Contents

Introduction

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

An amplifiers function is to boost the tiny signal generated by a cartridge, CD player, or other source so that it can drive the loudspeakers. 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.

The 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 **Mira 3** amplifier 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 new useful features not seen on REGA amplifiers of this price before.

The **Mira 3** amplifier has digitally controlled analog switched resistor network volume control.

The **Mira 3** features REGA designed circuitry, developed in-house with the aid of CAD circuit simulation, computer modeling and extensive listening.

The **Mira 3** has an internal switch to link the pre-amplifier and power amplifier, giving total flexibility within the REGA range; highly uncommon for amplifiers of this price.

The **Mira 3** includes extremely high quality components not normally found in an integrated unit. These include high tolerance polypropylene capacitors, advanced output transistors, and a large toroidal transformer.

Installation

The **Mira 3** 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 **Mira 3** as far away from the turntable as the tonearm lead will allow. If possible, place it to the left of the turntable.

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 **Mira 3**.

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 of the items.

Ventilation

The heat produced by the **Mira 3** is dispersed to the air via the case, particularly from the extruded heatsink. Ensure that the case has an unobstructed air passage around it.

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

Note: If the **Mira 3** is driven at high volume for a long period, it will become quite warm. This is entirely acceptable and as long as there is sufficient ventilation, the amplifier will continue to work quite normally.

DC Protection

The **Mira 3** has a circuit which protects the speakers from direct current in the event of a major failure of the system.

Short Circuit Protection

If in the event that the speaker leads are shorted, the fold back 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.

Pre-Amp Output and Power-Amp Input

The **Mira 3** has a pre-amplifier output & power-amplifier input, giving total flexibility within the REGA range.

The pre-amplifier can drive at least 5 power amplifiers, sub bass units etc, and the power amplifier can be used with most pre-amplifiers.

There is an internal link via a DIP switch between the pre-amp output and power-amp input which can be turned off by moving the DIP switch to the OFF position. If you are using only the pre-amp stage of the **Mira 3** in conjunction with a separate power-amplifier you may want your dealer to move the switch to the off position.

The pre-amp outputs and power-amp input use RCA type (phono) connectors.

Any adjustments made to the power amp link switch and gain must be carried out by a authorised Rega dealer.
If work is carried out by any person other than a Rega dealer it will invalidate your warranty.

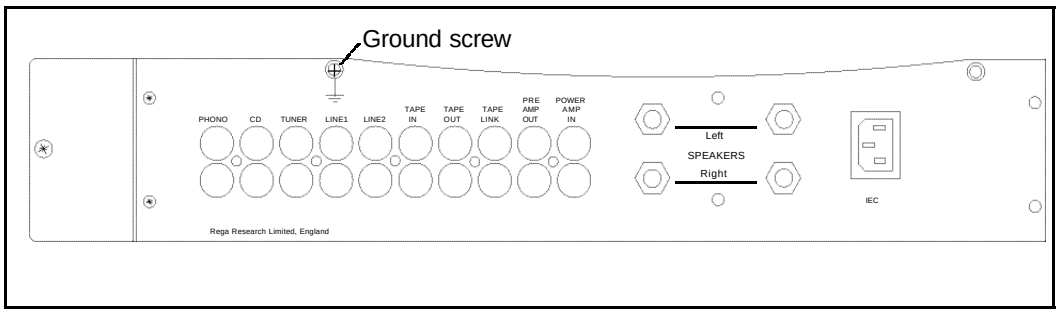
Input Connections

All the inputs and the tape outputs are made via RCA (phono) type connectors. The sockets on the REGA amplifiers are clearly marked red and white.

Right: always the lower row and marked in **RED**.
Left: always the upper row and marked in **WHITE**.

IMPORTANT: ALWAYS TURN OFF THE AMPLIFIER WHEN CHANGING LEADS, ESPECIALLY SPEAKER CABLES.

Rear Panel Connections



Phono Input

The **Mira 3** can be used with moving magnet (MM) or high output moving coil (MC) cartridges.

Earthing

Earthing is done via the Phono socket ground for Rega turntables so a separate earth is not necessary. In the unlikely event that your tonearm needs to be earthed to the amplifier, the grounding tag may be connected to the case grounding screw above the input sockets. See Rear Panel Connections drawing (page 7).

Compact Disc Input

The compact disc input is suitable for use with any CD source.

Tuner Input

The tuner input is suitable for use with most types of AM/FM tuners.

Line Inputs

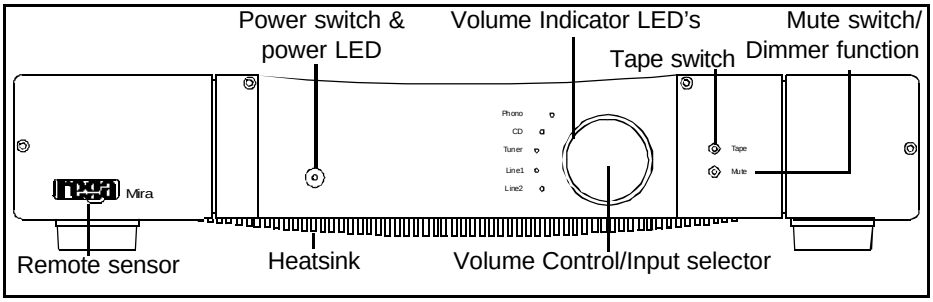
The Line inputs enable the connection of additional sources, such as a second tape machine, tuner, video recorder etc...

Tape Input/Output

Almost any tape machine can be used with your **Mira** amplifier, including compact cassette, video cassette, reel to reel, DAT, and DCC.

NOTE: ALL INPUTS, OTHER THAN THE PHONO INPUT, ARE AT STANDARD "LINE LEVEL" AND CAN THEREFORE BE USED FOR ANY LINE LEVEL INPUT.

In Use



Switching On

The **Mira 3** is turned on by depressing the power switch on the left of the control panel. The LED in the power switch will glow red.

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

Volume Control

The volume of the amplifier can be adjusted using the volume knob on the amplifier and via the remote control handset as described below.

The volume level is controlled via a microprocessor, which in turn takes its information from the volume knob digital encoder on the front panel or the remote control handset.

The volume control has a resolution of 1dB per step, giving a total range of 80 steps over the available gain or volume range of 80dB. There is a calibrated LED display comprising of 20 LED's, which indicates the gain level or relative position of the volume control; this is calibrated in 4dB steps, across the total gain of the volume range.

The left and right channels are matched and balanced within 0.2dB, ensuring a centrally placed soundstage no matter what the volume position or which gain level has been set.

LED Display Dimmer Function

To change the brightness of the volume control LED display, push the control knob once. You are now in input selection and dimmer mode. Pressing the Dimmer/Mute button three times will step through the three different levels of display brightness, you have eight seconds to press the Dimmer/Mute button.

Input Selection

The Input selector is combined with the volume control. To select your input, push the control knob in once. You are now in Input selection mode. You have eight seconds to choose your input. (When the eight seconds are up the control knob will return to the volume function). The inputs are selected by turning the knob to the required input.

Input Selector

Always allow the amplifier to fully power down (indicated by the power LED extinguishing after 2-3 seconds) before switching on again, so that the self-test circuitry can complete its reset cycle.

Tape: This input provides full tape monitoring facilities if your tape machine has 3 heads.

Mute: The mute function mutes both the speaker and pre-amplifier output.

It is possible to press the control knob within the eight-second period to resume the volume control mode.

Loudspeakers

The **Mira 3** amplifier is capable of driving all normal hi-fi loudspeakers. (Most loudspeakers have a nominal impedance of 8 Ohms).
If driving loudspeakers of unusually low impedance (4 Ohms 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 short and of similar length. Your REGA dealer will be able to make up specific lengths of cable for you with plugs already fitted. Never join cables together to increase their length.

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.

Bi-Amping

With the use of additional power amplifiers, the **Mira 3** integrated amplifier can be used in a bi-amping system, in conjunction with suitable speakers. This system can also be made active by the use of a suitable cross-over unit.

Use both pre-amp outputs into a stereo power amplifier, or the right and left outputs into individual mono power amps, to drive bass/midrange; and the speaker outputs on the integrated amplifier to drive the tweeters.

If you are using a different pre-amplifier or an active cross-over, the amplifier can be used as a stereo power amplifier by putting a line level input into the power-amp in connectors, and using the speaker outputs to drive the appropriate speaker. If you have any doubts concerning bi-amping your system, consult your REGA dealer.

Remote Control

The **Mira 3** features an optional remote control. This has additional buttons not used by the Mira, but all functions offered on the amplifier can be performed using the remote control.

Specifications

Input Specification (61W into 8Ω)
Note - Factory setting of gain range level 2
CD/Tuner/Line 1/Line 2/Tape input sensitivity: 220mV. Load 10KΩ.

Phono input sensitivity (moving magnet): 2.1mV. Load 47KΩ. (in parallel with 100pF)

Power amplifier input sensitivity = 818mV. load 24KΩ.

Pre-Amp Output level (with rated input levels)

818mV @ 470Ω. power amplifier gain = 28.8dB

Volume control LED display and step data
Each step of the volume control = 1dB
Each LED represents = 4dB
Total control range = 80dB (20 LED's @ 4dB/LED)

Power Output (230V or 115V supply voltage)
61 Watts both channels driven into 8Ω.
70 Watts only one channel driven into 8Ω.
91 Watts both channels driven into 4Ω.
115 Watts only one channel driven into 4Ω.

Tape Output
215mV. Load 560Ω

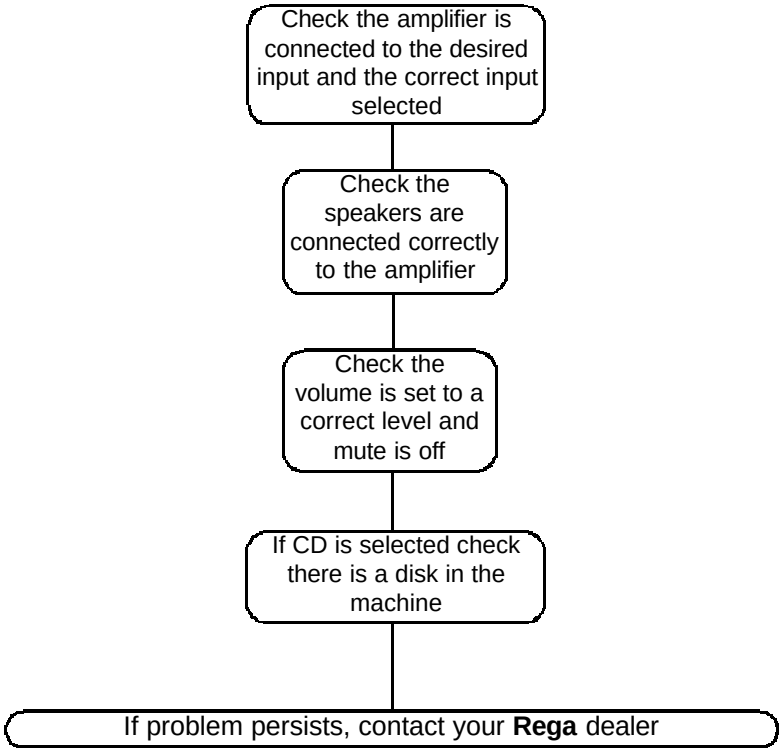
Power Consumption
225 Watts @ 230V or 115V @ 61 Watts both channels driven into 8Ω

Remote Control Phillips RC5 (system no. 16 audio pre-amp)

Recommended operating temperature 10°C - 35°C

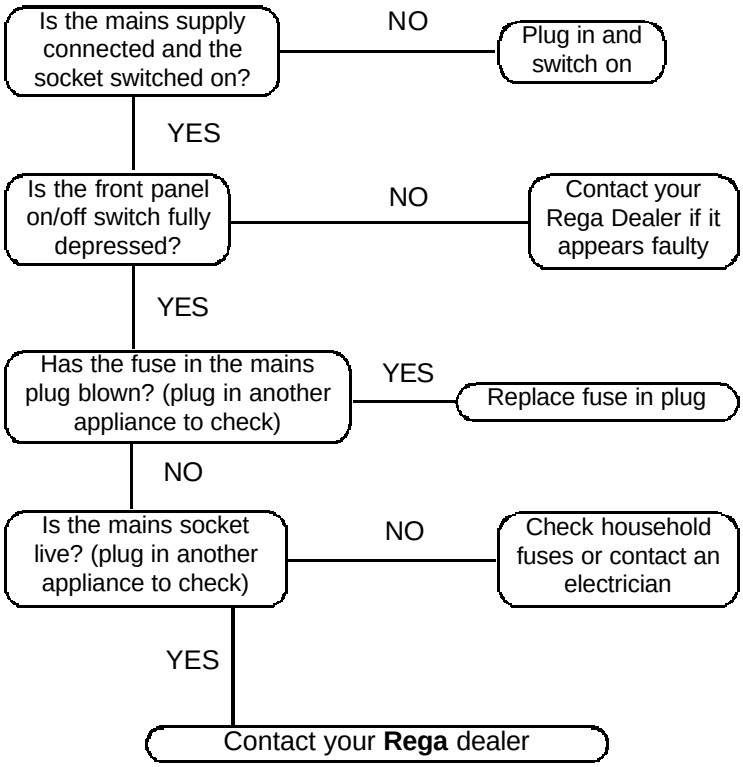
Troubleshooting

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



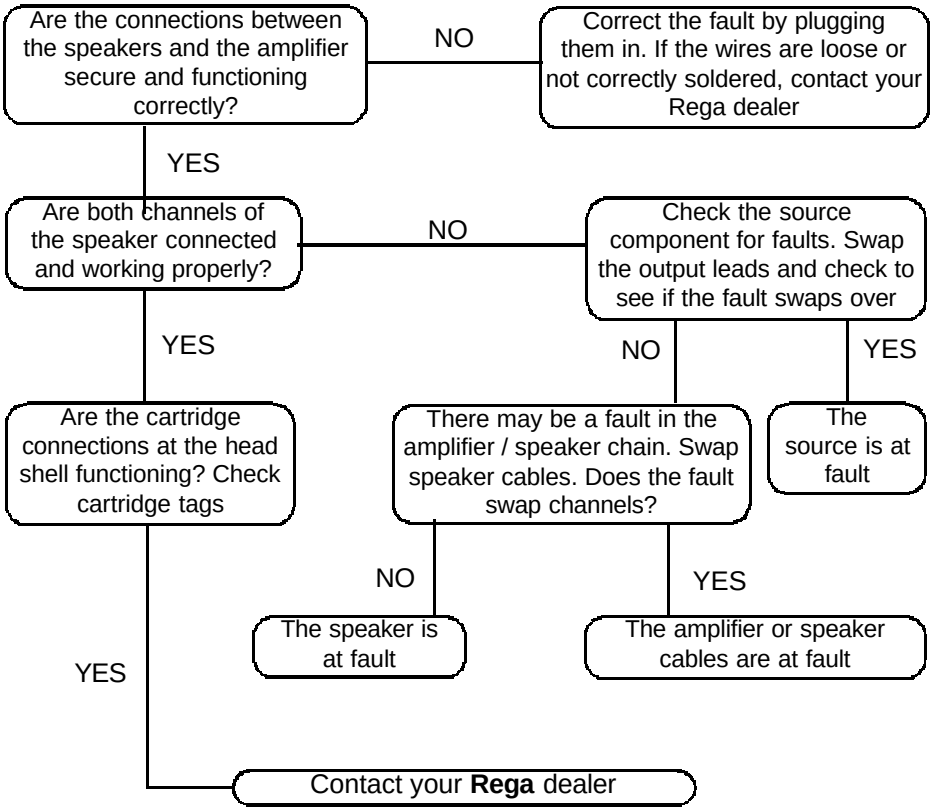
Troubleshooting

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



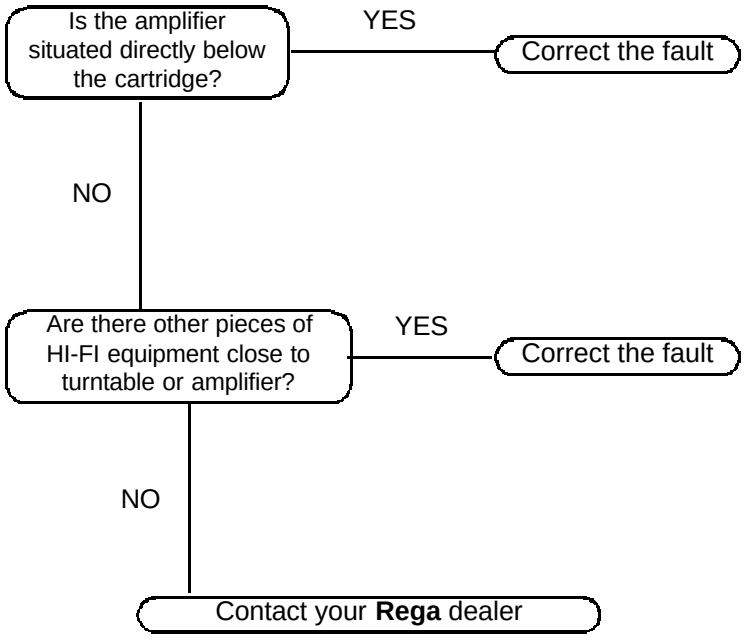
Troubleshooting

(Power on, sound from one speaker only)



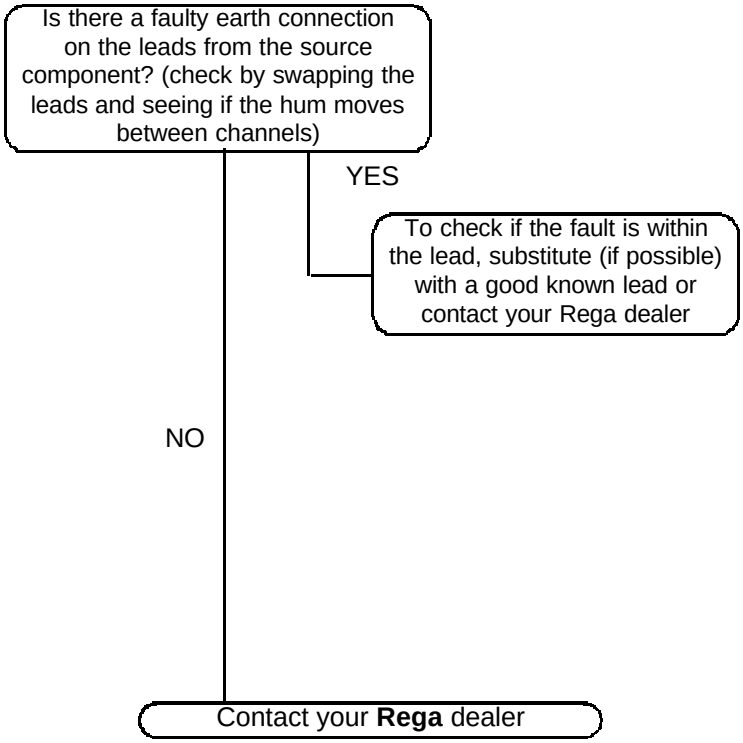
Troubleshooting

(Loud hum through both speakers
when 'Phono' is selected)



Troubleshooting

(Loud hum through one speaker when
'Phono' input is selected)



Input sensitivity and pre-amp gain

The **Mira 3** amplifier sensitivity or pre-amplifier gain can be set to three different levels; this is performed by putting the amplifier in to a programming mode on turning on the amplifier.
Please note the amplifier is set to normal sensitivity (level 2) in the factory, this setting being suitable for all normal Hi-fi requirements.

Settings -

Sensitivity's for 61W into 8 Ohms
CD, tuner, Line 1, line 2, Tape input sensitivity
Gain range or level 1 sensitivity = 870mV
Gain range or level 2 sensitivity = 220mV (Factory setting)
Gain range or level 3 sensitivity = 150mV

Phono input sensitivity
Gain range or level 1 sensitivity = 8.5mV
Gain range or level 2 sensitivity = 2.1mV (Factory setting)
Gain range or level 3 sensitivity = 1.4mV

Pre-amplifier gain levels to pre-amplifier output.
Gain range or level 1 gain = 0dB (unity gain)
Gain range or level 2 gain = 11.5dB (factory setting)
Gain range or level 3 gain = 15dB

Any adjustments made to the power amp link switch and gain must be carried out by an authorised Rega dealer.

If work is carried out by any person other than a Rega dealer it will invalidate your warranty.

Owners Log

(1)
Owner.....
Date.....
Where Purchased.....
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(2)
Owner.....
Date.....
Where Purchased.....
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(3)
Owner.....
Date.....
Where Purchased.....
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