



Operating Manual

- A 4218 1 x 60W**
- A 4219 2 x 60W**
- A 4220 1 x 120W**
- A 4221 2 x 120W**
- A 4222 1 x 240W**
- A 4223 2 x 240W**
- A 4224 1 x 480W**
- A 4225 2 x 480W**

Distributed by Altronic Distributors Pty. Ltd. Phone: 08 9428 2199 Internet: altronic.com.au

IMPORTANT NOTE:

Please read these instructions carefully from front to back prior to installation. They include important setup instructions. Failure to follow these instructions may prevent the unit from working as designed.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions prior to use and retain these instructions for future reference.
2. Heed all warnings on the appliance and in the operating instructions.
3. The appliance should not be used near water or sources of moisture.
WARNING: To reduce risk of fire or electric shock, do not expose the appliance to rain or moisture. The appliance should not be exposed to dripping, splashing or objects filled with liquids such as vases.
4. Clean only with a dry cloth.
5. Do not block ventilation openings.
6. Do not install near any heat sources.
7. Protect the power cord from damage.
8. Only use attachments and accessories specified by the instruction manual.
9. Unplug the appliance during electrical storms or when unused for long periods.
10. Refer all servicing to qualified service personnel or contact your original place of purchase.
11. Please install the unit in a well ventilated environment.
12. Power sources - This product should only be operated from the type of power source indicated on the rating label.
13. Do not touch conductive parts of output terminals to prevent electric shock. The external wiring connected to the terminals requires installation by a qualified installer.
14. This equipment is designed for commercial and professional use only.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: To reduce the risk of electric shock, do not remove any cover from the appliance. No user serviceable parts inside. Refer servicing to qualified personnel only.

CAUTION: Due to power consumption of the appliance, it should not be used with power boards or other receptacles to prevent overloading of the connected power outlet.

INTRODUCTION

Thank you for purchasing this Redback compact half rack PA amplifier. This amplifier has been designed with multi zone systems in mind, offering the ability to mix and match different zone amplifier power ratings and channel configurations within a single unit of 19" rack space.

UNPACKING & INSTALLATION

We encourage you to read this manual thoroughly prior to installation so that you can be aware of key installation requirements such as ventilation and environmental factors such as heat, moisture or excessive humidity. Use the following pages to connect your amplifier to your speaker system, taking care to follow the instructions in regards to 100V line or 8 Ohm low impedance set up.

FEATURES:

- Modular design allows for mix and match amplifiers within 1RU rack space.
- Class-D design with excellent performance and efficiency.
- LED indicators for protection mode, clipping condition and signal presence.
- 100V line or 8 ohm output via screw terminals.
- Stereo RCA line input.
- Balanced line input via 3 pin Euroblock pluggable terminal.
- High pass filter at 180Hz -3dB.
- Built-in short circuit, overload and high temperature protection.
- 2 year warranty.

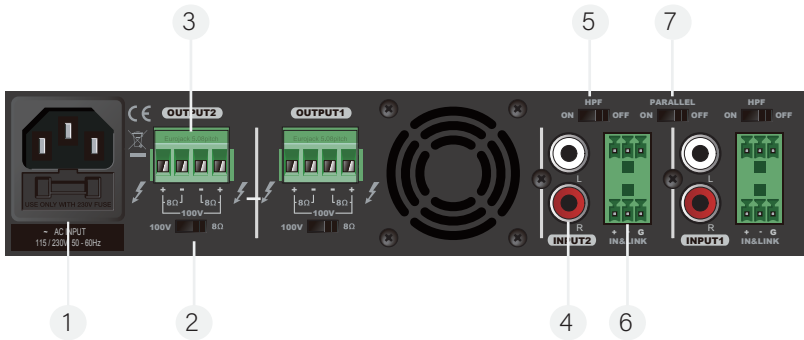
Compact Half Rack 100V PA Amplifiers

FRONT PANEL



1. **INPUT 1 volume:** Adjusts input 1 volume.
2. **LOW tone control (BASS):** Adjusts the low frequency, 100Hz +/-10dB.
3. **HIGH tone control (TREBLE):** Adjusts the high frequency, 10kHz +/- 10dB.
4. **SIGNAL indicator:** Turned on when output signal is present.
5. **PROTECTION indicator:** Turned on when the amplifier goes into protection mode by over current or over temperature.
6. **CLIP indicator:** Turned on when output signal exceeds rated level. If this indicator is activated then turn the volume down.
7. **INPUT 2 volume:** Adjusts input 2 volume.
8. **POWER indicator:** Turned on when the device is powered on.
9. **POWER switch:** Turn on and off the power of device.

REAR PANEL



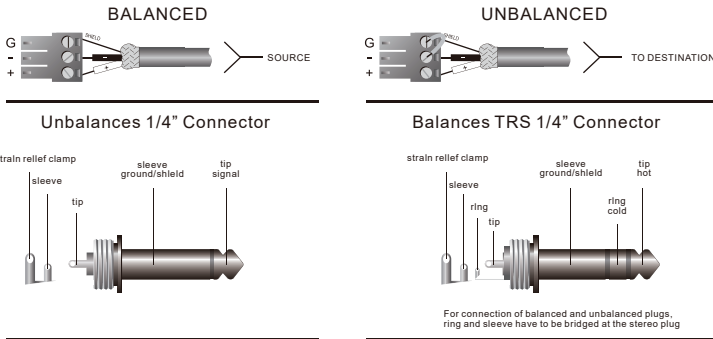
1. **AC INPUT CONNECTION:** When connecting power, connect the power cord to the connector and then plug it into an appropriate AC power outlet. Before connecting or disconnecting the power cord, make sure that the power to the device is turned off.
2. **OUTPUT SELECTION:** Sets the output impedance of the amplifier. High impedance for 100V line connection, low-impedance for 8 Ohm connection.
3. **SPEAKER CONNECTIONS:** Before connecting speakers, make sure that the power of the device is turned off. If the power is on, there is a risk of electrical shock.
4. **UNBALANCED INPUT:** RCA connector can be accepted unbalanced LINE input.
5. **HIGH PASS FILTER:** High pass filter 180Hz -3dB.
6. **BALANCED INPUT & LINK OUT:** Terminal block can be connected balanced LINE input and balanced LINK output.
7. **PARALLEL:** Input parallel selector. ie. Connect input 1 source to input 2.

SET UP & INSTALLATION

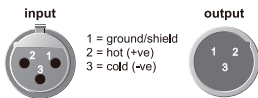
CAUTION: Before you begin, make sure your amplifier is disconnected from the power source, with the power switch in the "OFF" position and all level controls turned completely down (counterclockwise). To ensure adequate cooling in rack mount installations, we recommend you provide a 1RU gap between amplifiers. If using in a desktop situation (ie with rubber feet installed), the amplifiers can be stacked.

WIRING GUIDE

We recommend using pre-built or professionally wired balanced line connection cables (22 to 24 gauge). The diagram below shows connector pin assignments for wiring. The RCA input connections can also be used for unbalanced inputs.



XLR Balanced Wiring Guide



For unbalanced use pin 1 and pin 3 have to be bridged

OUTPUT WIRING GUIDE

For the amplifier output connectors, We recommend using heavy gauge speaker cable. Euro block screw terminals are provided for connection. Ensure there are no short circuits in your wiring by inserting the conductor completely into the terminal before securing so that the insulation prevents conductors from making contact. Using the guidelines below to select the appropriate size wire based on the distance from amplifier to speaker. Do not use shielded cable for output wiring.

Wiring should only be completed by qualified installation technicians.

8 Ohm Wiring Size

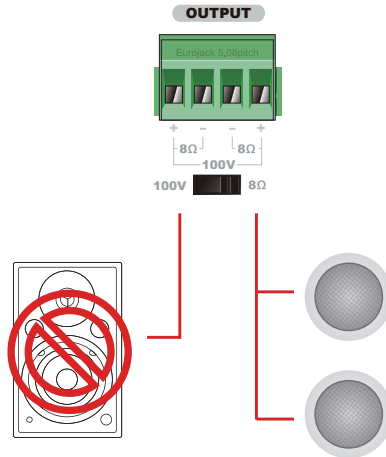
Distance	Wiring Size
Up to 10m	16 AWG
10 - 13m	14 AWG
13 - 19m	12 AWG
19 - 30m	10 AWG
30 - 45m	8 AWG
45 - 60m	6 AWG

100V Line Wiring Size

Wattage	18 AWG	17 AWG	15 AWG	14 AWG	11 AWG	10 AWG
30W	800m	1066m	1600m	2666m	4266m	6400m
60W	400m	533m	800m	1333m	2133m	3200m
120W	200m	266m	400m	666m	1066m	1600m
240W	100m	133m	200m	333m	533m	800m

CONNECTION - CAUTION WARNING

Never use both low impedance (8Ω) and high impedance (100V) terminals at the same time. Switch the impedance selector to the desired output. An 8 Ohm speaker shall be connected to the output terminals with + and - connected. The 100V output shall be connected to both + terminal connections.



[Figure 2.3 Wrong connection]

CONNECTIONS

INPUT : Connect unbalanced or balanced line-level sources to amplifier inputs. Set volume accordingly. Connect unbalanced line-level signals to RCA input connectors.

OUTPUT : Maintain proper polarity on output connectors. For each output channel, connect the output terminals to the speaker loads.

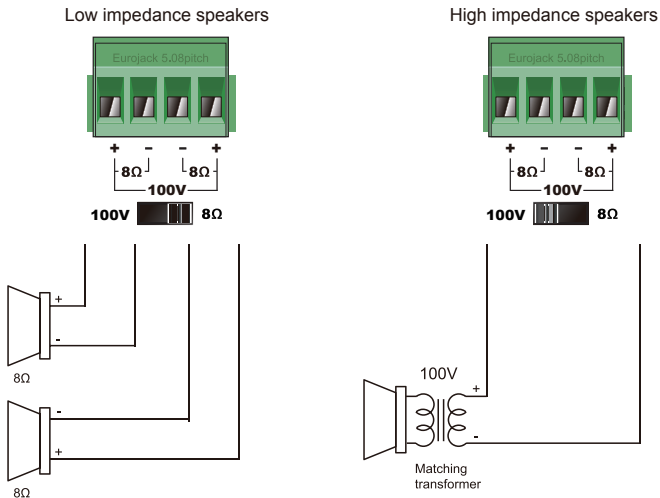
Use terminals marked 8 Ohm (+,-) for low impedance speaker connection. Use terminals marked 100V (+,+) for constant voltage speaker connection.

The impedance and output voltage are listed below:

Output voltage and impedance.

	A4218	A4219	A4220	A4221	A4222	A4223	A4224	A4225
8 Ohm	22V	22V	31V	31V	44V	44V	62V	62V
100V	167Ω	167Ω	83Ω	83Ω	42Ω	42Ω	21Ω	21Ω

Impedances indicated in the table above represent the total speaker system impedances.



**CAUTION: Select 8 Ohm position for low impedance speakers.
Select 100V position for high impedance speakers.**

Compact Half Rack 100V PA Amplifiers

SPECIFICATIONS

Model	A4218	A4219	A4220	A4221	A4222	A4223	A4224	A4225
Rated power (8Ω)	2x30W	4x30W	2x60W	4x60W	2x120W	4x120W	2x240W	4x240W
Rated power (100V)	60W	2x60W	120W	2x120W	240W	2x240W	480W	2x480W
Input sensitivity	0dBu / 10K Ohm unbalanced/balanced.							
Power supply:	AC 110-240V 50/60Hz							
Power consumption:	105W	195W	195W	360W	325W	635W	588W	1120W
Speaker output:	100V / 8 Ohm							
Frequency response:	80Hz - 17Khz (+1dB / -3dB)							
S/N ratio:	>80dB (with A-weight)							
THD:	<1% (at rated power, 1kHz)							
Output channel:	1 or 2 channels							
Tone control:	Bass: 100Hz (±10dB), Treble: 10KHz (±10dB)							
Working humidity:	90%							
Working temp:	0°C to +40°C							
Product size:	215 x 44 x 330mm (half 19" rack size)							
Weight:	3.5kg							

Specifications subject to change without notice.

ACCESSORIES



H 5192 Single Amplifier Rack Mount Ears



H 5193 Dual Amplifier Rack Mount Ears

WARRANTY STATEMENT

Redback warrants this product for two years from date of purchase. If this item is part of an installation or another product, please contact the installer or supplier for your warranty.

During the warranty period, we undertake to repair or replace your product at no charge if found to be defective due to a manufacturing fault. The warranty excludes damage by misuse or incorrect installation (i.e. failure to install and operate device according to specifications in the supplied instruction manual), neglect, shipping accident, or no fault found, nor by use in a way or manner not intended by the supplier.

For repair or service please contact your PLACE OF PURCHASE.

If this item was purchased directly from Redback distributor (Altronics) please make a warranty claim by:

1. FOR ONLINE CUSTOMERS (includes school and trade orders),

- a) Calling your nearest store location and quoting your tax invoice number.
- b) Upon contacting Altronics, we will issue an R.A. (Return Authorisation). As Altronics have a number of service agents throughout Australia, a copy of the R.A. will be emailed to you with full instructions of how and where to send the goods. The freight for shipping goods back to Altronics for all repairs is at the customers expense.
- c) A copy of the R.A. form, (or at the very minimum, the R.A. number) must accompany the goods to effect the repair.
- d) Altronics will pay the return freight to the customer where the warranty claim has been accepted.
- e) Please quote the R.A. number in any correspondence to us.

2. FOR OVER THE COUNTER PURCHASES to make a warranty claim, please return the goods to us in any of our stores, with a copy of your proof of purchase (tax invoice).

- a) Upon leaving the goods at one of our stores, an R.A. number will be issued to you.
- b) Once repaired, you will be contacted, advising that the goods are ready to be collected from the store.

It is at Altronics discretion as to whether the goods will be repaired or replaced (whilst under warranty); and as to whether identical goods will be used to replace the item due to changes of models / products.

Note: Under no circumstances should you attempt to repair the device yourself or via a non-authorized Altronics service centre, as this will invalidate the warranty!

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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Warranty Statement Revision 16/10/2020

