



A 4420A

Public Address Mixer

OPERATING
INSTRUCTIONS

Distributed by Altronic Distributors Pty. Ltd. Perth. Western Australia.
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Proudly Assembled in Australia

REDBACK A 4420A Mixer

Congratulations on purchasing the A 4420A REDBACK 8 Input Mixer.

This mixer has been designed to meet the requirements of today's high performance PA Systems.

The input section features I.C. balancing techniques to reduce hum and noise to very low levels while maintaining excellent balancing and input sensitivity. Naturally, if you want to use unbalanced microphones then it is simply a matter of connecting one of the input signal lines to earth (see figure 2).

THE MIXER FEATURES

- Phantom Powering available (individually selectable on each channel) on all microphone inputs if desired (internally selected). This function is factory set "OFF".
- VOX (Voice activated) muting of the auxiliary music inputs (internally selectable on or off) when any of the microphone inputs are used. This function is factory set "OFF".
- The microphones have a Bass cut switch to reduce feedback and improve vocal clarity (internally selectable on or off). This function is factory set "OFF".
- Bass and Treble Controls for the Auxiliary inputs.
- The microphone inputs can be selected to either channel through, or bypass the tone controls (internally selectable on or off). This is factory set in the "BYPASS" position.
- Internationally accepted IEC socket for mains power connection. Note this unit is designed for 240V AC 50Hz operation only.
- Supplied with Industry standard 3 pin XLR connectors for microphone inputs and stereo RCA's for Auxiliary inputs.
- The output of the mixer has been designed to operate with power amplifiers equipped with a balanced input. If you wish to drive an unbalanced amplifier, then simply connect one of the output signal lines of the mixer to Earth, and use the other output (see figure 2).

INSTRUCTIONS FOR USE

Remove the mixer from its packaging and inspect for any damage. If the unit appears to be damaged then do not operate as this may damage the unit further.

1. Prior to installation, set the internal jumpers. These are located as per figure 1. **WARNING Do not open unit when connected to the mains voltage.**
2. Plug in a low impedance microphone into the microphone input, or a music source (tape or Compact Disc or similar) into the auxiliary input.
3. Connect the mixer to an amplifier using a suitable cable. See figure 2, Connection Details.
4. Turn all controls fully down and then switch the mixer and amplifier on.
5. Turn up the level control associated with the input that you are using to about half way. Talk into the microphone (or play some music) and adjust the Master level to achieve the required level.

For the best noise performance turn the input level control to a high setting and use the Master as the volume control. Use the other input level controls to set the required mixing ratios. If you are using the auxiliary inputs, adjust the bass and treble controls to get the desired sound. If you have the tone routing jumper set to "TONE", you may also adjust the Bass and Treble controls when using microphone(s) to get the desired sound.

For best performance when using long lines between microphones/mixer and or amplifier use balanced lines. These have the effect of cancelling out any noise or hum that may be induced into the cables. Note that a balanced line uses three wires (two signal wires and one earth wire or shield) where an unbalanced cable uses only one signal wire and an earth. See the connection details (figure 2) for wiring up plugs etc.

Do not tamper with the unit. Warning Mains Voltage is Present Inside. Leave servicing to qualified personnel.

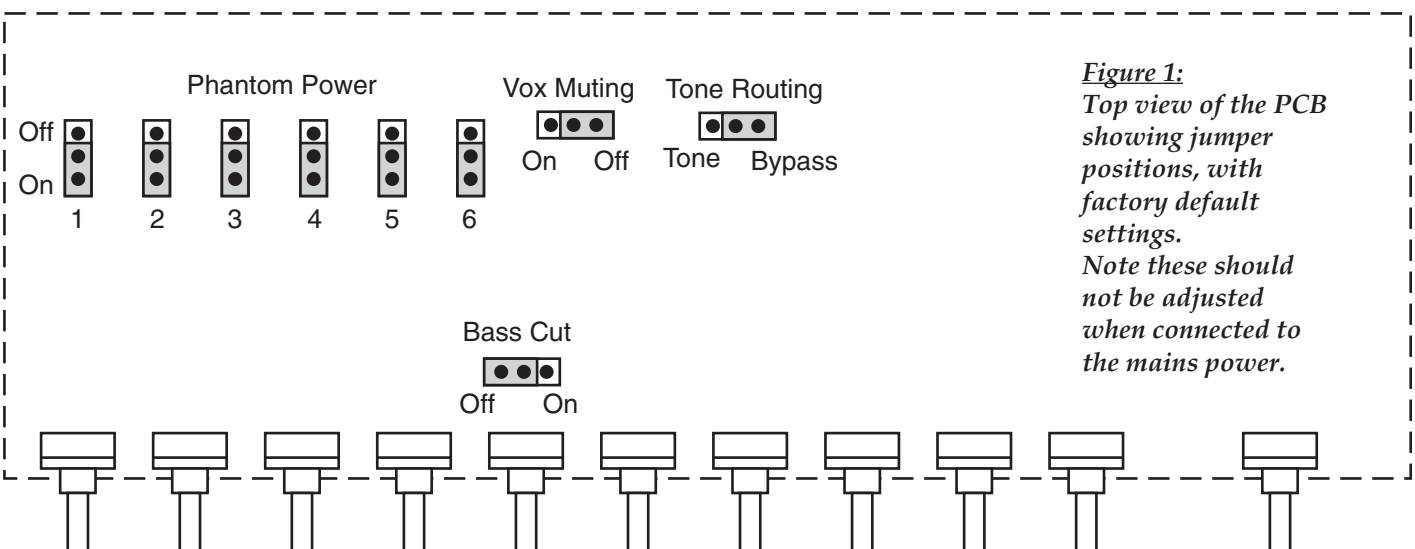


Figure 1:
Top view of the PCB showing jumper positions, with factory default settings. Note these should not be adjusted when connected to the mains power.

Auxiliary

No. of Channels:.....2
 Sensitivity (master full):260mV
 Signal to Noise Ratio:better than 76dB
 Frequency Response ($\pm 3\text{dB}$):60Hz - 20kHz
 Input Impedance:.....100k Ohm
 Muting Level:-50dB
 Mode:Unbalanced
 Connector Type:Stereo RCA

Tone Control

Bass Control: $\pm 9\text{dB}$ at 80Hz
 Treble Control: $\pm 10\text{dB}$ at 10kHz

Bass Cut Switch on Microphone

Switch "ON":-6dB/Octave from 150Hz

Phantom Power

Voltage:12V
 Output Impedance:3.4k ohm

Microphone

No. of Channels:.....6
 Sensitivity (master full):1.2mV
 Signal to Noise Ratio:better than 71dB
 Frequency Response ($\pm 3\text{dB}$):60Hz to 20kHz
 Input Impedance:.....600 Ohm
 Mic Impedance:.....200 - 600 Ohm nominal
 Mode:Balanced
 Connector Type:.....3 Pin XLR Female

Output

Signal to Noise Ratio :
 (all controls mid way)-85dB, ref 0dBm
 (all controls maximum).....-58dB, ref 0dBm
 Impedance:600 Ohms
 Distortion:Less than 0.06%
 Max Output Level:+19dBm
 Mode:Balanced
 Connector Type:3 Pin XLR Male
**Specifications subject to change without notice.*

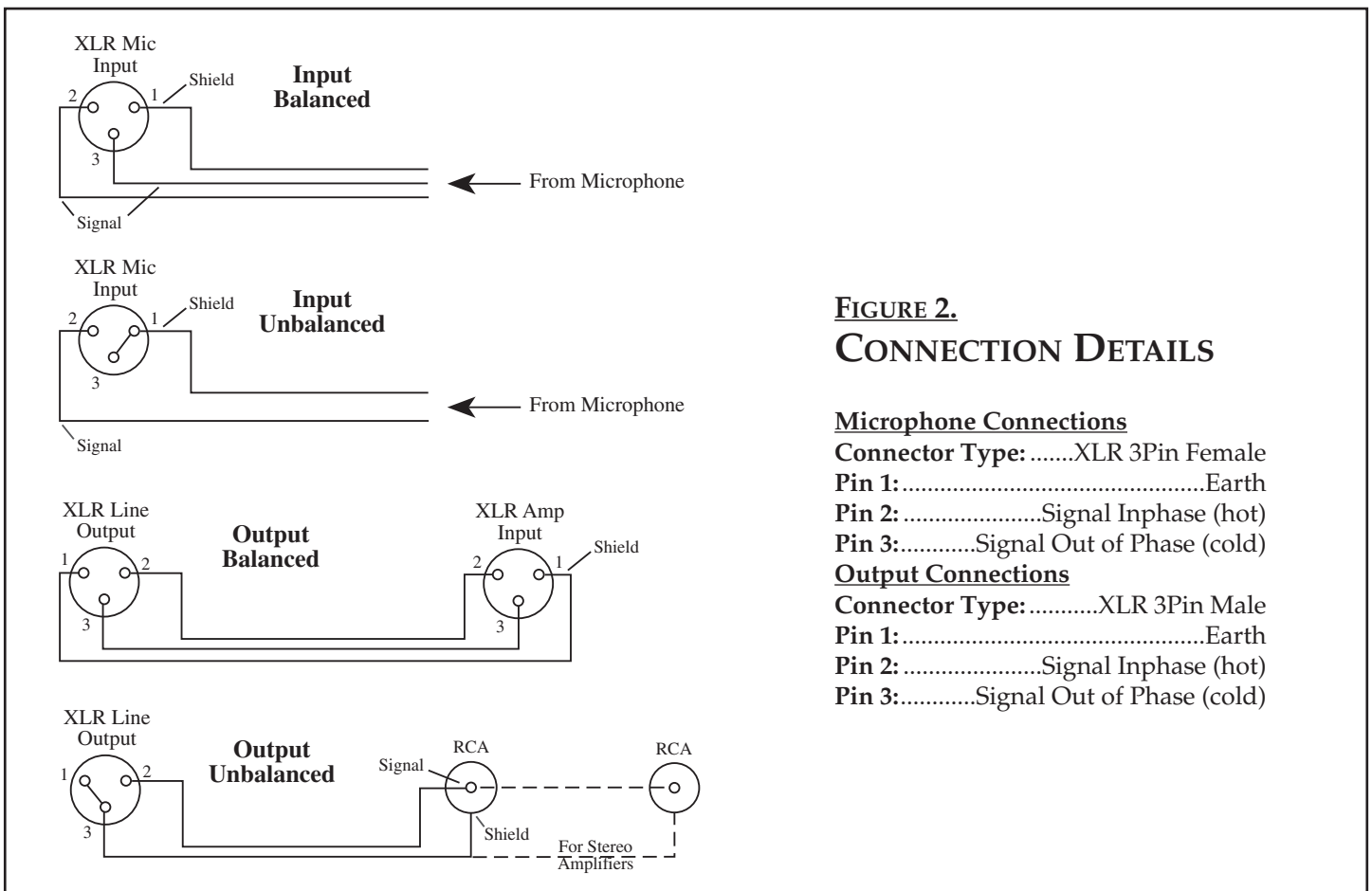


FIGURE 2.
CONNECTION DETAILS

Microphone Connections

Connector Type:XLR 3Pin Female
 Pin 1:Earth
 Pin 2:Signal Inphase (hot)
 Pin 3:Signal Out of Phase (cold)

Output Connections

Connector Type:XLR 3Pin Male
 Pin 1:Earth
 Pin 2:Signal Inphase (hot)
 Pin 3:Signal Out of Phase (cold)

TROUBLE SHOOTING

Fault/Symptom: No Sound

- Check that there is power on both the mixer and power amplifier. The mixer has a LED light to indicate if there is power.
- Check master volume is turned up.
- Check the fuse. CAUTION: Unplug the mixer from mains power before checking fuse.
- Check all lead connections

Fault/Symptom: When Paging the Music is Not Muted

- Set the *VOX Muting* internal jumper to "ON".

Fault/Symptom: Bass Control Fails to Give Bass Boost

- Check that the *Bass Cut* internal jumper is selected "OFF"

Fault/Symptom: Microphone Does Not Work

- The microphone may need phantom power. If so set the *Phantom Power* internal jumper(s) to "ON".
- Check microphone volume is turned up.

Fault/Symptom: Tone Controls Do Not Work on Mic

- Set the *Tone Routing* internal jumper to "TONE" setting.

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