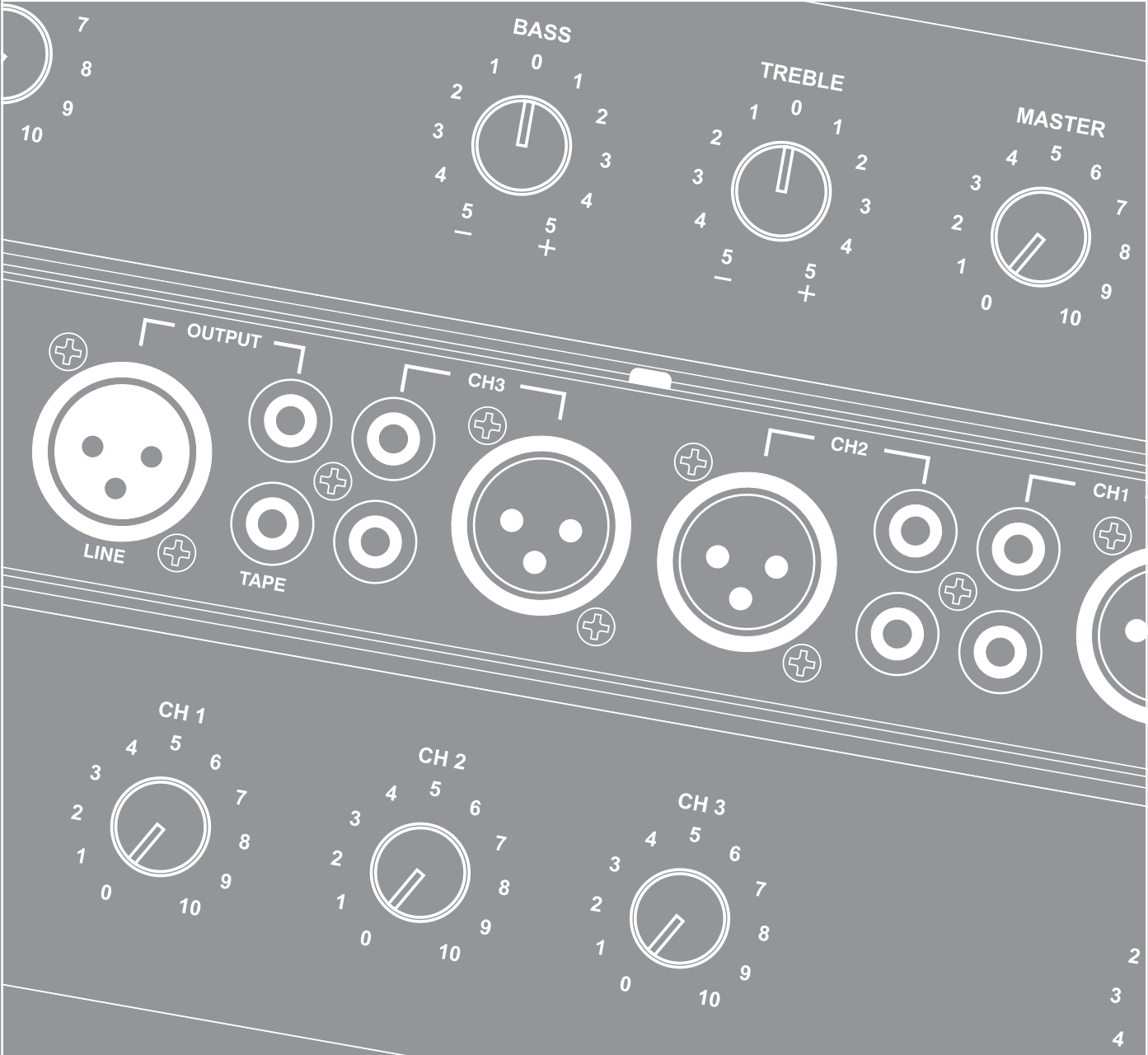


# AMC+ SERIES

## 30W/60W/120W/250W MIXER AMPLIFIERS INSTALLATION AND OPERATION MANUAL





## IMPORTANT SAFETY INFORMATION



1. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
2. Read all documentation before operating your equipment. Retain all documentation for future reference.
3. Follow all instructions printed on unit chassis for proper operation.
4. Do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
5. Make sure power outlets conform to the power requirements listed on the back of the unit.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
8. Mains voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
9. Have gain controls on amplifiers turned down during power-up to prevent speaker damage if there are high signal levels at the inputs.
10. Power down and disconnect units from mains voltage before making connections.
11. Never hold a power switch in the "ON" position if it won't stay there itself!
12. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, weathersheet, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign matter.
14. Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages. There are no user serviceable parts inside.
15. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
16. Do not connect the inputs / outputs of amplifiers or consoles to any other voltage source, such as a battery, mains source, or power supply, regardless of whether the amplifier or console is turned on or off.
17. Do not run the output of any amplifier channel back into another channel's input. Do not parallel- or series-connect an amplifier output with any other amplifier output. Australian Monitor Inc is not responsible for damage to loudspeakers for any reason.
18. Do not ground any red ("hot") terminal. Never connect a "hot" (red) output to ground or to another "hot" (red) output!
19. Non-use periods. The power cord of equipment should be unplugged from the outlet when left unused for a long period of time.
20. Service Information Equipment should be serviced by qualified service personnel when:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the equipment
  - C. The equipment has been exposed to rain
  - D. The equipment does not appear to operate normally, or exhibits a marked change in performance
  - E. The equipment has been dropped, or the enclosure damaged.

The Australian Monitor AMC+ series of amplifiers takes the heritage and reliability of our famous AMIS series amplifiers and integrates these features into low cost amplifiers for applications where reliability is everything, but the more elaborate features of our AMIS series are not required.

Available in 30, 60, 120 and 250 watt versions, the AMC+ series are 2 RU mixer amplifiers, featuring 70/100 volt line and 4 ohm outputs, and 4 universal mic/line inputs.

Master volume and overall treble and bass controls are provided, along with Vox triggered muting (defeatable), giving channel 1 priority over inputs 2, 3 and 4. There is also the facility to add a tone generator card.

The Australian Monitor AMC+ series gives the contractor a low cost alternative in applications that are price sensitive, but still require a high quality of sound reproduction and reliability.

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 Rev A: 1st Apr 2005  
 Rev B: 6th Jun 2006  
 Rev C: 26th May 2008



## 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 products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

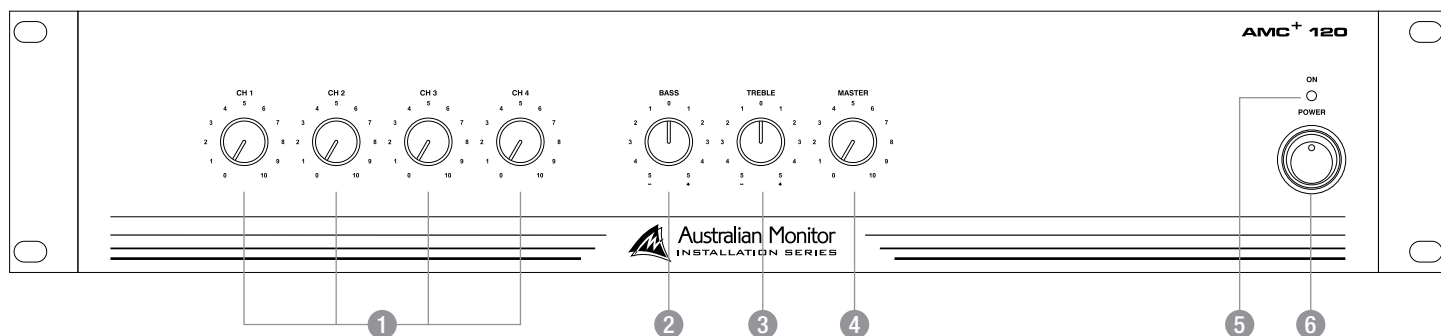


This symbol is intended to alert the user to the presence of important operational and maintenance (servicing) instructions in the literature accompanying the appliance.

### 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 CH 1–4

These control the levels for each channel input.

### 2 Bass

There is 12dB of cut and boost at 100Hz.

### 3 Treble

There is 9dB of cut and boost at 10kHz.

### 4 Master

This controls the overall mixed output level.

### 5 On

This LED indicates the unit is powered “on”.

### 6 Power

This switch switches power on or off the mains. The up position is on.



**1 CH 1-4**

Each channel input section has two inputs: XLR input – This is a balanced microphone input. It has an input sensitivity of 1mV. RCA input – This is an unbalanced line level input. It has an input sensitivity of 150mV. The two RCA sockets are summed to mono internally.

**2 REC Output**

The REC output is on unbalanced RCA connectors. The output level is 150mV into 10kohm at rated output. The output is dual mono.

The REC output is not affected by the MASTER volume control or the BASS and TREBLE controls.

The REC output does not receive the tone signal if the optional tone generator module is installed.

**3 Line Output**

The LINE output is on a balanced XLR connector. The output level is 0.775V into 1k at rated output.

**Note:** When wiring the LINE output as unbalanced, Pin2 should be wired as hot and Pin1 should be wired as ground/shield. Do not wire Pin3.

**4 Direct Out**

The speaker connections are on the 12 pole terminal strip. There is a low impedance output (OHM) and a distributed line voltage output (LINE). 70V out is available on 115V models. 100V out is available on 230V/240V models.

**Minimum Impedance**

AMC+30    AMC+60    AMC+120    AMC+250

Distributed Line Output

70V (115V version)	166ohm	83ohm	41ohm	20ohm
100V (230/240V version)	333ohm	166ohm	83ohm	40ohm

Low Impedance Output

(both versions)	4ohm	4ohm	4ohm	4ohm
-----------------	------	------	------	------

**Note:** Only connect one output – either Distributed Line or Low Impedance per channel. Do not connect LowZ and 70/100V at the same time.

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

**5 IEC Mains Input Socket**

This is a standard IEC 3 pin socket. It accepts a standard IEC mains cable, provided. The fuse draw at 5 contains the mains fuse and a spare. The mains fuse is a time lag (slow blow) HRC 20mm x 5mm ceramic type fuse.

The ratings are:

	AMC+30	AMC+60	AMC+120	AMC+250
230V/240V model	0.5A	1.6A	2A	2.15A
115V model	1A	3.15A	4A	6.3A

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

**⚡ Note:** Always disconnect power to the amplifier before replacing fuses.

**6 (Optional) Tone Module**

These terminals are for use with an optional tone module (not supplied). Use Australian Monitor ATC5488 module.

**7 Phantom Power**

12V phantom power is available for condenser or electret microphones on the XLR input when this switch is pushed in.

# INSTALLATION

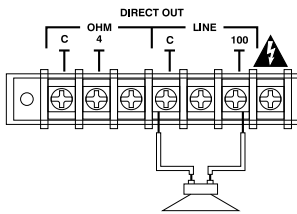
## Mounting

When rack mounting, it is advisable to allow 1 rack space above and below the amplifier. When multiple amplifiers are mounted in a rack, exhaust fans should be used on the rack. Airflow for cooling the AMC30, AMC60 and AMC120 is by convection from bottom to top. Airflow for cooling the AMC250 is by fan from front to side.

## Direct Output

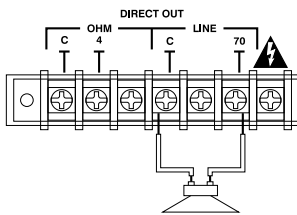
The output terminal strip accepts wire sizes from 16-22AWG (1.5mm<sup>2</sup> – 0.35mm<sup>2</sup>) or spade lugs. The following table should be used as a guideline for cable sizes. Regulations in your area may require different gauged wire and should be checked before using.

Output	Distance	Wire Size			
		AMC+30	AMC+60	AMC+120	AMC+250
100V	Up to 50m	AWG26(0.12mm <sup>2</sup> )	AWG26(0.12mm <sup>2</sup> )	AWG24(0.2mm <sup>2</sup> )	AWG22(0.35mm <sup>2</sup> )
	50m–200m	AWG24(0.2mm <sup>2</sup> )	AWG20(0.5mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )	AWG16(1.5mm <sup>2</sup> )
	Over 200m	AWG20(0.5mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )	AWG16(1.5mm <sup>2</sup> )	AWG13(2.5mm <sup>2</sup> )
70V	Up to 50m	AWG26(0.12mm <sup>2</sup> )	AWG24(0.2mm <sup>2</sup> )	AWG22(0.35mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )
	50m–200m	AWG20(0.5mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )	AWG16(1.5mm <sup>2</sup> )	AWG13(2.5mm <sup>2</sup> )
	Over 200m	AWG18(0.75mm <sup>2</sup> )	AWG16(1.5mm <sup>2</sup> )	AWG13(2.5mm <sup>2</sup> )	AWG10(6.0mm <sup>2</sup> )
4 ohm	Up to 10m	AWG18(0.75mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )	AWG18(0.75mm <sup>2</sup> )
	10m–30m	AWG13(2.5mm <sup>2</sup> )	AWG13(2.5mm <sup>2</sup> )	AWG13(2.5mm <sup>2</sup> )	AWG13(0.35mm <sup>2</sup> )
	Over 30m	Not Recommended	Not Recommended	Not Recommended	Not Recommended



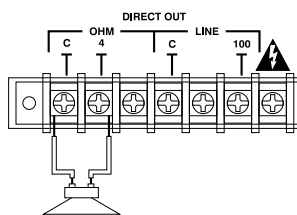
230/240V version

minimum total speaker impedance  
 AMC+30 333ohm AMC+60 166ohm AMC+120 83ohm AMC+250 40ohm



115V version

minimum total speaker impedance  
 AMC+30 166ohm AMC+60 83ohm AMC+120 41ohm AMC+250 20ohm



Both versions

minimum total speaker impedance  
 All models 4 ohm

**Note:** Only connect one output – either Distributed Line or Low Impedance.

### Line Output

The LINE output XLR can be used to connect up to 6 booster amplifiers. Balanced wiring (shielded pair cable) is recommended.

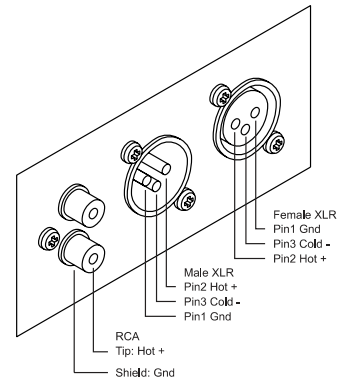
**Note:** When wiring the LINE output as unbalanced, Pin2 should be wired as hot and Pin1 should be wired as ground/shield. Do not wire Pin3.

### REC Output

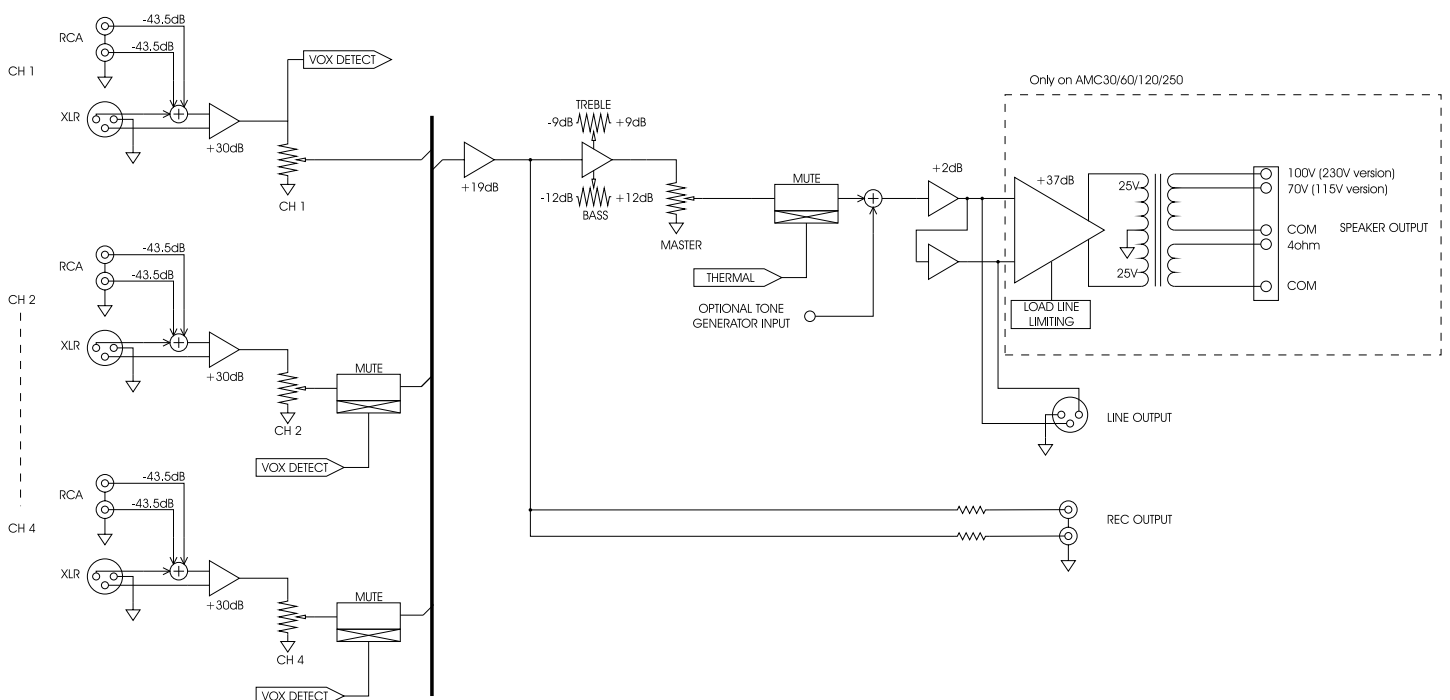
The REC output wiring should be kept as short as possible.

### Input Connections

For wiring balanced in, pin 2 is hot. Unbalanced wiring on the microphone inputs is not recommended. Balanced input wiring (shielded pair cable) is recommended. Unbalanced RCA wiring should be kept as short as possible.



Troubleshooting Guide		
Trouble	Likely Cause	Remedy
Power LED not on	Power not reaching amplifier	Check power switch is on Check mains connection Check mains fuse
Distorted sound	Output is short circuit Input is overloaded Output is being over driven Bass control is turned up	Check speaker loads for shorts Reduce input level at source Reduce volume levels on front panel Reduce Bass control level
No sound but amp is on	Volume controls down Amplifier has overheated (AMC+60, AMC+120 AMC+250 only) DC fuse(s) blown	Check volume controls Check for obstructions above and below Make sure the amplifier is well ventilated Refer product to local Australian Monitor dealer
No sound from channels 2 and 3	Priority function is being used	Remove signal (disconnect input) from channel 1 OR Disable priority function (see Internal Adjustments)
Tones do not sound when triggered	Tone generator module not installed	Purchase optional Tone generator module

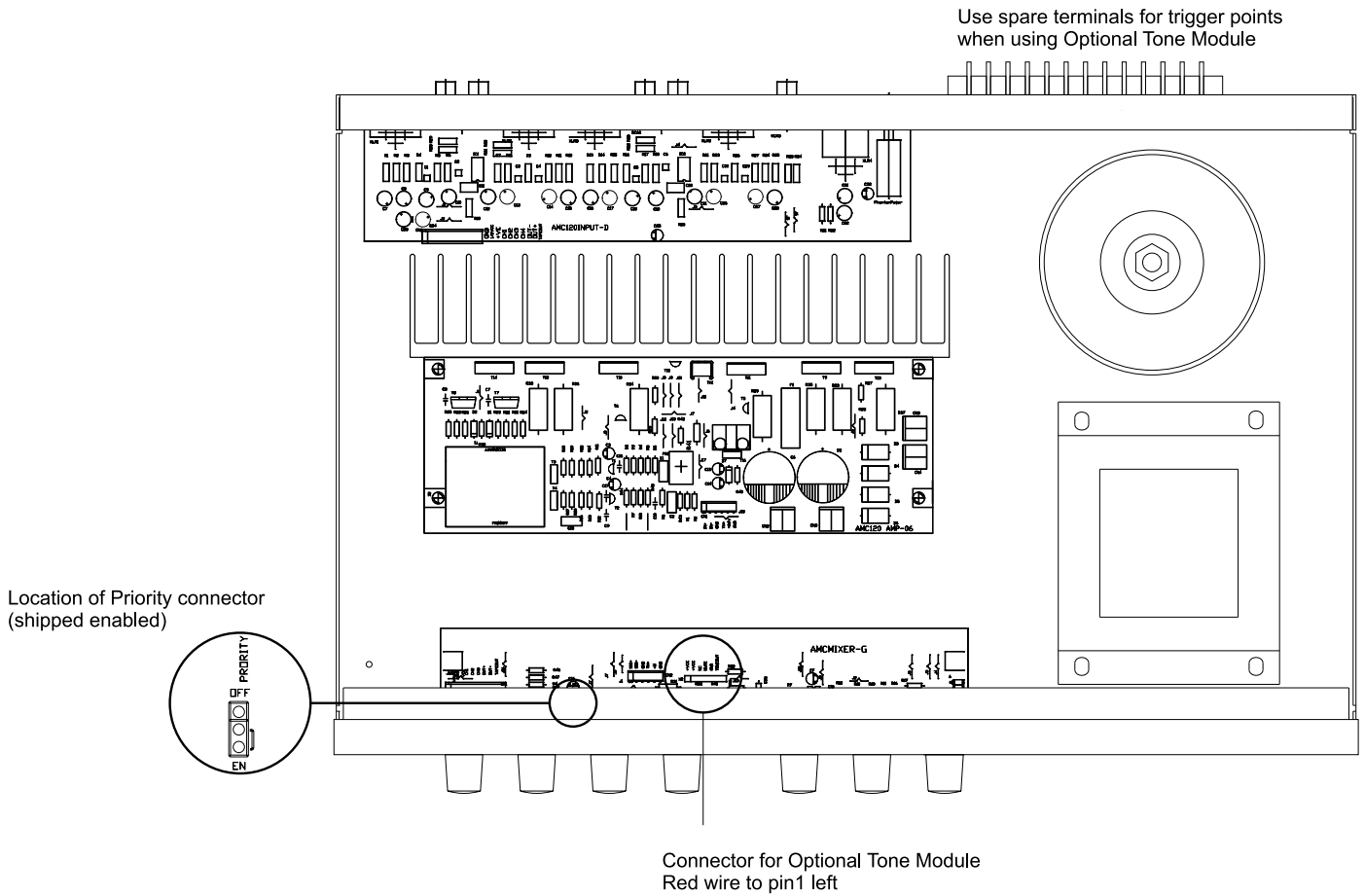


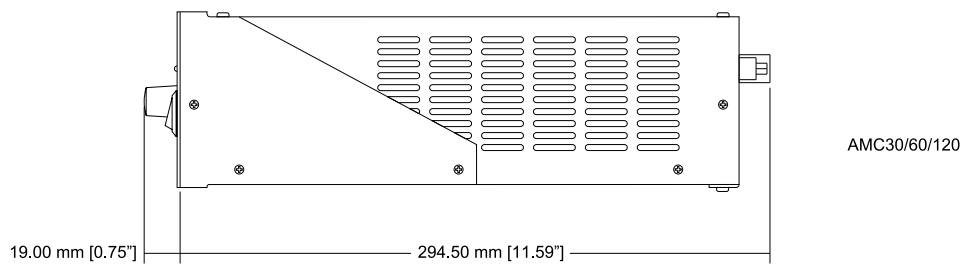
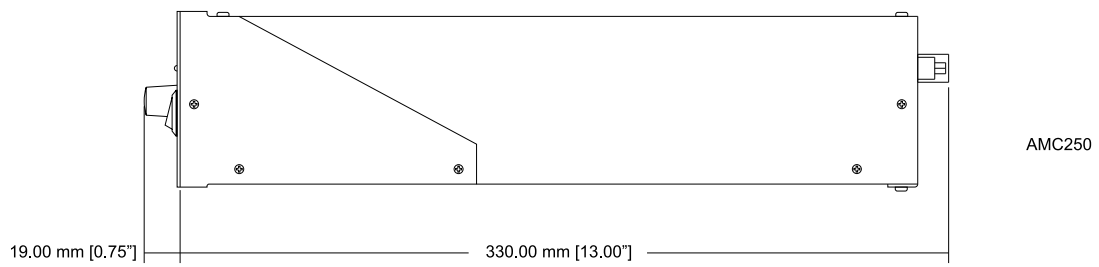
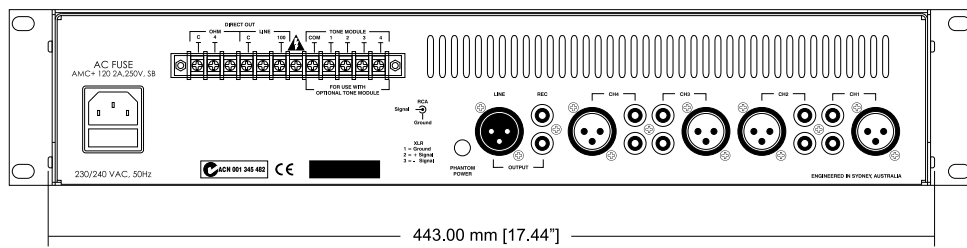
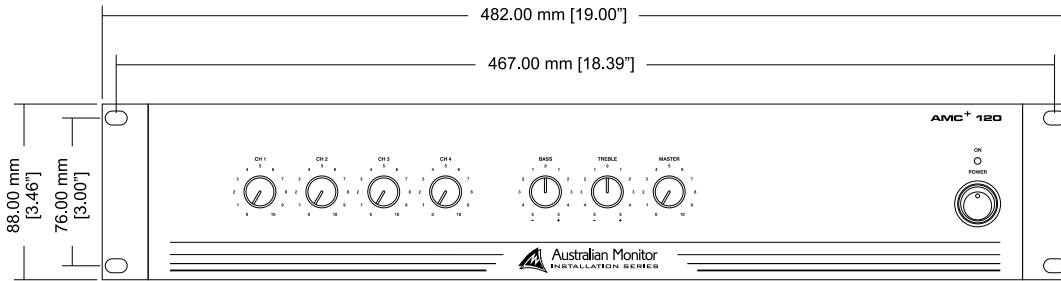
# FUNCTIONAL NOTES AND INTERNAL ADJUSTMENTS

## PRIORITY

Channel 1 will mute channels 2, 3 and 4. This will only occur when signal appears on channel 1, irrespective of the channel volume control.

Priority can be disabled. (See below). The release time is approx. 3 secs and is NOT adjustable. The mute depth is approx. 40dB and is not adjustable.





## SPECIFICATIONS

	AMC+ 30	AMC+ 60	AMC+ 120	AMC+ 250
<b>POWER OUTPUT (0.5%THD, 1KHZ)</b>	30W	60W	120W	250W
<b>S/N RATIO</b>	> 75dBr	> 75dBr	> 80dBr	>85dBr
<b>POWER BANDWIDTH (-3dB +1dB)</b>	85Hz-15kHz	75Hz-15kHz	75Hz-15kHz	30Hz-20kHz
<b>FUSES</b>				
MAINS (115V)	1.0A	3.15A	4A	6.3A
MAINS (230/240V)	0.5A	1.6A	2A	3.15A
DC	1.6A (x2)	4A	8A	10A (x2)
<b>OUTPUT REGULATION</b>	96%	93%	93%	90%
<b>SIZE (WXHxD)</b>	482 x 88 x 190mm 19" x 3.5" x 7.5"	482 x 88 x 281mm 19" x 3.5" x 11.1"	482 x 88 x 281mm 19" x 3.5" x 11.1"	482 x 88 x 384mm 19" x 3.5" x 15.1"
<b>NET WEIGHT</b>	6.0kg 13.2lb	8.5kg 18.7lb	10.5kg 23.1lb	11.5kg 25.3lb
<b>SHIPPING WEIGHT</b>	7.5kg 16.5lb	10.5kg 23.1lb	12.5kg 27.6lb	14kg 30.8lb
<b>SHIPPING DIMENSIONS (WXHxD)</b>	510 x 145 x 297mm 20.1" x 5.7" x 11.7"	525 x 175 x 385mm 20.7" x 6.9" x 15.2"	525 x 175 x 385mm 20.7" x 6.9" x 15.2"	525 x 185 x 470mm 20.7" x 7.3" x 18.5"
<b>MAINS CURRENT DRAW (240V)</b>				
FULL POWER	0.35A	0.66A	1.20A	2.53A
1/3 POWER	0.23A	0.44A	0.80A	1.61A
1/8 POWER	0.17A	0.32A	0.55A	1.10
IDLE	0.08A	0.13A	0.15A	0.15A
<b>MAINS CURRENT DRAW (115V)</b>				
FULL POWER	0.73A	1.38A	2.50A	5.28A
1/3 POWER	0.48A	0.92A	1.67A	3.36A
1/8 POWER	0.35A	0.67A	1.15A	2.30A
IDLE	0.17A	0.27A	0.31A	0.31A
<b>THERMAL OUTPUT (W)</b>				
FULL POWER	38W	67W	128W	259W
1/3 POWER	33W	63W	118W	231W
1/8 POWER	26W	51W	91W	168W
IDLE	11W	19W	26W	26W
<b>THERMAL OUTPUT (BTU/HR)</b>				
FULL POWER	130	229	437	884
1/3 POWER	113	215	403	788
1/8 POWER	90	172	311	573
IDLE	38	65	89	89

*\*1/3 and 1/8 power levels relate to voltage changes, not load changes.*

## COMMON TO ALL MODELS

<b>THD (1KHz, -1dB)</b>		Better than 0.5%
<b>MIC INPUT</b>	SENSITIVITY	1mV @ 200ohm
	IMPEDANCE	1k3 ohm
	HEADROOM	77mV (37dB)
<b>AUX INPUT</b>	SENSITIVITY	0.5V+/@100kohm
	IMPEDANCE	>200kohm
	HEADROOM	> 15V (>30dB)
<b>TONE CONTROL</b>	BASS @ 100HZ	+/- 12 dB
	TREBLE @ 10KHZ	+/- 9 dB
<b>LINE OUT</b>	NOMINAL OUTPUT	0.775V @ 1kohm
	OUTPUT IMPEDANCE	100ohm
<b>REC OUT</b>	NOMINAL OUTPUT	250mV @ 10kohm
	OUTPUT IMPEDANCE	1kohm

## AUSTRALIA AND NEW ZEALAND

[www.australianmonitor.com.au](http://www.australianmonitor.com.au)

### SYDNEY

(NSW & ACT SALES)

1 Clyde Street  
Silverwater  
NSW 2128  
Private Bag 149  
Silverwater NSW 1811  
Phone: (02) 9647 1411  
Fax: (02) 9648 3698  
Email:  
[nsw@audiotelex.com.au](mailto:nsw@audiotelex.com.au)

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PO Box 151 Blackburn  
South VIC 3130  
Phone: (03) 9890 7477  
Fax: (03) 9890 7977  
Email:  
[vic@audiotelex.com.au](mailto:vic@audiotelex.com.au)

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PO Box 2578 Fortitude  
Valley BC QLD 4006  
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Fax: (07) 3252 1237  
Email:  
[qld@audiotelex.com.au](mailto:qld@audiotelex.com.au)

### ADELAIDE

(SA & NT SALES)

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Thebarton  
SA 5031  
PO Box 157  
Hindmarsh SA 5007  
Phone: (08) 8352 4444  
Fax: (08) 8352 4488  
Email:  
[sa@audiotelex.com.au](mailto:sa@audiotelex.com.au)

### PERTH

(WA SALES)

3/11 Howe Street  
Osborne Park WA 6017  
PO Box 1281  
Osborne Park BC  
WA 6916  
Phone: (08) 9204 0200  
Fax: (08) 9244 3783  
Email:  
[wa@audiotelex.com.au](mailto:wa@audiotelex.com.au)

### AUCKLAND

(NZ SALES)

9C Piermark Drive  
Albany 0752  
New Zealand  
PO Box 300-512  
Albany 0752  
Phone: (09) 415 9426  
Fax: (09) 415 9864  
Email:  
[sales@audiotelex.co.nz](mailto:sales@audiotelex.co.nz)

## EUROPE / ASIA / MIDDLE EAST

[www.australianmonitor.com.au](http://www.australianmonitor.com.au)

### INTERNATIONAL SALES

1 Clyde Street Silverwater NSW 2128 Australia  
Private Bag 149 Silverwater NSW 1811  
Phone: + 61 2 9647 1411  
Fax: + 61 2 9748 2537  
Email: [international@audiotelex.com.au](mailto:international@audiotelex.com.au)