

FPM 44 Program Mixer

General Description

The Flex Series FPM 44 Program Mixer is a 4-Input, 4-Output mic or line level mixer aimed at general purpose sound contracting applications. The number of controls are kept minimal for ease of customer use.

Terminal strips are provided for the active differential balanced Inputs and Outputs. Phantom Power is available via a side-panel mounted switch. (See **Application Information** section for additional phantom details.)

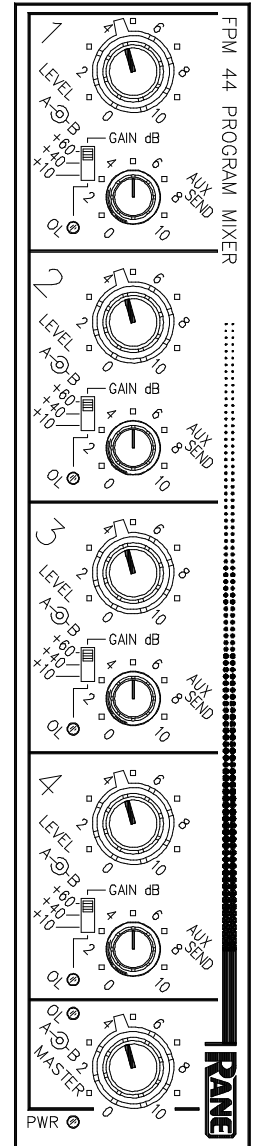
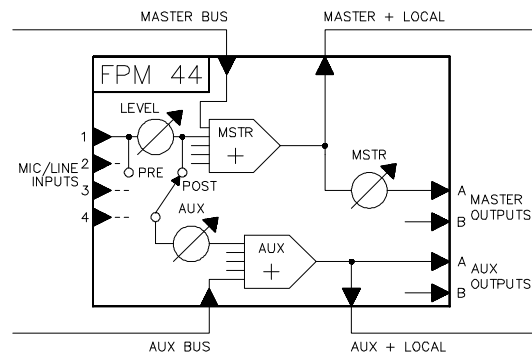
Input stage GAIN is switchable between 10, 40 or 60dB, and monitored by an overload LED on each Channel. Separate input Overload indicators aid in detecting large input signals and excessive gain settings.

Two MASTER A/B Outputs are available for zoning or other purposes, each with a separate LEVEL control. Concentric Channel Input LEVEL A/B controls allow two separate MASTER A/B Output mixes.

In addition to the MASTER A/B Outputs there are provisions for a separate AUX A/B Output mix. Individual internal Pre/Post switches allows choosing between sending the

AUX A/B levels before or after the Channel LEVEL control. This way, the AUX A/B Outputs function as independent outputs when in the 'Pre' position (for taping, etc.), and as a slaved functions when in the 'Post' position.

The FLEX BUS system allows unlimited expansion of FPM 44 modules. Simply connecting the bus system together with DIN connecting cables (supplied) expands the modules. Applications requiring 8, 12, 16 or ? inputs are handled easily by adding additional FPM 44 modules. With the FPM 44 as a building block, any size mixer can be assembled and expanded as your needs change.

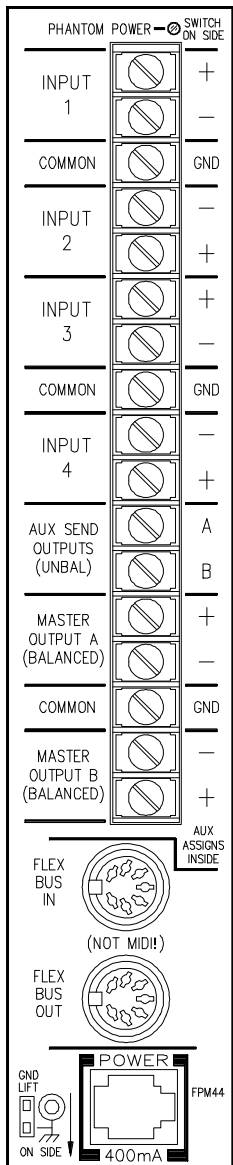


Features

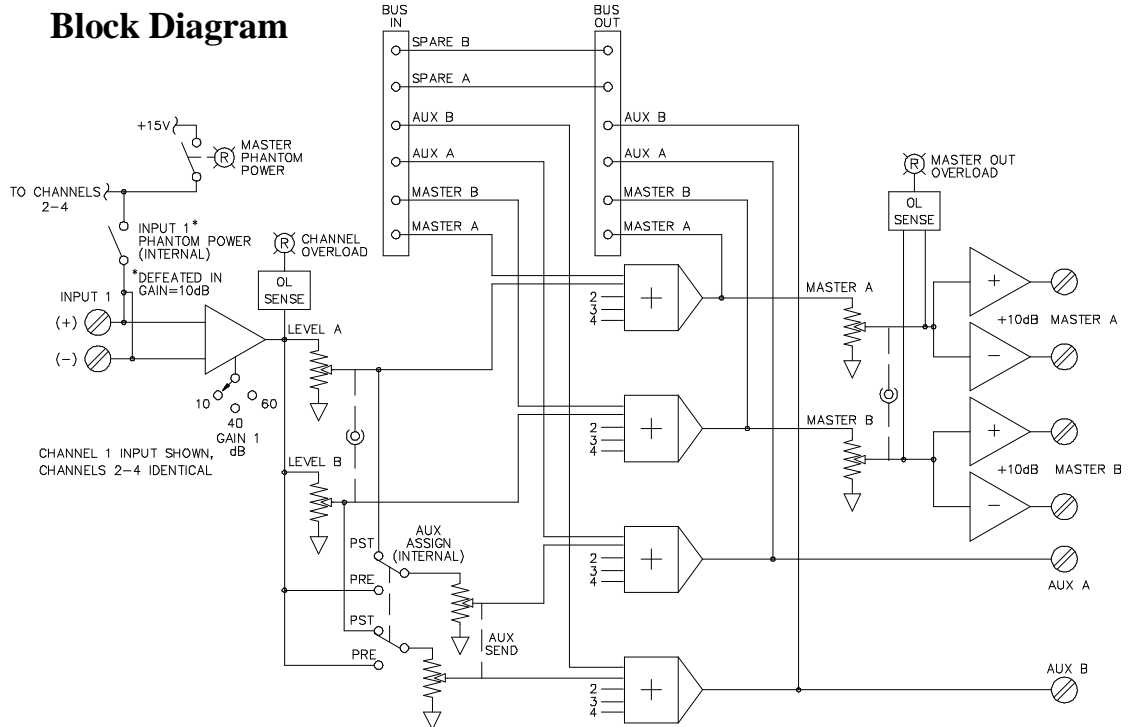
- 4 CH. MIC/LINE MIXER
- 2 MASTER A/B OUTPUTS
- 2 AUX A/B OUTPUTS
- SWITCHABLE GAIN CONTROLS
- PHANTOM POWER
- TERMINAL STRIPS
- PRE/POST AUX ASSIGNS
- OVERLOAD INDICATORS
- INPUT LEVEL CONTROLS
- MASTER OUTPUT CONTROLS
- AUX LEVEL CONTROLS
- EXPANDABLE TO ANY SIZE MIXER

Parameter	Specification	Limit	Units	Conditions/Comments
Input/Output Connectors	Terminal Strip			#6
Input Gain Switch	+10, +40 or +60	2	dB	3-Position Gain Switch
Input Impedance	1k	1%	Ohms	Mic or Line
Phantom Power	+15	4%	VDC	Switch On Side Panel
Master Output Gain Range	Off to +10/+16	1	dB	Unbalanced/Balanced
Aux Output Gain Range	Off to 0	1	dB	Unbalanced
Maximum Gain—Master	76	2	dB	Input to Master Out (Balanced)
Maximum Gain—Aux	60	2	dB	Input to Aux Out (Unbalanced)
Maximum Input Level	+10	1	dBu	GAIN: 10dB
Equivalent Input Noise (EIN)	20kHz Noise BW, Balanced Out			Ch. LEVEL Max; MASTER Max
	-130	2	dBu	GAIN: 60dB (76dB total); Rs=150•
	-126	Typ	dBu	GAIN: 40dB (56dB total); Rs=150•
	-100	Typ	dBu	GAIN: 10dB (26dB total); Rs=150•
Frequency Response	5-75 kHz	+0/-3	dB	Any GAIN Setting
THD+Noise	0.06	.01	%	+15dBu Output, 20-20kHz
Crosstalk	76 (1kHz); 50 (20kHz)	2	dB	Any Input To Any Output
Maximum Current	400		mA	RMS Current From Remote Supply

Rear Panel



Block Diagram



Application Information

Input gain setting is done via the front panel GAIN switch. The highest Gain position that prevents sustained lighting of the OL indicator should always be used. This allows the best overall signal-to-noise ratio. The input Overload indicators are set to come on when signal levels exceed +16dB. This is about 4dB before actual clipping, so occasional flickering of these indicators is permitted; however, they should never be allowed to remain lit for long periods of time. In this event, turn down the appropriate LEVEL control.

Master Phantom Power is controlled by a side-panel switch. This applies power to all four Inputs. Individual Phantom Power switches for each Channel are internal. *For line-level applications, Phantom Power automatically disengages in the GAIN=10dB position.*

The Input LEVEL controls are concentric type. Thus, two different levels may be sent to each of the MASTER A/B Outputs. These controls, in essence, are separate mix controls. You have the choice of putting all of any Input into MASTER OUTPUT A, or B, or any fraction thereof into both.

In addition, each Input has an AUX SEND control for mixing a separate AUX A/B Output. Individual internal PRE/POST slide switches determine where this signal originates (see Block Diagram above). The decision is based on whether you want the AUX A/B Output levels to be affected by the Input LEVEL control. For example, using the AUX A/B Outputs to feed a tape recorder is a common application. Here, you do not want the AUX A/B Levels affected by the Input LEVEL control, so you would leave the slide switch in the PRE position. The AUX SEND is a stereo concentric, sending the Input to both AUX A and AUX B Outputs. An internal modification is available that disconnects either output so that the FPM 44 can be used as a 4 x 4 mixer, or four separate microphone preamps.

Expansion is accomplished by tying the first unit's BUS OUT connector to the second unit's BUS IN connector with the supplied DIN cable. For multiple units, this process is continued to the end. The first unit's Output is the first 4 sources mixed; the second unit's Output is 8 sources, and so on.