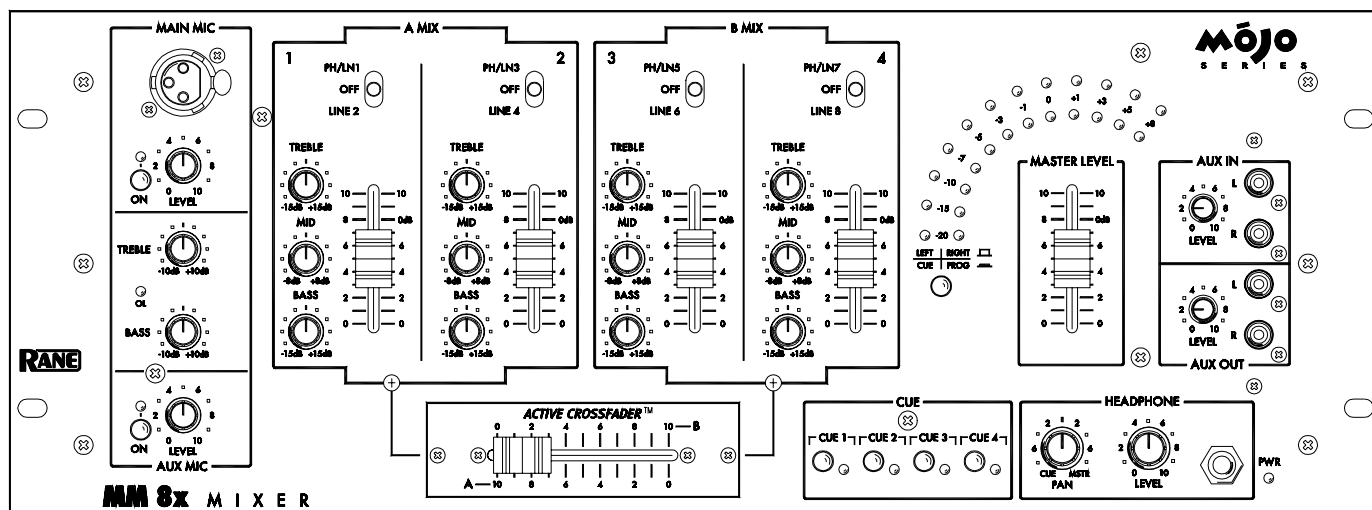


## MM 8x DJ Mixer



### General Description

Following in the success of the Mojo Series™, Rane proudly presents the MM 8x Mojo Mixer. Now everyone can take advantage of Rane quality and performance.

The MM 8x features eight stereo Inputs. Each of the four assignable buses contains its own three band EQ, allowing separate equalization of different sources. The four faders are grouped in two pairs, allowing a custom mix of two input sources on each side of the crossfader.

The MM 8x incorporates new *Active Crossfader™* technology that combines state of the art voltage controlled amplifier design with a professional studio quality, dual-rail crossfader control. Combining *Active Crossfader* technology with a removable crossfader, sets new standards for performance, reliability and serviceability. Virtually all crossfader noise is eliminated. Channel to channel crosstalk is greatly reduced and the *off* isolation of the faded channel is greatly increased. *Active Crossfader* technology dramatically increases the service life of the crossfader. In the unlikely event of crossfader failure, there is no loss of signal. If a

crossfader should become rough or noisy, it is possible to “hot swap” the control during a *performance with no interruption of the audio signal*. Simply use the input faders to set the audio levels while the crossfader is out of service.

Each of the four Phono (RIAA) Inputs switch to Line Level via rear panel switches.

Both the Main and Aux Mic Inputs route through Bass and Treble controls. The Main Mic input has an Effects Loop. The main program signal includes a stereo Master Loop for equalization or processing.

The Tape Output can be switched to exclude the Master Loop signal and record the unprocessed program signal.

The MM 8x doesn't scrimp on its powerful Headphone Cueing system in which one or more channels may be cued at one time. The metering can be switched to monitor stereo main output *or* mono cue on one side and mono program on the other.

The MM 8x's recessed top mounted jacks provide room for cabling in tight DJ coffins or racks without sacrificing its compact 4" depth.

### Features

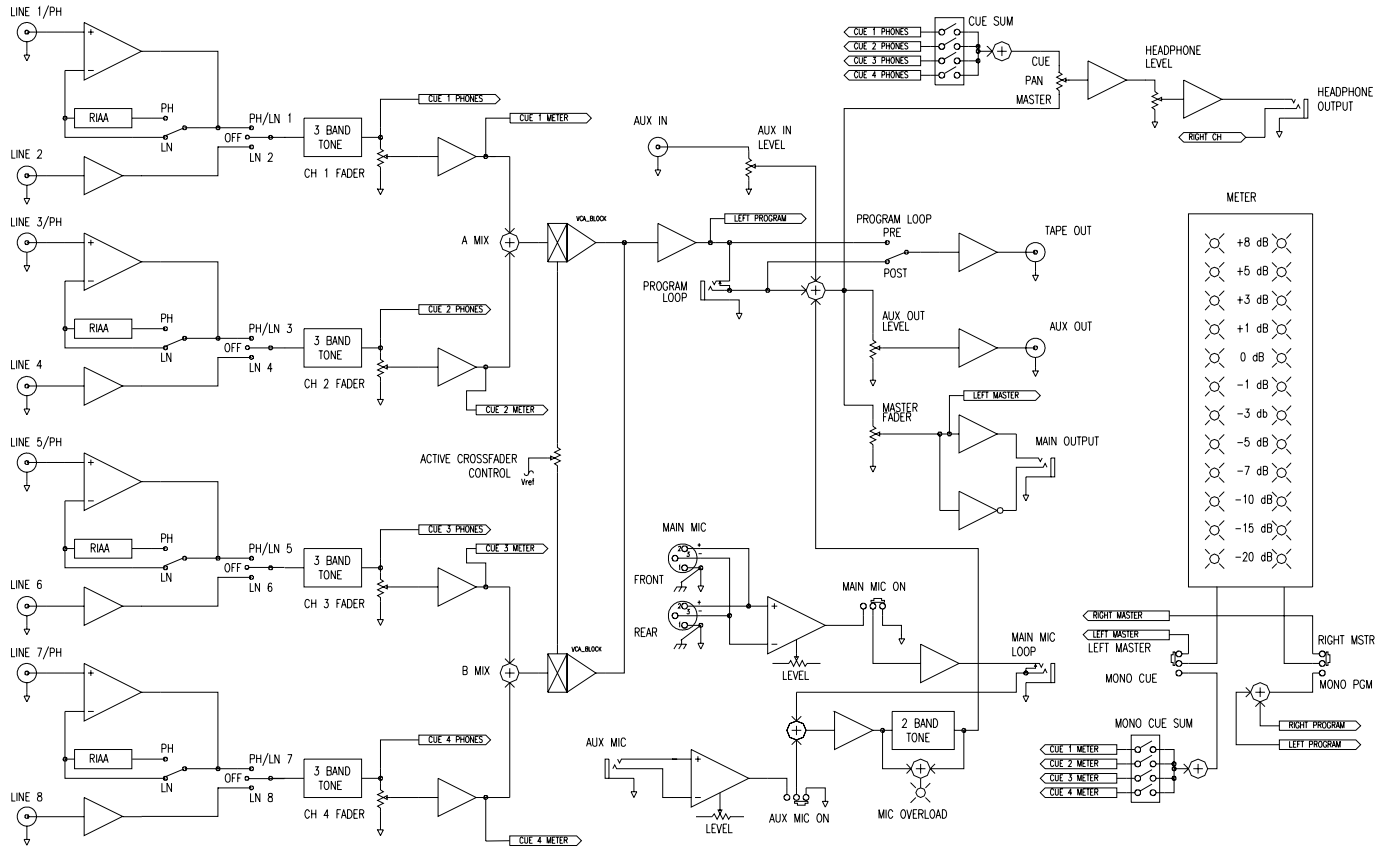
- Eight Stereo Inputs
- Additional Aux Stereo Input & Output
- Phono Inputs Line Level Convertible
- Separate EQ on each Input Fader
- Front Panel Hot-Swap *Active Crossfader™*
- Front & Rear Panel Main Mic Inputs with EQ & Loop
- Aux Mic Input with Line Level Capability
- Program Stereo Effects Loop
- Versatile Headphone Cueing
- Program/Cue Metering
- UL/CSA Remote Power Supply (120 VAC)
- CE (Low Voltage & EMC) Remote Power Supply (230 VAC)

## MM 8x Features and Specifications

Parameter	Specification	Limit	Units	Conditions/Comments
Gain: Line In to Main/Aux Out	14	±1	dB	1 kHz, EQ centered, all Levels max
.....Phono In to Main/Aux Out	50	±1	dB	1 kHz, EQ centered, all Levels max
.....Aux In to Main/Aux Out	10	±1	dB	1 kHz, EQ centered, all Levels max
.....Main/Aux Mic to Main/Aux Out	54 to Off	±2	dB	
.....Program Loop to Main/Aux Out	10	±1	dB	
.....Program Loop to Tape Out	0	±0.5	dB	
Input Impedance: Phono/Line	47k	±1%	ohms	200 pF ±5% cap loading
.....Line In, Program Loops	20k	±1%	ohms	
.....Aux In	10k	±20%	ohms	
.....Aux/Main Mic	511	±1%	ohms	Each leg to ground
Output Impedance: Aux, Tape	301	±1%	ohms	
.....Main, Program Loop	100	±1%	ohms	Each leg
.....Main Mic Loop	301	±1%	ohms	
.....Headphone	0.5	max	ohms	
Maximum Output Levels: Main	24		dBu	100k ohm load, +20 dBu 600 ohm load (min.)
.....Aux, Tape, Program Loop	20		dBu	2k ohm load, minimum output level
.....Headphone	220		mW	into 150 ohms, both driven @ 1 kHz (min.)
Frequency Response	10 to 33k	±1	Hz	Line to Main
THD & Noise	<0.2		%	80 kHz BW, unity gain 20-20 kHz, +4 dBu
Signal to Noise: Line to Main	90	typ	dB	Re +4 dBu, 20 kHz BW unity gain EQ flat
.....Phono to Main	87	typ	dB	Re +4 dBu, 20 kHz BW unity gain EQ flat
Input Referred Noise	-115	typ	dBu	Mic to Main, max gain, EQ flat
RIAA Accuracy	±0.5		dB	Best straight line, 30 Hz to 18 kHz
Source EQ: Treble Shelving	10	typ	dB	@ 8 kHz, max boost/cut 15 dB @ 40 kHz
.....Mid Bandpass	8	typ	dB	Peaking at 1 kHz, 3.5 octaves bandwidth
.....Bass Shelving	10	typ	dB	@ 125 Hz, max boost/cut 15 dB @ 20 Hz
Mic EQ: Treble Shelving	8	typ	dB	@ 5.5 kHz, max boost/cut 10 dB @ 12 kHz
.....Bass Shelving	8	typ	dB	@ 125 Hz, max boost/cut 10 dB at 60 Hz
Control Feed-through: Crossfader	-85	typ	dBr	Re 0 dBu @ 1 kHz
.....Input Fader	-84	typ	dBr	Re 0 dBu @ 1 kHz
.....Master Fader	-90	typ	dBr	Re 0 dBu @ 1 kHz
Crossfader Taper	Constant power curve	0.5	dB	
Crosstalk: Line to Main Out, A to B Bus	>80	typ	dB	1 kHz Max Level
Unit: Agency Listing				
.....120 VAC model	Class 2 Equipment U.L. 813 Exempt CSA Exempt			National Electrical Code Class 2 Class 2
.....230 VAC model	VDE, SELV CE (EMC) CE (safety) Exempt			Safety Extra Low Voltage EMC directive 89/336/EEC Article 1 of LVD 73/23/EEC
Power Supply: Agency Listing	RS 1			Class 2 Equipment
.....120 VAC model	UL listed CSA Certified			File no. E88261 File no. LR58948
.....230 VAC model	CE (EMC) CE (safety)			Meets EMC directive 89/336/EEC LV directive 73/23/EEC
Power Supply Requirement	18 VAC	10%	Vrms	With center tap
Maximum Current	750		mA	RMS current from remote supply
Unit Construction	All Steel			
.....Size	7"H (4U) x 19"W x 4"D			(17.8 cm x 48.3 cm x 10.2 cm)
.....Weight	9 lb w/o RS 1			(4.1 kg)
Shipping: Size	11" x 23" x 16"			(27.9 cm x 58.4 cm x 40.6 cm)
.....Weight	16 lb			(7.3 kg)
Note: 0 dBu=0.775 Vrms				

## MM 8x Block Diagram

Left channel shown, right channel equivalent

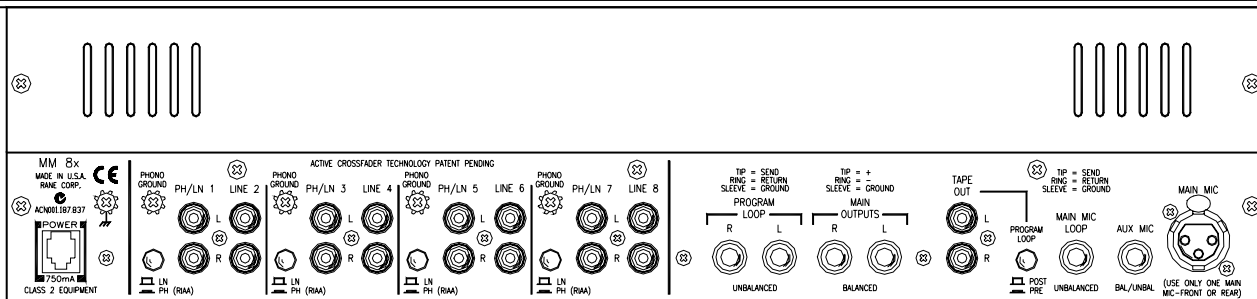


## Application Information

The MM 8x provides four sets of equalizer controls, three bands each, connected to each Input fader. Sensibly placed center frequencies provide optimum control over a wide range of input sources. A tape deck on Input 1, for instance, can be equalized to sound similar to a turntable on Input 2 and 3 or a CD player on Input 4 for smoother crossfades. Many DJ's prefer to drop the leading Bass control during beat-matching, and bring it back up after the crossfade for a smoother and more professional mix. Bass and treble can be adjusted  $\pm 15$  dB, Midrange can be adjusted  $\pm 8$  dB. The MM 8x has a dual purpose metering system. Through the

meter source selector button the input to the meter can be changed from peak *main output* in stereo, to *mono cue* on the left and *mono program* on the right. This allows Input Levels and beat to be matched before Crossfading. Separate Main Mic and Aux Mic Engage buttons (with flashing LEDs) leave no question if a mic is on or not. The Aux Line Input has its own Level control and sums with the other program material before the Master Level fader. The Tape Output does not include the Mic and Aux Input signals. If the Mic and Aux Input signals need to be recorded, use the Aux out to record. Main Output levels are controlled by the Master Level fader on the front panel.

## MM 8x Top / Rear Panel Details



## Architectural Specifications

The mixer shall have four (4) stereo mixing buses, each equipped with high quality 45 mm faders. Separate equalization shall be provided for each bus with a 3-band equalizer. CH 1 and CH 2 buses mix prior to the crossfader to form the A MIX. CH 3 and CH 4 buses mix prior to the crossfader to form the B MIX. Smooth and silent active crossfade between the mixes shall be included. There shall be four (4) stereo phono inputs which can be converted to line level, and four (4) stereo line level inputs. Phono RFI filters shall be built-in. Provisions shall exist for simultaneous use of two micro-

phones, with 2-band equalization and an external processing loop for the main mic. A program effects loop shall be provided. Metering shall be via a stereo LED meter. Complete cueing and headphone monitoring system shall be provided. The unit shall be exempt from agency safety requirements and powered from a UL listed, CSA certified (120 VAC) or CE certified (230 VAC) remote power supply. The unit shall be entirely constructed from Electro-galvanized steel, and mount into a standard 4U EIA rack.

*The unit shall be a Rane Corporation Model MM 8x.*