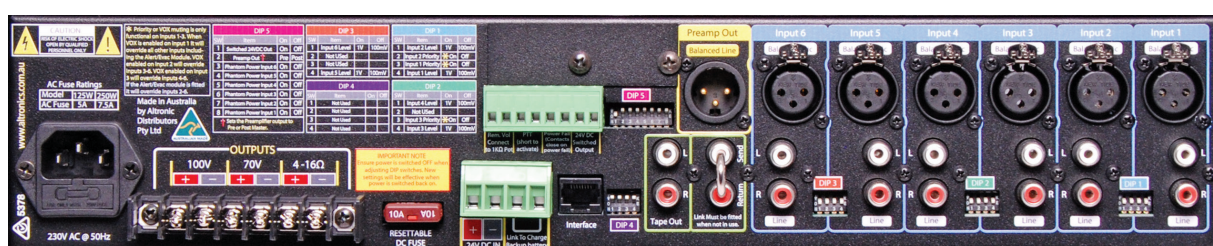


# REDBACK PHASE 5



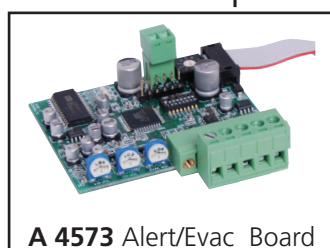
## Operating Manual

**A 4275A 125W Mixer Amplifier**  
**A 4285A 250W Mixer Amplifier**

## Optional Extras



**A 2711 MP3 Module**



**A 4573 Alert/Evac Board**



**A 2280B Remote Volume**



**D 2111 Keyboard USB/PS2**

Redback® Proudly Made In Australia

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 Phone: 1300 780 999 Fax: 1300 790 999 Internet: www.altronics.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 amplifier from working as designed.

**REDBACK** is a registered trademark of Altronic Distributors Pty Ltd

Since 1976 Redback amplifiers have been manufactured in Perth, Western Australia by Altronics. With over 40 years experience in the commercial audio industry, we offer consultants, installers and end users reliable products of high build quality with local product support. We believe there is significant added value for customers when purchasing an Australian made Redback amplifier or PA product

## **Australian Made Status**

All Redback house products made by Altronics will now be sporting the official Australian Made logo. Since starting manufacturing of commercial audio equipment in the mid 70's we have always taken pride in producing a quality local product.

The new adoption of the Australian Made logo will help us get the word out to local and export markets that our products carry the official compliance seal of the Australian Made campaign. We have always pushed our 'local is better' line in all of our marketing efforts, it's always an added boost when you are backed up by a widely recognised and respected icon.

## **Industry leading 10 year warranty.**

There's a reason we have the industry leading DECADE warranty. It's because of a long tried and tested history of bulletproof reliability. We've heard PA contractors tell us they still see the original Redford amplifier still in service in schools - that's over 40 years of operation - and still going strong!

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## 1.0 OVERVIEW

### 1.1 INTRODUCTION

The REDBACK range of mixer amplifiers are engineered to a very high standard and are packed with a host of features to satisfy a large range of installations.

### 1.2 FEATURES

- Very low noise and distortion
- Thermal overload protection
- Thermally cued forced fan cooling
- Protect Mode
- 4 levels of priority/Vox muting
- LCD display of amplifier status
- Minimum and Maximum Master Volume Over-ride
- Minimum and Maximum Remote Volume Over-ride
- USB keyboard interface for labelling of inputs and installer contact details.
- 6 inputs configurable as balanced microphone or line
- Music Input on front panel
- Adjustable line level sensitivity
- 70V, 100V and 4-16ohm outputs
- 240V AC or 24V DC operation
- 300mA Backup Battery charging
- Phantom power (on microphone inputs)
- Tape out (Dual RCA)
- Pre-amp send and return connections (RCA)
- Balanced line output (3 pin male XLR)
- Remote Volume option
- 24V switched output via PTT microphone (not supplied)
- 19" Rack Mount (2 unit).
- Optional Alert/Evac tones with voice-over message (via A 4573 module)
- Optional MP3 input with remote control (via A 2711 module)

### 1.3 WHAT'S IN THE BOX

A 4275A/85A Mixer Amplifier  
240V AC IEC C13 Appliance Mains Lead 10A 3 Pin Black  
Instruction Booklet

## 1.4 FRONT PANEL GUIDE

Fig 1.4 shows the layout of the front panel.

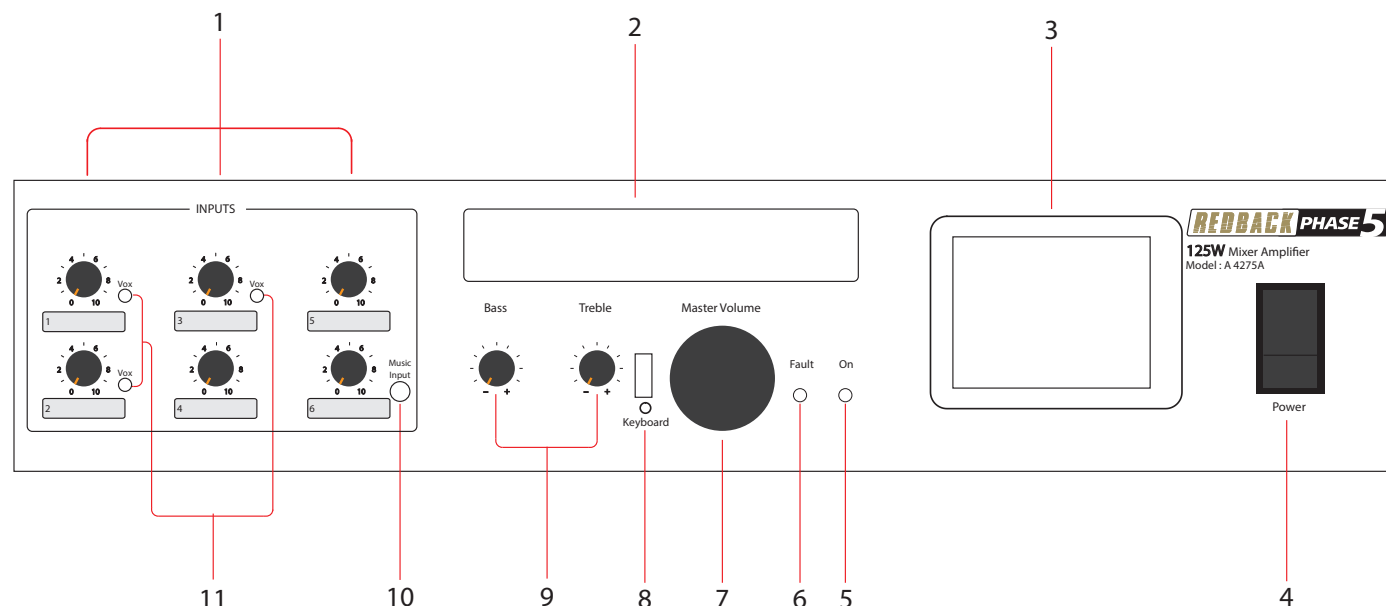


Fig 1.4

### 1 Inputs 1-6 volume controls

Use these controls to adjust the output volume of inputs 1-6.

### 2 Optional Music Input Module

Remove this cover to install optional music input module. This module over-rides the rear input 6 and is adjusted via the volume 6 pot.

### 3 LCD

Displays amplifier status, input and output levels, heatsink temperature, faults, voltage input and input labels.

### 4 Power Switch

Use this to turn the unit on.

### 5 On Indicator

This led indicates the unit has power.

### 6 Fault Indicator

This led indicates when the amplifier has a fault.

### 7 Master Volume

Use this control to adjust the master volume. This is a multi-turn adjustable control.

### 8 USB - PS2 compatible keyboard input.

Use a standard PS2-USB keyboard (such as Altronics D 2111) to label inputs, installer information and to access some additional features. (see section 1.10 for more details)

### 9 Bass and Treble Controls

Use these controls to adjust the bass and treble.

### 10 Music Input

Use this input to connect a portable music player. This input over-rides the rear input 6 and the optional Music input module (if fitted) and is adjusted via the volume 6 pot.

### 11 Vox level controls

Use these controls to adjust the vox sensitivities of inputs 1-3.

## 1.5 REAR PANEL CONNECTIONS

Fig 1.5 shows the layout of the rear panel.

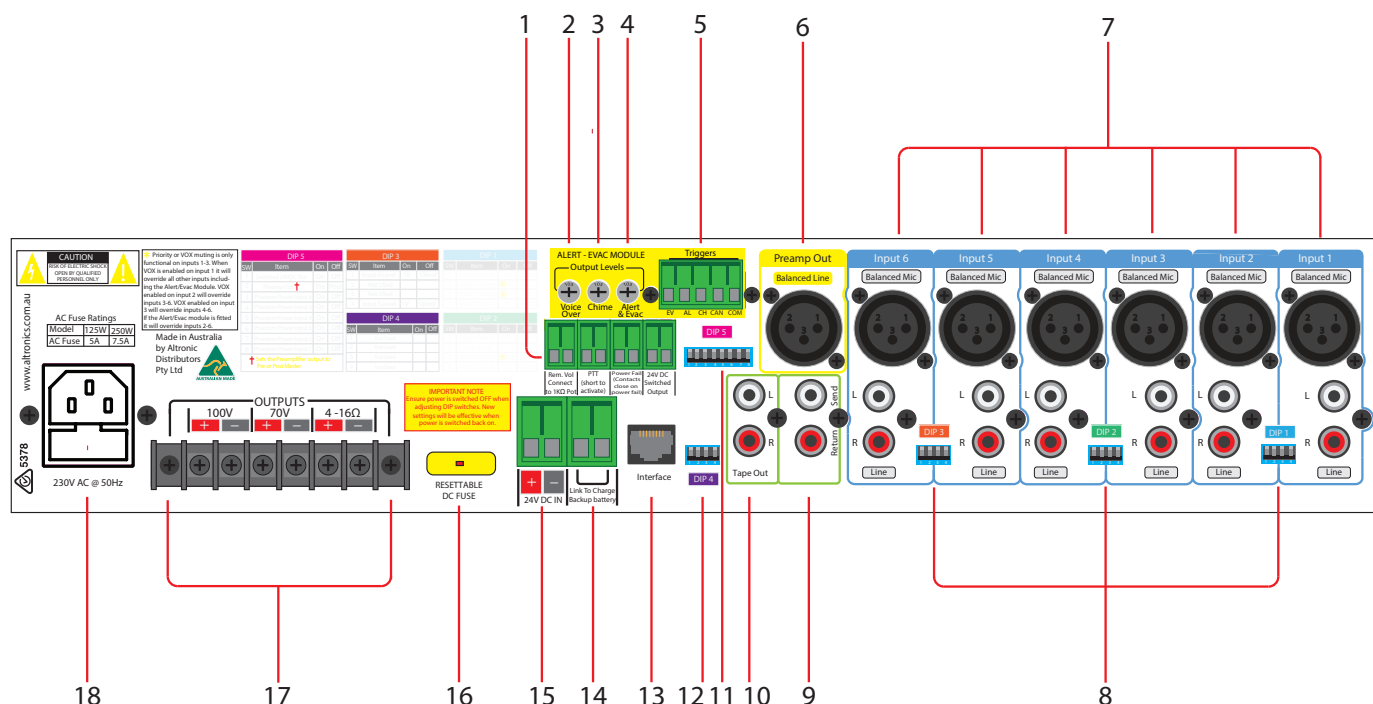


Fig 1.5

## 1 Switched 24V 1A output, PTT (Push to talk) muting, Remote Volume and Power fail Contacts

### Switched 24V 1A output

When set to "On" via the output DIP switch (see DIP switch settings section 2.3 ) 24V DC appears at the "24V DC Switched Out" terminals on the rear panel, whilst the PTT terminals are shorted together, or whenever any priority/Vox is activated. The switched 24V output could be used to control external devices like remote volume controls with bypass relays for emergency paging.

### PTT Muting Contacts

These contacts are shorted together to activate. The PTT (Push to talk) is normally done with the switch of a push to talk microphone.

### Remote Volume

Overall volume can be adjusted by a remotely located volume control. This requires a two wire figure 8 type cable and a 1kohmΩ potentiometer connected as shown in section 2.6. Maximum distance 100m.

### Power Fail Contacts

These contacts close when the power to the amplifier is removed. This could be used to activate a buzzer or remote warning light to indicate power failure to the amplifier. The A 4275A/85A range of mixer amplifiers have provision to plug in an optional Alert/Evacuation module (A 4573). The controls are listed below (see section 2.5 for more details).

## 2 Voice Over Volume

Use this trimpot adjustment to change the output level of the playback message.

## 3 Chime Volume

Use this trimpot adjustment to change the output level of the chime volume.

## 4 Alert and Evacuation Volume

Use this trimpot adjustment to change the output level of the alert and evacuation tone.

## 5 Alert, Evacuation, chime and cancel contacts

Use these contacts to trigger the chime tones, the alert tone, the evacuation tone and to cancel any of the tones once triggered. All tones & cancel function are operated by a closing contact to ground. This could be triggered via building fire indicator board, break glass alarm etc.

## 6 Preamp Out (Balanced Line Output)

A 3 pin 600ohm 1V balanced XLR output is provided for passing the audio signal on to other slave amplifiers or to record the output of the amplifier. This output can be set up to be effected (post master volume) by the master volume control or unaffected (pre master volume). Factory default setting disables the preout. (Refer to section 2.3 DIP switch settings).



**7 Input connectors**

There are 6 sets of inputs which can be either balanced mic or line inputs. The line inputs are dual RCA connectors which are internally mixed to produce a mono input signal.

**8 DIP SW 1-3**

Inputs 1-6 include an individual 4 way dip switch enabling adjustable input sensitivity (100mV or 1V) and Priority/VOX muting for inputs 1-3.

Priority/VOX muting is not available on inputs 4-6.

Note, when the Priority/VOX muting function is selected (inputs 1-3) it will operate with the input set for either microphone or line operation. (see section 2.3 for DIP Switch settings)

**9 Pre - amp send and return**

This allows external effects units, ie Graphic EQ'S , companders or signal processors to be connected to the amplifier. When not using this feature the send and return outputs must be linked externally (factory fitted). The amplifier will not work without this link. Only when an external effects unit is used can it be removed. (see section 2.8 for more details)

**10 Tape Out**

Dual RCA's provided for recording purposes. This level is post master volume. (see section 2.8 for more details)

**11 DIP SW 5**

These DIP switches set the 24VDC switched output status, determine the Preamp output as pre master volume or post master volume and also set the phantom power to the balanced inputs. (see section 2.3 settings)

**12 DIP SW 4**

Not currently used.

**13 RJ45 Interface**

This is for future expansion of product.

**14 Battery Charging**

The amplifier is provided with a trickle charge circuit to maintain the batteries in a charged condition. The charge rate is approximately 300mA. Simply link the terminals marked "link to charge backup battery" on the rear of the amplifier. A flat battery will generally take overnight to charge, or even longer depending on the battery capacity. (see section 2.9 for more details)

**15 24VDC IN**

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. (see section 2.9 for more details)

**16 DC Resettable fuse**

This fuse protects the internal power supply. If the fuse is tripped it is easily reset by pressing the small button on the fuse.

**17 Output Connections**

Speakers with total impedance of 4 to 16 ohms, or speakers fitted with a 70V/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 either 4Ω minimum for the 4-16Ω terminals or 80Ω minimum at 100V for the A 4275 (125W) and 40Ω minimum at 100V for the A 4285A (250W). Otherwise either the DC or mains fuse could blow or the fault led activate and the amp will shut down. (See the table below.) Always be careful to avoid short circuits and connection to the wrong terminals.

**18 240V AC power socket (Australian standard)**

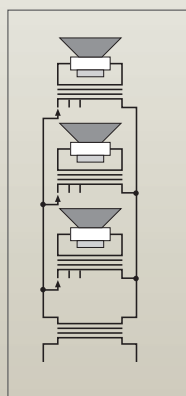
Connects to 240V AC mains power with the included IEC lead.

**About 70V & 100V Line Speaker Systems**

Wiring speakers in parallel for 70/100V line: Where several speakers are to be used at one time, on one circuit, it becomes necessary to use speakers fitted with line-matching transformers. This is to overcome the effects of connecting speakers in parallel and cable losses. The amplifier generally has an output voltage of 100 volts (70 volts is typically used in North America, however operation is similar). In this configuration the total wattage load on the amplifier is derived from adding all the line transformer primary tap ratings together. For example, 70 one watt speakers will have a total speaker load of 70 watts. Or alternatively, it is conceivable to connect 100 one watt speakers to a 100 watt, 100 volt line amplifier.

Measuring 70/100V Line Speaker Impedance To measure amplifier system load, you must use an impedance meter in order to measure the ac resistance of the connected speaker network. Impedance cannot be measured with a standard multimeter, as this measures the dc resistance. Use the Altronics Q 2003 or similar impedance meter.

Load	70V	100V
0.5W	9.4kΩ	20kΩ
0.66W	7.12kΩ	15kΩ
1W	4.7kΩ	10kΩ
1.25W	3.76kΩ	8kΩ
2W	2.35kΩ	5kΩ
2.5W	1.88kΩ	4kΩ
3W	1.56kΩ	3.3kΩ
5W	940Ω	2kΩ
7.5W	626Ω	1.3kΩ
10W	470Ω	1kΩ
15W	313Ω	666Ω
20W	235Ω	500Ω
30W	156Ω	333Ω
40W	117Ω	250Ω
60W	78Ω	166Ω
100W	47Ω	100Ω
125W	37Ω	80Ω
250W	19Ω	40Ω
500W	9.4Ω	20Ω



**Altronics Q 2003  
Impedance Meter**

## 1.6 LED STATUS INDICATORS

There are two led's on the front panel which indicate when power is available and if there is a fault.

The fault led will turn on under the following conditions.

### Overtemp

When the amplifier reaches a dangerous temperature the unit will shutdown, preventing damage. If this occurs, check for short circuits on the speaker line or objects blocking the amplifiers air vents.

## 1.7 PROTECT MODE

If the amplifier reaches a critical temperature or is over-driven it will shutdown.

The amplifier has been designed with an in built protection mode which will throttle the amplifier back to 50% output if it nears the shutdown temperature.

If the Protect Mode is active the amplifier LCD will flash "ON" and "OFF" to highlight that there is a problem with the amplifier. The fault condition will be displayed on the screen.

## 1.8 LCD STATUS INDICATORS

The LCD is used to offer more detailed information about the status of the amplifier.

The following elements can all be indicated on the display but may not be visible unless required.

- Signal presence
- Master Volume Level
- Amplifier Output level in dB
- Remote volume level
- Current Limit Condition
- Voltage Limit Condition
- Heatsink Temperature
- 230V AC Presence
- 24V DC Presence
- Alert/Evac Activation

## 1.9 LCD OVERVIEW

Fig 1.9 shows the layout of the LCD.

- 1 Zone Label**  
The Amplifier can be given a specific name so it is easily distinguishable. (Eg Sports Bar, Level 5 etc) (see section 1.10 for more details).
- 2 Mains Status Indicator**  
Indicates when the unit has mains power.
- 3 24V DC Status Indicator**  
Indicates when the unit has a 24V DC backup supply connected.
- 4 Heatsink Temperature Indicator**  
Displays the temperature of the internal heatsink.
- 5 Protect Mode**  
If the amplifier reaches a critical temperature the amplifier will go into protection mode.
- 6 Current Limit Indicator**  
If the amplifier goes into an over current status this indicator will come on. (see section 1.6 for more details)
- 7 Voltage Limit Indicator**  
If the amplifier goes into an over voltage status this indicator will come on. (see section 1.6 for more details)



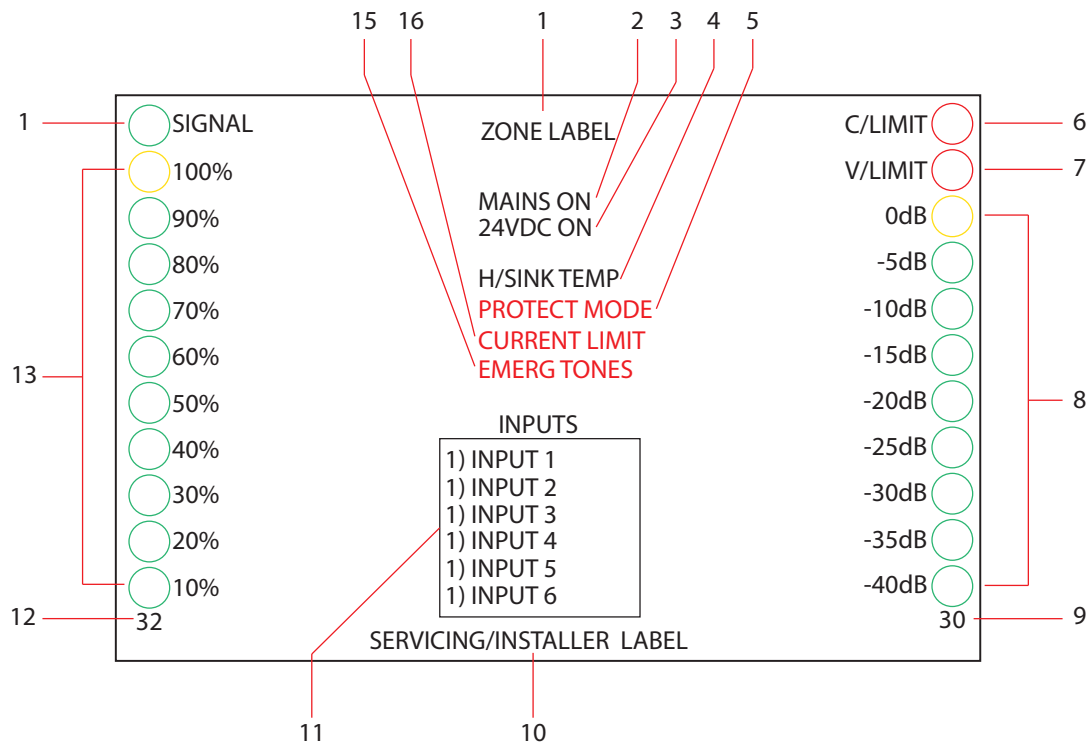


Fig 1.9

- 8 VU Meter**  
Displays the output of the amplifier in 5dB increments.
- 9 VU Level**  
Displays the actual dB output of the amplifier.
- 10 Servicing/Installer label**  
The Amplifier can be given a label which the installer can use for servicing details (such as "For service Call 1300 123 456") (see section 1.10 for more details).
- 11 Input labels**  
The Amplifier has 6 inputs which can all be given a meaningful label (such as DVD,CD Tuner etc) (see section 1.10 for more details).
- 12 Master Volume Level**  
Displays the actual master volume level.
- 13 Master Volume Meter**  
Displays the master volume level in 10% increments.
- 14 Signal Presence Indicator**  
Indicates when the amplifier has an input signal.
- 15 Emergency Tones Indicator**  
Indicates when the optional A 4573 Alert/Evac Module is active.
- 16 Current Limit Indicator**  
Indicates when the amplifier is drawing its maximum current.

## 1.10 Label the Input Sources, Service Information and setting up Min and Max Volumes

A number of options in the A 4275A/85A amplifier can be configured through the LCD by connecting a keyboard.

- Label Input Sources
- Label the Zone
- Label Servicing (or Installer) information
- Set Minimum and Maximum Remote Volume Levels
- Set Minimum and Maximum Master Volume Levels

Plug a standard PS2-USB keyboard (such as Altronics D 2111) into the USB socket on the front of the amplifier. The keyboard will be automatically detected and navigate the user to the amplifier setup screen.

There are a number of options available.

### 1) Label the input sources

Press the letter "i" on the keyboard. This will navigate the user to the "label inputs screen". Press the numbers 1-6 on the keyboard to select the input to label. Audio source examples might include CD Player, Radio, etc. A maximum of ten characters is available for each label. To use capital letters hold down the shift key when typing.

### 2) Label the Zone.

Press the letter "z" on the keyboard. This will navigate the user to the "label Installer screen". Type in the label required and press return. Press escape to exit back to the main label input screen.

### 3) Label the Service Information.

Press the letter "s" on the keyboard. This will navigate the user to the "label Zone screen". Type in the label required and press return. Press escape to exit back to the main label input screen.

### 4) Reset all Labels.

Press the letter "r" on the keyboard. This will navigate the user to the "reset all labels screen". Press enter to confirm or ESC to exit.

### 5) Set the Minimum and Maximum Remote Volume Levels.

If the remote volume is used and the volume levels need to be set so that they cannot go beyond certain limits then this function can be very useful.

Press the letter "v" on the keyboard. This will navigate the user to the "Set Remote Volume Min/Max screen". Press the number "1" to set the minimum and "2" to set the maximum. Enter a number between 0 and 100. Press escape to exit back to the main label input screen.

### 6) Set the Minimum and Maximum Master Volume Levels.

If the Master volume is required to be set so that the volume cannot go beyond certain limits then the minimum and maximum volume levels can be set here.

Press the letter "m" on the keyboard. This will navigate the user to the "Set Master Volume Min/Max screen". Press the number "1" to set the minimum and "2" to set the maximum. Enter a number between 0 and 100. Press escape to exit back to the main label input screen.

## 2.0 SETUP

### 2.1 Setup Guide

The A 4275A and A 4285A mixer amplifiers have a total of six inputs configurable as either Dual RCA (Line input) or 3 Pin Male XLR (Mic inputs). Each Input includes an individual 4 way dip switch enabling selection of mic or line input operation, adjustable line input sensitivity (100mV or 1V), Priority/VOX muting for inputs 1-3 and phantom power on/off. (Priority/VOX muting is not available on inputs 4-6).

1. Prior to installation, set input configurations as desired via the DIP switches on the rear of unit. Section 2.3 shows the various settings.
  2. Plug in a low impedance microphone into the microphone input, or a music source (tape or Compact Disc or similar) into the line input.
  3. Turn all controls fully down and then switch the amplifier on.
  4. Turn up the level control associated with the input that you are using to about half way. Talk into the microphone (or play some music) and adjust the Master level control to achieve the required volume.
- For the best sound performance turn the input level control to a high setting (say 3/4 ) and use the Master as the volume control.

Use the other input level controls to set the required mixing ratios. Adjust the bass and treble controls to obtain the desired sound. For best performance when using long lines between microphones/mixer and or amplifier use balanced lines. These reduce noise or hum that may be induced into the cables. Note that a balanced line uses three wires (two signal wires and one screened earth wire or shield) where an unbalanced cable uses only one signal wire and a screened earth.

Fig 2.1A shows illustrates a basic install with one microphone input on input 1 and five line level input sources connected to inputs 2 -5. The DIP switches for each input must be set to suit the input type, the input sensitivity (for line level inputs), whether the input is a priority input and whether phantom power is required. (see section 2.3 for DIP switch settings)

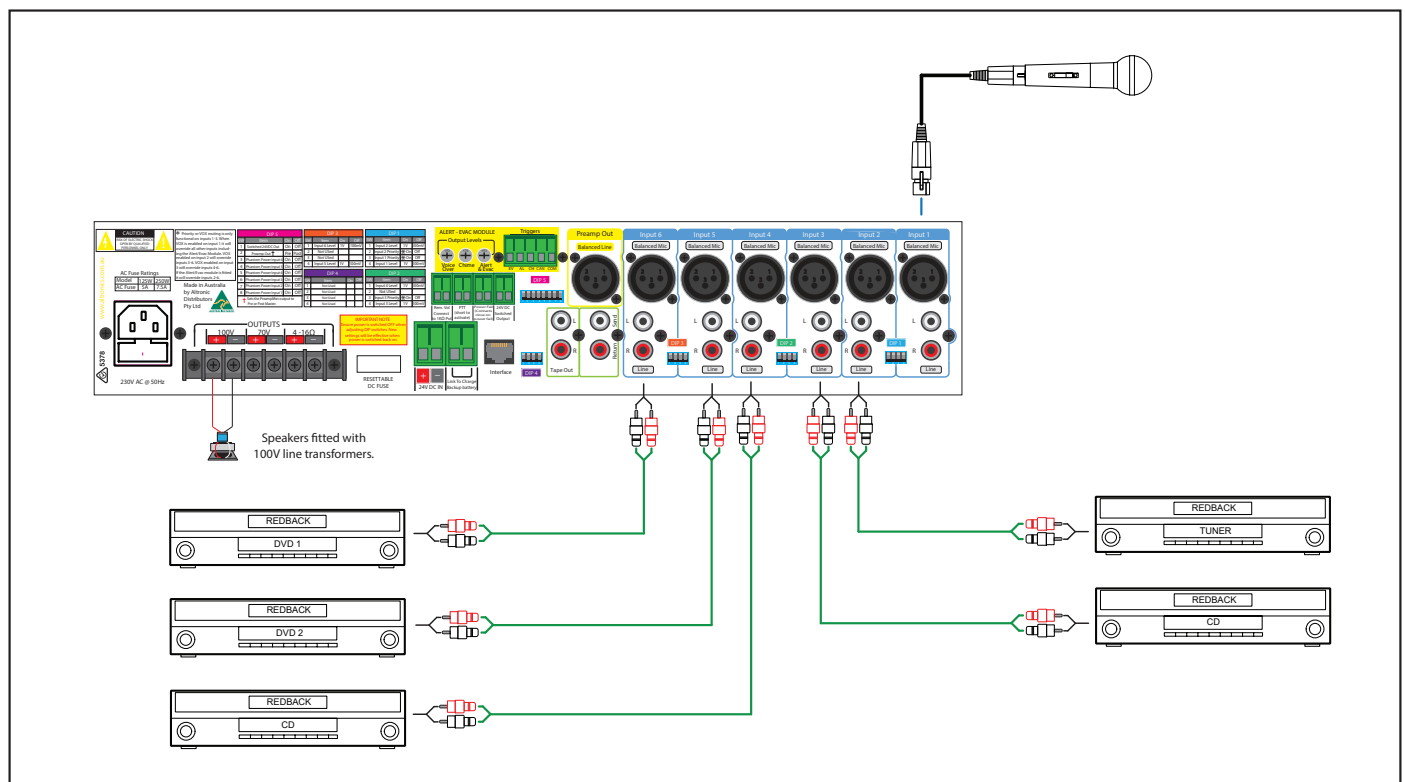


Fig 2.1A

## 2.2 Priorities

There are 4 levels of priority in the A 4275A/85A.

**Level 1** Input 1 has the highest level of priority if the VOX is enabled for this input. (Refer to section 2.3 for DIP switch and VOX sensitivity settings). It will override all other inputs including the optional A 4573 alert/evacuation module (if fitted). This input could be used for emergency microphone paging or telephone paging etc.

**Level 2** The optional A 4573 **alert/evacuation module (if fitted)** provides the next level of priority and will override all inputs except input 1.

**Level 3** If the VOX is enabled on input 2 it will override all other inputs (except the Evac module and input 1 if the VOX is enabled on input 1). (Refer to section 2.3 for DIP switch and VOX sensitivity settings).

**Level 4** If the VOX is enabled on input 3 it will override all other inputs (except the Evac module and inputs 1 & 2 if the VOX is enabled on these inputs). (Refer to section 2.3 for DIP switch and VOX sensitivity settings).

**Note 1 : Inputs 4-6 have no VOX.**

**Note 2 : Any Vox activation will trigger the 24V DC Switched Output ((when set "ON") check the DIP switch settings for more details).**

Figure 2.2A demonstrates an install with all 4 levels of priority shown. The A 4573 is fitted and assumes level 2 priority. Input 1 is shown with a microphone connected. The DIP1 switch settings are set for a 100mV sensitivity balanced microphone input with the priority/VOX enabled which makes this input priority level 1. (Refer to section 2.3 for more details about DIP switch settings). Input 2 is connected to a telephone paging system with a line level output. The DIP1 switch settings are set for a line level input with 1V input sensitivity and the VOX enabled which makes this input priority level 3. Input 3 is shown with a microphone connected. The DIP2 switch settings are set for a balanced microphone input and with the VOX enabled which makes this input priority level 4. Inputs 4-6 have no VOX option.

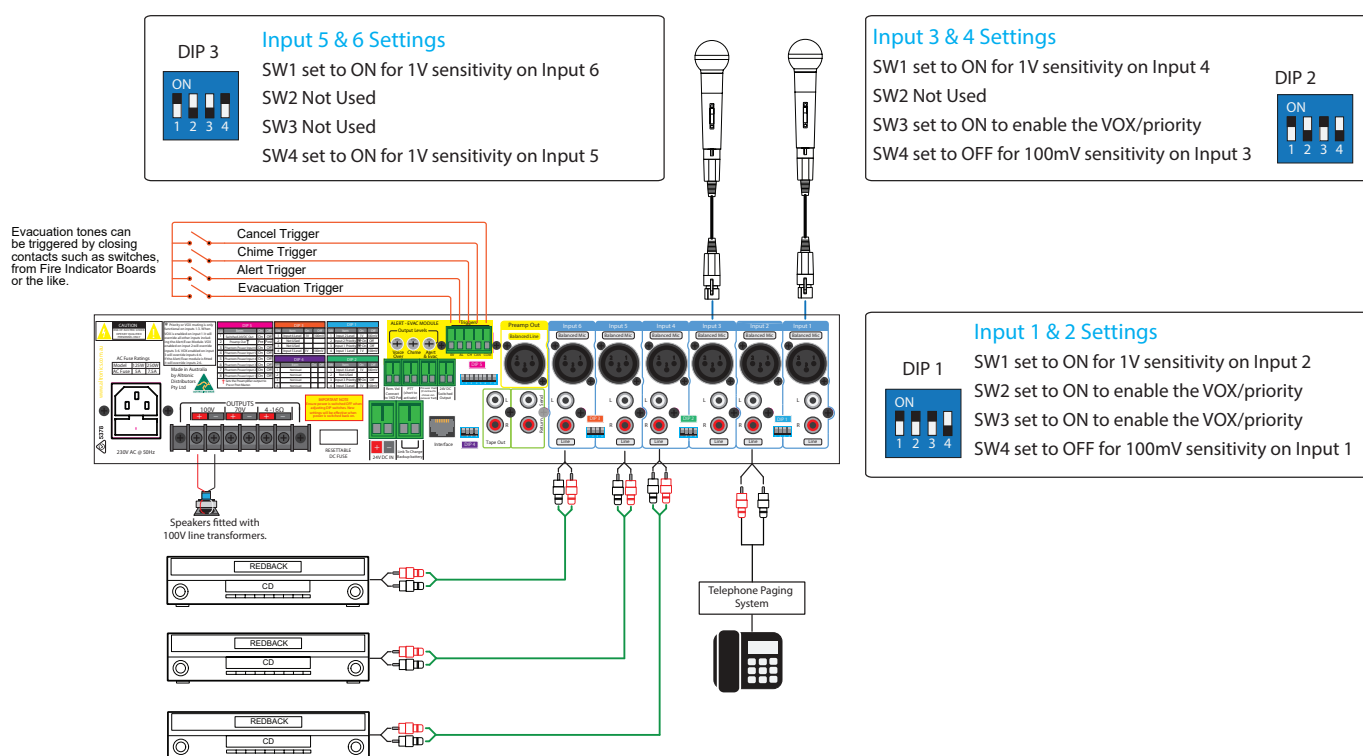


Fig 2.2A

## 2.3 DIP Switch settings

The A 4275A/85A range of amplifiers have a set of options which are enabled via the DIP switches 1-5.

DIP 1-3 set the input level sensitivity and priorities for inputs 1-6 as outline below and in Fig 2.3A.

(\* Priority/VOX muting is only available for inputs 1-3. Inputs 4-6 have no priority levels.)

### DIP 1

**Switch 1** - Sets Input 2 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

**Switch 2** - Sets Input 2 priority or VOX to ON or OFF.

**Switch 3** - Sets Input 1 priority or VOX to ON or OFF.

**Switch 4** - Sets Input 1 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

### DIP 2

**Switch 1** - Sets Input 4 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

**Switch 2** - Not Used

**Switch 3** - Sets Input 3 priority or VOX to ON or OFF.

**Switch 4** - Sets Input 3 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

### DIP 3

**Switch 1** - Sets Input 6 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

**Switch 2** - Not Used

**Switch 3** - Not Used

**Switch 4** - Sets Input 5 sensitivity to either 1V or 100mV. (This affects both the Balanced Mic and Line inputs)

Input 1: When VOX is enabled on input 1 it will override all other inputs (including the optional A 4573 alert/evac module).

Input 2: When VOX is enabled on input 2 it will override inputs 3 to 6 ).

Input 3: When VOX is enabled on input 3 it will override inputs 4 to 6.

Inputs 4-6: No VOX

To adjust the VOX sensitivity levels see section 2.4.

**Please Note : If the Alert/Evac Tone Module (A 4573) is fitted its VOX will always be enabled. It will override inputs 2 to 6 when activated.**

DIP 1			
SW	Item	On	Off
1	Input 2 Level	1V	100mV
2	Input 2 Priority	* On	Off
3	Input 1 Priority	* On	Off
4	Input 1 Level	1V	100mV

DIP 2			
SW	Item	On	Off
1	Input 4 Level	1V	100mV
2	Not USed		
3	Input 3 Priority	* On	Off
4	Input 3 Level	1V	100mV

DIP 3			
SW	Item	On	Off
1	Input 6 Level	1V	100mV
2	Not USed		
3	Not USed		
4	Input 5 Level	1V	100mV

\* Priority or VOX muting is only functional on inputs 1-3. When VOX is enabled on input 1 it will override all other inputs including the Alert/Evac Module. VOX enabled on input 2 will override inputs 3-6. VOX enabled on input 3 will override inputs 4-6. If the Alert/Evac module is fitted it will override inputs 2-6.

Fig 2.3A

DIP4 Switch Settings			
DIP 4			
SW	Item	On	Off
1	Not Used		
2	Not Used		
3	Not Used		
4	Not Used		

Fig 2.3B

**DIP 4**

These are currently not used.

**DIP 5**

This configures the 24V DC switched out status, determines the output of the Preamp Out and sets the phantom power to the inputs. See Fig 2.3C for details.

**Switch 1-** Sets the switched 24V DC out to ON or OFF. IF set to ON the switched output will activate whenever the PTT contacts are triggered or when a priority/VOX is activated.

**Switch 2 -** The Preamp output can be set up to be effected (post master volume) by the master volume control or unaffected (pre master volume).

**Switch 3-** Sets the phantom power (15V DC) for input 6.

**Switch 4-** Sets the phantom power (15V DC) for input 5.

**Switch 5-** Sets the phantom power (15V DC) for input 4.

**Switch 6-** Sets the phantom power (15V DC) for input 3.

**Switch 7-** Sets the phantom power (15V DC) for input 2.

**Switch 8-** Sets the phantom power (15V DC) for input 1.

DIP5 Switch Settings			
DIP 5			
SW	Item	On	Off
1	Switched 24VDC Out	On	Off
2	Preamp Out ↑	Pre	Post
3	Phantom Power Input 6	On	Off
4	Phantom Power Input 5	On	Off
5	Phantom Power Input 4	On	Off
6	Phantom Power Input 3	On	Off
7	Phantom Power Input 2	On	Off
8	Phantom Power Input 1	On	Off
↑ Sets the Preamplifier output to Pre or Post Master.			

Fig 2.3C

## 2.4 Adjusting VOX levels

The VOX sensitivity levels for inputs 1-3 sensitivity can all be adjusted via trimpots accessed through the front panel.



## 2.5 Installing the A 4573 optional Alert/Evac Module

The A 4573 module provides a means of adding Alert, Evacuation and chime tones to the amplifier. A voice-over message can also be recorded and played back during the evacuation tone cycle. All alert and evacuation tones conform to Australian standard AS1607.4.

**NOTE: If the Alert/Evac Tone Module (A 4573) is fitted its VOX will always be enabled. It will override inputs 2 to 6 when activated.**

To install the tone generator follow these steps.

1. Remove the lid from unit
2. Unscrew the tone generator cover plate from the rear panel
3. Locate tone generator 10 way header on board (this is located at the rear of the main board)
4. Connect ribbon cable header to the 10 way header on the rear board of mixer (see fig 2.5A).
5. The tone generator is held in by way of 2 screws (supplied) through the rear panel (via the same holes that the tone generator cover plate was attached).
6. Refit lid and secure with screws.

NOTE: Tones are operated by closing contacts and remain operating whilst contacts are closed.

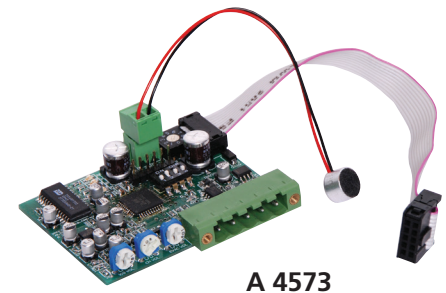
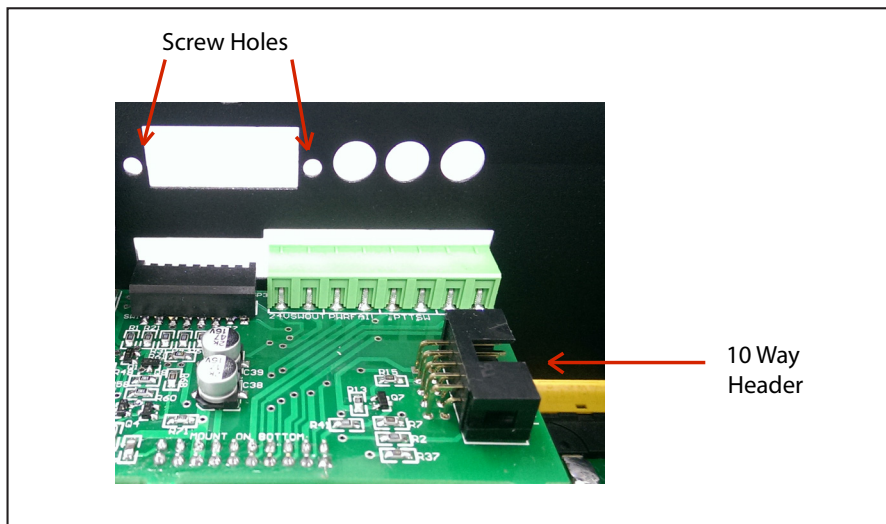


Fig 2.5A

Fig 2.5B shows the volume controls and the triggers.

- 1 **Voice Over Volume**  
Use this trimpot adjustment to change the output level of the playback message.
- 2 **Chime Volume**  
Use this trimpot adjustment to change the output level of the chime volume.
- 3 **Alert and Evacuation Volume**  
Use this trimpot adjustment to change the output level of the alert and evacuation tone.
- 4 **Alert, Evacuation, chime and cancel contacts**  
Use these contacts to trigger the chime tones, the alert tone, the evacuation tone and to cancel any of the tones once triggered. All tones & cancel function are operated by a closing contact to ground. This could be triggered via building fire indicator board, break glass alarm etc.

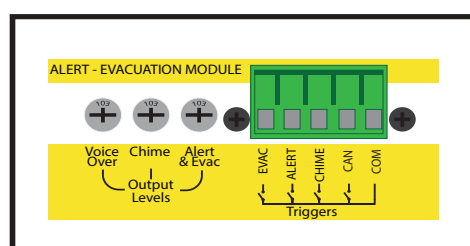


Fig 2.5B

## 2.6 PTT and 24V DC Switched Output

24V DC is available as a switched output to control external devices like remote volume controls with bypass relays for emergency paging or evacuation strobes (when powered from an external 24V supply). Please note: The 24V DC switched output has a maximum current draw of 1 amp and is internally thermal fuse protected.

Fig 2.6 demonstrates the connection of a strobe to the 24V DC output. As the current draw of the strobe may be more than 1amp a relay board is used to switch an external power supply. The Altronics S 4444 24V Relay Board as shown is an inexpensive and easily installed option designed for this purpose.

To enable the switched output, switch 1 on DIP5 must be set to the “ON” position.

The 24V DC output is activated when the PTT terminals shown on the rear of the unit (see Fig 2.6) are shorted together or when any priority/VOX is activated. The PTT is normally done with the switch of a push to talk microphone as shown in Fig 2.6.

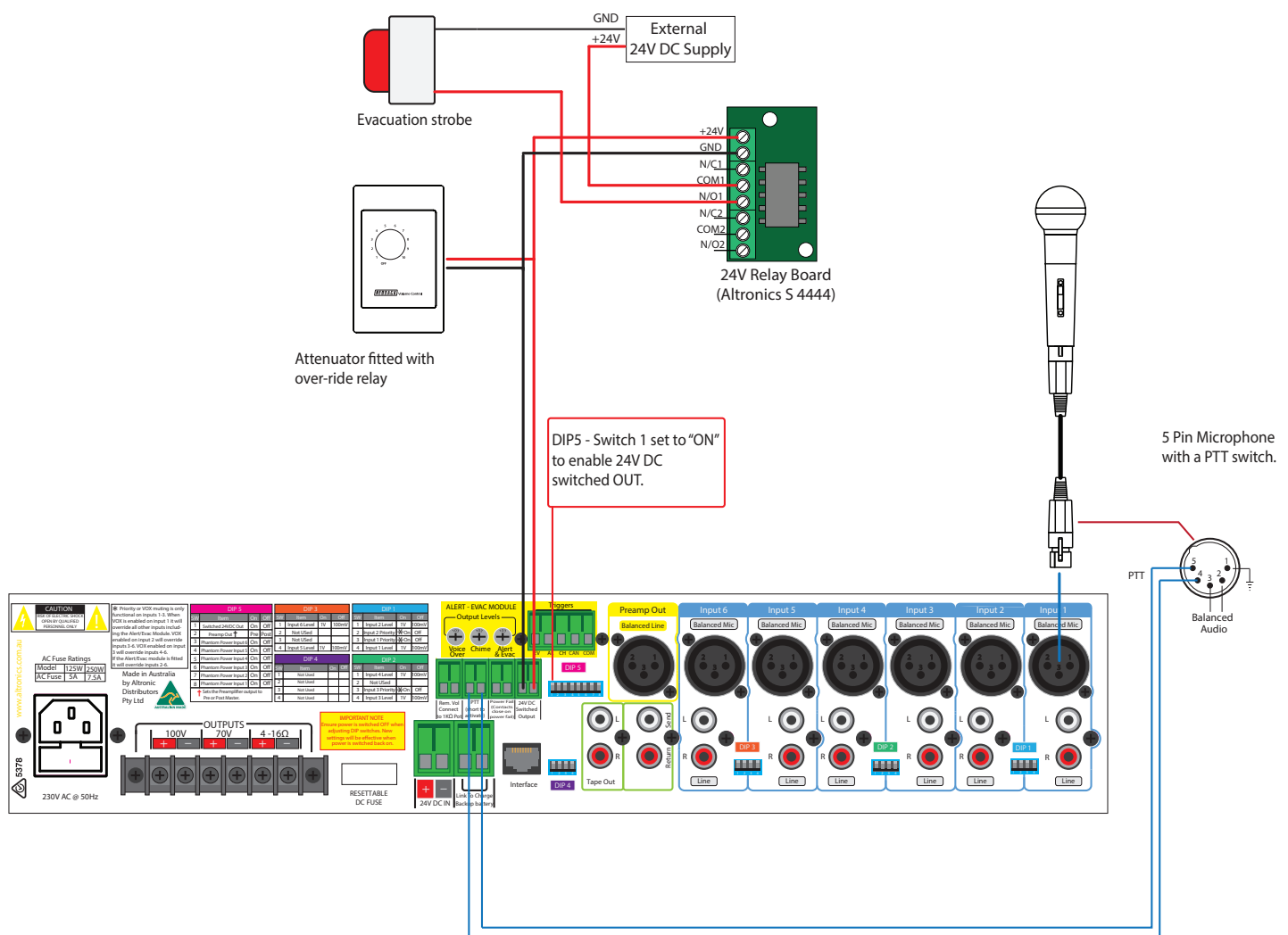


Fig 2.6

**2.7 Remote Volume Connection**

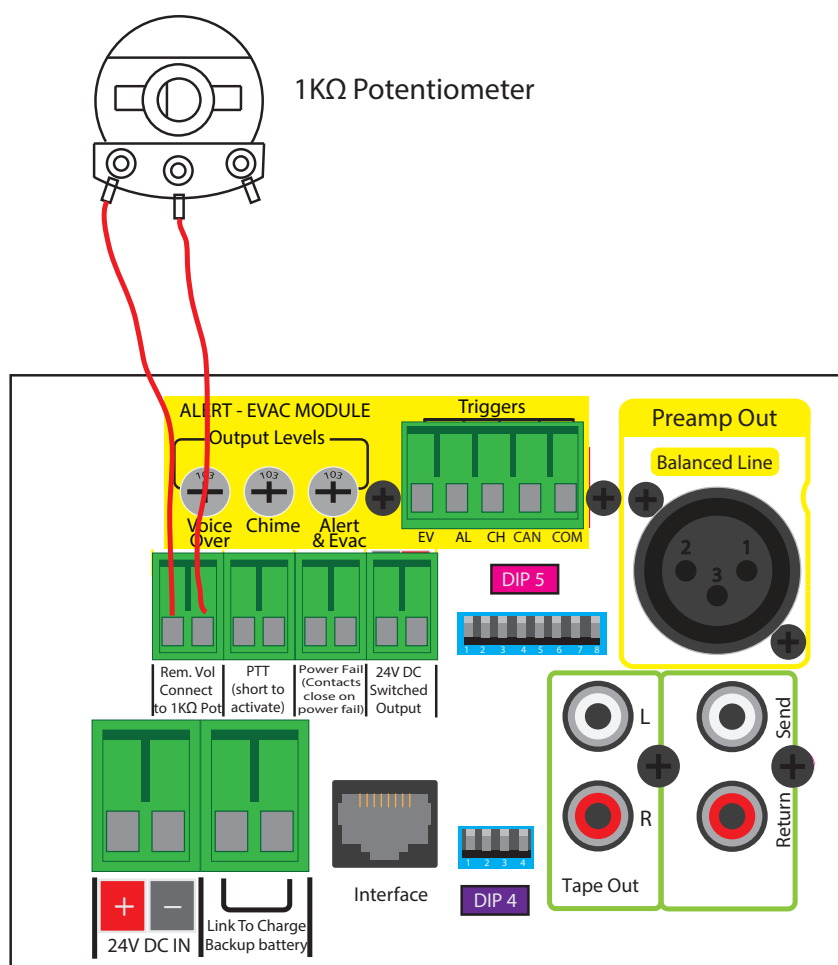
A two way euro block terminal has been provided for the connection of a remote volume control.

A potentiometer needs to be wired to these two terminals.

**\*\*DO NOT LINK OR SHORT THESE TERMINALS\*\***

A 1k $\Omega$  potentiometer is required for the remote volume to work correctly. The Altronics A 2280B shown below would be suitable.

The maximum distance from the amplifier the potentiometer can be connected is 100 metres. Fig 2.7 shows a typical connection.



**Fig 2.7**

**Altronics A 2280B  
(Wallplate fitted with 1K $\Omega$   
Potentiometer)**



## 2.8 Pre-Amp Out, Tape Out, Send & Return

### Pre-Amp Out

A 3 pin 600ohm 1V balanced XLR output is provided for passing the audio signal on to other slave amplifiers or to record the output of the amplifier. This output can be set up to be effected (post master volume) by the master volume control or unaffected (pre master volume). Factory default setting disables the preout. (Refer to section 2.3 DIP switch settings).

### Tape Out

Dual RCA's are provided for the "Tape Out" connection for recording purposes. This level is post master volume so it is affected by the master volume.

### Send and Return

RCA connectors are provided for the send and return audio paths. This allows external effects units, ie Graphic EQ'S , companders or signal processors to be connected to the amplifier. When not using this feature the send and return outputs must be linked externally (this is factory fitted). The amplifier will not work without this link. Only when an external effects unit is used can it be removed.

Fig 2.8 illustrates the connections required for a slave amplifier, a recording unit and an effects unit.

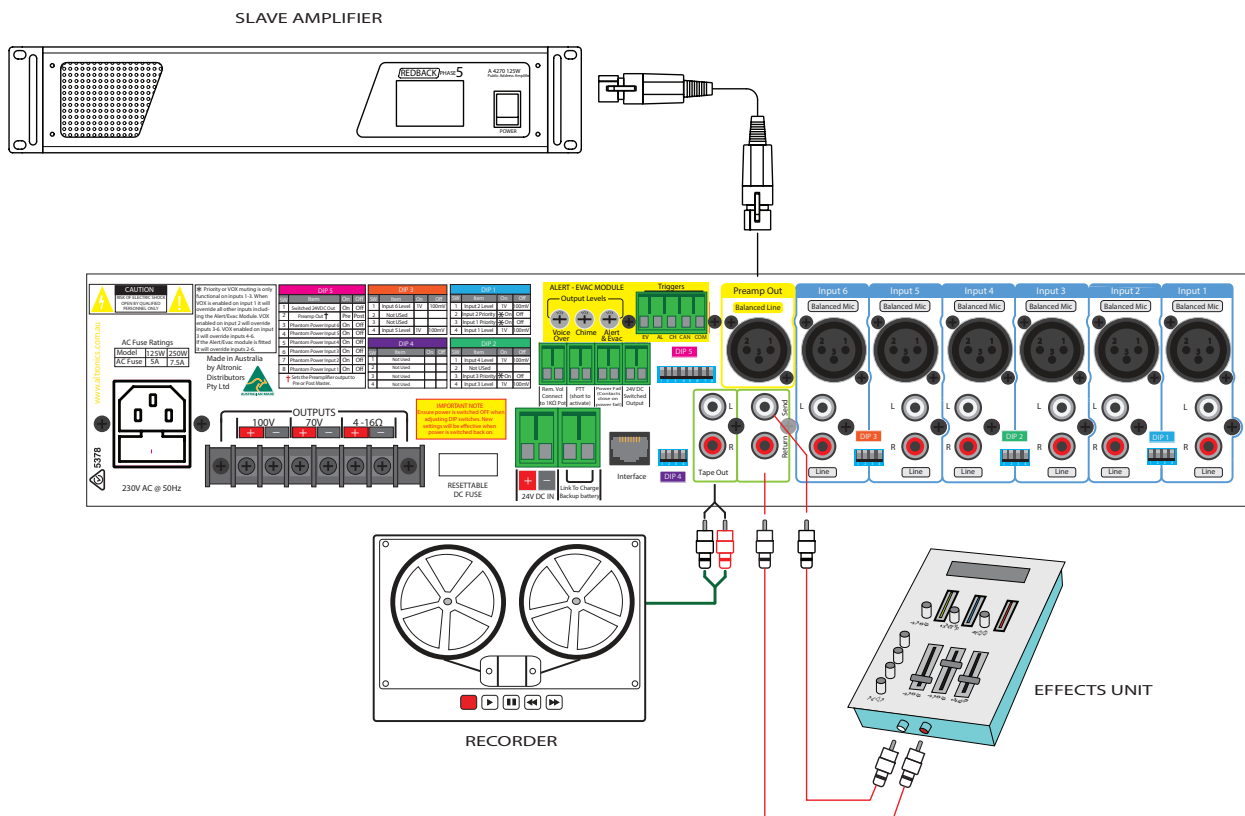


Fig 2.8

## 2.9 Backup Battery Charging

If the amplifier is connected to backup batteries the amplifier is provided with a trickle charge circuit to maintain the batteries in a charged condition. The charge rate is approximately 300mA. Simply link the terminals marked “link to charge backup battery” on the rear of the amplifier. A flat battery will generally take overnight to charge, or even longer depending on the battery capacity. (Refer to fig 2.9 for connection details)

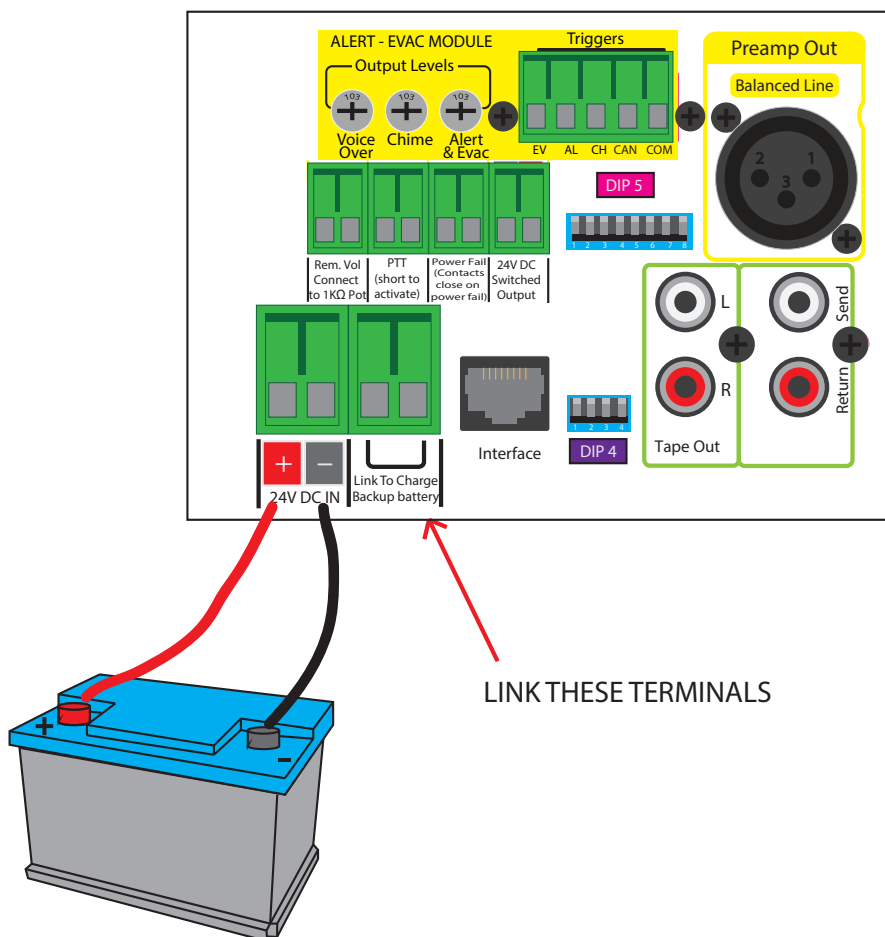


Fig 2.9

## 2.10 Fitting the Optional A 2711 MP3 Module

To install the optional MP3 module, follow these steps.

1. Make sure the amplifier is turned off.
2. Remove the lid from unit.
3. Unscrew the front cover piece from the front panel (keep the screws).
4. Locate the header inside the front of the amplifier. See Fig 2.10A
5. Push the header cable from the A 2711 MP3 module through the front panel and connect it to the 5 way header on the front board of the mixer (see fig 2.10B). Take special attention of the orientation of the plug.
6. Screw the module in using the four screws removed from the front cover piece.
7. Refit lid and secure with screws.



Once fitted if music is playing from this module it will over-ride the rear input 6. The output level is adjusted via the volume 6 control on the front of the amplifier.

NOTE: If a music source is connected to the Music input on the front of the amplifier it will override this MP3 Module and the rear input 6 source.

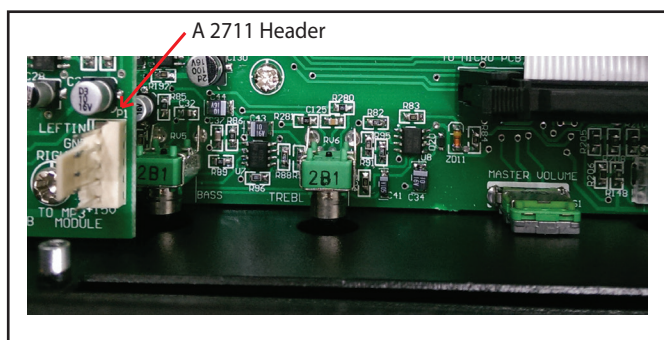


Fig 2.10A

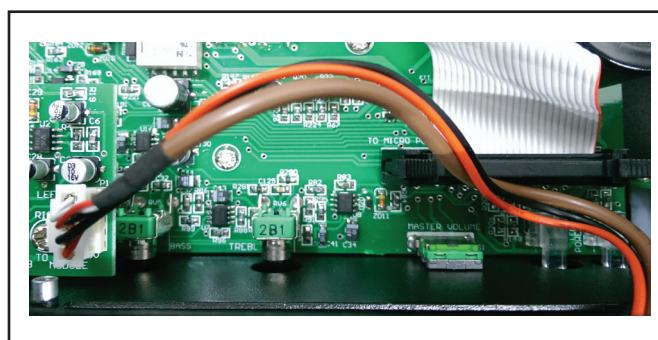
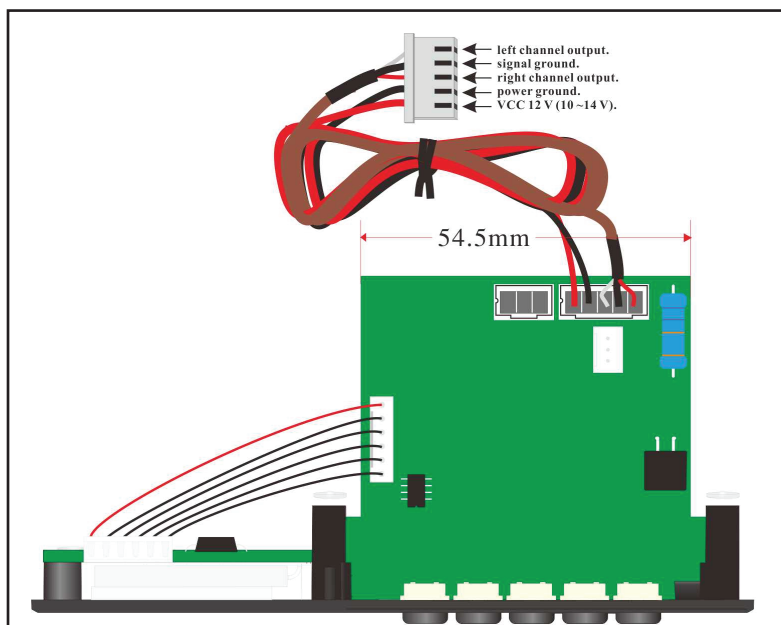


Fig 2.10B

### A 2711 Specifications

Output level: 500mV(800mV volume max.)  
 Playback frequency: 20Hz - 19KHz  
 THD: <0.3%  
 Signal to noise ratio: >65dB  
 File types: MP3/WMA/WAV  
 MP3/WMA decoder: 32-320kbps decoding  
 WAV decoder:  
 PCM single track 128-768kbps  
 PCM double track 256-1536kbps  
 IMA-ADPCM single track 32-192kbps  
 IMA-ADPCM double track 64-384kbps  
 Storage: USB/SD Card (maximum 32GB - FAT16/32)  
 Supply voltage: 12V DC(10-15V operating range)  
 Power consumption: <2W  
 Dimensions: 120W x 56.5D x 22Hmm

### A 2711 Pinouts



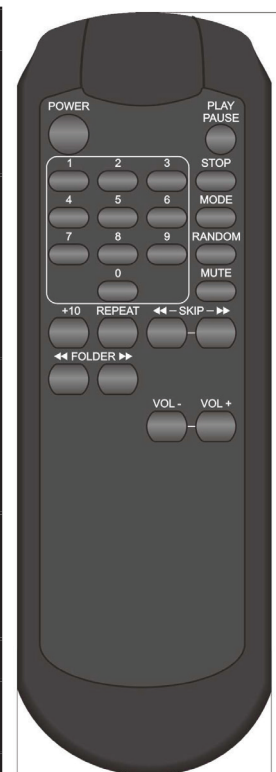


## A 2711 Controls

The A 2711 MP3 module can be controlled via the supplied remote control or by the buttons on the front of the unit. The table below lists the various functions and the means to control them.



Keys	Explanation	Panel	Remote
PLAY/ PAUSE	When this key is pushed during USB/SD stop, play will start after track search. When this key is pushed during USB/SD is playing, then it is changed to pause. When this key is pushed during USB/SD is pausing, then it is changed to play	✓	✓
FAST FOR- WARD	<i>In stop mode:</i> Change the starting play track (file) during stop mode, cyclic to the first track, if it is in the last track. <i>In play mode, pause mode, random play mode:</i> Single pressed, skip the playing track (file) to next track (file) for normal play/pause mode, to next random track (file) for random play /pause mode. Continue pressed, fast forward during play/pause when pressed more than 2sec.	✓	✓
REWIND	<i>In stop mode:</i> Change the starting play track (file) during stop mode, cyclic to the last track, if it is in the first track. <i>In play mode, pause mode:</i> Single pressed, skip the playing track (file) to previous track (file) for normal play/pause mode. Continue pressed, fast reverse during play/pause when pressed more than 2sec.	✓	✓
MODE	When the module is in ON state, pressing this key will change mode between USB and SD. Pressing this key over 3 seconds will power off the module. When the module is in the OFF state, pressing this key will power on the module.	✓	
POWER	Power off the module.		✓
STOP	When in PLAY/PAUSE mode, pressing the stop key will stop the player and shows TOC.		✓
MODE	When this key is pressed shortly, the module mode will change between USB, CARD and FM.		✓
+10	Pressing this key will skip forward 10 MP3 files		✓
RANDOM	When this key is pressed the module will play tracks randomly. If the key is pressed again random mode will be cancelled.		✓
MUTE	The module will mute when this key is pressed. If the key is pressed again, mute mode will be cancelled.		✓
FOLDER UP	<i>In stop mode:</i> Skip the starting play folder to next folder during stop mode, cyclic to the first folder if it is in the last folder. <i>In program entry mode:</i> Change the file for program select to next folder's first file, cyclic to the first folder if it is in the last folder. <i>In normal play mode:</i> Skip the playing file to the next folder's first file.	✓	✓
FOLDER DOWN	<i>In stop mode:</i> Skip the starting play folder to previous folder during stop mode, cyclic to the last folder if it is in the first folder. <i>In program entry mode:</i> Change the file for program select to previous folder's first file, cyclic to the last folder if it is in the first folder. <i>In normal play mode:</i> Skip the playing file to the previous folder's first file.	✓	✓
VOL -	Long press this key, the volume will decrease.		✓
VOL +	Long press this key, the volume will increase.		✓
0 - 9	You can use these keys to select the track you want directly.		✓



## 3.0 TROUBLE SHOOTING

If the REDBACK Phase 4 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.

### 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.

Check if signal LED on the front panel is lit to indicate there is signal. If it is not lit there is no signal present.

### 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.

### No Output Volume

Check the Send/Return link is in place. Ensure the input selector dip switch is configured correctly for each corresponding input.

Ensure remote volume terminals are linked when no remote volume potentiometer is connected.

When connected, check remote volume control is not turned down.

### No Switched 24V DC

Check output switch for correct setting.

Check fuse located on rear PCB is not blown (located inside the unit). see section 2.6 for details.

## 4.0 SPECIFICATIONS

### POWER OUTPUTS

A 4275A: .....125 watts RMS  
A 4285A: .....250 watts RMS  
Distortion:.....< 0.5%, @ 1kHz  
Output line: .....70V, 100V or 4 - 16Ω  
Line output:.....600Ω balanced, 0dBV

### FREQUENCY RESPONSE

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

### SENSITIVITY

Mic inputs: .....3mV balanced  
Line inputs:.....100mV-1V

### SIGNAL TO NOISE RATIO

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

### OUTPUT CONNECTORS

Speakers: .....Screw terminals  
Line out: .....3 pin XLR

### INPUT CONNECTORS

Inputs: .....3 pin XLR balanced or 2 x RCA  
24V DC power: .....Screw terminals  
240V AC power: .....IEC power connector  
Muting:PTT via microphone switch contacts  
or VOX muting (inputs 1-3)

### CONTROLS

Mic inputs: .....Volume  
Line inputs:.....Volume  
Bass:.....±10dB @ 100Hz  
Treble:.....±10dB @ 10kHz  
Master: .....Volume  
Power: .....On/off switch  
Indicators:.....Power, fault, VU meter,  
signal present, output peak limiting, overtemp  
Power Supply: .....240V AC or 24V DC

### FUSE PROTECTION

A 4275A: .....5A AC , 10A DC  
A 4285A: .....7.5A AC , 20A DC  
Switched 24VDC 1A Internal (both models)

### DIMENSIONS

All models: .....≈483W x 330D x 88H

### WEIGHT

A 4275A: .....≈14.5kg  
A 4285A: .....≈19.5kg  
Colour:.....Black

**\*Specifications subject to change without notice**

All Australian made Redback products are covered by a 10 year warranty.

Should a product become faulty please contact us to obtain a return authorisation number. Please ensure you have all the relevant documentation on hand. We do not accept unauthorised returns. Proof of purchase is required so please retain your invoice.