need any help with the product then we can be contacted at:

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## **PRODUCT WARRANTY:**

All equipment is fully tested before dispatch and carefully designed to provide you with trouble free use for many years.

We have a policy of supporting products for as long as possible and guarantee to be able to support your product for a minimum of 10 years.

For a period of one year after the goods have been despatched the Company will guarantee the goods against any defect developing after proper use providing such defects arise solely from faulty materials or workmanship and that the Customer shall return the goods to the Company's works or their local dealer.

All non-wear parts are guaranteed for 2 years after despatch and any defect developing after proper use from faulty materials or workmanship will be repaired under this warranty providing the Customer returns the goods to the Company's works or their local dealer.



This equipment manufactured by GlenSound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is **CE** marked and conforms to:

Low Voltage Directive: EN60065

Emissions: EN55103.1

Immunity: EN55103.2

## **WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2006 (WEEE)**

GlenSound Electronics Ltd is registered for business to business sales of WEEE in the UK our registration number is:

WEE/JJ0074UR

## **RoHS DIRECTIVE**

EC directive 2002/95/EC restricts the use of the hazardous substances listed below in electrical and electronic equipment.

This product conforms to the above directive and for this purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated Biphenyls	0.1%
Polybrominated Diphenyl Ethers	0.1%
Cadmium	0.01%

# GLENSOUND GS-HA013

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## **OVERVIEW**

The Glensound GS-HA013 portable headphone amplifier has been designed to withstand the rigours of regular outside broadcast use by sound engineers and production personnel.

Its features expand on the very popular original GS-HA001 which it superceeds.

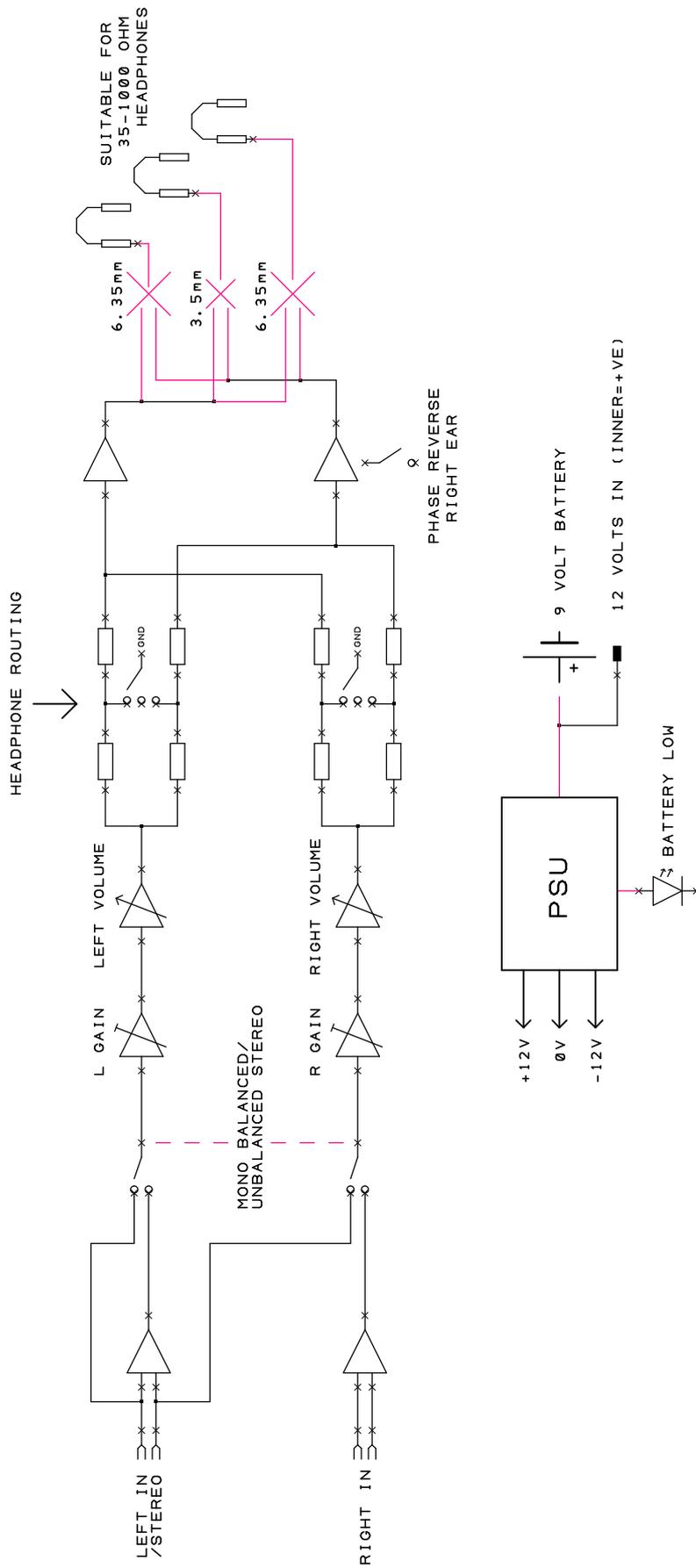
The headphone amplifier is powered from a single 9V PP3 battery and can also be powered by an external power supply (not included but available as an extra). It provides 1 high power headphone amplifier capable of driving high impedance broadcast style headphones and headsets.

Two XLR audio inputs are provided on the rear and a switch on the side selects if the stereo headphone output should be derived from both of these (one for left ear and the other for the right) or if just one input should accept an unbalanced stereo input.

Two coarse gain controls are provided to allow the headphone amplifier to accept a wide range of audio input levels, and these gain controls are preset and adjusted by a small screwdriver to prevent accidental operation by a non-technical user.

The front panel provides 2 headphone volume controls to allow the user to individually adjust the audio input level of the left and right inputs to the headphones. Two routing switches are also provided to allow the either input to be routed to either or both channels of the headphone amplifier.

# SIMPLIFIED BLOCK DIAGRAM



## FRONT PANEL CONTROLS



### 1) Power On Switch

The power on switch turns the headphone amplifier on/off. In the down position it is on and in the up position the GS-HA013 is off. To turn on the GS-HA013 must either have a battery fitted or an external power supply connected.

### 2) Power On LED

When the unit is turned on and operational this bright blue Led will illuminate. If this LED is flashing it indicates that the battery voltage is getting low and the battery will need replacing soon.

### **3) A Volume Control**

This rotary potentiometer adjusts the volume of the A input into the headphones. Turning it fully clockwise provides maximum volume and turning it ant-clockwise reduces the volume to the minimum possible.

This control has been designed to not to allow the volume to be completely turned off. This is to prevent an operator completely turning off the audio feed from a director or producer.

If you would like the volume control to be able to completely attenuate then this can be accommodated by Glensound prior to shipping.

### **4) A Routing Switch**

This switch selects which (or both) sources the A headphone output is derived from.

### **5) B Volume Control**

This rotary potentiometer adjusts the volume of the B input into the headphones. Turning it fully clockwise provides maximum volume and turning it ant-clockwise reduces the volume to the minimum possible.

This control has been designed to not to allow the volume to be completely turned off. This is to prevent an operator completely turning off the audio feed from a director or producer.

If you would like the volume control to be able to completely attenuate then this can be accommodated by Glensound prior to shipping.

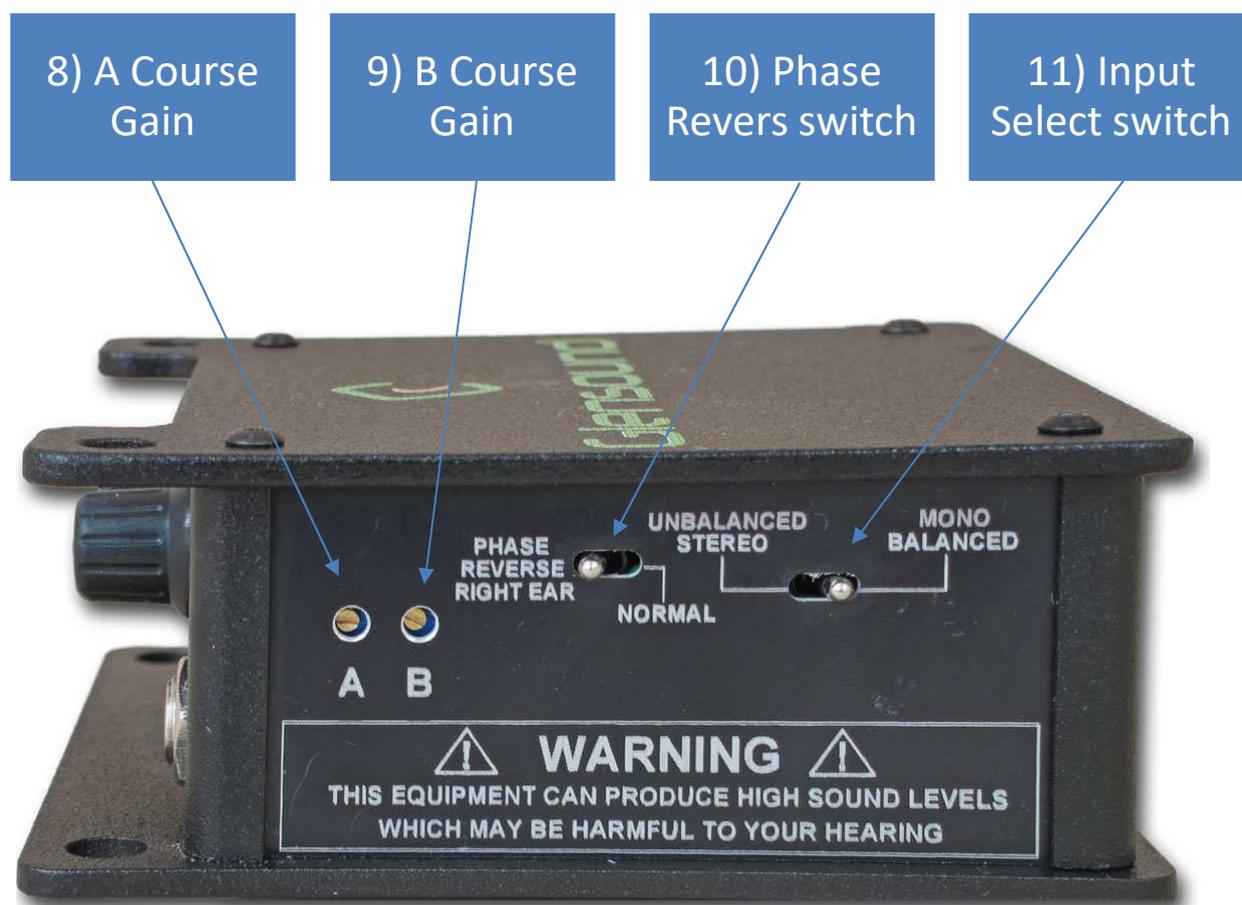
### **6) B Routing Switch**

This switch selects which (or both) sources the B headphone output is derived from.

### **7) 6.35mm Headphone Jack**

This is a standard 6.35mm (1/4") TRS jack socket. It is wired in parallel with the rear panel headphone jack sockets.

## RIGHT SIDE PANEL CONTROLS



### 8/9) A & B Course Gain Controls

This pre-set potentiometer adjusts the input gain of the incoming signal, to get it to the correct use for the headphone amplifier. This is a multi-turn pre-set which rotates 20 times, to allow a fairly fine level of accuracy when setting the gain.

As a general rule these pre-sets are only altered when first connecting to a new setup and the factory default is that they are lined up for a 0dB input level.

### 10) Phase Reverse Switch

For most customers this switch is irrelevant and this should be set to normal. When the switch is in the 'PHASE REVERSE RIGHT EAR' position the phase of the B audio input is reversed. This is a requirement of some older style wiring of BBC headphones.

### 11) Input Select Switch

This switch alters the audio input source being sent to the stereo headphone amplifier. It can either be two balanced mono audio sources from the rear panel XLRs with one source being sent to the 'A' circuit and the other to the 'B' circuit or if the switch is in the 'UNBALANCED STEREO' position then the 'A' XLR input will accept an unbalanced stereo source and route this to the A and B circuits.

## REAR PANEL CONTROLS



### 12) 3.5mm Headphone Jack

This is a standard 3.5mm TRS jack socket. It is wired in parallel with the rear panel 6.35mm & front panel headphone jack sockets.

### 13) 6.35mm Headphone Jack

This is a standard 6.35mm (1/4") TRS jack socket. It is wired in parallel with the rear panel 3.5mm and front panel headphone jack sockets.

### 14) A\STEREO Input

This is an XLR audio input. It operates in 2 modes depending upon the position of the input select switch on the right side panel. It either accepts a standard balanced mono audio source and routes that source to the 'A' side of the headphone amplifier.

Or it accepts an unbalanced stereo source and routes this to both the A and B sides of the headphone amplifier.

### **15) B Input**

This audio input is a normal balanced circuit. It is either routed internally to the 'B' side of the headphone amplifier or if the input select switch on the side of the unit is set to 'UNBALANCED STEREO' then its input is disconnected and not routed to the output.

### **16) DC Inout**

This is a 2.5mm barrel connector for attaching external DC supplies to if the GS-HA013 is to be powered by one instead of a battery. If both an external supply and battery are in place then the unit will be powered by whichever is providing the higher output voltage (normally this DC input).

## LEFT SIDE PANEL CONTROLS



### 17) Battery Compartment

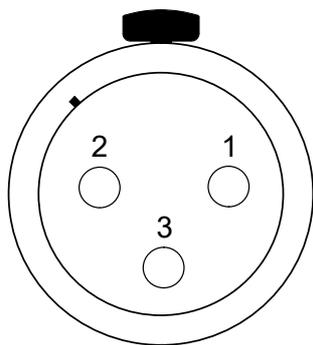
This is the compartment that houses the PP3 9 Volt battery.

### 18) Battery Compartment Catch

Use this little indent to lift the battery compartment to enable it to slide outwards when changing the battery.

# WIRING INFORMATION

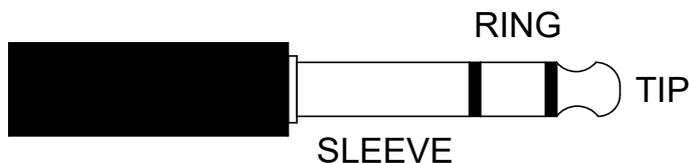
## 1. Standard wiring info



XLR SOCKET (FEMALE)

### STANDARD XLR AUDIO PINOUTS:

- 1: Ground/ Earth
- 2: INPHASE/ POSITIVE/ MIC +
- 3: MATE/ NEGATIVE/ MIC -



### STANDARD HEADPHONE WIRING:

- TIP: A/ LEFT Ear
- RING: B/ RIGHT Ear
- SLEEVE: Common/ Earth

## 2. Unbalanced Stereo Input

If set to unbalanced stereo input then the A XLR input wiring becomes:

- 1: Ground/ Earth
- 2: A input
- 3: B input

## **SPECIFICATION**

### **AUDIO INPUT:**

BALANCED INPUT IMPEDANCE >50K Ohms

UNBALANCED STEREO INPUT IMPEDANCE >22K Ohms (On each side)

INPUT GAIN RANGE -20dBu to +8dBu

FREQUENCY RESPONSE -1dBu @ 20Hz & 20kHz

NOISE -54dBu (RMS 22-22kHz) @ Max Gain -85dBu (RMS 22-22kHz) @ Min Gain

### **HEADPHONE OUTPUT:**

HEADPHONE IMPEDANCE 200 Ohms to 2K Ohms

HEADPHONE LEVEL RANGE -20dBu to +10dBu

MAXIMUM HEADPHONE LEVELS

\*\*\*\*WARNING HIGH SOUND LEVELS CAN BE HARMFUL TO YOUR HEARING\*\*\*\*

+19dBu into 2K Ohms

+18dBu into 600 Ohms

+16dBu into 200 Ohms

2 x HEADPHONE CONNECTORS 6.35mm A & B gauge Wired in Parallel

1 x HEADPHONE CONNECTOR 3.5mm Wired in Parallel with 6.35mm

### **MISC**

POWER Internal: 1 x PP3 9 volt battery

External: 12 to 20V @ < 44mA 2.5 mm Jack (inner positive)

BATTERY INDICATOR Steady blue LED indicates good battery Flashing blue LED indicates low battery

OVERALL SIZE 43 x 101 x 103 mm (H x W x D)

UNIT WEIGHT 380 Grams (including battery)