

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 32 Active Microphone/Line Splitter

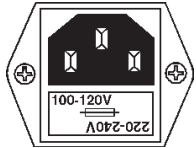
OWNER'S MANUAL



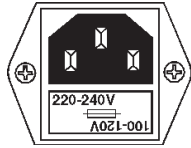
ARX Systems Pty Ltd, PO Box 15,
Moorabbin, Victoria 3189, Australia
Phone: (03) 9555 7859 Fax: (03) 9555 6747
International Fax: +61-3 -9555 6747
On the Web: www.arx.com.au
Email: info@arx.com.au

! 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 connect power cable to AC power until voltage has been correctly set



RoHS

CE **N1819**




Manufactured in Australia

Complies with 89/336/EEC EMC Directive, amended by 92/31/EEC and 93/68/EEC; 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., and EN 60950 : 1994 Low Voltage Directive

Complies with Australian Standard AS/N25 1053

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.

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

Specifications

Signal / Noise Ratio	-94dB
Distortion	.008% 20Hz - 20KHz
Gain through unit	Switchable 0, +10, +20, +30, +40 dB
Maximum Output	+24dB
Pad Switch	-20dB attenuation
Phantom Power	+48VDC slow turn on/turn off
Output Impedance	100 Ohms Electronically Balanced (Optional 600 Ohm Transformer balancing available)
Clip LED	1dB before clipping
AC Mains Input	Fused IEC socket
AC Power	100-120V AC 2 amp, 220-240V AC 1 amp
Transformer Type	Low-noise toroidal
Size	19"W x 3½"H x 8"D, 482 x 89 x 200 mm
Weight	15 lbs (7 Kg)

Complete online documentation is available on the ARX website:

www.arx.com.au/msx32.htm

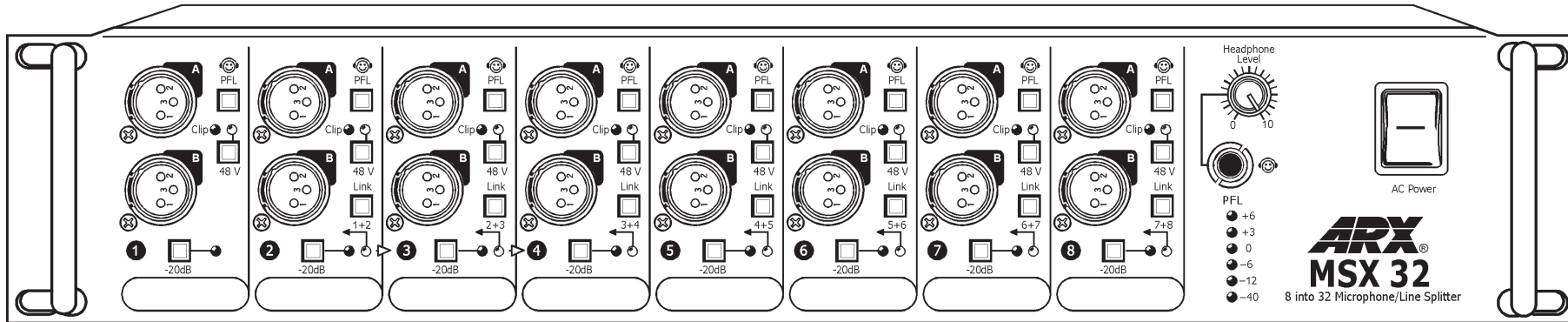
Specific queries can be emailed to the factory at info@arx.com.au

Architectural Specifications

The Active Microphone/Line Splitter shall be an eight channel unit in a steel chassis eight inches (200mm) deep and two rack units 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 with an indicator LED. There shall also be front panel switches with indicator LEDs to link each channel, thereby providing a potential maximum of 32 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, ±0.5dB. 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. There shall also be one male and one female XLR connector on the rear panel to allow multiple units to loop the headphone monitoring signal. 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.

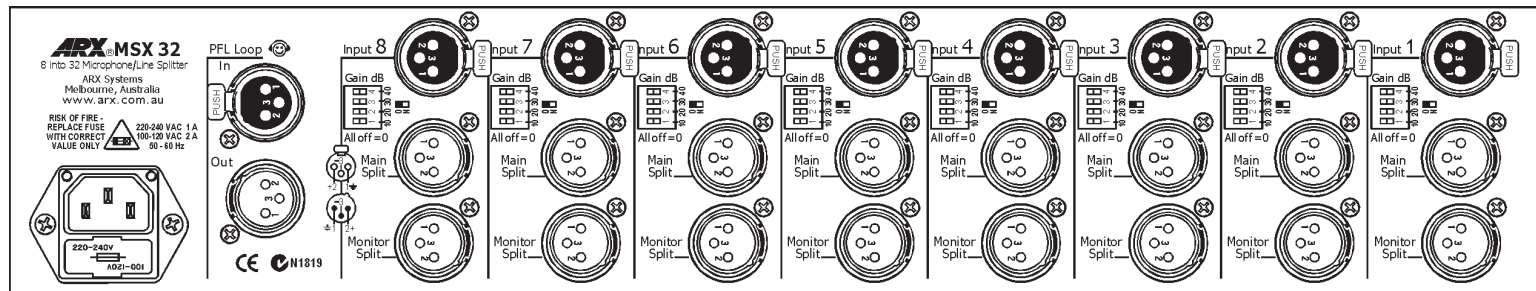


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Front Panel Connectors and Controls

- A and B balanced XLR Output splits Channels 1 through 8. Pin 3—, Pin 2 +, Pin 1 Ground
- PFL (Pre Fade Listening) switch
- 48V Phantom Power switch and LED
- Channel link switch and LED
- -20dB pad switch and LED
- Numbered marker panel for labelling individual channel assigns
- Headphone level control
- Headphone socket
- 6 LED PFL metering: -40, -12, -6, 0, +3 and +6dB
- Illuminated AC power switch
- Rack handles



Rear Panel Connectors

- Balanced XLR Input Channels 1 through 8. Pin 3 —, Pin 2 +, Pin 1 Ground
 - Gain DIP switches: 0dB, +10, +20, +30, +40
 - Balanced XLR Main (FOH) Output (same wiring as Input) Channels 1 through 8
 - Balanced XLR Monitor Output (same wiring as Input) Channels 1 through 8
 - PFL Input and Output loop XLR connectors. Pin 3 —, Pin 2 +, Pin 1 Ground
 - IEC 3 pin AC connector and integral fuseholder. Replace fuse with correct value only: 100–120 V AC 2 amp, 220–240 V AC 1 amp.
- Note: No connection to Audio ground on transformer balanced models (T/S and T/ALL)*



IMPORTANT



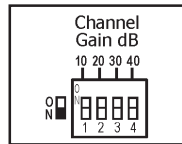
Check that the AC Power at the wall is in the same voltage range as that printed on the fuse holder doors, before connecting the MSX 32 to the AC supply. See Page 2 for further details.

Connecting the MSX 32

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 each channel can be linked to its predecessor by pushing in the Link switch on the front panel. The signal from the original channel will then appear at all outputs of the channels that have been linked.

Pressing any PFL switch will cause the audio from that channel to appear at the Headphone socket, and will also show up on the PFL LED metering immediately below the Headphone socket. The PFL In and Out XLR connectors on the rear panel can link the PFL busses when multiple MSX 32 units are being used.

MSX 32 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 32, so should only be done by a qualified technician.

- MSX 32 Electronically Balanced All Outputs
- MSX 32 T/S Electronically Balanced Main and Monitor Outputs,
 Transformer Balanced Outputs Splits 1 and 2
- MSX 32 T/ALL Transformer Balanced All Outputs

Introduction

Thank you for choosing this MSX 32 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 32.

About the MSX 32

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

With these benefits in mind, the ARX MSX 32 Active Microphone/Line Splitter has been developed to deliver the performance required by the increasing complexity of today's standards of audio production.

The MSX 32 consists of eight channels of actively buffered ultra low noise Microphone/Line Splitter. Each of these channels has four electronically Balanced splits – two outputs on the rear panel for Main and Monitor, plus two more output splits on the front panel. All splits have the option of transformer balancing if so specified.

Each channel has a –20 dB pad switch plus silently switchable 48V Phantom power with indicator LED. A PFL switch and 6 LED metering enables each channel to be easily checked with headphones for signal monitoring, and also for line tracing when system troubleshooting.

Gain through the MSX 32 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 'Link' switch links each channel to the one on its left, providing an ultimate maximum of 32 Outputs from a single input. An indicator LED shows when this is active. A Clip LED indicates imminent signal overload through the channel.

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 by the use of precision components throughout.

Advanced user options include internally jumper linking Inputs to Main outputs, and Ground lifting Output Pins 1 as required.

The MSX 32's uses an internal toroidal transformer based power supply to get the maximum benefit from the ultra low noise design of the splitter circuitry.

An illuminated power switch on the front panel provides visual confirmation of AC power connection to the unit.

The headphone output and the 6 LED PFL metering are both mounted on the right hand side of the front panel. Rear panel connectors enable this function to be linked when using multiple MSX 32 units.

To sum up, this feature packed two RU device is the answer wherever transparent signal buffering and routing is required.