



M Series Automotive Power  
Amplifiers:  
Models M3 and M4

## Product profile



JBL M series amplifiers (models M3 and M4) exact full performance from loudspeaker components and head units, bringing the entire automotive audio system to the highest level of fidelity possible. Providing an ideal balance between high power and low distortion, M series amplifiers are designed specifically for operation within the automotive electrical environment. The M3 and M4 are electronically and acoustically compatible with almost any combination of automotive audio components.

The high-powered M3 is capable of 100 watts RMS per channel in stereo mode and 250 watts RMS in bridged, single channel mode, with 300 watts peak music power. The versatile M4 offers user-selectable 2, 3 or 4-way operation for exceptional flexibility, making it ideal for multi-way subwoofer systems. Both amplifiers feature continuous forced air fan cooling for cleaner operation and longer life.

## Product profile

### M Series Automotive Power Amplifiers: Models M3 and M4

A pulse width modulated (PWM) power supply with digital voltage regulation circuitry allows the M3 and M4 amplifiers to operate at maximum efficiency within the electrically unstable automobile environment. The power supply incorporates costly MOSFET switching devices and specialized input and output filters to prevent switching noise from becoming audible. A low-profile, self-shielding air-core toroidal power transformer provides additional noise protection and runs cooler under high power operation. Isolated signal and power supply grounds greatly reduce the possibility of noise created by ground loops within the audio system.

Discrete output circuitry improves transient response and reduces audible distortion artifacts, providing more stable operation in the presence of low impedance down to 2 ohms in the stereo mode. Both the M3 and M4 are electrically protected from surges in line voltage by an in-line fuse. Forced air fan cooling systems operate whenever the M3 or M4 is turned on, providing constant air flow across the heat sink. The fan-driven cooling system is isolated from the amplifier circuitry to prevent airborne contamination of the circuit board area and individual electronic components.

Used in the two or four-channel mode, the M4 amplifier provides excellent full-range performance. In the three-channel mode, the M4 sends 40 watts of power to a stereo pair of speakers and 100 watts to a dedicated subwoofer system. An electronic subwoofer crossover and three user-selectable crossover points allow optimum low-frequency tuning within the automotive acoustic environment.

As with all JBL products, only the highest quality materials, components and design features are incorporated into the M3 and M4 amplifiers for uncompromised performance and reliability. A prime example is the use of dual-sided printed circuit boards (instead of conventionally used tightly packed, single-sided printed circuit boards) to reduce the possibility of particle buildup. Epoxy coating further eliminates conductive residue from forming on the boards surface and provides moisture resistance.

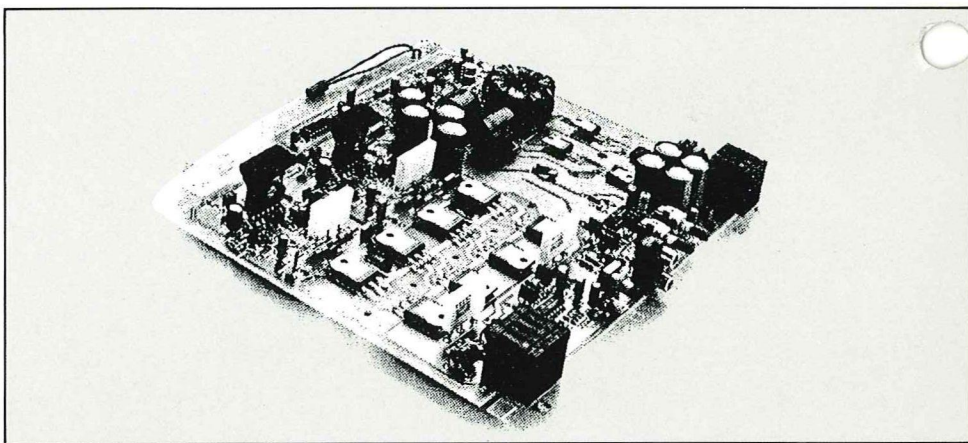
A unique template mounting system makes the M3 and M4 easy to install and remove, and provides a clean, well-finished look.

#### M3 specifications

Power Output per channel (stereo operation):	100 watts RMS, 20 Hz-20,000 Hz
Power Output single channel (bridged operation):	250 watts RMS, 20 Hz-20,000 Hz 300 watts peak music power (1 kHz, 1% THD)
Total Harmonic Distortion stereo operation:	0.05%, 20 Hz-20,000 Hz
bridged operation:	0.05%, 20 Hz-20,000 Hz
Input Sensitivity (100 watt output, 4 $\Omega$ ):	300 mV
Input Sensitivity Adjustment Range:	300 mV-2.0V RMS
Signal-to-noise Ratio:	Better than 100 dB
Input Impedance:	20k $\Omega$
Idle Current:	<2A
Dimensions (W x H x D)	14" x 2 1/4" x 10" (355mm x 57mm x 254mm)

#### M4 specifications

Power Output per channel (4-channel operation):	40 watts RMS, 20 Hz-20,000 Hz
Power Output per channel (2-channel operation):	100 watts RMS, 20 Hz-20,000 Hz
Power Output per channel (3-channel operation):	40 watts RMS x 2 100 watts RMS x 1
Total Harmonic Distortion 4-channel operation:	0.05%, 20 Hz-20,000 Hz
2-channel operation:	0.05%, 20 Hz-20,000 Hz
Input Sensitivity (40 watt output, 4 $\Omega$ ):	300 mV
Input Sensitivity Adjustment Range:	300 mV-2.0V RMS
Signal-to-noise Ratio:	Better than 100 dB
Input impedance:	20 k $\Omega$
Idle Current:	<2A
Subwoofer Crossover Frequencies:	50 Hz, 80 Hz, 120 Hz
Dimensions (W x H x D)	14" x 2 1/4" x 10" (355mm x 57mm x 254mm)



JBL continually engages in research related to product development and improvement. Because of this, new materials, production methods and design refinements may be introduced into existing products without notice. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

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JBL Incorporated  
8500 Balboa Boulevard  
Northridge, California 91329 USA