



Australian Monitor

AM-SERIES AMPLIFIERS

Translating power into an art form!

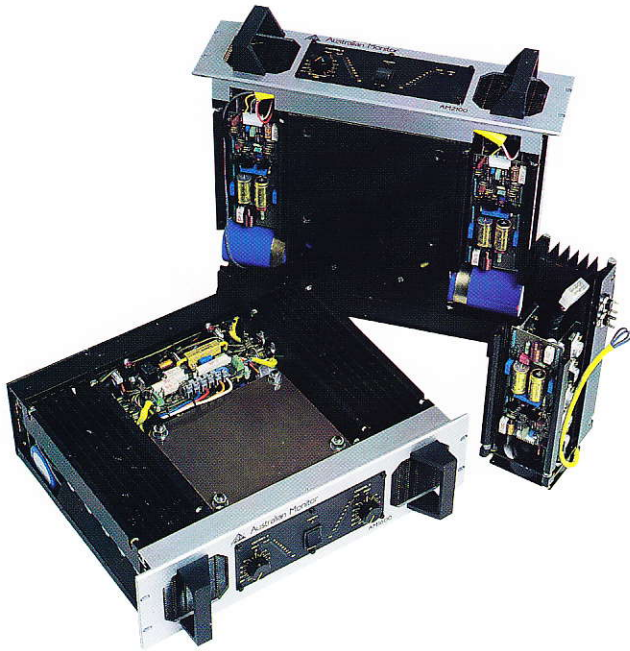


- Hand crafted
- Ruggedly reliable
- Sonically superior!

AM-SERIES amplifiers

Introduction

The oldest continent in the world and the last of the true pioneering countries, Australia is without doubt the most arduous, toughest testing ground in the world for any sophisticated 'state of the art' electro-mechanical equipment. With a heritage as tough as it gets Australian Monitor has developed a powerful range of amplifiers to survive not only the severity of the 'Diesel and Dust' touring environment, but also to provide the 'Reference Standard' of transparent sonic integrity demanded by the industry's foremost international audio recording studios.



Sonic Performance

Exhibiting all the main criteria required in today's exceptionally demanding recording process, all **AM-SERIES** amplifiers incorporate latest generation high speed lateral **Metal Oxide Silicon Field Effect Transistors** providing high slew rate - fast rise time, wide band flat frequency response, super low noise, THD and IMD. The AM-SERIES is a pure example of Australian Monitor's design philosophy. Quality without compromise, the combination of solid mechanical construction, high performance electronics and comprehensive functionality.

Chassis

All **AM-SERIES** amplifiers go through a unique engineering and manufacturing process. Every unit is hand crafted to a standard of excellence superior to that found in similar products from elsewhere in the world. Australian Monitor is built to last, utilising the latest in CAD/CAM techniques and aerospace materials, the 6mm aluminium alloy panels and custom alloy extrusions are precision sawn and milled to form a modular chassis and construction that is second to none. Symmetrical layout, even weight distribution and multi-point mounting of the alloy panels, modules and hardened steel pan provide a perfectly rigid monocoque chassis, minimising the effects of fatigue and extreme abuse that can be experienced by international concert touring systems.

Protection Network

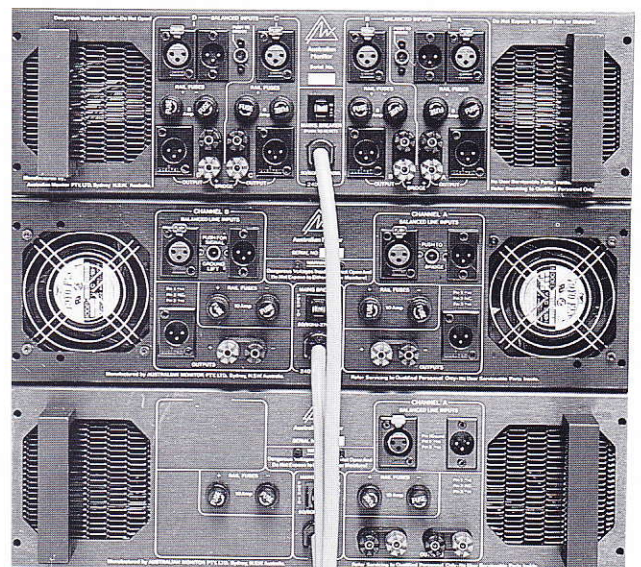
In the design of the AM-SERIES the utmost importance was placed on protection. Layout, grounding, decoupling and componentry have all been optimized to provide stability, reliability, and of course longevity. The eight point maximum protection network consists of: Mains circuit breaker, Independent rear panel \pm power rail fuses, Input muting at turn on, Short circuit protection with LED indication, Input over voltage protection, R.F. interference suppression, Thermal overload protection with LED indication, Mains inrush current suppression and LED indication.

Power Plant

All AM-SERIES amplifiers utilise a massive toroidal transformer exhibiting an excellent $< 4\%$ load regulation, high energy, high current-capability, and linear power supply. The associated electrolytic power capacitors are high ripple, high temperature, low E.S.R, mil spec rated. Minimised interconnection and heavy gauge wiring maximise power transfer to any current dependent load, for extended periods under very heavy duty cycles. Each **AM-SERIES** transformer has a dual-wound secondary allowing any channel access to the VA capabilities of the toroid transformer.

Cooling System

Each channel of an AM-SERIES amplifier is individually cooled by a dual speed axial fan blowing air directly over critical drive and PSU components. Fresh cool air is drawn through the front vents passed across a highly efficient heat exchanger and exhausted from the rear of the unit. Each heat exchange module has a perimeter of 1.5M (59") and has a total surface area of over 880,000 sq mm (1,360 sq ins). The efficiency of the cooling system maintains a thermally safe environment even under the most extreme and adverse of conditions.



AM Series - Rear Panels

AM1200



Ideal as a flexible alternative to a pair of stereo amplifiers, the exceptionally versatile and space saving AM1200 can be used in a variety of situations and in either 2, 3 or 4 channel configurations: 1) four individual mono channels, 2) tri-amped with one channel pair bridged, 3) as a stereo unit with two pairs of channels bridged. All of the four amplifier stages use closely matched, stable, high speed lateral Metal Oxide Silicon Field Effect Transistors. Rear panel bridge switching is supplied as standard with front panel indication.

AM2100



For applications involving long cable runs of 15 metres or more and the powering of multiple loudspeakers, the use of 70 or 100 volt lines is recommended. There are several benefits to this method including the reduction of losses due to cable resistance, the reduction in changes to the loudspeaker response due to cable resistance, and the ability to use multiple's of loudspeakers with individual level adjustment, all of which can be run in parallel without any undue loading effects to the amplifier.

The AM2100 is a specifically designed and dedicated, bridged monobloc amplifier for high power 100 volt line applications. The AM2100 will produce 100 volts of current into a line impedance of 4 ohms, generating 2500 watts of power without the need for ancillary line transformers. The front panel features a buffered 21 position detented attenuator. A comprehensive LED metering section indicating:- the signal output in -3dB increments from -27dB to clip point, \pm rail fuse continuity, channel fuse continuity, and fault/thermal status. The mono single channel input is via XLR connector and the 100 volt line output is by binding posts.

AM1600



The AM1600 features a 2 channel, 3 colour 10 segment visual metering system displaying signal levels from -27dB to clip point in 3dB increments. Comprehensive circuit status LED's are also provided for fault detection. The AM1600 optional studio version has bridge switching as standard with special rear mount fans, alternatively the AM1600 can be bridged via cables. The AM1600 has an extremely well proven track record as an audio standard in world class ultra critical studio monitoring. Australian Monitor amplifiers can be found in some of the worlds finest and most prestigious music productions studios such as The Record Plant, Los Angeles, EMI 301, Sydney. Sound Interchange, Toronto. Sony CD Mastering, Sydney and many many more.

AM-SERIES Features

- 3 Unit, heavy duty custom alloy chassis
- Modular construction - easy maintenance
- Symmetrical layout - even weight distribution
- High efficiency toroidal mains transformer
- Well regulated, high energy linear power supply
- Binding post or speakon output connectors
- Stereo, or optional bridge operation
- 100 volt output in bridge mode without line transformer
- Balanced inputs and buffered attenuators
- Fault and status LED indicators
- Super efficient cooling system
- Twin dual-speed fans
- Mains circuit breaker
- Ideal for Audio induction loops

Five Year Warranty

All published specifications are the minimum production performance standard of any AM-SERIES product. Australian Monitor products are manufactured to the highest possible tolerances and subjected to extensive quality control before leaving the factory. Australian Monitor guarantees that all of its amplifiers will meet or exceed published specifications for a period of five years from date of purchase.

AM-SERIES

Technical Specifications

AM1200

Output power (watts)	8 ohm	4 ohm
F.T.C. 20Hz-20kHz @ 0.1% THD (Pre-stress 4 dB below rated power for 1 hour and rated power for 5 Min) both channels driven	180w	300w
E.I.A. 1kHz, <0.05% THD (Pre-stress at rated power for 5 Min) single channel driven	220w	270w
all 4 channels driven	200w	320w
Pulsed @ 1kHz , at onset of clipping 10% duty cycle, single channel driven		460w
10% duty cycle, both channels driven		400w
Bridge Mode	620w	800w
2 ohm Capability single channel driven	450w (D)	
both channels driven	420w (C&D)	
AM1200S Version (no 2 ohm capability) (240 volt mains only,	220w	380w

AM1600II

Output power (watts)	8 ohm	4 ohm
F.T.C. 20Hz-20kHz @ 0.1% THD (Pre-stress 4 dB below rated power for 1 hour and rated power for 5 Min) both channels driven	470w	800w
E.I.A. 1kHz, <0.05% THD (Pre-stress at rated power for 5 Min) single channel driven	550w	900w
both channels driven	510w	820w
Pulsed @ 1kHz , at onset of clipping 10% duty cycle, single channel driven		1050w
10% duty cycle, both channels driven		880w
Bridge Mode	1670w	2200w
2 ohm Capability single channel driven	1250	
both channels driven	1100	
AM1600S Version (no 2 ohm capability) (240 volt mains only)	570w	1010w

AM2100 (monobloc)

Output power (watts)	Load Power
4.0 ohm	100 volts 2500w
6.7 ohm	100 volts 1500w
8.0 ohm	113 volts 1600w
16 ohm	120 volts 900w
100 ohm	100 volts 100w
100 ohm	130 volts 169w
Pulsed @ 1kHz , at onset of clipping 10% duty cycle, single channel driven	8 ohm 4 ohm 2200w 2500w

AM2100 AM1600 AM1200

Frequency response	---20Hz - 20kHz ± 0.5dB---		
-3dB points	5Hz-90kHz	5Hz-90kHz	5Hz-140kHz
Damping factor	>650:1	>650:1	>700:1
Output impedance	<15milli ohm		
Input impedance	---25k ohms---		
Input sensitivity	---0.92 volts + 1.5dB---		
Input CMRR	---better than 90dB---		
Voltage gain	35.8dB/62x	35.8dB/62x	31.4dB/37x
Rise time -10% to 90% @ 8 ohm	---2.2µS---		
Slew rate	65V/µS	65V/µS	60V/µS
Signal to Noise A weighted	105dB	105dB	100dB
Crosstalk @ 1kHz	---better than 90dB---		
Distortion @ 0.5dB below clipping re 4 ohms			
THD	<0.005% @ 1kHz 4 ohms		
IMD SMPTE	<0.015% @ 60Hz - 7kHz 4:1		
IMD CCIF	<0.01% @ 14kHz - 15kHz 1:1		
Weight net	30kg	30kg	26kg
Weight shipping	33kg	33kg	29kg
Dimensions W x H x D excluding handles	2U, standard rack mounting 482 x 133 x 375mm		
including handles	482 x 133 x 460mm		



Australian Monitor

Australian Monitor is designed and manufactured by

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