

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
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International Fax: +61-3-9555 6747
On the Web: www.arx.com.au
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IMPORTANT - PLEASE READ THIS FIRST



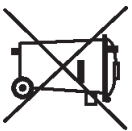
THIS IS A FIXED VOLTAGE UNIT. IT IS ESSENTIAL THAT YOU CHECK THAT THE VOLTAGE MARKED ON THE REAR OF THE CHASSIS OR LID IS THE SAME AS THE AC POWER COMING FROM THE AC CONNECTOR ON THE WALL, BEFORE CONNECTING IT TO AC POWER.



DAMAGE CAUSED BY CONNECTING TO THE WRONG AC VOLTAGE IS NOT COVERED BY YOUR WARRANTY



Do not insert power cable into unit until voltage has been checked.
Do not connect power cable to AC power until voltage has been checked.



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 ELECTRIQUE - NE PAS OUVRIR

Specifications

Signal / Noise Ratio	-94dB - nominal, 0dB Gain
Distortion	0.008% 1KHz Split, Main and Monitor 0.003%
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	Front - 600 Ohm Transformer Balanced Rear - 100 Ohms Electronically Balanced (Optional 600 Ohm Transformer balancing available)
Clip LED	1dB before clipping
AC Mains Input	Fused IEC socket
AC Power	220-240V AC 1 amp, 100-120V AC 2 amp,
Transformer Type	Low-noise toroidal
Size	19"W x 3 1/2"H x 8"D, 482 x 89 x 200 mm
Weight	~15 lbs (~7 Kg)

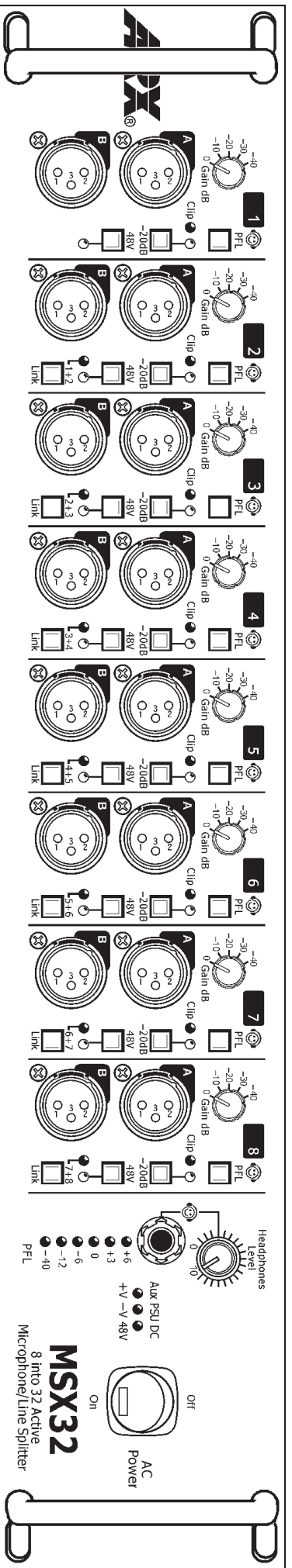
Complete online documentation is available on the ARX website:
www.arx.com.au/International/msx32.htm
Specific queries can be emailed to the factory at info@arx.com.au

Architectural Specifications

The Active Microphone/Line Splitter shall be an eight channel unit in a steel chassis 200mm (eight inches) deep and two rack units (88mm) high.
Each channel shall have its input and two outputs on the rear panel plus two transformer isolated 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. Each channel shall have an Input Direct-to-Main switch on the rear panel
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 on the front splits shall be 600 Ohms, transformer balanced, and 100 ohms electronically balanced on Main and Monitor outputs. Main and Monitor 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, 1 KHz.
Gain through the unit shall be switchable to 0, +10, +20, +30, +40dB via front panel rotary 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.
Access shall be provided for the connection of a backup/redundant power supply. This Power Supply shall be the PSU 32, and shall provide power for up to six MSX32 units.
AC power shall be supplied by a removable 3 pin mains cable, connecting to an IEC connector with integral fuse.
The Active Microphone Splitter shall be the ARX MSX 32.

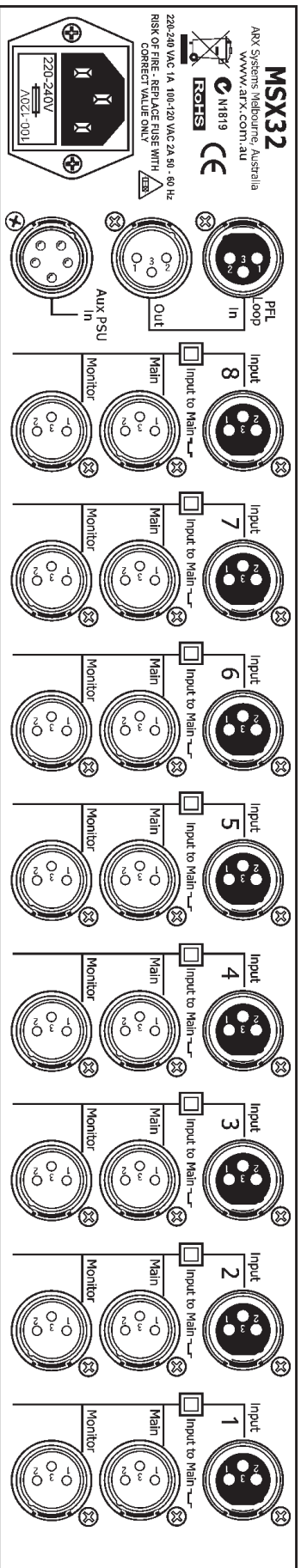


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MSX 32™ is a trade mark or ARX Systems Pty Ltd. Any other names and trademarks are used for information purposes only, and no other intent is expressed or implied



Front Panel Connectors and Controls

- Rotary Gain switches: 0dB, +10, +20, +30, +40
- A and B transformer balanced XLR Output splits Channels 1 through 8, Pin 3—, Pin 2 +, Pin 1 Not Connected
- PFL (Pre Fade Listening) switch
- 48V Phantom Power switch and LED
- Link to previous channel switch and LED
- -20dB pad switch and LED
- Headphone level control
- Headphone socket
- 6 LED PFL metering: -40, -12, -6, 0, +3 and +6dB
- Status LEDs to indicate PSX32 Backup/redundant power supply is connected
- Illuminated AC power switch
- Rack handles



Rear Panel Connectors

- Balanced XLR Input Channels: 1 through 8; Pin 3—, Pin 2 +, Pin 1 Ground
- Input Link Direct to Main Output switch
- 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, to link the PFL busses of multiple MSX32 units; Pin 3—, Pin 2 +, Pin 1 Ground
- Aux PSU 5 pin XLR type connector from PSU32 Redundant Power Supply.
 - Pin 1: + VDC, Pin 2: – VDC, Pins 3 and 4: Ground, Pin 5 +48V
- IEC 3 pin AC connector and integral fuseholder. Replace fuse with correct value only: 220–240 V AC 1 amp, 100–120 V AC 2 amp.



IMPORTANT



Check that the AC Power at the wall is in the same voltage range as that printed on the rear of the unit's lid, 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/DI Box/Line Out is connected into the Input connector on the rear panel of the 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. In normally supplied configuration Main and Mon outputs are electronically balanced. However, they can be optionally fitted with isolating transformers where complete signal and galvanic isolation is required (MSX 32 T/ALL).
 3. To either of the two front panel splits, for connection to remote trucks, OB vans, recording feeds, press feeds, etc. These are always Transformer balanced
- 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 rotary switch on the front panel.

If more splits from a single microphone are required, eg. for use as a Press or Media 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.

Each channel has a switch on the rear panel linking its Input to its Main output as required.

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.

Please Note: In some operating conditions the -40dB PFL meter LED will illuminate briefly when a channel PFL switch is pressed in. This is quite normal and due to the sensitivity of the metering circuit.

IMPORTANT INFORMATION

- Do not connect external Phantom Power (48VDC) to the Main or Monitor Outputs.
- Do not rack mount in the same rack (or near) as Power amplifiers or console Power Supplies
- If not using the PFL monitoring, make sure all PFL switches are OUT, and the Headphone level reduced to minimum



Ordering Options

MSX 32 BST	Electronically Balanced Main and Monitor Outputs, Transformer Balanced Outputs Splits 1 and 2
MSX 32 T/ALL	Transformer Balanced All Outputs
PSU32 cable	Optional dual 5 pin XLR cable for connecting an MSX32 to a PSU32 redundant power supply

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

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.

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.

The MSX 32 consists of eight channels of actively buffered ultra low noise Microphone/Line Splitter. Each of these channels has two transformer Balanced splits on the front panel and two electronically Balanced outputs on the rear panel for Main and Monitor. These can be optionally be transformer Balanced.

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 adjusting the rotary Gain control on the front panel 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.

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.

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

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.

For applications needing a redundant back-up power supply, the PSU32 is available. This stand alone Power Supply connects to the rear panel of the MSX 32 and will automatically switch over when needed. The PSU32 has 6 DC power outputs for driving multiple MSX32 splitters.

Please Note: When using the PSU32 Backup/Redundant Power Supply with the MSX32, **ONLY** switch on AC power when all of the connections have been made. **NEVER** make connections to the PSU while AC Power is active. **Switch OFF** AC power until all connections have been made.

