

REDGUM Audio

Integrated Amplifier

RGi35 / 35ENR

RGi60 / 60ENR

RGi120 / 120ENR

Owner's manual

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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 red gum wood 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

Carefully unpack and inspect your new amplifier.

In the carton there should be:

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

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.

If you need to repack your amplifier at a future time, replacement packaging is available from REDGUM Audio at a nominal charge.

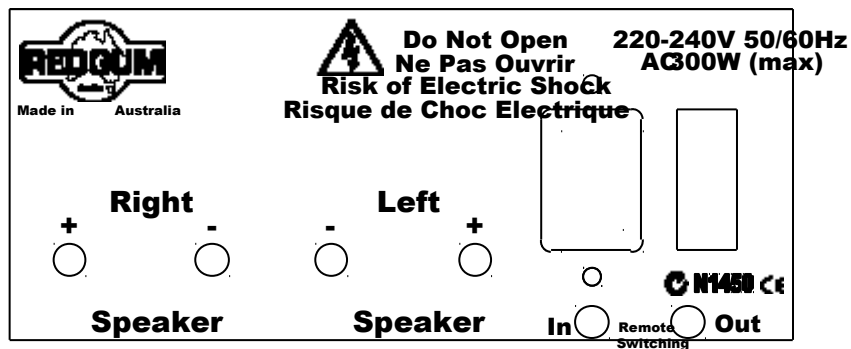
Contact REDGUM Audio Pty Ltd via the website.

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 amplifier are colour coded red (+) and black (-).



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

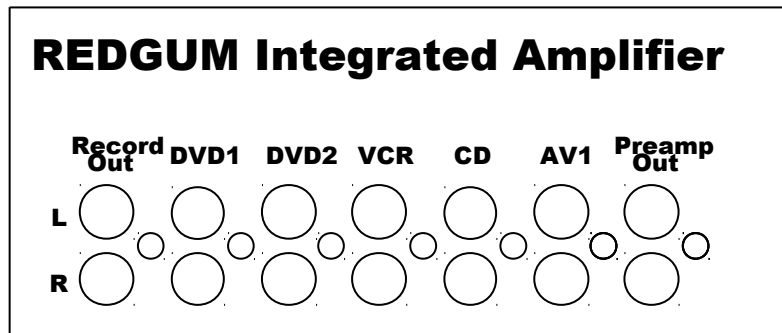
Step	Action
1	<p>Connect the:</p> <ul style="list-style-type: none">red (+) amplifier terminals to the respective red speaker (+) terminals; andblack (-) amplifier terminals to the respective black (-) speaker terminals. <p>Make sure when doing this that you connect the left/right speakers to the left /right channel outputs on the amplifier.</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).

DVD players, CD players and other components

There are five input connections at the rear of your amplifier labelled 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, model RGPH. If in any doubt, consult your dealer.

External power amplifier

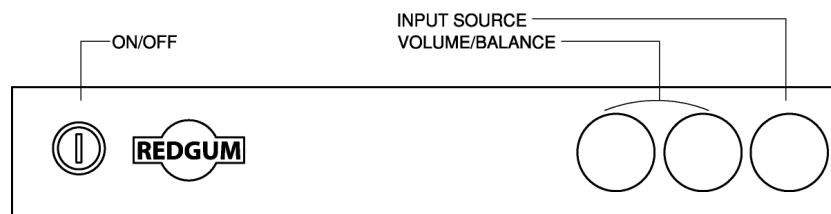
Your REDGUM amplifier comes with 'Preamp Out' sockets. This allows the amplifier's pre-amp stage to be connected to an external power amplifier if desired. To do this, connect your REDGUM amplifier's outputs marked left/right Pre-amp Out to the corresponding left/right Pre-amp inputs on the external power amplifier using high quality RCA interconnects.

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 amplifier 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 a key switch as the on/off control, or the option of a rocker/toggle switch if preferred.

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. N.B. Remote Control models will only operate with *the key* in the *on* position.

You may remove the key when the amplifier is turned on. However, it is recommended that you leave the key in place for convenience. If you do remove it, you can safely turn the amplifier on and off by using the rocker of the Circuit Breaker switch (marked Reset/Off) at the rear of the chassis. In this case, rocking the switch to the 'Reset' position will turn the amplifier on. Alternatively, you can safely turn the amplifier on and off from the power point when the Circuit Breaker switch is in the 'Reset' position.



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 several 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 the power 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, so protecting your equipment.

Volume and Balance control

REDGUM amplifiers are available in two versions using Dual Mono volume controls – manual or remote control.

For both manual and remote versions, the left rotary control affects the volume of the left speaker and the middle rotary control affects the volume of the right speaker.

When done manually, the simplest way to alter the volume level involves only one hand and is done by ear, so the setting chosen automatically adjusts for your room acoustic at the same time. To do this, set the volume for one channel at the generally desired level. Then by focussing on the other channel, bring the volume up till the image appears central.

Alternatively, the dual volume controls can be moved together easily, again using only one hand. Place the outer side of your hand onto the top of the two controls. With a slight downward pressure to maintain a “grip” on them, slide your hand to the left or right to adjust the volume. Should it be required because of room acoustics, further fine adjustments can be made with the individual controls once the volume level and position of image has been chosen. If preferred, a belt is available from the manufacturer that circles the two controls so they move together when only one control is turned.

For Remote Control models, the same left-right volume adjustment is done via the remote's Left-Right Arrow buttons. *Except* for the “Bal” (Balance) and “Mute” buttons, all functions are as commonly used in remotes of all kinds.

N.B. The “Mute” button cuts the volume by approximately 15dB, i.e. it is a partial rather than total Mute. Pressing the “Bal” (Balance) button is the quick way to match the volume levels of both channels. This results by recalibrating the levels up to 200 times within 2 seconds to achieve ± 0.1 dB balance.

For greater detail about the basic functions of the Dual Mono Remote Control, please see the “Firmware” page.

In addition, using the Dual Mono Remote Control, each amplifier can be personalised using REDGUM's own Control Options software (see separate Technical Information Section handout). For example, these options provide choices of a Professional Fade, “Memory Select” of last remembered volume level, and “Volume Control Movement” to help maintain the customer's intentionally set balance differential.

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 has 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 30cm (12in) from both the rear and side walls. Bigger distances will usually bring about an additional 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 creates the point of a triangle, where the other two points are formed by the speakers themselves. Start with your listening position making an isosceles 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 and excitement.

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 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 totally 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 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 the 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 contact the factory with the details and a replacement key will be sent by airmail the same day.

(Fax: +61 3 9018 4328, or email lostkey@redgumaudio.com)

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 heat sinks 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 amplifier 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. (See also section - Turning the amplifier on and off.)

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

RGi35 / RGi35ENR

(Dual Mono volume controls - manual or with Remote Control option)

Power Output RGi35:	35+35 Watt/Ch RMS (Transient 90 +90 WRMS)
Power Output RGi35ENR:	50+50 Watt/Ch RMS (Transient 120 +120 WRMS)
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:	> 120 amp
Audio Inputs:	5 inputs:- CD1, AV1, DVD, CD2 & AV2
Suggested Speakers:	REDGUM RGS Manna
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	420mm (W) x 360mm (D) x 93mm (H)
Shipping weight:	9 kg (8.2 kg cubic)

RGi60 / RGi60ENR

(Dual Mono volume controls - manual or with Remote Control option)

Power Output RGi60:	60+60 Watt/Ch RMS (Transient 132 +132 WRMS)
Power Output RGi60ENR:	75+75 Watt/Ch RMS (Transient 160 +160 WRMS)
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:- CD1, AV1, DVD, CD2 & AV2
Suggested Speakers:	REDGUM RGS Manna or RGS Lucens
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	420mm (W) x 360mm (D) x 93mm (H)
Shipping weight:	10 kg (8.2 kg cubic)

RGi120

(Dual Mono volume controls - manual or with Remote Control option)

Power Output RGi120:	120+120 Watt/Ch RMS (Transient 285 +285 WRMS)
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:- CD1, AV1, DVD, CD2 & AV2
Suggested Speakers:	REDGUM RGS Lucens or RGS Regnans
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	420mm (W) x 360mm (D) x 93mm (H)
Shipping weight:	11 kg (8.2 kg cubic)

RGi120ENR

(Dual Mono volume controls, SignWave heat sink - manual or with Remote Control option)

Power Output RGi120ENR:	155+155 Watt/Ch RMS (Transient 293 +293 WRMS)
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:- CD1, AV1, DVD, CD2 & AV2
Suggested Speakers:	REDGUM RGS Lucens or RGS Regnans
Cabinet Finish:	solid Red Gum wood fascia, powder-coated 1.6mm steel chassis
Dimensions:	420mm (W) x 360mm (D) x 93mm (H)
Shipping weight:	17 kg (16.5 kg cubic)

Warranty

REDGUM amplifiers are warranted to be free of defects in material and workmanship, subject to the following conditions and limitations, 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.

N.B. As per industry standard, fuses, lamps (LEDs) or batteries are not covered under warranty.

Should the product be faulty, the owner is liable for the cost of freight to the nearest REDGUM repair agent, or the REDGUM Audio 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 9018 4328

Alternatively, you may email the details (including Serial Number) to warranty@redgumaudio.com. (Not necessary for factory direct purchases.)

If you are not the original owner of this REDGUM product, feel free to send your unit's details to owners@redgumaudio.com so that you can be placed on the REDGUM Owner's Register. We welcome your feedback and would be happy to include you on our REDGUM Updates email list.