

# MA-355B

## 35-Watt Mixer Amplifier



### General Product Description

The Electro-Voice® MA-355B is a 35-watt, five-input mixer amplifier designed for commercial sound applications. It features five separate input controls which can be used to adjust the level from any of six input sources. Figure 1 shows the layout of the front and rear panels.

Input channels 1-3 are designed to be used as low-Z microphone inputs. The block diagram shown in Figure 2 outlines the signal flow for the MA-355B. A signal appearing at either input 1 or 2 will automatically mute the other channels unless the mute function is defeated via a switch on the rear panel. A threshold adjustment allows compensation for background noise to avoid false triggering. Input 4 is switch selectable to allow use as either a low-Z microphone or auxiliary line-level input. Microphone inputs 1-4 are available via female XLR connectors. A set of screw terminal connectors are also supplied and can be installed in place of the XLR connectors. Input 5 is for auxiliary line-level sources such as tape or CD players. Mono or stereo signals may be applied to inputs 4 or 5. The left and right components of a stereo signal can be applied to the dual RCA phono jacks of these inputs and mixed together to drive the built-in monaural power amplifier. A rear panel paging input with gain control is provided for the paging output of a telephone system. An audio signal appearing at this input automatically mutes all other inputs.

A preamplifier output jack and power amplifier input jack permit the mixed output to be fed to an external signal processor (graphic EQ or compressor) and then returned to the built-in amplifier. The preamp output may be used to drive an additional power amp with its own set of speakers without interrupting the function of the built-in amplifier. The internal connection between the preamp output and the power amp input is automatically broken when a connection is established to the power amp input. This prevents a "dry" unprocessed signal from interfering with the return from the external signal processor. The TAPE OUT jacks are not affected by the MASTER VOLUME control so that optimum recording levels for the preamp mix can be maintained.

The speaker output is available at a barrier strip which includes terminals for driving 4, 8 and 16 ohm loudspeaker loads, as well as 25 or 70.7 volt distributed systems.

### Architects' and Engineers' Specifications

The mixer amplifier shall have five input channels, with individual mix gain controls. Input channels 1 and 2 shall be configured for low-Z balanced microphone operation. A signal present on either of these two channels shall trigger the muting of channels 3, 4 and 5. The mute circuit shall be defeatable using a switch on the rear panel, and there shall be a threshold adjustment so that background noise in the Mic 1 or Mic 2 inputs can be prevented from falsely triggering the mute circuit. Input 3 shall be configured for low-Z microphone



operation. Input 4 shall be switch selectable to allow use as either a low-Z microphone or auxiliary line-level input. Microphone inputs 1-4 shall be available via female XLR connectors which can be replaced with the supplied screw terminal connectors. Input 5 shall be for line-level auxiliary input sources. Inputs 4 and 5 shall accept either monaural or stereo sources. If a stereo source is connected, it shall be properly mixed to mono via a resistor network mounted on the input plate. There shall be a paging input that accepts a 600-ohm line-level feed from a phone system. When a signal is present at the paging input, it shall automatically mute other input sources. The paging input shall be equipped with its own gain control.

There shall be a master level control, with LED bargraph output level indication. Separate bass and treble equalization controls shall be provided. The mixer amplifier shall meet the following performance criteria: output power shall be 35 watts; total harmonic distortion shall be less than 1% at 1 kHz; frequency response shall be within  $\pm 2$  dB from 60 Hz to 15 kHz; input impedance shall be 600-ohms (balanced inputs) or 47 kW (unbalanced inputs); nominal load impedance shall be 4-, 8- or 16-ohms for voice-coil-connected loudspeakers, 25- or 70.7-volt nominal transformer windings for the constant-voltage output.

In addition to a preamplifier output/power amplifier input link, there shall also be a line-level tape output which shall not be affected by the master volume control.

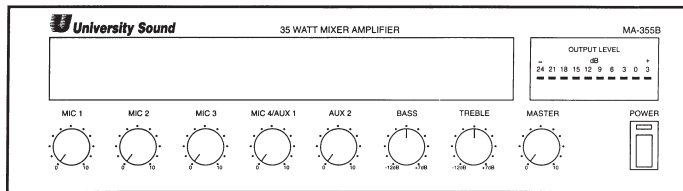
The mixer amplifier shall operate from a standard 120 V ac 50/60 Hz power source, and measure 10.8 cm (4.25 in.) high x 42.0 cm (6.5 in.) wide x 34.6 cm (13.6 in.) deep. The net weight shall be 7.3 kg (16.0 lb).

The mixer amplifier shall be the Electro-Voice® Model MA-355B.

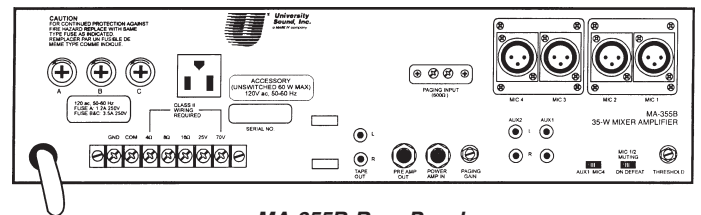
## Specifications:

**Power Output (at 1 kHz):** ..... 35 Watts  
**Frequency Response:** ..... 80 Hz - 15 kHz,  $\pm 2$  dB  
**Input Sensitivity/Impedance,**  
**Mic 1, 2, 3, 4:** ..... 0.3 mV/600 ohm (balanced)  
**Paging:** ..... -20 dBm/600 ohm (transformer isolated)  
**Power Amp In:** ..... 1 V/10 kohm (unbalanced)  
**Aux 1 and Aux 2:** ..... 100 mV/47 kohm (unbalanced)  
**THD (at rated output):** ..... <5% at 1 kHz  
**Signal-to-Noise Ratio,**  
**Mic 1, 2, 3, 4:** ..... >52 dB  
**Aux 1 and Aux 2:** ..... > 65 dB  
**Paging:** ..... > 65 dB  
**Power Amp In:** ..... >90 dB  
**Line Output Level/Impedance,**  
**Preamp Output:** ..... 1 V/1k ohm (unbalanced)  
**Tape Output:** ..... 500 mV/47 kohm (unbalanced)

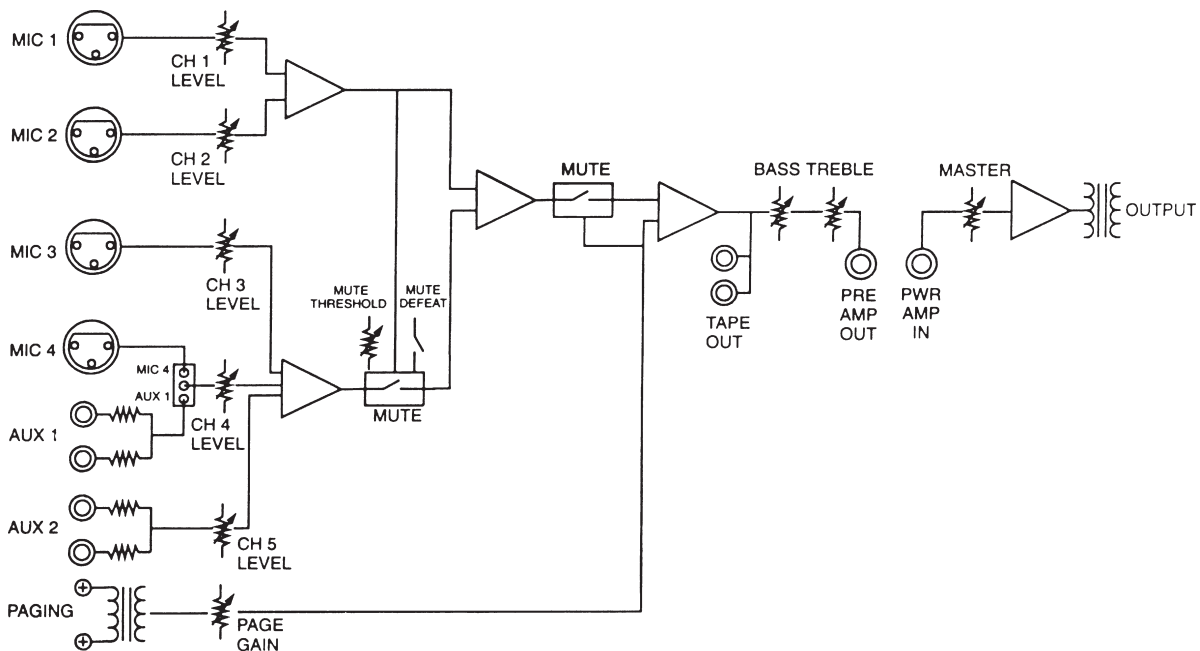
**Speaker Outputs:** ..... 4-, 8-, 16-ohm 25- and 70.7-volt  
**Tone Controls,**  
**Bass:** ..... +7/-12 dB at 100 Hz  
**Treble:** ..... +7/-12 dB at 10 kHz  
**Muting:** ..... 40 dB attenuation  
**Protection :** ..... 3 independent Slo-Blo® fuses, primary ac and dc  
**Power Dissipation:** ..... 155 watts  
**Power Supply:** ..... 108-132 V ac, 50/60 Hz  
**Optional Accessory:** ..... RM-3/10 Rack-Mount Kit  
**Dimensions**  
**Height:** ..... 10.8 cm (4.25 in.)  
**Width:** ..... 42.0 cm (16.5 in.)  
**Depth:** ..... 31.8 cm (12.5 in.)  
**Net Weight:** ..... 7.3 kg (16.0 lb)  
**Shipping Weight:** ..... 7.7 kg (17.0 lb)



MA-355B Front Panel



MA-355B Rear Panel



MA-355B Block Diagram

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**Switzerland** Keltenstrasse 11, CH-2663 IPSACH, Switzerland, Phone: 41132-331-6833, FAX: 41132-331-1221  
**Germany** Hirschberger Ring 45, 094315, Shooting, Germany, Phone: 49 9421-706 392, Fax: 49 9421-706 287  
**France** Parc de Courcerin, Alice Lech Walesa, Lognes, 77185 Marne La Vallée, France, Phone: 3311-6480-0090, FAX: 3311-6480-4538  
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**Electro-Voice®**

U.S.A. and Canada only.

For customer orders, contact the Customer Service department at  
800/392-3497 Fax: 800/955-6831

For warranty repair or service information, contact the Service  
Repair department at 800/685-2606

For technical assistance, contact Technical Support at 866/78 AUDIO

Please refer to the Engineering Data Sheet for warranty information.

Specifications subject to change without notice.

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