



## 30W Public Address Amplifiers

# OPERATING INSTRUCTIONS

A 4031A: 30W Desk Mount Amplifier

A 4033A: 30W Rack Mount Amplifier

### 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 -16 $\Omega$  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.

### 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. The 5 pin din has facility for PTT (push to talk) muting. 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. Wiring for 5 pin din socket is as per Fig 1.

We recommend that you connect only one microphone at a time to input 1.

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

#### Microphones Two and Three

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

#### Speaker Outputs

Screw terminals are provided for both VC (voice coil) and 100V outputs. Minimum impedance for 100V loads is 333 $\Omega$  (When only the 100V output is used).

Minimum impedance when only VC output is used is 4 $\Omega$  @ 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 600 $\Omega$  loads.

### INTERNAL JUMPER SETTINGS

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

#### 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.

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# REDBACK A 4031A / A 4033A 30 Watt Amplifiers

**Important Note:** There are only two combinations of jumper settings for JP1 and JP2:

- Configuration 1: both jumpers set to the outside



- Configuration 2: both jumpers set to the inside



No other combinations can be used.

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.

## Configuration 1

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.

## OPERATION

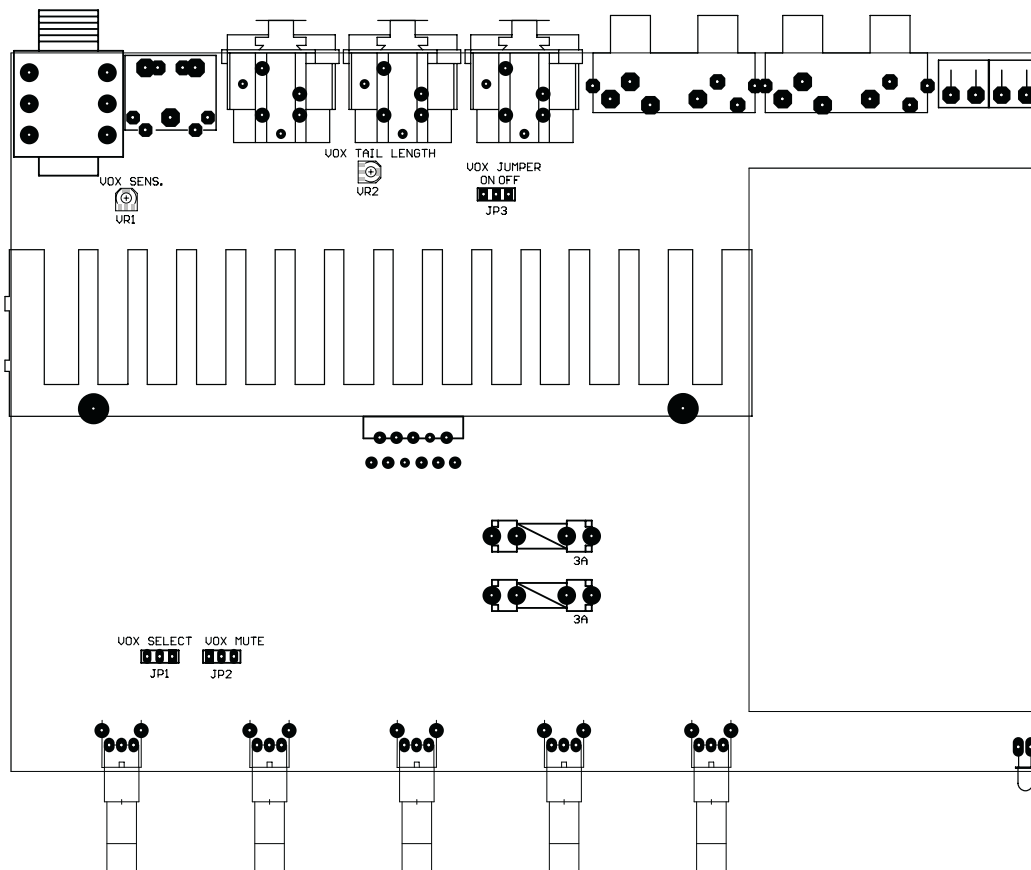
Once all inputs and outputs are connected:

- 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.

## Configuration 2

*Figure 1. Inside top view of amplifier, showing the location VOX adjustments.*



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## SPECIFICATIONS

**POWER OUTPUT:** .....30 Watts RMS

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

**FREQUENCY RESPONSE:**

**Microphone:** .....52Hz - 10kHz, ±3dB

**Auxiliary:** .....40Hz - 10kHz, ±3dB

**SPEAKER OUTPUTS:**.....100V (330Ω) (floating)  
or 4 - 16Ω (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:** .....±10dB @ 100Hz

**Treble:** .....±13dB @ 10kHz

**Power:** .....On/Off Switch

**POWER SUPPLY:** .....240V AC

**INDICATORS:** .....Power on LED

**PROTECTION:** .....AC Fuse 0.5A  
DC Fuse 2 x 3A

**DIMENSIONS:**

A 4031A: .....≈ 300W x 220D x 80H mm

A 4033A: .....≈ 483W x 220D x 88H mm

**WEIGHT:**

A 4031A: .....≈ 4.1kg

A 4033A: .....≈ 5.1kg

**COLOUR:** .....Black

**ACCESSORIES:** .....IEC Mains Lead

\* Specifications Subject to Change Without Notice

## 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**

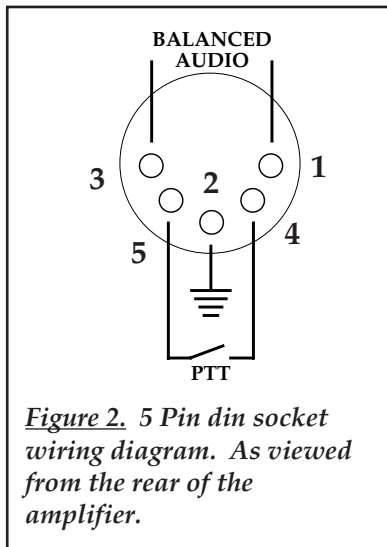
Make sure that the input is the correct level (check for shorted connectors). Check for any short circuits on the speaker line.

**CONTINUALLY BLOWS FUSES**

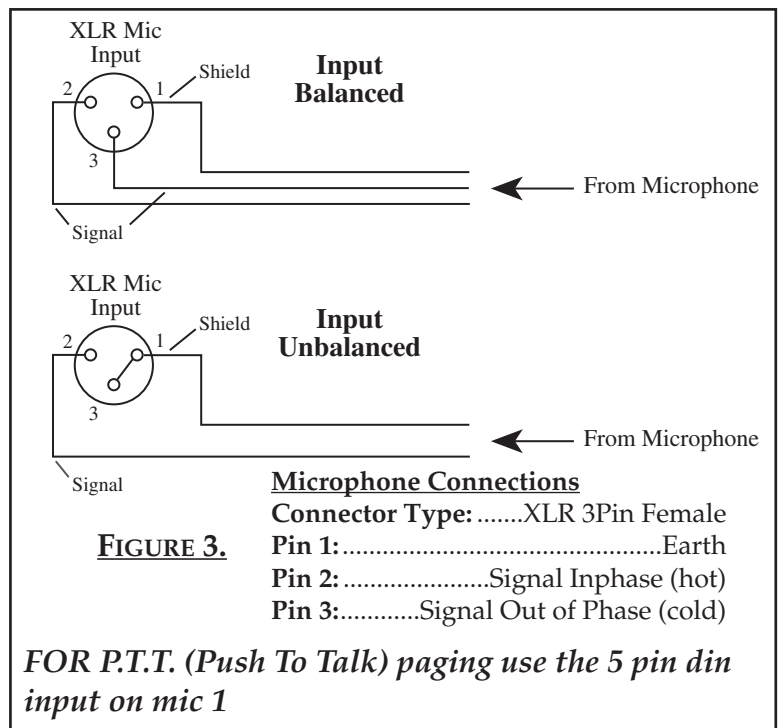
Make sure that the speaker line is not shorted. Check also speaker types, ratings and if on correct output.

**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.



*Figure 2. 5 Pin din socket wiring diagram. As viewed from the rear of the amplifier.*



**FIGURE 3.**

**FOR P.T.T. (Push To Talk) paging use the 5 pin din input on mic 1**

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