GS-HA013

BATTERY POWERED PORTABLE HEADPHONE AMPLIFIER

PRODUCT DETAILS

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IMPORTANT SAFETY INSTRUCTIONS

Read this safety sheet prior to installation or initial use. This generic safety sheet covers multiple product configurations across our range. The full operating & installation manual and model-specific technical specifications are available online at: **www.glensound.com**

Glensound
Keeps Working



DANGEROUS VOLTAGE: This symbol is intended to warn that dangerous voltages within the product are present and constitute a risk of electric shock.



IMPORTANT INSTRUCTIONS: This symbol is intended to highlight that there are important operating, installation, and maintenance instructions in the literature accompanying this unit.

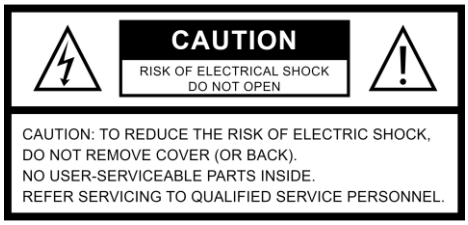


THIS UNIT MUST BE EARTHED (Class I Mains Models):
English: This symbol highlights that the equipment must have a valid earth connection with the protective earthing conductor.
Danish: *Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.*
Finnish: *Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.*
Norwegian: *Apparatet må tilkoples jordet stikkontakt.*
Swedish: *Apparaten skall anslutas till jordat uttag.*



CAUTION – SHOCK HAZARD: DISCONNECT ALL POWER SOURCES: This symbol warns that the product can be energised simultaneously from more than one power source (e.g., dual AC mains supplies, external DC power, and/or PoE). Care must be taken if accessing internal components. Ensure that ALL connected power supplies are fully disconnected.

1. **Read & Keep Instructions:** Read these instructions, keep these instructions, heed all warnings, and follow all instructions.
2. **Indoor Use & Moisture:** Unless otherwise specified in the model-specific manual, this product is intended for indoor use only. Do not use this apparatus near water, and do not expose this product to rain or moisture.
3. **Ambient Temperature:** The intended ambient operating temperature of this product is 0°C to 40°C (or 0°C to 50°C where specified in the model-specific technical specifications in the online user manual).
4. **Cleaning & Heat Sources:** Clean only with a dry cloth. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
5. **Cable & Cord Protection:** Protect all power cords and network cables from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
6. **Attachments & Lightning:** Only use attachments/accessories specified or supplied by the manufacturer. Unplug this apparatus during lightning storms or when unused for long periods of time.
7. **Servicing & No User-Serviceable Parts:** The product contains no user-serviceable parts and must not be disassembled or modified in any way. Doing so could result in personal injury and/or product failure. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when a power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
8. **Professional Environment:** This equipment is not suitable for use in locations where children are likely to be present.



WARNING:

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

POWER SUPPLY & DISCONNECT INSTRUCTIONS (APPLICABLE BY MODEL CONFIGURATION)

9. **Simultaneous / Redundant Power Sources (Mains, DC & PoE):** Depending on the model, this product may be powered by a single source or simultaneously by multiple redundant power sources (dual AC mains inlets, an AC mains inlet, an external DC power input, and/or Power over Ethernet [PoE]). Disconnecting a single power lead will NOT isolate the unit if another power source remains connected. To completely de-energize the equipment, unplug ALL connected AC mains cords, DC barrel jack/external DC connectors, and PoE RJ45/etherCON network cables.
10. **AC Mains Disconnect Devices (Single or Dual IEC Inlets):** Where AC mains inlets are fitted, the mains plug(s) and rear-panel IEC appliance coupler(s) serve as the disconnect device(s). On dual-mains models, both mains' cords must be unplugged to isolate the unit from AC mains power. The socket-outlet(s) used for mains power must be installed near the equipment and be easily accessible.
11. **Plug Grounding & Polarization (AC Mains Models):** Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has 2 blades with one wider than the other. A grounding-type plug has 2 blades and a third grounding prong provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. **Approved Detachable Earthed Mains Cords (Class I AC Mains Models):** Use only approved detachable 3-core earthed mains cords (minimum H05VV-F 3G0.75 mm² with IEC 60320-1 C13 connector) rated for the country of installation: • United Kingdom: Use a BS 1363-1 approved moulded plug fitted with a 5 A ASTA-approved BS 1362 fuse. • European Union: Use a CEE 7/7 (Schuko/French) earthed plug. • Denmark: When connecting to wall socket-outlets in Denmark, use an approved 3-pin earthed plug complying with DS 60884-2-D1 (Standard Sheet DK 2-1a) to ensure protective earthing is maintained. • USA/Canada: Use a UL-listed / CSA-certified 3-conductor grounding power cord [minimum 18 AWG, SVT/SJT] with a NEMA 5-15P plug. • All other regions: Use a nationally safety-approved 3-core earthed mains cord rated for the country of installation.
13. **Internal Primary Fusing & Neutral Fusing Warning (AC Mains Models – Service Personnel Only):** Internal primary fuse(s) are located between the Live terminal of the IEC inlet and the Live input of the power supply and should only be changed by a qualified service engineer using a correctly rated replacement as specified in the product handbook. WARNING – Neutral Fusing: Because the AC mains plug may be reversible in some electrical distribution systems, the internal primary fuse may be located in the neutral conductor. Always disconnect all AC mains power cords completely from the IEC inlet(s) to de-energize all phase conductors before opening the enclosure or servicing the unit.
14. **Power over Ethernet (PoE) Models:** Unplugging the RJ45 / etherCON network cable disconnects PoE power from the unit. The Ethernet cable intended to be connected to the unit is for indoor building routing only and must not exit the building structure without appropriate primary surge protection.
15. **External DC / USB Power Input Models:** Connect only the manufacturer-supplied AC/DC power adaptor (where provided), or a safety-approved external DC or USB power supply complying with BS EN IEC 62368-1 (classified as ES1 and PS2/Limited Power Source [LPS]) that matches the voltage, minimum current rating, and pin polarity marked adjacent to the DC/USB input connector or specified in the product manual. The external power adaptor plug and the DC/USB input connector serve as the DC disconnect devices and must remain readily accessible; unplugging the DC/USB connector disconnects external DC power only and will not isolate the unit if AC mains or PoE remains connected.

INSTALLATION, THERMAL, MECHANICAL & OPTICAL SAFETY (APPLICABLE BY MODEL CONFIGURATION)

16. **Ventilation & Sealed Heatsink Enclosures:** Do not block any ventilation openings; install in accordance with the manufacturer's instructions. On models where the aluminum enclosure acts as the units heatsink, do not cover the unit or speaker grille with soft furnishings, cloths, or curtains, and allow free airflow around the housing.
17. **19-Inch Equipment Rack Installation (Rack-Mount Models):** Rack-mounted models are designed for stationary installation in a standard 19-inch equipment rack. Secure the unit to the front rack rails using all four mounting holes on the integral rack ears with appropriate rack screws (e.g., M6 screws and cage nuts). Ensure that ventilation openings on the chassis are not obstructed by rack walls or cabling.
18. **Carts, Stands, Brackets & Tip-Over Hazard:** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
19. **Optical SFP Transceiver Modules (Where fitted):** Any optical SFP transceiver modules installed in this product must be certified Class 1 Laser Products in accordance with IEC/EN 60825-1. Do not look directly into open optical ports or fiber-optic cable ends while the equipment is energized.





Disposal (WEEE): the crossed-out wheeled bin symbol means this product must not be disposed of with household waste. Take it to an approved electrical and electronic equipment recycling point, or contact Glensound for advice.
Declaration of conformity: Glensound declares that this product complies with the applicable UK and EU legislation. The full declaration of conformity is available at www.glensound.com.
Manufacturer: Glensound Electronics Ltd, The Design Buildings, 6 Brooks Place, Maidstone, Kent, ME14 1HE, UK · Tel: +44 (0)1622 753662 · Email: sales@glensound.com · www.glensound.com

Glensound Electronics Ltd

Thank you for choosing a new Glensound product.

All rights reserved.

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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EMAIL ADDRESSES

General enquires: office@glensound.co.uk

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Sales enquires: sales@glensound.co.uk

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.

CE

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

Handbook Contents

Issue 1

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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 personel.

It's features expand on the very popular original GS-HA001 which it superceeds.

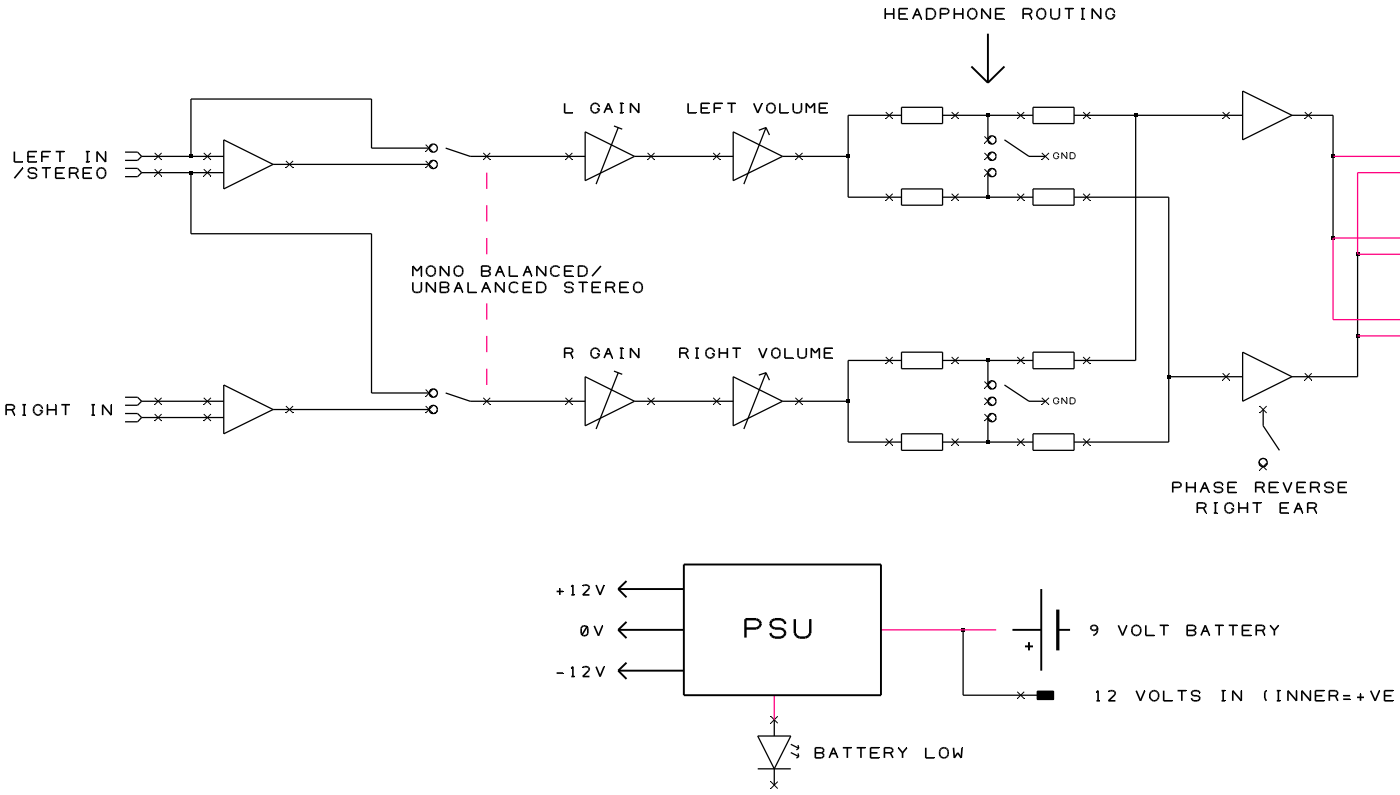
The headphone amplifier is powered from a single 9V PP3 battery and can also be powered by an external power supply (not inlcuded but available as an extra). It provides 1 high power headphoen amplifier capable of driving high impedance broadcast style headphones and headsets.

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 the 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 presets 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 headphoen 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 I son 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 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 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 nd 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

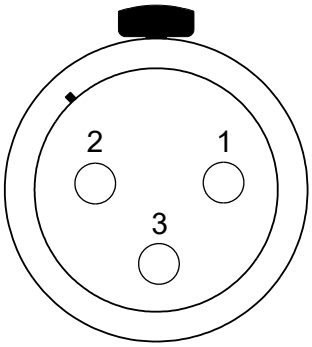
This is the compartment that houses the PP3 9 Volt battery.

18) Battery Compartment Catch

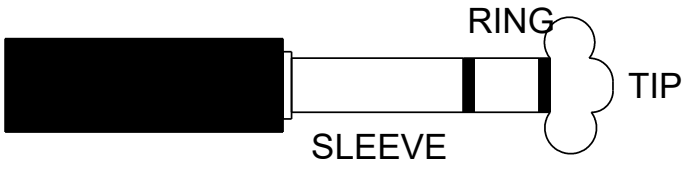
Use this little indent to lift the battery compartment to enable it to slide outwards when changing the battery.

WIRING INFORMATION

1. Standard wiring info



XLR SOCKET (FEMALE)



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 32hms to 1K 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)