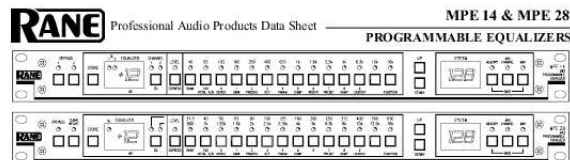




Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE MPE 14. You'll find the answers to all your questions on the RANE MPE 14 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual RANE MPE 14
User guide RANE MPE 14
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MPE 14 & MPE 28 MIDI Programmable Equalizers

General Description

The MPE 14, two-channel, 14-band, 2/3-octave, and the MPE 28, one-channel, 28-band, 1/3-octave MIDI programmable equalizers begin a generation of automated signal processing from Rane Corporation.

Sound Contracting: Presets can be stored for varying room configurations, and recalled via front panel, or external contact closures with the Rane RPS-4 Remote Program Selector (covering switch closures to MIDI program change commands). Access security can be maintained in two levels of front panel lockout.

Live Performance: The MPE series interface to any MIDI controller or sequencer, allowing not only program changes, but also curve modification in real time through the use of MIDI System Exclusive (SYSEX) messages.

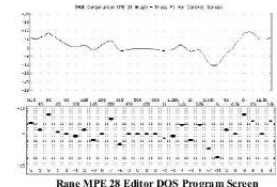
MIDI Studios: Not only can the MPEs overcome deficiencies in synthesizer and drum machine voices, they also add a new musical dimension: *Expression*. The MPEs respond to expression controllers such as MIDI continuous controllers or channel pressure aftertouch. This feature allows dynamic control and continuous modification of the EQ curve. Bend your bass or tweak your treble; it's now at your fingertips, in real time.

The MPEs are digitally controlled analog equalizers. Start with Rane's proven equalizer performance. Put it under the powerful control of a 16-bit, 16MHz microcontroller. Program the microcontroller to provide full MIDI implementation, including SYSEX. Add it all together and you get an unbeatable programmable equalizer. The MPEs utilize Rane's exclusive Interpolating Constant-Q filter technology. The same design used in the commercial grade model GE 30 for

smooth, consistently accurate performance, and minimum interaction. The MPEs are fitted with fully balanced Inputs and Outputs using both 3-pin and 1/4" TRS connectors.

The MPEs allow the user to store 128 equalization curves recalled by either the front panel controls, MIDI commands, another MPE, a Rane RPS 4, or from a computer. DOS software is available from the factory (at no charge) that allows graphic editing of the MPE. Other software companies produce MPE Editor/Librarians, such as Opcode Systems (Galaxy) and Mark of the Unicorn (Unisyn and X-or).

The MPEs also feature decimal and octal program display, program mapping, curve weighting, ramping, copying, and a wealth of usable factory EQ presets. Please consult the **MPE Users Guide** (available upon request) for further information on these and other advanced features.



Features

- 128 MEMORIES WITH DIRECT RECALL
- REALTIME DYNAMIC CONTROL VIA MIDI
- CURVE COMPARE, WEIGHTING & COPYING
- "SNAPLESS" EQ CURVE RAMPING
- MIDI SYSEX CURVE EDITING
- SEPARATE EQ AND SYSTEM DISPLAYS
- INTERPOLATING CONSTANT-Q FILTERS
- +12/-15dB RANGE IN 148 STEPS
- INDIVIDUAL BYPASS SWITCHES
- BALANCED 3-PIN & 1/4" IN/OUT
- NON-VOLATILE MEMORY
- TWO-LEVEL ACCESS SECURITY SYSTEM
- UL/CSA REMOTE POWER SUPPLY
- DOS EDITOR PROGRAM AVAILABLE



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Manual abstract:

Sound Contracting: Presets can be stored for varying room configurations, and recalled via front panel, or external contact closures with the Rane RPS 4 Remote Program Selector (converting switch closures to MIDI program change commands). @@@@This feature allows dynamic control and continuous modification of the EQ curve. Bend your bass or tweak your treble; its now at your fingertips, in real time. The MPEs are digitally controlled analog equalizers. Start with Ranes proven equalizer performance. Put it under the powerful control of a 16-bit, 16MHz microcontroller. Program the microcontroller to provide full MIDI implementation, including SYSEX. Add it all together and you get an unbeatable programmable equalizer. The MPEs utilize Ranes exclusive Interpolating Constant-Q filter technology. @@@@The MPEs also feature decimal and octal program display, program mapping, curve weighting, ramping, copying, and a wealth of usable factory EQ presets.

Please consult the MPE Users Guide (available upon request) for further information on these and other advanced features. Rane MPE 28 Editor DOS Program Screen +12/-15dB RANGE IN 1dB STEPS INDIVIDUAL BYPASS SWITCHES BALANCED 3-PIN & 1/4" IN/OUT NON-VOLATILE MEMORY TWO-LEVEL ACCESS SECURITY SYSTEM UL/CSA REMOTE POWER SUPPLY DOS EDITOR PROGRAM AVAILABLE Features 128 MEMORIES WITH DIRECT RECALL REALTIME DYNAMIC CONTROL VIA MIDI CURVE COMPARE, WEIGHTING & COPYING SNAPLESS EQ CURVE RAMPING MIDI SYSEX CURVE EDITING SEPARATE EQ AND SYSTEM DISPLAYS INTERPOLATING CONSTANT-Q FILTERS MPE 14 & MPE 28 PROGRAMMABLE EQUALIZERS Parameter Specification Professional Audio Products Data Sheet Limit Units Conditions/Comments Equalizer: Channels

.....
..Bands: MPE 14

.....
... MPE 28 ..

.....
...Type

...Accuracy

...Range ..

.....
...Program Memories Inputs: Type

...Connectors

...Impedance ..

.....
...Maximum Level Outputs: Type

...Connectors

...Impedance ..

.....
...Maximum Level Overall Level Range RFI Filters Memory Battery Life MIDI Xmit/Rcv Buffer Size Bypass Switches Overload LED Thresholds Low Filter Frequency Response THD+Noise IM Distortion (SMPTE) Signal-to-Noise Ratio Channel Separation (MPE 14) Power Supply Input Power Supply Connector Safety Agency--Unit

...Classification

...Design ..

.....
...U.L. Listing

.....C.S.A. Certification ..

.....
...CENELEC --Remote Power Supply ..

.....U.L.

Listed

230VAC Export Model EMI/RFI Emission Levels Maximum Current Unit: Construction

.....
Size

Weight Shipping: Size

Weight Note: 0dBu=0.775Vrms (2) MPE 14; (1) MPE 28 (14) 2/3 Octave ISO Spacing (28) 1/3 Octave ISO Spacing Interpolating Constant-Q 3 +12/-15 128 Active Balanced/Unbalanced 3-Pin & 1/4" TRS 15k +20 Active Balanced/Unbalanced 3-Pin & 1/4" TRS 200 +20 ±12 Yes 3 5,000 Yes +16 15Hz, 18dB/Oct, Butterworth 15-45kHz 0.008 0.009 MPE 14/MPE 28 re +20dBu 108/104 103/98 100/95 75 18-24VAC w/center-tap 6-pin mod plug Class 2 Equipment Safety Extra-Low Voltage U.L.

813 Exempt C22.2 No. 1 Exempt IEC 65 Exempt E90493 Meets requirements of IEC 950 FCC Part 15 Compliance Satisfies VDE 0871 500 All Steel 1.75"H x 19"W x 8.5"D (1U) 6 lb 7" x 22" x 13" 11 lb 40Hz to 16kHz 31.

5Hz to 16kHz: % dB Center Frequency 1 dB Step Size 1 1% 1 · dBu 1% 1 2 50% · dBu dB Yrs Bytes dBu Hz dB % % dB dB dB dB Vrms Balanced:100· Each Output 2 dB Step Size Ray-O-Vac BR2325, or equal Each Channel Separate Output or any Internal Level 1 3% +0/-3 .001 .002 2 2 3 10% +4dBu, 20-20kHz 60Hz/7kHz, 4:1, +4dBu 20kHz Noise BW, Balanced All Bands Centered, Unity Gain All Bands Centered, Max Gain All Bands Full Cut, Unity Gain 40-20kHz Proposed AES RAP Standard Wired per above National Electrical Safety Code VDE SELV Class 2 Class 2 Harmonization Doc. @@@It hooks-up the same, and you use it the same. The main difference is you use pushbuttons instead of sliders. @@@@Your choice. @@@@And, of course, another

difference is the curve-weighting feature. @@@@And lastly, theres SYSEX. @@Used this way, any MPE may be designated as a master unit and all others as slaves. This opens up a whole new world of remote control capabilities.

The other possibility, using the powerful MPE SYSEX code, is to allow anyone with the proper equipment and programming ability to manipulate all curve parameters in real time. Rane provides an MPE Editor for DOS (at no charge) that allows graphic editing on a PC with a MIDI interface card (laptops can be fitted with a MIDIator serial-toMIDI converter). @@@@Individual bypass switches shall be provided for each channel. @@The input impedance shall be 15k ohms, while the output impedance shall be 200 ohms, balanced. Both shall be capable of processing audio signal levels of a maximum of +20dBu. RFI input filters shall be provided. A low filter shall exist with 18dB/octave slopes and Architectural Specifications a corner frequency of 15Hz.

@@MIDI In, Out and Thru jacks shall be provided. All controls shall be rubber-based pushbutton switches. @@@@The unit shall be a Rane Corporation Model MPE Programmable Equalizer.

Available Accessories RPS 4 Remote Program Switcher RWS 4 Remote Wall Switch (requires RPS 4) DOS MPE Editor Programs (versions available for MPE 28 and MPE 14). ©Rane Corporation, 10802 47th Avenue W., Mukilteo WA 98275-5098 TEL(206) 355-6000 FAX(206) 347-7757 Printed in the U.S.A. on Recycled Paper All features & specifications subject to change without notice. 520-260 MAY94 .



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