

REDGUM Audio

Monoblock passive pre/power amplifier

RGM175

RGM300

Owner's manual

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Contents

Why REDGUM?	1
Unpacking	2
Setting-up your amplifier	2
Connecting your amplifier to other components	3
Loudspeakers.....	4
CD players, DVD players and other components.....	4
Record out.....	5
How to use your REDGUM amplifier	5
Turning the amplifier on and off.....	5
Input source selection.....	6
Volume and balance control.....	6
Achieving the best sound from your system	7
Where to put your speakers.....	7
Your listening room.....	8
Other helpful hints.....	9
Troubleshooting	10
Specifications	12
Warranty	13
Warranty Registration	13

Why REDGUM?

The river red gum is Australia's most widespread and recognised tree, and it produces a wood that is truly unique. It yields the second hardest timber in the world, and this strength saw its widespread use in the railway lines that sprang up to connect the rapidly expanding colonies of early 20th century Australia. Its resistance to termites also made it the natural choice for building foundations, and to this day it continues to support some of our most historic structures.

The river red gum can be found on most river banks in mainland Australia, where its roots tap into water stored in the sands and its leaves provide food for the indigenous wildlife. Its presence is synonymous with the Australian outback, at once a symbol of life sustaining water and the struggle against a harsh climate. When conditions turn dry, the red gum will adapt by shedding huge branches from its trunk in an effort to conserve moisture. As anyone familiar with camping in the Australian bush will tell you... don't ever pitch your tent underneath a red gum tree!

A celebrated part of our culture, it has perhaps been made most famous through the landscape paintings of Hans Heysen and Ronald Bull.

And while it was in wide use throughout Australia's history, it was not until the invention of the carbide saw that it was possible to cut the wood accurately. And only then could the real beauty of this unique hardwood be unveiled.

When polished it reveals a deep red lustre, highlighted by an intertwining and tightly packed grain structure. Fine irregularities add to this beauty, and it is highly sought after as a decorative wood for these unique aesthetic properties. No two pieces of red gum will match exactly, and this is as it should be. Like our products, each piece is outstanding and unique.

Now that you've heard the story of the Australian river red gum, it's time to listen to your very own REDGUM. We've carefully selected and lovingly crafted each piece before coupling it to some of the finest audio engineering that money can buy. The results? Stunning! Trust us, you won't believe your ears.

Unpacking

There should be three cartons containing your new amplifier. Carefully unpack each one and inspect each component.

In the first carton there should be:

- an Owner's Manual
- the on/off key (for key switch versions only)
- a REDGUM key ring
- two RCA cables
- the pre-amplifier.

In the second carton there should be:

- a power amplifier
- one phone 'control' cable.

In the third carton there should be:

- a power amplifier
- one phone 'control' cable.

If there is any damage to the amplifier, contact your dealer immediately. It is a good idea to keep the shipping carton and packing materials, as they can be used to protect your amplifier whenever you need to move it again in the future.

Setting-up your amplifier

Your amplifier consists of three components, a pre-amplifier and a two power amplifiers (one for each loudspeaker). You need to connect these components together before you can use your amplifier.



Important Safety Note

Ensure that all required connections between your amplifier's components have been made and checked before connecting the power amplifiers to mains power.

Stacking the components

Place the right channel power amp at the bottom (denoted by the red ring around the RCA input socket) and then the left channel power amp (black ring) above that. The pre-amp should then be placed at the top of the stack. This will ensure the best visual matching of the Red Gum front panels.

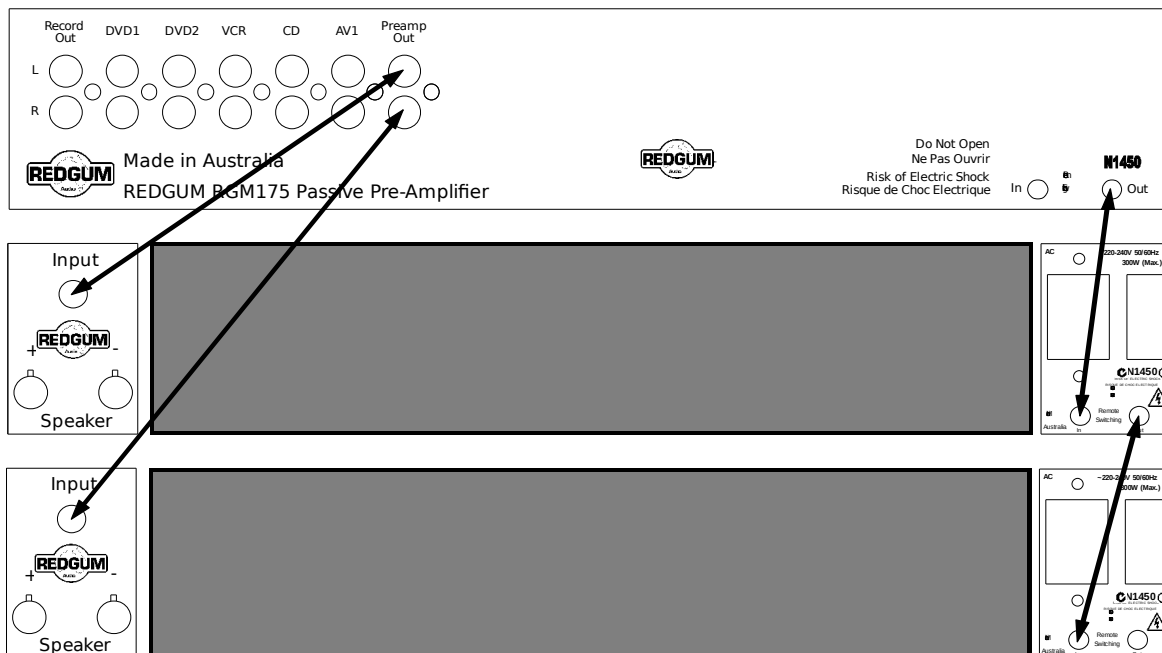
Connecting the RCA cables

Use the supplied RCA cables to connect the pre-amp out sockets on the pre-amp to the input sockets on the power-amps, as shown on the diagram below. When doing this be careful to ensure that the correct

left/right channel connections are made (use the coloured rings to assist you in this).

Connecting the phone 'control' cables

Connect the 3.5mm phone 'control' cable from the remote switching 'out' socket on the pre-amplifier to the remote switching 'in' socket on the left channel power amplifier, as shown on the diagram below. Then use the remaining cable to connect the remote switching 'out' of the left channel to the remote switching 'in' of the right channel.



Important Safety Note

Before connecting your amplifier to mains power ensure that the power control switch on the pre-amplifier is in the 'off' position, and that the rocker switches at the rear of both power amplifiers are also in the 'off' position.

Connecting the power amps to mains power

Connect the two IEC power cords to the outlets on both amplifiers, but do not plug them in to mains power until you have connected your speakers and source components to your amplifier.

Connecting your amplifier to other components

For safety reasons, always ensure that your amplifier and other components are turned off and disconnected from mains power before making any connections. Failure to do so may result in an electrical shock and/or damage to your equipment.

Loudspeakers

The loudspeaker terminals at the rear of your power amps are colour coded red (+) and black (-).

Follow the steps below to connect your amplifier to your speakers.

Step	Action
1	<p>Connect the:</p> <ul style="list-style-type: none">left channel amplifier terminals to the respective left speaker terminals; andright channel amplifier terminals to the respective right speaker terminals. <p>Make sure when doing this that you maintain the correct + to + and - to - connections.</p>
2	<p>Ensure that all connections points are clean, and that all connections are secure. Check that wiring terminations look neat and that no loose strands of wires are touching any other terminals. Failure to make neat connections may result in poor sound, or amplifier damage.</p>

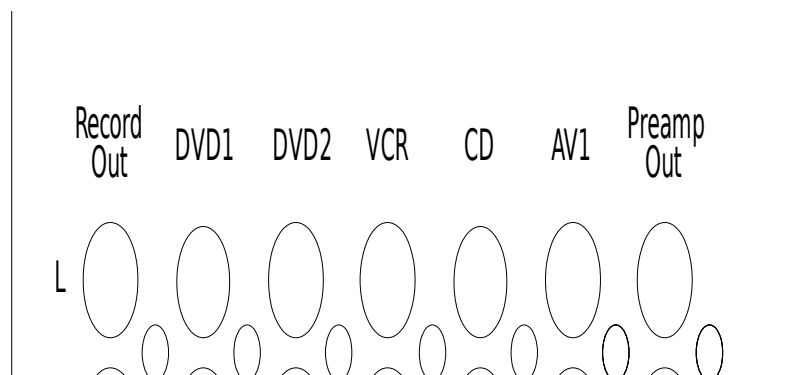


Note

We recommend using heavy gauge speaker cable for the best quality sound (the heavier, the better and with a 2mm minimum).

CD players, DVD players and other components

There are five input connections at the rear of your pre-amp labeled DVD1, DVD2, VCR, CD and AV1. Each of these inputs has a left and right channel jack, and these are colour coded white (left channel) and red (right channel).



Connect the output jacks of each of your components to the corresponding input jacks at the rear of the amplifier. When doing this, be careful to ensure that the correct left/right channel connections have been made. RCA connectors are colour coded to help you, so use the white plugs for the left channel and the red plug for the right channel. We recommend the use of high quality RCA interconnects wherever possible, for the best quality sound.

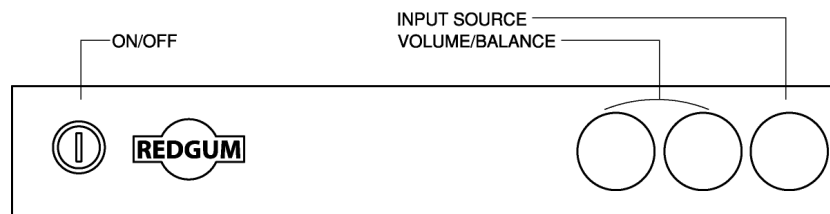
The amplifier inputs are all the same sensitivity, and will accept a signal from any line-level source (Mini Disc, DAT player, VCR, Tuner, etc.). Therefore, any unused inputs may be used by other components. If you wish to connect a Turntable, you will need to purchase a separate phono pre-amplifier. REDGUM Audio produces a stand-alone phono pre-amplifier. If in any doubt, consult your dealer.

Record out

The Record Out/Tape Out sockets allow you to record a signal coming in through any of the input sockets (for example, your CD player). This signal is unprocessed, and fed directly from the input sockets to the Record Out sockets to allow the best quality "straight through" recording. Use RCA connectors to connect the Record Out sockets to your recording device.

How to use your REDGUM amplifier

At the front of your pre-amp is an on/off switch, and three rotary controls. These are used to turn the amplifier on and off, select the input source, and adjust the volume and balance.



Turning the amplifier on and off

Your amplifier utilises either a rocker/toggle switch or a key switch as the on/off control.

For rocker/toggle switch versions, flick the switch on the front panel to turn the amplifier on and off.

For key switch versions, insert the key provided into the lock. When the key is vertical, the power is off. To turn on the power, rotate the key clockwise a quarter turn.

You may remove the key when the amplifier is turned on. However, it is recommended that you leave the key in place for convenience.



Note

Always make sure that the volume is turned down before turning on your amplifier, to protect your equipment.

Why do I hear sounds when turning my amplifier on and off?

You can expect to hear sounds from your loudspeakers when turning your REDGUM amplifier on and off. Usually, you will hear a slight 'pop' sound when turning on, and a couple of low 'thunk' sounds when turning off. These sounds are caused by electrical energy increasing and decreasing within the amplifier. They are a sign that your amplifier is operating normally, and are not a cause for concern.

More on 'thunks'

In greater detail, REDGUM amplifiers make audible 'thunks' when powered up and down, but usually only the latter ones are noticeable to people. A REDGUM amplifier has no need to mask this sound with a troublesome relay in the speaker line. In fact, customers can be reassured that this sound is a healthy sign that the amplifier is flexible enough to cope with such rapid changes in the power supply.

What actually causes the 'thunks' is best explained for the process during the powering down of a REDGUM integrated amplifier (35W, 60W or 120W), which has both channels run from a shared power supply. When the system is turned off, the first and weaker 'thunk' comes from both speakers together, as the power in the supply (which is common to both channels) "settles" below the voltage required for stable operation. The voltage available to the amplifier continues to fall till eventually the output stage of one of the channels goes into conduction, thus grabbing and dumping the remaining stored power into the speaker line of that channel. This dumping causes the remaining supply of power to collapse, causing the third and loudest 'thunk', but only through the channel where it was dumped.

As a result, the second channel is left with virtually no power to access from the shared supply. Since the separate output stages of the channels have reached their critical cut-off voltages sequentially, the second channel is deprived of the power required to produce a sound of the same proportions as the loud 'thunk' from the first channel. Because of component tolerances, the final 'thunk' sound is usually heard from the same channel.

This same process occurs with the 170W and 300W monoblock REDGUM amplifiers, but with both channels producing their final 'thunks', each in their own time. Each channel has its own power supply, so the fall in voltage affects only that channel, causing it to collapse as described above.

Input source selection

Rotate the input selector to choose which component will play through your amplifier.



Note

Always make sure that the volume is turned down before changing the input source, to protect your equipment.

Volume and balance control

REDGUM amplifiers are available in two versions – single or dual volume control.

If your model has a single volume control, the left rotary control affects the volume and the middle rotary control affects the balance between the speakers.

If your model has dual volume controls, the left rotary control affects the volume of the left speaker and the middle rotary control affects the volume of the right speaker. These controls are usually moved together and this can be done easily using only one hand. Place the outer side of the hand onto the top of the two volume controls. With a slight downward pressure to maintain a "grip" on the controls, slide your hand to the left or right to adjust the volume. Should you prefer, a belt is available from the manufacturer that circles the two controls so they move together when only one control is turned. Should it be required because of room acoustics, further fine adjustments can be made with individual controls once the general volume level has been chosen.

Achieving the best sound from your system

This section is provided to offer some general assistance to those seeking to get the very best performance from their system. You will be surprised by just how much improvement can be had by experimenting with a few simple factors. The following advice is based on our own years of trial and error, and we hope that checking through it makes a positive difference to the sound of your system.

Where to put your speakers

Deciding on the best placement for speakers is a very individual thing, as each of us have our own listening preferences. Try moving your speakers around while listening to some favourite tracks until you find the result which suits you best.

Distance from the surrounding walls

Placing your speakers right in the corners of the room can result in bass which sounds 'boomy' and unclear. Try to keep your speakers at least 20cm (eight to twelve inches) from both the rear and side walls. Bigger distances will usually bring about an improvement in the sound.

Distance between the speakers themselves

The correct distance between the speakers will depend on the size of your listening room, and your personal taste. Start by experimenting with the speakers from two to four metres (six to twelve feet) apart.

Distance between the speakers and the listening position

The best stereo imaging will be achieved when the listening position forms the point of a triangle, where the other two points are made by the speakers themselves. Start with your listening position as the point of an equilateral triangle, and experiment by moving forwards and backwards.

The angle (toe-in) of the speakers

At REDGUM Audio we recommend a 30 degree angle between the speakers. This provides a strong central image, and suitable 'timing' to provide good rear projection for home theatre. You should experiment, however, to find the sound that suits you best.

Your listening room

Strange as this may sound, the room itself will have a profound affect on how your audio system responds. In fact, many experts consider the room to be as important to the sound as any other component in your system!

Did you ever notice how it's difficult to talk in some restaurants because you can't hear each other over all the other conversations going on around you? Yet another similarly sized restaurant is perfectly suited to intimate romantic murmuring. The difference lies in the surfaces around you. Here is a simple test – go into your bathroom and clap your hands; then clap them again in a room with carpet, curtains and other soft furnishings. Notice the difference? In a room with many hard reflective surfaces sound waves bounce around a lot before dying out. Not even the most expensive stereo in the world is capable of sounding good in such a challenging acoustic environment.

When it comes to your listening room the same principles apply. Wooden floorboards, polished concrete and slate tiles are all highly reflective surfaces. In a room without curtains or other wall furnishings the sound may be overly 'bright' or aggressive.

Similarly, it is possible for a room to be too 'damped' or absorptive. Where there are no reflective surfaces at all the sound may seem 'dead' or lacking in energy.

Luckily for us, most household rooms are a combination of the two. And, generally speaking, a combination of the two will bring about the best results.

Too many hard surfaces?

If your room is sounding too 'bright', try placing a large rug on the floor between your listening position and the speakers. Or hang some soft furnishings from the walls.

Too many soft surfaces?

If your room is too damped, try removing some of the soft furnishings from the walls or rugs from the floor.

Managing the bass

Sometimes, low frequency waves can also bounce around and cause problems in a listening environment. This may be the result of the shape of the room, or the materials it is constructed from. Large pieces of furniture in a room can often help to break up these 'standing waves'.

While few of us will feel the need to redesign a room to improve its sonic properties, sometimes a small change, like placing a rug on the floor, can make a big improvement to the sound.

Other helpful hints

Corrosion and sound system terminals

Atmospheric corrosion can build up on speaker cable and interconnect terminals over time. Should this occur, removing and re-inserting wires and cables will clean and improve the contact and hence the quality of signal transmission. Always remember to turn off all equipment before connecting or disconnecting any wires or cables.

Placement of components in your sound system

Lots of fresh air is important to the health of your electronics. The louder you play your music, the more important it is to ensure that components receive adequate ventilation. Amplifiers, in particular, will generate a lot of heat. Placing the amplifier at the top of the stack, and ensuring adequate ventilation, will help to ensure that heat can be dissipated as it should.

Troubleshooting

The following troubleshooting guide is designed to assist you in identifying and rectifying any problems you may experience with your speakers.

Symptom	Likely cause	Recommended action
No sound	The amplifier is not turned on, or is not connected to the power outlet	Check that the amplifier is plugged into the power outlet, and turned on
The sound of a particular input source is not heard	Improper connections	Make sure that the external component is connected correctly
Stereo image is vague/bass response is lacking	Speakers out of phase	Check that the correct + to + and - to - connections have been made between the amplifier and your speakers
Buzzing or crackling sound when connecting wires	Equipment is turned on	Turn off all equipment before making any cable connections
Distortion at low volumes	Speaker wires are touching each other, or another terminal, and shorting the signal	Ensure that all cable connections are clean with no loose wires
	Amplifier is damaged	Check/repair amplifier
Distortion at high volumes	Amplifier is overloaded	Turn down the volume to avoid damage to your speakers and amplifier

If the problem cannot be resolved by any of these recommended actions you should make certain that the problem lies with the amplifier, as malfunction within other components may also be the cause of the symptoms. You can do this by borrowing a CD player and speakers that you are certain are working, and replace your normal components with these to test the amplifier in isolation. If the problem persists, please see your local REDGUM Audio dealer.

Lost Keys

Lost keys can be replaced, as information is kept on file at the REDGUM factory about every product we manufacture. If you provide us with the serial number of your product (look under the amplifier, on the carton, or on the final test report issued with the product), we can provide you with another key. Just fax us the details and a replacement key will be sent by airmail the same day (Fax: 61 3 9897 1399).

Thermal cut-off

For your convenience, there are no replaceable fuses in this amplifier. The only overload devices are thermal. Internally, there are thermal cut-offs that will shut down the amplifier if the heatsinks reach 80 degrees Centigrade. This would usually only happen if the speaker leads remain 'shorted' for a period of time.

Should this occur, your amplifier will resume operation once it has returned to normal operating temperature.

Circuit breaker

Additional protection for your equipment is built into the power-amps in the form of a Circuit Breaker. Found on the rear panel of the chassis, it is a rocker switch with RESET and OFF positions.

In the (unlikely) event of a power overload or an internal malfunction, the Circuit Breaker on the rear will activate ('trip'). The switch will automatically rock to the OFF position, and a red light will be seen inside the rocker.

In the case of a power overload, rocking the switch to the RESET position will turn on your amplifier again. When reset the red light will turn off and you will hear a 'thunk' sound as the amplifier powers up.

However, in the event of an internal malfunction, resetting the switch will not be possible. When the switch is rocked to the RESET position, it will instantly flick back to the OFF position, and the red light will stay 'on'. Should this occur, the amplifier will need professional service.

If in any doubt whatsoever, please consult your dealer.

Specifications

RGM175

175 Watt + 175 Watt Monoblock passive pre/power amplifier (dual or single volume control)

Power Output:	175+175 Watt/Ch RMS (297 + 297 RMS IHF pulse)
Harmonic Distortion:	0.009% (below clipping)
Intermodulation Distortion:	< 0.005% (below clipping)
Signal to Noise:	> 100db
Input Impedance:	10k (Matches 600 ohms - 50k)
Frequency Response:	0.8hz - 80khz (-3db points)
Peak Current:	> 150 amp
Audio Inputs:	5 inputs:- DVD1, DVD2, VCR, CD & AV1
Suggested Speakers:	REDGUM Audio RGS39i
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	3 x 420mm (W) x360mm (D) x93mm (H)
Shipping weight:	25.4 kg (3 x 8.16 kg cubic)

RGM300

300 Watt + 300 Watt Monoblock passive pre/power amplifier (dual or single volume control)

Power Output:	300+ 300 Watt/Ch RMS (596 + 596 RMS IHF pulse)
Harmonic Distortion:	0.009% (below clipping)
Intermodulation Distortion:	< 0.005% (below clipping)
Signal to Noise:	> 100db
Input Impedance:	10k (Matches 600 ohms - 50k)
Frequency Response:	0.8hz - 80khz (-3db points)
Peak Current:	> 150 amp
Audio Inputs:	5 inputs:- DVD1, DVD2, VCR, CD & AV1
Suggested Speakers:	REDGUM Audio RGS38i or larger
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	3 x 420mm (W) x360mm (D) x93mm (H)
Shipping weight:	30.7 kg (3 x 8.16 kg cubic)

Warranty

REDGUM amplifiers are warranted to be free of defects in material and workmanship, subject to the following conditions, for SEVEN (7) years from the date of purchase by the original owner. Warranty claims must be accompanied by proof of purchase, including date.

This warranty is subject to the following conditions and limitations:-

This warranty is void and inapplicable if the amplifier has:

- not been used in accordance with the instructions contained in the manual;

- been subject to misuse or abuse, one example of which would be damage consistent with speaker terminals being hooked to another electrical source;

- been modified, repaired or tampered with by anyone not specifically authorised in writing to do so by REDGUM or its agents;

- been damaged by accident, intent, neglect or transportation.

Should the product be faulty, the owner is liable for the cost of freight to the nearest REDGUM repair agent, or the factory. Should the product be found to be without fault, the owner will be liable for the return freight also.

Warranty Registration

Complete for warranty registration:

Name

Address

City

Zip/Post Code

Country

Date of purchase

Place of purchase

Model No

Serial Number (if any)

Fax this page to the REDGUM Audio factory at +61 3 9897 1399

Alternatively, you may email the details (including serial number) to warranty@redgumaudio.com