

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, 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, Cheltenham, Victoria 3192, Australia.

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

PowerPRO II Dual Channel Control Unit for the *PowerMAX* Speaker System

Owner's Manual



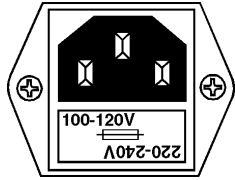
ARX Systems Pty Ltd, PO Box 15,
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Phone: 03 - 9555 7859 Fax: 03 - 9555 6747
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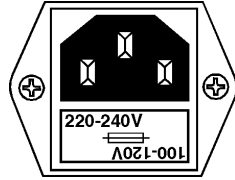
IMPORTANT - PLEASE READ THIS FIRST



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

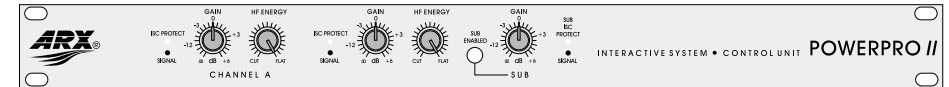
RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



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

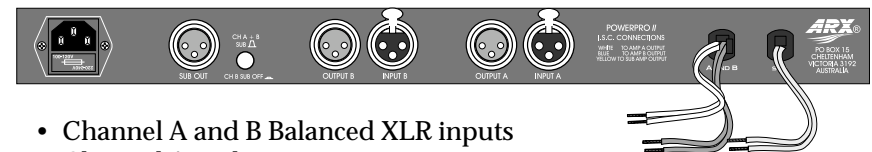
Complies with Australian Standard AS/N25
1053

PowerPRO Front Panel controls



- Gain and HF energy controls for Channel A and B
- ISC Signal Present and Protect LED indicators. During normal operation the Signal LEDs will light up as soon as any signal runs through the processor. The ISC Protect LEDs will light up on peaks or transients if the system is being used to achieve high SPL. This is normal, and should not be taken as an indication that the system is being over-driven. However, if they are on for the majority of the time, then the Input levels are too high and should be reduced
- Sub Bass enable switch. Switch OUT - Sub Bass not connected; speaker operates full range. Switch IN - Sub Bass operational; speaker operates with a High Pass Filter @ 100 Hz, and 40 to 100 Hz appears at the Sub Output on rear panel to drive a Sub bass cabinet
- Gain control for Sub Bass output, plus Signal and Protect LED indicators
- AC power LED; when lit up indicates that the unit is connected to AC power

PowerPRO Rear Panel



- Channel A and B Balanced XLR inputs
- Channel A and B XLR outputs
- Sub XLR output
- Sub Disable Switch for Channel B. This lets Channel A run as a mono Front of House feed, and Channel B can then be used as a Full range feed for a monitor system
- ISC return leads from Channel A and B amplifier outputs; White: Amp Channel A, Blue: Amp Channel B
- ISC return leads from the Sub amp output; Yellow
- 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. Please also refer to voltage details on Page 2

twin ARX 12" (300mm) long throw Pro Sub Series speakers, its innovative Optimally Coupled vented chamber design lets it easily outperform ordinary bass boxes many times its size. Professional XLR connectors are fitted as standard.

PowerPRO

The PowerPRO Interactive System Control Unit is a dual channel processor for the PowerMAX speaker system. It supplies EQ and phase alignment, plus a crossover with Sub Bass output and processing. As well as all this, it also has I.S.C. for speaker protection at absolute sound pressure levels.

The Channel B Sub Off switch on the rear panel enables you to use the PowerPRO as a mono system with Sub on Channel A, and use Channel B for full range output, say to a monitor system. Total system flexibility in one rack unit processing!

The PowerPRO is placed last in the signal chain before the power amps, usually in the amp rack. Once adjusted to the sound you prefer, it needs no adjusting or calibrating from gig to gig. Just set it and forget it - the PowerPRO does the rest.

About ISC

ISC is short for Interactive System Control, ARX's innovative speaker protection circuitry. Extra leads run from the Output of the amplifier back into the PowerPRO processor, so that it knows how much power the amplifier is delivering at all times. The PowerPRO is factory calibrated for the PowerMAX series, so it knows the speaker's exact safe operating area (S.O.A.) As soon as it senses that the amplifier power is reaching danger levels, it triggers the system protection circuits to freeze the level momentarily at the maximum safe level until the power peak has passed. This method of speaker control is virtually foolproof, but it does require that for maximum output you should use an amplifier with a minimum output of 300 watts RMS per channel into 8 ohms. Otherwise an amp of lesser power could distort severely before the PowerPRO protection circuits are activated, running the risk of system failure.

PowerMAX 1 and 3 specifications

Drivers	1 x 12" (300mm) Low Frequency driver 1 x 1" throat (25mm) horn loaded High Frequency driver
Crossover	Internal 24dB per octave Passive crossover with hand wound air core coils mounted on a fibreglass PCB
Frequency Response	50 Hz - 20 KHz
Impedance	8 ohms
Minimum Amplifier Power	300 w RMS @ 8 ohms
Dispersion	90H x 40V
Sensitivity	99dB, 1 watt 1 metre averaged
Maximum SPL	124+ dB
Dimensions	22"H x 15"W x 15"D 565 x 380 x 380 mm

PowerMAX 2 and 4 specifications

Drivers	1 x 15" (380mm) Low Frequency driver 1 x 1" throat (25mm) horn loaded High Frequency driver
Crossover	Same as PowerMAX 1 and 3
Frequency Response	40 Hz - 20 KHz
Impedance	8 ohms
Minimum Amplifier Power	300 w RMS @ 8 ohms
Dispersion	60H x 40V
Sensitivity	101dB, 1 watt 1 metre averaged
Maximum SPL	126+ dB
Dimensions	30"H x 17.5"W x 16"D 763 x 445 x 414 mm

PowerMAX SUB specs

Drivers	2 x 12" (300mm) Low Frequency driver
Crossover	External - a separate output from the PowerPRO processor
Frequency Response	40 Hz - 100 Hz
Minimum Amplifier Power	600 w RMS @ 4 ohms
Sensitivity	100 dB, 1 watt 1 metre
Maximum SPL	127 dB
Dimensions	37"H x 22"W x 16"D 930 x 540 x 400mm

PowerPRO Specifications

Input Impedance	20 Kohms electronically balanced
Max Input Level	+ 20 dB
Output Impedance	150 ohms
Max Output Level	+ 20 dB
Signal to Noise Ratio	-98 dB, input grounded
Dynamic Range	120 dB
Distortion	.008% THD @ + 4dB, 1 KHz
Crossover Frequency	100 Hz (to Sub Out)
High Pass Filters	35 Hz Sub Out/ 45 Hz A/B Out
Input/Output Connector	XLR
Power Requirements	100-120V AC, 220-240 V AC, 50-60 Hz, 8 Watts (8 VA)

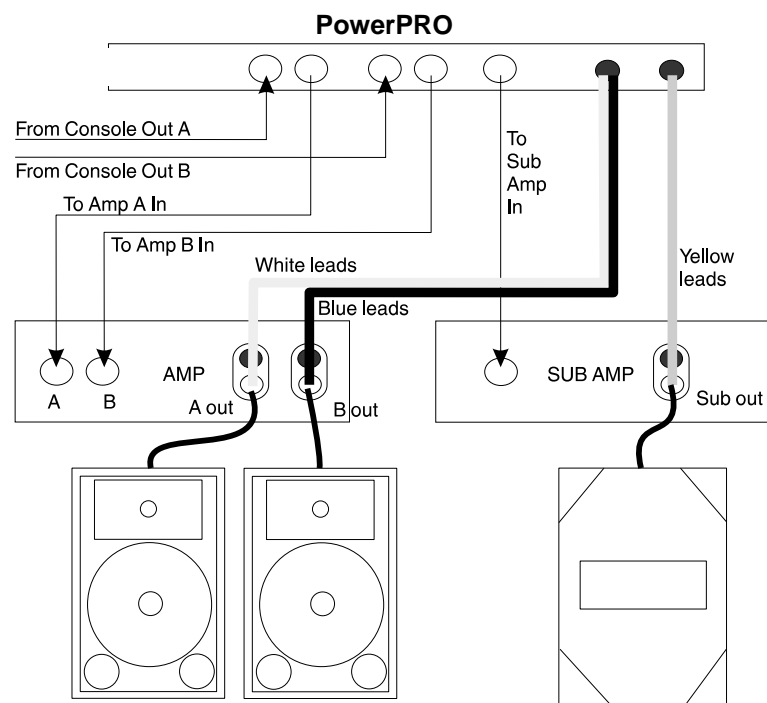
Important

Note that both white leads connect to the OUTPUT of Channel A Amp, Both BLUE leads to the OUTPUT of Channel B Amp, and the Yellow leads to the OUTPUT of the SUB Amp, in parallel with the speaker leads.

Check this wiring **very** carefully. Don't get them mixed up, otherwise you will have the output of Channel A controlling the input level of Channel B and vice versa.

The system will sound **much** better if you get it right!

System Wiring Diagram



Introduction

Thank you for choosing this ARX PowerMAX speaker system. We hope you enjoy using it as much as we enjoyed creating it. As with all ARX equipment, it has undergone precise factory calibration, testing and 'burn in' before shipping. To ensure continued trouble free use, please familiarise yourself with the contents of this owners manual before using the PowerMAX system.

About the PowerMAX system

The PowerMAX series is a new generation of innovative speaker systems from ARX. Using design techniques borrowed from the award winning ARX concert systems, the PowerMAX brings processor controlled speakers within everyone's range.

Designed to fit your transport as well as your budget, The PowerMAX line features powerful, space saving speaker designs that fit neatly into any vehicle, yet still punch out maximum power. There's a model to suit every application, including stage monitors, and even a powerful sub for when you have to fill large venues with the PowerMAX sound.

All of this is controlled by the PowerPRO speaker processor, a multi channel control unit that provides EQ, crossover (for the PowerMAX Sub) and speaker protection circuitry to keep the PowerMAX sound happening, day after night, night after night

PowerMAX 1

The PowerMAX 1 is a 2 way speaker system featuring an ARX Pro Series 12" (300 mm) bass driver, together with an all new USA manufactured compression driver. The all plywood trapezoidal construction of the PowerMAX 1 provides a strong, rigid cabinet giving breathtaking Highs and powerful Lows from an ultra compact enclosure.

PowerMAX 2

The PowerMAX 2 is also a 2 way speaker system, with an all new ARX Pro Series 15" (380 mm) cast frame bass driver for maximum low end punch. An all new USA manufactured compression driver handles the high end, coupled to a larger CD fibreglass flare for increased efficiency to match the low end. All ply trapezoidal construction makes the PowerMAX 2 a new dynamic force in compact, powerful sound reinforcement.

PowerMAX 3 and 4

The PowerMAX 3 is a stage monitor version of the PowerMAX 1, featuring the same components assembled in a low profile stage monitor configuration. The PowerMAX 4 is a stage monitor version of the PowerMAX 2, featuring the same components assembled in a medium profile stage monitor configuration. All plywood construction provides strong, rugged stage monitors with all the power you need to really cut through on stage. Professional XLR connectors are fitted as standard.

PowerMAX SUB

The PowerMAX SUB is a unique Sub Bass cabinet that supplies extra low end punch for the PowerMAX 1 and 2's when using them in larger venues. Featuring