

FME 15 microGraphic Equalizer

General Description

The Rane Model FME 15 microGraphic Equalizer is a single channel, 2/3 octave graphic equalizer. Representing a third-generation evolution of Rane's pioneering constant-Q approach to equalization—now the standard of the industry—the FME 15 features the very best. The very best sound, performance and reliability.

Technically, the FME 15 is an interpolating constant-Q design. This means the bandwidth of each individual filter is guaranteed to be narrow enough to prevent unwarranted interaction between filters, yet wide enough to produce exactly the type of correction curve demanded by even the most unusual acoustic surroundings. Interpolating means the FME 15 produces ripple-free combining of adjacent response curves. And constant-Q produces constant bandwidth curves for all slider positions. This differs dramatically from conventional designs which are encumbered with the unfortunate

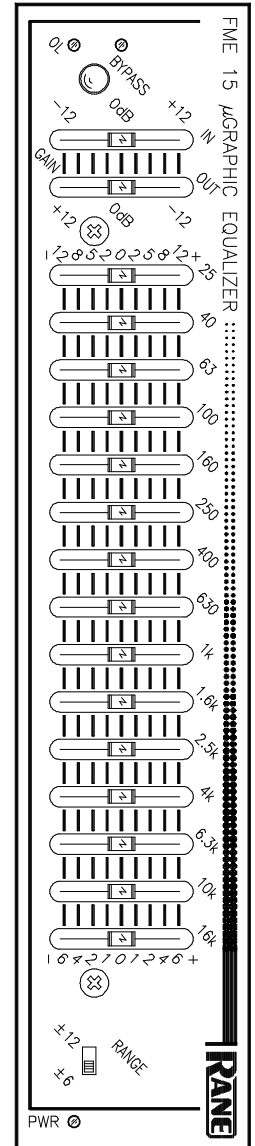
characteristic of changing bandwidth with changing boost/cut amounts.

The FME 15 features a RANGE switch for allowing high slider resolution in the ± 6 dB mode. The ± 12 dB mode provides a wide range of control over system audio. Front panel controls include separate GAIN controls for input and output levels as well as an Overload indicator monitoring all critical nodes. Separate Input and Output GAIN controls allow maximizing of headroom at all times.

A passive BYPASS switch with indicator allows for easy A-B comparison of results or signal restoration in the event of power loss or unit failure. And the rear of the unit provides balanced 3-pin, 1/4" TRS and #6 terminal strip connectors, as well as a convenient 1/4" TRS Patch Input/Output. This patch input allows connection to a standard insert loop jack with a single stereo patch cord.

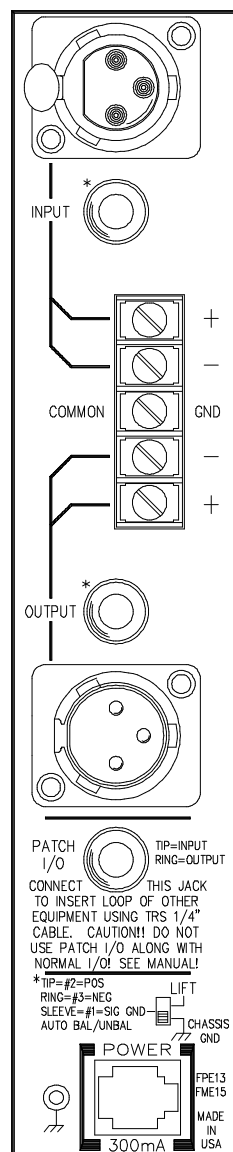
Features

- 15-BAND EQUALIZER CHANNEL
- INTERPOLATING DESIGN
- INPUT & OUTPUT LEVEL CONTROLS
- PASSIVE BYPASS SWITCH & LED
- EQ RANGE SWITCH
- 2/3-OCTAVE CONSTANT-Q BANDWIDTH
- OVERLOAD INDICATOR
- LOW AND RFI FILTERS
- U.S. PATENT 4,891,841
- 1/4" TRS INSERT PATCH JACK
- 3-PIN, TERMINAL STRIP & 1/4" TRS INPUT/OUTPUT CONNECTORS

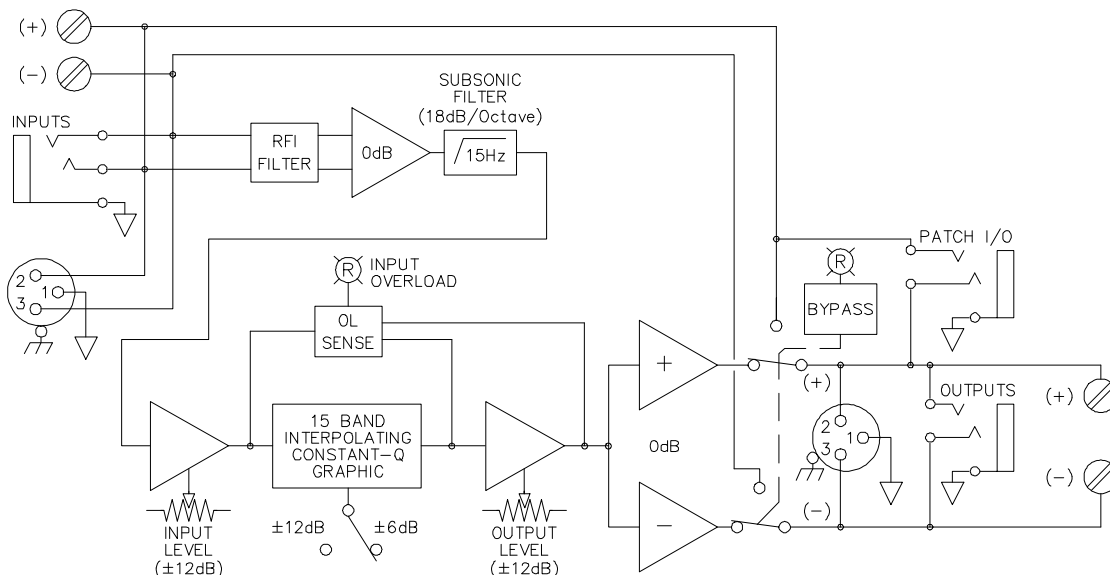


Parameter	Specification	Limit	Units	Conditions/Comments
Equalizer: Channels	One			
.....Bands	(15) 2/3 Octave ISO Spacing			From 25Hz to 16kHz
.....Type	Interpolating Constant-Q			Smooth Combining
.....Accuracy	3		%	Center Frequency
.....Travel	20		mm	Positive Grounded Center Detent
.....Range	± 12 or ± 6	1	dB	Switch Selectable
Overall Input Gain Range	-12 to +12	1	dB	
Overall Output Gain Range	+12 to -12	1	dB	
Passive Bypass Switch	Yes			LED Indicated
Low Filter	15Hz, 18dB/Oct, Butterworth	3%	Hz	Internally Defeatable
Signal-to-Noise Ratio	re +20dBu/+4dBu			20kHz Noise Bandwidth, Balanced
	108/92	2	dB	Sliders Centered, Gains Full Up
	91/75	2	dB	Full Boost, Gains Full Up
	106/90	2	dB	Full Cut, Gains Full Up
Maximum Current	300		mA	RMS Current From Remote Supply

Rear Panel



Block Diagram



Application Information

The FME 15 microGraphic Equalizer offers the same high quality interpolating constant-Q performance as its long throw relative, the GE 30. No compromises or trade-offs exist in selecting an FME 15 microGraphic. All circuitry, components and specifications meet or exceed the GE 30. Only the slider throw is different, plus you gain a RANGE switch to help extend the usable travel if modest boost/cut amounts are needed. This model exists for people requiring the very best equalizer possible in the smallest space allowable.

Interpolating constant-Q graphic equalizers arose from the sound professional's need for greater control with less interaction than previously possible with conventional equalizers. The

FME 15's advanced filter design yields smooth bandpass response when two sliders are used in tandem, enabling the user to "interpolate" between ISO centers to reach problem areas precisely. Truth in slider position also became a requirement. The curve traced out by the slider positions on interpolating constant-Q designs indeed represents the actual changes to the frequency response. On conventional designs they do not.

You use an interpolating constant-Q graphic the same way you use a conventional graphic. You just get the desired results quicker, with far less after adjustment to the adjacent sliders, eliminating a phenomenon Rane calls "equalizing the equalizer".