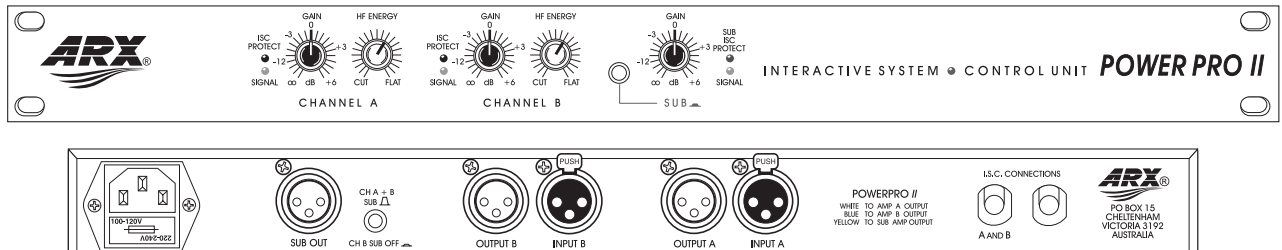


POWERMAX SERIES



PowerPRO II

MULTI CHANNEL POWERMAX SYSTEM SPEAKER PROCESSOR



It is generally accepted throughout the pro audio industry that a well designed, dedicated speaker processor or control unit is the best way to get reliable, repeatable performance from speaker systems with the minimum of time consuming pre-show setup and adjustment.

However, up till now this kind of control has been reserved for active multi-amped high end concert systems.

Now ARX brings state of the art processor control and reliability to smaller, passively crossed over systems.

About the PowerPro II

ARX has had a lot of experience with processor controlled speaker systems, having manufactured them for over 12 years now. The all new dual channel PowerPRO II is a unique second generation speaker processor that supplies EQ trim, phase correction, sub crossover, and fail safe ISC™ speaker protection, neatly fitted into a one ru package.

Controls

The front panel has Gain controls for Channels A, B and Sub; plus High Energy cut only controls for Channels A and

B. There are LEDs for Signal Present and ISC Protection for all three channels, and a Sub enable switch.

The rear panel has balanced XLR inputs and outputs for Channels A and B, and a separate Sub output.

Near this there is a switch so that Channel A can be used with a Sub (say for FOH) while Channel B can run full range (say for monitors). This allows an extremely cost effective system to be put together.

What is I.S.C?

ISC™ (Interactive System Control) is our innovative speaker protection circuitry, and constantly monitors the amount of power the amplifier is delivering to the speakers.

Since the PowerPRO II is factory calibrated for the ARX PowerMAX series, it knows the speaker's exact Safe Operating Area (SOA). If it senses that a peak in amplifier power is about to exceed the SOA, it automatically triggers the system protection circuits to hold the level momentarily at the loudest safe setting until the power peak has passed.

Applications:

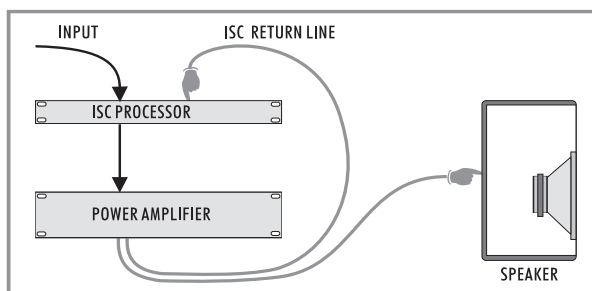
- All ARX **PowerMAX** Speaker Systems
- All similarly configured passively crossed over speaker systems

Also available:

The **PowerDrive** integrated systems amplifier.

This is a Three channel amplifier (Left, Right and Sub) with built-in PowerPro II speaker processor, in a compact, powerful 2 RU package.

The **PowerDrive** is the perfect system for true 'plug and play' ease of setting up. No extra processor wiring required. It's ideal for driveway hire, compact systems, and trouble free installations.



Continued Over

Diagram showing the basic principles of Feedback style Gain Control

PowerPRO II

Specifications

Input Impedance

20 Kohms electronically balanced

Maximum Input Level

+20dB

CMRR

> 50 dB, @ 1 KHz

Output Impedance

150 ohms

Maximum Output Level

+22dB

Signal to Noise ratio

90 dB, unweighted

Dynamic Range

110 dB

Distortion (THD)

.008% @ +4 dB, 1 KHz

Crossover Frequency

100Hz (to SUB out)

HighPass Filters

35 Hz SUB output

45 Hz A/B outputs

ISC Returns

Differential Inputs,

22 K Ohms impedance,

hard wired to chassis

Input Connector type

Balanced 3 pin XLR

Output Connector type

Balanced 3 pin XLR

Power Requirements

100-120 V, 220-240 V AC, 5

0-60 Hz, 8VA (8 watts)

Weight

5 lbs/2.2 Kg

Dimensions

19"W x 1¾"H x 6"D

482 x 44 x 155mm



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.



How Does it Work?

The Basic Principles of Feedback style Gain Control

I.S.C monitors the *output* of the power amplifier driving each set of speaker components. Extra leads run from the outputs of the amplifier to the PowerPro II, so it can compare this signal with an internal model of the safe operating area (SOA) of the speaker.

When the signal applied to the speaker tries to exceed that SOA, the signal is limited or held at a level which is safe for the speaker to reproduce. Since the speaker signal forms part of a feedback loop this SOA can never be exceeded.

Why monitor the amplifier's outputs?

What we really need to know is the actual power being applied to speaker components, *not* the signal being applied to the input of the power amplifier.

To measure this accurately we have to go where the real action is - the *outputs* of the amplifier, which we use as the reference.

This also means that the PowerPro II is 'amplifier non-specific' and can be used with any amplifier of the correct power rating, without needing to be re-calibrated for different amplifier input sensitivities

What size amplifier do I need?

You'll notice that on all ARX speaker System Spec Sheets we quote a "recommended *minimum* amplifier power."

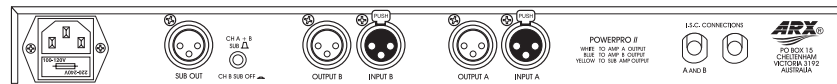
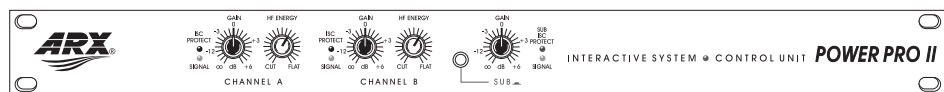
We don't quote a maximum amplifier power, since the ISC processor determines the amount of power supplied to each speaker. By recommending the *minimum* amplifier power, we are saying that this is the *least* amount of amplifier power required for ISC to operate in the way ARX engineers designed it.

The PowerPRO II is placed last in the system chain before the power amps, usually in the amp rack. Once it has been connected up correctly, it needs no readjusting. Just set it and forget it - the PowerPRO II looks after the rest!

The PowerPRO II and other speakers

Although the PowerPRO II has been set up and calibrated for the ARX PowerMAX system, it can also serve as the ideal control unit for other manufacturer's similarly configured passively crossed over systems with similar power ratings, to:

- keep it under control, and
- keep it sounding great!



Front Panel

- Green Signal Present and Red ISC Protection LEDs for all three channels
- Gain controls for Channels A, B and Sub; from infinity through to +6dB
- High Frequency energy 'cut only' controls for Channels A and B
- Sub enable switch
- AC power LED

Rear Panel

- Balanced XLR Inputs for Channels A and B; wired Pin 3 – Pin 2 +, Pin 1 Ground
- Balanced XLR Outputs for Channels A, B and Sub; wired Pin 3 – Pin 2 +, Pin 1 Ground
- Switch to enable Channel A to run with a Sub for Front of House, and Channel B to run full range for monitors
- ISC return leads from the Amplifier outputs.
- IEC 3 pin AC connector, with integral fuse and voltage change function