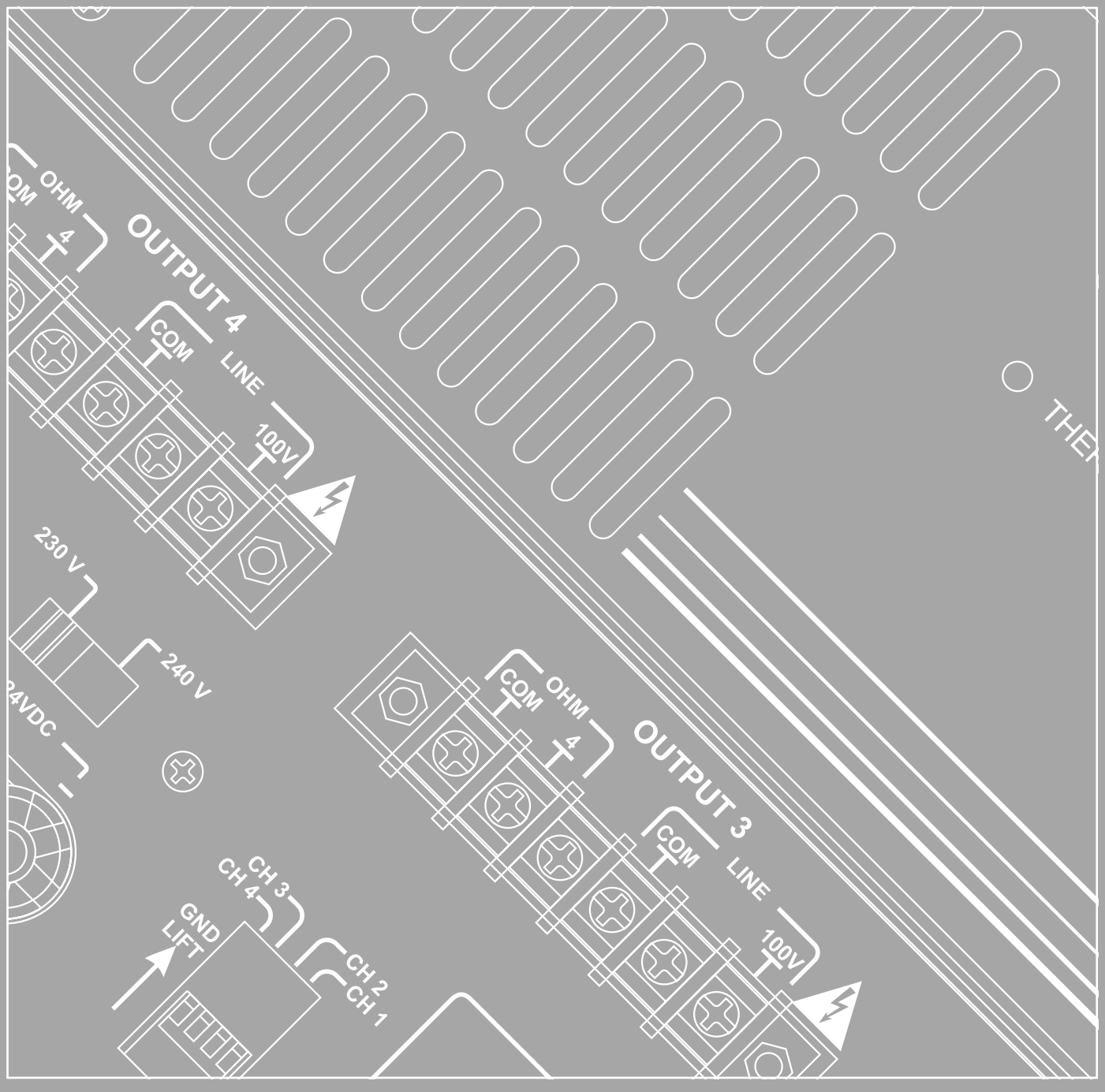
Australian Monitor
INSTALLATION SERIES

AMIS480P

4 x 80 WATT LINE AMPLIFIER
INSTALLATION AND OPERATION MANUAL



INTRODUCTION AND CONTENTS

The Australian Monitor Installation Series AMIS480P is a robust, highly featured 4 channel power amplifier.

Offering 4 independent channels, each delivering 80 watts into 4 ohms or 70/100 volt line, the AMIS480P is designed to operate in extreme conditions to give the contractor the most reliable 4 channel amplifier available today.

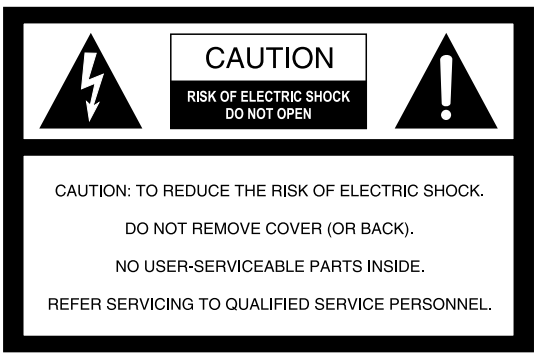
Engineered with maximum attention to channel isolation, with individual ground lift switches and level control for each channel, the AMIS480P will operate as 4 individual amplifiers in a rack space friendly, 2RU chassis.

For ease of installation, each channel input can be routed to the next channel via rear panel link switches, eliminating the need for daisy chaining or Y-split cables. The AMIS480P also offers signal present and clip LED indicators for each channel as well as a thermal protect indicator.

The AMIS480P is a significant advance in 4 channel amp design offered at a contractor friendly price.

AUS, EUR, USA

Rev A: 17th Oct 2004



WARNING !

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK.
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

This symbol is intended to alert the user 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 to persons.

This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarised) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure. To prevent electric shock, match wide blade of plug to wide slot, fully insert.

FRONT PANEL

1 STATUS

This LED indicates OUTPUT signal level for each channel.

Green: -23dB (below rated power)
Red: 0dB (rated power, clip)

Due to the nature of distributed audio and line transformers, this LED functions as a peak indicator. Some flashing of red is acceptable on program transients. Continuous flashing of red could be placing undue stress on the amplifier due to external speaker transformer saturation.

2 THERMAL

This LED will illuminate when the amplifier has overheated. Overheating will mute all channels.
If the amplifier shuts down because it has overheated, there may be a problem with the installation. See Troubleshooting section.

3 POWER

This switch switches power on or off from the mains input.

NOTE: When using the '24VDC IN' binding posts, the amplifier is 'on' regardless of the switch position.

4 ON

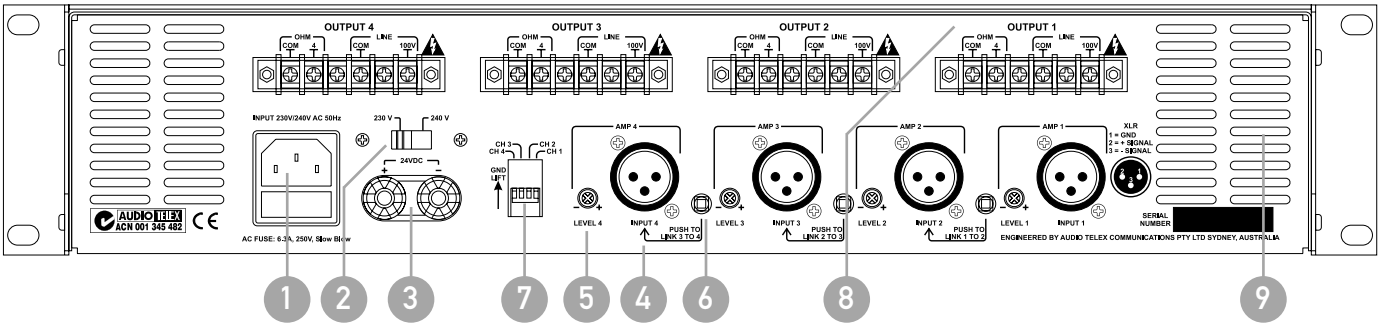
This LED indicates if the amplifier is powered 'on'.

NOTE: When using the '24VDC IN' binding posts, the amplifier is always 'on' and the power LED will always be on regardless of the position of the power switch.

5 AIR INTAKE VENTS

These vents allow fan assisted air flow into the amplifier to cool the heatsinks. These should be kept free from obstruction. The air flow is from front to rear.

BACK PANEL



1 IEC MAINS INPUT SOCKET

This is a standard IEC 3 pin socket. It accepts a standard IEC mains cable, provided. The fuse draw contains the mains fuse and a spare.
The mains fuse is:

- 230V/240V model -
  Time lag (slow 6.3A blow) HRC
  20mm x 5mm ceramic type.
- 115V model -
  Time lag (slow 10A blow) HRC
  20mm x 5mm ceramic type.

Always replace the fuse with one of the same value and type.

NOTE: Always disconnect power to the amplifier before replacing fuses.

2 VOLTAGE SELECT SWITCH

(only on 230V/240V models)

This switch is used to select the mains voltage for your region.

Disconnect power to the amplifier before operating this switch.

3 24VDC

These binding posts provide connection for an external 24V emergency power systems and are not switched by the front panel power switch. The 24VDC IN does NOT provide any trickle charge facility.The binding posts can accommodate a wire thickness of up to 4mm in diameter. The maximum current draw at 24VDC is 18A with peaks up to 25A.

4 INPUT

These 3 pin XLR sockets accept the source input for each channel. When wiring from unbalanced sources, pins 1 and 3 should be shorted together (see Installation section). The input sensitivity (voltage required to drive amplifier to maximum power) of the amplifier is 0dBu (0.775V) with the Input Level Control set at maximum.

5 LEVEL

These pots control the level of the signal through the amplifier channel. Minimum position is Off and maximum gives a sensitivity of 0.775V (0dBu). The maximum input voltage before the input stage clips is 2.9V (+11.5dBu).
Depending on the input source, the input level control should be run above the 12 o'clock position (half way) to avoid clipping the input stage.

6 LINK SWITCH

These switches change the input source of an amplifier channel from the XLR input connector to the linked channel. The switch is positioned before the amplifier channel volume control, so only the individual channel is affected by volume control changes. See Installation - Setup.

NOTE: Please ensure the link switches are in the desired position before power-up.

7 GND LIFT

These DIP switches are used to individually lift pin1 of each input. Reading from left to right, these switches affect channels 4, 3, 2, 1. The ground is not completely removed but stays tied to ground through a 10Ω resistor. This is to avoid speaker and amplifier damage if an incorrectly wired (pin 3 floating) unbalanced signal is connected and the ground is inadvertently lifted.

8 OUTPUT

There is one 6 pole terminal strip for each channel. Each channel has a low impedance output and a distributed line voltage output. 70V out is available on 115V models. 100V out is available on 230V/240V models.

MINIMUM IMPEDANCE

Distributed Line Output	
70V (115V version)	62.5Ω
100V (230/240V version)	125Ω
Low Impedance Output	
(both versions)	4Ω

NOTE: Only connect one output - either Distributed Line or Low Impedance per channel. Do not connect LowZ and 100V at the same time.

Each channel output strip comes fitted with a touch-proof cover held in place by two M3 machine screws with flat and spring washers.

9 EXHAUST VENTS

These vents allow hot air to escape from the amplifier. There are also vents along the side of the amplifier. These should be kept free from obstruction.

INSTALLATION

MOUNTING

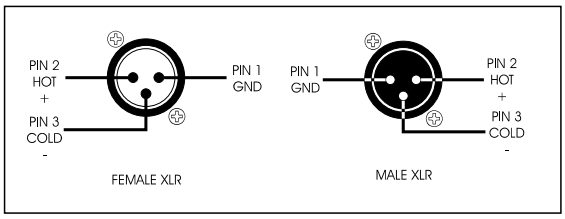
When rack mounting, allow at least 45mm (1.14”) between the sides of the amplifier and the sides of the rack.
The front of the amplifier should be left clear and free to draw air. Airflow for cooling the amplifier is front to rear.

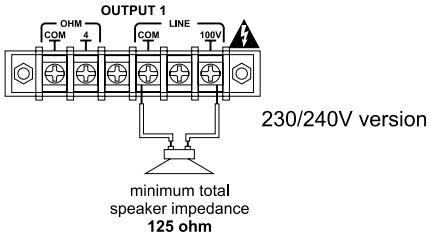
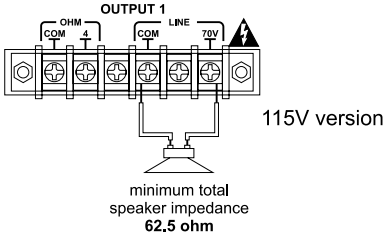
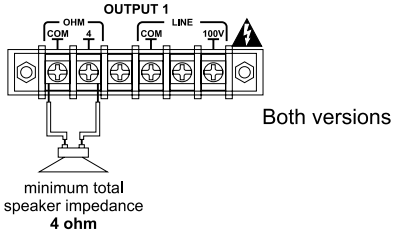
OUTPUT CONNECTIONS

The output terminal strip accepts wire sizes from 16-22AWG (1.5mm^2 - 0.35mm^2).
The following table should be used as a guideline for cable sizes. Regulations in your area may require different gauged wire and should be checked before using.

INPUT CONNECTIONS

When wiring balanced in, pin 2 is hot.
When wiring unbalanced in, pin 2 is hot and pin 1 and pin 3 should be shorted together to the shield.
Balanced input wiring (shielded pair cable) is recommended.



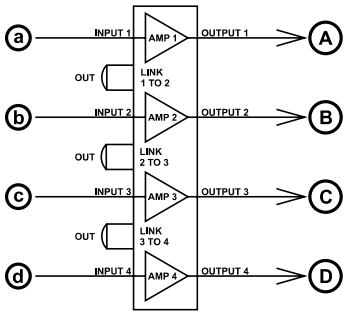
OUTPUT TYPE	DISTANCE	WIRE SIZE	
100V	Up to 50m	AWG25-26 (0.15mm^2)	
	50m - 200m	AWG20 (0.5mm^2)	
	Over 200m	AWG18 (0.75mm^2)	
70V	Up to 50m	AWG24 (0.20mm^2)	
	50m - 200m	AWG17 (1.0mm^2)	
	Over 200m	AWG16 (1.5mm^2)	
Low Impedance (4Ω)	Up to 10m	AWG18 (0.75mm^2)	
	10m - 30m	AWG13 (2.50mm^2)	
	Over 30m	Not Recommended	

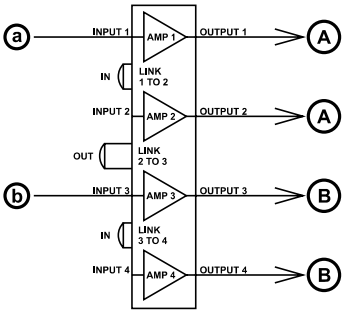
NOTE: Only connect one output - either Distributed Line or Low Impedance per channel.

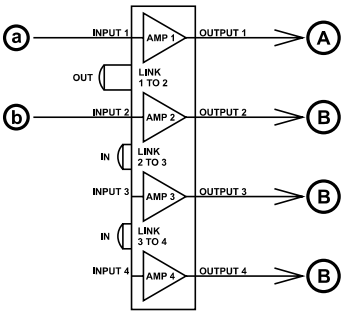
SETUP & TROUBLESHOOTING

SETUP

Each channel of the AMIS480P can be wired individually to suit multi-zone systems. If more than one zone is to receive the same signal, it can be easily routed to the next channel of the amplifier using the LINK switches. The channel being linked receives the input signal from the previous channel. The previous channel may be receiving signal from its own input or the signal coming from the previous channel. The volume control only affects the amplifier output, not the input level.



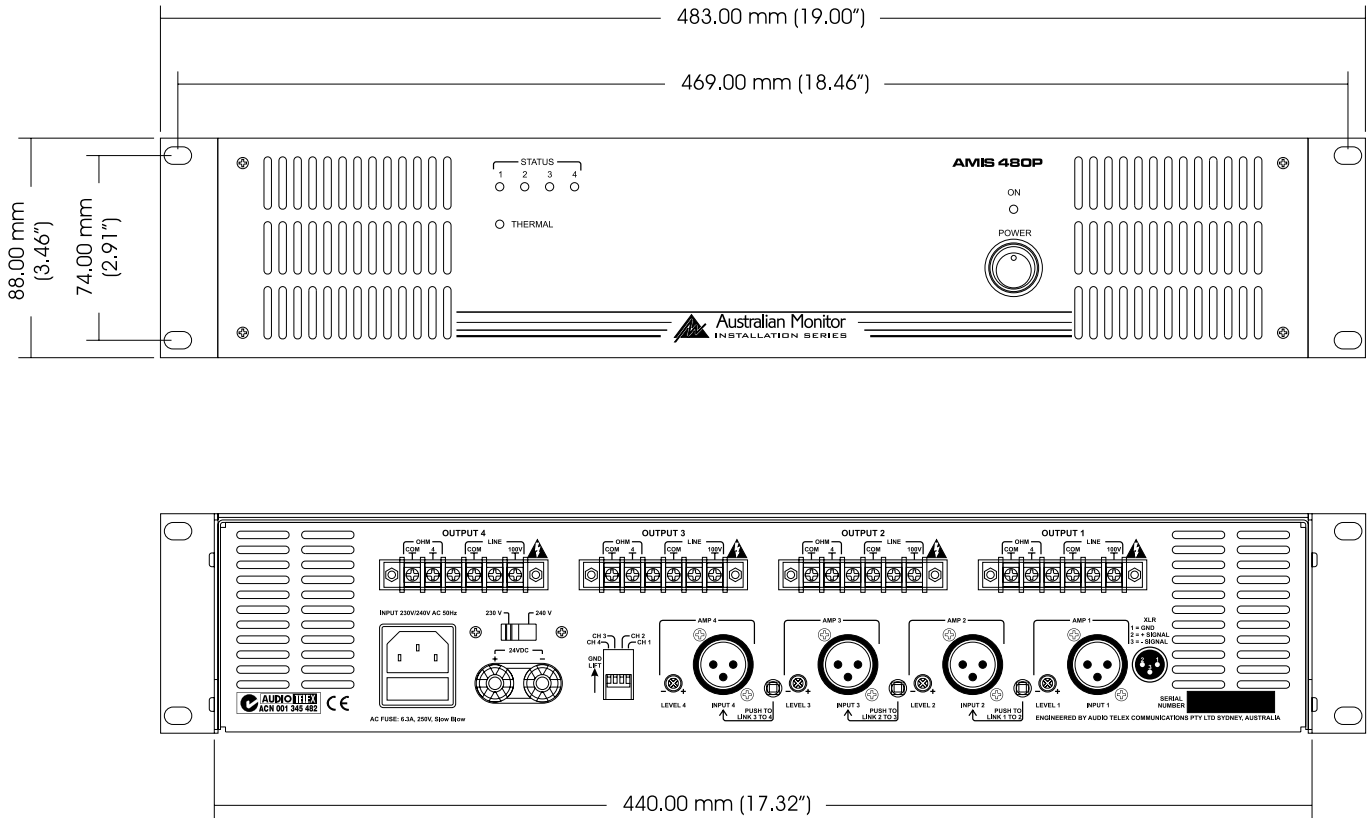


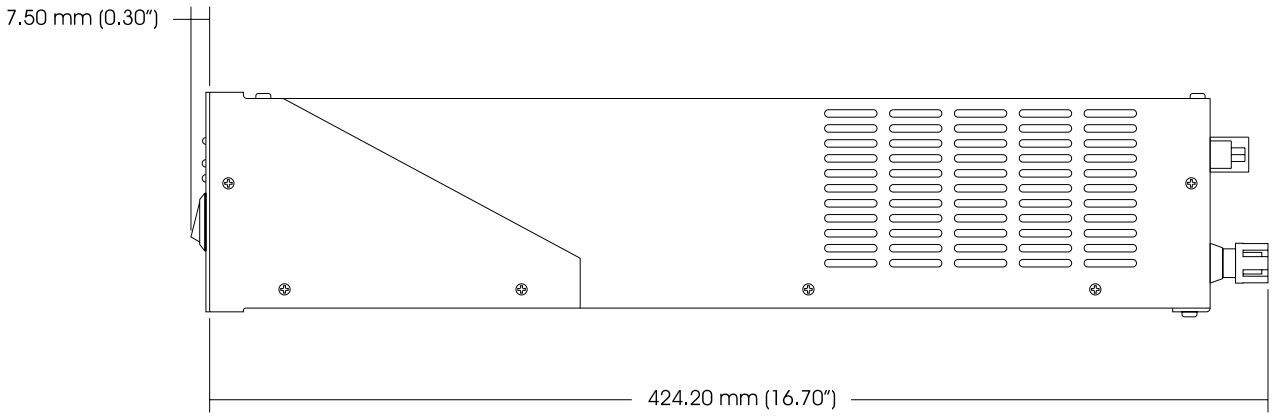


TROUBLESHOOTING GUIDE

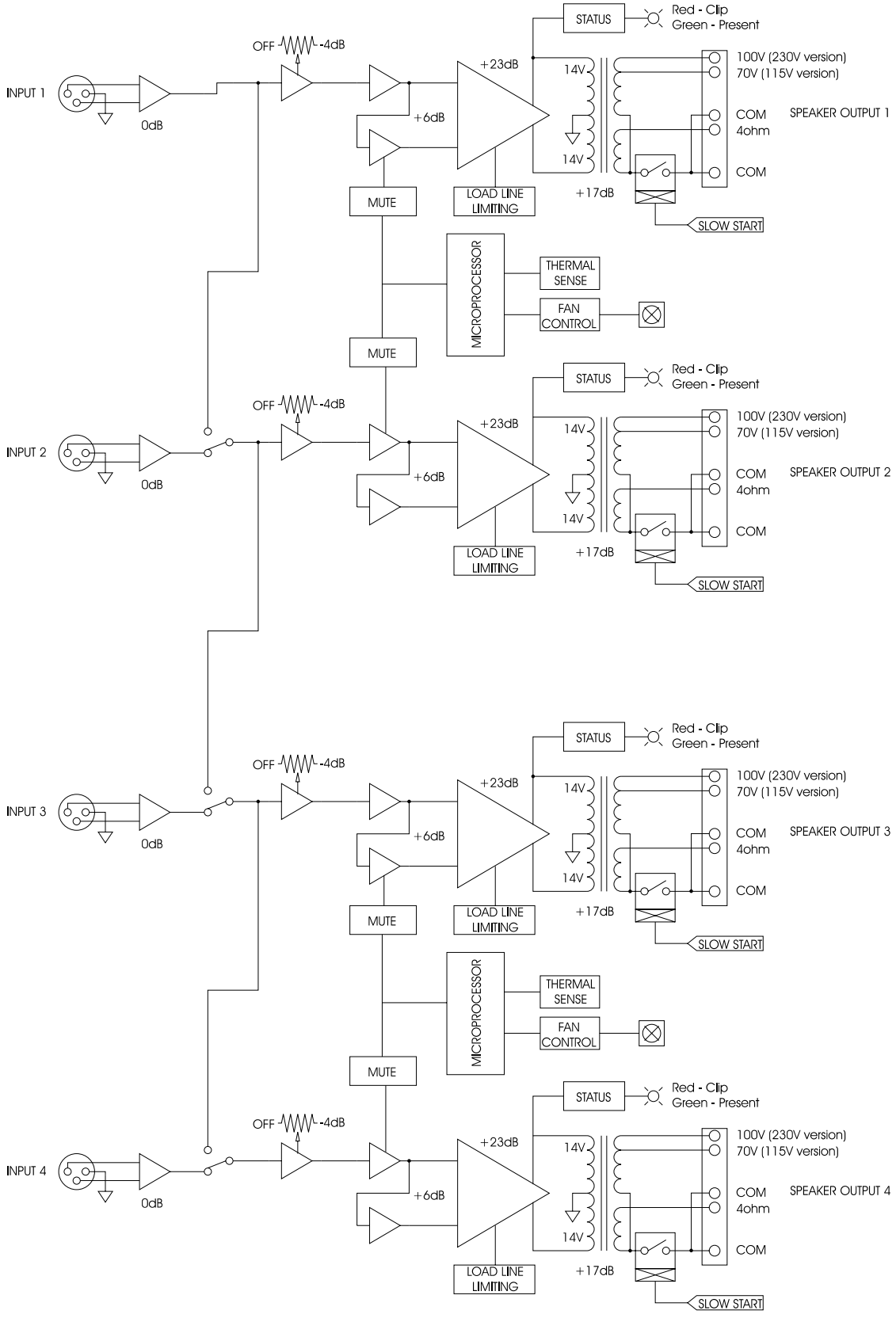
TROUBLE	LIKELY CAUSE	REMEDY
Power LED not on	Power not reaching amplifier	Check mains connection or DC connection Check mains fuse Check power switch is on
Thermal indicator on	Speaker load bad	Check the speaker loads
	Amplifier not able to cool itself	Check for blockages around the intake grills and exhaust grills on the rear and sides of the amplifier Make sure the amplifier has a source of cool air
Distorted sound	Output is short circuit	Check speaker loads for shorts
	Input is overloaded	Reduce input level at the source
No sound but amp is on	DC fuse(s) blown	Refer product to local Australian Monitor dealer
	LINK switch is in	Check LINK switch position
	Channel volume down	Check channel volume
Some channels not working with linked source	Channel volume down	Check channel volume

DIMENSIONS


483.00 mm (19.00")
469.00 mm (18.46")
88.00 mm (3.46")
74.00 mm (2.91")
STATUS
1 2 3 4
THERMAL
AMIS 480P
ON
POWER
Australian Monitor
INSTALLATION SERIES
OUTPUT 4
OUTPUT 3
OUTPUT 2
OUTPUT 1
INPUT 230V/240V AC 50Hz
230 V
240 V
24VDC
AC FUSE: 6.3A, 250V, Slow Blow
AUDIO TELEX
ACN 001 345 482
AMP 4
AMP 3
AMP 2
AMP 1
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
INPUT 4
INPUT 3
INPUT 2
INPUT 1
XLR
1 = GND
2 = + SIGNAL
3 = - SIGNAL
SERIAL NUMBER
ENGINEERED BY AUDIO TELEX COMMUNICATIONS PTY LTD SYDNEY, AUSTRALIA
440.00 mm (17.32")


7.50 mm (0.30")
424.20 mm (16.70")

BLOCK DIAGRAM



SPECIFICATIONS

OUTPUT POWER (1% THD, all channels driven)	4 x 80W
FREQUENCY RESPONSE (1W)	80Hz - 20kHz
POWER BANDWIDTH (-3dB)	85Hz - 20kHz
THD (1kHz, -3dB)	Less than 0.5%
S/N RATIO	94dB (ref 100V)
CROSSTALK	
1kHz	80dB
20Hz - 20kHz	Better than 60dB
INPUT SENSITIVITY	0.775V RMS (0dBu)
INPUT IMPEDANCE	20KΩ
VOLTAGE GAIN (pot at max)	
100V out	129 (42dB)
70V out	90 (39dB)
4Ω out	23 (27dB)
OUTPUT REGULATION (1kHz)	95%
DIMENSIONS (h x w x d)	88mm x 483mm x 432mm (4.36" x 19" x 17")
WEIGHT	20kg (44lb)
SHIPPING DIMENSIONS (h x w x d)	230mm x 540mm x 550mm (9.1" x 21.3" x 21.7")
SHIPPING WEIGHT	24kg (53lb)

ALL CHANNELS DRIVEN

CURRENT DRAW	Mains (230/240V)	Mains (115V)	24VDC IN
IDLE	0.08A	0.17A	0.7A
1/8TH POWER	1.0A	2.1A	8.7A
1/3RD POWER	1.5A	3.1A	14.2A
FULL POWER	2.7A	5.7A	18.35A

ALL CHANNELS DRIVEN

THERMAL OUTPUT	Watts	BTU/Hr
IDLE	17W	58
1/8TH POWER	150W	512
1/3RD POWER	160W	546
FULL POWER	250W	854

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