



DATA SHEET DS46-01

# MUSTANG COMMUNICATIONS LTD

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## MMA MIXER-AMPLIFIER RANGE

The comprehensive MMA range is suitable for cost-effective incorporation in a variety of small scale priority paging and music systems, factories, schools and hotels, etc. Various output powers combined with a flexible input module system and the ability to combine several MMA units ensures complete compliance with the users operating requirements. Auxiliary output/input facilities also enable full system configuration with any other Mustang amplification, zone controls, volume controls, etc. Construction is extremely robust yet admirably accessible for maintenance staff. Standard units are for 19" rack mounting, 2U height, but an optional factory fitted free-standing case may be specified.

The plug-in modules - selected from the range shown below may be changed or supplemented at any time to suit system revisions.



## MAIN FEATURES

- Extremely robust design
- Priority input capability for paging
- Priority controlled DC current sink to operate zone relays/busy lamps, etc.
- 0dB input/output access points for system expansion, tape recording, etc.
- 50Watt and 100Watt output options
- Simultaneous low impedance and 100V outputs
- Full range of plug-in modules to meet all system requirements.
- Plug-in driver circuit modules featuring advanced electronics for accuracy and reliability.
- Laced cableforms throughout
- Robust output devices plug-in to massive heatsink system.
- Convection cooled for supreme reliability
- Generous power and output transformers provide effortless performance.
- Stabilised mixer supply
- Free-standing cased, or standard 2U rack mounting versions
- Full electronic protection
- Robust locking DIN connectors
- 24V DC output to operate remote relays, lamps, or remote pre-amplifiers, etc.
- Optional spindle-locked controls in place of front gain control knobs.
- Optional automatic level facility
- Optional XLR connectors



# MMA MIXER-AMPLIFIER RANGE

## TECHNICAL SPECIFICATION

DATA SHEET DS46-01

	MM.4	MM.6	MMA.704	MMA.706	MMA.1404	MMA.1406	A.70	A.140
Format	Mixer only		Integrated mixer-amplifier				Slave amplifier	
Power output. Continuous sine wave rated	N/A		50W RMS		100W RMS		50W RMS	100W RMS
Output matching	N/A	N/A	4-8-16 ohms, 100V balanced, floating with centre tap					
Input module capacity	4	6	4	6	4	6	N/A	
Input module type	Select as required from the range illustrated below						N/A	
Treble & Bass control groups	1	2	1	2	1	2	N/A	
User controls	Individual input gains, treble, bass, master, power on-off						Power on-off	
Priority (optional use)	Input No.1						N/A	
Frequency response	N/A		-3dB @ 20Hz, -0.5dB @ 20kHz 8 ohms ref. 1kHz; -3dB @ 20Hz - 20kHz 100V output ref 1kHz					
S/N ratio	N/A		92dB					
Total harmonic distortion.	N/A		Typically 0.3% 8 ohm output					
100V line regulation	N/A		Better than 2dB no load/maximum load					
Input sensitivity and signal to noise ratio	Dependent upon input module(s) fitted - see other data sheet						N/A	
Mixer output or mixer facility level	0.775V @ 600 ohms pre master level control; 0.775V @ 10k ohms post-master level control (power amplifier input).							
Tone controls	±13dB @ 100Hz; ±17dB @ 10kHz ref 1kHz.						N/A	
Priority access current	2mA						N/A	
Auxiliary DC supply output	24V nominal. Maximum load 1A. Fused						N/A	
Priority sink outputs	Absolute maximum 500mA per sink @ 40V. Unfused						N/A	
Input connectors	Locking DIN 5 pin 180° (not supplied). Mustang part No. 5-180							
Mains connector	3-pin 6A IEC (supplied)							
Audio power output and sink connections	N/A		4BA (M3.5) barrier terminals to suit wire ends, spades or rings					
AC Mains supply voltage	220/240V AC 50/60Hz; 115V option is available - please contact the factory							
AC Mains supply fuse	2A(T) mains							
Net weight	4.5kg exc. modules		11kg excluding modules		11.5kg excluding modules		11kg	11.5kg
Dimensions (19" style)	483 x 88 x 328mm (2U fitting) excluding connectors. Allow 40mm FMS for handles							
Dimensions (free-standing)	441 x 95 x 328mm excluding connectors. Allow 40mm FMS for handles							

## MODULE RANGE

MODULE	FUNCTION	MODULE	FUNCTION
M.60	Multi-purpose transformer balanced microphone & line, with phantom DC supply	TG.2	Tone generator - 1kHz tone pips and continuous tone
M.60TB	Multi-purpose transformer balanced mic/line, phantom DC. Treble & bass adjustment	TG.3	Tone generator - 1kHz gongs
L.50	Multi-purpose transformer high level balanced line	TG.5	Tone generator - Warble alarm and Dee-Dah alarm
M.6	Microphone 30-200 ohms, transformer balanced, with phantom supply	XAM.2	Tuner, AM, fixed single station
QM.6	Microphone 30-200 ohms, transformer balanced, three-tone chime, phantom supply	VFM.4	Tuner, VHF-FM, single selectable station
G.4	Phono-turntable pick-up with RIAA ceramic/magnetic equalisation		
T.5	Line input, wide range sensitivity, unbalanced general purpose		
L.5	Line input, transformer balanced, medium to high level input		

## QUALITY ASSURANCE

Guided by a policy of non-obsolescence, every part for the MMA range of amplification is carefully manufactured direct from raw materials to ensure total control of all aspects of quality and delivery.

Every sub-assembly and finished amplifier is exhaustively and individually tested. All procedures meet our internal Quality Assurance standards, which in turn are maintained to ISO.9002.



## CONTACT

We will be pleased to receive enquiries regarding application of the MMA range, either by phone, fax, or email.

*In the interests of continuous development, specifications are subject to change without notice.*  
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Electromagnetic compatibility (EMC) directive 89/336/EEC and amendment directive 92/31/EEC  
This equipment has been designed and manufactured to the highest standards. If connected and operated as set out in this manual, there should be no Electromagnetic Compatibility problems. If any aspect of operation gives rise to concern, then please contact the manufacturer for advice.