

# DATA SHEET

## MA120

### 120W MIXING AMPLIFIER



The MA120 is a 120W single channel mixing amplifier. Designed for ease of use, the front panel of the MA120 includes volume and microphone controls, providing immediate visual feedback regarding system operation. The MA120 is equipped with four priority levels for audio routing: one emergency input, one paging input, two mic/line inputs, and four stereo line, mono summed inputs. It's audio performance, ease-of-use, and versatile feature set makes the MA120 ideal for a variety of professional audio applications.

#### FEATURES

- Single channel; 120 watts of continuous power
- Supports 4Ω and 70V/100V outputs
- Class D amplifier topology
- Intuitive front and rear panels
- Four priority levels for audio routing
- 24V priority output overrides local volume controls
- Dedicated emergency input with mute all switch
- Paging mic input with contact closure and chime
- Two mic/line level inputs with 48V phantom power
- Four stereo inputs
- Fanless operation
- Internal universal power supply
- Auto standby mode
- Rack mountable (2RU)
- CE marked, UL listed, and RoHS compliant
- Covered by Biamp Systems' five-year warranty

#### ARCHITECTS & ENGINEERS SPECIFICATION

The mixing amplifier shall provide 1 emergency input that shall be triggered by either contact closure or VOX level. The emergency input shall support user adjustable volume and VOX activation level via the rear panel. The mixing amplifier shall provide 1 paging input connection for receiving microphone or line level analog audio signals via Euroblock connectors. The paging input shall support volume control, user adjustable gain, and chime level via the rear panel. The mixing amplifier shall provide 2 balanced input connections for receiving microphone or line level analog audio signals via either Euroblock or RCA connectors. The balanced input shall support user adjustable gain and EQ via the rear panel. The mixing amplifier shall provide 4 unbalanced input connections for receiving line level analog audio signals via RCA connectors. Each unbalanced input shall support user adjustable gain via the rear panel. The mixing amplifier shall support 4 priority levels of audio transmission. The mixing amplifier shall provide output connection for the transmission of line level analog audio signals via Euroblock connector. The output channel shall support user adjustable EQ via the rear panel. The mixing amplifier shall include a switchable standby mode via the rear panel that reduces power consumption to 0.5 watts. The standby mode shall activate automatically after 10 minutes if no signal is detected. The standby mode shall be activated/deactivated manually by toggling the standby mode button on the front panel. The mixing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years. The mixing amplifier shall be Biamp® MA120.

## MA120 SPECIFICATIONS

INPUTS		OUTPUTS	
<b>Number of Inputs</b>		<b>Number of Output Channels:</b>	1
Emergency (line level with contact):	1	<b>Output Connectors:</b>	4-pin, 0.3 inch (7.6 mm) Euroblock
Paging Mic (mic level with contact):	1	<b>70V/100V Mode:</b>	Yes
Mic/Line (balanced):	2	<b>Low Impedance Mode:</b>	Yes
Stereo Line (unbalanced):	4	<b>Priority Output Contact:</b>	Yes
Input Priority Levels:	4	<b>Minimum Operational Load:</b>	4Ω
Priority Input Contact:	Yes	<b>Amplifier</b>	
Chime:	Yes	<b>Topology:</b>	Class D
Tone Control:	Yes	<b>RMS Output Power (1% THD):</b>	120 W
Wall Panel Controls:	Yes	<b>Dynamic Power:</b>	150 W
VOX Mute:	Yes	<b>SNR (1% THD):</b>	> 90 dB
Music Level Control:	Yes	<b>THD+N (@ -6dB):</b>	< 0.5%
<b>Front Panel Indicators:</b>	Signal present, clipping, overload condition, emergency mode active, paging active, VOX active	<b>Protection:</b>	Temperature, overcurrent, overvoltage, undervoltage
<b>Emergency Input</b>		<b>Priority Output</b>	
Nominal Input Sensitivity:	0 dBV (1 Vrms)	<b>Voltage:</b>	24V
THD+N (Pre-Out, @ -6dB):	< 0.5%	<b>Max Current:</b>	0.5A
Frequency Response (-3dB):	45 Hz - 20 kHz	<b>Pre-Out</b>	
Input Impedance:	5 kΩ	<b>Nominal Output Level:</b>	0 dBV
<b>Paging Mic</b>		<b>Standby</b>	
Nominal Input Sensitivity (Bal. Mic):	-45 dBV (5.6 mVrms)	<b>Wakeup Sensitivity:</b>	
THD+N (Pre-Out, @ -6dB):	< 0.4%	<b>Inputs 1-4:</b>	-43 dBV (6 mVrms ± 10%)
Frequency Response (-3dB):		<b>Mic A, B (RCA):</b>	-50 dBV (5 mVrms ± 10%)
Balanced Mic:	165 Hz - 20 kHz	<b>Mic A, B (Balanced, VOX off):</b>	-74 dBV (0.3 mVrms ± 10%)
Unbalanced, Balanced Line:	20 Hz - 20 kHz	<b>Time to Auto Standby:</b>	10 min
Gain:	-15 to +15 dB	<b>Power Consumption (100-240VAC 50/60Hz)</b>	
Chime Length:	2 sec	<b>Normal Operation:</b>	160W
Input Impedance:	2 kΩ	<b>Idle Operation:</b>	12.5W
<b>Mic A, B</b>		<b>Standby Mode:</b>	0.5W
Nominal Input Sensitivity:		<b>Cooling:</b>	Convection
Balanced Mic:	-45 dBV (5.6 mVrms)	<b>Overall Dimensions</b>	
Balanced Line:	-12 dBV (250 mVrms)	<b>Height (without feet):</b>	3.5 inches (89 mm)
Unbalanced Line:	-12 dBV (250 mVrms)	<b>Width:</b>	19 inches (483 mm)
THD+N (Pre-Out, @ -6dB):	< 0.2%	<b>Depth:</b>	11.8 inches (300 mm)
Frequency Response (-3dB):		<b>Weight:</b>	11.0 lbs (5.0 kg)
Balanced Mic:	165 Hz - 20 kHz	<b>Environmental</b>	
Unbalanced, Balanced Line:	20 Hz - 20 kHz	<b>Ambient Operating</b>	
Phantom Power (balanced only):	+48VDC (7mA/input)	<b>Temperature Range:</b>	32 - 95° F (0 - 35° C)
VOX Attenuation (Mic A, B, Inputs 1-4):	30 dB	<b>Humidity:</b>	0-95% relative humidity (non-condensing)
Input Impedance:	2 kΩ	<b>Altitude:</b>	0-6,600 ft (0-2000m) MSL
<b>Inputs 1-4</b>		<b>Compliance</b>	
Nominal Input Sensitivity (Unbal. Line):	-12 dBV (250 mVrms)		FCC Part 15B (USA)
THD+N (Pre-Out, @ -6dB):	< 0.1%		UL listed (USA and Canada)
Frequency Response (-3dB):	20 Hz - 20 kHz		CE Marked (Europe)
Input Impedance:	10 kΩ		RoHS Directive (Europe)

## MA120 BACK PANEL



## OPTIONAL ACCESSORIES



**ALINP**  
Active local input panel



**D-ALINP**  
Active local input panel  
(Decora® style)



**MICPAT-D**  
All call paging microphone

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