

# Signature Series

Maximum Resilience Broadcast Audio



## Signature HA2+ Twin Stereo Headphone Amplifier



HA2+ Front



HA2+ Rear

## FEATURES

**2 x headphone amplifiers**

**1 x stereo input with separate mono cue inputs**

**Stereo or mono operation**

**Headphone outputs available on front and rear**

The Signature HA2+ is a broadcast specification, twin headphone amplifier, designed to operate in a mono or a stereo mode.

The HA2+ has 2 x XLR inputs that are used as the primary programme audio input. This can be stereo, or, if mono, can be switched to appear on both sides of the headphone outputs. There are left and right programme input gain controls on the front panel, and they are on recessed screw terminals.

There are also secondary, mono cue inputs. Connections are via one of 3 x 6.35mm jack sockets on the rear panel. This allows a single cue input to be connected to both headphone outputs, or each headphone amplifier can receive an individual cue input.

On the front panel there is a source control for each headphone output that allows a mix between the programme and cue input. Full left is programme only, full right is cue only, and anywhere in between is a variable mix.

Each of the two headphone amplifiers has its own volume level control. There is also a master volume control that affects the overall level of both amplifiers. This can be defeated via a rear panel dip switch.

The headphone outputs are available via 2 x front panel 6.35mm headphone sockets, and in parallel on 2 x rear panel XLR connections.

The Expedition uses Glensound's propriety CAN headphone system. This allows multi impedance headphones to be used, from 32-1000ohm, with the same perceptual level in the headphones when the volume control is kept in a fixed position. Stereo or mono connections can also be made to the headphone sockets, including mono earpieces.

Rear panel inputs and outputs are electronically balanced on XLRs and can accommodate unbalanced connections if required.

Power is provided by an internal switch mode power supply, with a wide input range. There is also an input for external 12V DC power. The 12V DC input can be connected to the optional Signature Ps1 external DC Master Power Station, for situations where a redundant power supply is desirable.

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### EXAMPLE APPLICATION

## Radio Studio Co-Host & Guest Monitoring Headphone monitoring

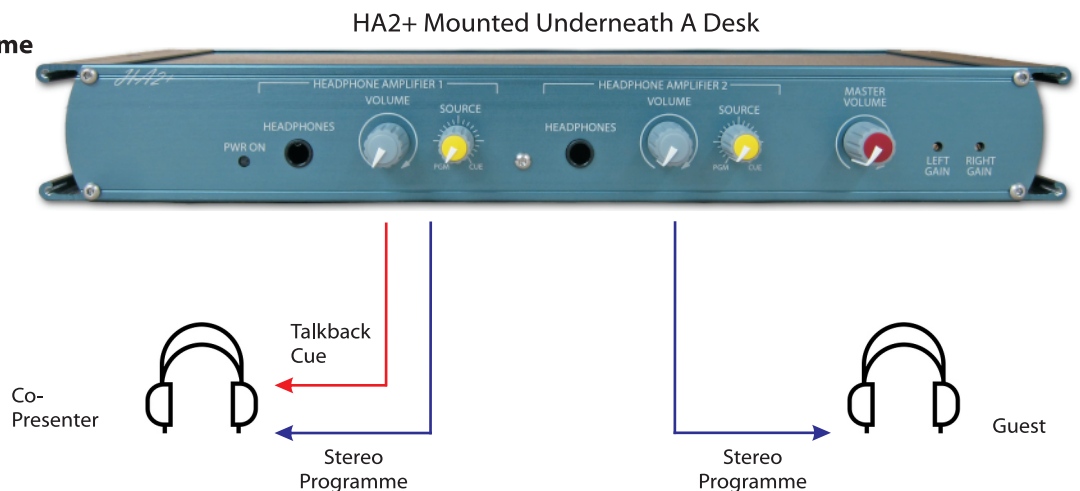


#### Stereo Programme

2 x XLR3  
(balanced or unbalanced)

#### Talkback Cue

1 x 6.35mm  
jack plug  
(balanced or unbalanced)



Many broadcast mixers do not have as many headphone outputs as required. In this example the HA2+ is being used to provide extra headphone connections to a co-presenter and a guest.

The HA2+ is mounted underneath a desk using the flush mounting side wings. This allows the users access to the level controls and front panel connections.

The main stereo programme comes from the broadcast mixer and connects into the HA2+ via 2 x XLR connections.

The talkback cue feed from the broadcast mixer or intercom connects into the 'headphone 1 only' input connection via the 6.35mm jack socket. This makes the talkback cue available only on headphone amplifier 1.

Both of the HA2+ users are in the main studio on a guests table opposite the presenter. They connect their headphones into the front of the HA2+ and have separate level controls so they can now monitor the programme audio.

As the co-presenter is part of the radio presenting team, he also has access to the secondary talkback cue input. He can adjust the source control on the front panel so he can also hear the talkback cue. As this input is only connected to the 1st amplifier, it is not available to the guest.

# Signature Series

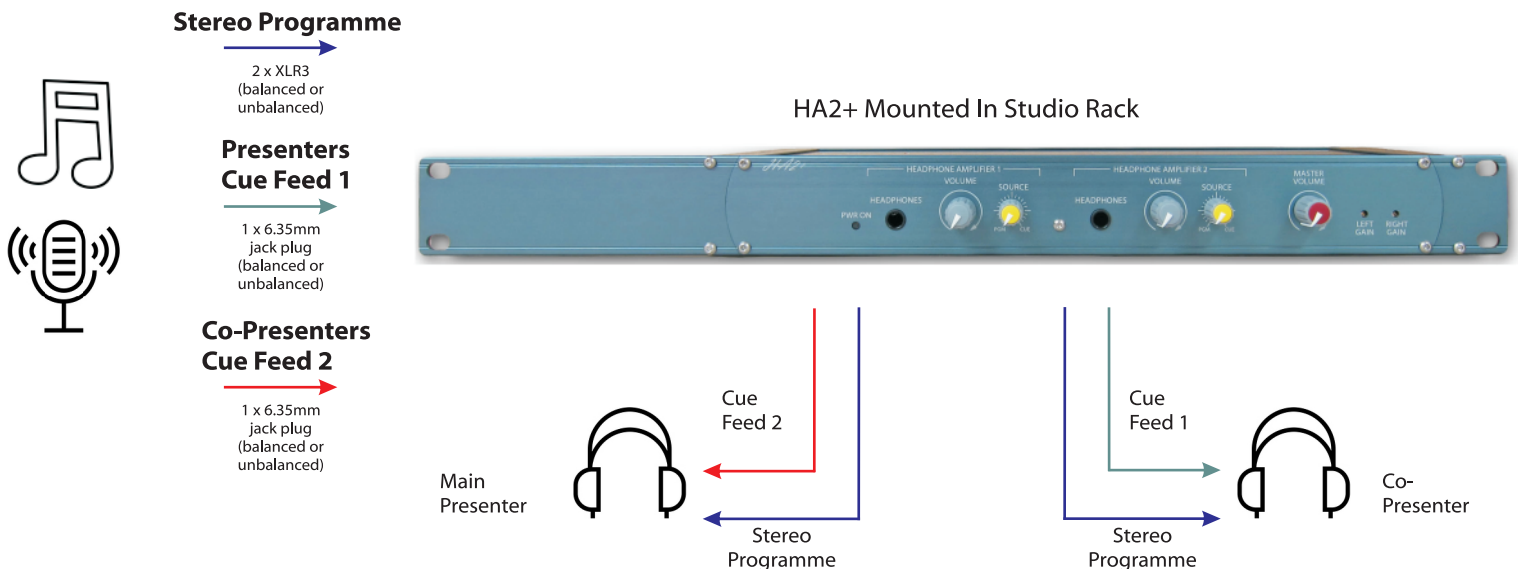
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## Signature HA2+ Twin Stereo Headphone Amplifier

### EXAMPLE APPLICATION

## Talk Show Presenter & Co Host With Separate Cue (Talkback) Feeds Headphone monitoring



A fairly common setup for many radio stations is to have talk shows with a presenter & co-host working together on a live programme. On such a setup, to keep distractions to a minimum, the main presenter will only be fed vital information on their off air cue feed. However the co-host will often be fed with much more information on their cue feed.

The problem is that many low cost radio mixers do not provide the cue (talkback) facilities required. A HA2+ can help to overcome this shortfall.

In such a scenario the HA2+ will have stereo programme audio routed into its 2 x XLR inputs on the rear. Then the presenter's cue feed will be connected into the rear panel 6.35mm jack

socket marked 'Input 1 only' and the co-hosts cue feed will be connected into the rear panel 6.35mm jack socket marked 'Input 2 only'.

The HA2+ is likely to be fitted in the studios local 19" rack bay allowing easy access to the headphone level controls for both the presenter & co-host.

Both the presenter and co-host have their own mix of source level between programme and cue so both can set the balance between cue and programme to their individual liking. Both also have their own individual level control allowing them to set their own desired headphone volume.

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## Signature HA2+ Twin Stereo Headphone Amplifier

### SPECIFICATION

#### AUDIO INPUTS

**Maximum Input Level**

+24dBu

**Input Impedance**

30k

**Programme Input Type**

Sophisticated electronically balanced  
(can be wired unbalanced)

**Programme Input Circuit**

Stereo or mono (via rear panel switch)

**Programme Input Connectors**

2 x Neutrik 3 pin XLR sockets

**Cue Input Type**

Sophisticated electronically balanced  
(can be wired unbalanced)

**Cue Input Circuit**

Mono

**Cue Input Connector**

Neutrik A gauge 6.35mm (1/4") jack socket

**Coarse Gain Range**

+/-10dB on programme input only

**Front Panel Volume Pots Gain Range**

75dB (-65dB to +10dB)

**Front Panel Source Control Range**

70dB (-70dB to 0dBu)

#### HEADPHONE OUTPUTS

**Output Type**

Sophisticated electronically balanced.  
They can accept mono or stereo jacks, with  
automatic level correction for low or high  
impedance headphones

**Output Connectors**

Front panel Neutrik A-gauge TRS 6.35mm  
(1/4") jack socket in parallel with rear panel  
Neutrik 3 pin XLR plug

**Frequency Response**

-1.7dB 20Hz, -0.5dB 20kHz

**Maximum Output Level**

+19dBu/67.07mW into 600 ohms and  
+8dBu/6.2mW into 32 ohms

**Distortion**

<0.01% THD @ 100Hz & 0.007% @ 10kHz  
Reference to +8dBu output

**Noise**

>-83.3dB @ line up unweighted  
RMS (22Hz to 22kHz)

**Headphone Impedance**

32 - 1000 Ohms

**Crosstalk**

Crosstalk, Programme input to Cue input 1k  
tone @ lineup -74dBu

#### POWER

**Mains Input**

Filtered IEC, 100 to 240VAC  
47 - 63Hz

**AC Consumption**

2.2 Watts @ 230VAC

**DC Input**

4 Pin Neutrik XLR plug +/- 12V

**DC Consumption**

+12V=100mA, -12V=100mA

**Internal Mains Fuse**

20mm 1A Anti Surge

#### PHYSICAL

**Size**

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

**Weight**

0.94kg

**Mechanics**

All aluminium construction, anodized and  
laser etched

**Shipping Carton**

Rugged export quality cardboard carton  
610 x 420 x 130mm LxDxH

**Shipping Weight**

2.35kg



**Glensound**  
Keeps Working

E & OE

HA2+



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## Signature Series Standard Features

### STANDARD FEATURES

#### 19" Rack Mount Ears



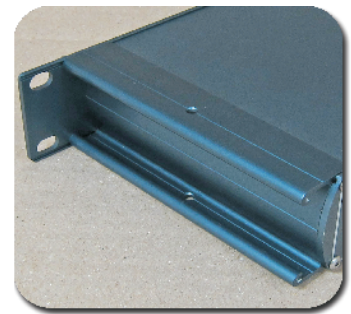
A Signature unit can rack mount in a 1U 19" rack, regardless of the size of the unit. Rack ears are included as standard with every unit.

#### Front Or Rear Mounting



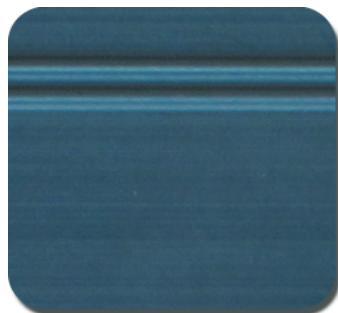
A Signature unit can be rack mounted via the front panel or if it is more convenient, via the rear panel by simply swapping the rack ears over.

#### Side Wings For Flat Surface Fixing



A Signature unit has side wings with mounting holes at the top and bottom, allowing flush fixing from above **OR** underneath.

#### Neutral Colour Scheme To Compliment Equipment Areas



#### Rack Screws Included



#### Modern Design



#### Internal Switch Mode AC Power Supply



A Signature unit has an internal switch mode AC power supply, allowing worldwide power connections from 100-240v via an IEC socket.

#### 12V DC Power Connection



All Signature units (except PS1) have a 4 pin XLR  $\pm 12V$  DC socket for connection to the PS1 Power Station. This can act as the primary or backup power source.

#### Quick Find Manual



A Signature unit has a QR code attached. This can be scanned to simply and quickly locate the manual and technical information.

### CONTACT

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