



## 3 RB-PMX4 10 Input, 4 Output Analogue Preset Mixer

### Introduction



Fig 3-1: RB-PMX4 Front Panel.

The RB-PMX4 is a high performance 10 mono input to 4 mono output preset mixer. Each of the four outputs has a 10 way DIP switch associated with it to select which of the 10 inputs are routed to it. So, by altering the DIP switches, any of the input sources can be mixed to any of the outputs. The DIP switches are enclosed by a screw-on cover on the front panel so that the settings can not be accidentally changed for secure applications.

The RB-PMX4 has been designed for situations where a small mixer is needed for installations where it will be configured and then only altered occasionally, or never altered. Uses for this product are numerous including a four bus mini-mixer, a 4 zone mixer for pubs and clubs, a multiple clean-feed generator and a quad stereo to mono converter to name a few.

The XLR-3 inputs and outputs are electronically balanced and can be wired unbalanced. Each output is individually buffered so that a short circuit on one won't affect the others. Each input has its own gain control which is a pre-set potentiometer accessible through the front panel. This provides gain adjustment of -8dB to 18db. This is useful for normalizing consumer and professional signals to give outputs of -15dBu and 0dBu respectively.

The front panel is held on by 2 off M3 x 6 stainless steel dome-head screws and can be removed using a 2mm AF hex key (allen key). Each 10-way switch represents an output and the individual switches represent the inputs that will be mixed to that output. Switches are in the ON (down) position to be mixed and the OFF (up) position for off.

The XLR-3 outputs are electronically balanced and can be wired unbalanced. Each output is individually buffered so that a short circuit on one won't affect the others.

An LED power indicator on the front panel displays the power supply connection.



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## MIXER & SOURCE SELECTORS



MIXER & SOURCE SELECTORS - RB-PMX4

### System Block Diagram

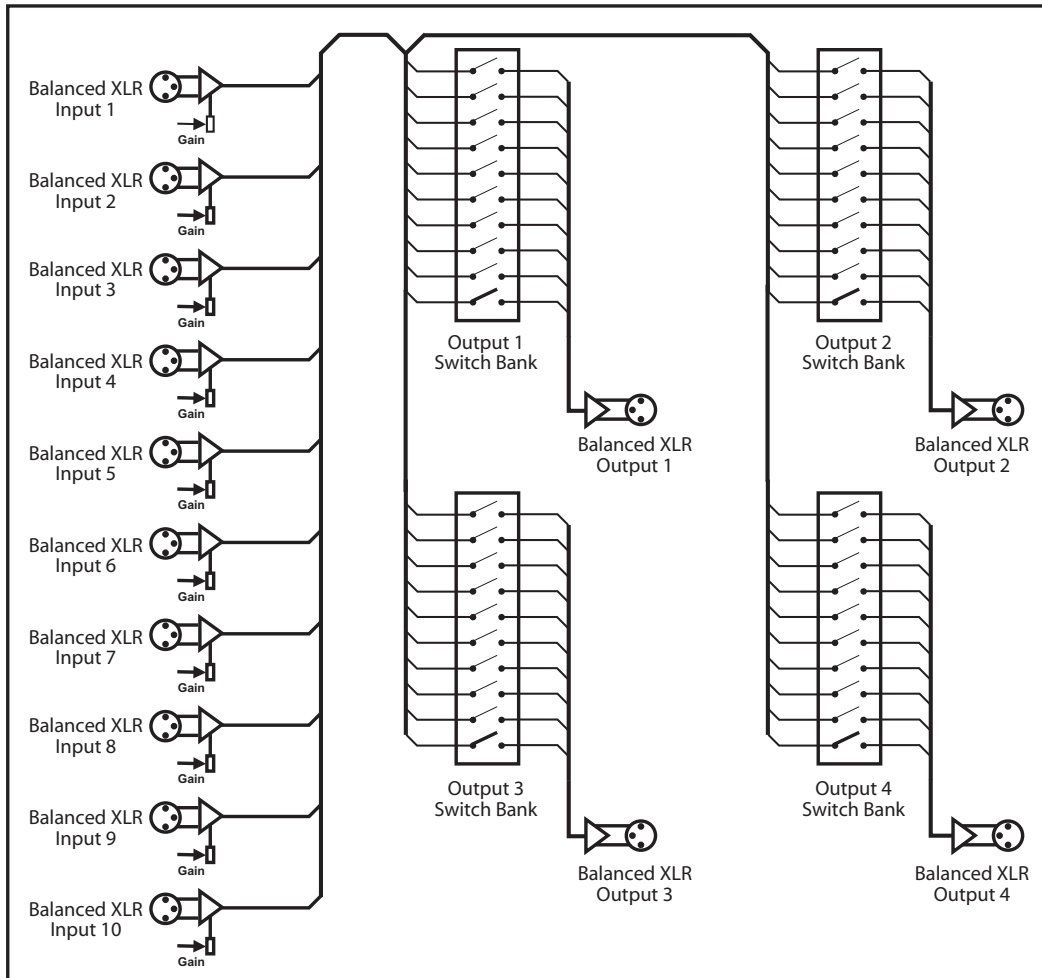


Fig 3-2: RB-PMX4 Block Diagram.

### Rear Panel Connections and Operation



Fig 3-3: RB-PMX4 Rear Panel.

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## Inputs 1-10

The XLR-3 input sockets can take balanced professional levels, or unbalanced by using the front panel gain controls, and by connecting the non-phase to the signal ground screen. The XLR 3 pin input has the following connections:

- Pin 1: Screen
- Pin 2: Phase
- Pin 3: Non-phase

## Outputs 1-4

The XLR 3 pin output plugs are electronically balanced, and can be wired unbalanced. Each output is individually buffered so that a short circuit on one output will not affect the others. They have the following connections:

- Pin 1: Screen
- Pin 2: Phase
- Pin 3: Non-phase

## Front Panel Controls

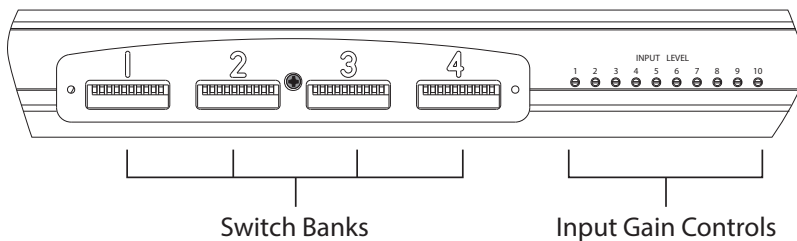


Fig 3-4: RB-PMX4 Front Panel Controls.

## Switch Banks

There are 4 off 10-way switch banks, one for each output. Using these switches, each input channel can be individually selected to each output. When the switches are up (OFF) position, they are off and mixed when in the down (ON) position.

## Input Gain Controls

The gain for each input may be individually varied from  $-8\text{dB}$  to  $18\text{dB}$  by adjusting the pre-set potentiometers, which are accessible through the holes in the front panel. This is useful for normalising consumer and professional signals to give outputs of  $-15\text{dBu}$  and  $0\text{dBu}$  respectively.



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#### Technical Specifications RB-PMX4

##### Audio Specifications

Maximum Input Level:	+28dBu
Input Impedance:	>20kΩ balanced bridging
Maximum Output Level:	+28dBu
Output Impedance:	<50Ω
Frequency Response:	20Hz to 20kHz ±0.1dBu (600 Ω load, @ 1kHz)
Input Gain Range:	Adjustable 8dBu loss to 18dBu gain.
Common Mode Rejection:	>60dBu typically
Off-isolation/Crosstalk:	>90dBu @ 1kHz
Noise:	-86dBu RMS 22Hz-22kHz, unity gain, ref +8dB
Distortion:	<0.01% @ 1kHz, 0dBu to +26dBu

##### Connections

Inputs:	10 x XLR 3 pin female (Balanced, can be unbalanced)
Outputs:	4 x XLR 3 pin male (Balanced, can be unbalanced)
Mains Input:	Filtered IEC, 110V-120V, or 220-240V switchable, fused, 6W maximum
Fuse Rating:	Anti-surge fuse 100mA 20 x 5mm (230VAC) Anti-surge fuse 250mA 20 x 5mm (115VAC)

##### Equipment Type

RB-PMX4: 10 input, 4 output analogue preset mixer



##### Physical Specifications

Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.2cm (H) (1U) 19" (W) x 4.3" (D) x 1.7" (H) (1U)	
Dimensions (Boxed):	53cm (W) x 20.5cm (D) x 6cm (H) 21" (W) x 8" (D) x 2.4" (H)	
Weight:	Nett: 1.5kg Nett: 3.3lbs	Gross: 2.2kg Gross: 4.8lbs