

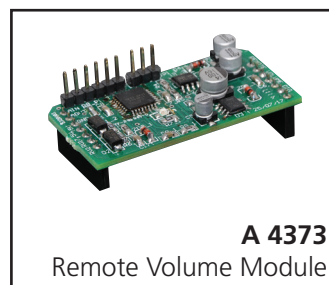
# Redback® A 4270/80 Four Zone Paging PA Amplifier



**A 4660**  
Paging Console



**A 4658**  
Power Injector



**A 4373**  
Remote Volume Module



**A 2280B**  
Remote Volume Wall Plate



**A 4376**  
Rack Mount Ears

## Operating Manual

### A 4270 125 WATT FOUR ZONE PAGING PA AMPLIFIER A 4280 250 WATT FOUR ZONE PAGING PA AMPLIFIER

#### Optional Accessories

- A 4660** Paging Console
- A 4658** Power Injector Box
- A 4373** Remote Volume Module
- A 2280B** Remote Volume Wall Plate
- A 4376** Rack Mount Ears

Redback® Proudly Made In Australia

Distributed by Altronic Distributors Pty. Ltd.  
Phone: 1300 780 999 Fax: 1300 790 999 Internet: [www.altronic.com.au](http://www.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.

User manual revision number: 1.6 23/08/2023



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

You may be surprised to learn that Altronics 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 Altronics 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 bullet-proof 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.

## 1.0 OVERVIEW

The Redback® A 4270 125 Watt and A 4280 250 Watt 4 Zone paging amplifiers are specifically designed for multi zone applications. Based on the popular Redback® A 4377 and A 4387 amplifier series, these amplifiers have three inputs which can be configured for either microphone or line level. The addition of zone paging is made possible by connecting Redback® A 4660 paging consoles to the amplifier. The amplifiers have a main 100V speaker output plus as additional four separate 100V output speaker loads, each of which can be used for background music which can be overridden by the A 4660 paging microphones.

The Redback® A 4270 conservatively delivers 125W RMS power, while the A 4280 delivers 250W RMS. Frequency response extends from 50Hz to 15kHz  $\pm 3\text{dB}$  at a total harmonic distortion (THD) of less than 0.5% @ 1kHz.

Vox muting is provided on inputs one and two, which, when activated, automatically mutes the other inputs. Bass and treble controls and phantom powering capability enable unparalleled flexibility for a wide scope of applications such as factories, workshops, mine sites, sports clubs and office buildings.

The amplifiers operate from 240V AC mains or 24V DC permitting battery backup operation during mains power failure. The output comes standard suitable for a 100V line load, but this can be configured internally to 70V line or low impedance (4 - 16 $\Omega$ ) loads. (Check the Website for details).

Thermal overload, overcurrent and overload protection circuitry and fuses on both AC and DC provide excellent fault condition protection and robust performance. The amplifier also utilises a half power mode which enables the amplifier to continue to run at a reduced output level if it is being over driven.

Tape output sockets are provided for recording purposes or feeding into additional power amplifiers.

Remote volume available when A 4373 Digital volume control module fitted internally and external A 2280B wall plate or 1K $\Omega$  potentiometer connected.

MP3 based Alert and Evacuation tones along with chime tones and voice over message are built standard functions of the amplifiers.

## 2.0 FEATURES

- 3 Balanced microphone inputs / 3 Aux inputs / 1 Music input
- Robust design incorporating latest Mosfet technology
- Very Low noise and distortion
- 100V Main Output standard with optional 70V and 4-16 $\Omega$  outputs
- 100V Outputs 1- 4
- Zone paging (via optional Redback® A 4660 paging consoles)
- Background music (BGM) selectable to Outputs 1-4
- MP3 based Alert/Evac tones with MP3 voice over message for emergency tones
- 240V AC or 24V DC operation
- VOX muting on inputs 1 and 2 (Switch selectable internally)
- Adjustable VOX level sensitivities
- Bass and Treble controls
- Tape Output
- Phantom power on microphone inputs (DIP switch selectable internally)
- Multi stage thermally cued fan cooling
- Output Peak Limited
- Thermal Overload protected
- Signal Presence Indicator
- Half power mode when overdriven
- Fault Indicators
- 24V DC Power Status Indicator
- Optional remote volume (With A 4373 Digital volume control module fitted and external A 2280B wall plate)
- Rack Mountable (suits 19 inch racks) with optional A 4376 rack ears

# Redback® A 4270/80 Four Zone Paging PA Amplifier

## 3.0 FRONT PANEL CONTROLS

Figure 1 shows the layout of the front panel.

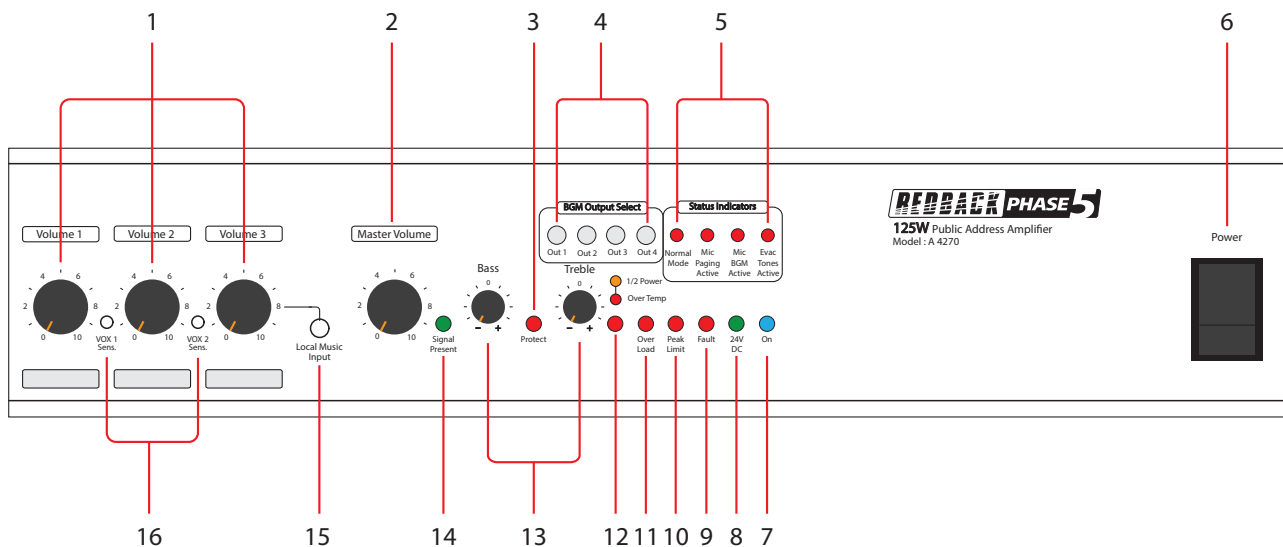


Fig 1

### 1 Inputs 1-4 volume controls

Use these controls to adjust the output volume of inputs 1-4 (volume 3 is used to adjust the volume of input 4 the music input).

### 2 Master volume Control

Use this control to adjust the master volume.

### 3 Protect Indicator

This LED indicates when the amplifier module has an internal circuitry fault.

### 4 BGM Output Select Switches

Use these switches to select which output zones are to receive the background music.

### 5 Status Indicators

Normal Mode: Indicates that the amplifier is operating in normal mode (i.e. no paging or Evac tones active).

Mic Paging Active: Indicates when an A 4660 paging mic console is in use.

Mic BGM Active: Indicates when the BGM input on the rear of an A 4660 paging console is active.

Evac Tones Active: Indicates when the Alert or Evac tones are active.

### 6 Power Switch

Use this to turn the unit on.

### 7 On Indicator

This led indicates the unit has power.

### 8 24V DC Indicator

This LED indicates when the amplifier is being powered from the 24V input.

### 9 Fault Indicator

This led indicates when the amplifier has a fault.

### 10 Peak Limit Indicator

This LED indicates when the input signal is clipping.

### 11 OverLoad Indicator

This LED indicates when the output is drawing too much current from the amplifier. The output will be disconnected until the current draw is reduced.

### 12 OverTemp/ Half Power Indicator

When this LED is red it indicates when the amplifier is overheating. The output will be disconnected until the amplifier is once again cool enough to operate. If this LED is orange the amplifier has gone into half power mode. This mode lets the amplifier continue to run at a lower output rather than shutdown completely. This mode might be initiated from the amplifier being overdriven or overloaded.

### 13 Bass and Treble Controls

Use these controls to adjust the bass and treble.

### 14 Signal Presence Indicator

This LED indicates when an input signal is present.

### 15 Music Input

Use this input to connect a portable music player. This input over-rides the rear input 3 and is adjusted via the volume 3 pot.

### 16 Vox level controls

Use these controls to adjust the vox sensitivities of inputs 1-2.



## 4.0 REAR PANEL CONNECTIONS

Figure 2 shows the layout of the rear panel.

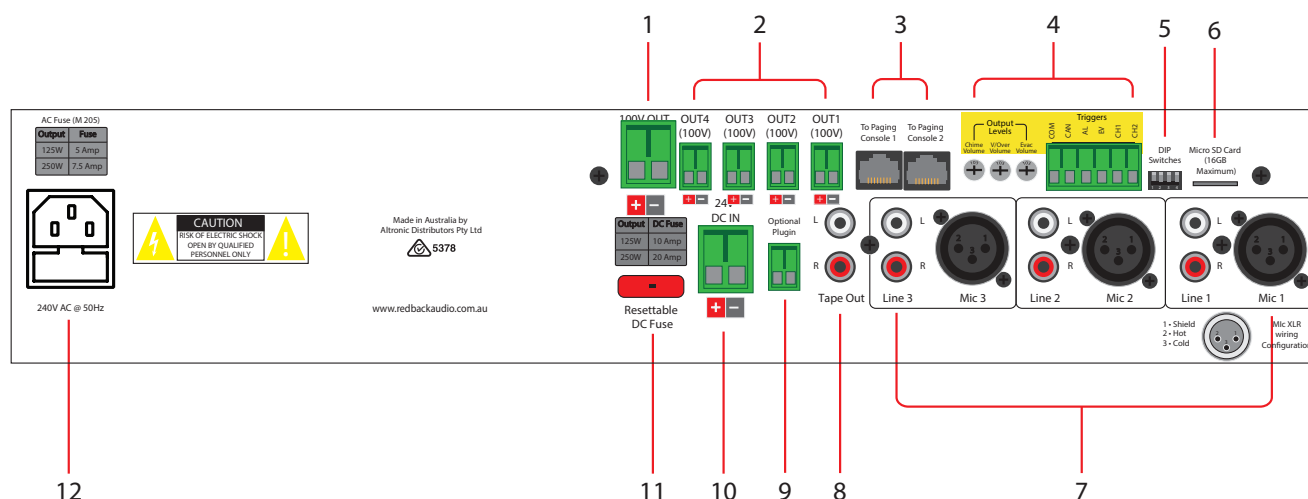


Fig 2

### 1 100V Out (Main) Output Connections

This is the main output of the amplifier and is for connection of speakers fitted with a 100V line transformer. Always ensure that the total load of the speakers does not exceed the rated output of the amplifier i.e. 80Ω minimum at 100V for 125W and 40Ω minimum at 100V for 250 Watts. Otherwise either the DC or mains fuse could blow or the fault led to activate and the amp will shut down. Always be careful to avoid short circuits and connection to the wrong terminals.

### 2 100V Out (Out1 - Out4) Output Connections

These 100V line outputs are for zones which can be paged when the optional A 4660 paging microphones are connected. Background music can be piped to these outputs via the front switches.

### 3 Connections for A 4660 Paging Consoles

These RJ45 ports are for connection of the optional A 4660 paging consoles. Note: Only one port can be used even if two consoles are used (see figure 10 for more details).

### 4 Alert/Evacuation Tone Generator with Voice Over Message

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 a building fire indicator board, break glass alarm etc.

All tones are MP3 based files and are stored on the supplied Micro SD card.

(Refer to section 15.0 for more details).

### 5 DIP Switches

These switches provide various functions (refer to section 17.0).

### 6 Micro SD Card

This is used to store the MP3 files used for the Alert, Evac and Chime tones and also the Voice over messages. (Refer to section 15.0 for more details).

### 7 Inputs 1-3

These inputs can be either a balanced XLR input with sensitivities of 500mV or dual RCA line inputs with a 1V input sensitivity. The line input dual RCA connectors are internally mixed to produce a mono input signal.

### 8 Tape Out

Dual RCA's provided for recording purposes. This is a line level output.

### 9 Optional Plugin

This connection is to be used when the optional A 4373 Digital Volume Board is fitted inside the amplifier. This provides remote volume when used in conjunction with a 1K potentiometer wired to these terminals.

### 10 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 Fig 5 for more details)

### 11 DC Resettable fuses

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

### 12 240V AC power socket (Australian standard)

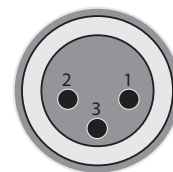
Connects to 240V AC mains power with the included IEC lead. The internal fuse is an M205 5Amp for the A 4270 125 Watt amplifier and an M205 7.5Amp for the A 4280 250 Watt amplifier.

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## 5.0 AUDIO CONNECTIONS

The amplifier has three balanced XLR audio inputs, three dual RCA line inputs which are internally mixed to create mono signals and a front mounted Music Input for portable devices. This input when connected, over-rides the rear channel 3 audio sources and is adjusted via the volume 3 level control. A VOX function is also included which when enabled will allow input 1 to mute inputs 2 and 3, or input 2 to mute input 3. The VOX circuitry is selected by internal switches as shown in figure 5. The VOX1 switch when set to ON will allow input 1 to mute inputs 2 & 3. The VOX2 switch when set to ON will allow input 2 to mute input 3. The VOX sensitivity is adjusted by the trimpots located on the front of the amplifier.

Mic XLR wiring Configuration



- 1 • Earth/Shield
- 2 • Signal Hot
- 3 • Signal Cold

Fig 3 shows a typical install where the A 4270 has a balanced microphone connected to input 1 and a Line level source connected to input 2. If the VOX1 switch is set to "ON", the microphone will VOX mute the CD player connected to input 2.

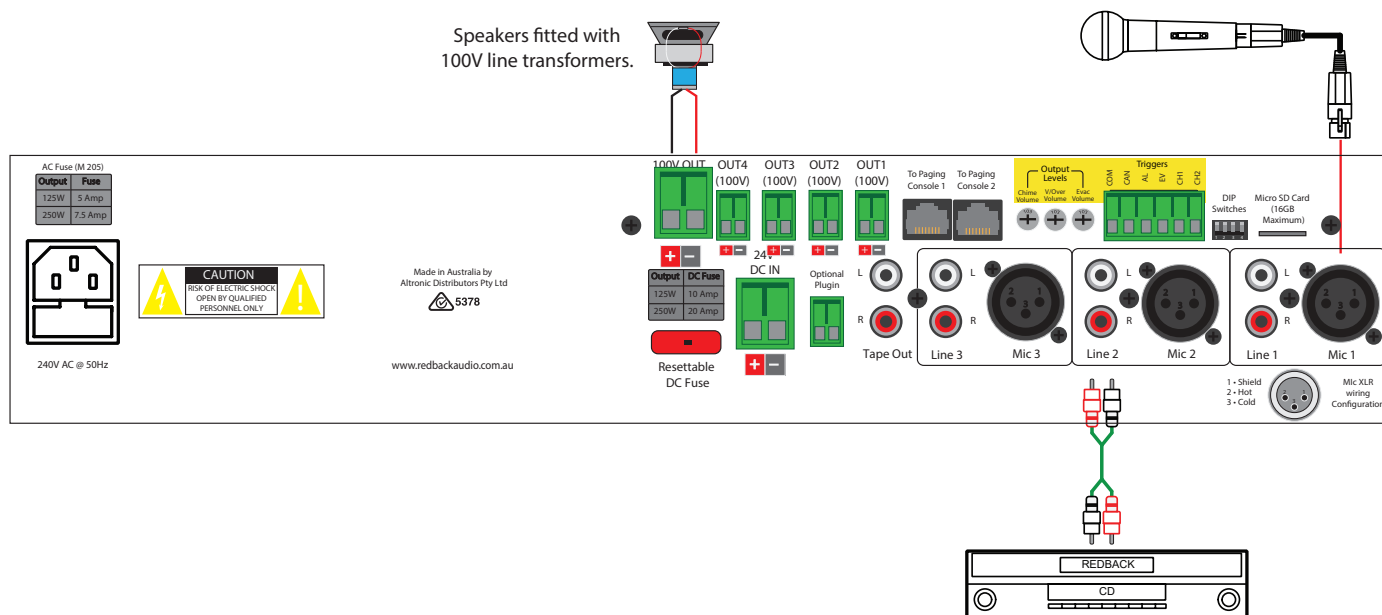


Fig 3

## 6.0 POWER SUPPLY

The amplifier operates on 230V AC or primarily for battery backup operation a 24V DC supply. Ensure power is switched OFF at the front panel before connecting either mains power to the IEC socket or 24V DC to the screw terminal input. As high currents may be drawn when operating from a 24V DC supply confirm the capacity of the DC power supply used.

## 7.0 PHANTOM POWER

All three microphone inputs have DIP switch selectable phantom power. When enabled 15V DC will be connected to the Hot and Cold pins of the corresponding XLR. To access the DIP switches, first disconnect power from the unit and then remove the lid. The location of the DIP switches is shown in figure 4.

The Phantom power DIP switch settings are:

- DIP 1 enables the phantom power to the XLR connector on input 1.
- DIP 2 enables the phantom power to the XLR connector on input 2.
- DIP 3 enables the phantom power to the XLR connector on input 3.
- DIP 4 is not used.

## 8.0 VOX MUTING

Vox muting is provided on inputs one and two, which, when activated, automatically mutes the other inputs.

The VOX1 switch when set to ON will allow input 1 to mute inputs 2 & 3. This will also override the A 4660 paging consoles (if connected).

The VOX2 switch when set to ON will allow input 2 to mute input 3.

The VOX sensitivity is adjusted by the trimpots located on the front of the amplifier (see figure 1).

## 9.0 REMOTE VOLUME (Optional)

It is possible to control the master volume with the addition of the A 4373 Digital Remote volume board and a 1k $\Omega$  potentiometer (or Altronics A 2280B wall plate) fitted across the terminals labelled "Optional Plugin" on the rear of the amplifier. The plugin board is fitted inside the amplifier in the location shown in figure 4.

*NOTE: Take special care with the orientation of the board and remove power from the amplifier before fitting.*

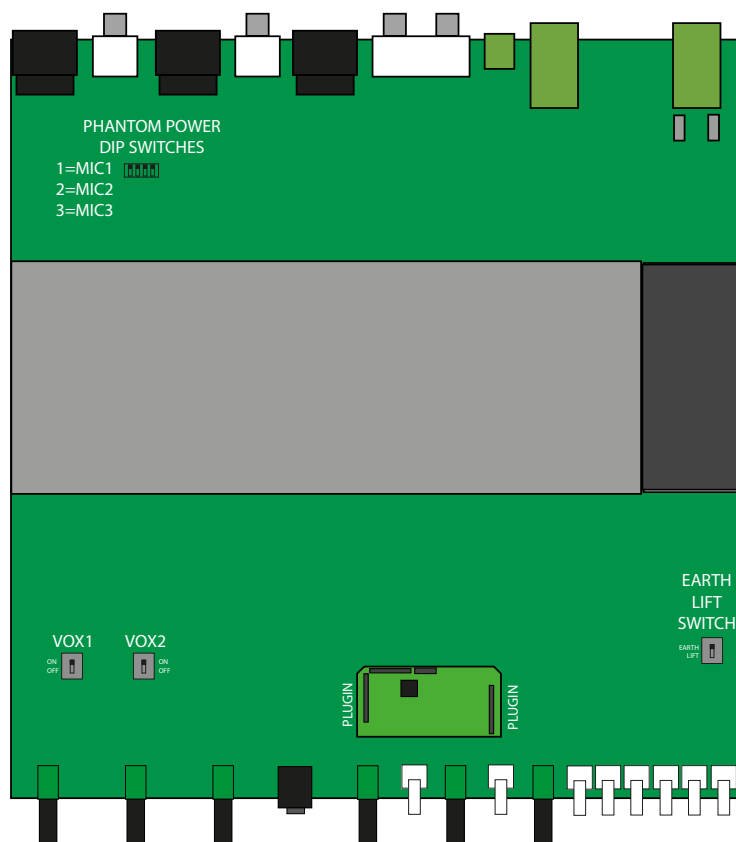


Fig 4

## 10.0 SPEAKER CONNECTIONS

Speakers fitted with 100V line transformers may be connected to the output terminals on the rear of the amplifier. Always ensure the total load of the fitted speakers does not exceed the rated output of the amplifier (ie 125 watts for the A 4270 and 250 watts for the A 4280 amplifier) otherwise damage may result. When fitting speakers with line transformers the impedance of the load cannot be measured using a standard multimeter. An impedance meter (such as the Altronics Q 2007) is required. Fig 5 lists the impedance at certain loads of speakers fitted with 70V and 100V line transformers. So for a total load of 125 watts using 100V line transformer fitted speakers, the impedance of the speaker load should be 80 $\Omega$ .



### 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 2004 or similar impedance meter.

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

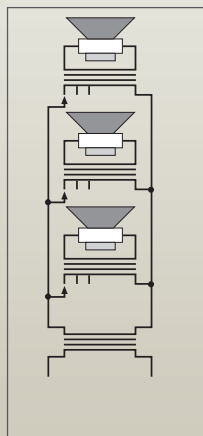


Fig 5

# Redback® A 4270/80 Four Zone Paging PA Amplifier

Figure 6 illustrates a typical install where the A 4270 has all five outputs connected to 100V line speakers, and a Redback® A 4660 Paging console is connected to the one of the RJ45 ports.

**NOTE: The total load of all speakers must not exceed the total load rating of the amplifier.**

Audio from the amplifier is output to the main 100V Out terminals which is not affected by the A 4660 paging console. The audio from the amplifier can also be piped to any of the 100V zone outputs 1- 4 and used as background music to that zone. This is achieved by pressing the “BGM Output Select” switches on the front of the amplifier. If paging is required to these zones then a Redback® A 4660 paging console can be connected as shown. The paging console provides paging to all four output zones and will override the background music to those zones (refer to section 11.0 for more details).

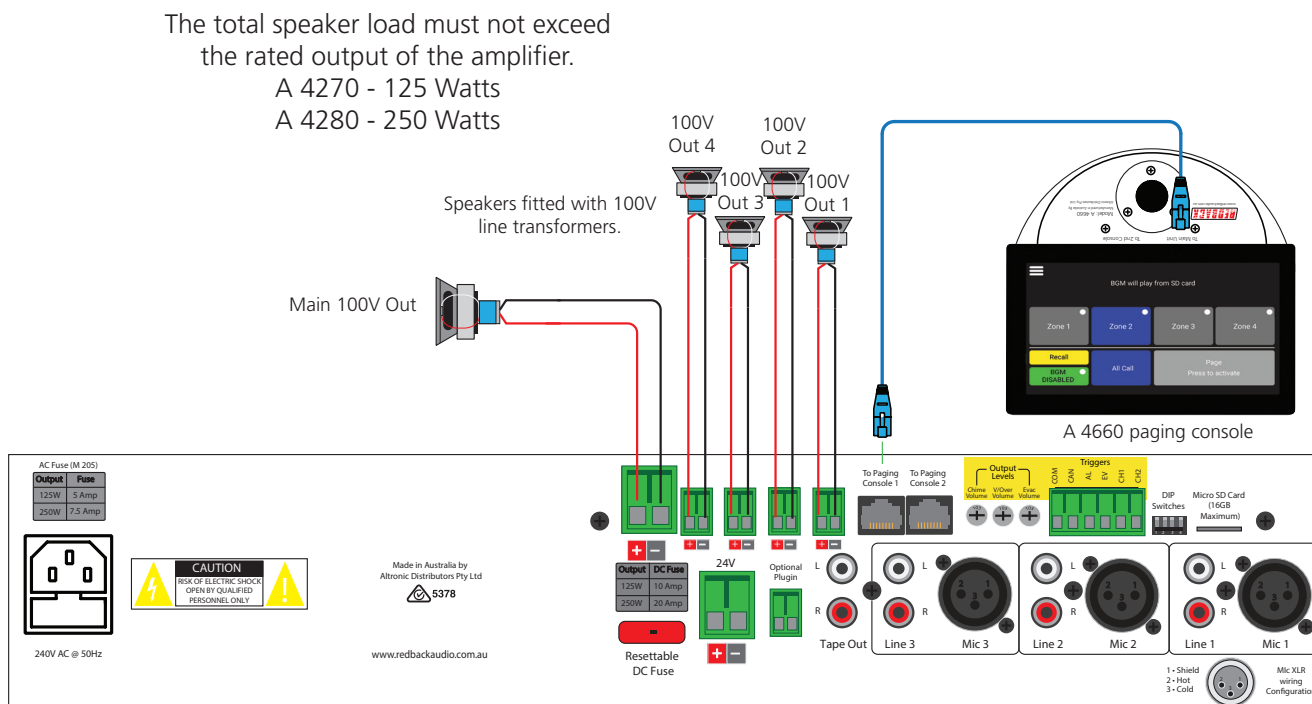


Fig 6

## RJ45 cabling configuration (586A ‘Straight through’)

The A 4660 paging consoles are connected to the amplifier using “pin to pin” configuration RJ45 data cabling as shown in fig 7. When installing ensure all connections are verified with a LAN cable tester before switching any system component on.

**Failure to follow the correct wiring configuration may result in damage to system components. and will Void the warranty.**

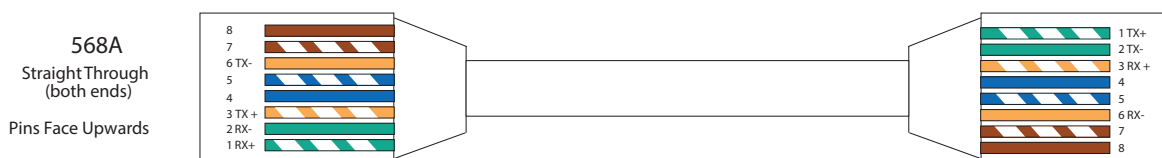


Fig 7



## 11.0 A 4660 PAGING CONSOLE OVERVIEW

The A 4660 paging consoles allows for paging to any of the four amplifier output zones by selecting the zones required, or by pressing the all call button if all zones are required, and then simply pressing the page button. General paging will override the background music to all zones. At the completion of the announcement, audio will be restored to previously selected zones.

*Note: If the VOX1 switch on the amplifier is set to ON, input 1 will override the A 4660 paging consoles.*

When using the paging console, these microphones assume priority between input 1 and input 2 on the amplifier. If two consoles are connected, they operate on a first in, first served basis, activating a system busy indicator on the inoperative console.

A maximum of 2 paging consoles can be connected back to the A 4270 and A 4280. The consoles must be cascaded back to the amplifier via Cat5e/6 cabling to only one of the RJ45 ports on the rear of the unit (Refer to figure 10).

Each unit must be assigned an address which is set when the A 4660 is first initialised, or it can be re-assigned by accessing the Factory Reset option (see page XX). The address when connecting to the A 4270 or A 4280 can be any number from 1-8.

The paging console can also be used as a secondary local source of background music (BGM).



### 11.1 Connecting the paging console

The console is connected to the A 4270 via standard Cat5e/6 cabling as shown in figure 8.

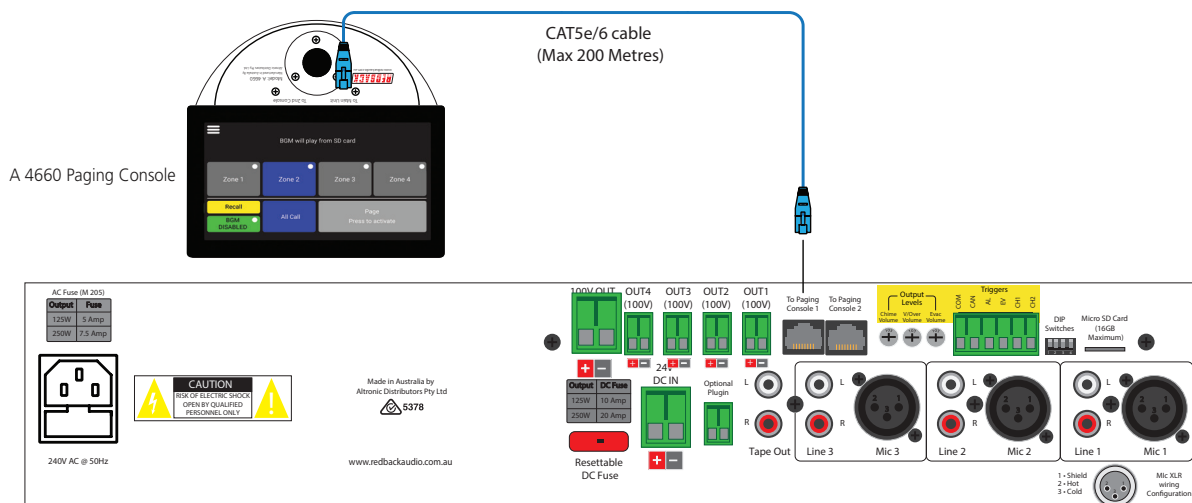


Fig 8

There are two RJ45 ports on the back of the A 4270 either of which can be used to connect an A 4660 paging console. The maximum distance between the A 4270 and a paging console is 200m.

*Note: External power injectors (Redback ® A 4658) may be required if power problems are encountered from long cable runs. This is shown connected to the console in the example of figure 9.*

# Redback® A 4270/80 Four Zone Paging PA Amplifier

## 11.2 Connecting the paging console with a power injector

If power problems are encountered from long cable runs, an A 4658 power injector may be required. The console is connected to the A 4658 via standard Cat5e/6 cabling as shown in figure 9.

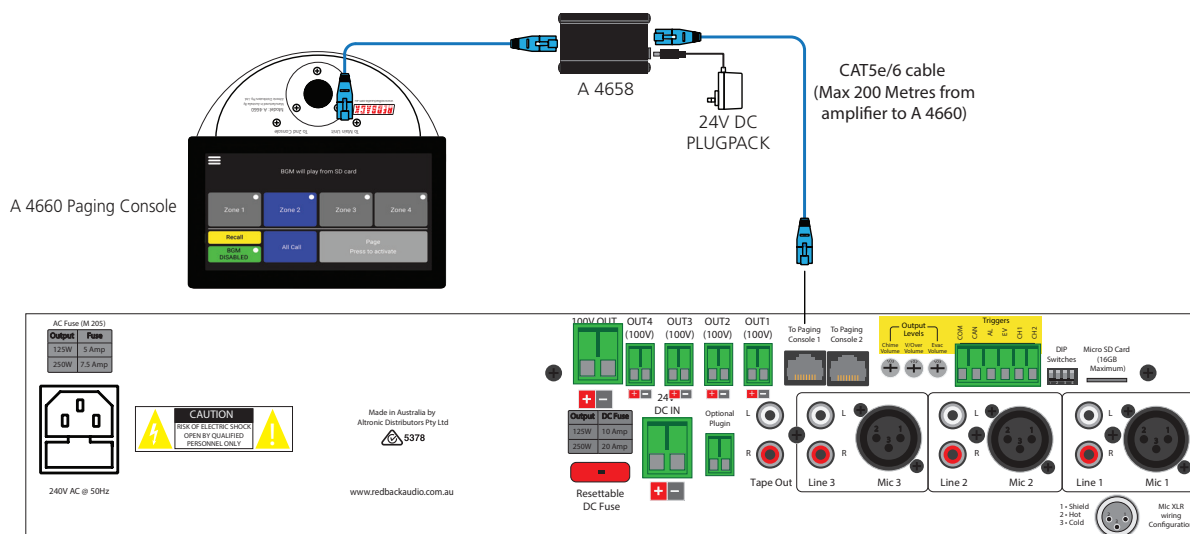


Fig 9

**Note: Power Over Ethernet or POE's cannot be used as the power injectors as they run on 48V. The A 4270 and A 4660 systems are powered by 24V DC. Use of POE's will void the warranty.**

## 11.3 Cascading two paging consoles

When connecting two paging consoles to the amplifier they must be cascaded and connected to only one of the two RJ45 ports on the rear of the amplifier, as shown in figure 10. Standard Cat5e/6 cabling is used and the maximum total run length to the second paging console is 200m. If an A 4658 power injector is required, it can be connected before the first or second paging console. Figure 10 illustrates the A 4658 connected before the second console.

**Note: A maximum of two paging consoles can be connected to the amplifier and they must be cascaded off one Rj45 port.**

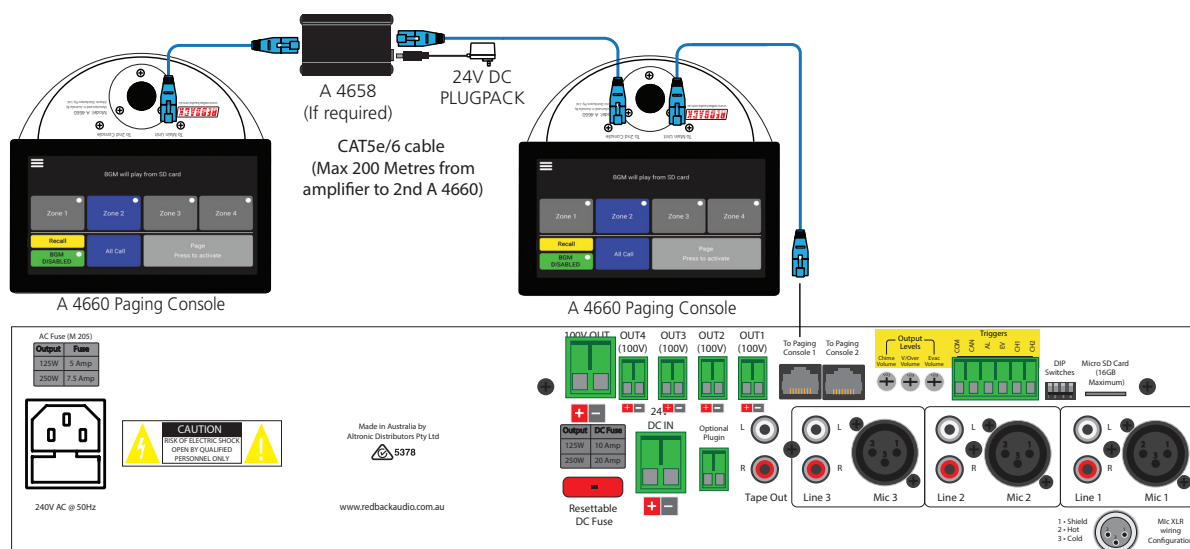


Fig 10 Cascading A 4660 paging consoles.

## 12.0 A 4660 HOME SCREEN

Figure 11 below outlines the main functions of the A 4660.

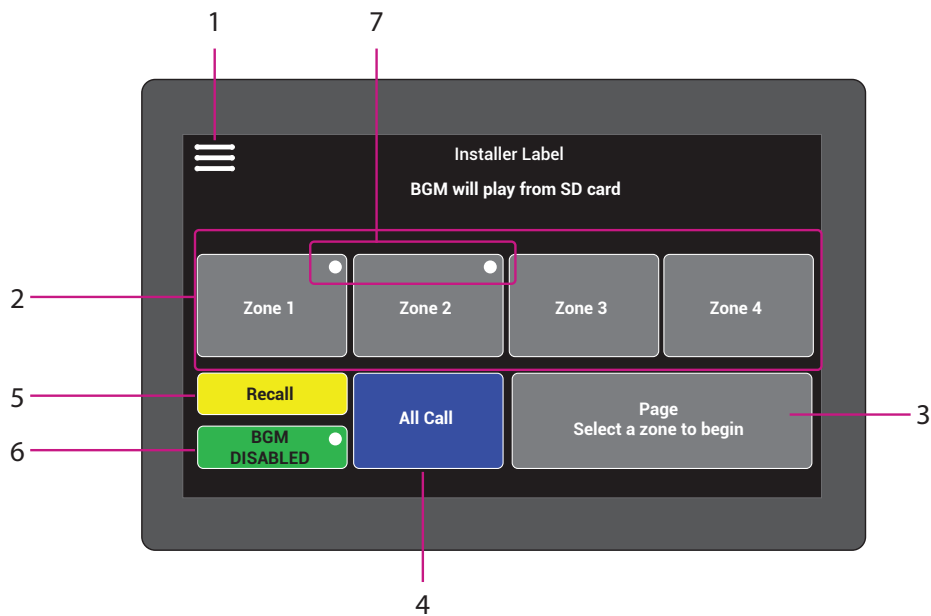


Fig 11

- 1 Menu Button** - Press this to access the system settings (see section 13.0)
- 2 Zone Selection** - To page to a zone select the desired zones by pressing the buttons 1- 4
- 3 Page Button** - Press this button to page to selected zones. Press again to cancel paging or press the cancel button.  
*Note: If the Chime In or Chime Out are enabled (see section 13.6) these will activate before and/or after paging is available.*
- 4 All Call Button** - Press this button to quick select all zones.
- 5 Store/Recall Button** - Use this button to store zones to a fast recall button.  
**To store a group of zones** select the zones you wish to group together. Once the desired zones are selected, press store. You can now assign a group to a button. Select a button and give it a label using the displayed keyboard. Press enter when done.  
**To recall zones** press the recall button and select one of the labelled buttons to recall. The zones stored in this group will then illuminate automatically. Press the page button to page.
- 6 BGM Disabled/Enabled** - Press this button to enable or disable the background music option (see section 14.0).
- 7 BGM active indicator** - The dot in the corner of the zone button indicates which zones have the BGM selected.

## 13.0 A 4660 SETTINGS

The settings menu can be accessed using the icon on the top left of the screen. Once in this menu the following screen will be displayed, which shows the various settings available.

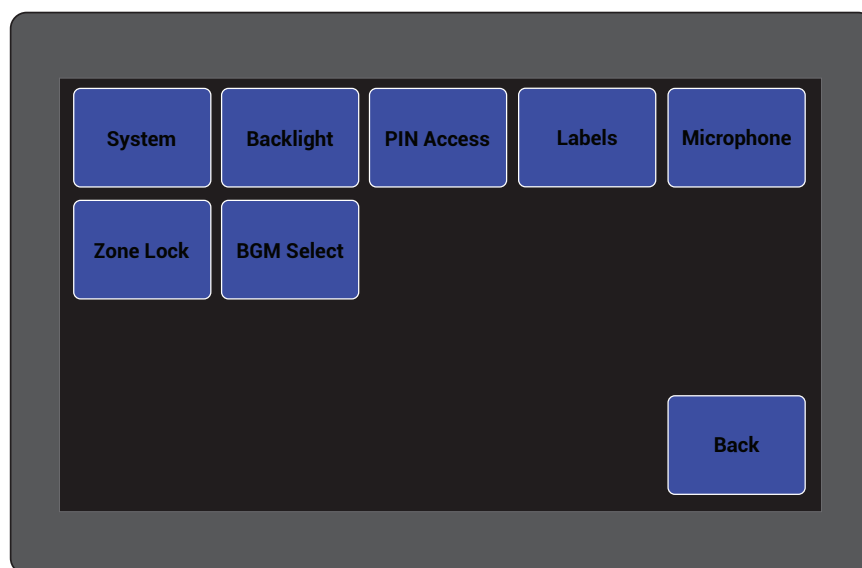


Fig 12 - Console Settings Screen.

### 13.1 A 4660 System Settings

The System settings screen is shown in figure 12.

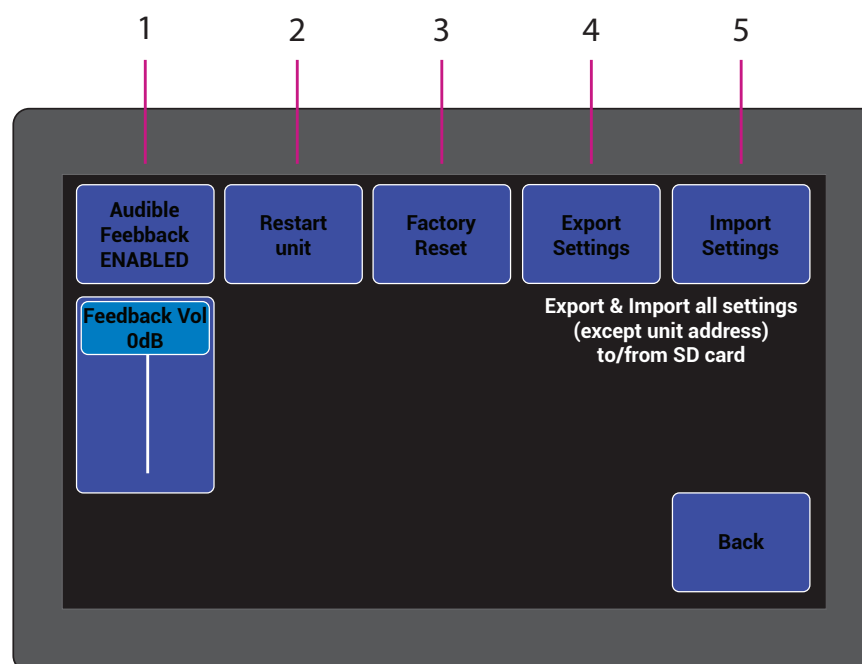


Fig 13 - System Settings Screen.

- 1 Audible Feedback** - Allows you to enable/disable the audible feedback (in built speaker) on button presses and set the volume. Press the button to enable/disable and use the slider below to adjust the feedback volume.
- 2 Restart unit** - This will restart the A 4660.
- 3 Factory reset** - This will reset the unit back to it's default settings. This option is also required to re-assign the paging console address (Press the factory reset button, tap confirm and a prompt will appear for the units address. Select the required address (which can be any number from 1-8). If any settings need saving before the factory reset, use the Export Settings option below.
- 4 Export Settings** - This feature allows the settings of the unit to be transferred to another unit or kept as a back up. Simply insert a Micro Sd card into the unit and follow the prompts.
- 5 Import Settings** - This feature allows the settings of the unit to be imported from another unit. Insert a Micro SD card and follow the prompts.

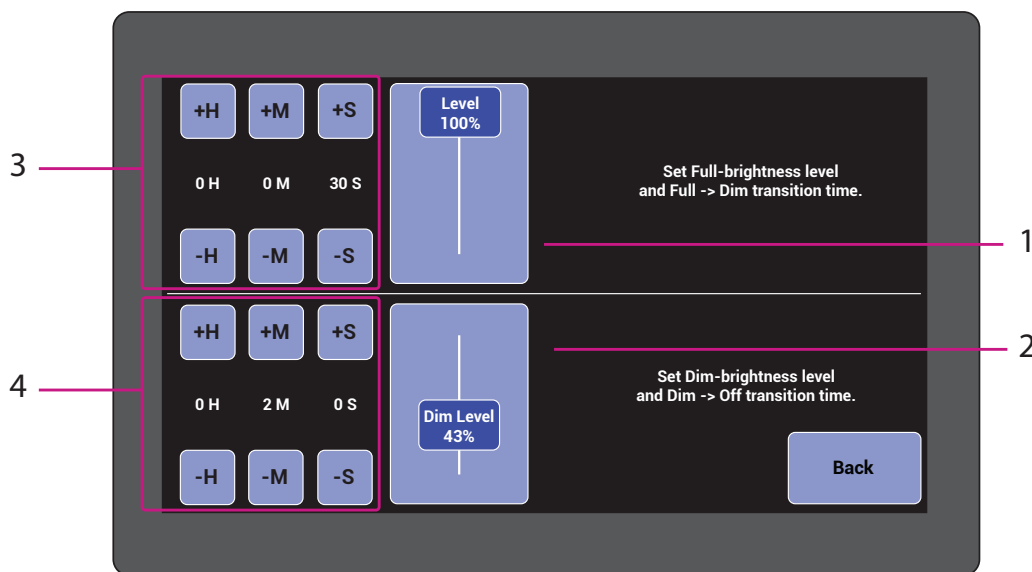
## 13.2 A 4660 Backlight Settings

Press the “backlight” button to display the screen shown in figure 14.

There are two levels of screen brightness which come into effect, when the screen hasn’t been touched for a period of time set by the user.

This menu screen allows the user to select the active screen brightness level, the dimmed brightness level and timeout periods for the transition from active screen mode to dimmed mode, and the transition period from dimmed mode to screen off mode.

- 1 Active Screen Brightness Level** - Use this slider to adjust the brightness level of the active screen.
- 2 Dimmed Screen Brightness Level** - Use this slider to adjust the brightness level of the dimmed screen
- 3 Active Screen to Dimmed Mode transition time** - Use these buttons to adjust the timeout period to enter dimming mode (set to 0 for the screen to be remain always on).
- 4 Dimmed Mode to screen Off transition time** - Use these buttons to adjust the timeout period from dimmed screen mode to the screen turning off completely (This is unavailable if the dimming mode is set to zero).



**Fig 14 - Backlight Settings Screen.**

**13.3 A 4660 PIN Access** - Set an optional access PIN preventing unauthorised access to the wallplates settings. Type in a preferred PIN and press “E” to accept. Press “C” to delete PIN digits or to reset the PIN (For access without a PIN, delete all PIN digits). Once complete press the BACK button and the change will take effect.

**13.4 A 4660 Labels** - Allows you to set and change the labels for the output zones ,customise an installer label which is displayed on the top of the main screen, and name the Bluetooth module.

Select the desired button and then use the displayed keyboard to enter the labels.

**13.5 A 4660 Zone Lock** - General paging can be blocked to any zones via this menu. Select the zones to be blocked and then press the back button. On the main screen these blocked zones will be blacked out and unavailable.

*NOTE: This will only lock out zones for this console. It will not lock out the same zones from other paging consoles connected to the A 4580.*



# Redback® A 4270/80 Four Zone Paging PA Amplifier

## 13.6 A 4660 Microphone settings

Press the “microphone” button to display the screen shown in figure 15.

From this menu the chime options and action of the paging button are set.

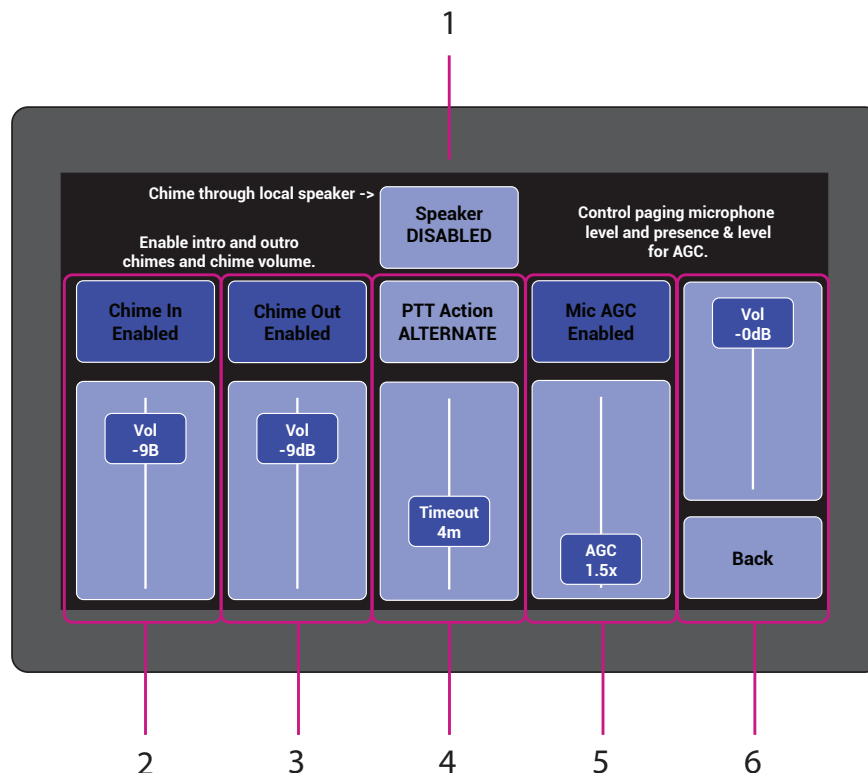


Fig 15 - Microphone Settings Screen.

- 1 Console Speaker** - This button enables the speaker built into the A 4660. If enabled the chime will be audible from the console as well as through the paging system.
- 2 Chime In** - This button allows you to enable or disable the pre-announcement chime on the paging audio. The level can also be adjusted to suit the installation. For instance a user may require the pre-announcement chime be louder than the normal programming. The standard pre-announcement chime can be replaced by an MP3 file installed on a Micro SD card by the user. A folder called “chime\_in” needs to be created and the required MP3 file inserted into this folder (refer to section 16.0 for installing MP3 files). The micro SD card needs to be inserted into the A 4660 and kept there.  
Note: The Micro SD card must be inserted into the A 4660 paging console. Not the amplifier.
- 3 Chime Out** - This button allows you to enable or disable the post-announcement chime on the paging audio. The level can also be adjusted to suit the installation. For instance a user may require the post-announcement chime be louder than the normal programming. The standard post-announcement chime can be replaced by an MP3 file installed on a Micro SD card by the user. A folder called “chime\_out” needs to be created and the required MP3 file inserted into this folder (refer to section 16.0 for installing MP3 files). The micro SD card needs to be inserted into the A 4660 and kept there.  
Note: The Micro SD card must be inserted into the A 4660 paging console. Not the amplifier.
- 3 PTT Action** - This button determines the action of the paging button. If momentary action is selected the paging button will need to be held to page. If alternate action is selected the paging button needs to be pressed and released to start paging. The paging mode will stay active for the period set by the timeout, or until the paging is cancelled by the user.
- 5 Mic AGC** - Allows for the microphones automatic gain control (AGC) effect to be adjusted up or down according to installation requirements. AGC allows the signal to automatically adjust to compensate for variations in level of peoples voices when making paging announcements. Please note high levels of AGC will increase audible noise in the system while paging.
- 6 Paging Level** - Adjust the paging level to suit the installation. This allows for paging to be adjusted to suit the level of programming from other sources connected to the system.

## 14.0 A 4660 LOCAL BACKGROUND MUSIC (BGM)

Background music to the four output zones is primarily fed from the audio output of the amplifier and selected by the front panel switches. But a secondary source of background music is available through the A 4660 paging console. There are three options available as background music sources.

Press the "BGM Select" button to display the screen shown in figure 16.

From this menu the local BGM options and volume are set.

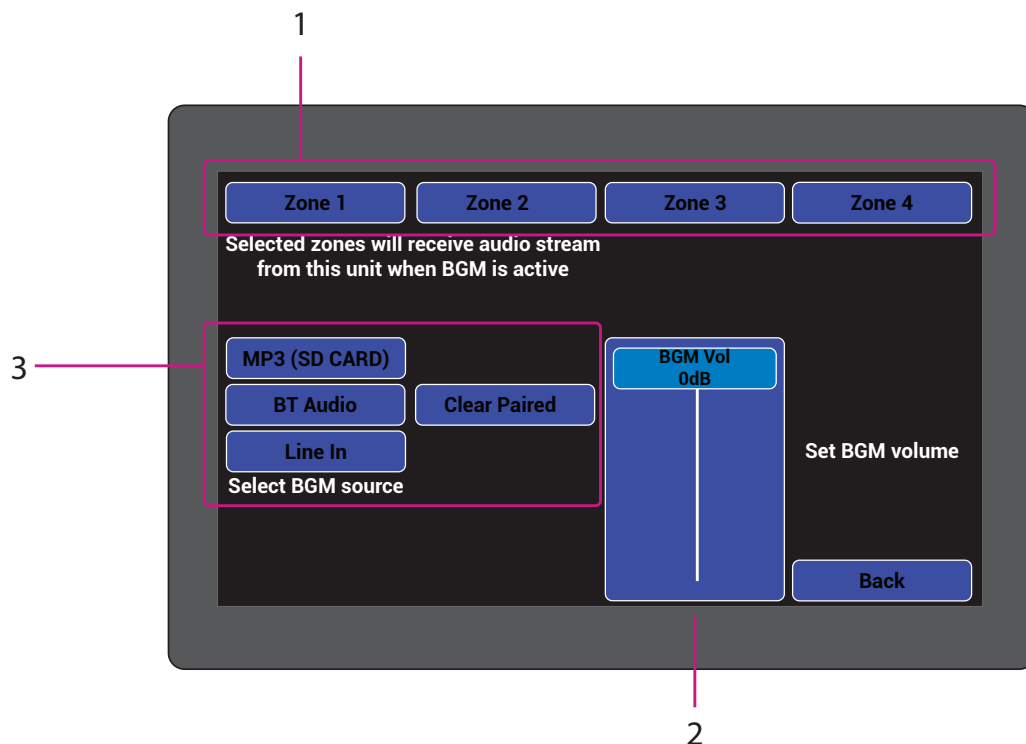


Fig 16

- 1 Zone Select** - Use these buttons to select which zones will receive the background music when the BGM is active. (The BGM is enabled from the home screen). Once activated these settings will override the amplifier front panel BGM button settings. If the BGM is disabled from the paging console the previous front panel switch settings will return).
- 2 BGM Level** - Adjust the BGM level to suit the installation.
- 3 Select BGM Source** - Use these buttons to select the BGM input source (See section 12 for more details).

### A 4660 Background Music (MP3 via Internal SD card)

Background music can be played from a Micro SD card inserted into the unit. A folder called "BGM" needs to be created and the required MP3 files inserted into this folder (refer to section 16.0 for installing MP3 files). MP3 files stored in the "BGM" folder will be played randomly.

Note: The Micro SD card must be inserted into the A 4660 paging console. Not the amplifier.

*Please note: Every time paging occurs the background music will return to a new MP3 file. It will not resume from the previously playing file.*

### A 4660 Background Music (Bluetooth Connection)

A bluetooth device such as a mobile phone, can be paired to the A 4660 for BGM playback. Simply search for the bluetooth device and pair. Previously paired devices can be cleared using the "Clear Paired" button.

The Bluetooth module can be labelled using the procedure set out in section 13.4.

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## A 4660 Background Music (Line In)

A local BGM source such as a mobile phone or tablet, is connected to the A 4660 through a compatible Redback UTP solutions transmitter. Figure 17 illustrates the use of a mobile phone as the local BGM source. This is connected to the 3.5mm audio input of the Redback A 4944 and then fed through a Cat5e/6 cable to the A 4660 paging console.

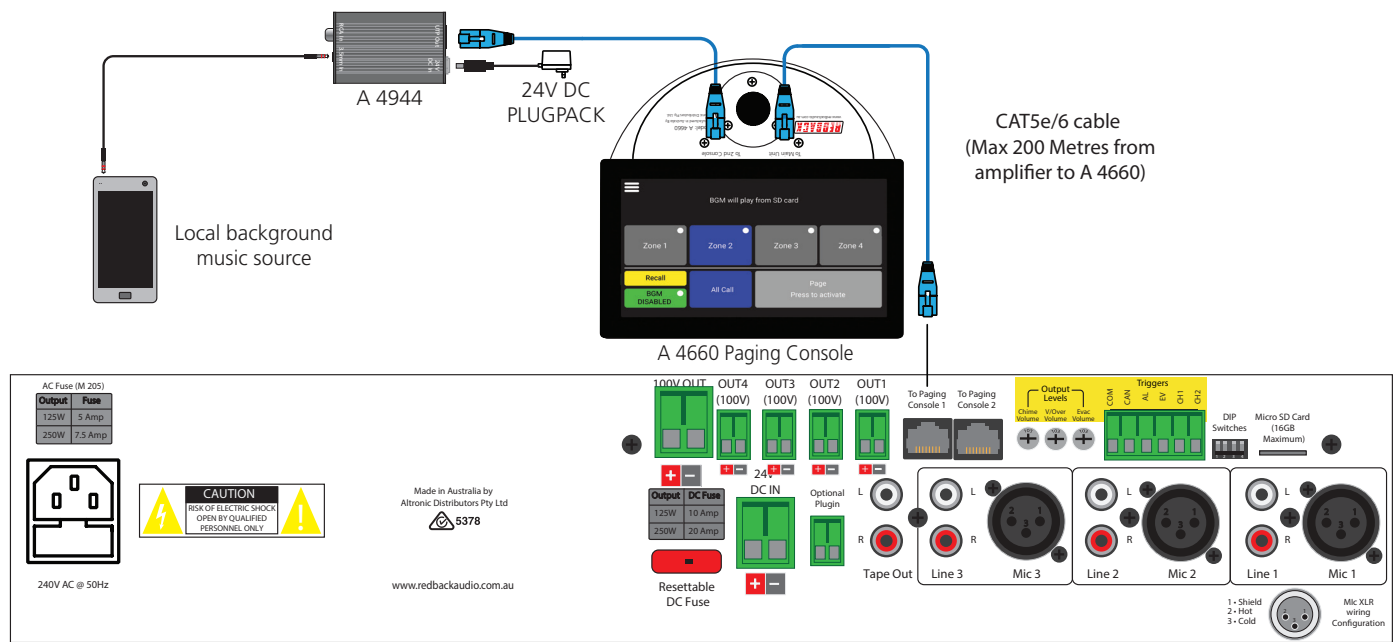


Fig 17 - Local BGM input via Redback A 4944 solutions transmitter

## 15.0 ALERT, EVACUATION and CHIME MP3 FILES and VOICE OVER MESSAGES

The supplied Micro SD card houses all the MP3 audio files used for the output tones. These files are stored in five separate folders (see figure 5) and relate to the corresponding output. e.g. the Alert folder houses the MP3 file to be played when the Alert mode is triggered.

These files can be any length and bit rate, but must be in MP3 format (they cannot be Wav files or AAC files).

*Note 1: MP3 files should have the following specifications for optimum performance. 128kbps, 44.1kHz, 32bit, VBR or CBR, Stereo (even better as mono).*

*Note 2: only one MP3 file can be in each folder.*

There is also a folder labelled "#LIBRARY#" which contains a host of sample MP3 files.

The "Voice" folder contains the MP3 audio files played as the Alert and Evacuation messages. There are separate folders for both the Alert and Evacuation messages as shown in figure 18.

The messages have to be recorded in MP3 format using any readily available PC software or other means, and then transferred to these folders.

### Activating the Voice Over Message:

Voice over messages become active when an MP3 file is present in the relevant folder. If the voice over message is not required leave the folder empty.

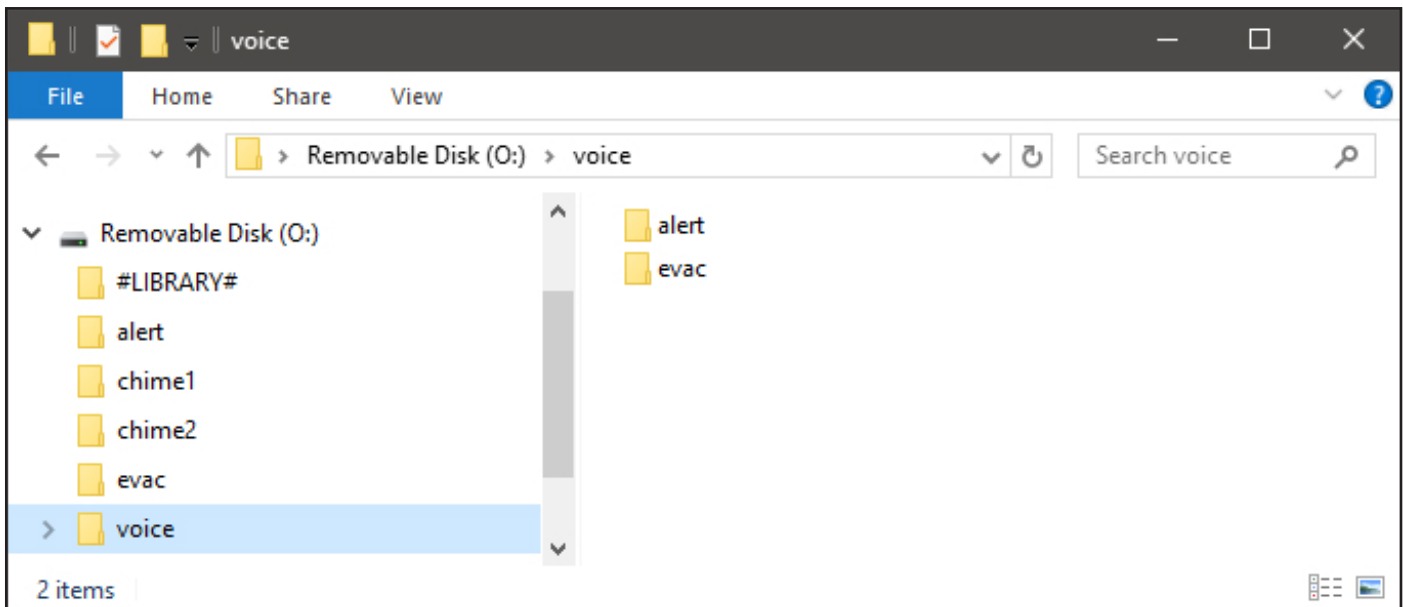


Fig 18

## 16.0 INSTALLING MP3 FILES

You will first need to remove power from the amplifier then remove the Micro SD card from the rear of the unit. To remove the Micro SD card push the card in and it will eject itself.

In order to access the program, the Micro SD card will need to be connected to a PC. You will need a PC or laptop equipped with an Micro SD card reader to do this. If a Micro SD slot is not available then the Altronics D 0371A USB Memory Card Reader or similar would be suitable (not supplied).

Step by step guide to installing an MP3 onto the Micro SD card with a Windows installed PC

Make sure the PC is on and card reader connected and correctly installed. Then insert the SD card into the reader. Go to "My Computer" or "This PC" and open the SD card which is usually marked "Removable disk".

In this case it is named "Removable disk (O:)" as shown in figure 19.

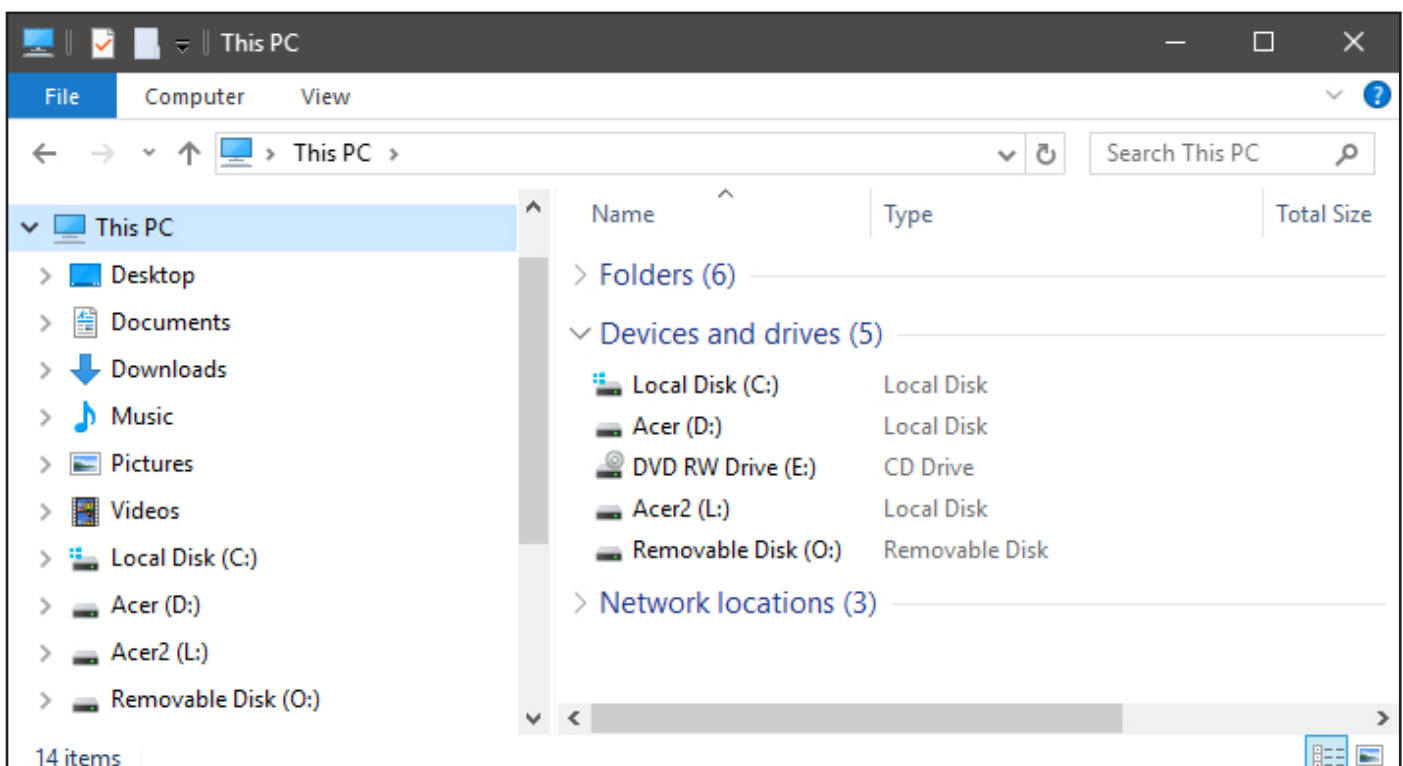


Fig 19

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Open the Removable Disk and you should get a window that looks like figure 20.

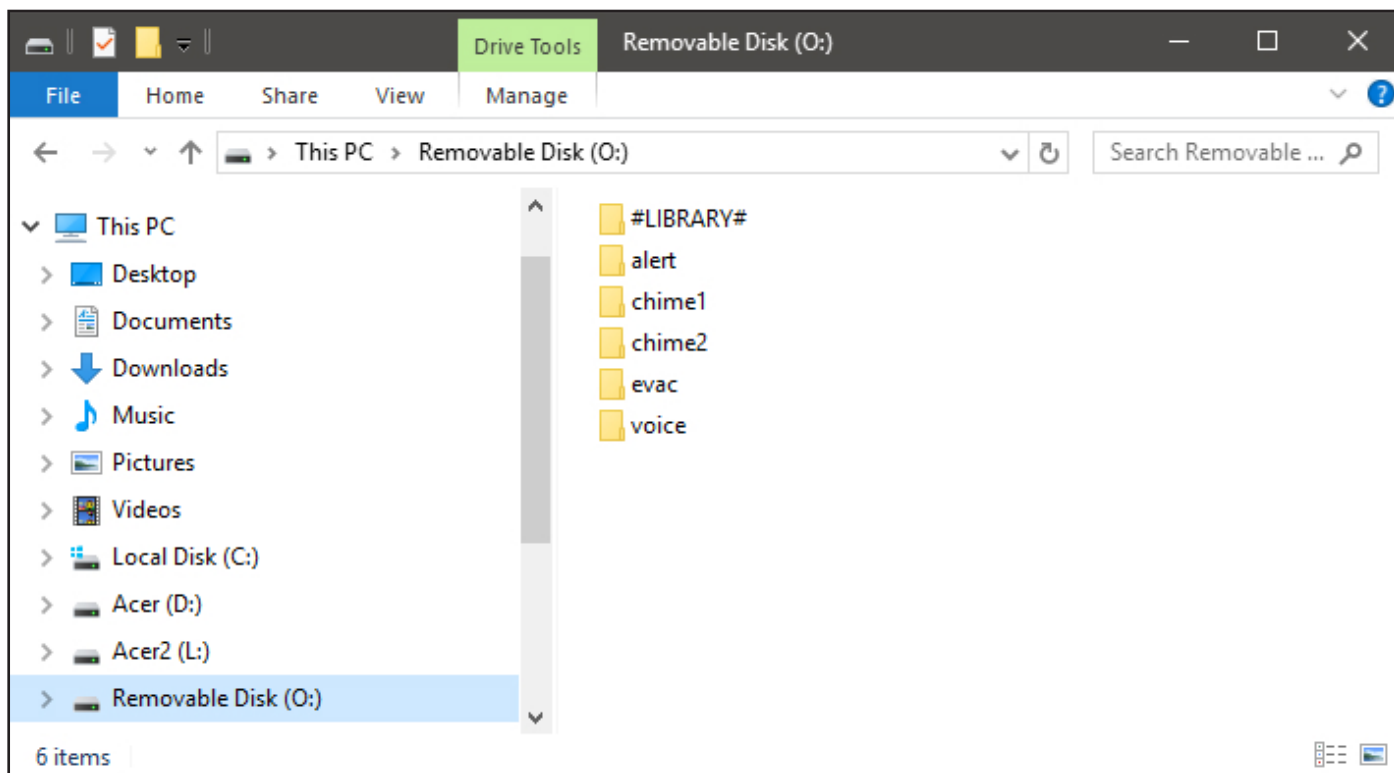


Fig 20

The contents of the SD Card include a Library folder of sample MP3 files and five folders for the MP3 files associated with the various triggers.

There should be default MP3 files included in each folder. These will need to be replaced with your own MP3 files.

Open the folder in which you want to install an MP3 (in our case its the Alert folder) and you should see an MP3 file which is named Alert.MP3 as shown in figure 21.

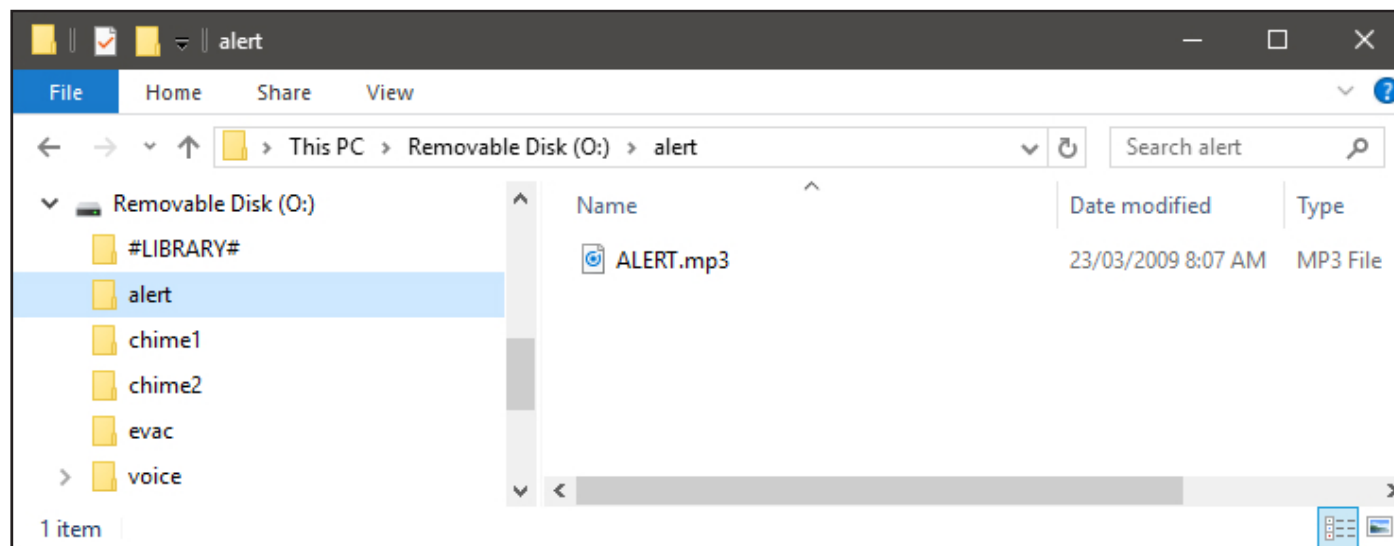


Fig 21

This MP3 file needs to be deleted and replaced by the MP3 file you want to play when you activate the Alert mode. The MP3 file name is not important. But it is important that there is only one MP3 file in the Alert folder.



Check the properties of the MP3 file.

*NOTE the new MP3 file cannot be "Read only".*

To check this, right click on the MP3 file and scroll down and select Properties, you will get a window that looks like figure 22.

Make sure the "Read Only" box has no tick in it.

The new MP3 is now installed on the card. Repeat these steps for the other MP3 folders if you need to.

The card can be removed from the PC following windows safe card removal procedures. Make sure the amplifier is OFF and insert the SD card into the slot in the rear; it will click when fully inserted. The amplifier is ready to use.

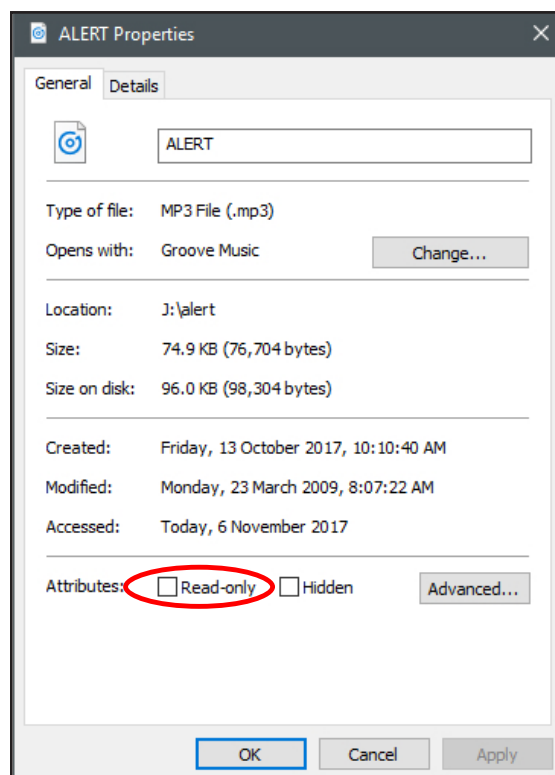


Fig 22

## 17.0 DIP SWITCH SETTINGS

These switches affect the alert/evac triggers on the rear of the amplifier.

**Switch 1:** The Alert and Evac contacts can be set to either continuous or momentary operation.

In continuous mode the alert/evac tone will continue while the corresponding rear contact is triggered.

In momentary mode the alert/evac tone will continue to sound after a momentary trigger of the rear contact.

**1 - ON: continuous operation of alert/evac contacts**

**1 - OFF: momentary operation of alert/evac contacts**

### Switches 2 - 4 Evacuation Timer Settings:

These switches control the time period before the unit switches from the alert, to the evac tone when the Alert is triggered by the rear contact. This time period can be switched from 30 seconds to 180 seconds in 30 second increments.

Sw2 = ON, Sw3 = OFF, Sw4 = OFF - Changeover = 30 Sec

Sw2 = OFF, Sw3 = ON, Sw4 = OFF - Changeover = 60 Sec

Sw2 = ON, Sw3 = ON, Sw4 = OFF - Changeover = 90 Sec

Sw2 = OFF, Sw3 = OFF, Sw4 = ON - Changeover = 120 Sec

Sw2 = OFF, Sw3 = ON, Sw4 = ON - Changeover = 150 Sec

Sw2 = ON, Sw3 = ON, Sw4 = ON - Changeover = 180 Sec

*Note: Setting all switches 2 - 4 to OFF deactivates the switchover function.*

## 18.0 FIRMWARE UPDATE

It is possible to update the firmware for this unit by downloading updated versions from [www.altronics.com.au](http://www.altronics.com.au) or [redbackaudio.com.au](http://redbackaudio.com.au).

To perform an update, follow these steps.

- 1) Download the Zip file from the website.
- 2) Remove the SD card from the amplifier and insert it into your PC. (Follow the steps on page 11 to open the SD card).
- 3) Extract the contents of the Zip file to the root folder of the SD Card.
- 4) Rename the extracted .BIN file to update.BIN.
- 5) Remove the SD card from the PC following windows safe card removal procedures.
- 6) With the power turned OFF, insert the SD card back into the amplifier.
- 7) Turn the amplifier ON. The unit will check the SD card and if an update is required the amplifier will perform the update automatically.

# Redback® A 4270/80 Four Zone Paging PA Amplifier

## 19.0 TROUBLESHOOTING

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. 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 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.

### Unit will not play MP3 files.

Make sure all MP3 files are not "Read Only". See page 13

*MP3 files should have the following specifications for optimum performance. 128kbps, 44.1kHz, 32bit, VBR or CBR, Stereo (even better as mono).*

## 20.0 SPECIFICATIONS

### POWER OUTPUTS

Power: ..... A 4377 - 125 watts RMS  
..... A 4387 - 250 watts RMS  
Distortion: ..... < 0.5%, @ 1kHz  
Output line: ..... 100V

### FREQUENCY RESPONSE

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

### MIC SENSITIVITY

Mic inputs: ..... 3mV  
Line inputs: ..... 1V  
Music input: ..... 500mV

### SIGNAL TO NOISE RATIO

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

**LINE OUTPUT** ..... 600Ω balanced, 0dB, 3 Pin XLR

### OUTPUT CONNECTORS

Speakers: ..... Screw terminals

### 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  
..... VOX muting (inputs 1-2)

### CONTROLS

Mic/Line/Music inputs: ..... Volume  
Power: ..... On/off switch  
Indicators: ..... Power, signal present, output peak limiting, overtemp, Overload Protect, Half Power, 24V DC

**POWER SUPPLY:** ..... 240V AC or 24V DC

**FUSE PROTECTION:** ..... 125W - 5A AC, 10A DC  
..... 250W - 7.5A AC, 20A DC

**DIMENSIONS** ..... ~483W x 300D x 88H