

## CONTENTS

INTRODUCTION, FEATURES AND TECHNOLOGY	1-3
INSTALLATION	3
CONNECTIVITY	4-6
LOUDSPEAKER CONNECTIONS	6-7
IN USE / INPUT SELECTION	7
MUTE / REMOTE CONTROL	8
TECHNICAL SPECIFICATION	9
TROUBLESHOOTING	10-13
OWNERS LOG	14

## INTRODUCTION, FEATURES AND TECHNOLOGY

Thank you for purchasing the **Brio-R** the latest version of Rega's best selling amplifier.

Housed in a brand new case the **Brio-R** draws on the pedigree of the previous three incarnations of this model. The sonic recipe for the Brio embodies the best in traditional audio circuits with excellent engineering practice.

A newly designed output amplifier in the **Brio-R** was born after extensive research by our engineers to develop a low source impedance emitter follower Class A driver stage. This is based around a complementary pair of 150w Sanken Darlington output transistors. The technical and sonic improvement gained by the use of low impedance drivers is well known, however it can feature high standing currents in the driver stage when using standard transistor configurations. By combining the low impedance driver with the Sanken Darlington transistors (with their imbedded thermal bias network running at a lower standing current) this combination forms a complementary emitter follower emulating Class A conditions with good thermal stability with lower standing currents in the driver stage.

Other notable improvements include the input switches (relays) and rotary volume control. The input relays are in the optimum position, being placed directly between the input sockets and the amplifier input, shortening the signal path at this critical stage.

Remote control has been added to the **Brio-R** for the first time without compromising the sonic design of the amplifier. This was achieved by keeping the remote circuit separate to the audio circuit and having its own dedicated power supply (via a separate winding on the mains transformer). There is no direct contact between the microcontroller and the signal path, as the microcontroller controls the relays and volume control motor is using DC control voltages.

During the **Brio-R** design process Rega reviewed the circuit and improved the low and high current power supplies, coupling and bypass capacitors, (where film capacitors are used throughout the signal path). The phono stage has been improved to reflect the current improvements in the Rega Planar turntables, where the input sensitivity has been increased along with a revision of the sub 100Hz part of the phono frequency response.

The output amplifier is capable of driving awkward loads as low as  $1.7\Omega$ , below this the amplifier is protected against shorted speakers and reactive loads.

The power supply uses a low noise generously rated toroidal transformer and  $10,000\mu\text{F}$  smoothing capacitors that provide enough current to drive the most awkward of loads.

We have avoided superfluous gadgets such as tone controls and headphone sockets as they obstruct the signal path and degrade sound quality. The Rega Ear (sold seperately) is a dedicated headphone amplifier designed specifically for this purpose offering far greater performance than an in built socket.

The **Brio-R** is utilising the highest quality components and all of our engineers' experience to achieve the best sonic performance and ensuring it is the most advanced and feature packed Brio to date.

### INSTALLATION

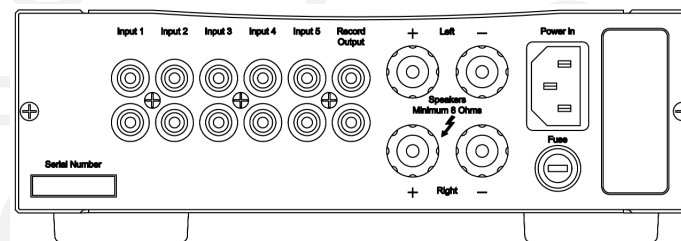
The **Brio-R** will work well on most surfaces, such as a shelf or table, provided there is sufficient air around the amplifier to prevent overheating. If using a turntable, magnetic interference can be avoided by positioning the amplifier as far away from the cartridge as the tonearm lead will allow. Never stack other hi-fi equipment directly on top of the amplifier. The heat produced by the **Brio-R** is dispersed to the air by the case itself. Ensure that the case has an unobstructed air passage around it. Never place it directly on fabric or carpets.

## CONNECTIVITY

All the line level inputs and the line level output are made via RCA (Phono) connectors. The sockets on Rega amplifiers are identified as follows:

**Left:** Always the upper row and marked in **WHITE**

**Right:** Always the lower row and marked in **RED**



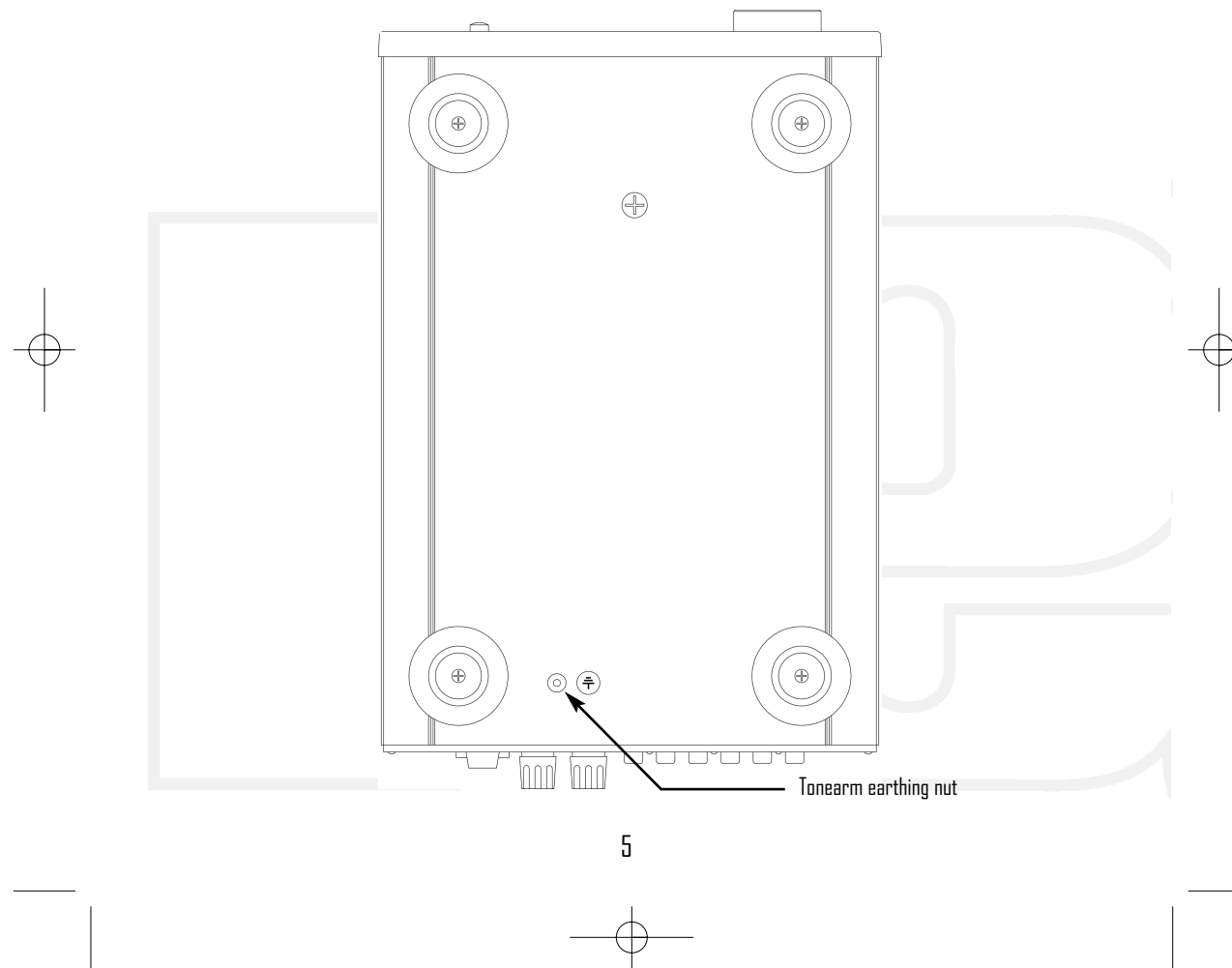
**IMPORTANT: ALWAYS TURN OFF THE AMPLIFIER WHEN CHANGING LEADS & SPEAKER CABLES.**

### Rear Panel Connections

**Input 1 – Phono stage for use with a turntable only.**

The Phono input can be used with moving magnet (MM) or HIGH OUTPUT moving coil (MC) cartridges.

**Earthing:** For Rega turntables earthing is achieved via the Phono lead ground therefore a separate earth is not necessary. If your tonearm has a separate earth lead it will need to be connected to the grounding nut located on the underside of the amplifier.



**Input 2-5 – Standard “Line level”** Line inputs enable the connection of any additional sources such as CD players DVD, TUNER etc. Note the record output is disabled when input 5 is selected.

**Input 5 – Record input “line level”** We advise if a recording device with the ability to monitor the recording signal is connected to the amplifier, its output is connected to input 5 to stop possible feedback issues.

**Record output** For connection to any recordable device (such as a CD recorder). The output is a ‘record signal’ as selected by the main input selector 1-4. Note the record output is disabled when input 5 is selected. This output is not affected by the volume control.

**Mains Power lead** The supplied power lead should be connected to the ‘Power in’ socket also located on the rear of the unit.

#### LOUDSPEAKER CONNECTIONS

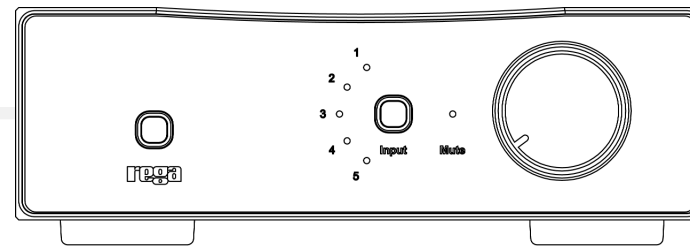
The **Brio-R** is capable of driving all normal Hi-Fi loudspeakers, Rega recommends using loudspeakers with a nominal impedance of 8Ω. It is possible to run speakers as low as 4Ω however such units may cause the case to exceed 40° C above the ambient temperature.

Top row **RED** and **BLACK** left speaker  
Bottom row **RED** and **BLACK** right speaker



### IN USE

Switch the **Brio-R** on by pressing the power button located on the left hand side of the front panel above the Rega Logo. After a few seconds you will hear a gentle click indicating the switch on relay has been released and the amplifier is ready for use.



### INPUT SELECTION

To change between inputs simply press the button marked 'input' to cycle through from 1 to 5.(This button can be held down to cycle quickly).

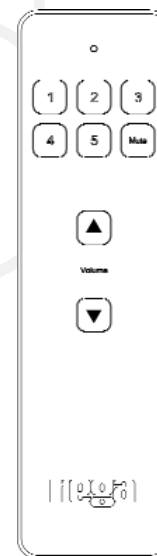
The selected input is highlighted by the corresponding red LED. Input selection can also be changed via the supplied remote control handset.

### MUTE

The mute function is available only via the remote control. This function mutes the power amplifier outputs. When selected a red LED is illuminated on the front panel, press again to deselect.

### REMOTE CONTROL

The **Brio-R** is supplied with a dedicated remote control handset which allows you to select inputs 1 through 5, mute the unit and adjust the volume. (Batteries included 2 x AAA Alkaline).



## Brio-R SPECIFICATIONS

### Input sensitivities for rated output level:

Input 1 (Phono) input sensitivity = 2.1mV at 47K $\Omega$  In parallel with 220pF.

Maximum Input 1 (Phono) input level = 100mV.

Input 2 to 5 (Line) input sensitivity = 210mV at 47K.

Maximum Input 2 to 5 (Line) input level = 10.25V

### Power outputs at 230/115V supply voltage:

50Watts RMS both channels driven into the rated load of 8 $\Omega$ .

58Watts RMS one channel driven into the rated load of 8 $\Omega$ .

73Watts RMS both channels driven into the rated load of 4 $\Omega$ .

93Watts RMS one channel driven into the rated load of 4 $\Omega$ .

Continued high level use into 4 $\Omega$  may cause the case to exceed 40° C above the ambient temperature.

### Power consumption:

195Watts at 230/115V into the rated load of 8 $\Omega$ .

### Record output level:

Record output level (with rated input levels) = 210mV.

Record output impedance = 470 $\Omega$ .

### Frequency response:

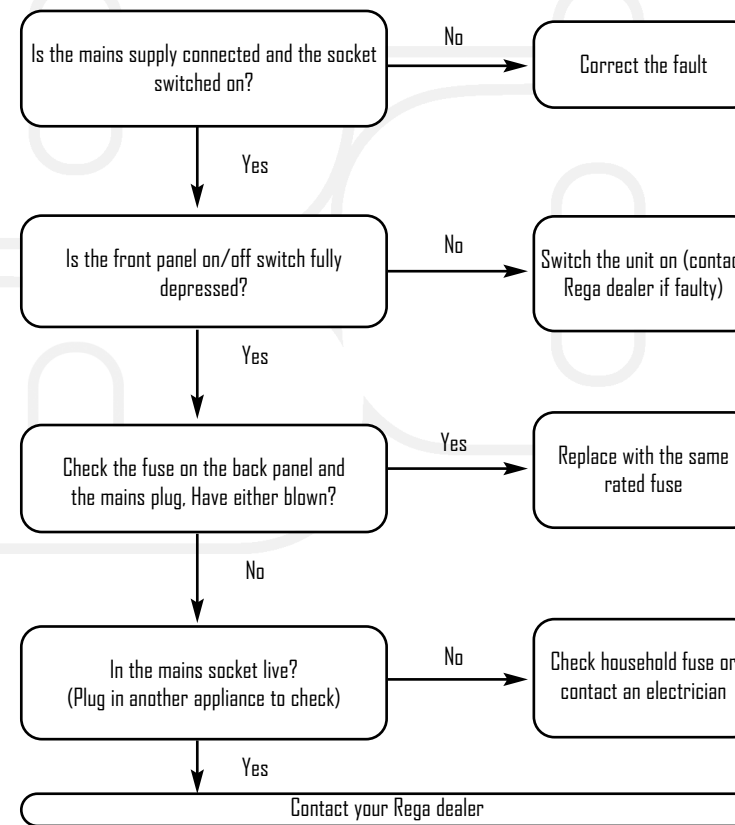
Phono 15Hz to 40KHz (-3dB points) / 27Hz to 20.5KHz (-1dB points).

RIAA accuracy (100Hz to 10KHz)  $\pm$  0.4dB typically better than  $\pm$  0.3dB

Line 12Hz (-1dB points) to 43KHz (-3dB points).

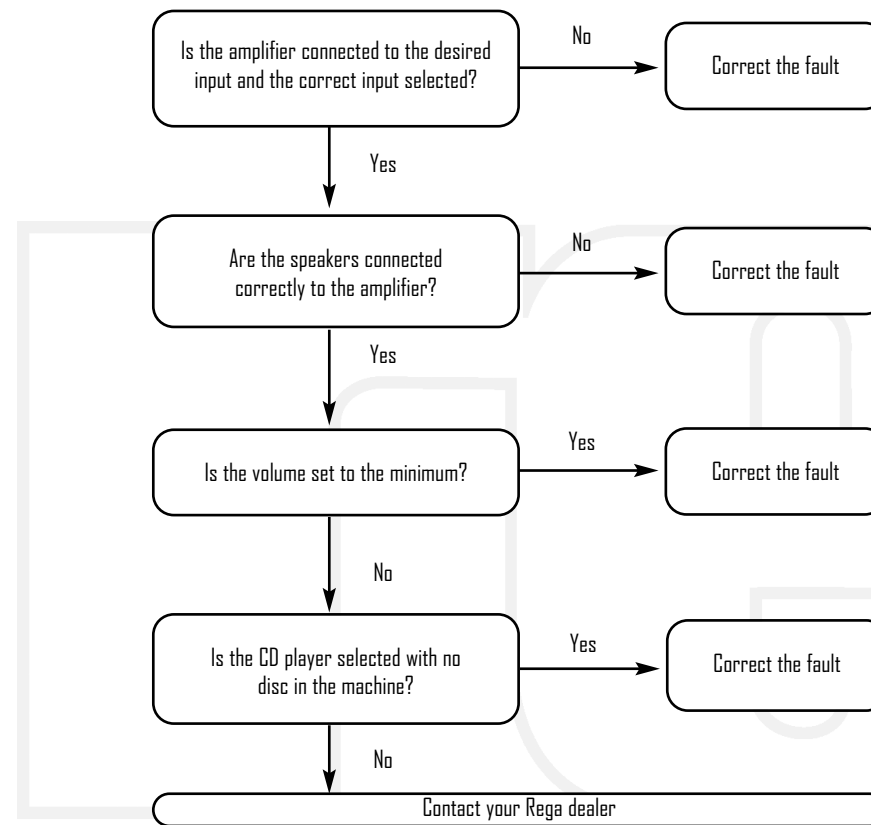
### TROUBLESHOOTING

No power - logo not illuminated



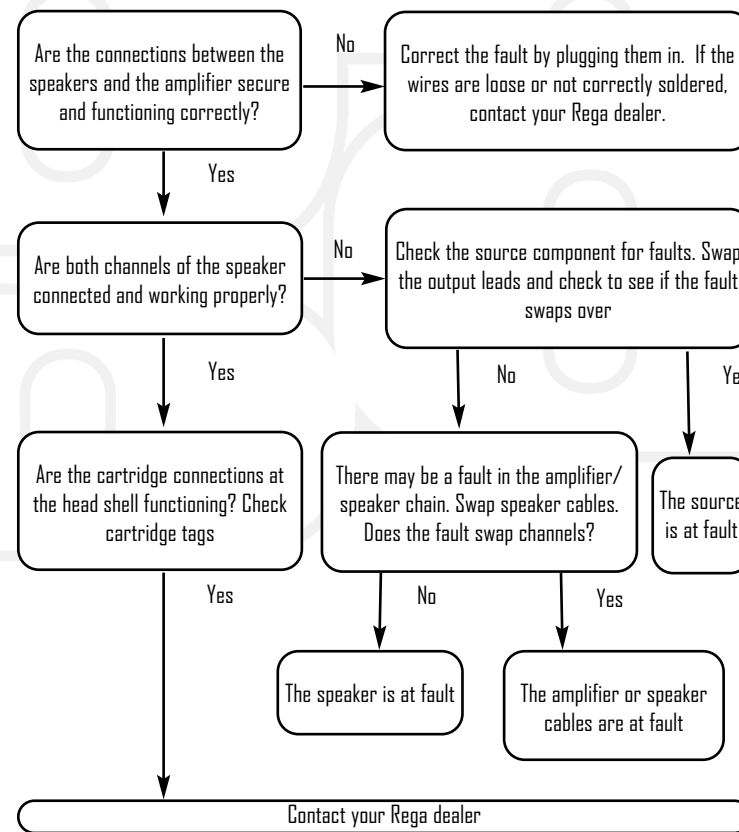
## TROUBLESHOOTING

Power ON - Logo illuminated but no output



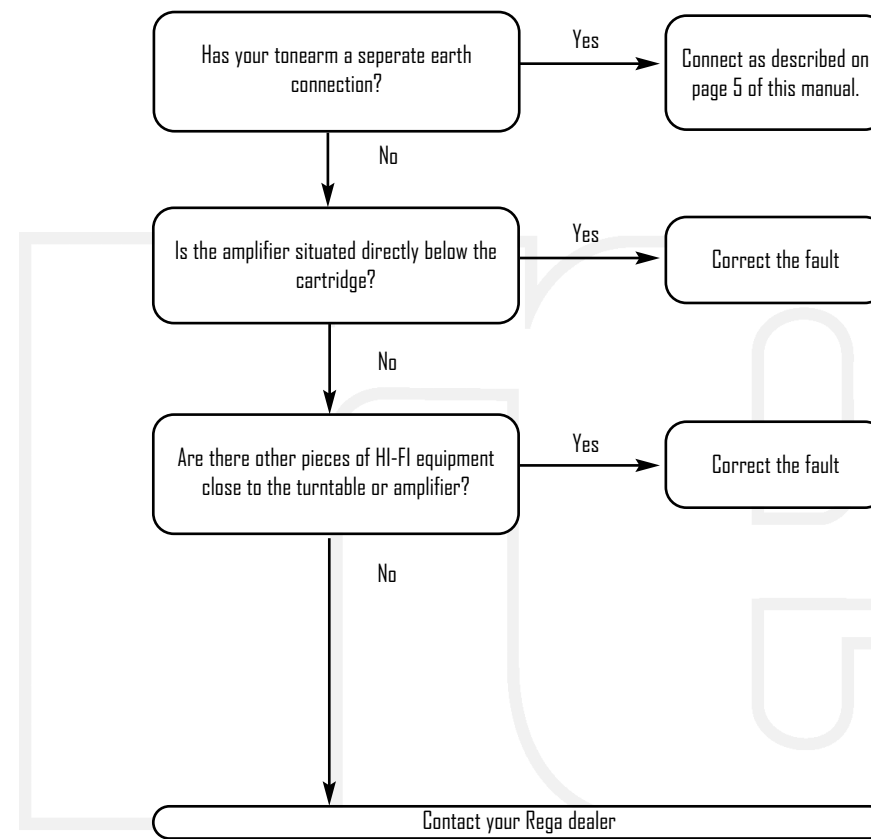
### TROUBLESHOOTING

Power ON - sound from one speaker only



## TROUBLESHOOTING

Loud hum through both speakers when 'Phono' is selected



### OWNERS LOG

(1)  
Owner.....  
Date.....  
Where Purchased.....

(2)  
Owner.....  
Date.....  
Where Purchased.....

(3)  
Owner.....  
Date.....  
Where Purchased.....

(4)  
Owner.....  
Date.....  
Where Purchased.....

(5)  
Owner.....  
Date.....  
Where Purchased.....



