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.

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 parcel 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

DI-6SM

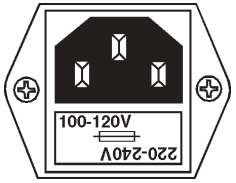
OWNER'S MANUAL

www.arx.com.au ®

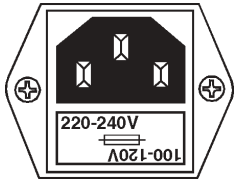
ARX Systems Pty Ltd, PO Box 15,
Moorabbin, Victoria 3189, Australia
Phone: (03) 9555 7859 **Fax**: (03) 9555 6747
International Fax: +61-3 -9555 6747
On the Web: www.arx.com.au
Email: info@arx.com.au

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 ÉLÉCTRIQUE - NE PAS OUVRIR

CE N1819

Complies with 89/336/EEC EMC Directive, amended by 92/31/EEC and 93/68/EEC 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

Channels 1 - 6

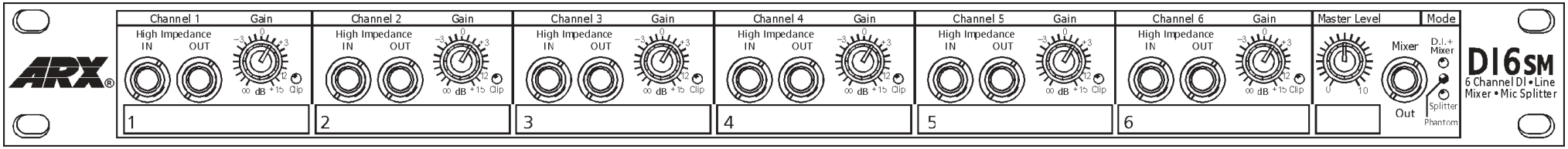
Input Impedance	2 MegOhm
Input Headroom	+21 dB
Output Signal/Noise	-98 dB Unweighted -104 dB A weighted @ unity gain
Output Level (Max)	+26 dB
Dynamic Range	124 dB
Frequency Response	20 Hz to 20 KHz -0.5dB
Distortion (@ unity gain)	100 Hz .004% 1 KHz .003% 10 KHz .005%
Input/OutputConnector Type	Jack
Balanced Output Type	XLR

Master Section

Output Signal/Noise	All Inputs at unity, Master at unity -90 dB unweighted -96 dB A weighted
Output Level (Max)	+26 dB
Output Impedance	600 ohms
Distortion	.006% @ 1 KHz, unity gain
Output Connector Type	Jack (on front) and XLR (on rear)

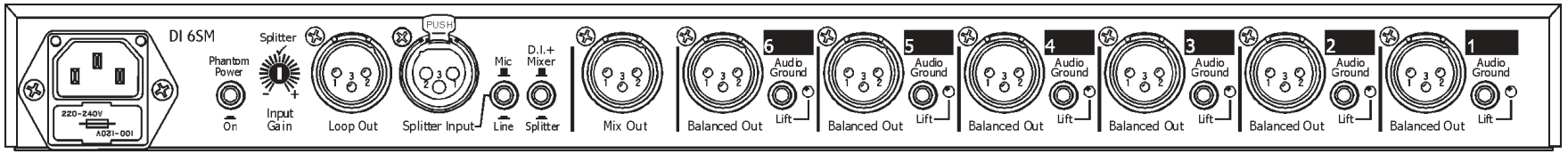
Splitter Input

Maximum Level	+20 dB
Input Impedance	Line - 20 Kohms Balanced Mic - 5 KOhms Balanced
Input Connector Type	XLR
Power Requirements	100/110 or 220/240V AC 50/60 Hz 8 Watts (8 VA)
Weight	5 lb/2.2 Kg
Dimensions	19"W x 1¾"H x 6"D 482 x 44 x 155 mm



Front Panel Controls

- Unbalanced Hi Z insulated phone jack Input socket
- Unbalanced Hi Z insulated phone jack Output socket
- Channel Level control; from oo through 0 dB to +15 dB
- Channel clipping indicator LED
- Numbered marker panel for labelling DI assigns. Use grease pencil or Chinagraph type only. Do not use felt tip pens as these may permanently stain your front panel.
- Master Mix level control
- Balanced jack Master Mix output
- DI, Splitter and Phantom status LEDs



Rear Panel Connectors

- Channels 1 - 6 Balanced Output. Pin 2 + Hot, Pin 3 - Cold, Pin 1 Ground
- Channels 1 - 6 audio Ground lift switch
- Ground lift LED indicators
- XLR Balanced Master output. Pin 2 + Hot, Pin 3 - Cold, Pin 1 Ground
- DI or Splitter mode function switch
- Microphone or Line Input select
- XLR Balanced Input for Splitter mode. Pin 2 + Hot, Pin 3 - Cold, Pin 1 Ground
- Mic/Line Loop Output
- Mic/Line Splitter Input Gain
- Phantom Power Switch
- IEC connector witchable 100/110 or 220/240V AC, with integral fuse. Replace with correct value only

DI-6SM Application Notes

Setting up your DI-6SM is very straightforward. It will accept virtually all High Impedance (Hi Z) and Low Impedance (Lo Z) Unbalanced lines and convert them to Electronically Balanced Low Impedance (Lo Z) lines, suitable for all professional audio applications. Simply choose a channel on the front, and turn the Gain control hard Left. Plug your line into the Input, and your XLR lead into the corresponding Output on the rear. Turn the channel Gain control up until the required output level is reached. 0dB or Unity Gain is marked on the Gain control at approximately 1 o'clock.

To reduce the signal level, turn to the Left; to increase it turn to the Right, up to a maximum of +15dB. The Clip LED will light up if any part of the circuitry is being overloaded. If this occurs, reduce the Input level until it stops. Use the audio Earth/ Ground lift switch next to each Output to eliminate Ground loop hum if necessary.

If the Input signal needs to continue on to a musician's individual amplifier, for example Bass or Keyboards, insert a lead into the channel Output on the front panel and run it to the amp.

The DI-6SM also has a Mix function. This is especially useful for today's multiple keyboards, drum machine, music computer set ups. Up to 6 individual components can be plugged into the DI-6SM, and individual balanced lines can be run down to the main console. A summed mix of these can be sent out to either the monitor console via the Master Balanced Output, or to the musician's personal amp via the Master Unbalanced Output, or both if you wish.

However if you are running short of channels to the main console, this summed mix

can be sent to the main console and the musician can balance the mix to their own taste.

A further advantage of the DI-6SM for multi keyboard use is that the whole stage setup can be used unchanged at rehearsal or in the studio.

The Splitter function available on the DI-6SM enables a single Microphone or Line Input signal to be split to up to 6 Outputs. The level of each Output is controlled individually by the front panel Gain controls, with the Master Level control acting as an overall level setter.

To get into Splitter mode on the DI-6SM, first turn down all level controls on the front panel, then select Splitter on the rear panel switch, then Mic or Line, and plug a lead into the Balanced XLR Splitter Input on the rear panel. An LED will light up on the front panel to indicate Splitter mode. The tick mark on the Input Gain control indicates a typical microphone gain setting. Bring up the Master level control first, then each individual level control until you have the levels you require. If the Signal needs to continue on to another piece of equipment, connect a lead from The Loop Output XLR connector adjacent to the Splitter Input.

Phantom power for condenser microphones is available by pressing the Phantom Power switch on the rear.

!!! TURN DOWN THE MASTER MIX LEVEL CONTROL BEFORE SWITCHING PHANTOM POWER ON !!!

The DI-6SM is also ideal as a -10 dB to +4 dB level matcher for consumer audio products, home studio equipment, and Video Audio in discos and clubs.

In Radio and TV broadcast work the DI-6SM is a must in any remote truck, OB van or mixing suite, being easily and quietly able to deliver the +8 dB or greater line levels that are common to the industry. It will do this in Direct Injection mode, Line mixer mode or Splitter mode.

In short, the ARX DI-6SM is a truly unique audio problem solver for all facets of the audio industry, from Broadcast and Studio work through to Discos, Clubs and Concert sound.

Being AC mains powered the DI-6SM has no batteries to go flat, nor does it require Phantom Power. However, many mixing consoles have Phantom Power available to all channels or none, or to blocks of channels. If this is the case, then the DI-6SM will quite happily accept Phantom Power.

Special Note

Just two things the DI-6SM won't do:

Apart from the Input to the Splitter function, the DI-6SM is a Line Mixer, so it won't accept Microphone level signals into the front unbalanced inputs, and it won't accept speaker lines, so don't plug the output of an amplifier into it.

Introduction

Thank you for choosing this ARX DI-6SM. We hope you enjoy using this unique product as much as we enjoyed creating it. As with all ARX equipment, it has undergone extensive factory testing and 'burn in' before shipping. To ensure continued trouble free use, please familiarise yourself with the contents of this manual before using.

About the DI-6SM

It's a fact of audio life that a lot of equipment that has to be connected to professional audio systems isn't impedance or level compatible.

Most consumer oriented audio products have unbalanced outputs, whereas Balanced Low Impedance (Low Z) is the norm in pro audio. CDs, DVDs, Tape/cassette decks, Video audio, drum machines, synthesizers, guitars, computers; at some stage all these need linking up to balanced inputs, whether the application is Live sound, Studio or Broadcast.

Recognising this fact, ARX have developed the DI-6SM - Six active D.I. (Direct Injection) units, plus a 6 into 1 Line Mixer, plus a 1 into 6 Mic or Line Splitter, and all in a compact one rack unit package!

This unique and flexible audio problem solver allows Six independent unbalanced audio sources (keyboards, instruments, tape decks etc.) to easily and quietly interface with balanced pro audio systems; to individual channels or summed down to one Master output, or will split a single incoming Mic or Line signal to 6 Outputs.

Despite the compact size of the DI-6SM, it's not short of features. Each channel has 2 phone jack IN/OUT sockets, level control from infinity (off) through 0 dB to + 15 dB gain, plus a clipping indicator LED. The Master section has a Master volume control and status LEDs indicating whether the unit is in DI or Splitter mode. In addition, as on all ARX single rack unit equipment, there is a numbered marker panel you can write on for easy confirmation of channel assigns.

On the rear, each channel has an XLR Balanced Output, Ground lift switch and indicator LED. The Master section has both balanced XLR and Jack outputs. In addition there is an XLR Balanced Input and switch to put the unit in either DI or Splitter mode.