

# AVIDHIFI

## Reference

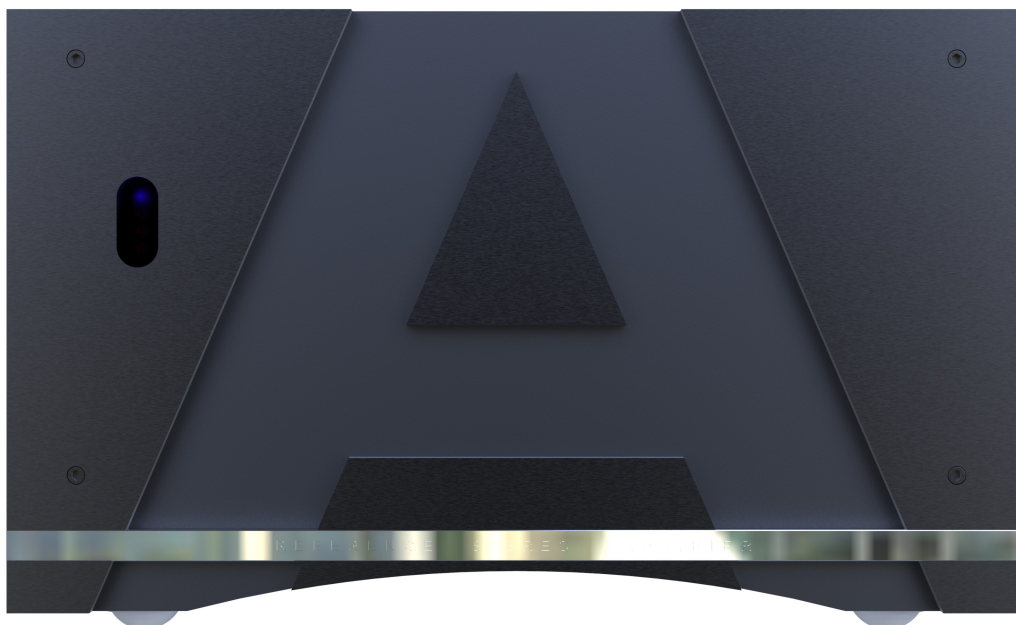
### High Performance Power Amplifier



USER MANUAL

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## ***Welcome to your AVID Reference Power Amplifier***

***Congratulations on purchasing your AVID Reference Power Amplifier. Using the highest quality materials and built to the highest industry standards, your AVID Reference amplifier should provide you with many years of trouble-free enjoyment.***

***The Reference Power Amplifier is available as either a mono unit (two required) or as a Stereo unit. The basic instructions are common to both units. Any differences will be highlighted in the text.***

***Please read this manual carefully to ensure you understand all the features and operating functions available.***

### **Caution**

- These units are heavy, and it is recommended that at least two people are used when moving the unit.
- Care should be taken to ensure that the unit is switched off and unplugged from the mains before connecting or disconnecting any other equipment to your Reference Power Amplifier. This is to protect your speakers from any momentary high-level signals which, due to the high power capabilities of the amplifier, could cause damage.
- Please allow adequate ventilation (see 'Setup procedure')
- There are no user-serviceable parts inside—please do not, under any circumstances, remove the amplifier cover, doing so would expose you to potentially lethal voltages and will void your warranty.
- Only clean your Reference Power Amplifier with a dry micro-fibre cloth.
- Take care to ensure the unit is not exposed to water or other liquids. If you believe water may have entered the case, turn the unit off at the socket immediately and seek advice from your dealer before attempting to use it again.

## Key Reference Features:

### High Power, High Current capabilities

Your Reference amplifier has an over-sized transformer and power reservoir far in excess of what the amplifier will demand in normal use. This design, along with fast-acting localised smoothing capacitors ensure that no matter what the dynamic demands, your Reference amplifier will always have more in reserve.

### Balanced and Unbalanced input

Giving great flexibility, the Reference Power Amplifier provides the option of using either balanced (XLR) or unbalanced (RCA) connections. Balanced input guarantees the best noise performance allowing the use of long cable runs while unbalanced inputs ensure compatibility and convenience with all modern line level sources.

### Efficient, silent cooling

All AVID Reference Amplifiers use silent, passive cooling using generous aluminium heatsinks. Each heatsink accommodates multiple, paralleled output devices capable of delivering much higher current than typically required by the most difficult loudspeaker loads, whilst maintaining the highest levels of reliability.

### Sophisticated Protection

Due to the high power and current capabilities of your Reference Amplifier, it is necessary to ensure that any risk of damage due to incorrect set-up or a fault in the system is minimised. All Reference Amplifiers incorporate a sophisticated system that monitors key parameters at all times. The front panel houses a display made up of four LED indicators. After an initial check phase, this display should show a single blue LED, indicating normal operation. Any other illuminated or flashing LEDs indicate a fault. In this event, please refer to the troubleshooting section.

The system monitors for short-circuits, clipping (indicator light), gross clipping (output muted), DC-offsets, internal fuse failure and overheating.

### Unparalleled build standards

Constructed using the highest quality materials suited to their application. A substantial 3mm-thick steel chassis which is clad in thick anodised aluminium plates providing mechanical damping and is finished to compliment our range of Reference products

### High quality connectors

Gold plated connectors are used throughout to design of the Reference Amplifiers to guarantee long-term reliable connections. High current binding posts accept both conventional 4mm plugs or spade connectors are used for loudspeaker connections.

## Setup Procedure:

1. Place the amplifier in its final position.
2. This amplifier uses silent, passive cooling and therefore you must ensure adequate ventilation is provided. Allow at least 50mm all around the cabinet, and do not place the unit in a closed cabinet.
3. Connect the output from the Pre Amplifier to the Power Amplifiers input using either balanced or unbalanced cables.
4. Set the balanced/unbalanced switch to appropriate position
5. Connect speakers to output of amplifier.

### Switch-on procedure

1. Ensure Pre-Amplifier volume control is set to minimum.
2. Always switch-on input devices (turntable, CD etc) and the Pre-Amplifier BEFORE switching on the Power Amplifier.
3. Having checked that all connections to, and from the amplifier are correct, switch on the Power Amplifier, using the switch on its rear panel.
4. The unit employs an anti-surge device during the first few seconds of start-up. This employs a high power resistor which is designed to dissipate a lot of power as heat—over time, this device may become dusty, and this dust may result in a short-term ‘burning’ smell. This is NORMAL and no cause for alarm. The smell will dissipate after a few moments.
5. After a few seconds, the LED indicators should finish their test sequence, and a single BLUE LED should be illuminated (if not, please check TROUBLESHOOTING page).
6. Start your source and slowly increase the volume setting until you reach the required sound level.

### Switching Off

1. Your Reference Power Amplifier may be left powered up safely for long periods, however it is recommended that it is switched off if you are going to leave it unused.
2. Always switch off the Power Amplifier BEFORE switching off any other connected devices.

## PLACEMENT

- Although the amplifier generally runs cool, you should always ensure that adequate ventilation is maintained. Avoid placing your Reference Power Amplifier where it may be affected by external heat sources, or damp conditions.
- The Reference Power Amplifier is very heavy, and must be placed level, on its dedicated shelf, or directly on the floor.
- The amplifier is fitted with heavy-duty roller feet to make positioning the unit as easy as possible.
- Do not place any objects on top of the amplifier, which could obstruct air-flow.

## CONNECTING TO THE MAINS SUPPLY

### *WARNING:*

- Only connect to the mains once all other connections are in place.
- The Reference Power Amplifier uses a dedicated high current mains lead—do not attempt to use another type. Once plugged in, the mains lead locks in place—you must activate the red toggle if you wish to disconnect the cable.
- Inspect all cables for any damage—please contact your dealer if you have any concerns.

## CABLE SELECTION

Generally it is best to keep loudspeaker cable lengths as short as possible—having the power amplifiers close to your loudspeakers is a good idea, even if this means having longer line-level connections (XLR, rather than RCA).

There is an enormous choice when it comes to selecting interconnecting and loudspeaker cables and, as with most things, getting a consensus of what is best is impossible, we would however make the following recommendations when choosing cables:

### General

1. Keep cable lengths as short as practical and the same for both right and left channels
2. Choose high quality connectors to ensure long-term reliability (disconnect and reconnect occasionally to clean connections)

### Loudspeaker Cables

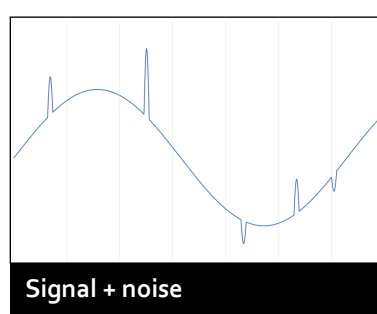
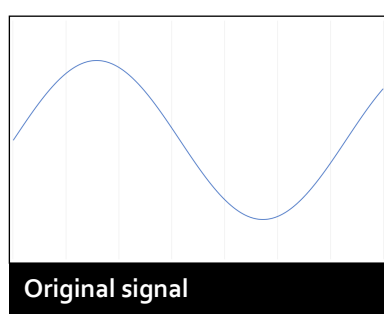
1. Minimise cable resistance—choose a cable with a large cross-section of copper core. This is especially important when using low impedance loudspeakers, or particularly long cable runs.
2. Cables come in all kinds of construction, and may affect the perceived sound balance—this is highly subjective point and is best left to the listener to decide as to which suits the system and your tastes

## Balanced and unbalanced inputs

There are two methods of connecting analogue audio devices, using either “Balanced” or “Unbalanced” connections. By far the most common is unbalanced – the main reason for this is cost - fully balanced system uses almost twice as many components as a typical unbalanced system.

### Unbalanced inputs

A normal, unbalanced system uses interconnects with just two conductors (normally using RCA connectors)—an inner core that carries the audio signal, and an outer sheath that acts as a “Ground” or 0V reference. In an ideal situation, this would be all that is needed. Unfortunately, as well as transferring the intended signal, a cable is also very effective at picking up radio frequency noise. This noise can be generated by many things, for example the operation of light switches, thermostats, or fluorescent lamps will commonly produce RF ‘spikes’. The result is a combination of the two signals, as illustrated below:

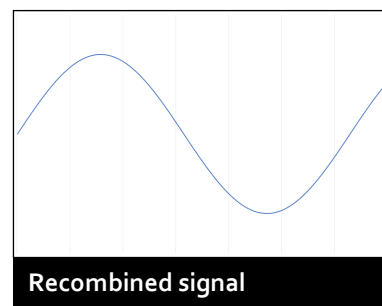
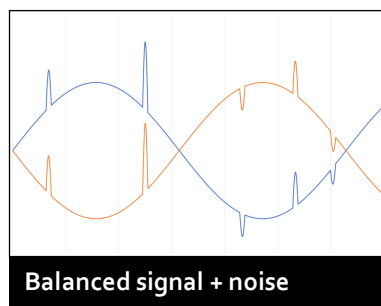
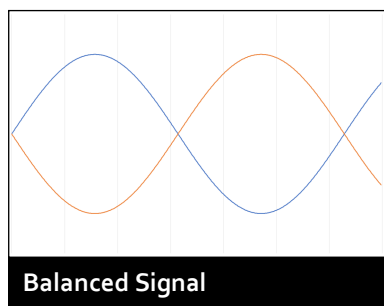


Unfortunately, once the signal has become corrupted with noise, there is no method of removing this noise without further damaging the original signal.

### Balanced inputs

A balanced input uses a clever technique where instead of having just one signal conductor, there are two (as well as a Ground). The standard connection for a balanced input is the 3-pin XLR connector.

This method sends the original signal along one of the conductors, and a second identical, but inverted one, down the second conductor. Now, if this signal is corrupted by the same noise signal, both signals will be affected identically. Note the orange plot, which shows the inverted signal, the signal remains inverted, but the noise is not; this is because, being in close proximity to each other, the two conductors pick up the noise signal at exactly the same time (and therefore phase).



Now when the two wave forms are recombined (by subtracting one from the other, the noise cancels itself out, leaving the original, noise-free signal.

## XLR connection Standard

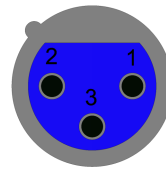
As mentioned previously, balanced inputs use two signal conductors and a single ground conductor. For correct operation, it is vital that the correct connection standards are used. AVID adhere to the EIA Standard RS-297-A to ensure compatibility with all modern audio equipment.

By convention, the two signals are referred to as the positive phase (sometimes referred to as 'hot') and the negative phase ('cold').

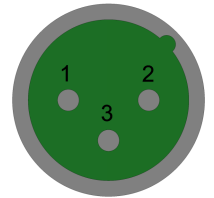
The standard pin connections are as follows:

PIN	Connection
1	Ground
2	Positive (Hot)
3	Negative (Cold)

Female



Male



## Mixed systems

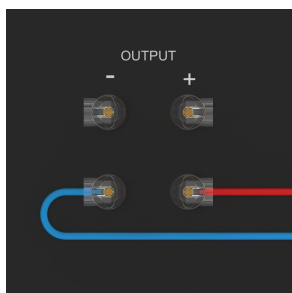
Whilst it is possible to connect unbalanced units to Balanced units, this is not the optimum method, and ideally a balanced source should be always be connected to a balanced input —the fact that the Reference Power Amplifier utilises both connection types, allows the use of both connection types with minimal compromise in performance.



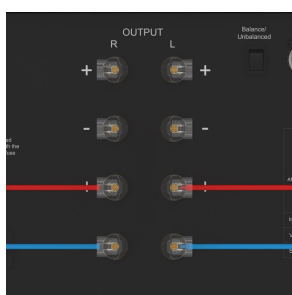
## OUTPUT CONNECTIONS

Both the Mono and Stereo Reference Power Amplifiers have two pairs of output connectors per channel. This makes the use of Bi-Wired connections straight-forward. If you are only using a single-wired configuration, then you only have to use one pair of connectors—please see the diagrams below for guidance.

### SINGLE-WIRED CONNECTION

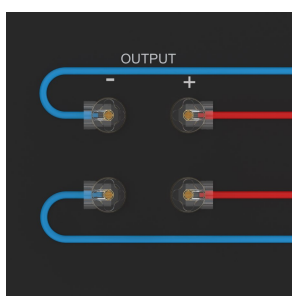


Mono amplifier—in single-wire mode, you may use either of the pairs of connector. Connect '+' connector to the '+' connection of the speaker, and the '-' connector to the '-' connection on the speaker.

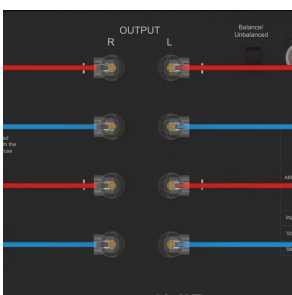


Stereo amplifier—in single-wire mode, you may use either of the pairs of connector. Connect '+' connector to the '+' connection of the speaker, and the '-' connector to the '-' connection on the speaker. Connect 'L' pair to the left speaker and 'R' pair to the right speaker.

### BIWIRED CONNECTION



Mono amplifier—in bi-wire mode, connect one pair to the HF terminals of your speaker and the other pair to the LF terminals. Connect '+' connector to the '+' connection of the speaker, and the '-' connector to the '-' connection on the speaker.

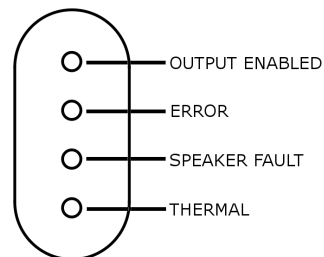


Mono amplifier—in bi-wire mode, connect one pair to the HF terminals of your speaker and the other pair to the LF terminals. Connect '+' connector to the '+' connection of the speaker, and the '-' connector to the '-' connection on the speaker. Connect 'L' pair to the left speaker and 'R' pair to the right speaker.

## TROUBLESHOOTING

Operation of your Reference Power Amplifier is generally straight-forward. When you first switch on the amplifier, it will carry out a short self-diagnostic test. During this process, the out put will remain muted. The Indicator LEDs will cycle through a pre-programmed sequence. After a few seconds, and assuming no fault was found, you should be left with a single BLUE LED indicator—this is the normal operating state of the amplifier.

Any flashing lights after the initial start-up phase indicates that a possible fault has been detected. In this case you should immediately switch-off the amplifier and consult the following table to check what steps need to be taken.



OUTPUT ENABLED	ERROR	SPEAKER FAULT	THERMAL	FAULT	CORRECTIVE ACTION
BLUE	RED	RED	RED		
ON	OFF	OFF	OFF	NORMAL OPERATION	OK
ON	RANDOM FLASH	OFF	OFF	OVER LOAD	REDUCE VOLUME LEVEL
ON	OFF	RANDOM FLASH	OFF	OUTPUT CLIPPING	REDUCE VOLUME LEVEL
OFF	2 FLASHES	OFF	OFF	EXTREME CLIPPING	REDUCE VOLUME LEVEL
OFF	3 FLASHES	OFF	OFF	INTERNAL FUSE FAILURE	CONTACT DEALER
OFF	4 FLASHES	OFF	ON	OVERHEATING	<ol style="list-style-type: none"> <li>CHECK FOR ADEQUATE VENTILATION</li> <li>REDUCE VOLUME</li> <li>CHECK THAT LOUDSPEAKERS ARE COMPATIBLE WITH THE AMPLIFIER</li> </ol>
OFF	5 FLASHES	OFF	OFF	DC OFFSET	<ol style="list-style-type: none"> <li>SWITCH OFF AMPLIFIER, LEAVE FOR A FEW SECONDS AND THE SWITCH ON AGAIN. IF PROBLEM PERSISTS....</li> <li>CONTACT YOUR DEALER</li> </ol>
OFF	6 FLASHES	ON	OFF	SHORT CIRCUIT ACROSS OUTPUT	CHECK LOUDSPEAKER CONNECTIONS AT BOTH ENDS

**BEWARE: THE AMPLIFIER CONTAINS POTENTIALLY LETHAL VOLATGES. THERE ARE NO USER-SERVICEABLE PARTS INSIDE THE AMPLIFIER — ANY ATTEMPT BY AN UNAUTHORISED PERSON TO OPEN THE UNIT MAY VOID YOUR WARRANTY.**

## Specification

### INPUTS

**Line** (RCA and XLR)

Nominal sensitivity:	<b>TBC V</b>
Input impedance:	<b>TBC k<math>\Omega</math></b>
Maximum input:	<b>TBC V<sub>rms</sub></b>
Frequency response:	<b>TBC Hz—TBC kHz <math>\pm</math> 0.2dB</b>

### OUTPUT

#### Stereo Power Amplifier (both channels driven)

Power:	into 8 Ohms (<0.1% THD)	<b>TBC W</b>
	into 4 Ohms (<0.1% THD)	<b>TBC W</b>

#### Mono Power Amplifier

Power:	into 8 Ohms (<0.1% THD)	<b>TBC W</b>
	into 4 Ohms (<0.1% THD)	<b>TBC W</b>

Dimensions:	500 x 650 x 300mm (WxDxH)
Net weight (each):	68Kg (150lbs)
Packaging (each):	730 x 570 x 400mm (WxDxH)
Shipping weight (each):	81Kg (179lbs)

## DECLARATION OF CONFORMITY

### EC Declaration of Conformity 06 December 2017

We declare that our Reference Mono & Stereo Amplifier conforms to directives and harmonized international standards:

#### **EMC (89/36/EEC) Electromagnetic conformity**

#### **BS EN 60065: 1994**

Safety requirements for mains operated electronic and related apparatus for household and similar use.

#### **CENELEC HD21/22 Flexible cables and cords**

#### **EN 55020: 1988 Electromagnetic Immunity**

#### **EN 55013: 1990 Electromagnetic Emissions**

*C. Mas Director AVID HIFI Limited*

## Warranty Statement UK Residents

**AVID HIFI** Limited products are warranted against defects in materials and workmanship for a period of two years from the original date of purchase, or no later than three years from the date of shipment to an authorized **AVID** agent, whichever comes first, extending to five years subject to the product owner having submitted the Registration form ([www.avidhifi.com/register.htm](http://www.avidhifi.com/register.htm)). Also the following conditions being observed.

- The product must have been purchased through an authorized **AVID** dealer
- By default, the warranty is in favour of the original purchaser only, however warranties are transferable providing the new owner completes the online product registration form. In this case, warranty obligation will pass from dealer to manufacturer.
- During the warranty period, **AVID** will repair, or replace any defects due to material or workmanship, without charge for parts or labour.
- Should product need to be returned, a written description of the defect and a photocopy of the original purchase receipt must accompany it. Receipts must show the model, serial number, date of purchase, name and address of purchaser and authorized dealer and the price paid.
- Returned product must be packed in the original packing and returned to **AVID** or original dealer by the customer at his/her expense. **AVID** will pay return freight of its choice.
- The warranty is void if the product has been used or handled other than in accordance with the instruction manual supplied, abused or misused, damage by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than **AVID** or an dealer with prior authorization.
- The warranty is void if the product serial number has been removed, altered or made illegible.
- The warranty is void if the product has been taken out of the country of purchase.
- **AVID** shall not be held liable for incidental or consequential damages of any kind arising from the sale or use of its products.
- The warranty applies to ex-demonstration product, using manufacture date as purchase date.
- Where the product is sold under a consumer transaction (as defined by the Sale of Goods Act 1979) the statutory rights of the purchaser are not affected by this warranty.
- Products are sold on the basis of specifications applicable at the time of sale. **AVID** shall have no obligation to modify or to update products once sold.

### Outside UK

**AVID** has formal distribution in many countries throughout the world. In each country the **AVID** importer has contractually accepted the responsibility for the product warranty. Warranty should normally be obtained from the importing agent or distributor from whom you obtained your product. In the unlikely event of service required beyond the capability of the importer, **AVID** will, of course, back up the warranty.

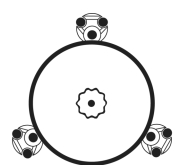
- Where product has been either supplied directly or there is no current distributor, **AVID** accepts responsibility for the warranty period. Returned product must be packed in the original packing and returned to **AVID** by the customer at his/her expense. **AVID** will pay return freight of its choice. The warranty is only valid in the country of purchase.
- Products outside their original destination requires that units with remaining warranty be returned to the country of purchase for the warranty to be valid. Customer is responsible for freight both ways and all associated import and export charges.
- Foreign distributors are not required to provide warranty service, repair or change AC mains voltage on units that they did not originally import and sell.
- Foreign distributors may at their discretion offer service for a fee.

MISCELLANEOUS. ANY IMPLIED WARRANTIES RELATING TO THE ABOVE PRODUCT SHALL BE LIMITED TO THE DURATION OF THIS WARRANTY. THE WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO THE PURCHASER.

WARRANTOR. Inquiries regarding the Limited Warranty may be sent to the following address:

**AVID HIFI** Limited. Bicton Industrial Park, Kimbolton, Huntingdon. PE28 0LW ENGLAND





# AVIDHIFI



## AVID HIFI Ltd

Bicton Industrial Park,  
Kimbolton, Huntingdon,  
Cambridgeshire.  
PE28 0LW  
ENGLAND

Tel: +44(0)1480 869 900 — Website: [www.avidhifi.com](http://www.avidhifi.com) - Email: [info@avidhifi.co.uk](mailto:info@avidhifi.co.uk)

Company Registered No: 5435528 — VAT Registration No: GB 694 9858 48 — Directors: C. Mas & S.J. Mas