



Operating Manual

A 4235 30W Mixer Public Address Amplifier

A 4245 60W Mixer Public Address Amplifier

A 4255 100W Mixer Public Address Amplifier



OVERVIEW

These compact 1RU rack mount amplifiers are suitable for both stand alone PA system use, or as zone amplifiers in larger systems requiring local inputs. All models operate on 240V ac or 24V dc for battery backup operation. All models include a choice of six source options on 2 inputs. Input one consists of a 3-pin XLR which can be set for either balanced mic level (3mV) or balanced line level (2V), adjusted via a rear mounted trimpot. A dual RCA is also provided on input one with adjustable sensitivity of either 300mV or 1V. Input two consists of three sets of dual RCA sockets on the rear panel and a 3.5mm jack on the front panel. Auxiliary source inputs are selected via the front panel switch. Input one can be DIP switch selectable to VOX mute input two. Phantom power is also provided on input one XLR. Volume level controls are provided on the front panel for inputs one and two. The circuit includes protection features in case of output over voltage, over current and over temperature. All are self-resetting once the fault condition is removed. Visual indication via front panel LEDs display amplifier status at all times.

FEATURES

- Compact 1RU 19" rack mount design
- Balanced mic or line input
- VOX muting
- Phantom power
- Four auxiliary inputs
- 3.5mm Jack Input (Front Mounted)
- Overload limiting
- Over voltage limiting
- On demand fan cooling (60W and 100W versions only)
- Over temperature shut down protection
- Dual input connectors
- Variable input sensitivities
- 240V ac / 24V dc operation
- Australian designed & manufactured

REAR PANEL

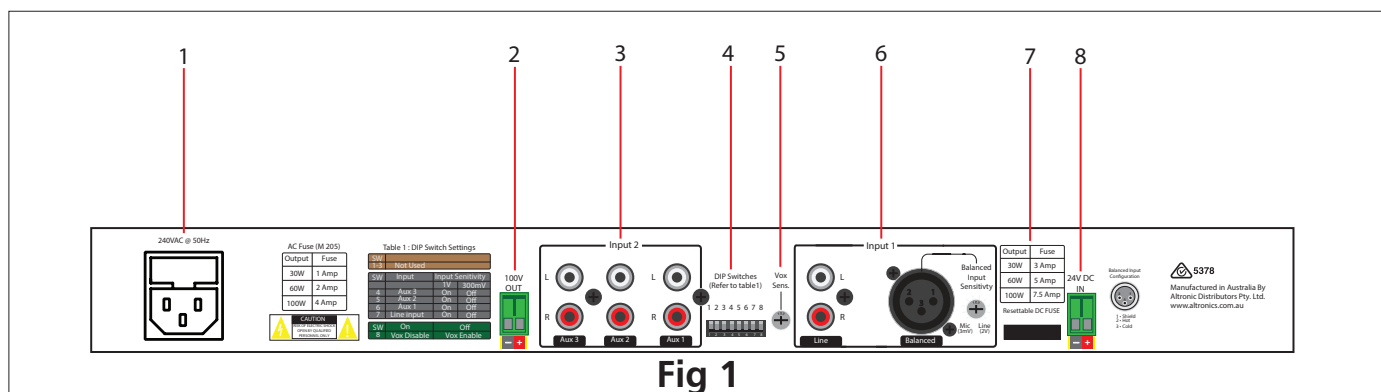


Fig 1

- 1 240V AC Input**
Connect to a 220-240V AC @ 50Hz power source.
- 2 100V Output**
Speakers fitted with a 100V line transformer may be connected. Always ensure that the total load of the speakers does not exceed the rated output of the amplifier ie 333Ω minimum at 100V for the A 4235 (30W), 166Ω minimum at 100V for the A 4245 (60W) and 100Ω minimum at 100V for the A 4255 (100W). Otherwise either the DC or mains fuse could blow or the fault led activate and the amp will shut down. Always be careful to avoid short circuits and connection to the wrong terminals. Refer to Fig 2 and Fig 3 for more details about the impedance of speakers and how to check the impedance.
- 3 Input 2**
Input 2 consists of 3 sets of Dual RCA inputs and a front mounted 3.5mm jack. Each of these inputs has an adjustable input sensitivity of either 300mV or 1V set by DIP switches 4-6. The input is selected by the rotary switch on the front of the unit which has four positions. Three of the positions select the three RCA inputs and the fourth position selects the music input on the front of the unit. Volume is adjusted by the Input 2 volume pot on the front of the unit.
- 4 DIP Switch Settings**
The A 4235 range of amplifiers have a set of options which are enabled via the DIP switches 1-8.

Switch 1-3	Not used
Switch 4-6	sets the input sensitivity for the Auxiliary RCA inputs on Input 2 to either 1V or 300mV.
Switch 7	sets the input sensitivity for the Dual RCA line input to either 1V or 300mV. Note: this only affects the line input.
Switch 8	Input 1 can be set to Vox Input 2 and is switched on via DIP 8.
- 5 Vox Sensitivity**
When the VOX is set to "ON" via DIP 8, Input 2 is muted when audio at Input 1 is present. The sensitivity of the VOX circuit is adjusted via this trimpot.
- 6 Input 1**
Input 1 can be used for mic or line input operation. The dual RCA line input has adjustable line input sensitivity of either 300mV or 1V (Set by DIP switch 7). The balanced XLR input has an adjustable input sensitivity from 3mV up to 2V. Phantom power is available on the balanced XLR input. Volume is adjusted via the Input 1 volume pot on the front of the unit.
- 7 Resettable DC Fuse**
Used to protect the unit when powered from 24V DC. This fuse is resettable by pressing the red button.
- 8 24V DC Input**
Battery Backup: Provision has been provided to run the amplifier from a suitably rated 24V battery system in the event of a mains failure. Using appropriately rated cable, connect the battery to the "24V DC In" terminals. Observe correct polarity when connecting.

TROUBLE SHOOTING

If the REDBACK amplifier fails to deliver the rated performance, check the following:

No Power, No Lights

Make sure amplifier power switch is on. Make sure mains power switch is on at the wall. Check the mains and DC fuse. Replace with only the correct type and rating. Over rated fuses will invalidate warranty.

Distorted Output

Check that the speaker type is correct for the output that you are using (ie. 4-16Ω, 70V or 100V line). Check for any short circuits on the speaker line. Check speaker line impedance. Note you must use an impedance meter for this such as Altronics Q 2001.

Very Low Output Volume

Make sure that the input is the correct level (check for shorted connectors). Check for any short circuits on the speaker line.

Check input DIP switches are set correctly.

Continually Blows Fuses

Make sure that the speaker line is not shorted. Check speaker types, ratings and if on correct output.

Amplifier Keeps on Cutting In & Out

Make sure that there is adequate ventilation around the amplifier. Check the vent slots on the front, top and sides are not covered or blocked and the fan on the rear is functioning correctly. Check also speaker types, ratings and for any short circuits on the speaker line.

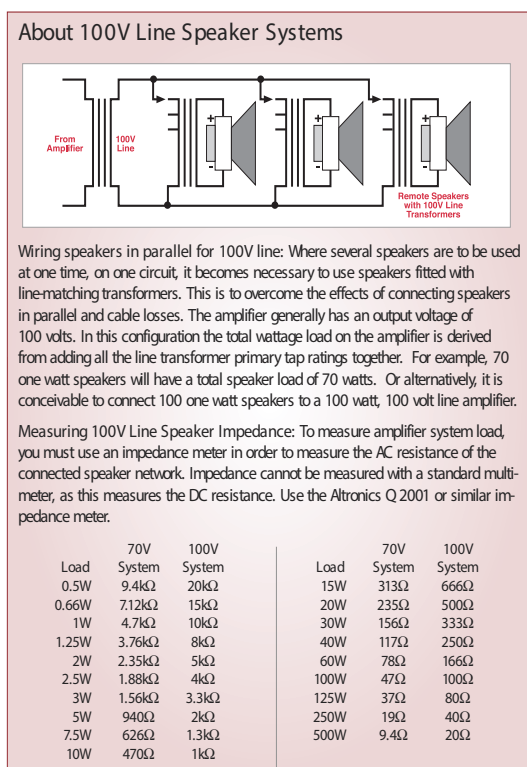


Fig 2



Altronics Q 2001 Impedance Meter

Fig 3

SPECIFICATIONS

POWER OUTPUTS

A 4235:30 watts RMS
A 4245:60 watts RMS
A 4255:100 watts RMS
Distortion:.....< 0.5%, @ 1kHz

FREQUENCY RESPONSE

Mic input:.....50Hz - 12kHz, -3dB
Line input:50Hz - 15kHz, -3dB

SENSITIVITY

Mic input:3mV-2V balanced
Line input:.....300mV-1V
Aux inputs: 300mV-1V
3.5mm input: 600mV

SIGNAL TO NOISE RATIO

Mic input:> 75dB below rated output
Line input:.....> 81dB below rated output

OUTPUT CONNECTORS

Speakers:Screw terminals

INPUT CONNECTORS

Input1:3 pin XLR balanced or 2 x RCA
Input2:3 x RCA and 3.5mm Jack
24V DC power:Screw terminals
240V AC power:IEC power connector

***Specifications subject to change without notice**

Other 1RU Amplifiers in this range

A 4230 30W Public Address Amplifier

A 4240 60W Public Address Amplifier

A 4250 100W Public Address Amplifier



Distributed by Altronic Distributors Pty. Ltd.
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User manual revision number: 1.0 15/07/2013