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Operating Manual

A 4437 4 CHANNEL MIXER WITH MUTE TRIGGER

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.

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REDBACK

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 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 INTRODUCTION

Many large commercial buildings these days employ two PA systems. One is the traditional PA/BGM system for every day paging and music distribution. The second is a stand alone emergency evacuation PA system for use in the event of a fire or other emergency. This mixer has been designed for such installations.

It works as a stand alone audio processor with four mic/line inputs for microphone and music sources. Plus it has a set of Mute contacts connected to the buildings Fire Indicator Board (FIB). When the FIB operates it triggers these contacts, rending the local PA/BGM system inoperative so the main emergency evacuation system has precedence.

All inputs can be configured for either balanced mic via 3 pin XLR or line inputs via RCA. Line input sensitivity is adjustable from 100mV to 1V using rear mounted DIP switches. Phantom power is also available on all inputs. Outputs are either balanced 3 pin XLR or stereo RCA connectors.

Individual & master level controls are provided on the front panel along with recessed treble and bass adjustments.

Provision is included for the A4573 alert/evac module which generates pre chime, bell, alert and evacuation tones. The alert tone can function continuously, or switch to evac tone after a preset time delay (adjustable 30 seconds to 4.5 minutes). Simply connects to the mixer internally via the cable provided.

2.0 FEATURES

- Four input channels
- Individual level, bass and treble control on all inputs
- 3.5mm music input
- Adjustable input sensitivity on line inputs
- Adjustable Vox sensitivity
- Phantom power ON/OFF for mic inputs
- 24V DC battery back up terminals
- Mute trigger
- Provision for Alert/Evac tone generator module
- 10 Year Warranty
- Australian Designed and Manufactured

3.0 WHAT'S IN THE BOX

A 4437 Mixer 4 Channel with MP3 Message player
24V DC Plugpack
Instruction Booklet

4.0 FRONT PANEL GUIDE

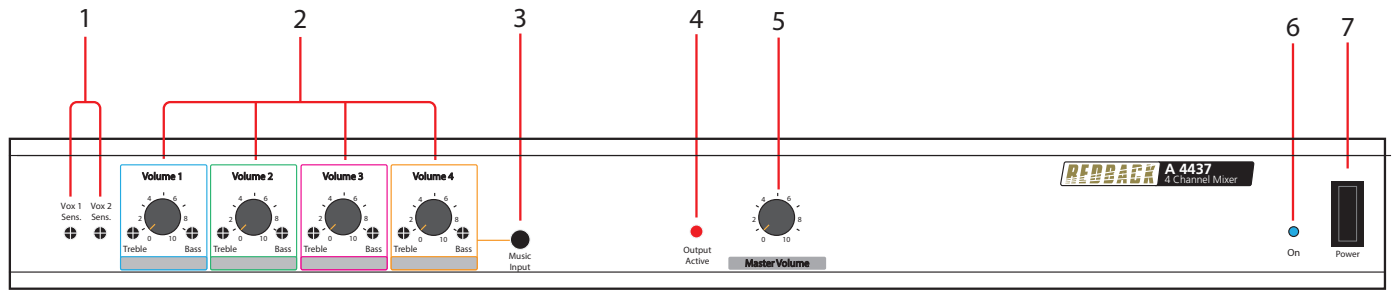**Fig 1** shows the layout of the A 4437 front panel.

Fig 1

1   **VOX 1 Sensitivity**
    This sets the VOX sensitivity of input 1. When the VOX is active on input 1, inputs 2-4 are muted.
    VOX 2 Sensitivity
    This sets the VOX sensitivity of input 2. When the VOX is active on input 2, inputs 3-4 are muted.

2   **Inputs 1-4 volume controls**
    Use these controls to adjust the output volume, bass and treble of inputs 1-4.

3   **Music input**
    This input will override input 4 when connected. Use this for connection of portable music players.
    (Note 1: this input has a fixed input sensitivity).
    (Note 2: switch 1 on DIP4 must be set to ON to enable this function).

4   **Output Active Indicator**
    This led indicates when the unit has an output signal present.

5   **Master Volume**
    Use these controls to adjust the output volume, bass and treble of the master volume.

6   **On Indicator**
    This led indicates when the unit has power.

7   **Power Switch**
    Use this switch to turn the unit on.

5.0 REAR PANEL CONNECTIONS

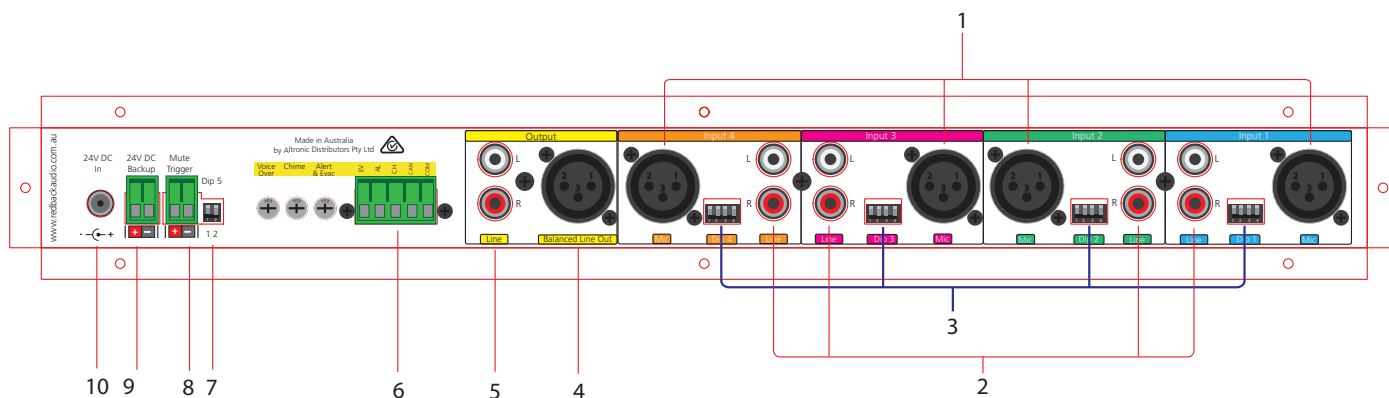Fig 2 shows the layout of the A 4437 rear panel.

Fig 2

1   Microphone Inputs
There are four microphone inputs which all incorporate a 3 pin balanced XLR. Phantom power is available at each Mic input and is selected via DIP switches on DIP1 - DIP4 (For more details see DIP switch settings).

2   RCA Unbalanced Line 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.

3   DIP Switches DIP1 - DIP4
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   Preamp Out (Balanced Line Output)
A 3 pin 600ohm 1V balanced XLR output is provided for passing the audio signal on to a slave amplifier or to record the output of the amplifier.

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

6   Optional A 4573 Alert/Evac Module
Install this module to provide emergency evacuation tones which override all inputs except intput 1. (see section 2.2 for more details).

7   DIP Switch DIP 5
These switches provide the options for the Mute trigger (see DIP switch settings for more details).

8   Mute Trigger
This connector is used to activate the Mute function. (see section 8.0 for more details).

9   24V DC Input (Backup)
Connects to a 24V DC backup supply with at least 1 amp current capacity. (Please observe the polarity)

10   24V DC input
Connects to a 24V DC Plugpack with 2.1mm Jack.

6.0 DIP Switch settings

The A 4437 has various options which are enabled via the DIP switches 1-5.
DIP 1-4 set the input level sensitivity, phantom power and priorities for inputs 1-4 as outlined below.
 (* Priority/VOX muting is only available for Mic inputs 1-2. Line Inputs 3-4 have no priority levels.)

> **IMPORTANT NOTE:**
> **Ensure power is switched off when adjusting DIP switches.**
> **New settings will be effective when power is switched back on.**

DIP 1
Switch 1 - Input 1 Select - OFF - Mic, ON - Unbalanced Line Input
Switch 2 - Sets Input 1 sensitivity to either ON - 1V or OFF - 100mV. (This affects the unbalanced Line Input only)
Switch 3 - Sets Input 1 priority or VOX to ON or OFF.
Switch 4 - Enables Phantom power to the Mic on input 1.
DIP 2
Switch 1 - Input 2 Select - OFF - Mic, ON - Unbalanced Line Input
Switch 2 - Sets Input 2 sensitivity to either ON -1V or OFF -100mV. (This affects the unbalanced Line Input only)
Switch 3 - Sets Input 2 priority or VOX to ON or OFF.
Switch 4 - Enables Phantom power to the Mic on input 2.
DIP 3
Switch 1 - Input 3 Select - OFF - Mic, ON - Unbalanced Line Input
Switch 2 - Sets Input 3 sensitivity to either ON - 1V or OFF - 100mV. (This affects the unbalanced Line Input only)
Switch 3 - Not used
Switch 4 - Enables Phantom power to the Mic on input 3.
DIP 4
Switch 1 - Input 4 Select - OFF - Mic, ON - Line/Music input *(Must be set to ON for Music Input to operate)*
Switch 2 - Sets Input 4 sensitivity to either ON - 1V or OFF - 100mV. (This affects the unbalanced Line Input only)
Switch 3 - Not used
Switch 4 - Enables Phantom power to the Mic on input 4.

Input 1: When VOX is enabled on input 1 it will override inputs 2 - 4.
Input 2: When VOX is enabled on input 2 it will override inputs 3 - 4.

DIP 5
Switch 1 - ON - The mixer output will mute when the mute trigger contacts are open.
          Normal mixer operation when contacts shorted.
       OFF - The output will mute when 24V DC is applied to the mute contacts.
          Normal mixer operation when no voltage applled to mute contacts.
Switch 2 - Not used

7.0 Alert/Evac Module

The optional A 4573 Alert/Evac module can be fitted to provide pre chime, bell, alert and evacuation tones. The alert tone can function continuously, or switch to evac tone after a preset time delay (adjustable 30 seconds to 4.5 minutes).
The alert/evac module when activated will override inputs 2-4.
The trimpots are used to adjust the output levels of the alert and evacuation tone and the chime and voice over message. Use the contact triggers to activate 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, remote wall plates etc.

To install the A 4573 follow these steps.
1) Disconnect power from the A 4437
2) Remove the lid.
3) Remove the blank metal plate from the rear of the A 4437.
4) Slip the A 4573 through the hole and plug the cable into the header socket as show in figure 3.
5) Screw the A 4573 into the rear of the A 4437 with the screws supplied with the A 4573.
6) Refer to the A 4573 for DIP switch settings and options required.
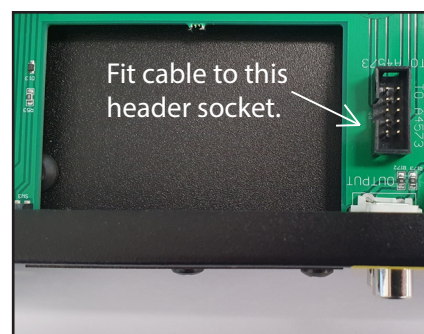7) Replace lid on A 4437.

Fit cable to this header socket.

Fig 3

8.0 Mute Function

The output of the A 4437 mixer can be muted by using the Mute contacts in combination with switch 1 of DIP5 (refer to DIP switch settings).

There are two methods to activate the mute function.

1) The first requires the use of a closing contact on the mute contacts. This could be triggered via a building fire indicator board, break glass alarm, remote wall plates etc.

With DIP5 switch 1 set to ON, any open connection on the mute contacts as shoen in figure 4 will mute the output of the mixer. While the contacts are closed the mixer will operate normally.
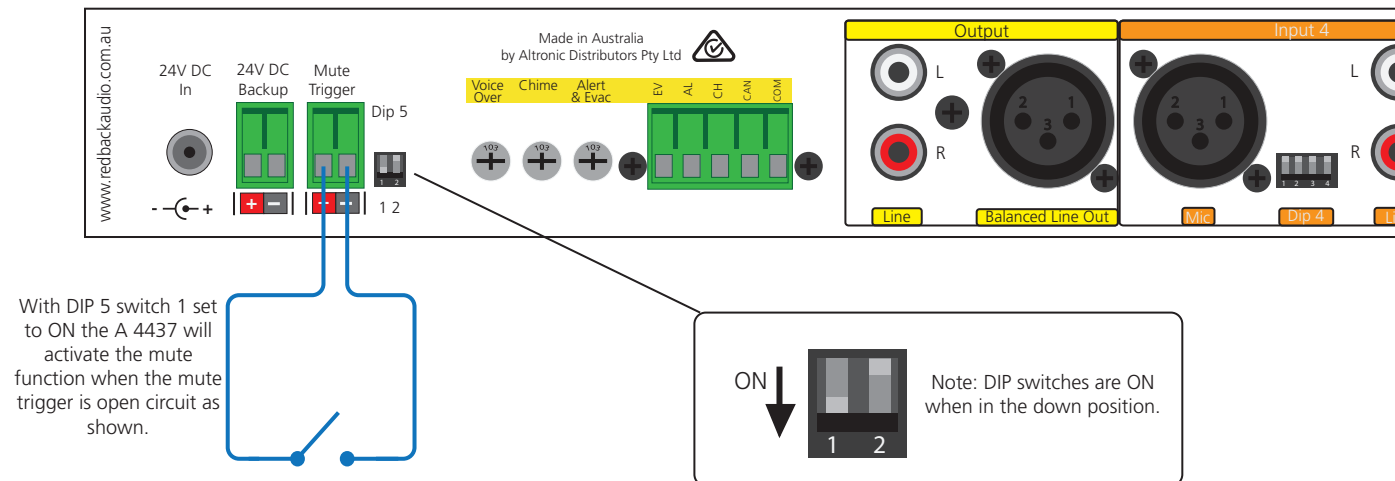

With DIP 5 switch 1 set to ON the A 4437 will activate the mute function when the mute trigger is open circuit as shown.

ON — Note: DIP switches are ON when in the down position.

Fig 4 DIP 5 switch 1 set to ON. Mute activated by open circuit on Mute Trigger terminals.

2) The second method makes use of 24V DC on the mute contacts.

With DIP5 switch 1 set to OFF, apply 24V DC to the mute contacts as shown in figure 5 to activate the mute function.

With DIP 5 switch 1 set to OFF the A 4437 will activate the mute function when 24V DC is applied to the mute trigger as shown.

24V DC
+24V

ON — Note: DIP switches are ON when in the down position.
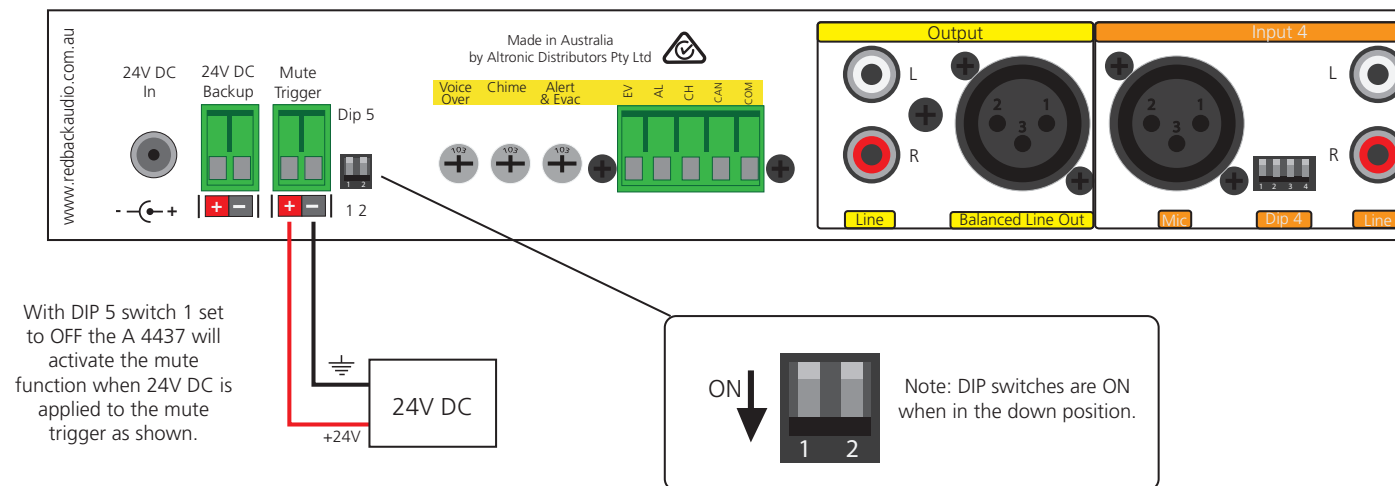
Fig 5 DIP 5 switch 1 set to OFF. Mute activated by applying 24V DC to Mute Trigger terminals.

9.0 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 or 2 x RCA
Switched out: ....Screw terminals

INPUT CONNECTORS
Inputs: ....3 pin XLR balanced or 2 x RCA
.... 3.5mm stereo jack front panel
24V DC power: ....Screw terminals
24V DC Power: ....2.1mm DC Jack
Mute trigger: ....Screw Terminals

CONTROLS:
Power:...Standby Switch
Bass:...±10dB @ 100Hz
Treble:...±10dB @ 10kHz
Master: ....Volume
Inputs 1-4: ....Volume

INDICATORS:..................Power on, output active

POWER SUPPLY:..................................... 24V DC

DIMENSIONS:≈................... 482W x 175D x 44H

WEIGHT: ≈... 2.1 kg

COLOUR: ....Black

* Specifications subject to change without notice