



**A 4031C**



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## Operating Manual

**A 4031C** 30W Desk Mount Amplifier

**A 4033C** 30W Rack Mount Amplifier

Redback® Proudly Made In Australia

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

### IMPORTANT NOTE:

Please read these instructions carefully from front to back prior to installation.  
They include important setup instructions.  
Failure to follow these instructions may prevent the amplifier from working as designed.

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# Redback® 30W Public Address Amplifiers

## 1.0 FEATURES

- 3 Inputs suitable for either microphone or line level, or for use as microphone and line level coupled together. Line level can be compact disc, cassette, tuner, etc.
- Bass and treble controls (on both microphone and auxiliary inputs).
- Full 30W RMS output (100V and 4 -16Ω outputs).
- Push to talk muting.
- Protection against over-voltage, over current, thermal run-away and short circuit load.
- Internationally accepted IEC mains socket (240V AC operation only).
- Stereo RCA sockets for all auxiliary inputs (configured to mono internally allowing standard stereo equipment to be directly connected).
- Fully balanced microphone inputs.
- Tape output, suitable for recording, or for connection to a second amplifier.
- Ten year warranty.

## 2.0 CONNECTING UP THE UNIT

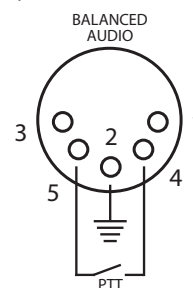
### Microphone One

There are three types of sockets on the rear of the amplifier for microphone one. These are 6.35 mm (unbalanced) Jack, 5 pin Din, or 3 pin XLR female. We recommend that you connect only one microphone at a time to input 1.

The 5 pin din has facility for PTT (push to talk) muting (the wiring for the 5 pin din socket is as per Fig 1). The PTT contacts will mute input 2 (mic 2 and aux 2) and input 3 (mic 3 and aux 3).

The PTT contacts will not mute Aux 1 input.

For connection to the 3 pin XLR sockets refer to Fig 2.



**Fig 1.** 5 Pin din socket wiring diagram. As viewed from the rear of the amplifier.

### Microphones Two and Three

These are via 3 pin XLR sockets. Refer to Fig 2 for wiring these.

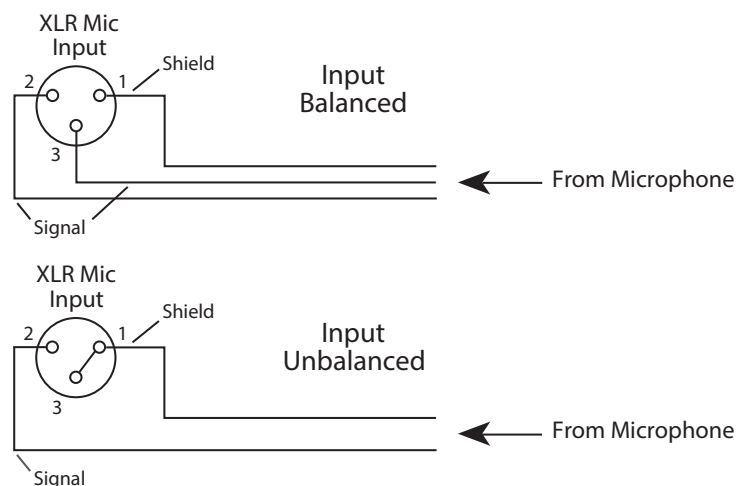
### Microphone Connections

Connector Type: .....XLR 3Pin Female

Pin 1: .....Earth

Pin 2: .....Signal Inphase (hot)

Pin 3: .....Signal Out of Phase (cold)



**Fig 2.** XLR Microphone Connections

### Speaker Outputs

Screw terminals are provided for both VC (voice coil) and 100V outputs. Minimum impedance for 100V loads is 333Ω (When only the 100V output is used). Minimum impedance when only VC output is used is 8-16Ω @ 30W total load. A combination of 100V and VC is possible however we do not recommend this. If more than 30W is used then the unit may shut down due to overloading.

### Tape Out

This is a mono output configured for a stereo lead for direct connection to a stereo source. This is suitable for connection to an auxiliary input on external equipment. This is also suitable for driving 600Ω loads.

## 3.0 INTERNAL JUMPER SETTINGS

The amplifier has 3 sets of internally selectable jumpers, located as per figure 3.

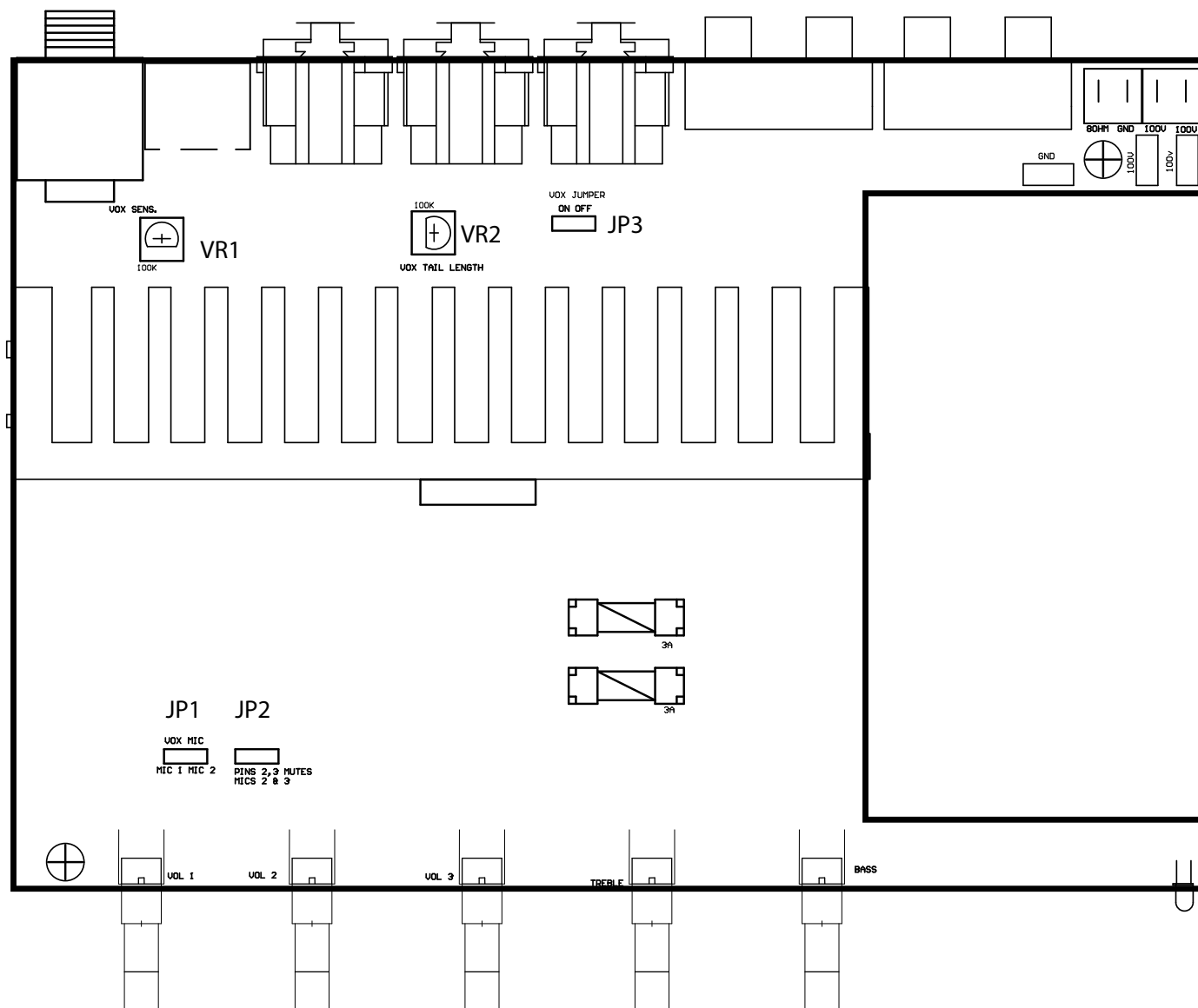


Figure 3. Inside top view of amplifier, showing the location VOX adjustments.

### VOX Muting Adjustments

VOX can be selected ON or OFF on the board via JP3.

1. VR1 adjusts the VOX sensitivity (i.e. input level that will activate switch). Turning the trimpot anticlockwise (as viewed from top) will make the VOX switch less sensitive. This will prevent unwanted activation due to high ambient (background noise).
2. VR2 adjusts the tail length (i.e. time before switching off) of the VOX switch. Turning VR2 anti-clockwise will increase the tail length.

**Important Note: There are only two combinations of jumper settings for JP1 and JP2 (No other combinations can be used).**

#### • Configuration 1: both jumpers set to the outside

When both jumpers are set to the outside the following logic applies.

- When paging through input 1, the VOX switch (where fitted) mutes both inputs 2 and 3.
- When the PTT contacts on input 1 are closed, both inputs 2 and 3 are muted.
- Paging through input 2 or input 3 has no effect on any other input.

Note

1. There is no PTT facility on inputs 2 and 3.
2. The PTT facility on microphone 1 will not mute Aux.1.



JP1



JP2

# Redback® 30W Public Address Amplifiers

## • Configuration 2: both jumpers set to the inside

When both jumpers are set to the inside the following logic applies.

- When paging through input 2, the VOX switch mutes input 3.
- When the PTT contacts on input 1 are closed, input 3 is muted.
- Paging through input 3 has no effect on any other input.

Note

1. There is no PTT facility on inputs 2 and 3.
2. There is no priority between input 1 and input 2 in this configuration, i.e. paging on both inputs 1 and 2 simultaneously will mean they mix together.



JP1



JP2

## 4.0 OPERATION

Once all inputs and outputs are connected:

- 1 Turn bass and treble to midway point.
- 2 Turn all volume controls to zero.
- 3 Turn power switch on. Power indicator should illuminate.
- 4 Turn on microphone or auxiliary input source and adjust appropriate volume control to desired level.

The microphone and auxiliary for each input are mixed together, e.g. mic 1 and aux 1 are mixed. Both the mic and auxiliary inputs can be run together but note there is only the one volume control for both of these.

## 5.0 TROUBLE SHOOTING

### NO POWER

(Power LED light does not illuminate)

Check mains fuse. Only replace with M205, 240V AC 0.5A rated fuse.

### DISTORTED OUTPUT

Check that the speaker type is correct for the output that you are using. Check for any short circuits on the speaker line.

### VERY LOW OUTPUT

Make sure that the input is the correct level (check for shorted connectors). Check for any short circuits on the speaker line.

### CONTINUALLY BLOWS FUSES

Make sure that the speaker line is not shorted. Check also 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 case are not covered or blocked. Check also speaker types, ratings and for any short circuits on the speaker line.

## 6.0 SPECIFICATIONS (\* Specifications Subject to Change Without Notice)

POWER OUTPUT:.....30 Watts RMS

T.H.D.: .....typically < 0.5% @ 1kHz

FREQUENCY RESPONSE:

Microphone: .....52Hz - 10kHz,  $\pm 3$ dB

Auxiliary:.....40Hz - 10kHz,  $\pm 3$ dB

SPEAKER OUTPUTS:.....100V (330 $\Omega$ ) (floating)  
or 8 - 16 $\Omega$  (0V referenced)

NOISE LEVEL:

All volume controls min: ..typically 76dB below rated output  
(All inputs display same signal to noise ratio)

OUTPUT CONNECTORS:

Speakers:.....Screw Terminals

Tape Output: .....RCA Stereo Socket

INPUT SENSITIVITY:

Mic 1:.....2.6mV Balanced or 3.2mV Unbalanced

Mic 2:.....2.6mV Balanced

Mic 3:.....2.6mV Balanced

Aux 1:.....150mV

Aux 2:.....150mV

Aux 3:.....150mV

MUTING:.....PTT Via Microphone

.....Switch Contacts

.....or Optional VOX Muting

.....-79dB below rated output

INPUT CONNECTORS:

Mic 1: .....5 pin DIN balanced or 3 pin XLR balanced  
.....or 6.35mm jack unbalanced

Mic 2:.....3 pin XLR balanced

Mic 3:.....3 pin XLR balanced

Aux 1: .....RCA Stereo Socket

Aux 2: .....RCA Stereo Socket

Aux 3: .....RCA Stereo Socket

240V AC Power:.....IEC Type Chassis Socket

CONTROLS:

Input 1 (Mic 1 / Aux 1):.....Volume

Input 2 (Mic 2 / Aux 2):.....Volume

Input 3 (Mic 3 / Aux 3):.....Volume

Bass:..... $\pm 10$ dB @ 100Hz

Treble: ..... $\pm 13$ dB @ 10kHz

Power:.....On/Off Switch

POWER SUPPLY: .....240V AC

INDICATORS: .....Power on LED

PROTECTION:.....AC Fuse 0.5A

.....DC Fuse 2 x 3A (internal)

ENSIONS:.....

A 4031C:..... $\approx 300$ W x 220D x 80H mm

A 4033C:..... $\approx 483$ W x 220D x 88H mm

WEIGHT: .....A 4031C:  $\approx 4.1$ kg

.....A 4033C:  $\approx 5.1$ kg

COLOUR: .....Black

ACCESSORIES:.....IEC Mains Lead