Signature Series

Maximum Resilience Broadcast Audio

PS1

POWER STATION

Back-up Power Supply for Signature Series Audio Racks

User Guide

Glensound
6 Brooks Place, Maidstone
Kent, UK, ME14 1HE
Tel: +44 (0)1622 753662
www.glensound.co.uk

Glensound
Keeps Working

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

Technical enquires: techinfo@glensound.co.uk

Sales enquires: sales@glensound.co.uk

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

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.

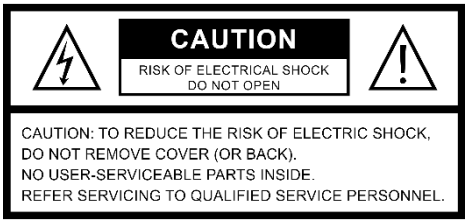
1. Read & Keep Instructions: Read these instructions, keep these instructions, heed all warnings, and follow all instructions.

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.

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 molded 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

CE

EU DECLARATION OF CONFORMITY FOR:

SIGNATURE PS1

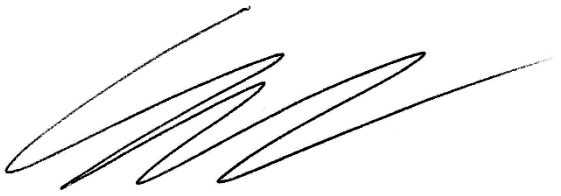
Power Station for Signature Series

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: March 2018

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 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%

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

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.

PS1 Power Station
Handbook Contents

Issue 1,

Description Page No.

Contents

IMPORTANT SAFETY INSTRUCTIONS ..... **Error! Bookmark not defined.**
PRODUCT WARRANTY: 7
OVERVIEW 9
PHYSICAL INSTALLATION 10
EXAMPLES OF USE 12
1. Master DC Power Supply 12
2. Redundant DC Power Supply 13
USER CONTROLS & CONNECTIONS 14
1. PSU ON LEDS 14
2. PSU 2 Outputs 15
3. PSU 1 Outputs 15
4. Mains Input 15
MAXIMUM CURRENT OUTPUT 16
WIRING INFORMATION 17
SPECIFICATIONS 18

OVERVIEW

The Signature PS1 Power Station provides a fully resilient back up power supply to your Signature Series units. It contains two switch mode power supplies, each capable of powering up to three separate Signature Series units. A pair of bright front panel LEDs indicate that each power supply is on and active. The master AC power input accepts 100 – 240 VAC for Worldwide compatibility.

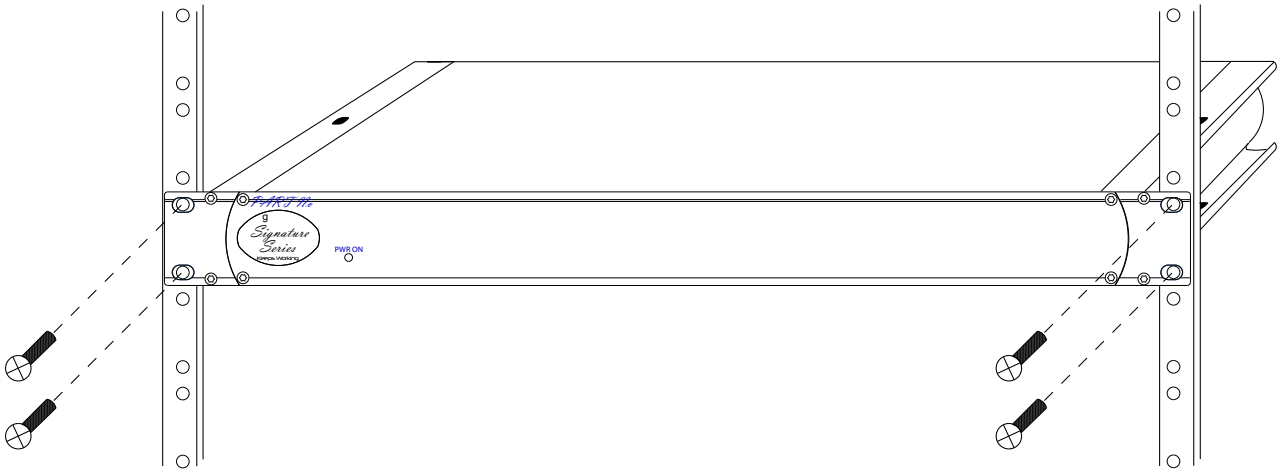
As well as providing a backup DC supply for up to six Signature Series units, the PS1 can also act as a master DC power distribution to six Signature units.

All outputs are individually fused so a short circuit on one will not affect any others.

PHYSICAL INSTALLATION

The Glensound Signature Series have been designed to be highly versatile for installation and can be installed in 19" racks with either their front or rear panels facing the front of the rack. They can also be mounted underneath desks or work tops and can be either permananetly mounted or stood (using the supplied feet) on top of desks or worktops.

INSTALLING SIGNATURE SERIES IN A 19" RACK



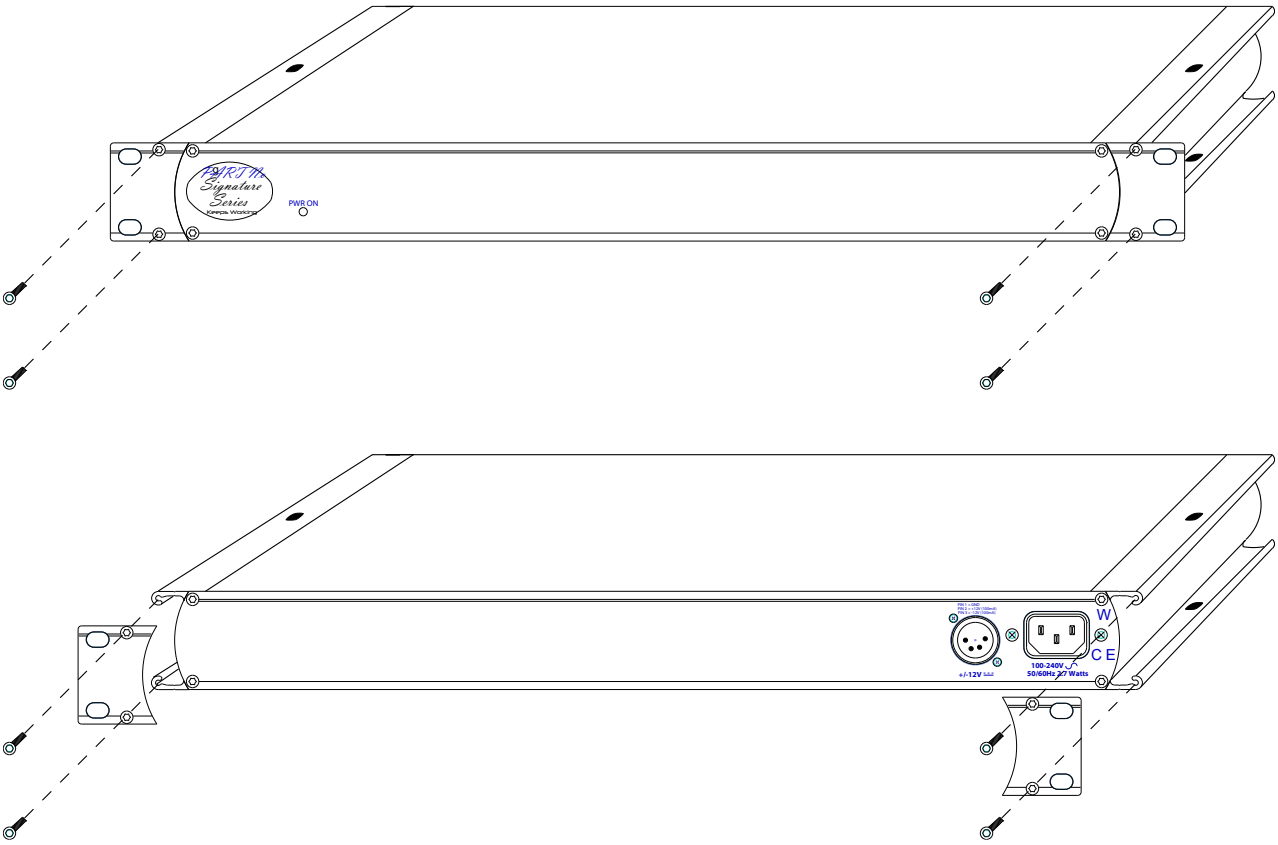
Firmly hold the signature subrack within the 19" rack and locate in 1RU of space. Use the supplied 6mm rack screws to securly attach the unit to the rack.

INSTALLING ADHSIVE FEET FOR NON PERMANENT TABLE TOP MOUNTING



Remove the front rack ears (if they are not required), turn the unit upside down and attach the supplied 4 sticky feet as per the above drawing.

SWAPPING RACK EARS TO ALLOW THE REAR TO BE INSTALLED AT THE FRONT OF A RACK

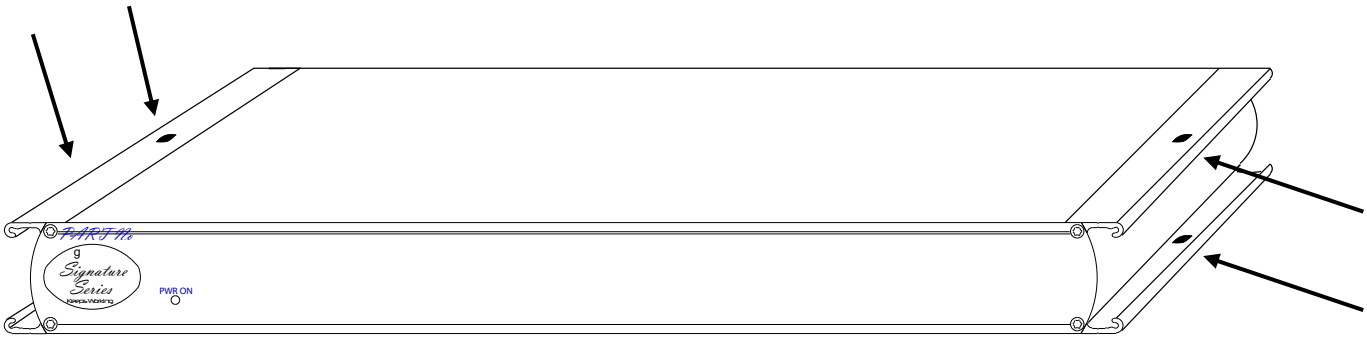


First remove the 4 silver button head screws that fix the rack ears onto the front of the unit as shown in the top picture above.

Remove the rack ears and turn the unit around for access to its back panel.

Re-fit the 2 rack ears using the same 4 silver button head screws that were removed from the front as per the bottom picture above.

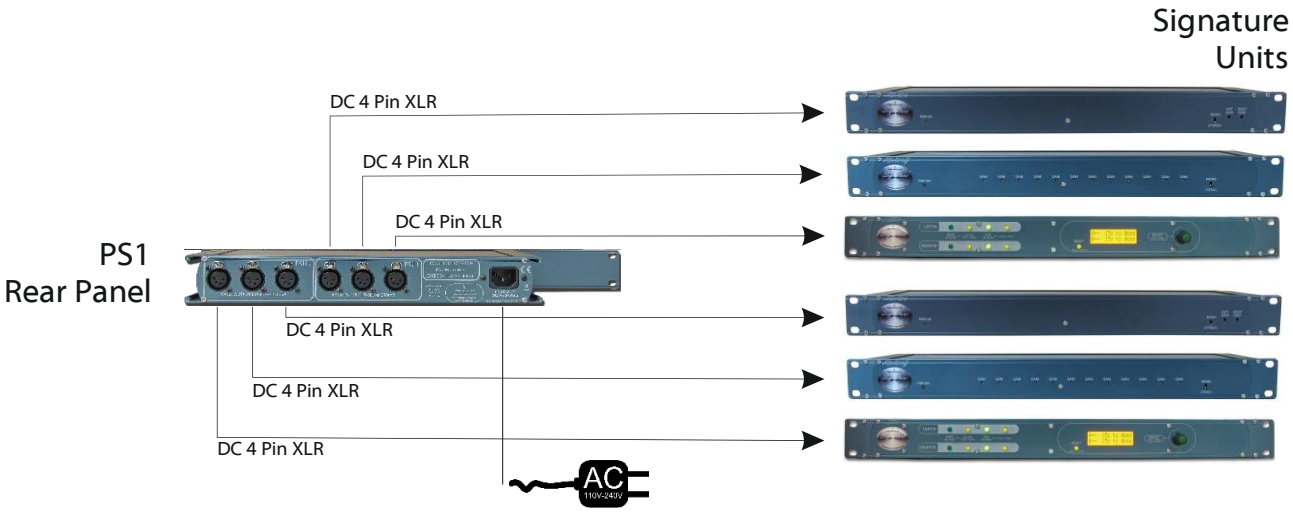
USING THE MOUNTING HOLES FOR PERMANENTLY ATTACHING THE UNIT ABOVE OR BELOW A WORKTOP/ DESK



Use either the top or bottom mounting holes as indicated above to use suitable screws to attach the signature unit to a worktop or bench. **PLEASE ENSURE THAT YOU USE SUITABLE FIXINGS**

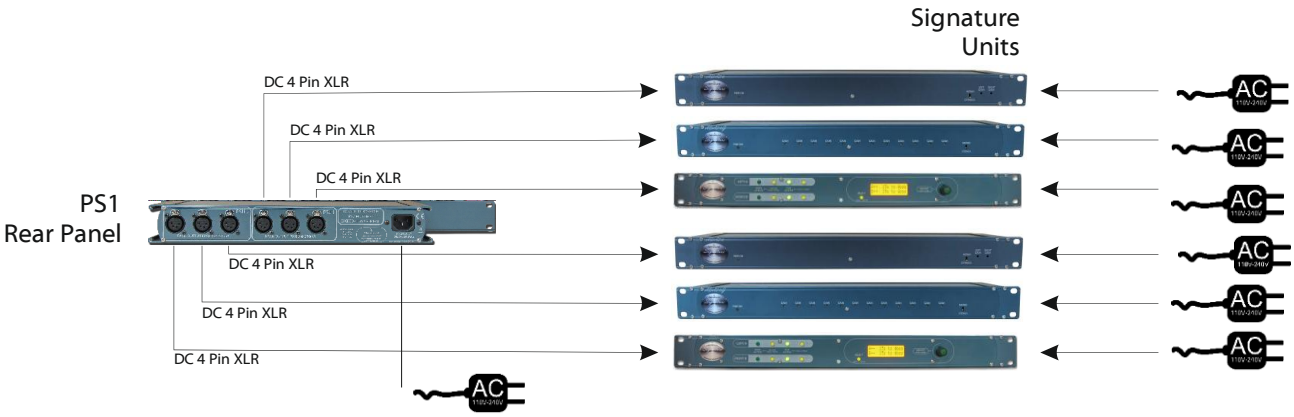
EXAMPLES OF USE

1. Master DC Power Supply



The Signature PS1 Power Station can be used as the primary power source for Signature Series units. There are 6 x ±12VDC outputs. Each of these can connected to any single Signature Series unit, providing it with the primary power source. The PS1 must be connected to a 100-240VAC mains power supply in order to distribute DC power to the other Signature units.

2. Redundant DC Power Supply



The Signature PS1 Power Station can be used as a redundant power supply for Signature Series units. This is very useful when the Signature units are being used for an important function, and the peace of mind of a backup supply is desirable.

Each Signature unit connects to a 100V - 240V AC supply as normal. The PS1 has 6 x ±12VDC outputs. Each of these connects to any single Signature Series unit, providing it with the redundant power source. In the event of a failure of the AC power supply on the Signature units, the PS1 will simply take over and ensure that the unit remains operational.

USER CONTROLS & CONNECTIONS

FRONT PANEL

1. PSU ON LEDS

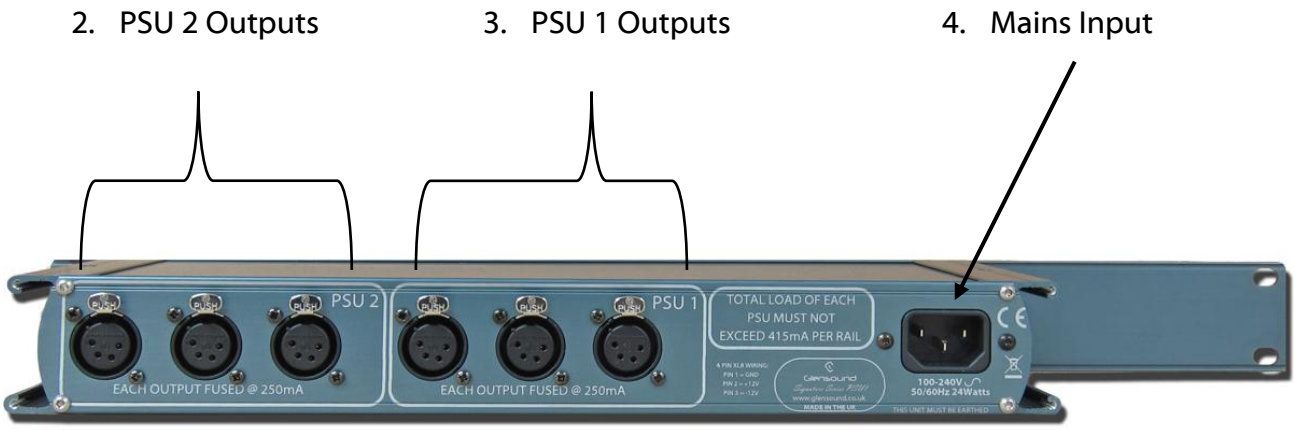


1. PSU ON LEDS

The two front panel PSU LEDs are each connected to the output of one of the two internal power supplies.

If these LEDs are on then the unit is functioning correctly.

REAR PANEL



2. PSU 2 Outputs

These three DC power outputs are fed from one of the two internal power supplies. Each one can be connected to an associated input on a Signature Series unit to provide DC power to that unit.

Each output is individually fused so a short on one output or other external problem on that output will not affect any other devices connected to the PS1.

3. PSU 1 Outputs

These three DC power outputs are fed from one of the two internal power supplies. Each one can be connected to an associated input on a Signature Series unit to provide DC power to that unit.

Each output is individually fused so a short on one output or other external problem on that output will not affect any other devices connected to the PS1.

4. Mains Input

This wide range IEC plug accepts mains inputs in the range of 100 – 240VAC (+/- 10%).

MAXIMUM CURRENT OUTPUT



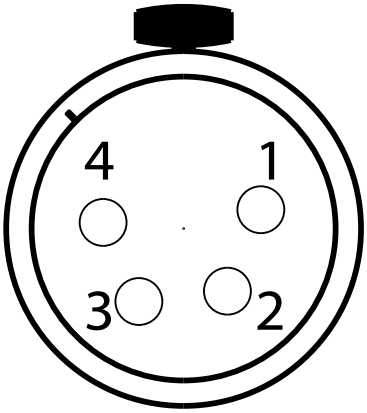
IMPORTANT: MAXIMUM OUTPUT CURRENT

Each Glensound Signature rack has printed on its rear panel near the 4 pin XLR DC input connector the maximum current consumption of that rack for both its postive and negative DC input rails.

Each of the 2 internal Power Supplies (PSU 1 and 2) within the PS1 power station have a maximum output current of 415mA per rail.

It is therefore necessary to make sure that the total current requirements of any devices attached to the PS1 when added up do not exceed 415mA per rail per PSU output.

WIRING INFORMATION



4 PIN XLR SOCKET (FEMALE)

DC OUTPUTS:

PIN 1: GND

PIN 2: +12V

PIN 3: -12V

SPECIFICATIONS

POWER

Mains Input
Filtered IEC, 100 to 240VAC
47 - 63Hz

AC Consumption
10 Watts @ 230VAC

DC Output
6 off 4 Pin Neutrik XLR plug ± 12V

DC Output Fuse
Internal polyfuse 250mA per rail per output

Internal Mains Fuse
20mm 1A Anti Surge

ACCESSORIES

DC Output Cable
6 x 2 metre long cables, 4 pin XLR plug
to 4 pin XLR socket included

PHYSICAL

Size
336 x 123 x 44mm (LxDxH) no rack ears
482mm (19") 1RU with rack ears

Weight
0.85kg

Mechanics
All aluminium construction, anodized and laser etched

Shipping Carton
Rugged export quality cardboard carton
610 x 420 x 130mm (LxDxH)l

Shipping Weight
3kg