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MACRO MODULE DATASHEET - M240 SERIES (EXTRACT OF MACRO MANUAL ISSUE No.7)

MICROPHONE & LINE INPUT MODULES	
M240	Universal low impedance microphone input, transformer balanced.
M260	Low impedance transformer balanced microphone input with chimes
M280	Low impedance transformer balanced microphone input, audio operated priority
L240	Universal line input, transformer balanced, 50mV - 100V
L270	Universal line input, transformer balanced, 50mV - 100V, chimes.
L300	Universal line input, transformer balanced, 50mV - 100V, audio activated priority.
L330	Auxiliary unbalanced line input, 50mV- 0.775V, priority/passive
L340	Auxiliary unbalanced line input, 50mV - 0.775V, priority, chimes (no CDM)
NON-PRIORITY MODULES	
E260	RIAA equalised 5mV @ 50K for magnetic phono cartridge Flat response, 80mV to 1V for ceramic phono cartridge
TONE GENERATOR MODULES	
T260	Repeating gongs with timer, priority hold & memory
T270	Multi function alarm tone generator. Provides dee-dah, whoop, warble, time pips, dashes, and continuous. Momentary triggering or with timer, priority hold & trigger memory.
T300	Trimphone telephone simulator, momentary triggering
T320	Triple chimes with timer, priority hold, & memory

Table 1 The current range of input modules

MODULE FEATURES & GENERAL SPECIFICATIONS

MICROPHONE INPUT MODULES	M240	M260	M280
Transformer or Electronic balanced	T	T	T
Priority only or priority/passive option	PP	PO	PO
Priority controlled current sink	✓	✓	✓
Chimes & Chime Duration Monitor sink	✓	✓	✓
Phantom DC supply	✓	✓	✓
Audio activated priority (VOX)	✓	✓	✓
Bass cut facility	✓	✓	✓

GENERAL SPECIFICATIONS - MICROPHONE INPUT MODULES

Input mode	Transformer balanced, centre tap by-passed to Audio 0V
Sensitivity range	100uV to 100mV
Input impedance	Suitable for 200 ohm microphones
Frequency response -3dB points	60Hz - 20kHz
Bass cut response	-3dB @ 300Hz -6dB @ 200Hz
Signal to noise ratio	66dB minimum
Input overload capability	50dB
Sink capability (mA max. continuous)	250mA
Phantom supply	+15V via 1k0
VOX delay	3 seconds maximum

DIL switch settings for Microphone input modules M240/260/280

DIL switch	1	2	3	4	5	6
100uV - 1mV sensitivity	on					on
1mV - 10mV sensitivity		on		on		
10mV - 100mV sensitivity		on		on	on	
Phantom supply enable (all sensitivities)			on			

LINE INPUT MODULES	L240	L270	L300	L330	L340
Transformer input or unbalanced	T	T	T	U	U
Priority only or Priority/passive switchable	PP	PO	PO	PP	PP
Sensitivity 50mV - 100V	✓	✓	✓		
Sensitivity 50mV - .775V				✓	✓
Priority controlled sink	✓	✓	✓	✓	✓
Chimes		✓			✓
Chime Duration Sink		✓			✓
Audio activated priority (VOX)			✓		✓

GENERAL SPECIFICATIONS - LINE INPUT MODULES

Input mode	Transformer balanced, fully floating
Sensitivity range and impedance L240/270/300	50mV-650mV @ 10k; 600mV-8V @ 10k; 8V-100V @ 100k
Sensitivity range and impedance L330/340	50mV-775mV @ 4k7 nominally
Frequency response -3dB points	20Hz - 18kHz
Signal to noise ratio	58dB minimum
Input overload capability	50dB
Sink capability (mA max. continuous)	250mA
VOX delay	3 seconds maximum

DIL switch settings for Line input modules L240/260/280

DIL switch	1	2	3	4	5	6
50mV - 650mV sensitivity @ 10k load	on				on	on
600mV - 8V sensitivity @ 10k load	on			on	on	on
8V - 100V sensitivity @ 100k load		***		on	on	
600 ohm line termination resistor enabled		on				

*** Note: To avoid damage, ensure that this switch position is off

TONE GENERATORS	T260	T270	T300	T320
Momentary or timed triggering	M/T	M/T	M	M/T
Adjustable tone frequency	✓	✓	✓	✓
Priority hold forfull tone sequence	✓	✓		✓
Priority memory	✓	✓		✓
Adjustable duration timer	✓	✓		✓
Adjustable rate of character	✓	✓		✓
Character selectable by DILswitch		✓		

GENERAL SPECIFICATIONS - TONE GENERATOR MODULES

Trigger switch requirements	1.5mA maximum @ +15V DC
Duration timer	2 - 30 seconds approx
Trigger memory capacity	Indefinite
Sink capability (max. continuous)	250mA
Generated frequency range (T270)	250Hz to 1200Hz, but depends on character
Rate of character	Depends on character

DIL switch settings forTone generator modules T270

DIL switch	1	2	3	4	5	6	7	8
Dee-dah, variable rate		on	on		on			on
Dee-dah, slow, fixed rate		on	on		on			
Dashes, variable rate			on	on				on
Dashes, slow, fixed rate			on	on				
Slow whoop (bomb alert)	on			on				
Warble, variable rate	on	on	on		on			on
Warble, slow, fixed rate	on	on	on		on			
Time pips, variable rate			on	on	on	on		on
Pips, slow, fixed rate			on	on	on	on		
Continuous tone only		on	on					on

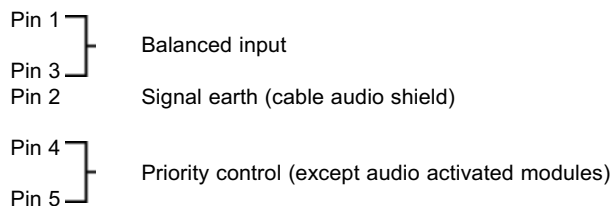
MISCELLANEOUS MODULES	E260	
Function	Magnetic phono pre-amp	Ceramic phono pre-amp
Sensitivity	5mV@50k	80mV-1V @ 1M
Equalisation	RIAA	Flat

Input connections

Standard amplifiers are fitted with Locking 5 pin DIN input connectors on a 180 degree spacing pattern. See the diagram below to identify the pin numbers. The input connections will vary depending upon which module is being used in the corresponding module position, as follows:

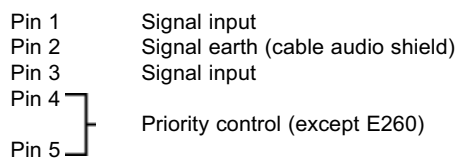
Balanced microphone & line input modules i.e. M240 to M280 and L240 to L300 inc.

Standard Locking 5 pin DIN -



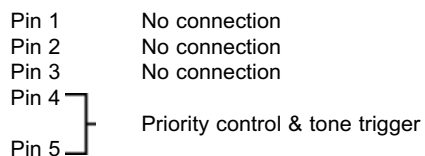
Auxiliary inputs and music modules i.e. L330, L340, E260.

Standard Locking 5 pin DIN -



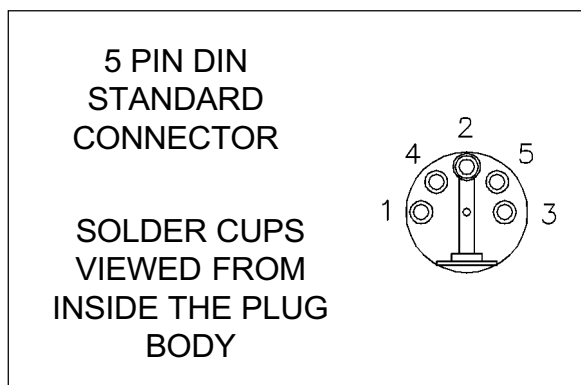
Tone generator modules i.e. T260 to T320 inclusive

Standard Locking 5 pin DIN -

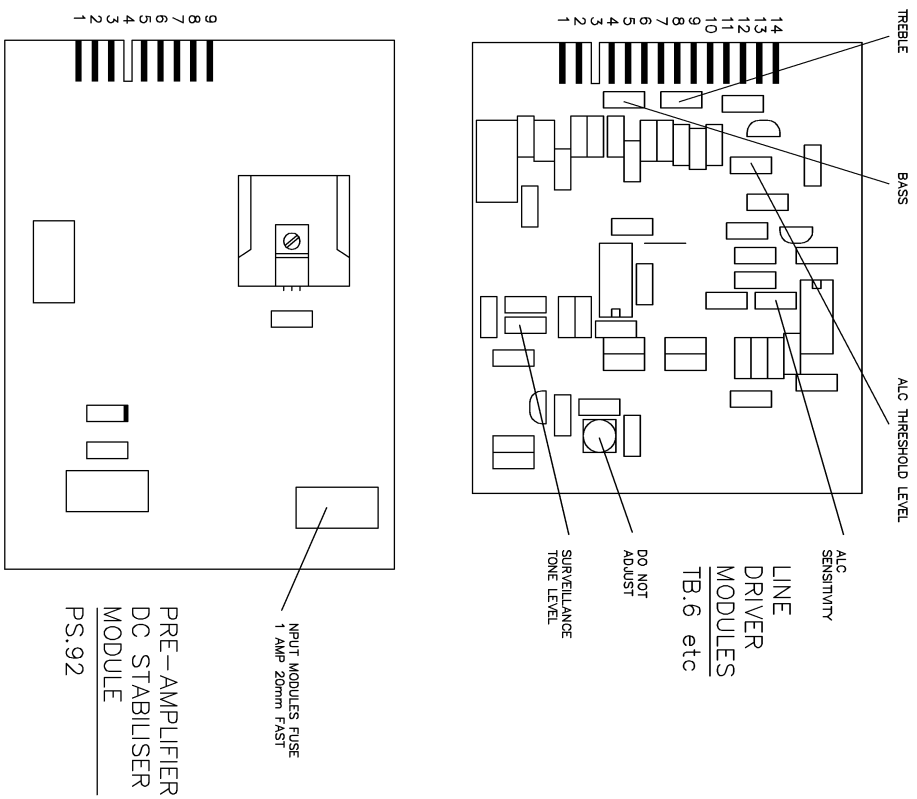
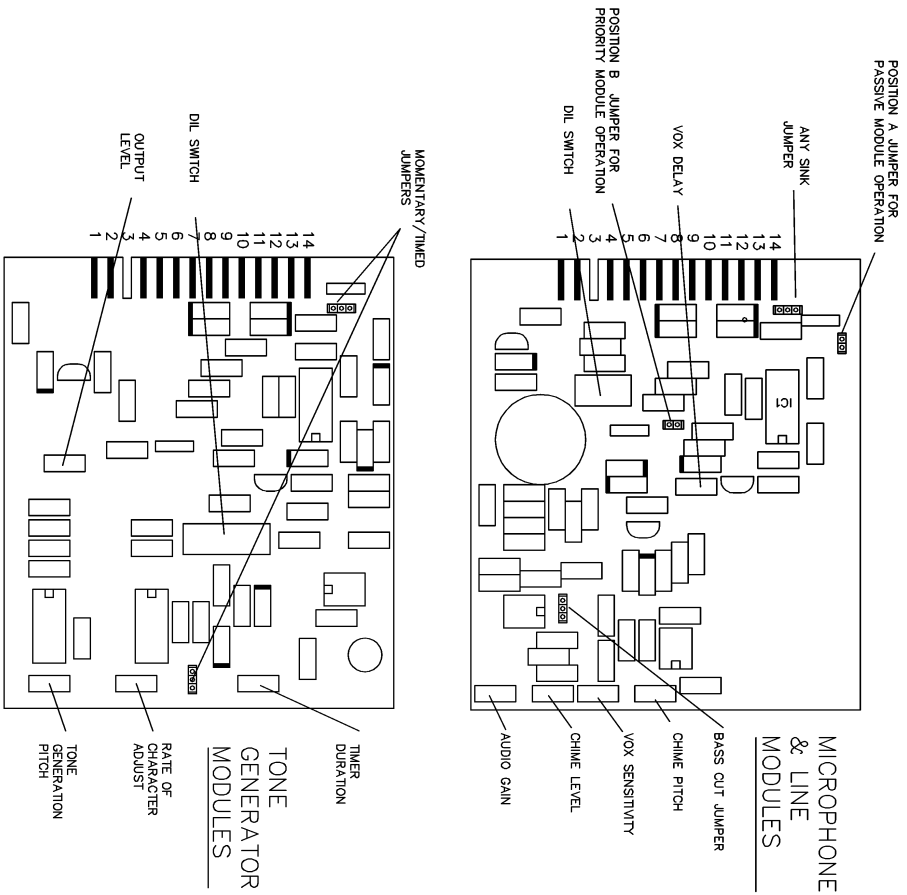


Module adjustments

Various adjustments are available on each module, dependent on type and function. The general locations are shown in overleaf.



Locking 5 pin DIN connector plugs are not furnished automatically with the unit, and must be ordered as a separate item.



NOTE: FEATURES AND ADJUSTMENTS FITTED DEPEND UPON EXACT MODULE TYPE

VIEW FROM COMPONENT SIDE

REV	DESCRIPTION	APPD	DATE
1	CHANGES TO REPRESENT BLACK MACRO		06-06-02

MUSTANG COMMUNICATIONS LTD SCARBOROUGH ENGLAND YO11 3UT Phone 01723-582555 Fax 01723-586773 dtdc@mustang.co.uk www.mustang.co.uk		CUSTOMER REF DRAWING TITLE MACRO AMPLIFIER RANGE LOCATION OF MODULE ADJUSTMENTS & FUSES	©1998 COPYRIGHT MUSTANG COMMUNICATIONS LTD DRAWN TRACED CHECKED APPRD DATE MRT MAC-1140 25-03-91
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