

Operating Manual

A 4427 8 CHANNEL MIXER WITH MESSAGE PLAYER

Redback® Proudly Made In Australia

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.



Since 1976 Redback amplifiers have been manufactured in Perth, Western Australia. With close to 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 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 39 years of operation - and still going strong!

1.0 INTRODUCTION

This unique Redback PA mixer features six input channels which are user selectable for either balanced mic or line as well as two dedicated line level RCA inputs and a 3.5mm audio jack for portable devices. In addition it incorporates a MP3 based message player for playback of Alert, Evacuation or Chime tones.

The unit has six levels of priority with adjustable sensitivities, and a 24V DC output (limited to 120mA current draw) which becomes live when any triggers are activated or VOX/PTT circuitry becomes active.

2.0 FEATURES

- Eight input channels
- Micro SD card message player for audio announcements
- Individual level, bass and treble control on all inputs
- Six levels of VOX priority
- Adjustable VOX sensitivity
- 3.5mm music input
- Adjustable input sensitivity on line inputs
- 24V DC battery back up terminals
- In built Alert/Evac/Chime functionality
- 24V DC output
- MP3 active indicator
- LED VU meter
- 10 Year Warranty
- Australian Designed and Manufactured

3.0 WHAT'S IN THE BOX

A 4427 Mixer 8 Channel with MP3 Message player
24V 1A DC Plugpack
Instruction Booklet

Redback® A 4427 8 Channel Public Address Mixer

4.0 FRONT PANEL GUIDE

Fig 1 shows the layout of the A 4427 front panel.

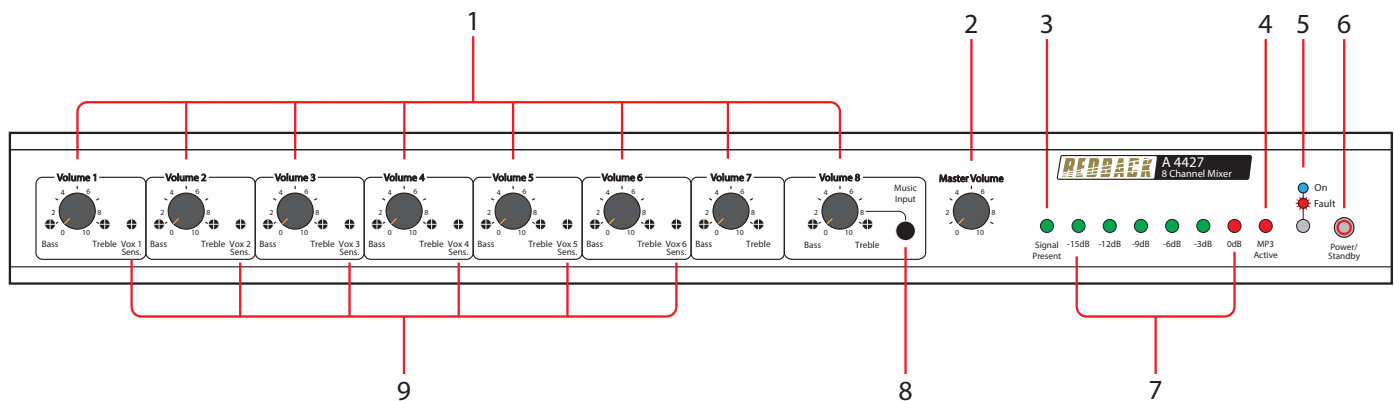


Fig 1

1 Inputs 1-8 volume controls

Use these controls to adjust the output volume, bass and treble of inputs 1-8.

2 Master Volume

Use this control to adjust the master volume.

3 Signal Presence Indicator

This LED indicates when a signal is present at any of the inputs.

4 MP3 Active Indicator

This LED indicates when an MP3 is playing.

5 On/Fault Indicator

This led indicates when the unit has power if the LED is blue. If the LED is red a fault has occurred with the unit.

6 Standby Switch

When the unit is in standby mode this switch will illuminate. Press this button to switch the unit ON. Once the unit is ON the On indicator will illuminate. Press this switch again to put the unit back in standby mode.

7 LED VU Meter

This LED bargraph provides a visual indication of the output signal.

8 Music input

This input will override input 8 when connected. Use this for connection of portable music players.

9 VOX Sensitivities

These trimpots set the VOX sensitivities of input 1-6.

5.0 REAR PANEL CONNECTIONS

Fig 2 shows the layout of the A 4427 rear panel.

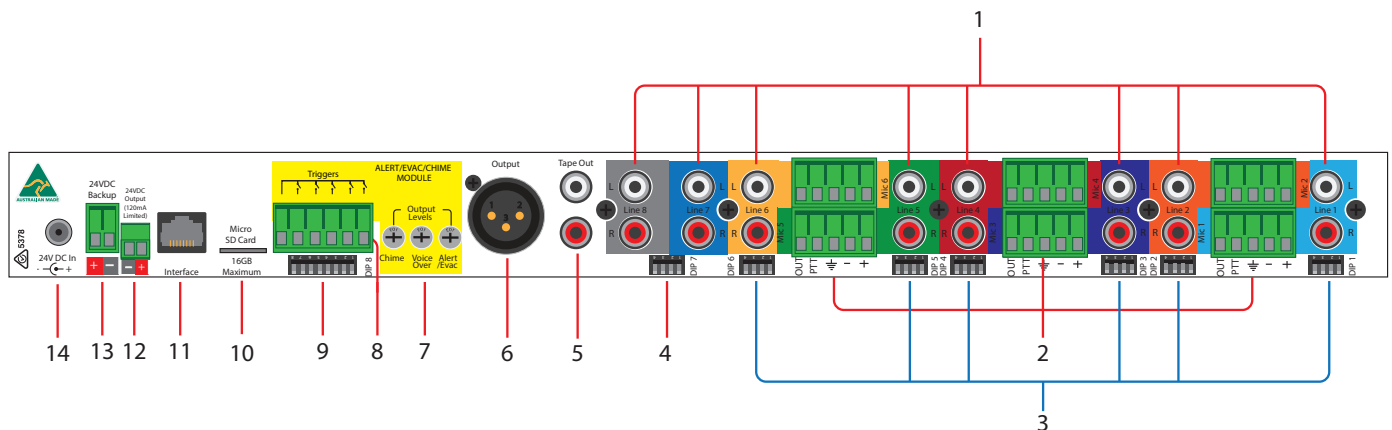


Fig 2

1 RCA Inputs

The line inputs are dual RCA connectors which are internally mixed to produce a mono input signal. The input sensitivity of these inputs can be adjusted to 100mV or 1V via the DIP switches DIP1 - DIP7 (refer to DIP switch settings).

2 Microphone Inputs

There are six microphone inputs which all incorporate a 5 way euro connector. Phantom power is available on each Mic input and is selected via DIP switches on DIP1 - DIP6 (For more details see DIP switch settings). A PTT connection is also available for PTT muting and a 24V DC (limited to 120mA current draw) output is provided for each microphone for activation of external indicators. (The PTT and 24V DC OUT connections are wired using the ground as a common connection).

3 Dip Switches DIP1 - DIP6

These are used to select various options such as phantom power on mic inputs, VOX options and input sensitivities. Refer to DIP Switch Settings section.

4 Dip Switches DIP7

These are used to select the input sensitivities of the Line inputs 7 & 8. Refer to DIP Switch Settings section.

5 Tape Out

Dual RCA's provide a line level output for recording purposes or to pass the output on to another amplifier.

6 Preamp Out (Balanced Line Output)

A three pin 600 ohm 1V balanced XLR output is provided for passing the audio signal on to a slave amplifier or to record the output of the amplifier.

7 Alert, Evacuation, Chime and Voice Over Message Volumes

Use these trimpots to adjust the output levels of the alert and evacuation tone and the chime and voice over message.

8 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.

9 DIP 8

These switches provide various play modes (see DIP switch settings for more details).

10 Micro SD Card

This is used to store the MP3 audio files for the Alert, Evacuation and Chime tones and the Voice Over message. The Micro SD card needs to be pushed in to insert and to remove.

11 RJ45 Interface

This is for future expansion of product.

12 24V DC Out

This is a 24V DC output which is activated when any of the Alert, Evacuation or Chime triggers are operated. It also becomes active when any of the VOX circuits are enabled or any of the PTT muting is activated.

13 24V DC Input (Backup)

Connects to a 24V DC backup supply with at least 1 amp current capacity. (Please observe the polarity)

14 24V DC input

Connects to a 24V DC Plugpack with 2.1mm Jack.

Redback® A 4427 8 Channel Public Address Mixer

6.0 CONNECTIONS

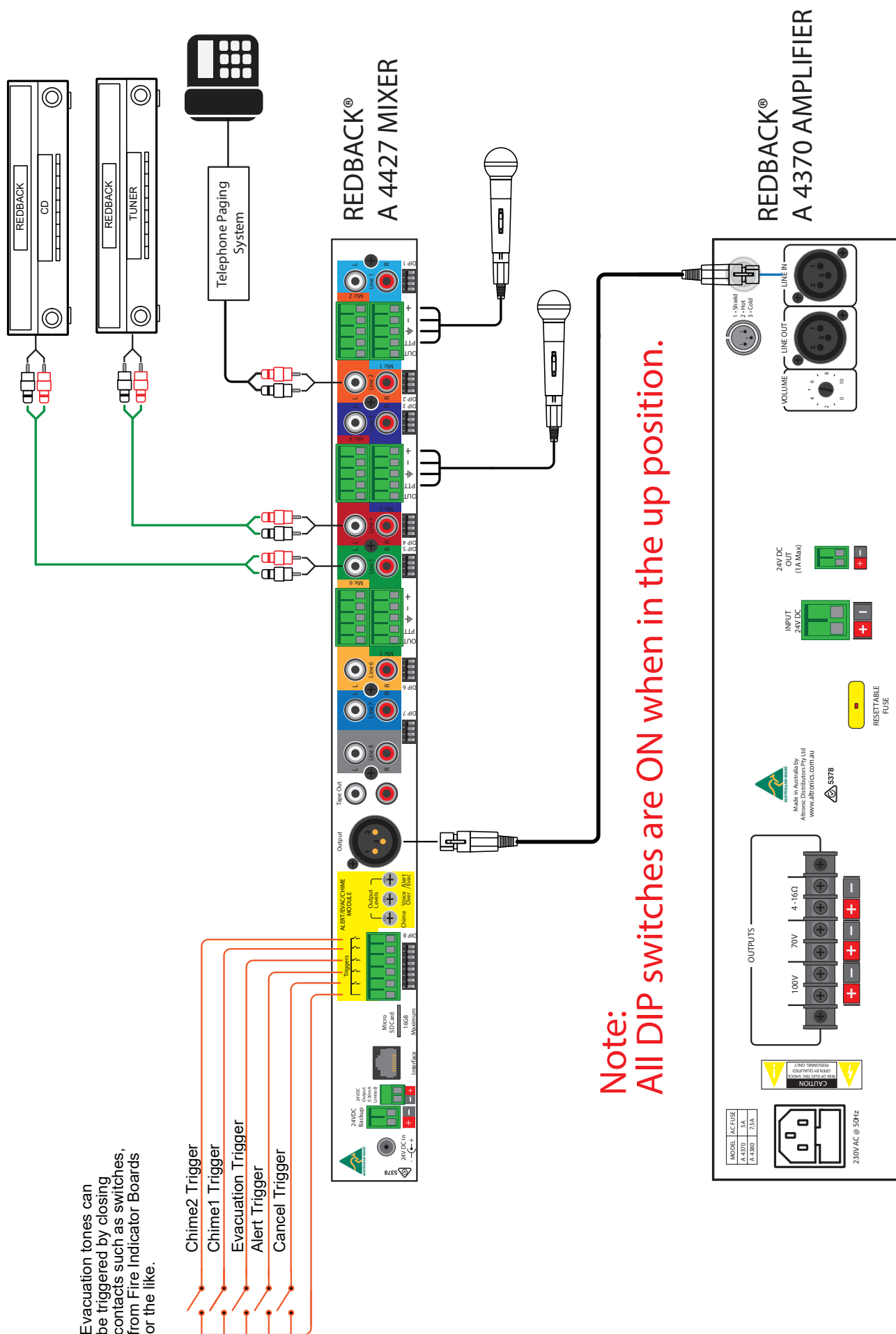


Fig 3

Figure 3 demonstrates a basic install with five input sources. The VOX priorities are set for 3 levels of priority, so that the microphone on input 1 has the highest priority. The input 1 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 7.0 for more details about DIP switch settings).

Input 2 is connected to a telephone paging system with a line level output. The Input 2 DIP2 switch settings are set for a line level input with 1V input sensitivity and the VOX is enabled which makes this input priority level 2.


Input 3 is shown with a microphone connected. The Input 3 DIP3 switch settings are set for a 100mV sensitivity balanced microphone input and with the VOX enabled which makes this input priority level 3.

Inputs 4 and 5 are set as line level inputs with a sensitivity of 1V and the VOX priority disabled. The output of the mixer is fed into a power amplifier which drives the speakers.

All DIP switch settings are shown below. *NOTE: The switches are ON when in the up position.*

Input 1 Settings


DIP 1

ON
↑


SW1 set to OFF - Phantom power disabled
 SW2 set to ON to enable the VOX/priority
 SW3 set to OFF
 SW4 set to OFF to set Input to Microphone Input

Input 2 Settings


DIP 2

ON
↑


SW1 set to OFF - Phantom power disabled
 SW2 set to ON to enable the VOX/priority
 SW3 set to ON - Line Input Sensitivity set to 1V
 SW4 set to ON to set Input to line Input

Input 3 Settings


DIP 3

ON
↑


SW1 set to OFF - Phantom power disabled
 SW2 set to ON to enable the VOX/priority
 SW3 set to OFF
 SW4 set to OFF to set Input to Microphone Input

Input 4 Settings


DIP 4

ON
↑


SW1 set to OFF - Phantom power disabled
 SW2 set to OFF to disable the VOX/priority
 SW3 set to ON - Line Input Sensitivity set to 1V
 SW4 set to ON to set Input to line Input

Input 5 Settings

DIP 5

ON
↑


SW1 set to OFF - Phantom power disabled
 SW2 set to OFF to disable the VOX/priority
 SW3 set to ON - Line Input Sensitivity set to 1V
 SW4 set to ON to set Input to line Input

7.0 DIP Switch settings

The A 4427 has 8 sets of DIP switches.

DIP1 - DIP6 select the inputs 1 - 6 as either Mic or Line, sets the Line Input level sensitivity, enables phantom power and enables VOX priorities for inputs 1-6 as outlined below.

(* Priority/VOX muting is only available for inputs 1-6. Inputs 7-8 have no priority levels.)

DIP 1

Switch 1 - ON - Enables Phantom power to the Mic on input 1.

Switch 2 - ON - Sets Input 1 priority or VOX to ON.

Switch 3 - Sets Line 1 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 1 Select - OFF - Mic, ON - Line

DIP 2

Switch 1 - ON - Enables Phantom power to the Mic on input 2.

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

Switch 3 - Sets Line 2 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 2 Select - OFF - Mic, ON - Line

DIP 3

Switch 1 - ON - Enables Phantom power to the Mic on input 3.

Switch 2 - ON - Sets Input 3 priority or VOX to ON.

Switch 3 - Sets Line 3 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 3 Select - OFF - Mic, ON - Line

DIP 4

Switch 1 - ON - Enables Phantom power to the Mic on input 4.

Switch 2 - ON - Sets Input 4 priority or VOX to ON.

Switch 3 - Sets Line 4 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 4 Select - OFF - Mic, ON - Line

DIP 5

Switch 1 - ON - Enables Phantom power to the Mic on input 5.

Switch 2 - ON - Sets Input 5 priority or VOX to ON.

Switch 3 - Sets Line 5 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 5 Select - OFF - Mic, ON - Line

DIP 6

Switch 1 - ON - Enables Phantom power to the Mic on input 6.

Switch 2 - ON - Sets Input 6 priority or VOX to ON.

Switch 3 - Sets Line 6 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 4 - Input 6 Select - OFF - Mic, ON - Line

Input 1: When VOX is enabled on input 1 it will override inputs 2 - 8.

Input 2: When VOX is enabled on input 2 it will override inputs 3 - 8.

Input 3: When VOX is enabled on input 3 it will override inputs 4 - 8.

Input 4: When VOX is enabled on input 4 it will override inputs 5 - 8.

Input 5: When VOX is enabled on input 5 it will override inputs 6 - 8.

Input 6: When VOX is enabled on input 6 it will override inputs 7 - 8.

DIP 7 sets the input sensitivity of the Line inputs 7 and 8.

DIP 7

Switch 1 - Sets Line 7 input sensitivity to either ON - 1V or OFF - 100mV.

Switch 2 - Not Used.

Switch 3 - Not Used.

Switch 4 - Sets Line 8 input sensitivity to either ON - 1V or OFF - 100mV.

DIP 8 sets the functionality of the Alert/Evacuation/Chime outputs

DIP 8

Switch 1 - ON - Hold trigger contact closed to play, OFF - Hold trigger contact closed momentarily to play.

Switch 2 - ON - Activates MIC pre-announcement chime (activated by PTT on mic inputs)

Switch 3 - Not Used

Switch 4 - Not Used

Switches 5-8 - Sets the Alert to Evacuation tone change-over time (refer to figure 4).

DIP 8

Alert -Evac Timer Settings

Time (sec)	DIP switch			
	5	6	7	8
30	on	off	off	off
60	off	on	off	off
90	on	on	off	off
120	off	off	on	off
150	on	off	on	off
180	off	on	on	off
210	on	on	on	off
240	off	off	off	on
270	on	off	off	on
300	off	on	off	on
330	on	on	off	on
360	off	off	on	on
390	on	off	on	on
420	off	on	on	on
450	on	on	on	on

Fig 4.

8.0 ALERT, EVACUATION and CHIME MP3 FILES and ALERT and EVAC 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: 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 5.

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.

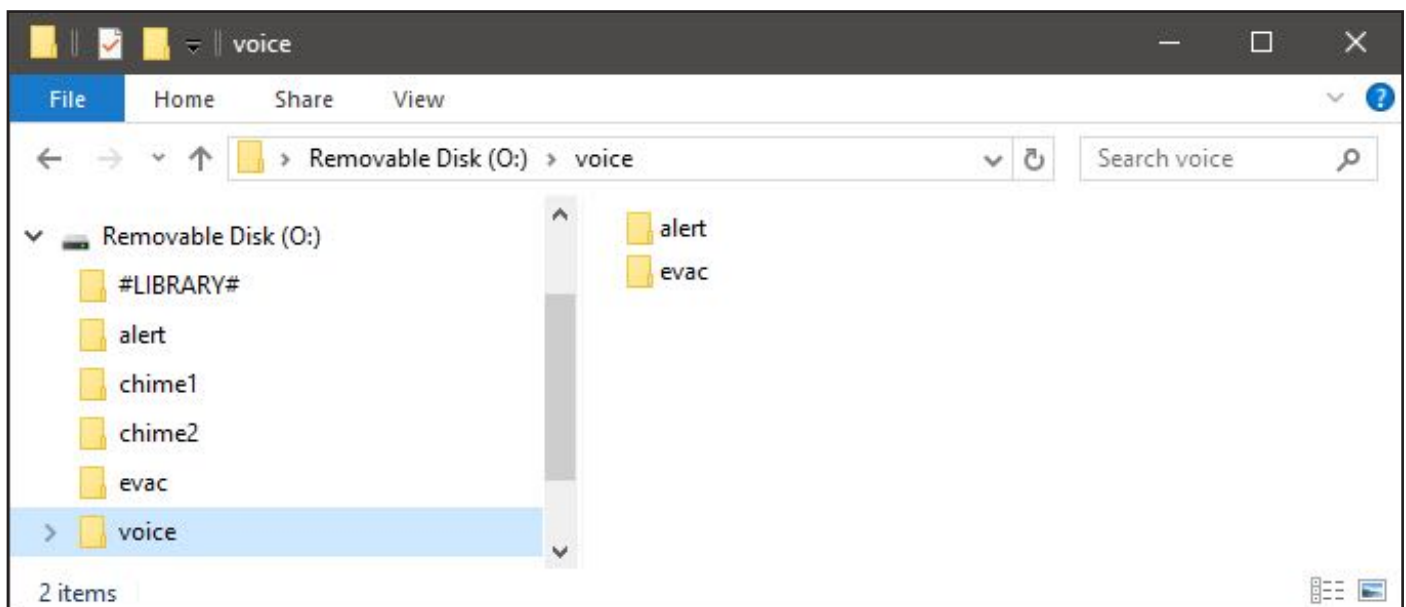


Fig 5

9.0 INSTALLING MP3 FILES

You will first need to remove power from the A 4427 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 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 6.

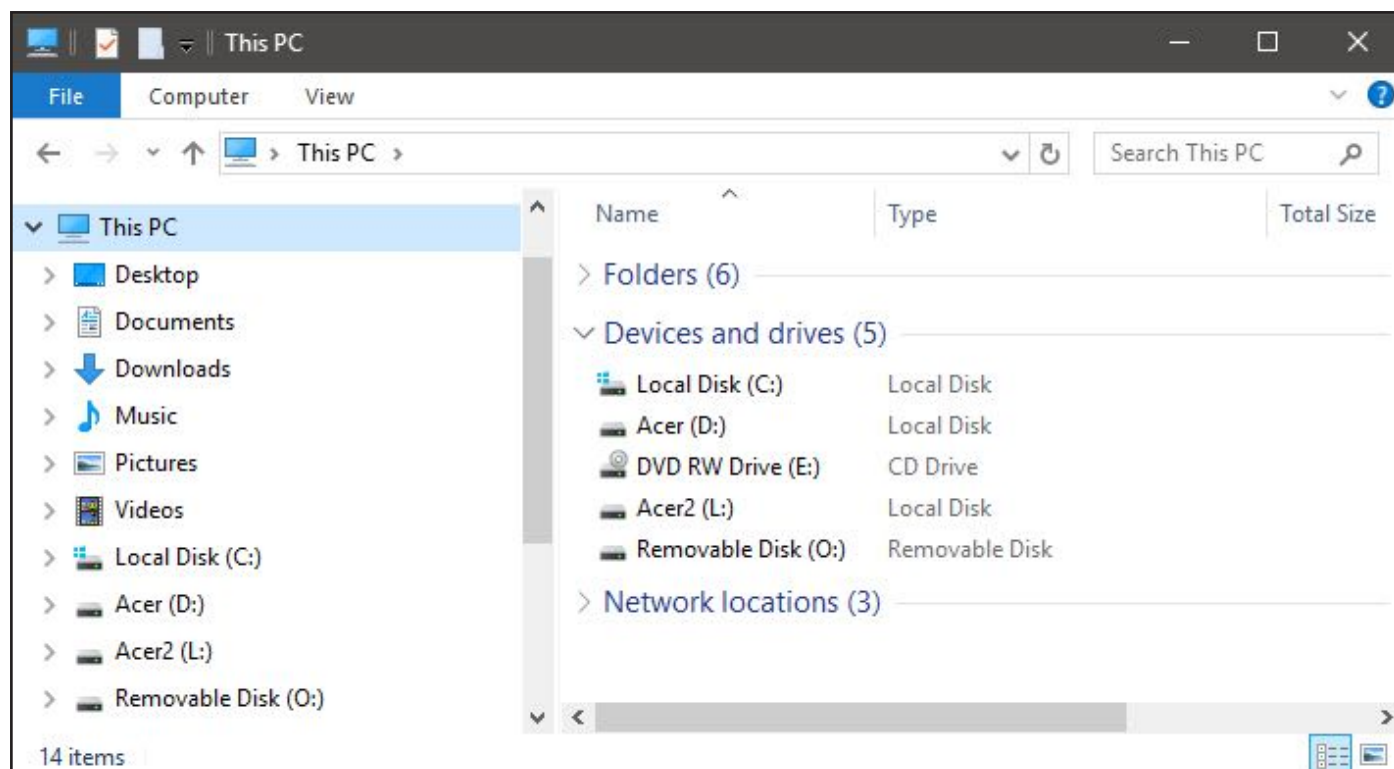


Fig 6

Open the Removable Disk and you should get a window that looks like figure 7.

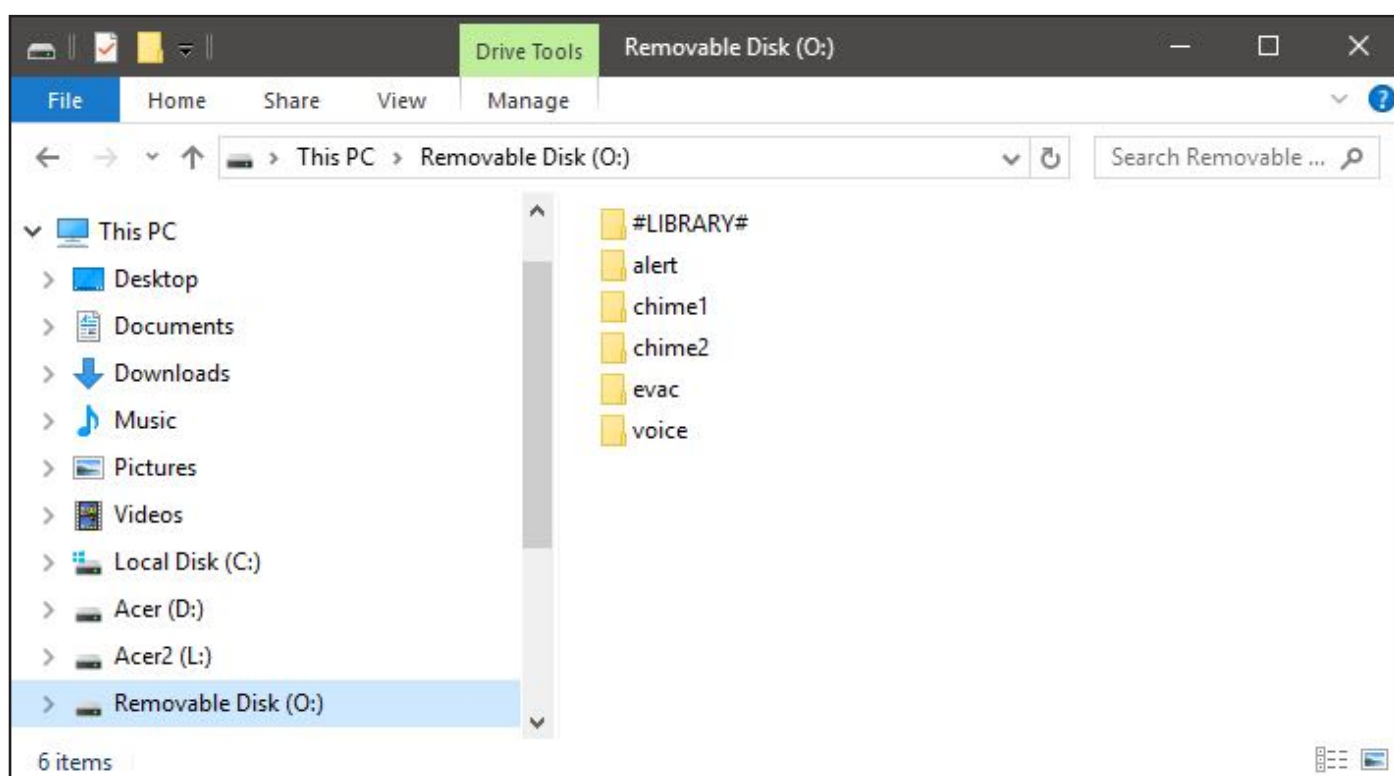


Fig 7

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 8.

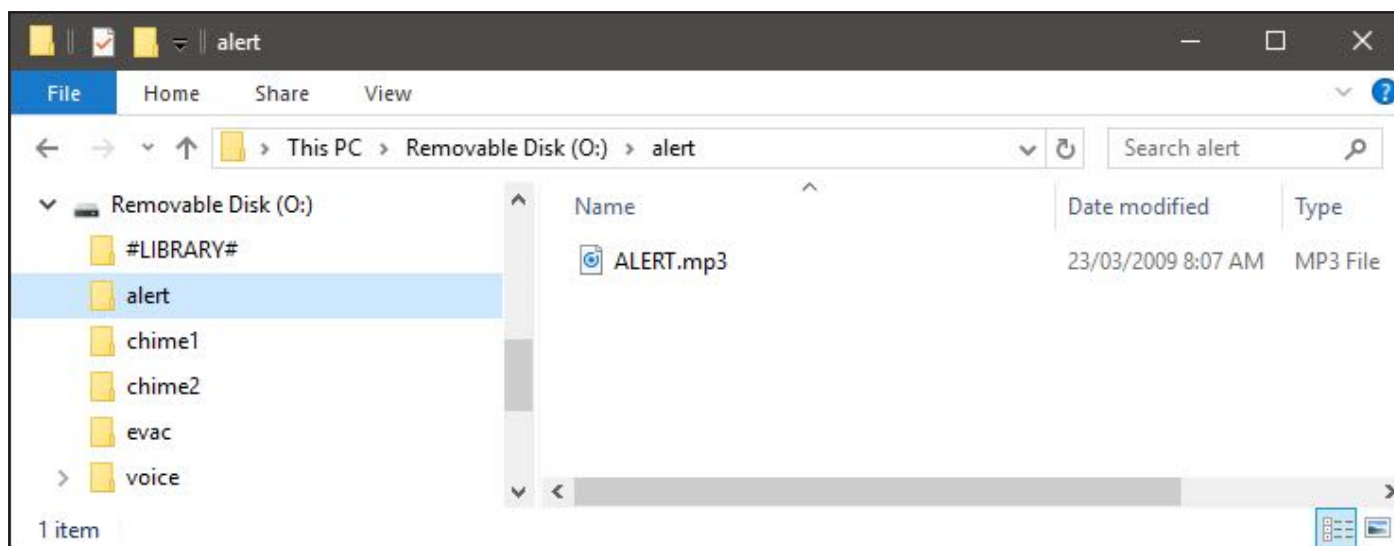


Fig 8

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 9.

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 A 4427 is OFF and insert the SD card into the slot in the rear; it will click when fully inserted. The A 4427 is ready to use.

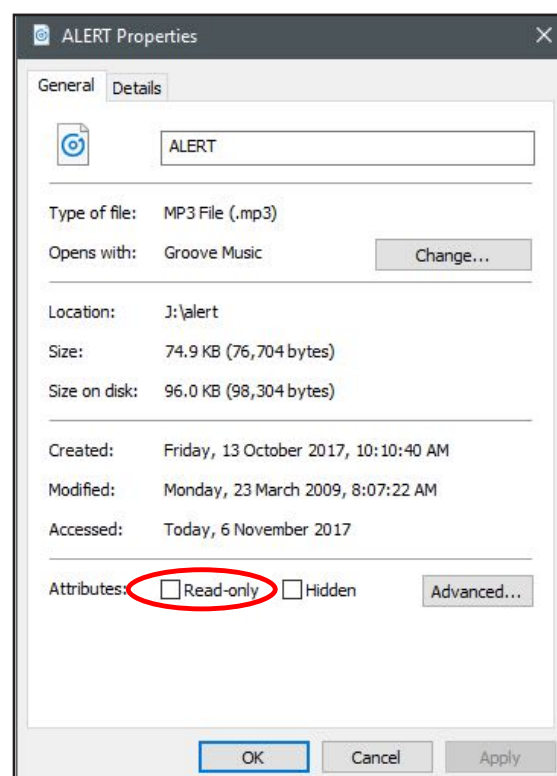


Fig 9

10.0 TROUBLE SHOOTING

If the REDBACK A 4427 mixer fails to deliver the rated performance, check the following:

No Power, No Lights

The standby switch is used to turn the unit on. Make sure this switch has been pressed.
Make sure mains power switch is on at the wall.
Check the supplied plugpack is connected correctly.

MP3 files not playing

The files must be MP3 format. Not wav, AAC or other.
Check Micro SD card is inserted correctly.

DIP switch changes not effective

Turn the unit OFF before changing DIP switch settings. Settings become effective after power is returned.

Redback® A 4427 8 Channel Public Address Mixer

11.0 FIRMWARE UPDATE

It is possible to update the firmware for this unit by downloading updated versions from redbackaudio.com.au.

To perform an update, follow these steps.

- 1) Download the Zip file from the website.
- 2) Remove the Micro SD card from the A 4427 and insert it into your PC.
- 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 A 4427.
- 7) Turn the A 4427 ON. The unit will check the SD card and if an update is required the A 4427 will perform the update automatically.

12.0 SPECIFICATIONS

OUTPUT LEVEL:.....0dBm

DISTORTION:.....0.01%

FREQ. RESPONSE:.....140Hz - 20kHz

SENSITIVITY

Mic inputs:3mV balanced

Line inputs:.....100mV-1V

OUTPUT CONNECTORS

Line out:3 pin XLR balanced

Switched out:Screw terminals

INPUT CONNECTORS

Inputs:5 pin euro connectors or 2 x RCA
..... 3.5mm stereo jack front panel

24V DC power:Screw terminals

24V DC Power:2.1mm DC Jack

Remote triggers:Screw Terminals

CONTROLS:

Power:.....Standby Switch

Bass:.....±10dB @ 100Hz

Treble:.....±10dB @ 10kHz

Master:Volume

Inputs 1-8:Volume

INDICATORS:.....Power on, MP3 error,
.....MP3 active, Signal Present, VU Meter

POWER SUPPLY:..... 24V DC

DIMENSIONS:≈..... 482W x 175D x 44H

WEIGHT: ≈..... 2.1 kg

COLOUR:Black

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.

* Specifications subject to change without notice