



# GS-MON004

**8 INPUT 4 LOUDSPEAKER 19" 1RU  
AUDIO MONITOR**

## **PRODUCT DETAILS**



# 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:

Glensound Electronics Ltd  
1 – 6 Brooks Place  
Maidstone  
Kent  
ME14 1HE  
United Kingdom

Telephone: +44 (0) 1622 753662

Fax: +44 (0) 1622 762330

## EMAIL ADDRESSES

General enquires: [office@glensound.co.uk](mailto:office@glensound.co.uk)

Technical enquires: [techinfo@glensound.co.uk](mailto:techinfo@glensound.co.uk)

Sales enquires: [sales@glensound.co.uk](mailto: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.



## EU DECLARATION OF CONFORMITY FOR:

### **GS-MON004**

*8 Input 4 Loudspeaker Audio Monitor*

This declaration of conformity is issued under the sole responsibility of the manufacturer.

This equipment is manufactured by Glensound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is CE marked and conforms to the following Union harmonisation legislation:

Low Voltage Directive:	EN60065 and EN62368-1:2014
Emissions:	BS EN55032:2015
Immunity:	BS EN55035:2017

Signed for and on behalf of Glensound Electronics Ltd.

Gavin Davis, Managing Director  
Maidstone, Kent, England

Date: 20/02/2019

## **RoHS DIRECTIVE**

RoHS 2 Directive 2011/65/EU restricts the use of the hazardous substances listed below in electrical and electronic equipment.

This product conforms to the above directive and for these 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%

# **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**

# GLENSOUND GS-MON004

## Handbook Contents

Issue 1

Description

Page No.

### **Contents**

PRODUCT WARRANTY: .....	3
OVERVIEW .....	8
GS-MON004 PANEL LAYOUT .....	9
Front Panel .....	9
Front Panel Features .....	9
Rear Panel .....	11
Rear Panel Features .....	11
AUDIO BLOCK DIAGRAM .....	12
SPECIFICATIONS .....	13
WIRING INFORMATION .....	14
Standard XLR Pin Outs .....	14
Standard Headphone Wiring .....	14

## **OVERVIEW**

GS-MON004 is an audio monitoring subrack designed for speech and confidence monitoring of signals.

It features 4 x front panel loudspeakers, each driven from its own class D amplifier. Each speaker/ amplifier combination has two analogue audio inputs mixed together as its source. These two inputs can of course be one stereo input being mono'd by the internal mixer.

Utilising 4 front panel loudspeakers provides an effective sound stage for close field monitoring of 4 different audio sources and provides much improved cognitive recognition for an operator of the 4 different audio circuits than if the 4 sources were monitored on a single loudspeaker driver.

Each loudspeaker has it's own front panel volume control, illuminated mute switch and peak and presence indicators. The mute switches allow a quick and easy way of turning a source on/ off whilst the presence indicators help an operator clarify which of their 4 audio sources are currently active. The peak LEDs indicate an overload of the input signal and provide a useful reference to potential issues with the incoming audio circuits.

The GS-MON004 was designed in 2019 and utilises all the very latest technological advancements. It features high output, flat response, low distortion drive units with low telsa (gauss) neodymium magnets. It also features the latest low noise class D amplifiers.

A front panel headphone socket is also provided (inserting a headphone jack cuts the front panel loudspeakers), this allows an operator to continue monitoring the sources in very high ambient noise levels.

To protect the loudspeakers from damage from sudden high peak audio levels compressor/ limiter circuits are fitted for each loudspeaker. This compressor has been carefully designed not to taint the monitoring audio at normal listening levels.

All the audio inputs are electronically balanced and terminated in industry standard XLRs.

The GS-MON004 is 19" 1RU and is mains powered from an internal filtered switch mode power supply, making it suitable for use around the World.

## **GS-MON004 PANEL LAYOUT**

### **Front Panel**



### **Front Panel Features**

#### **1. Channel Peak LED**

Peak LEDs are provided (1 for each channel) to indicate an overly high audio input signal. The peak LEDs are monitoring a point in the audio chain prior to the front panel volume controls and after the 2 input mixer.

#### **2. Channel Volume Control**

The rotary channel volume controls adjust the audio level of the associated channel to its associated loudspeaker/ channel of the headphone amplifier. Turning the control clockwise increases the audio level and turning it anti-clockwise reduces the audio level.

#### **3. Headphone Jack**

This is a stereo 6.35mm (1/4") jack socket for headphones.

Plugging a jack plug into the socket will cut the 4 internal loudspeakers.

The 4 incoming audio circuits are mixed to the headphones as two pairs of stereo, such that Inputs 1 & 3 are routed to the left ear and Inputs 2 & 4 are routed to the right ear.

#### 4. **Present Indication**

The present LEDs are taken from a point in the audio chain prior to the front panel volume controls and the front panel channel mute switches. Therefore they will illuminate if a signal is present on a channel even if its volume control is turned down or its mute switch is operated.

The present (presence) indicators are used to provide a visual indication audio being present on a particular channel.

The LEDs illuminate at a threshold of -20dB and have a hold time of a few seconds, so stay illuminated for a short while after an audio source disappears.

#### 5. **Channel Mute Switch**

The channel mute push switch latches on/ off and is used for turning off the audio to a channel.

If the internal LED in the switch is illuminated then the mute is active and no audio will be monitored on either the loudspeaker or in the headphones from the associated input channel.

## Rear Panel



## Rear Panel Features

### 6. Mains Input

The standard IEC mains plug is filtered and accepts external AC voltages of 100 - 240 VAC +/- 10%.

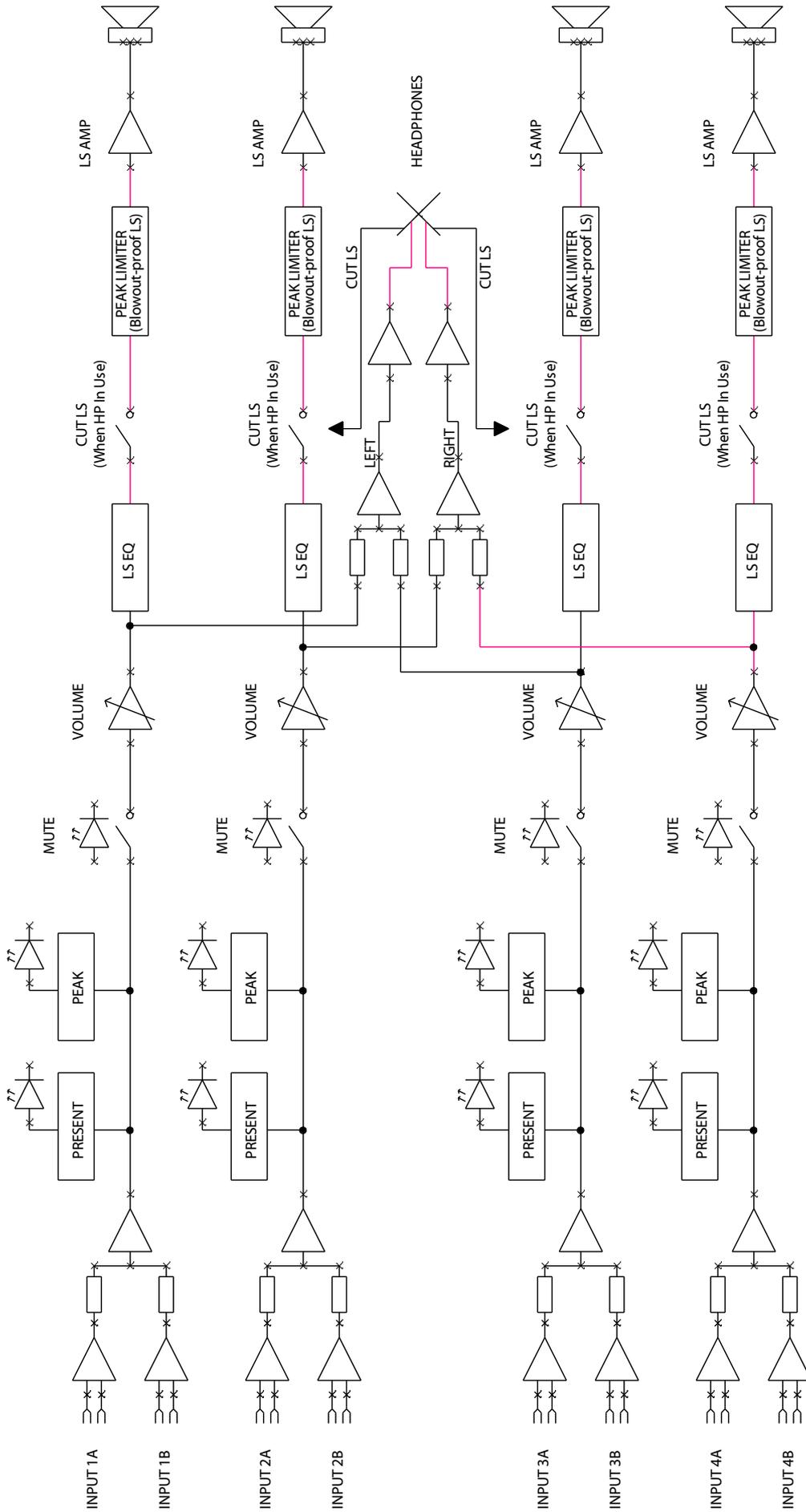
There is an internal fuse and maximum current consumption is 25 Watts.

### 7. Audio Inputs

The audio input XLRs are electronically balanced and their inputs can be wired unbalanced. They have a line up level of 0dBu.

Each of the 4 loudspeakers has a pair (A and B) of inputs associated with it. Each pair of A and B inputs are mixed together to provide a single mono audio feed to their loudspeaker.

# AUDIO BLOCK DIAGRAM



# SPECIFICATIONS

## AUDIO - General

### Input Impedance

> 30K Ohms

### Input Type

Electronically balanced (can be wired unbalanced)

### Input Connector

Female 3 Pin XLR (Neutrik)

### Maximum Input Before Clipping

+27dB

### Volume Control Gain Range

+10/ Off

### Present Indicator Threshold

-18dB

### Present Indicator Hold Time

3 seconds

### Peak LED Threshold

+10dB

### A + B Mixers

0dB + 0dB = +6dB

## AUDIO - Loudspeaker

### Maximum Power RMS

4 Watts (per loudspeaker)

### Peak Power (per loudspeaker)

5 Watts (limited by compressor circuit)

### Amplifier Type

Class D

### Noise @ Lineup (measured at I/P to LS)

> -61.5dB

### Peak Power (per loudspeaker)

5 Watts (limited by compressor circuit)

### Amplifier Type

Class D

### Noise @ Lineup (measured at input to LS)

> -61.5dB

### THD + N (measured at input to LS)

> 0.18% @ 1kHz ref +8dB

### Acoustic Frequency Response

120Hz to 22kHz +/- 9dB

### Maximum Acoustic Level (1 Loudspeaker)

88dB SPL @ 0.61 Meters (2 Feet)

### Maximum Acoustic Level (4 Loudspeakers)

98dB SPL @ 0.61 Meters (2 feet)

## AUDIO - Headphones

### Connector

6.35mm (1/4") TRS Jack Socket

### Maximum Output Before clipping

+18dB into 600 Ohms

### Noise @ Lineup (22hz to 22kHz RMS)

> -88 dB

### THD + N

> 0.0025% @1kHz ref +8dB

## POWER

### Input Voltage

100 - 240 VAC +/-10%

### Frequency

50 / 60 Hz

### Input Connector

Filtered IEC (Internally fused)

### Consumption

25 Watts (Maximum)

## PHYSICAL

### Mechanics

All aluminium with laser etched panels and light textured black powder coated lid/ base

### Loudspeaker Magnet Type

Neodymium

### Magnetic Induction

1.15 T (per loudspeaker)

### Size

19" 1RU 221mm deep

### Weight

1.9Kg (4.2lbs)

### Shipping Weight

3.5Kg (7.8lbs)

### Shipping Size

62 x 41 x12 cms

### Shipping Carton

Rugged export quality cardboard

## INCLUDED ITEMS

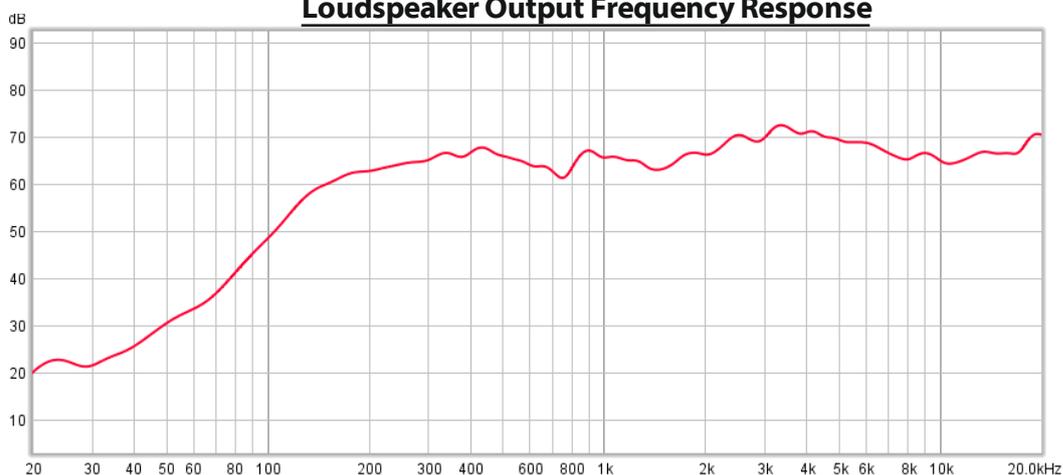
### Handbook

Physical A4 (download also available)

### Mains Cable

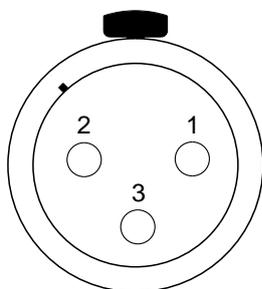
2 metre IEC (UK & Europe only)

## Loudspeaker Output Frequency Response



# WIRING INFORMATION

## Standard XLR Pin Outs

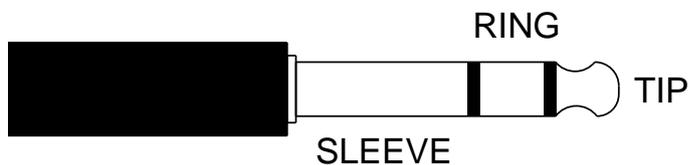


XLR SOCKET (FEMALE)

## STANDARD XLR AUDIO PINOUTS:

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

## Standard Headphone Wiring



## STANDARD HEADPHONE WIRING:

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