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Important

The Exon 3 is a unique amplifier where ingenious design has allowed an unusually high output from an exceptionally small size. Listen to its superlative sound quality and you will understand why we say “unique”.

The Exon 3 can comfortably produce power levels in excess of 200 watts and therefore good ventilation MUST be provided around the case top and bottom.

We advise the following.

1. Do not stack the amplifiers on top of each other.

2. If Exons need to be stacked vertically use a specialist non enclosed equipment stand. Keep the Exons away from other heat producing equipment.

3. Alternatively place the amplifiers side by side with at least 40mm between them.

4. Do not place the Exon 3 on any carpet, bedding or any other material that will obstruct the heat sink fins underneath.

5. Keep the Exons away from any heat source such as radiators, fires, heaters or sunlight.

When in use the case will feel warm to the touch. This is normal. If the Exons are used with insufficient air circulation and the case temperature rises too high (approximately 60°C) the amplifier will automatically switch off and will reset once a correct working temperature is reached.

If the Exon 3 is required to be used in extreme applications such as very low impedance loudspeakers or P.A. applications, additional fan cooling may be used and/or the amplifiers stacked on their sides (or upside down) to allow the heat sinks underneath to work more efficiently.

Introduction

Your Rega Mono-block has been designed to reproduce music effectively and easily. The **Exon 3** has been built to Rega's discriminating standards of reliability and quality to ensure many years of musical enjoyment.

A Monoblock's function is to drive loudspeakers in partnership with a pre-amplifier unit. It is vital that the amplifier achieves this without changing the signal, which would distort the music. We have avoided superfluous gadgets such as tone controls or a headphone socket as they obstruct the signal path and degrade the produced sound quality.

Rega amplifiers incorporate remarkable and innovative design ideas. For those interested in the technical details, these innovations are described more fully in this manual. Alternatively, you can simply switch on, sit back, and let your amplifier speak for itself.

Mission Statement

Rega's philosophy is to make high quality products at sensible prices, as a means of reproducing music as faithfully as possible. Rega is committed to the design and development of new and existing products, both in hi-fi and other areas, that will perpetuate Rega's values of quality and value for money.

Design Innovation

In common with all Rega products, the Exon 3 mono-block has been designed without compromise. Our time and money has been spent on developing the unique circuit design and using unusually high quality components. However, we have included useful features to further enhance your listening pleasure.

The Exon 3 features completely Rega designed circuitry developed in-house with the aid of CAD circuit simulation, computer modeling and extensive listening.

The output stage is fully protected with DC and short circuit protection, with mains fuse monitoring; all ensuring that your speakers are not damaged by mains spikes or faulty source components.

This Rega amplifier includes extremely high quality components not normally found in a power-amplifier of this price. These include high tolerance polypropylene capacitors, and two generously rated toroidal transformers, enabling the Exon 3 to drive even the most awkward of speaker systems.

General Description

The Rega Exon 3 Power Amplifier is a 120 Watt 8Ω/200 Watt 4Ω high performance, symmetrical circuit, Mono Block power amplifier, which is housed in the Rega custom built extruded aluminium case and high thermal efficiency heat sink. The Exon 3 amplifier has a fully protected output stage, with DC and electronic thermal protection & supply monitor for both transformers. High quality Evox polypropylene capacitors have been used in the signal path.

Circuit

The Exon 3 power amplifier uses a fully symmetrical circuit topology throughout, with a low distortion high linearity & bandwidth common base voltage amplifier driver stage. This type of circuit topology will provide the necessary voltage swing, to enable the Exon 3 to drive the speaker system with the minimum of distortion. Four Sanken 200 Watt output transistors are used in a high current output stage, thus enabling the Exon 3 to drive the most awkward of speaker systems.

The Exon 3 uses two generously rated toroidal transformers for each rail of the power supply, and with 37,600μF of parallel connected smoothing capacitors, will provide more than enough current to drive the hardest of loads. All input and driver stages are fed from a fully regulated supply providing a stabilized voltage, ensuring the highest level of sonic purity.

The improvements to the power supply and the internal wiring plus the up-grades to the capacitors & transistors, all combine to give a significant improvement to the over all performance of this already high performance amplifier.

Installation

The amplifier will work well on most surfaces, such as a shelf or a table, provided there is sufficient air around it to prevent overheating.

To avoid magnetic interference, site the amplifier as far away from the pre-amp as the lead will allow. If possible, place it to the left of the pre-amp.

Keep other equipment, such as tuners, cassette decks or CD players away from the amplifier. **Never** stack other hi-fi components on top of the amplifier.

Due to the layout of Rega's amplifier circuit designs, they are virtually insusceptible to Electro Magnetic interference, and by virtue of the extruded aluminium case, emit practically no Electro Magnetic radiation. However, placing any electronic equipment close together may impair the performance of one or both items.

Ventilation

The heat produced by the amplifier is dispersed to the air via the case, particularly from the base. Ensure that the case has an unobstructed air passage around it.
It is perfectly acceptable for the amplifier to become warm to the touch.

Never place the amplifier on carpet, rugs, bedding or other hi-fi equipment.

Amplifier and Speaker Protection

The power LED will flash if the following has occurred.

1) Thermal cutout has been activated.
If the amplifier reaches a temperature liable to cause internal electronic damage a thermal protection sensor will activate, and protect the speaker, and alert the user of the fault condition. The unit should be turned off for at least 30 minutes to allow for complete cooling. After this period the amplifier should automatically reset and continue to work normally. If it does not, turn off for more than an hour before retrying.

If the amplifier is still used, in an over heated condition, because of sustained high sound levels, the amplifier protection circuit will reset and set every few minutes, until the volume level is reduced and the amplifier is allowed to cool down, this could occur when driving high levels into 4Ω speakers.

2) DC voltage level present on speaker terminals.
If in the event of a major fault occurring in the amplifier, and thus causing a DC voltage level to be present on the speaker terminals, the protection circuit will activate, and protect the speaker, and alert the user of the fault condition.

3) One of the mains fuses has blown.
If in the event of one of the mains fuses blowing, the protection circuit will activate, and protect the speaker, and alert the user of the fault condition.

Short Circuit Protection

If in the event that the speaker leads are shorted, the short circuit protection will protect the output stage from excessive currents. This innovative Rega protection circuit is not placed in the audio signal path and therefore does not affect sound quality.

Power Amplifier Inputs

The Exon 3 can be used in conjunction with any pre-amplifier with a standard line output level (approximately 1V).

The red **(Input)** socket on the back of the amplifier is for input from the pre-amplifier.

The white **(Link)** socket on the back of the amplifier is used to connect other power amplifiers in parallel, provided your pre-amplifier can drive more than one.

Cursa and Exon level
Because of the increased power of the Exon 3, the amplifier will require a higher drive level of 1 volt to get the maximum output. The Cursa output level will need to be set to 1V (SWITCH 3 ON). This can be performed by your dealer or by a Rega appointed engineer. Please see the Cursa manual.

Rega's Cursa and Mira, can drive up to five power amplifiers in parallel, allowing you greater flexibility with your system. For details of bi-amping and multi-amping, please see your pre-amplifier manual.

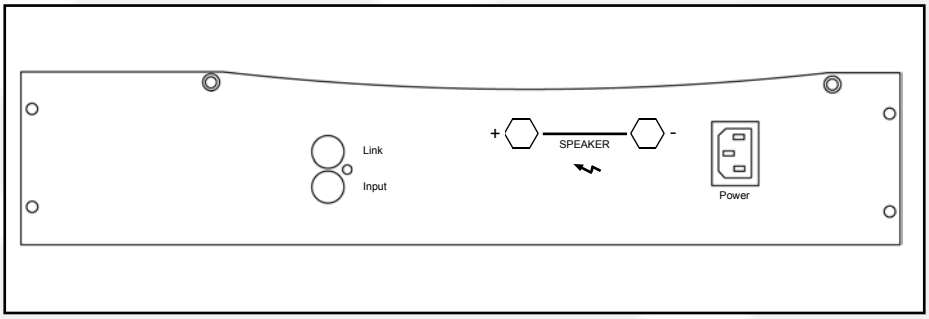
Input Connections

All connections are made using RCA (phono) type connectors. The sockets on all Rega amplifiers are clearly marked red and white.

Input: the lower row marked in **RED**.
Link: the upper row marked in **WHITE**.

Important: Always turn off the amplifier when changing leads, especially speaker cables.

Rear Panel Connections



Loudspeakers

The Rega amplifiers are capable of driving all normal hi-fi loudspeakers. (Most loudspeakers have nominal impedance of 8Ω). If driving loudspeakers of unusually low impedance (4Ω or less) ensure that you check with your dealer for compatibility.

Loudspeaker Cable

We recommend using good quality cable such as our own, or similar types made by other quality hi-fi companies. Very expensive cable claiming to use special materials and technologies, along with solid core' or OFC types, are not recommended, as they often do not represent value for money. Try to keep cable runs to either speaker of equal length. Your Rega dealer will be able to make up specific lengths of cable for you with plugs already fitted.

Damage by shorting

Never short (i.e. touch together) the bare ends of speaker cable on any amplifier. However, the protection circuit will prevent damage in the case of accidental shorting. **Never** join cables together to increase their length.

In Use

Switching On

Depressing the power switch to the left of the control panel turns on the amplifier. The LED in the power button will flash.

After several seconds you will hear a gentle click and the power button will stop flashing. This indicates the switch-on relay has been released and the amplifier is ready for use.

We recommend you switch your source components (Phono, CD, Tuner, Tape etc.) on first, then your pre-amplifier, and lastly your power amplifier. This prevents audible clicks being heard through your speakers as you switch on your equipment. A start-up delay has been designed on Rega amplifiers to prevent any damage being done to your speakers when your system is initially switched on.

Specifications

Power output @ 230V or 115V supply voltage.
125 Watts into 8Ω..
225 Watts into 4Ω..

Input sensitivity for 125W and 225W into 8Ω and 4Ω.
Power amplifier input sensitivity = 1.1V @ 24KΩ.
Power amplifier gain = 28.8dB.

Features.
Speaker & DC protection.
Fuse monitor.
Short circuit protection.
Reactive load protection.
Dual transformer power supply

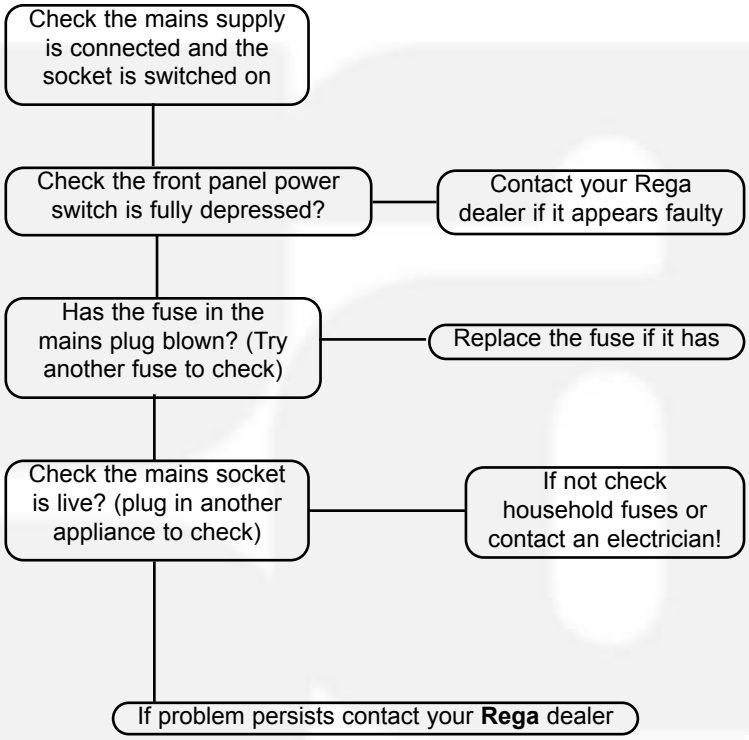
Frequency response.
11Hz to 50kHz (1dB Points).

Power consumption.
355 Watts @ 230V or 115V (driven into 4Ω).

Recommended operating temperature.
10°C - 35°C

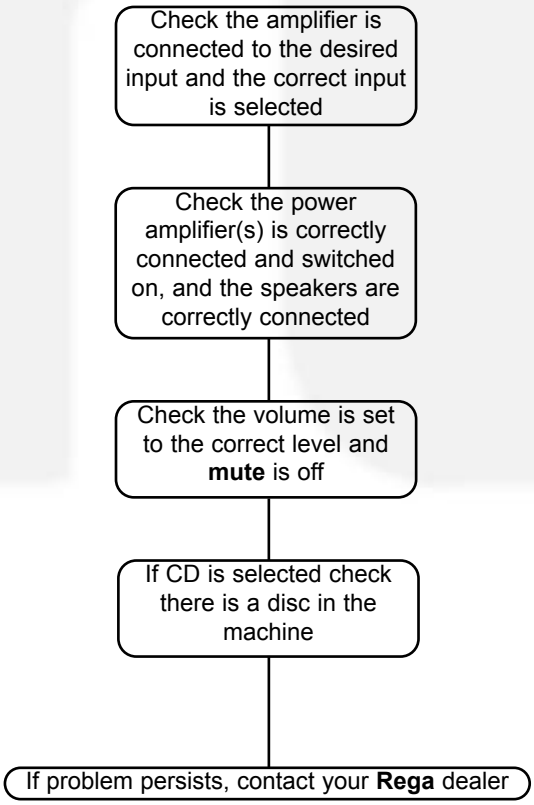
Troubleshooting

(No power, power switch LED does not light up)



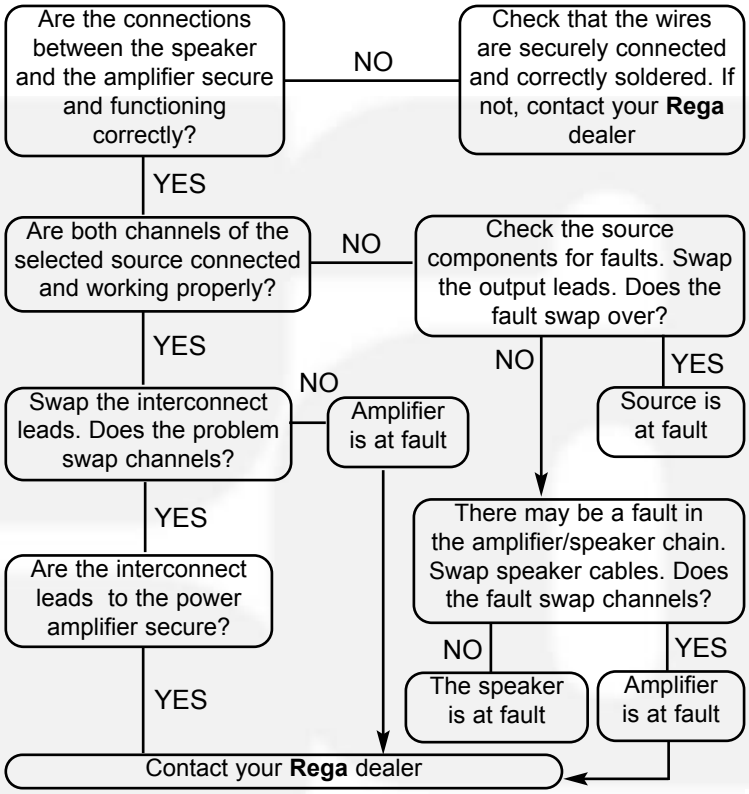
Troubleshooting

(Power on, power switch LED lit but no output)



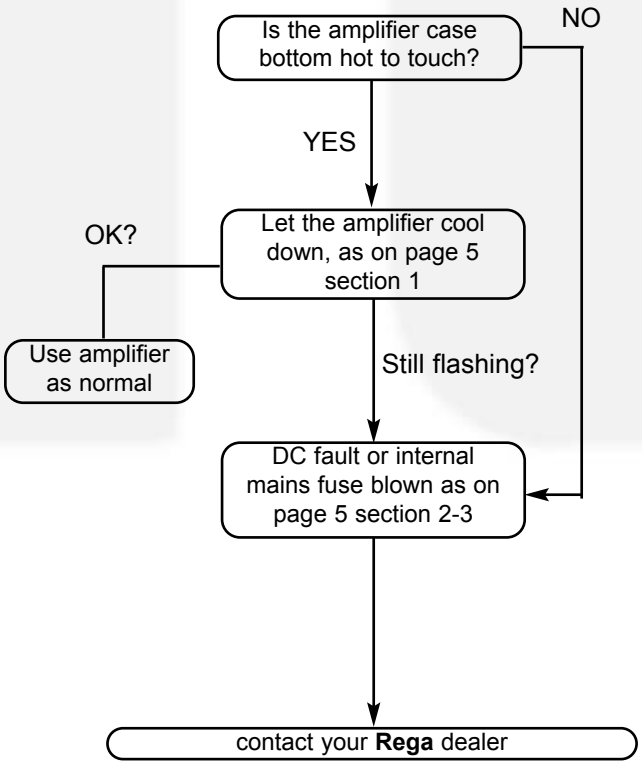
Troubleshooting

(Power on, sound from one speaker only)



Troubleshooting

(Power on, power LED flashing but no output)



Owners Log

(1)
Owner.....
Date.....
Where Purchased.....
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(2)
Owner.....
Date.....
Where Purchased.....
.....

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