

The Mitre range of amplifiers consists of integrated, slave, and tuner/amplifier models. They are designed to give a high degree of flexibility as well as quality and reliability.

## Integrated Amplifiers

MODELS: M2060M (60 watt) · M2120M (120 watt) · M2300M (300 watt)

- Four balanced microphone/line inputs.
- Each microphone input has the option of cascade priority, phantom power, chime and volume restoration/busy.
- Built-in one, two or three note chime with pre-set volume control.
- Built-in alarm tone generator with pre-set volume control. Tones are adjustable. A continuous 900Hz tone or continuous pips can also be configured making it suitable for class change, start and stop work, etc.
- Each universal input has input live indicator.
- Master volume and treble and bass controls.
- 300 watt version M2300M has four zone relay selector as standard.
- Option socket. Can be used to add frequency equaliser etc.
- Music mute facility, which allows for music to be totally muted or 'ducked' to a pre-set level, when paging operated.
- Output stage protected by thermal shut down in event of unsuitable load.
- Auxiliary stereo music input (internally mixed) to accept tuners, CD players or tape decks.

## Slave Amplifiers

MODELS: M2120S (120 watt)  
M2300S (300 watt)

- Each amplifier has two balanced line inputs, which have selectable priority and rear mounted independent gain controls.
- Priority selectable by DIL switch.
- Option socket. Can be used to add frequency equalisers etc.
- Output level indicator.
- Output stage protected by thermal shut down in event of unsuitable load.
- 30V 1.5A output for powering mixers etc.



## Tuner Amplifiers


MODELS: M2060A (60 watt) · M2120A (120 watt) · M2300A (300 watt)

These have the same facilities as the Mixer Amplifiers with the added facilities of an FM/AM Tuner

- The FM Tuner operates between 87-108 MHz and the AM between 525-1605 kHz.
- Phase locked loop tuner with digital display of frequency and selected channel providing 7 FM, 7 AM and an auxiliary input for CD or tape.



## Our Complete Range:

M2060A	60 watt with AM/FM tuner
M2120A	120 watt with AM/FM tuner
M2300A	300 watt with AM/FM tuner
M2120S	120 watt slave amplifier with 2 prioritised balanced inputs
M2300S	300 watt slave amplifier with 2 prioritised balanced inputs
M2060M	60 watt mixer amplifier 4 mic/line inputs
M2120M	120 watt mixer amplifier 4 mic/line inputs
M2300M	300 watt mixer amplifier 4 mic/line inputs
M2RACK	2U rack mounting kit
M3RACK	3U rack mounting kit
MWALL	Wall mounting kit
OPTEQ	 equaliser.



Low Voltage Directive  
73/23/EEC as amended by 93/68/EEC

EMC Directive  
89/336/EEC as amended by 92/31/EEC and 93/68/EEC

Applies only when the items are correctly fitted and operated in or with products of our manufacture  
and are installed in a recommended enclosure.

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# mitre

...the public address amplifier system –  
with flexibility built-in...



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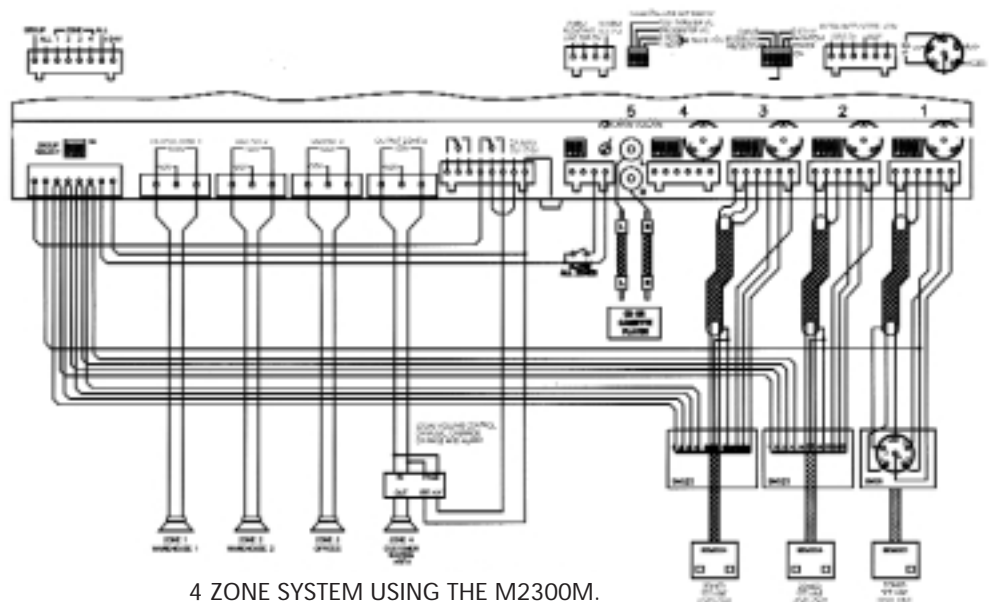
## The Range

All the Mitre range of amplifiers are available in 300 watt versions, as well as the 60 watt and the 120 watt units, making it our most adaptable system yet. The Mitre has emerged as a result of many months of research and testing at our Sussex headquarters, and the company is proud to offer this revolutionary range. With several built-in safety factors, it comes as an extremely user-friendly unit.

If you need a Public Address system to contact personnel in an office complex, factory, warehouse or shop, or you need to make announcements of the latest offers in the supermarket, or call up staff, customers, or competitors at the leisure complex, then you should consider carefully the system to install. Perhaps you need to spread the word across a restaurant, or bar, that the meal is ready, call the next patient to the doctor's surgery, or just broadcast some relaxing background music...then the Mitre can accommodate your needs – integrating several uses at the touch of a button if required.

This example shows a typical 4-zone system (3 with Paging and Music, and 1 with Paging only), as used in a small office/workshop complex, using the M2300M which provides the following features:

- Single zone all call microphone (BDM 201) overriding all other inputs.
- 2 tone alarm signal to all zones overriding descending inputs.
- Two 4 tone microphones (BDM 204) with 3 note chime overriding descending inputs.
- Background music broadcast to all zones except zone 3 'Offices'.
- Local volume control for zone 4 which is overridden when a paging announcement is made.



## Mitre Slave Technical Specification

	120W	300W
Rated output power 100V line 230V AC supply	120W 83 Ohms	300W 33 Ohms
THD 1 kHz rated output 230V AC supply	Less than 0.5% typically 0.2%	
Typical output power 1% THD 230V AC supply	150W 66 Ohms	340W 29 Ohms
Output regulations 1 kHz 100V line	Better than 1 dB	
Output voltages obtainable by pin selection	50 & 100 V	
Supply voltage AC	220 - 240V 50-60 Hz	
Power consumption		
Quiescent	18VA	26VA
Rated output power @ 1 kHz	300VA	700VA
Fuse protection		
1 x AC supply 20 x 5mm	3.15A(T)	6.3A(T)
2 x DC (amplifier) auto blade type	10A(F)	20A(F)
1 x DC Aux output 20 x 5mm	2A(T)	2A(T)
Input type	2 x line balanced with priority gating	
Input sensitivity	0.5V @ 40K Ohms balanced	
Input common mode rejection ratio 50 Hz - 30 kHz Frequency response - 3dB@ Signal to noise ratio Selectable high pass filter	Better than 40 dB typically 60 dB 40 Hz - 20 kHz Better than 85 dB 200 Hz 12 dB/octave	
DC Aux output	30V @ 1.5A max.	
LED indicators	Output level indicator 5V 25V 50V 100V Inputs busy, i.e. accessed	
Terminations		
AC supply input	3-pin	DIN IEC 6A
Line signal inputs	4-pin	Screw terminated connector
DC Aux output	2-pin	Crimp terminated connector
Loudspeaker line output	3-pin	Screw terminated connector
Fan Assisted	No	Yes
Dimensions (cm) (D x W x H)	340 x 430 x 90	340 x 430 x 132
Weight	12kg	18kg

## Mitre Tuner Specification

FM tuning range	87-108 MHz	
Sensitivity for 40 dB signal to noise ratio (ref. to $\pm 22.5$ kHz)	20 dB $\mu$ typical	
IF frequency	10.7 MHz	
IF rejection @ 98 MHz	70 dB typical	
Image rejection @ 98 MHz	80 dB typical	
AM rejection @ 98 MHz	70 dB typical	
Antenna input impedance	75 Ohms unbalanced	
AM tuning range	525-1605 kHz	
Sensitivity for 30 dB signal to noise ratio (ref. to 30% modulation)	40 dB $\mu$ typical	
IF frequency	450 kHz	
IF rejection @ 1050 kHz	55 dB typical	
Image rejection @ 1050 kHz	36 dB typical	
AGC @ 1050 kHz	60 dB typical	
Antenna input impedance	To suit loop antenna	
Pre-set channel selection	7FM 7AM 1 Aux	
Tuned frequency indicator	4	7 segment LED displays
Channel indicator	1	7 segment LED display
Memory battery back-up	90 days	

## Mitre Integrated Technical Specification

	60W	120W	300W
Rated output power 100V line 230V AC supply	60W 166 Ohms	120W 83 Ohms	300W 33 Ohms
THD 1 kHz rated output Aux input 230V AC supply	Less than 0.5% typically 0.2%		
Typical output power 1% THD Aux input 230V AC supply	80W 125 Ohms	150W 66 Ohms	340W 29 Ohms
Output regulation (1 kHz 100V line)	Better than 1dB		
Output voltages obtainable (Pin selection)	50 & 100V		
Supply voltage AC	220 - 240V 50-60 Hz		
Power consumption @ 230V			
Quiescent	12VA	18VA	26VA
Rated output power @ 1 kHz	150VA	300VA	700VA
Fuse protection			
1 x AC supply 20 x 5mm	2A(T)	3.15A(T)	6.3A(T)
2 x DC (amplifier) auto blade type	5A(F)	10A(F)	20A(F)
1 x DC Aux output 20 x 5mm	2A(F)	2A(F)	2A(F)
Aux input phono stereo summed mono			
Sensitivity	100mV @ 20k Ohms		
Frequency response - 3 dB@	40Hz - 20 kHz		
Signal to noise ratio	Better than 80 dB		
Tone controls			
Bass	±12 dB @ 100 Hz		
Treble	±12 dB @ 12 kHz		
Universal input (line)			
Sensitivity	80mV @ 12K balanced		
Frequency response - 3 dB@	40 Hz - 18 kHz		
Signal to noise ratio	Better than 70 dB		
Universal input (Mic)			
Sensitivity	600µV balanced		
Input impedance			
Without phantom power	12k Ohms		
With phantom power 15V	660 Ohms		
Frequency response - 3 dB@	40 Hz - 18 kHz		
Common mode rejection ratio 50 Hz - 30 kHz	Better than 60 dB		
Signal to noise ratio terminated 200 Ohms	Better than 60 dB		
System busy output	Open collector 0.5A @ 40V total max.		
Aux line output level	0 dBm transformer isolated		
Source impedance	100 Ohms		
Busy/restoration relay output	2 pole changeover 5A @ 100V max.		
DC Aux output	30V @ 1.5A max.		
4-zone relay output	N/A	N/A	5A @ 100V max.
LED indicators	1 per universal input (indicates busy state)		
Terminations			
AC supply input	3-pin DIN IEC 6A		
Aux signal input	2 x phono, stereo summed mono		
Universal input	6-pin, Screw terminated connector		
Alarm trigger & 0 dB line output	4-pin, Screw terminated connector		
Busy/restoration relay output	8-pin, Screw terminated connector		
Loudspeaker line output	3-pin, Screw terminated connector		
Fan assisted	No	No	Yes
Dimensions (cm) (D x W x H)	340 x 430 x 90	340 x 430 x 90	340 x 430 x 132
Weight	11kg	12kg	18kg

## M2RACK M3RACK MWALL

Mounting kits are available for rack or wall mounting the Mitre units. Two sizes of rack mountings are available - for 2 units M2RACK and for 3 units M3RACK, and the wall mounting bracket is standard size, reference MWALL.