

## 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](mailto:info@arx.com.au)

# MSX12 ISO Transformer Balanced 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](http://www.arx.com.au)  
Email: [info@arx.com.au](mailto:info@arx.com.au)



## IMPORTANT - PLEASE READ THIS FIRST

This is a passive transformer isolated device. It has no connection to AC power and has no hazardous internal voltage.

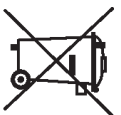
However, it does contain very sensitive internal circuitry. The lid provides essential shielding for sensitive components and should not be removed during use or any other time.

The MSX48 has no user serviceable parts inside and should be returned to the manufacturer should servicing become necessary. Your warranty does not cover any damage caused by modifications or service work performed by non authorised personnel. Refer to the International Limited Warranty on Page 8 for more details

## 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



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.  
Complies with Australian Standard AS/NZS 1053

## Specifications

Input Impedance	300 Ohms
Output Impedance	2 secondaries @ 600 Ohms each
Frequency Response	30Hz - 20 KHz $\pm$ 1dB
Maximum Output Level	+ 20dBm
THD at Max Output	0.2% 30 Hz - 20KHz @ 20dBm
Insertion Loss	0.5dB @ 1 KHz (600 Ohm source & load)
Input Connectors	3 pin female XLR, wired Pin 2 + Hot, Pin 3 – Cold
Main Output	3 Pin male XLR, wired Pin 2 + Hot, Pin 3 – Cold
Monitor & Aux Output	3 pin male XLR wired Pin 2 + Hot, Pin 3 – Cold. Audio grounds not connected; Pin 1 is floating.
Size	19"W x 1 3/4"H x 6 1/2"D
	482 x 44 x 200 mm
Weight	5.5 lbs (2 Kg)

Complete online documentation is available on the ARX website:

[www.arx.com.au/msx12.htm](http://www.arx.com.au/msx12.htm)

Specific queries can be emailed to the factory at [info@arx.com.au](mailto:info@arx.com.au)

## Architectural Specifications

The Microphone/Line Splitter shall be a four channel unit in a steel chassis 6.5 inches (200mm) deep and one rack unit high.

Each channel shall have its input and two outputs on the front panel plus an auxiliary output on the rear panel. The Input and the Main outputs shall be hard wired to allow Phantom power to pass through. The Monitor and Auxiliary channels shall be transformer isolated.

The Input headroom shall be 300 Ohms, and the frequency response shall be 30 Hz to 20 KHz,  $\pm$  1dB. Insertion loss shall be 0.5dB @ 1 KHz with a 600 Ohm source and load.

The Output impedance shall be 600 ohms transformer balanced on the Monitor and Auxiliary outputs of each channel. The maximum Output level shall be +20dB. Total Harmonic Distortion shall be 0.2% @ 20dBm, 30 Hz to 20 KHz. Audio Grounds shall not be connected; Pin 1 shall be floating.

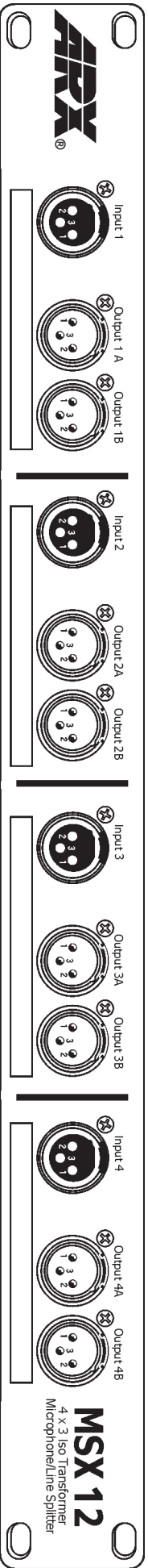
A chassis Ground screw terminal shall be provided on the rear panel.

The Transformer Balanced Microphone/Line Splitter shall be the ARX MSX 12.



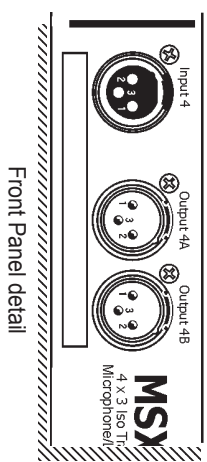
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[www.arx.com.au](http://www.arx.com.au)



**Front Panel Connectors**

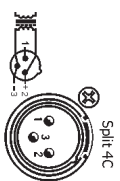
- Balanced XLR Input Channels 1 through 4, Pin 3 -, Pin 2 +, Pin 1 Audio Ground. All pins hard wired through to Main Outputs
- Balanced XLR Main (FOH) Output Channels 1 through 4. Same wiring as Input to allow Phantom power to pass through to Main Outputs
- Balanced XLR Monitor Output Channels 1 through 4, Pin 3 -, Pin 2 +, Audio Ground is floating (not Connected)
- Marker panel for labelling individual channel assigns



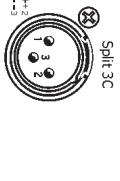
Front Panel detail

**MSX 12**  
4 X 3 Iso Transformer  
Microphone/Line Splitter  
Find us on the internet  
www.arx.com.au

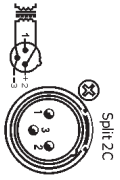
**ARX**  
Designed and Manufactured by  
ARX Systems  
Melbourne, Australia



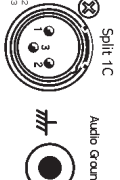
Split 4C




Split 3C




Split 2C




Split 1C



Audio Ground point

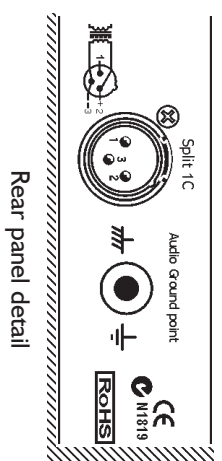


CE  
RoHS  
NT1819



**Rear Panel Connectors and Controls**

- Balanced XLR Output splits Channels 1 through 4, Pin 3-, Pin 2 +
- Screw terminal Chassis Grounding point



Rear panel detail

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## **Connecting the MSX12**

The original signal from the microphone is connected into the Input connector on the front 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 front panel
- 2: To the Monitor console (or a second Main console) out of the Monitor connector on the front panel
- 3: To the rear panel split, for connection to remote trucks, OB vans, recording feeds, press feeds, etc. The Monitor and Auxiliary feeds are fitted with isolating transformers for complete signal and galvanic isolation.

The Input connector is hard wired to the Main output connector, so that Phantom power can be passed through to condenser microphones, DI boxes, and similar items.

Naturally, normal care should be observed when making Phantom powered connections. To avoid the risk of sudden large noises when plugging in, the console and system levels should be pulled down.

There is no power to switch on or settings to adjust. The MSX12 is a true Plug and Play device; simply make the correct connections and it will work.

It really is as straightforward as that!

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## **Introduction**

Thank you for choosing this MSX12 Transformer isolated 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 MSX12.

## **About the MSX12**

The ARX MSX12 Transformer isolated Microphone/Line Splitter has been developed to deliver the performance required by the increasing complexity of today's standards of audio production.

The MSX12 is a totally passive device requiring no power, and consists of Sixteen channels of transformer isolated ultra low noise Microphone/Line Splitter. Each of these channels has a direct looped Main/FOH feed, as well as a transformer isolated Monitor split on the front panel.

On the rear panel is an Auxiliary transformer isolated split ideal for use with a remote recording truck or TV feed.

Marker panels on the front and rear provide a space where individual channel connections can be noted.

The all-steel chassis of the MSX12 provides strong interference resistant shielding. Internally, state-of-the-art audio transformers deliver superb audio quality and total galvanic isolation.

The MXS12 is the easy answer to multi channel signal splitting and isolating requirements.