

# M-Class Dual-Channel Amplifiers



## Models M600, M450 and M300

### Description

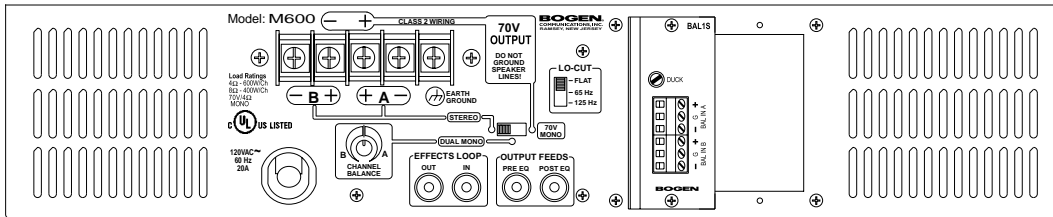
Bogen's M-Class delivers on what professional sound installers need most: Flexibility, Power, and Reliability. Flexibility - 3 modes of operation: Stereo, 70V Mono, or Dual Mono; 2 modular input bays for a variety of prioritized input types. Power - up to 600W/ch stereo or 1200W of 70V mono power. Reliability - Massive power toroid and heat sinks, heavy 14-gauge chassis, Back-Slope™ AC voltage stabilization, Clip limiters, DC voltage, over-current, and thermal protection circuits. All this wrapped into 2 rack spaces of some of the best looking metal in the industry.

### Features

- 3 mono power levels: 1200W, 900W, or 600W for 70V speaker systems
- 3 stereo power levels: 600W, 450W, or 300W per channel @ 4 ohms
- 3 modes of operation to choose from - Stereo, Dual Mono, or 70V Mono
- Low noise, low distortion, and high slew rate
- Flexible modular input capability (2 module capacity)
- Professional, dual-channel (balanced or unbalanced), high-impedance input module (Model BAL1S) included
- 3 selectable low-frequency, roll-off choices
- 2x1 mixer function when in mono modes
- Insert connections for outboard equipment (in mono modes)
- Post- and Pre-EQ Output Feeds (summed mono out in stereo mode)
- DC, overload, short circuit, and thermal protection circuits
- Clip limiting circuits for speaker protection
- Power-saving Sleep Mode for intermittent use applications
- Status, Signal, and Clip/Limit indicators
- Back-Slope AC voltage stabilization for dependable performance over varying AC line voltages
- Heavy-gauge steel chassis with cast aluminum front panel
- Recessed volume control knobs with snap-on protective cover
- Mounts in 2 rack spaces (3-1/2") directly stackable without need for extra space above or below
- 2 independent, continuously variable, cooling fans for dependable and quiet operation
- Easily removable front fan grilles with filters
- Stable into 2-ohm loads

**BOGEN®**

Specifications subject to change without notice.  
© 2001 Bogen Communications, Inc.  
Part No. 54-5092-01R1 Printed in U.S.A. 0101



Technical Specifications	M600	M450	M300
Power Output			
70V mono	1200W @ 4 ohms	900W @ 5.5 ohms	600W @ 8 ohms
4-ohm	600W per channel*	450W per channel*	300W per channel*
8-ohm	400W per channel*	300W per channel*	200W per channel*
Input Sensitivity	1.225V	1.06V	0.866V
S/N Ratio (20K BW)	109dB ref. 8 ohms, F.P.	106dB ref. 8 ohms, F.P.	103dB ref. 8 ohms, F.P.
Class of Operation	H	H	AB
Product Weight	46 lbs.	44 lbs.	41 lbs.
Connectors: Power	20A line cord	15A line cord	15A line cord
Input	2 new Bogen std. 12-pin connector modules		
Output	5-pin "touch-proof" Barrier Strip, RCA Pre- & Post-EQ Output		
Power Bandwidth	20-40kHz .5% THD		
THD @ 1kHz rated power	less than .02%		
Load Impedance	4-8 ohms, 70V		
Minimum Load Impedance (Stereo)	3.2 ohms		
Frequency Response @ 1 watt	20-20kHz +/- 0.25dB		
Output Regulation, 1kHz direct	0.5dB @ 8 ohms		
1kHz bridged	1.5dB @ 70V		
Inputs	BAL1S Standard, other modular input types available		
AC Input Voltage Range	95-130V AC, 60 Hz		
Indicators	Status (On/Protect/Sleep), Clip/Limit, Signal		
Temperature Range	15 to 105 degrees F		
Cooling	Forced Air Variable Speed Fan		
Physical Dimensions (W x H x D)	17" x 3.5" x 16"		
Protection	RF, DC, Low-frequency, Thermal, Low-impedance, Circuit Breaker, Short Circuit		
Special Features	Sleep Mode, Back-Slope regulation, Stereo, Dual Mono, 70V Mono Operation, Toroidal Power Transformer		

\* Both channels driven at nominal line voltage 120V AC, 60Hz.

## Architects and Engineer Specifications

The amplifier shall be a Bogen M-Class Amplifier, Model M600, M450 or M300. The amplifier shall provide a 70V mono output capability of 1200, 900 or 600 watts respectively. It shall also incorporate two independent amplifier channels rated at 600, 450 or 300 watts/channel into 4 ohms, respectively.

The amplifier shall provide 2 module bays for the installation of various input module types. A dual-channel (balanced or unbalanced), high-impedance input module shall come installed as a standard module in the amplifier.

The amplifier shall be capable of 3 distinct modes of operation. These are Stereo, Dual Mono, and 70V Mono. In Dual Mono and 70V Mono, the amplifier shall provide the function of a 2 x 1 mixer of the installed input modules. Additionally, in the Dual Mono and 70V Mono modes, the amplifier shall allow one module to mute the other installed module if desired.

The amplifier shall drive the speaker load directly without the use of an output transformer. The amplifier shall allow a user-selectable low frequency roll-off of 65Hz, 125Hz, or no roll-off.

The amplifier shall have a defeatable sleep mode that greatly reduces idle power consumption when the amplifier has not received audio for more than 3 minutes. The amplifier shall also include a clip limiting feature that automatically reduces signal clipping.

The amplifier shall have three indicators that correspond to status, signal, and clip/limit.

The amplifier shall allow the connection of external signal processing equipment when in Dual Mono or 70V Mono modes. The signal flow shall automatically be diverted to external equipment when connected. The amplifier shall also provide both post- and pre-EQ signal feeds for distribution to other equipment.

The amplifier shall include a system that automatically compensates for surges or sags in AC line voltages of up to +/-10%. Additionally, the amplifier shall be protected against over-currents, overloads, excessive thermal dissipation, DC voltage, and short circuit on the outputs.

The amplifier shall be enclosed in a heavy-gauge steel chassis with recessed level control knob which can be protected by a removable plastic cover. The amplifier shall be cooled by 2 independent fans with continuously variable speed control and easily replaceable fan filters.

The amplifier shall fit into a 19" rack and use two rack spaces. It shall allow the attachment of feet for tabletop placement.

**BOGEN**  
COMMUNICATIONS, INC.

50 Spring Street, Ramsey, New Jersey 07446, U.S.A.  
201-934-8500 FAX: 201-934-9832  
Web Site: www.bogen.com