

# MSX 4

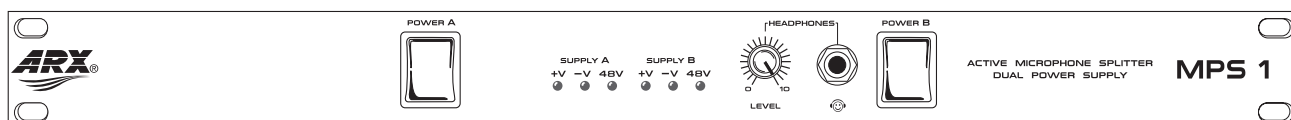
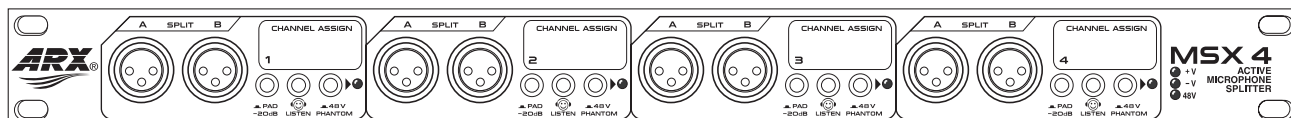
FOUR CHANNEL ACTIVE  
MICROPHONE SPLITTER

# MPS 1

DUAL POWER SUPPLY FOR MSX 4



<http://www.arx.com.au>



Active microphone splitting has a number of benefits over passive splitters: primarily these are improved sound quality, noise figures comparable to the best microphone inputs, increased resistance to RFI, and a consistent microphone load.

## THE MSX 4

With these benefits in mind, the ARX MSX 4 Active Microphone Splitter has been developed to deliver the performance required by the increasing complexity of today's standards of audio production.

This feature packed one rack unit device is the answer wherever transparent signal buffering and routing is required.

The MSX 4 consists of four channels of actively buffered ultra low noise Microphone Splitter. Each of these channels has four active splits – electronically Balanced outputs for Main and Monitor on the rear panel, plus two electronically Balanced splits (with optional transformer isolation) on the front panel.

Each channel has a front panel pad switch (-20dB) for bringing high level signals under control, plus switchable consistent 48V Phantom power with indicator LED. A 'Listen' switch enables each channel to be easily checked with headphones for line tracing when troubleshooting.

Internally, powerful RF input filter-

ing removes both common mode and differential nasties at ultrasonic frequencies and above. High CMRR is achieved with precision components, not vulnerable trim pots.

Similarly, independent differential outputs have been used to avoid the need for the CMR trimming required by conventional cross coupled balanced drivers. Without their feedback based topology, sonic quality is vastly improved.

## THE MPS 1

To get the maximum benefit from the MSX 4's ultra low noise design, it is externally powered by the MPS1 Dual Power Supply. This unique and compact single rack unit device comprises two electrically separate power supplies in the one chassis, and ensures reliable, trouble free operation for your MSX 4 System.

## BACKUP

Using the rule that you should 'never go anywhere without a backup', by using two power supplies in tandem the MPS 1 has backup built in – each of its dual power supplies is always available for use.

The headphone output for the 'Listen' function is also mounted in the MPS 1 chassis.

The MPS 1 will power up to 12 MSX4 units, for a total of 48 channels.

## Features

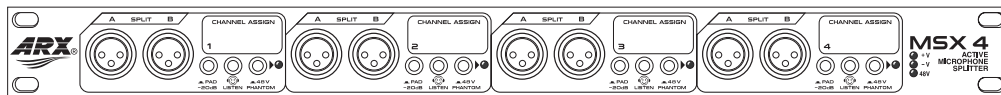
- Four channel four way split
- Ultra low noise design
- 'SilentStart' Phantom Power switch
- 20 dB pad switch
- Headphone monitoring switch
- Electronically Balanced Inputs and Outputs
- Optional transformer balanced front panel splits
- External dual power supply with headphone amp built in
- Intuitive, 'user friendly' layout
- Flawless performance in any audio environment

# MSX 4 Specifications

- Signal / Noise Ratio**  
-94dB
- Distortion**  
.008% 20Hz - 20KHz
- Through Gain**  
Input / Output 10dB  
(may be varied internally)
- Maximum Output**  
+18dB
- Pad Switch**  
20dB attenuation
- Phantom Power**  
+48VDC Silent Switch  
slow turn on/turn off
- Output Impedance**  
*Main/Monitor outputs:*  
50 Ohms Electronically Balanced  
*Split 1/Split 2 outputs:*  
50 Ohms Electronically Balanced  
(Optional 600 Ohm Transformer)
- Power Input**  
2 x Male 6 Pin XLR
- Power Supply**  
ARX MPS 1

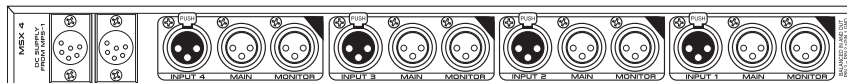
# MPS 1 Specifications

- AC Mains Input**  
Dual fused IEC sockets
- AC Power**  
100-120V AC 2 amp  
220-240V AC 1 amp
- Transformer Type**  
2x low noise toroidal power transformers
- Power Outputs**  
Dual + and - 25 VDC Unregulated, 6 Amp  
Dual separate +48VDC Regulated, 500mA
- Power Output Connectors**  
2 x 6 pin latching XLR
- Size**  
19"W x 1 3/4"H x 6"D  
482 x 44 x 150 mm
- Weight**  
MSX 4 5 lbs (2 Kg)  
MPS 1 18 lbs (8.2 Kg)



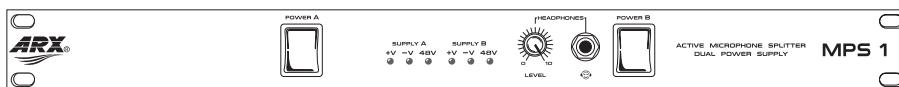
## MSX 4 FRONT PANEL

- A and B balanced XLR Output splits  
Channel 1. Pin 3--, Pin 2 +, Pin 1 Ground
- 20dB pad switch
- Listen function switch
- 48V Phantom Power switch and status LED
- Numbered marker panel for labelling microphone channel assigns
- Power status LEDs. For normal operation all 3 LEDs will be lit.



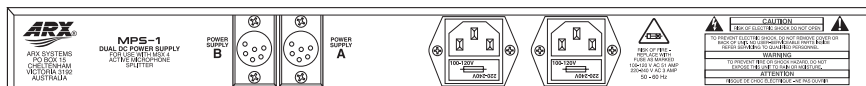
## MSX 4 REAR PANEL

- Balanced XLR Input Channel 1. Pin 3 -, Pin 2 +, Pin 1 Ground
- Balanced XLR Main (FOH) Output (same wiring as Input)
- Balanced XLR Monitor Output (same wiring as Input)
- 6 pin DC Power supply input connectors from the MPS 1 Power Supply



## MPS 1 FRONT PANEL

- Dual Power Switches
- Power status LEDs. For normal operation all 6 LEDs will be lit.
- Listen function level control
- Listen function headphone socket



## MPS 1 REAR PANEL

- 6 pin DC Power supply connectors
- Dual IEC 3 pin AC connectors and integral fuseholders. Replace fuses with correct value only: 100 - 120 V AC 5 amp, 220-240 V AC 3 amp.

## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The Active Microphone Splitter shall be a four channel unit in a steel chassis six inches (155mm) deep and one rack unit high.

Each channel shall have its input and two outputs on the rear panel plus two outputs on the front panel. Each channel shall also have a 48V Phantom power switch on the front panel with an indicator LED, a headphone monitoring switch, and a -20 dB pad switch.

The Input headroom shall be +21dB, with a CMRR of better than 70dB, and the frequency response shall be 10 Hz to 20 KHz, ±0.5dB.

The Output impedance shall be 50 ohms electronically balanced on all four outputs per channel. Additionally the two front panel outputs shall have the option of being 600 ohms transformer balanced.

The maximum Output level shall be +18dB, with a Signal to Noise ratio of -94dB unweighted. Total Harmonic Distortion shall be 0.008% @ 0dB, 20 Hz to 20 KHz, and the gain through the unit shall be a nominal 10dB. There should be provision for this to be varied internally. DC Power shall be supplied to the Microphone Splitter by

an external power supply via 2 x Male 6 Pin XLR Sockets. The external power supply shall consist of two completely independent units in a one rack unit steel chassis. Each unit shall have its own power switch and DC supply indicator LEDs. The headphone output and level control shall also be included in the power supply.

The dual power supplies shall be wired so that they can instantly switch from one to the other in the event of a failure. AC power shall be supplied to the dual power supply by two removable 3 pin mains cables, connecting to two IEC connectors with integral fuses and voltage change switches on the power supply's rear panel.

The Active Microphone Splitter shall be the ARX MSX 4. The Dual Power Supply shall be the ARX MPS 1.

Specifications available on disk



<http://www.arx.com.au>

Our policy is one of continuous improvement, and therefore designs may change without notice. However, unless otherwise stated, specifications will always equal or exceed those previously given.



ARX Systems Pty Ltd, Australia; Phone: +61-3 9555 7859 Fax: +61-3 9555 6747

©1997 ARX Systems Pty.Ltd. ACN 006 471 825. All rights reserved. ARX Systems® is a Registered Trade Mark.