

INTERNATIONAL LIMITED WARRANTY

ARX Systems (ARX) warrants to the first purchaser of any ARX equipment that it is free from defects in materials and workmanship under normal use and service. ARX's sole obligation under this warranty shall be to provide, without charge, parts and labour necessary to remedy defects, if any, which appear within twelve (12) months from date of purchase, and for a further twelve (12) months supply parts only.

This is our only warranty. It does not cover finish or appearance items, burned voice coils, or if the equipment has been, in ARX's sole judgement:

- Subjected to misuse, abuse, negligence or accident;
- Repaired, worked on, or altered by persons not authorized by ARX;
- Connected, installed, adjusted or used for a purpose other than that for which it was designed. This includes running a speaker system with the ISC leads disconnected, or with a non-ARX crossover, or with the wrong processor.

This warranty gives you and us specific legal rights and you may also have other rights which may apply.

Warranty Service Procedure

Should it become necessary to have your equipment serviced under the terms of the warranty, please follow these steps:

1. Call your ARX distributor for a Return Authorization (RA) number;
2. **Carefully** repack the unit, in its original packaging where possible, including a note with a description of the problem, and a copy of the receipt showing date of purchase. Attach these to the actual unit itself. Don't forget to write your name and address clearly, and include a phone number where you can be contacted during normal business hours. Make it easy for our service technicians to contact you if they have a question. Also, use **plenty** of packing material - better to be safe than sorry.
3. Send the unit freight prepaid to ARX Systems, at the address given you with your RA number. We will pay the return freight when the serviced unit is returned to you.
4. We strongly recommend you insure the package. We can't fix it if it gets lost! Send it by UPS, Fedex, DHL or any similar service that can track the package. Parcel Post is *not* recommended

If Warranty Registration Card is missing, please write to ARX in the country of purchase, stating model and where purchased, or to ARX, PO Box 15, Moorabbin, Victoria 3189, Australia.

Or you can Email us at: info@arx.com.au

MSX 8 Active Microphone/Line Splitter

OWNER'S MANUAL



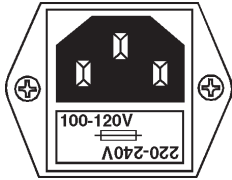
ARX Systems Pty Ltd, PO Box 15,
Moorabbin, Victoria 3189, Australia
Phone: (03) 9555 7859 **Fax:** (03) 9555 6747
International Fax: +61-3 -9555 6747
On the Web: www.arx.com.au
Email: info@arx.com.au



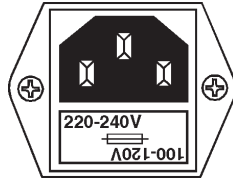
IMPORTANT - PLEASE READ THIS FIRST



This is a dual voltage unit. It is essential that you check that the voltage on the fuseholder cover below the AC connector on the rear of the chassis is set correctly before connecting it to AC power.



THIS IS SET FOR
100 V AC TO 120 V
AC OPERATION



THIS IS SET FOR
220 V AC TO 240 V
AC OPERATION

To change, pull fuseholder out and rotate 180°, then push in again. Do not insert power cable into unit until voltage has been correctly set. Do not plug power cable into AC power until voltage has been correctly set

WARNING SYMBOLS USED ON THIS EQUIPMENT



This symbol is intended to alert you to the presence of important operating instructions contained in this owner's manual



This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



This symbol indicates that a Slow Blow fuse is used in this equipment. Replace with same type and value only



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE
COVER OR BACK OF UNIT
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL

WARNING

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT
EXPOSE THIS UNIT TO RAIN OR MOISTURE.

ATTENTION

RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



Complies with 89/336/EEC EMC Directive, amended by 92/31/EEC and 93/68/EEC; CE 73/23/EEC Low Voltage directive and meets the following standards: EN 55013 : 1990, Sections 3.2 and 3.5
EN 55020 : 1988, Sections 4.3, 5.4, 6.2, 7.0, 8.0.

Complies with Australian Standard AS/N25 1053

Specifications

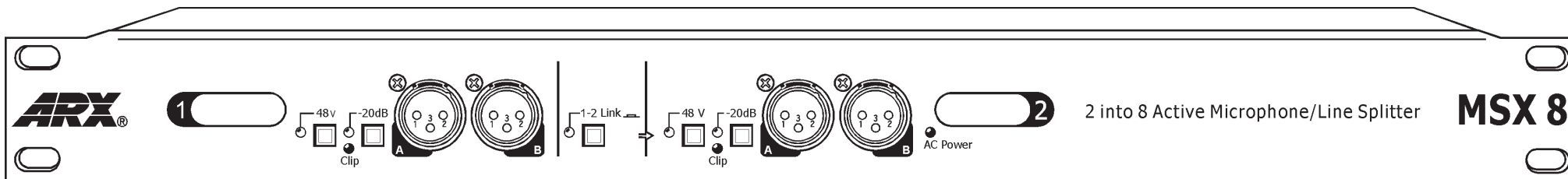
<i>Signal / Noise Ratio</i>	-94dB
<i>Distortion</i>	.008% 20Hz - 20KHz
<i>Gain through unit</i>	Switchable 0, +10, +20, +30, +40 dB
<i>Maximum Output</i>	+24dB
<i>Pad Switch</i>	-20dB attenuation
<i>Phantom Power</i>	+48VDC slow turn on/turn off
<i>Output Impedance</i>	100 Ohms Electronically Balanced (Optional 600 Ohm Transformer balancing available)
<i>Clip LED</i>	1dB before clipping
<i>AC Mains Input</i>	Fused IEC socket
<i>AC Power</i>	100-120V AC 1 amp 220-240V AC 0.5 amp
<i>Transformer Type</i>	Low-noise shielded toroidal
<i>Size</i>	19"W x 1¾"H x 6"D 482 x 44 x 155 mm
<i>Weight</i>	5 lbs (2.2 Kg)

Complete online documentation is available on the ARX website:
www.arx.com.au/msx8.htm

Specific queries can be emailed to the factory at info@arx.com.au

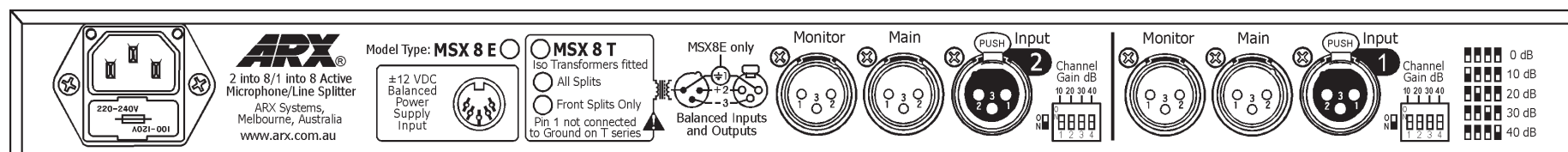


Our policy is one of continuous improvement, and therefore designs may change without notice. However, unless otherwise stated, specifications will always equal or exceed those previously given. ARX® is a Registered Trade Mark of ARX Systems Pty Ltd. MSX 8™ is a trade mark of ARX Systems Pty Ltd. Any other names and trademarks are used for information purposes only, and no other intent is expressed or implied



Front Panel Connectors and Controls

- A and B balanced XLR Output splits Channel 1. Pin 3 -, Pin 2 +, Pin 1 Ground (Standard: electronic; Optional: transformer isolated)
 - -20dB pad switch and status LED
 - Channels 1 and 2 Link switch and status LED
 - 48V Phantom Power switch and indicator LED
 - Numbered marker panel for labelling microphone channel assigns
 - AC Power status LED
- Channel 2 connectors and controls identical



Rear Panel Connectors

- Balanced XLR Input Channels 1 and 2. Pin 3 -, Pin 2 +, Pin 1 Ground
- Gain DIP switches: 0dB, +10, +20, +30, +40dB
- Balanced XLR Main (FOH) Output (same wiring as Input) Channels 1 and 2
- Balanced XLR Monitor Output (same wiring as Input) Channels 1 and 2
- 12V DC DIN connector for applications requiring remote power
- IEC 3 pin AC connector and integral fuseholder. Replace fuse with correct value only: 100–120 V AC 1 amp, 220–240 V AC 0.5 amp.

Note: No connection to Audio ground on transformer balanced models (T/S and T/ALL)

Architects' and Engineers' Specifications

The Active Microphone/Line Splitter shall be a two channel unit in a steel chassis six inches (200mm) deep and one rack unit (44mm) 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 and a -20 dB pad switch with an indicator LED.

There shall also be a front panel switch with an indicator LED to link both channels, thereby providing a maximum of 8 outputs from one input.

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

The Output impedance shall be 100 ohms electronically balanced on all four outputs per channel. Additionally all outputs shall have the option of being transformer balanced.

The maximum Output level shall be +24dB, with a Signal to Noise ratio of -94dB unweighted. Total Harmonic Distortion shall be 0.008% @ 0dB, 20 Hz to 20 KHz.

Gain through the unit shall be switchable to 0, +10, +20, +30, +40dB via rear panel switches.

AC power shall be supplied by a removable 3 pin mains cable, connecting to an IEC connector with integral fuse and voltage change switch on the unit's rear panel.

The Active Microphone Splitter shall be the ARX MSX 32.



IMPORTANT



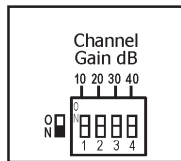
Check that the AC Power at the wall is in the same voltage range as that printed on the fuse holder door, before connecting the MSX 8 to the AC supply. See Page 2 for further details.

Connecting the MSX 8

The original signal from the microphone is connected into the Input connector on the rear panel of the chosen channel. From there it can go any or all of the following:

- 1: To the main Front of house console, out of the Main connector on the rear panel
- 2: To the Monitor console (or a second Main console) out of the Monitor connector on the rear panel
- 3: To either of the two front panel splits, for connection to remote trucks, OB vans, recording feeds, press feeds, etc. In normally supplied configuration these two splits are electronically balanced, identical to the Main and Monitor feeds. However, they can be optionally fitted with isolating transformers where complete signal isolation is required.

48V Phantom power can be switched to the mic input from the front panel, and the channel Pad can be switched in to cope with ultra hot signals. Overall Channel Gain is controlled by each channel's DIP switch on the rear panel. All switches Off (down) equals a Gain of 0dB. Only push up the switch of the Gain setting you require. i.e. for a channel Gain of 20dB you would push up switch #2 only.



Channel Gain setting with DIP switches

If more splits from a single microphone are required, eg. for use as a Press Box, then push in the Link switch on the front panel. The signal from Channel 1 will then appear at all 8 outputs of the MSX 8

MSX 8 Options

Either just the front panel splits or all splits are available with isolating transformer balanced outputs if required. Ideally these should be installed at the time of ordering the unit(s), but they are available as a retrofittable kit. Contact ARX directly or the dealer at your point of sale for further information on obtaining a transformer balancing kit. The kit comes with complete details on the installation, testing and ground lift wiring of the transformers.

Note: This retrofitting involves opening the case of the MSX 8, so should only be done by a qualified technician.

- MSX 8 Electronically Balanced All Outputs
- MSX 8 T/S Electronically Balanced Main and Monitor Outputs,
Transformer Balanced Outputs Splits 1 and 2
- MSX 8 T/ALL Transformer Balanced All Outputs

Introduction

Thank you for choosing this MSX 8 Active Microphone/Line Splitter. As with all ARX equipment, it has undergone extensive factory calibration and 'burn in' before shipping. To ensure continued trouble free use, please familiarise yourself with the contents of this manual before using the MSX 8.

About the MSX 8

Today's venues face a growing need to provide a multiplicity of audio feeds from presentations, conferences, orchestral performances and lectures.

The advent of digital broadcasting, the growth of webcasts and direct-to-CD archiving highlight the deficiencies in audio splitting systems more than ever before. Whether the end product is a broadcast feed or CD sales of an unrepeatable lecture, performance or event, the end-users' expectations of audio quality are higher than ever. And the MSX 8's channel linking enables it to instantly become a 1 to 8 press box at the push of a button

With these requirements in mind, ARX has developed the MSX 8 Active Microphone/Line Splitter to deliver the performance required by today's standards of audio production.

Active microphone and line 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. All of which translate into superb audio quality for your clients.

The MSX 8 consists of two channels of actively buffered ultra low noise Microphone/ Line Splitter. Each of these channels has four electronically Balanced splits – two on the rear panel, plus two more on the front panel. All four output splits have the option of transformer balancing if so specified.

Each channel has a –20 dB pad switch and a silently switchable 48V Phantom power with indicator LED. A 'Link' switch links channel 1 with channel 2, providing a maximum of 8 Outputs from a single input. An indicator LED shows when this is active. A Clip LED indicates imminent signal overload through the channel.

Gain through the MSX 8 can be set individually by the small DIP switches on the rear of each channel, from 0dB through to +40 dB in 10 dB steps

A numbered marker panel on the front provides a space where individual channel connections can be noted.

Internally, powerful RF input filtering removes both common mode and differential interference at ultrasonic frequencies and above. High CMRR is achieved with precision components, not vulnerable trimpots.

The MSX 8 has a low noise shielded transformer based power supply to obtain the maximum benefit from the ultra low noise design of the splitter circuitry.

Summing up, the feature packed MSX 8 device is the answer wherever transparent signal buffering and routing is required.