

# LIGWA M62 & M42 LOUDSPEAKER MANAGEMENT CONTROLLER



## Product Description:

In its basic configuration the Ligwa M62 & M42 are powerful '2 in 6 out' or '2 in 4 out' digital system controllers which provide multiple X-Over, EQ, Delay and Limiting options. Using DSP-based digital crossovers with 96kHz sampling rates, this versatile controller will enable simple configuration and Optimisation of loudspeakers in terms of speaker management and room EQ functionality.

Equalisation is provided on each input and output section with two shelving filters and six fully variable parametric sections. Butterworth, Bessel, Linkwitz Riley and Hardman filters are available.

A high performance, low distortion limiter is incorporated on each output; threshold is user adjustable with two LED's provided for each output channel to indicate the signal level relative to the Limiter threshold.

Attack and release constants are automatically calculated by the M62 dependant on frequency. Input and output gain is adjustable in 0.2dB steps from -40dB to +15dB. Input delay is adjustable in variable steps from 0 to 400ms and output delay is adjustable to 80ms.

Set up of the unit is exceptionally simple thanks to the intuitive signal flow based interface, or it can be controlled from a PC with Ligwa's standard *m62*<sup>TM</sup> software. Any of the inputs (A, B, or sum) can be routed to any output with the unique routing engine of the m62.

The *m62* can also be linked, via its RS232 connector, to a laptop computer or other PC and controlled using *m62*<sup>TM</sup> software. This will provide improved access to the configuration functionality via simple on-screen graphics.

The universal switch mode power supply automatically adapts to mains voltages from 85 to 240 volts

## Features common to both models:

- Two balanced XLR analogue inputs and six balanced XLR outputs M62
- Simple configuration and optimisation of loudspeakers in terms of speaker management and room EQ
- Intuitive signal flow based interface and 2 x 24 character backlit LCD
- Unique routing engine allows any input to be sent to any output
- Butterworth, Bessel, Linkwitz Riley and Hardman type filters are available on all outputs
- Input and output gain is adjustable in 0.2db steps from -40db to +15db
- Input delay adjustable in variable steps from 0 to 400ms, while output delay is adjustable to 80ms
- Automatically calculated attack and release constants dependant on frequency
- RS232 connector enables connection to a Laptop computer or other PC for enhanced control functions using M62 software
- Automatically adapting universal switch mode power supply -85 to 240 volts

## General

Inputs	2
Input Impedance	>10k Ohm electronically balanced
Outputs M62	6
Outputs M42	4
Maximum Input level	+20dBu
Output Impedance	<100 Ohm, ground balanced
Maximum Output Level	+20dBu into 600 Ohm load
Sample Rate	96kHz
Bit Depth	24 bit
Frequency Response	10Hz to 40kHz, +/- 3dB (filters disabled) 20Hz to 20kHz, +/- 0.5dB (filters disabled)
THD	<0.01%, (+10dBu, 20Hz to 20kHz, 30kHz bandwidth)
Dynamic Range	>112dB (A weighted, 22kHz bandwidth) >109dB (un-weighted, 22kHz bandwidth)
Serial Comms Data	38.4kbaud, format: 8 data, 1 stop, no parity

## Processing

Gain	+15dB to -40dB and mute, 0.2dB steps
Output Ch. Source	Input A, Input B and SUM
Delay	Input 400ms, output 80ms
Limiter	High performance limiter, adjustable threshold in 0.2db steps, Automatic time constants
EQ Frequency	10Hz to 25 KHz, 1/36 octave steps
EQ gain	+15db to -15db, 0.2db steps
EQ width	5.0 to 0.1 octave bandwidth, 1/36 octave steps
HP filter frequency	Off, 10Hz to 25.4kHz, 1/36 octave steps
LP filter frequency	10Hz to 25.4kHz and off, 1/36 octave steps
LP / HP filter type	12, 18 & 24dB/octave Bessel and Butterworth 12, 24 and 48dB/octave Linkwitz Riley 4th or 8th order Hardman

## Connections

Audio inputs	3 pin female XLR
Audio outputs	3 pin male XLR
Serial comms	Available via R232 port
Network comms	2
Mains	3 pin IEC
Mains Power	Universal switch-mode PSU 85v to 240v AC, 50/60Hz
Consumption	< 25watts
Dimensions	45mm (H), 482mm (W), 254mm (D)
Weight	2.7Kgs net / 5.94 Ibs net



Enterprise House,  
40 Jasmine Grove,  
London  
SE20 8JW

Sales +44(0)208 402 7129  
Fax +44(0)7043 070421  
Mobile +44(0)7984 937109