

# AVIDHIFI

## SIGSUM

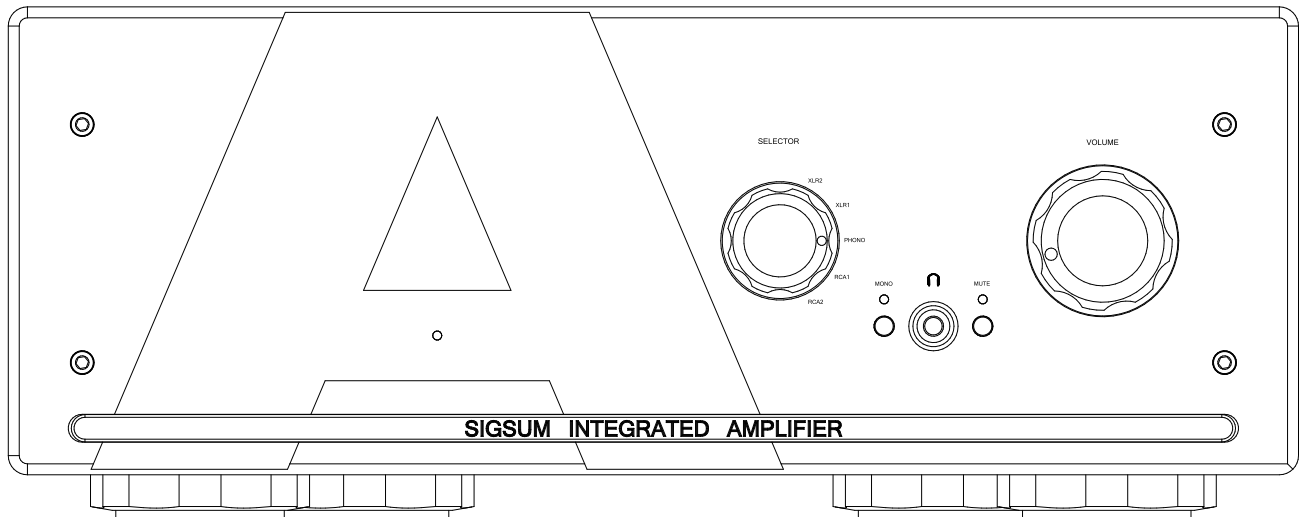
High Performance Integrated Amplifier



USER MANUAL

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***Welcome to your AVID Sigsum Amplifier***

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

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

**Caution**

- This unit is 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 Sigsum. This is to protect your speakers from any momentary high-level signals which, due to the high power capabilities of the Sigsum, could cause damage.
- There are no user-serviceable parts inside—please do not, under any circumstances, remove the cover of the Sigsum—doing so would expose you to potentially lethal voltages and void your warranty.
- Only clean your Sigsum 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 Sigsum Features:

- **1,100 VA Toroidal transformer—132,000uF Capacitance Reservoir**

The 'heart' of any amplifier, the power supply must provide for any energy demands made by the amplifier. Working together these two key components maintain a massive energy reservoir that allows the amplifier to react to the complex dynamic power demands created by the music. The size of both these devices ensure that the rest of the amplifier will never place demands that cannot be met by the supply

- **50mm, High Quality Volume Potentiometer**

Illustrating that not all volume controls are born equal! This massive brass-cased device offers a level of transparency unequalled. It's reassuringly weighty but smooth action indicative of the highest levels of build quality and ensures long-term reliability.

- **Fully discrete, high current, output stage**

Many lesser amplifiers make do with their output devices integrated into a single, large chip—this is very convenient for the manufacturer, but places some serious limitations on the performance capability of the unit. With a fully discrete design, we are able to ensure that the very best devices are used, as well as ensuring that parameters such as peak current, output impedance and thermal performance are never compromised.

- **4 Line level Inputs—2 Balanced, 2 unbalanced**

Up to four line-level devices can be connected to the amplifier, the higher quality balanced inputs (with the use of a suitable adapter) can be converted to unbalanced mode if required. All inputs offer the same high performance levels with regard to sensitivity and bandwidth, with the balanced inputs inherently offering the best performance with regards to noise rejection. The input sockets themselves have been chosen to offer the best in terms of audio performance and long-term reliability

- **High performance Phono stage with adjustable gain, input resistance and capacitance**

Derived from our hugely successful Pulsus phono stage, the Sigsum's phono stage offers unrivalled performance and flexibility when compared to other designs. Designed to offer the best performance in terms of distortion, noise and compliance with the RIAA specification—but most importantly, it sounds superb.

- **Superior headphone amplifier, capable of driving almost any conventional, dynamic headphone**

Most headphone amplifiers take the form of an afterthought, but nothing could be further from the truth with the Sigsum. As with the main output stage, this amplifier is designed to use discrete components selected to offer the best performance, and the widest compatibility with the diverse selection of headphones available today. Working in pure Class 'A' at low to medium volume levels this is a 'proper' headphone amplifier complete with its own dedicated power feed.

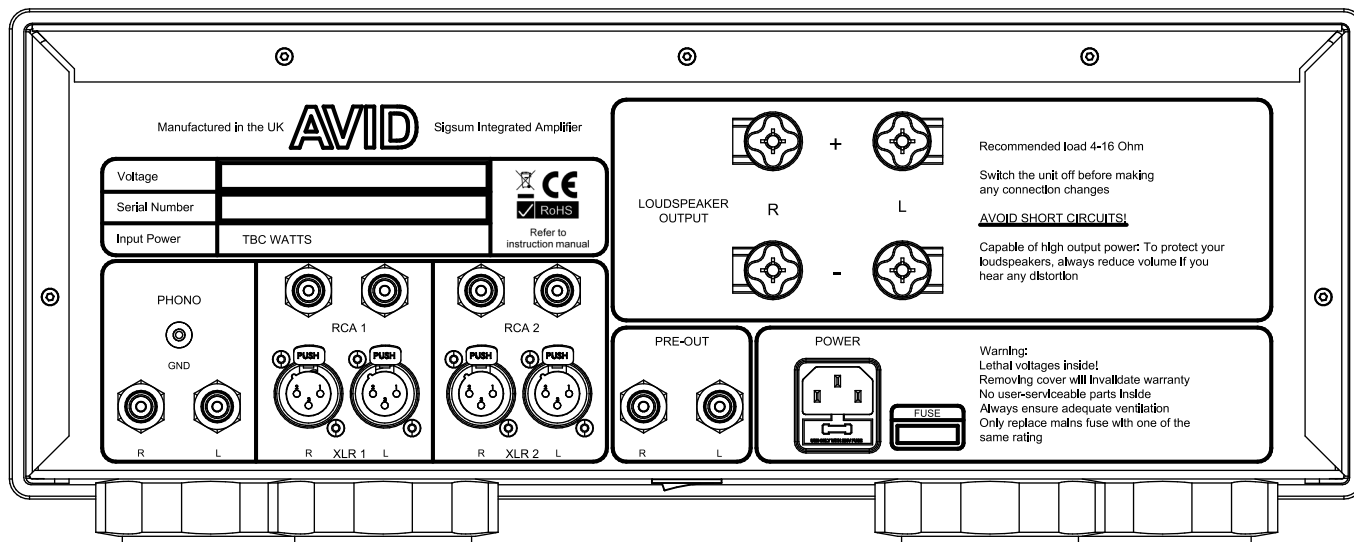
- **Unbalanced Pre-amp output for future systems upgrades**

Whilst the performance of the amplifier is exemplary when compared with the very best integrated designs, we know that with time, people often look for ways of improving performance further still. By using the Pre-out sockets built-in to the Sigsum, it is possible to upgrade to even greater performance levels with the addition of the *Celsus* power amplifier (or any other power amplifier in the **AVID** range).

## PLACEMENT

- Place your Sigsum on a sturdy and level surface
- Avoid locations where your Sigsum may be affected by direct sunlight or damp.
- Keep your Sigsum away from heat sources
- Do not place the Sigsum in an enclosed space such as a closed cabinet unless ventilation has been catered for
- Do not place any objects on top of the amplifier, which would obstruct air-flow

## CONNECTION TYPES



Your **AVID** amplifier can make use of either Balanced (XLR), Unbalanced (RCA), or any combination of the two types of input.

### WHICH SHOULD I USE?

Whenever possible you should use balanced connections, however in recognition that not all sources provide balanced connections, unbalanced connections may be used when necessary.

### WHAT'S THE MAIN BENEFITS OF USING BALANCED INPUTS?

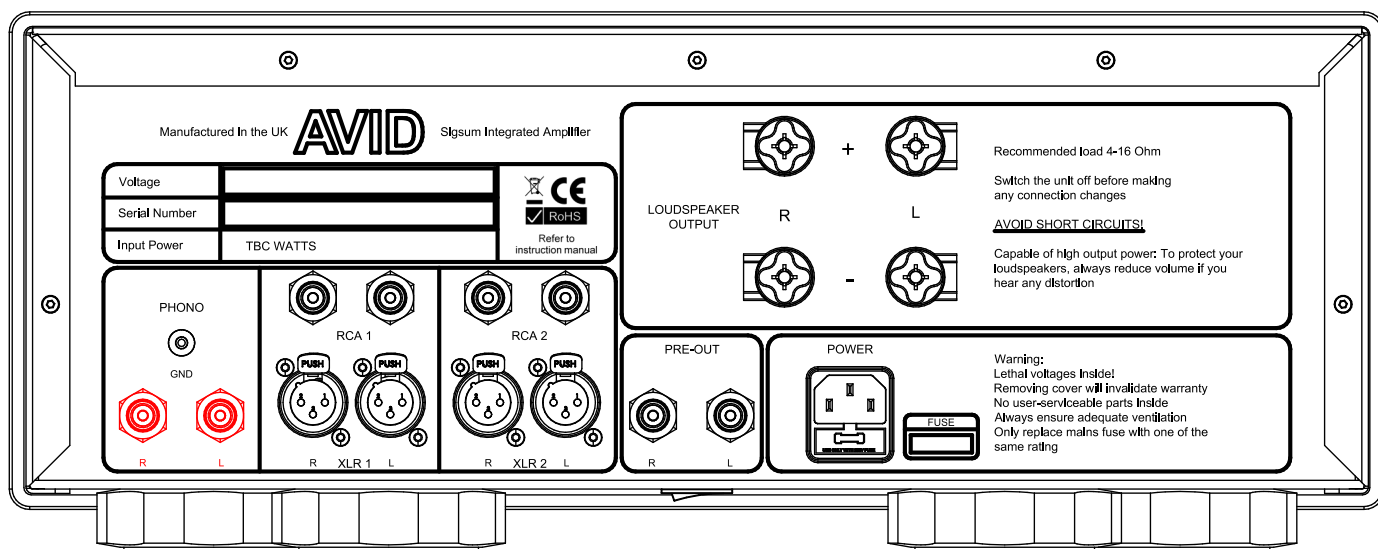
All audio cables are susceptible to picking up noise (even screened cables). Any wire will act as an aerial, in that they can pick up electromagnetic interference, whether that be radio signals, or simply the energy created by something like a spark from a thermostat being tripped. Balance inputs generally offer higher performance, thanks to their superior noise rejection characteristics. This reduced noise allows for greater dynamics and generally improved transparency.

- **UNBALANCED CONNECTIONS**

Conventional, unbalanced connections make use of two conductors—one carrying the signal, and the other is a ground reference (0V), which can also take the form of a shield (in the case of coaxial cables). The use of coaxial cables can improve susceptibility to noise, however it can never be completely removed.

- **BALANCED CONNECTIONS**

A balanced connection is different in that there are two signal cables, one with the positive phase of the signal, and the other with the negative (a mirror image of the positive signal, if you like). When the signal reaches the amplifier, the two signals are effectively subtracted from each other (but as one is negative, the signal is effectively added). Just like any other cable, they are susceptible to external electrical noise sources. The difference is that both the negative and positive wires are likely to be equally affected. The benefit here is that when these two signals are effectively 'subtracted' from each other in the amplifier, any noise effectively disappears leaving a pristine signal.



## PHONO INPUT

The phono stage of your Sigsum can be configured for cartridges of various types in terms of Sensitivity, Impedance, and Capacitance. In the first instance, please refer to your cartridge documentation to ascertain the initial settings for your cartridge. The phono settings are accessible from beneath the unit—take care when turning the unit over, and ensure it is resting on a soft, clean cloth to ensure none of the finishes are damaged during the procedure.

The phono stage provides an earthing post that should be connected to the turntable earth cable—failure to do so will result in high levels of hum.

### In the absence of full cartridge documentation, please follow these guidelines

#### Initial setup

The settings are configured using the switches accessible through the apertures on the bottom, towards the rear of the case. Using a pen tip, you can slide each arrow to either the ON or OFF position.

#### Moving Magnet

A standard Moving Magnet cartridge is the easiest to configure—simply ensure all the switches are set to OFF—this is a starting

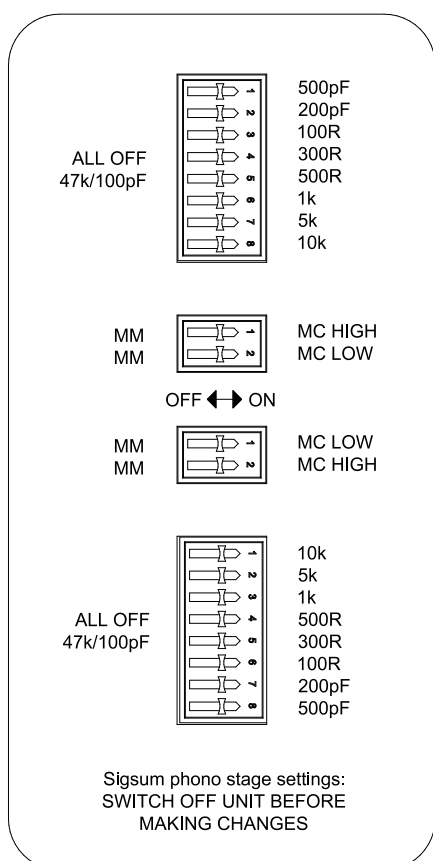
#### Sensitivity

There are three sensitivity levels available increasing from MM, MC LOW and MC HIGH.

Check what type of cartridge you have. If you are uncertain, set the dial to MM. If you have an MC cartridge, then set the dial to MC (mid).

Play a piece of music with which you are familiar. Adjust the volume control to a comfortable listening level, if the volume control is much beyond the half way point, you should probably consider increasing the sensitivity level, if the volume is immediately very loud, then choose a lower sensitivity.

Some very high output MC cartridges work well using the MM setting—no harm will be done by experimenting with settings.



## **Resistance**

Normally, the ideal aim is to match the amplifier's input impedance to that of the cartridge, this will ensure maximum signal transfer, and minimise noise (hiss) —however, if you do not have this information (remember you can check the manufacturer's website), you can safely experiment with any of the possible values—again, tune by ear to get the most pleasing sound.

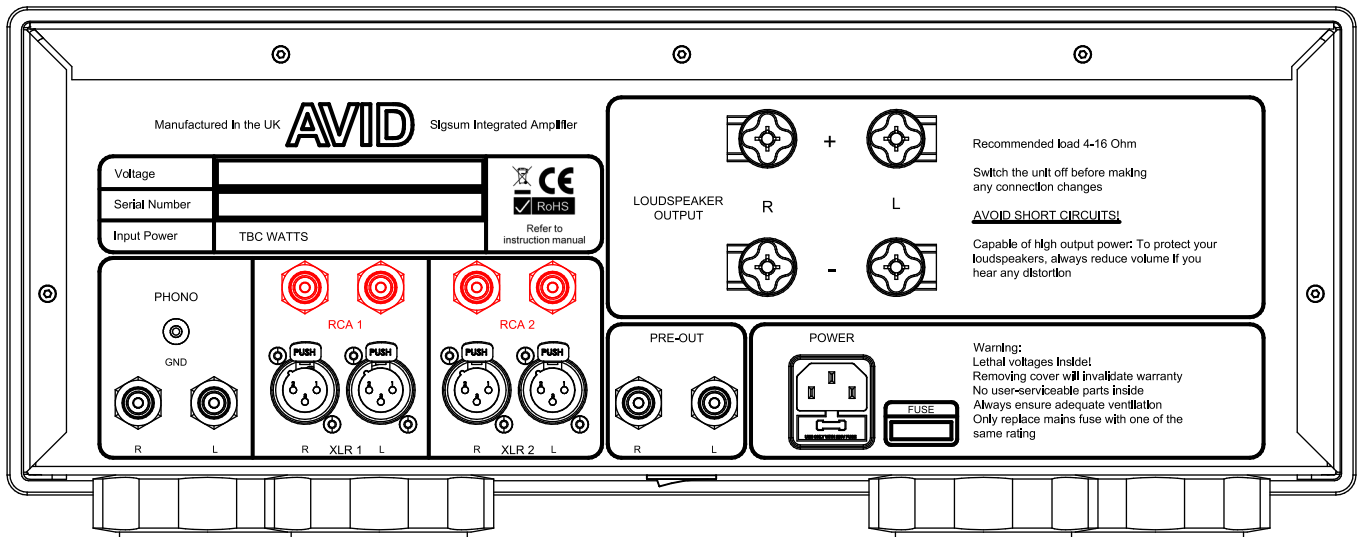
Most MM cartridges are 47k, high output MC cartridges also tend to benefit from a high resistance setting, however low output MC cartridges are invariably low impedance, suggesting a low resistance setting. Please experiment with this setting, as the minor adjustments can make worthwhile improvement to the overall performance.

## **Capacitance**

The effect of the capacitance setting is most obvious at high frequencies, but can be quite subtle. The values chosen are affected by the design of cartridge, but also by the connecting cables—so there is no absolutely correct setting, and experimentation is recommended until you find a setting that suits your set-up and personal preference.

Low impedance designs tend to be largely unaffected by capacitance settings, but high impedance designs, and especially MM cartridges can be greatly affected. Start by okaying a selection of tracks you know well and adjust the setting until you find one where you feel the best balance of detail and musicality are achieved.

## **LINE INPUT**



The Sigsum has Four line inputs: two Balanced and two Unbalanced— which you choose depends on your source equipment, but if you have the choice, we recommend using Balanced. These are referred to as Line Level inputs, and can be used to connect to any standard piece of audio equipment, such as CD, Media Streamer, or FM/DAB Tuner.

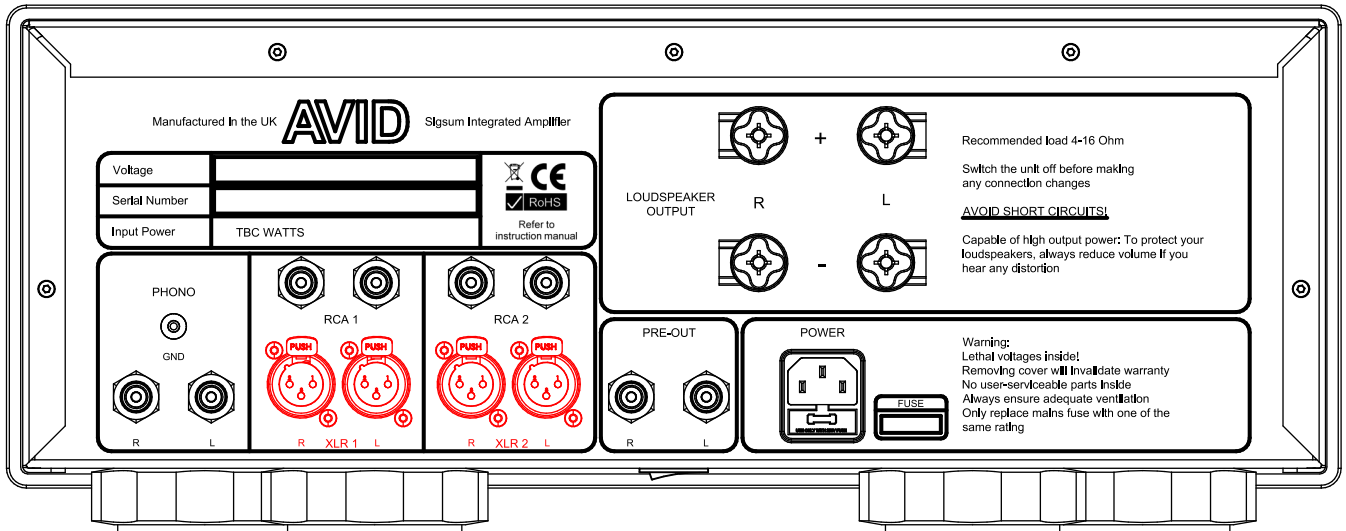
### **Unbalanced**

The unbalanced inputs make use of the two pairs of RCA connectors immediately above the three pin XLR sockets—these sockets are labelled RCA 1 and RCA 2.

## Balanced

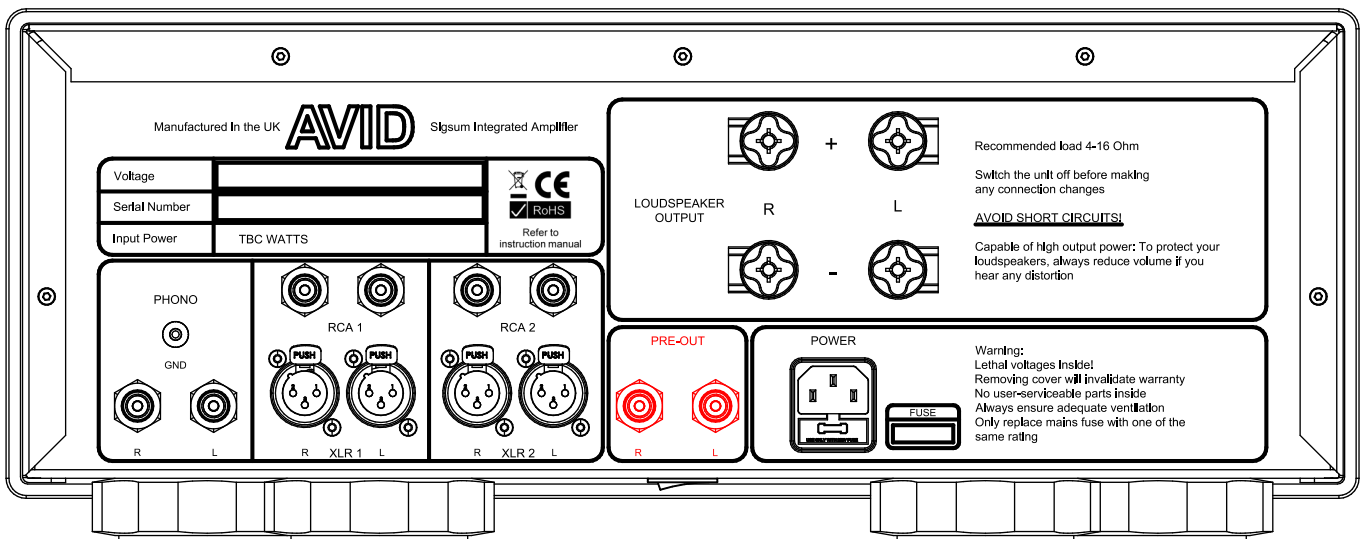
The unbalanced inputs make use of the two pairs of RCA connectors immediately above the three pin XLR sockets—these sockets are labelled XLR 1 and XLR 2.

XLR connectors make use of a locking mechanism—please make sure that the plugs are pushed in all the way, and that these engage correctly (you should hear a click when they engage).



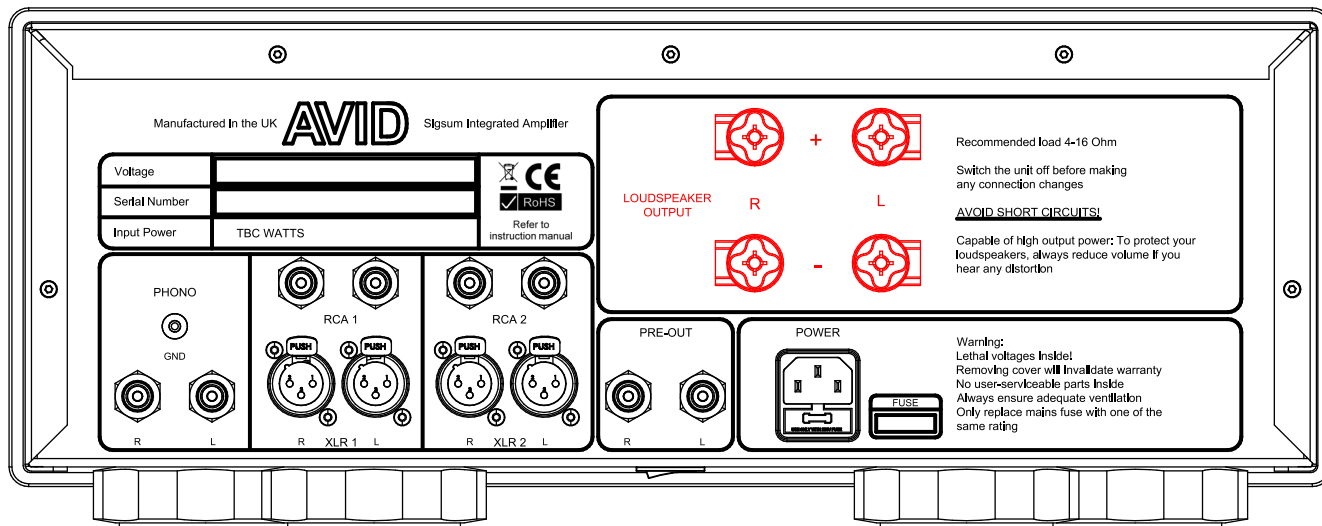
## PRE-OUT

The Sigsum is capable of outputting to an external amplifier should you require. This signal is affected by the position of the volume control—so your Sigsum takes the role of a high quality Pre-Amplifier, allowing you an upgrade path to the likes of the *Celsus* power amplifier





## Loudspeaker Connections



The Sigsum outputs its power through two pairs of binding posts—these are compatible with both 4mm/banana plugs and Spade connectors

The Sigsum has a sophisticated protection circuit to prevent damage from DC offsets, short-circuits and overheating, but it is always wise to avoid situations where these situations may occur.

Always make sure that all connections are tight—loose connections can result in intermittent sound, loss of efficiency and damage to the terminals, due to arcing.

### Speaker cable

Feel free to experiment with the type of loudspeaker cable you use—there is no definitive answer as to which is best, as this is all to do with system matching— and personal taste. Keep in mind that this is a high current design, so to reap the maximum benefits, the cable resistance should be kept as low as possible. This can be achieved by keeping cable runs as short as necessary and using a cable with a large cross-sectional area.

### Correct Phase

It is important to ensure that your loudspeakers are connected “in phase”. This simply means that, for both the left and right channels, the positive output connections are connected to the positive terminals on the loudspeakers, and similarly the negative outputs are connected to the negative loudspeaker connections. It sounds very simple, but it is surprising how often mistakes are made with this. You will know if you have got this correct, as when you listen to the system you should have strong bass and a very obvious centrally located image—out of phase will have a diffuse image, and very weak bass. Use of the Mono button will help clarify this issue—if you listen to the signal in mono and the speakers are connected correctly, you should hear a VERY strong centrally located signal—out of phase speaker will sound very diffuse with no discernible image.

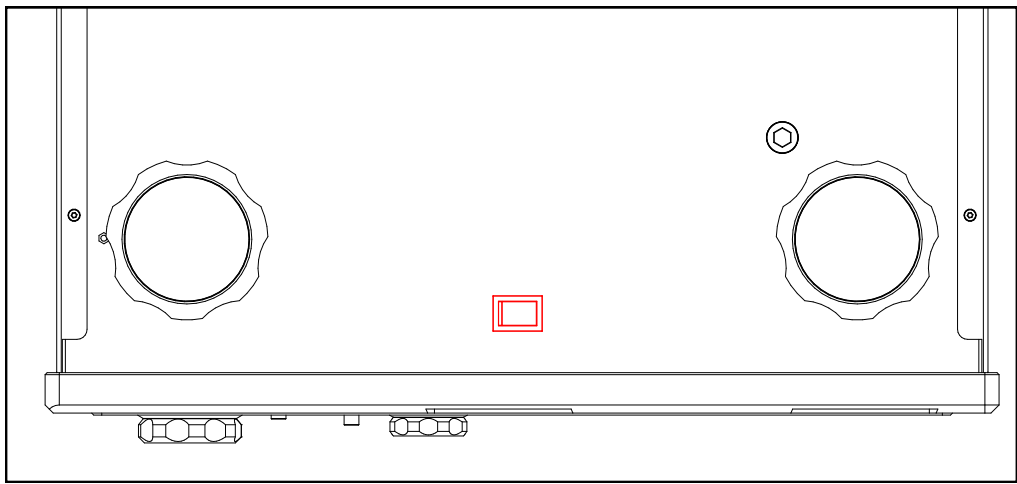
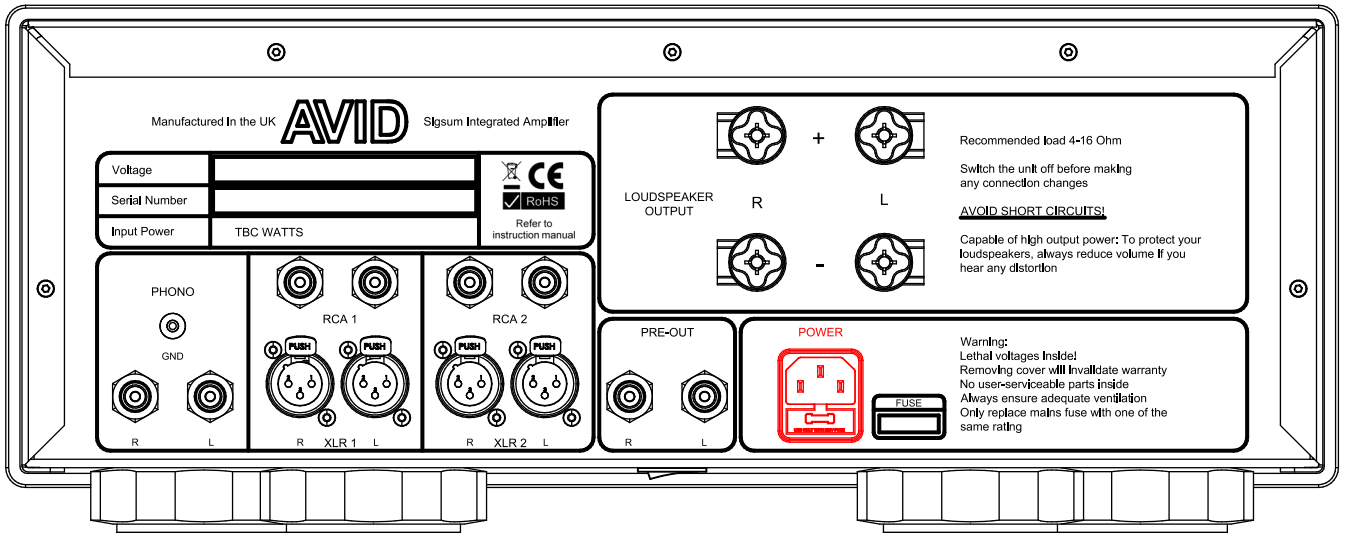
# Mains Power

Mains power is supplied via the standard IEC 3-pin connector on the rear panel. The mains circuit does incorporate filtering circuits to ensure the feed is clean, and therefore the use of external mains filtering systems is unnecessary.

We recommend, for safety reasons, that connecting the mains should be left as the last step.

## Switching on

Before switching the unit on, ensure the volume control is turned to its minimum level (fully anticlockwise). Your Sigsum amplifier has a mains switch, which is hidden on the bottom of the unit, in the middle of the front panel. There will be a few clicks from internal relays as the protection circuit is activated during the first few seconds. There is a single, blue LED on the left of the unit (in the large 'A') that is illuminated whenever the unit is on.



## Headphone Use

Your Sigsum incorporates a high quality headphone amplifier capable of driving most conventional, dynamic headphones. Please be aware that, because of the amplifier's ability to drive a wide range of headphones, it is capable of driving sensitive designs to very high levels.

**Please make sure that you do not use excessive levels, especially over prolonged periods—permanent hearing damage will result.**

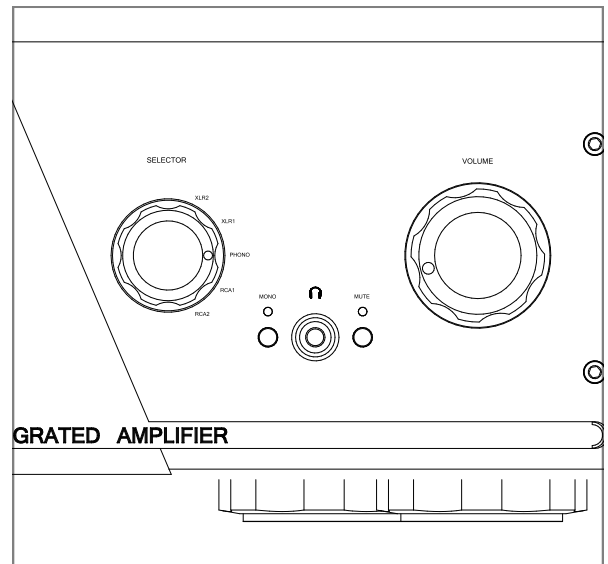
## Mono Operation

The Sigsum has the ability to switch the stereo signal to mono. Mono operation is active when its associated Blue LED is illuminated.

## Mute

The output from the Sigsum can be temporarily silenced by pressing the Mute button—again, its operation is indicated by a blue LED. Press the button again, to go back to normal operation.

**Always check that the volume setting has not been inadvertently increased before unmuting the amplifier.**



## Amplifier protection

In the event of a fault occurring, the unit will protect itself—this will happen when a DC offset or short-circuit is detected, or if the unit exceeds its maximum safe operating temperature. Should any of these faults occur, the MUTE light will illuminate. In the case of overheating, the unit will reset itself, once it has cooled sufficiently, however, in any event, you should switch your Sigsum off, and investigate the likely fault (check your loudspeaker cabling, and ensure the unit has sufficient cooling). If the protection circuit activates on a regular basis, please contact your dealer for support.

## TROUBLESHOOTING

Operation of your Sigsum is generally straight-forward, but if you are having problems, please use the following sequence:

<b>Fault</b>	<b>Solution</b>
No Power light	<ol style="list-style-type: none"><li>1: Ensure the power lead is plugged in, and that the power socket is switched on</li><li>2: Ensure the Power switch under the unit is in the ON position</li><li>3: Check for damage to the mains lead—Try an alternative cable</li><li>4: Check the mains input fuse (unplug from the mains before checking)</li></ol>
No Sound	<ol style="list-style-type: none"><li>1: Check that the volume control is not turned all the way down</li><li>2: Check the correct source is selected, and plugged in</li><li>3: Check the Mute button is out (and its associated light is off)</li><li>4: Check that any headphones have been unplugged from the Sigsum</li><li>5: Check that the speakers cables are correctly connected at both ends</li></ol>
Distorted sound	<ol style="list-style-type: none"><li>1: If the volume is excessively high, turn the volume down</li><li>2: If you are listening to the Phono input, reduce the sensitivity (see PHONO INPUT)</li></ol>
Hum from Phono input	<ol style="list-style-type: none"><li>1: Ensure that the turntables earth cable has been attached to the earth post on the rear of the amplifier</li><li>2: Check the same connection on your turntable—refer to units documentation</li></ol>
Sound cuts out	<ol style="list-style-type: none"><li>1: Check amplifier and speaker terminals for loose, or shorted connections</li><li>2: Ensure that the unit has adequate cool air and ventilation</li></ol>
Mute light on when Mute button off	<p>This indicates a fault:</p> <ol style="list-style-type: none"><li>1: Check for short-circuits at either end of the loudspeaker cable</li><li>2: Check that the unit is not overheating</li><li>3: Consult your dealer if problem persists.</li></ol>

## Specification

### POWER

Continuous power output (20Hz—20kHz at 0.5% THD):

Both channels, 8 $\Omega$ , 20Hz—20kHz: **110 W**

Harmonic distortion, 80% power, 8 $\Omega$  at 1kHz: **0.003%**

Recommended loudspeaker impedance: 4-16  $\Omega$

### INPUTS

#### Phono

Gain: 48dB – 60dB – 70dB

Input resistance: 100R – 300R - 500R – 1K – 5K – 10K – 47K

Input capacitor: 100pF – 200pF – 500pF

Distortion: Less than 0.001%

RIAA Accuracy: + 0.5dB 5Hz – 70KHz (Neumann HF correction)

Noise (A weighted): MM –81dB MC –67dB (high setting)

Channel separation: < -85dB 5Hz – 20KHz

#### Line (RCA and XLR)

Nominal sensitivity: **340mV** Volume Full 100W XLR

Input impedance: **33 k $\Omega$**  XLR **82 k $\Omega$**  RCA

Maximum input: **11 V<sub>rms</sub>** XLR

Frequency response: **5Hz—over 80kHz  $\pm$  1dB**

Signal/noise ratio:

XLR (AwtD) 50 W, ref. 1V input: **100 dB**

RCA (AwtD) 50 W, ref. 1V input: **100 dB**

### OUTPUTS

#### Preamplifier output

Nominal output level: **11 V**

Output impedance: **47  $\Omega$**

#### Headphone Output

Maximum output level into 600 $\Omega$ : **10 V RMS**

Output impedance: **1  $\Omega$**

Load range: **20  $\Omega$ —600  $\Omega$**

## Specification (continued)

### POWER CONSUMPTION

Input voltage (region dependent)	<b>115V or 230V AC</b>
Power Consumption (Max)	<b>59</b> Watts No Signal Idle
	<b>800</b> Watts Clipping 4Ω Load

### DIMENSIONS AND Weights

Unit (including output terminals -W x D x H) :	<b>471mm x 500mm x 190mm</b>
Packed:	<b>600mm x 570mm x 260mm</b>
Unit weight:	<b>31.2kg</b>
Packed weight:	<b>34.5kg</b>

## DECLARATION OF CONFORMITY

### EC Declaration of Conformity 06 December 2017

We declare that our Sigsum integrated 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 ever 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, damaged by accident, neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than **AVID** or a 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.

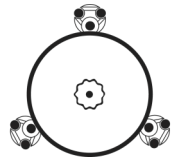
### Outside UK

**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



# AVID HIFI



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