Manuals+ — User Manuals Simplified.

REDBACK A4285C Phase5 Public Address (PA) Mixer Amplifier User Manual

A4285C Phase5 Public Address (PA) Mixer Amplifier
User Manual

Operating Manual
A 4275C 125W Mixer Amplifier
A 4285C 250W Mixer Amplifier

Contents

A4285C Phase5 Public Address (PA) Mixer Amplifier

Optional Extras

A 2711 MP3 Module

A 4573 Alert/Evac Board

A 2280B Remote Volume

D 2111 Keyboard USB/PS2

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.
www.redbackaudio.com.au

You may be surprised to learn that Redback is still manufacturing hundreds of product lines right here in Australia. We have resisted the move offshore by offering our customers better quality products with innovations to save them time and money.

Our Balcatta production facility manufactures/assembles:

Redback public address products

One-shot speaker & grill combinations

Zip-Rack 19 inch rack frame products

We strive to support local suppliers wherever possible in our supply chain, helping to support Australia's manufacturing industry.

Redback Audio Products

100% developed, designed & assembled in Australia.

Since 1976 we have been manufacturing Redback amplifiers in Perth, Western Australia. 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.

Local support & feedback.

Our best product features come as a direct result of feedback from our customers, and when you call us, you speak to a real person – no recorded messages, call centres or automated push button options.

It's not only the assembly team at Redback who are employed as a direct result of your purchase, but hundreds more at local companies used in the supply chain.

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.

We offer this comprehensive parts & labour warranty on almost every Australian Made Redback public address product. This offers both installers and end users peace of mind that they will receive prompt local servicing in the rare event of any problems.

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 4275C/85C Mixer Amplifier
240V AC IEC C13 Appliance Mains Lead 10A 3 Pin Black Instruction Booklet
1.4 FRONT PANEL GUIDE
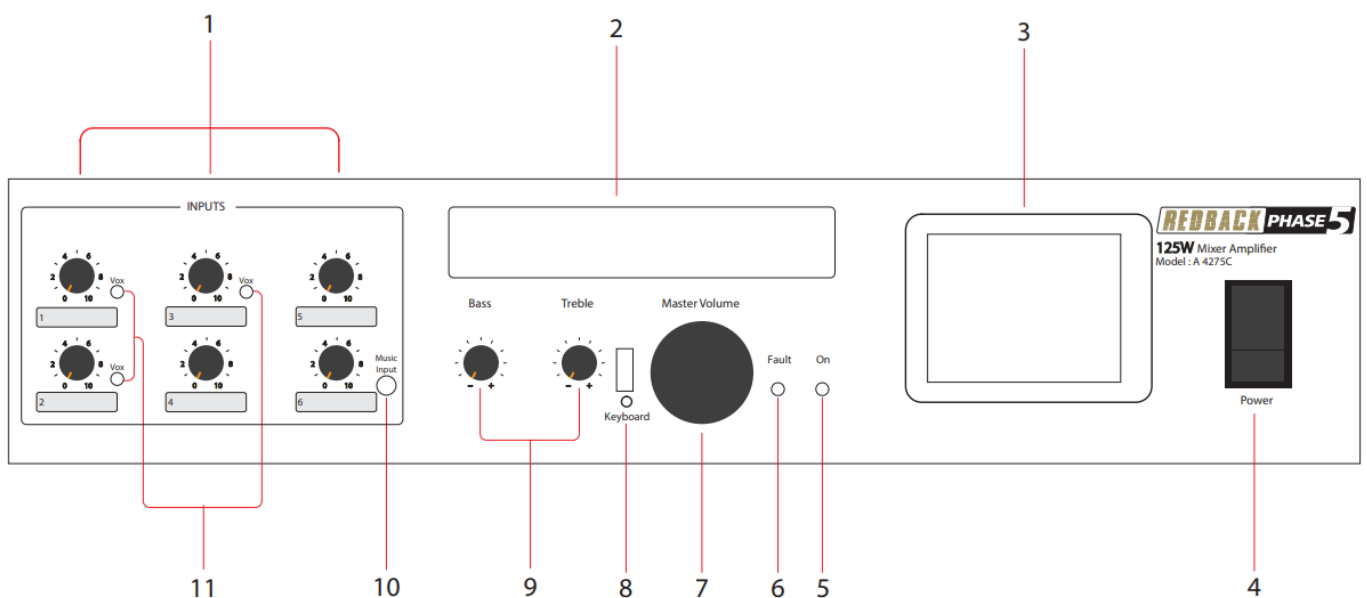Fig 1.4 shows the layout of the front panel.

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 Indicato**r

   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 mutli-turn adjustable control.

8. **USB – PS2 compatible keyboard input.**

   Use a standard PS2-USB keyboard (such as Redback 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
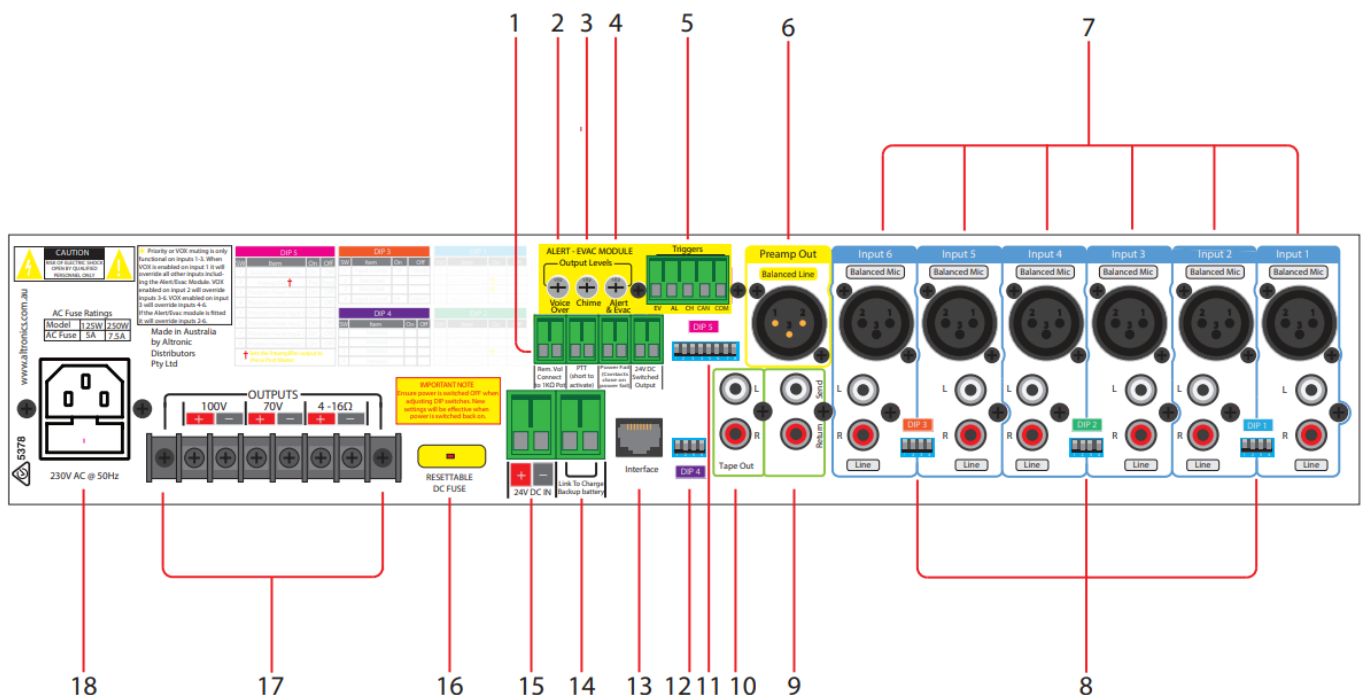
Fig 1.5 shows the layout of the rear panel.

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 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 4275C/85B range of mixer amplifiers have provison 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 ieeither 4Ω minimum for the 4-16Ω terminals or 80Ω minimum at 100V for the A 4275C (125W) and 40Ω minimum at 100V for the A 4285C (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.
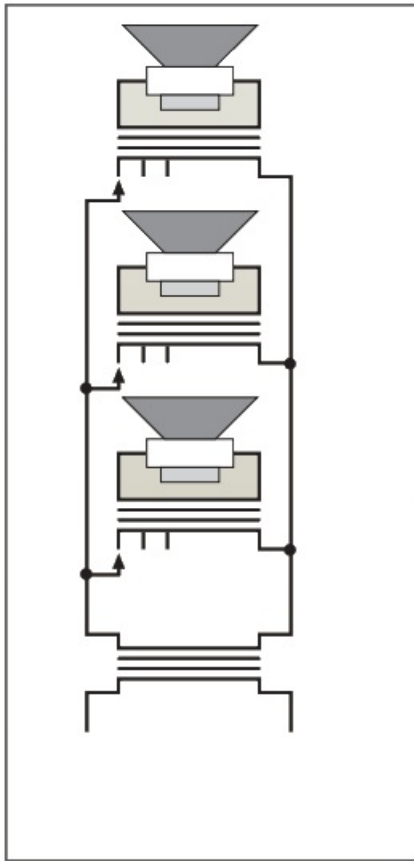
Redback Q 2004

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

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 amplifer 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)
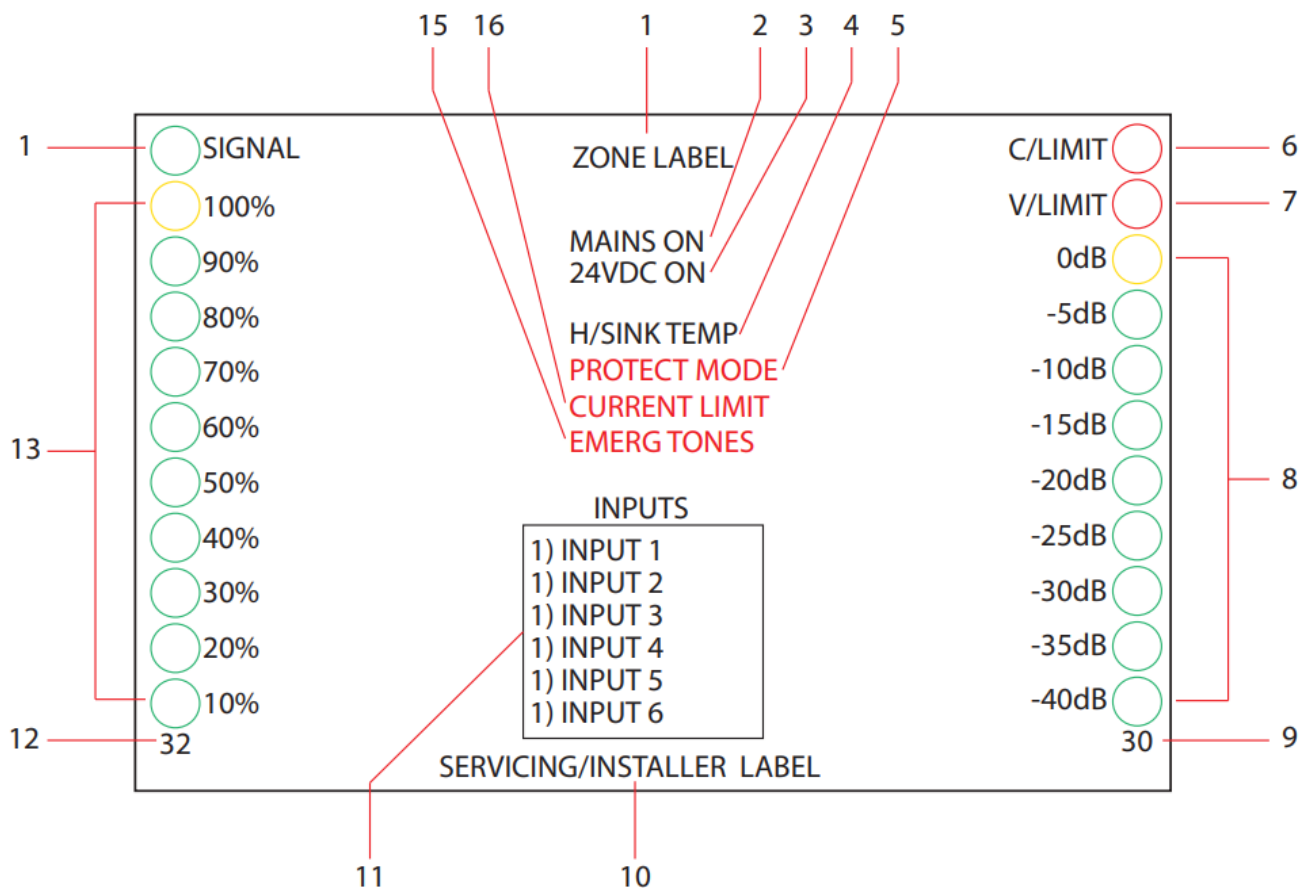
Fig 1.9

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 labelled (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 4275C/85C 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 Redback D 2111) into the USB socket on the front of the amplfier.
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 certian 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 certian 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.

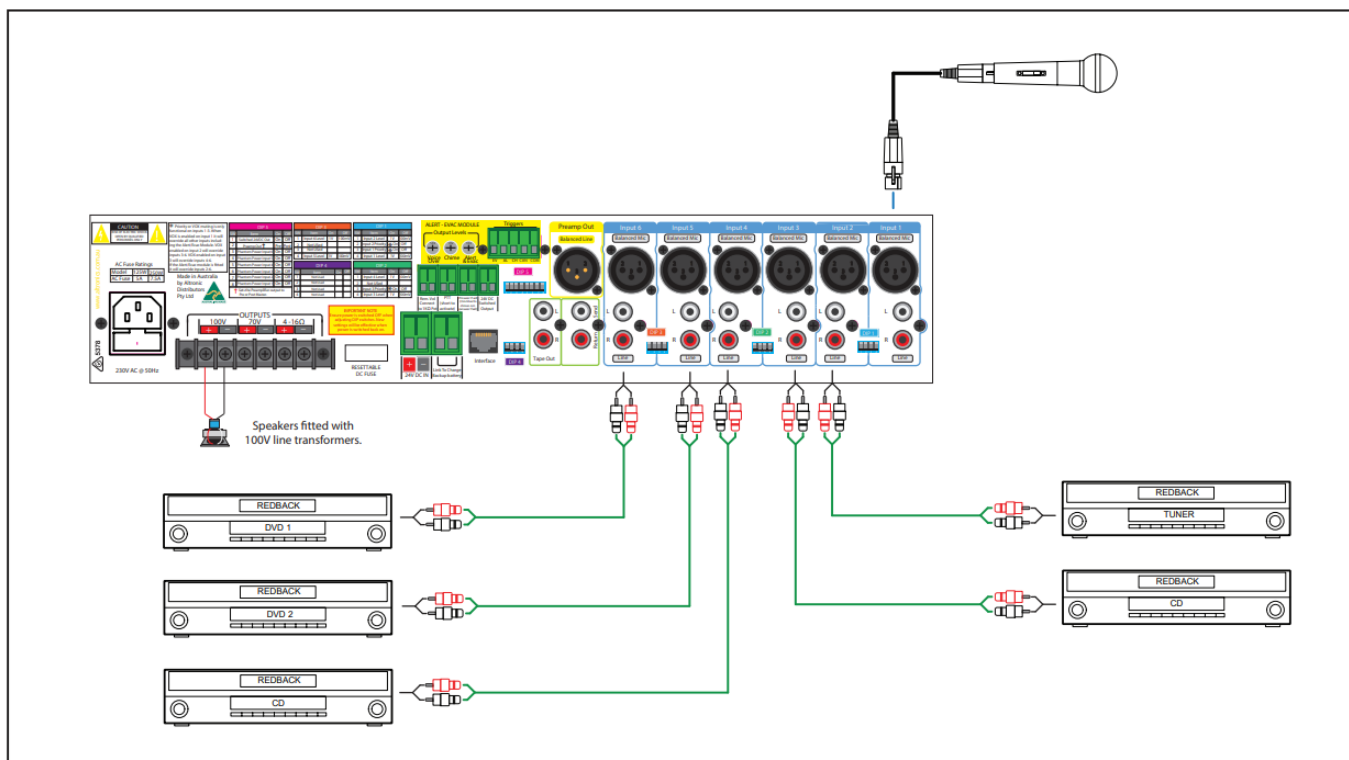   Press escape to exit back to the main label input screen.

Fig 2.1A

2.2 Priorities

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

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 pag ing etc.

Level 2 The optional A 4573 alert/evacuation module (if fitted) provides the next level of priority and will override all inputs except input1.

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).**

Note1 : 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.
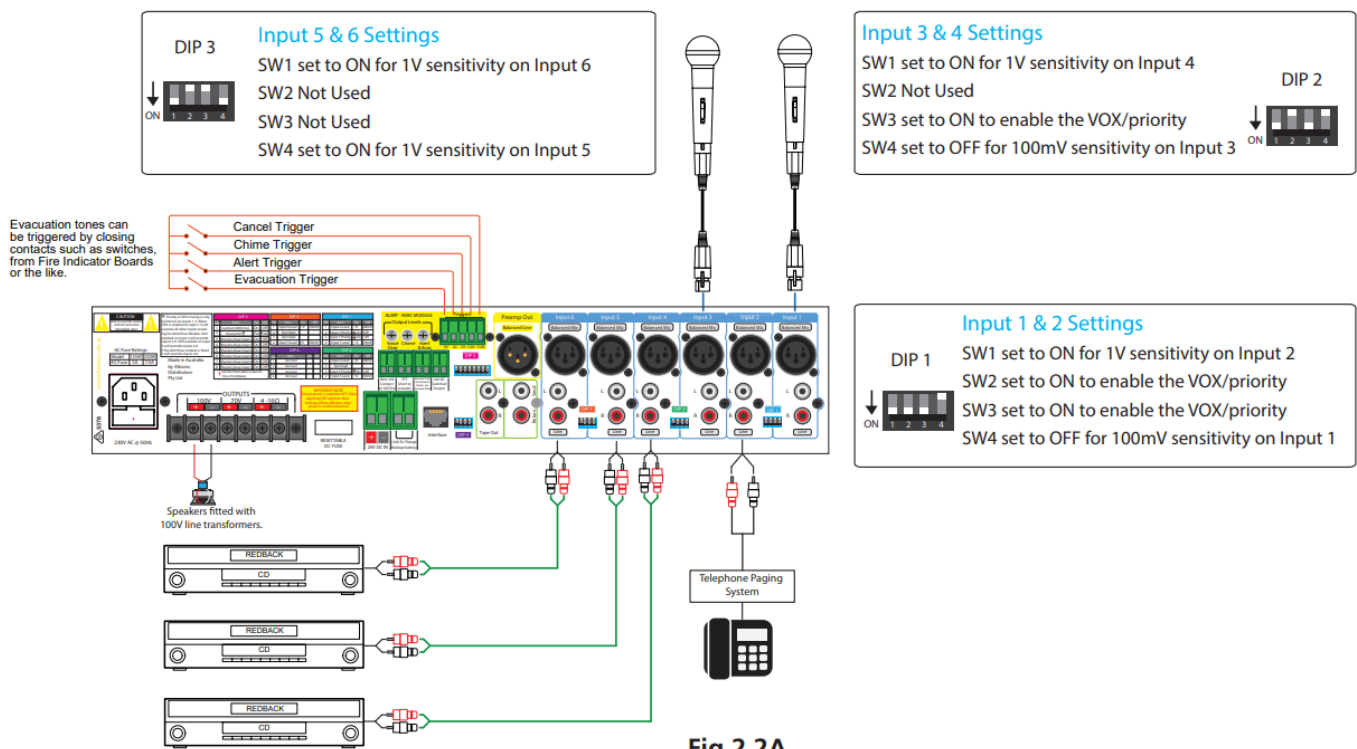
Fig 2.2A

2.3 DIP Switch settings

The A 4275C/85C 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 RCA input sensitivity to either 1V or 100mV.

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 RCA input sensitivity to either 1V or 100mV.

DIP 2

Switch 1 – Sets Input 4 RCA input sensitivity to either 1V or 100mV.

Switch 2 – Not Used

Switch 3 – Sets Input 3 priority or VOX to ON or OFF.

Switch 4 – Sets Input 3 RCA input sensitivity to either 1V or 100mV.

DIP 2

Switch 1 – Sets Input 6 RCA input sensitivity to either 1V or 100mV.

Switch 2 – Not Used

Switch 3 – Not Used

Switch 4 – Sets Input 5 RCA input sensitivity to either 1V or 100mV.

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

* 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.

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

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

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

comform 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.
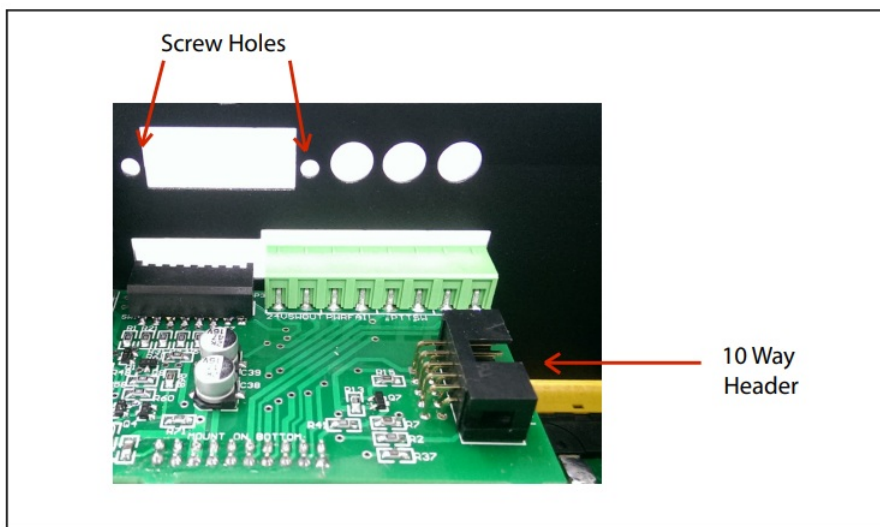

Fig 2.5A

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.
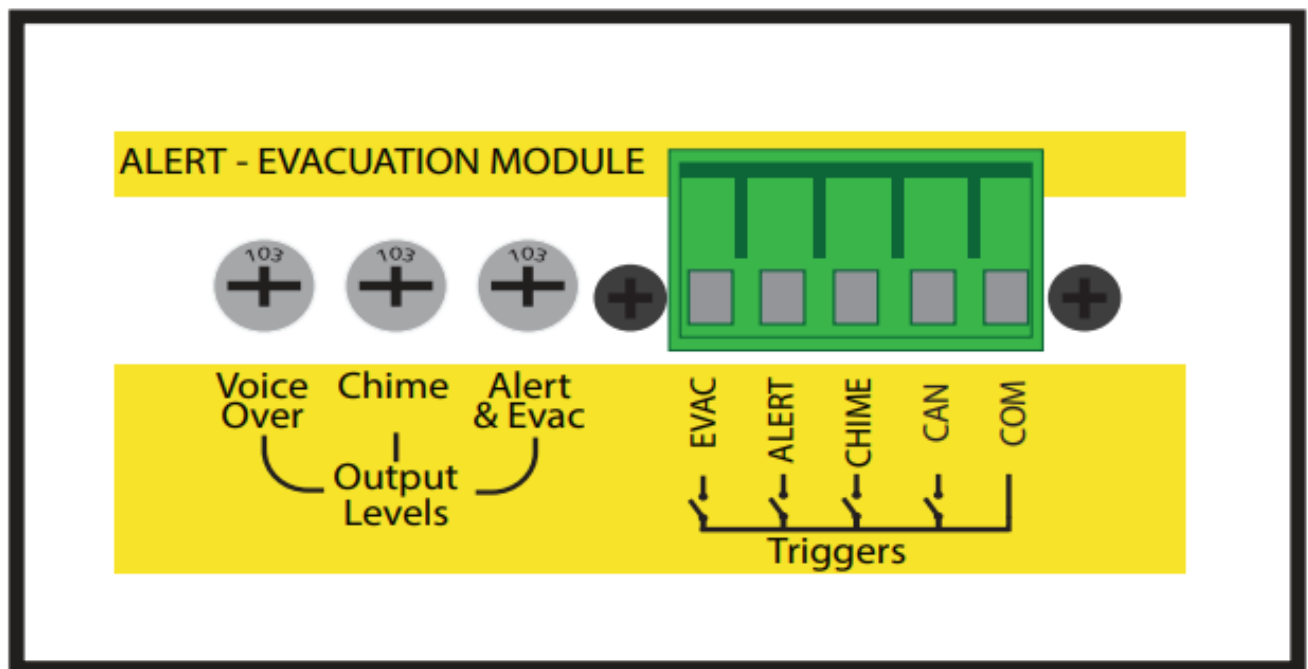
Fig 2.5B

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 Redback 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 ouput 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.
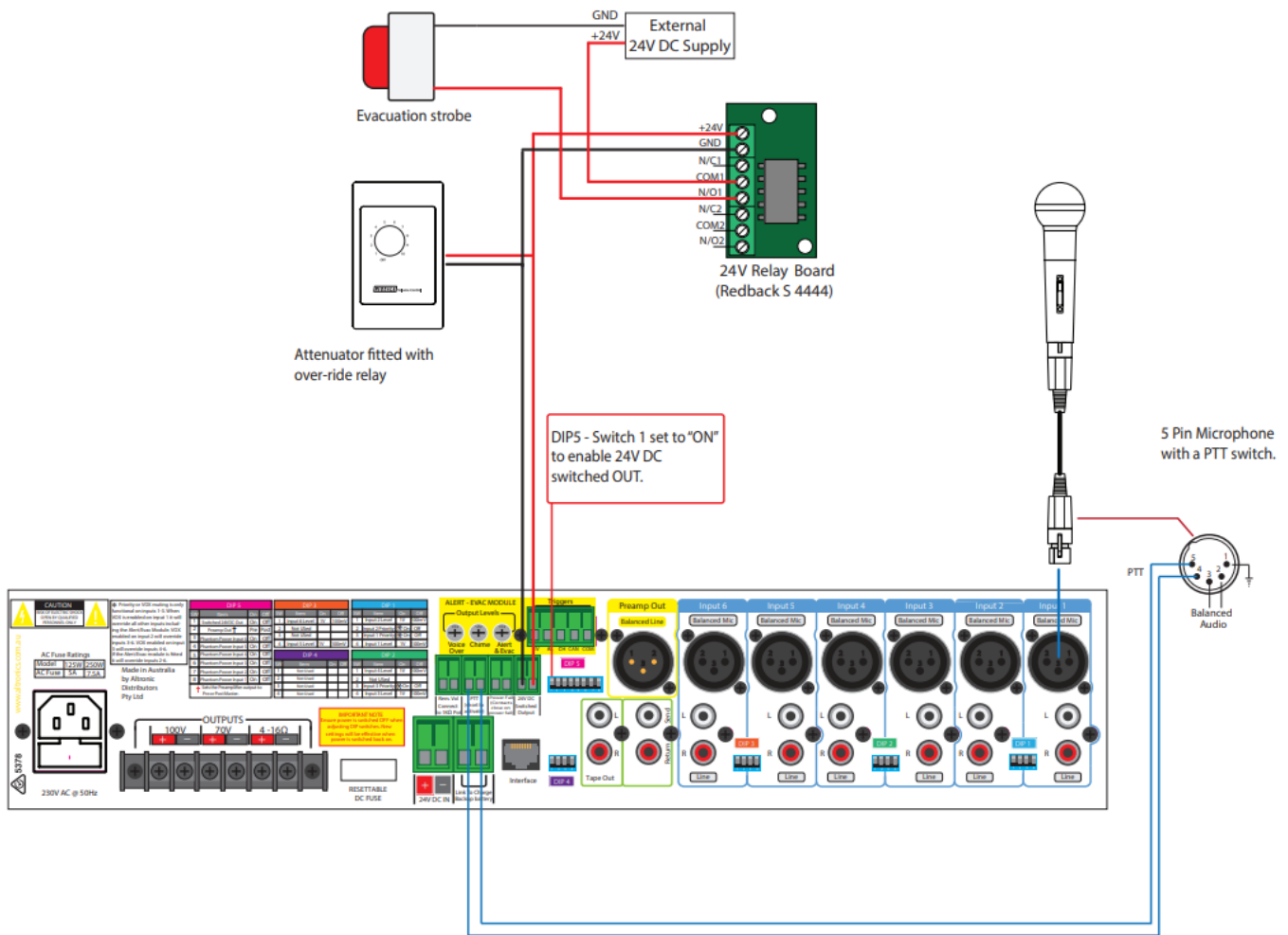
Fig 2.6

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 1kΩ potentiometer is required for the remote volume to work correctly. The Redback 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.
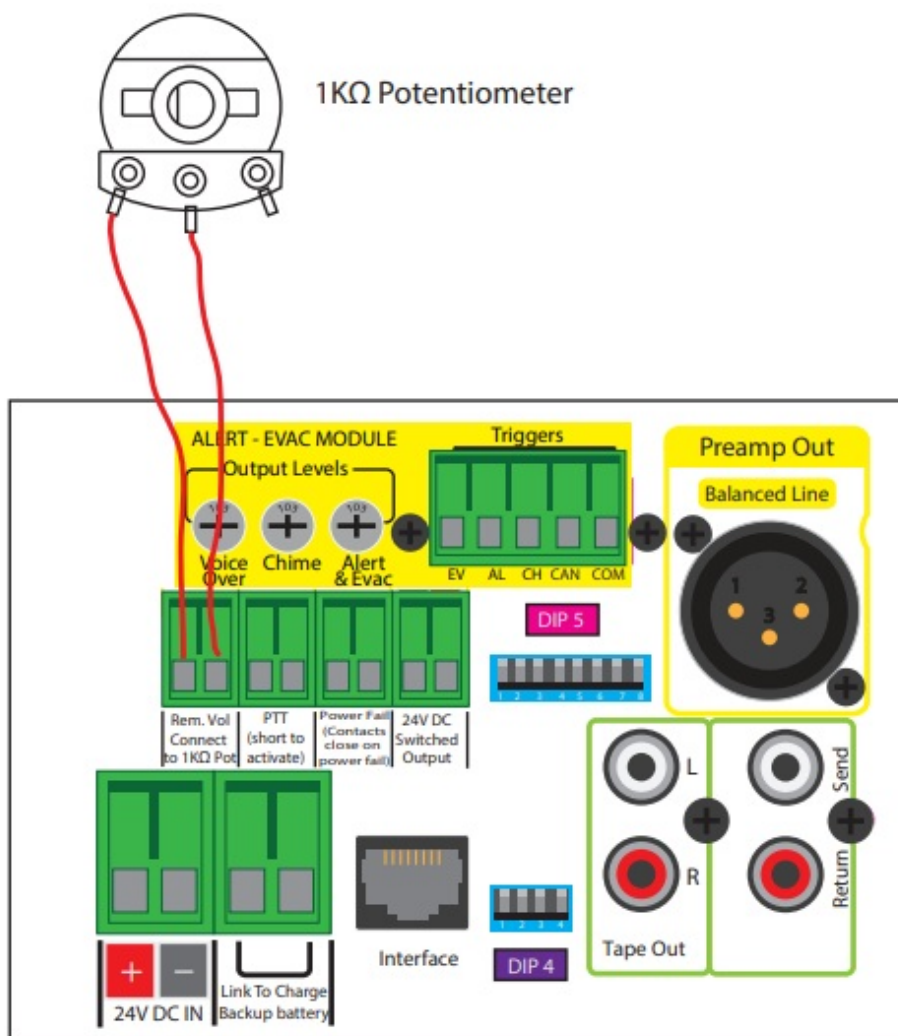
1KΩ Potentiometer

Fig 2.7

Redback A 2280B (
Wallplate fitted with 1KΩ
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
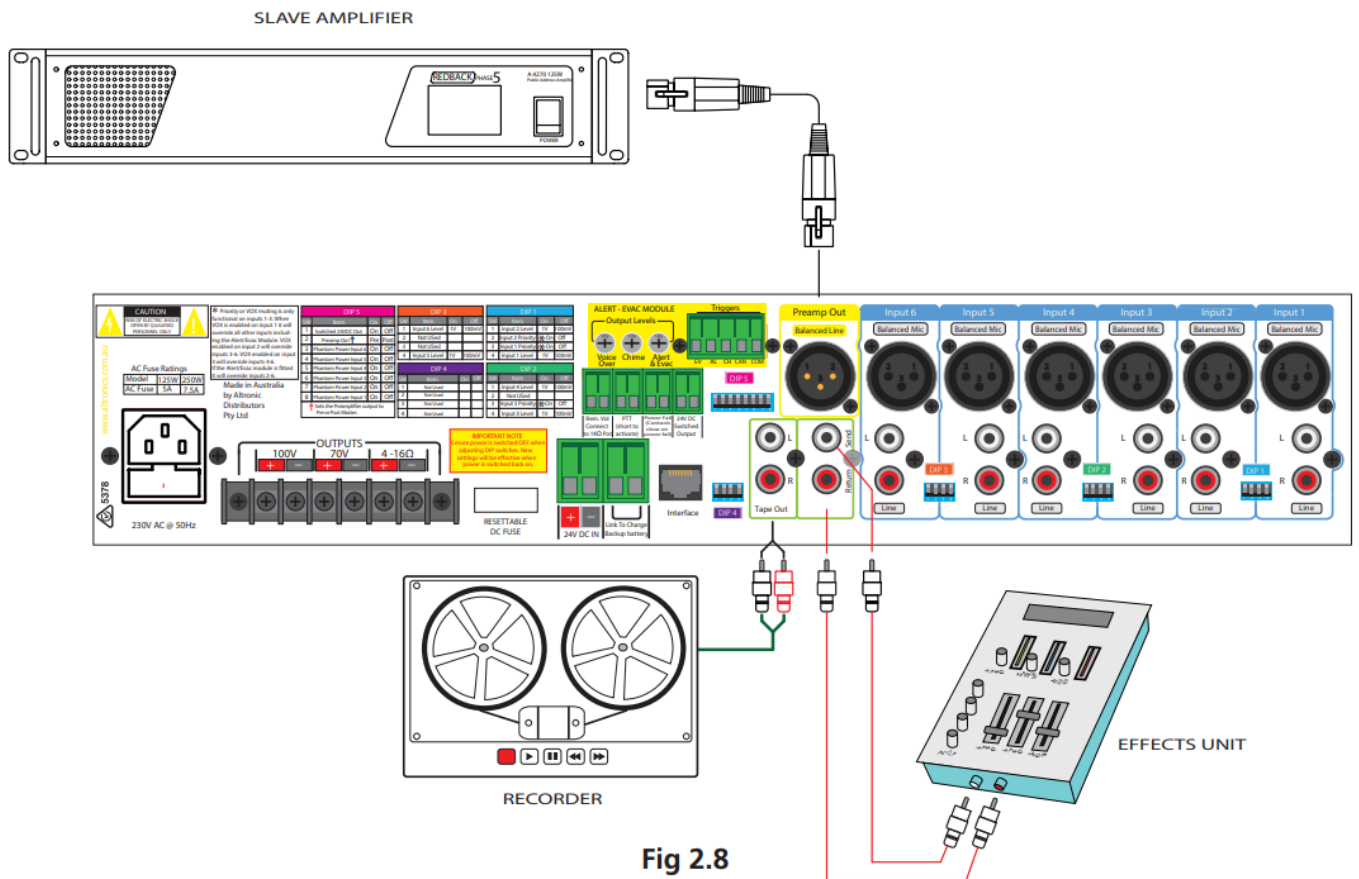
2.9 Backup Battery Charging

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 isapproximately 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)
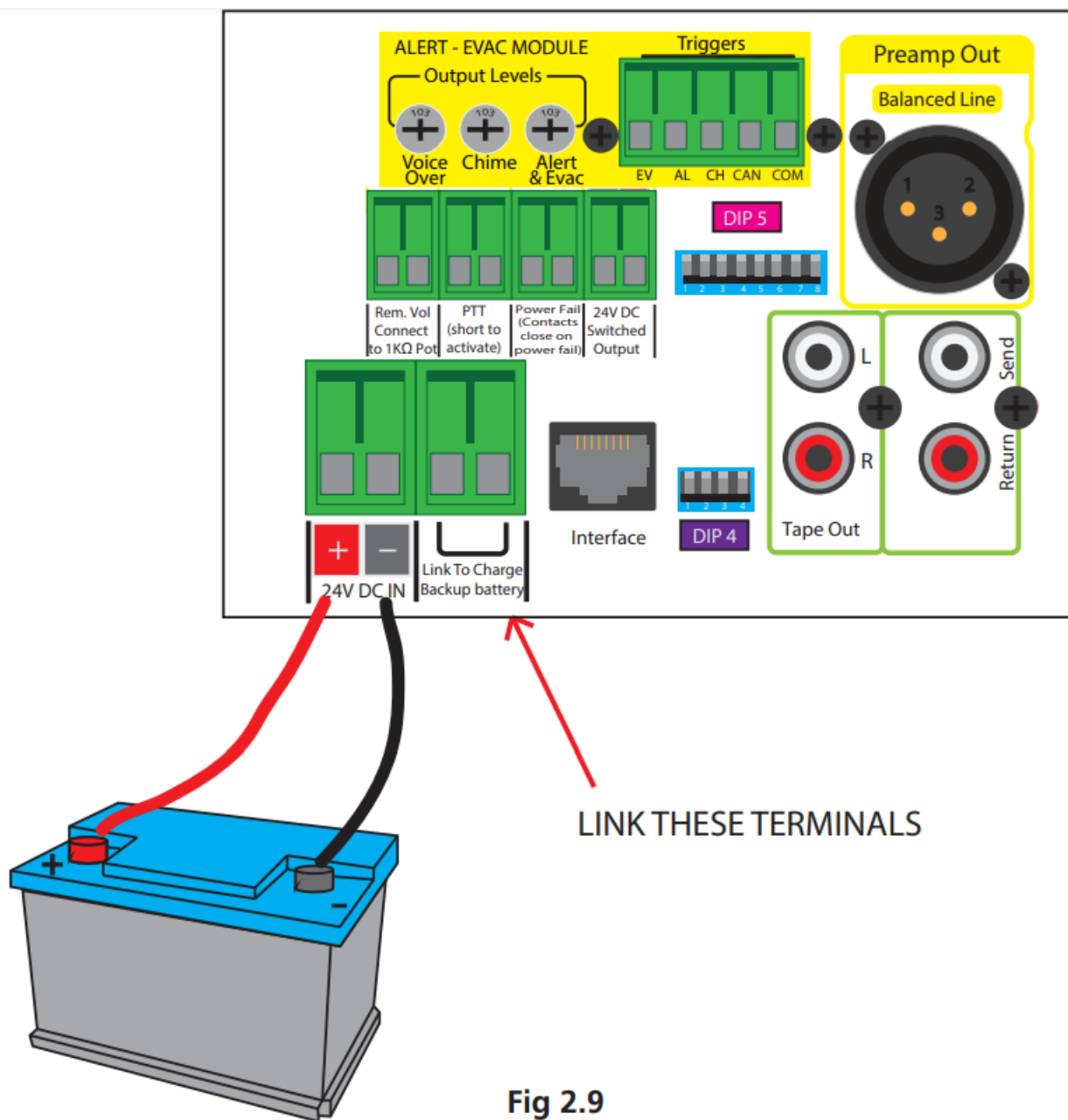
ALERT - EVAC MODULE — Output Levels —
Voice Over · Chime · Alert & Evac

Triggers
EV AL CH CAN COM

Preamp Out
Balanced Line

DIP 5

Rem. Vol Connect to 1KΩ Pot | PTT (short to activate) | Power Fail (Contacts close on power fail) | 24V DC Switched Output

Interface

DIP 4

Tape Out
L
R

Send
Return

24V DC IN
+ −
Link To Charge Backup battery

LINK THESE TERMINALS

Fig 2.9

2.10 Fitting the Optional A 2711 MP3 Module
To install the optional MP3 module, follow these steps.

FOLDER ⏮ ▶II ⏭ ⏻
IR MODE
SD/SDHC/MMC

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.
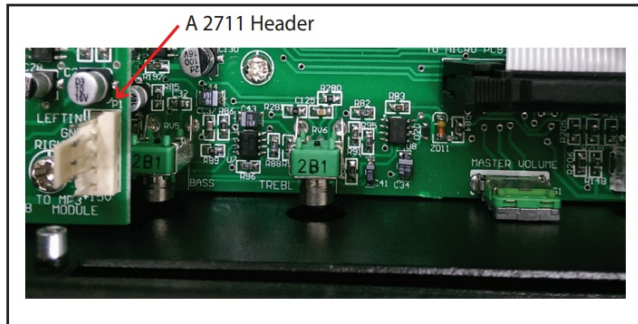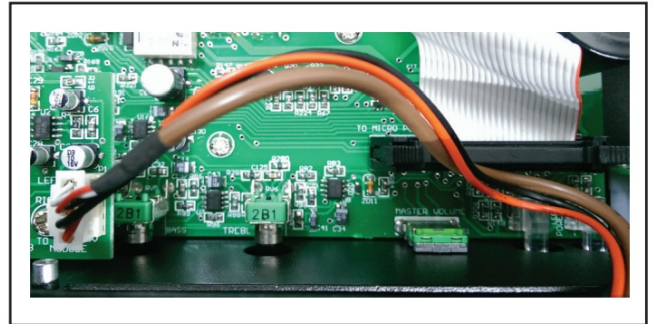

Fig 2.10A

Fig 2.10B

A 2711Specifications
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
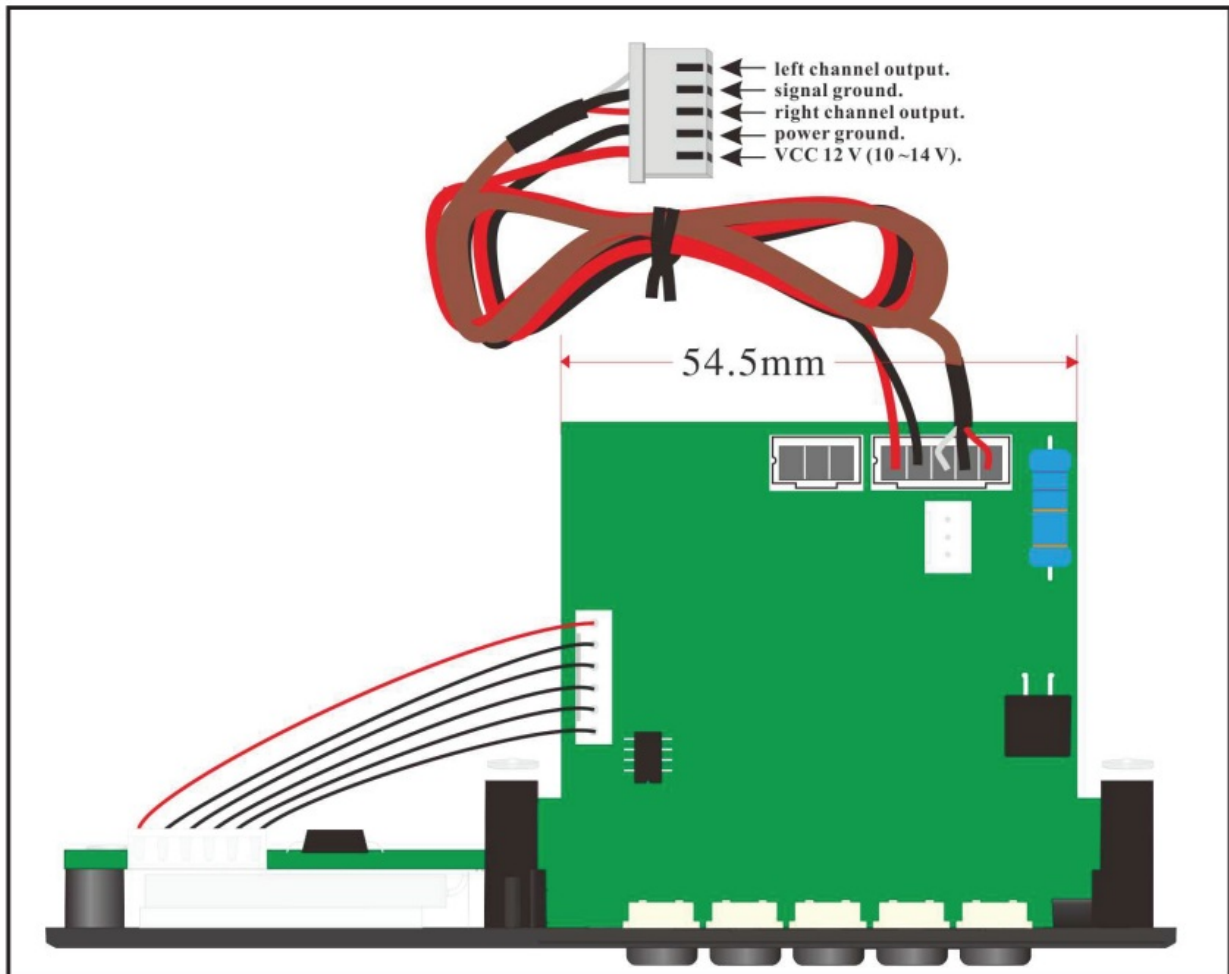Storage: USB/SD Card (maximum 32GB – FAT16/32)
Supply voltage: 12V DC(10-15V operating range)
Power consumption: <2W
Dimensions: 120W x 56.5D x 22Hmm

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	In stop mode: Change the starting play track (file) during stop mode, cyclic to the first track, if it is in the last track. In play mode, pause mode, random play mode: 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	In stop mode: Change the starting play track (file) during stop mode, cyclic to the last track, if it is in the first track. In play mode, pause mode: Single pressed, skip the playing track (file) to precious track (tile) 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 FLAY/PAUSE mode, pressing the stop key the 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 tiles		✓
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	in stop mode: Skip the starting play folder to next folder during stop mode, cyclic to the first folder if it is in the last folder. In program entry mode: Change the file for program select to next folder's first tile, cyclic to the first folder if it is in the last folder. In normal play mode: Skip the playing file to the next folder's first tile.	✓	✓
FOLDER DOWN	In stop mode: Skip the starting play folder to previous folder during stop mode, cyclic to the last folder if it is in the first folder. In program entry mode: Change the file for program select to previous folder's first tile, cyclic to the last folder if it is in the first folder. In normal play mode: Skip the playing tile 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.		✓

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 with invalidate warranty.

Distorted Output
Check that the speaker type is correct for the output that you are using (ie. 4-16O, 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.

SPECIFICATIONS

POWER OUTPUTS

A 4275C: …………………….………125 watts RMS

A 4285C: …………………….………250 watts RMS

Distortion:……………………..< 0.5%, @ 1kHz

Output line: ……………70V, 100V or 4 – 16O

Line output:…………..600O 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 4275C: …………….……………….5A AC , 10A DC

A 4285C: ……………….………7.5A AC , 20A DC

Switched 24VDC 1A Internal (both models)

DIMENSIONS

All models: …………….≈483W x 330D x 88H

WEIGHT

A 4275C: …………….……………………..≈14.5kg

A 4285C: …………….……………………..≈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.

www.redbackaudio.com.au
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Documents / Resources

REDBACK A4285C Phase5 Public Address (PA) Mixer Amplifier [pdf] User Manual
A4285C Phase5 Public Address PA Mixer Amplifier, A4285C, Phase5 Public Address PA Mixer Amplifier, PA Mixer Amplifier, Mixer Amplifier

References

- 🌐 **redbackaudio.com - Crazy Domains**