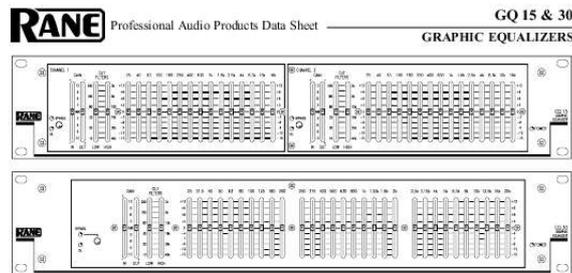




Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE GQ 15. You'll find the answers to all your questions on the RANE GQ 15 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual RANE GQ 15
User guide RANE GQ 15
Operating instructions RANE GQ 15
Instructions for use RANE GQ 15
Instruction manual RANE GQ 15



GQ Series Interpolating Constant-Q Equalizer

General Description

The Rane GQ Series Interpolating Constant-Q Equalizers consist of the GQ 15, a two-channel, 2/3-octave design and the GQ 30, a one-channel, 1/3-octave version. Housed in a two rack-space unit, these units feature long throw 45mm sliders for excellent resolution of settings, as well as adjustable bandlimiting Low and High Cut Filters.

The active filter sections of these units feature Rane's patented (#4,891,841) constant bandwidth (constant-Q) design. The bandwidth of each individual filter is guaranteed to be narrow enough to prevent unwanted interaction between filters, yet wide enough to produce the optimum type of correction curve demanded by the most unusual acoustic surrounding. This differs dramatically from conventional designs of the past. Earlier designs are encumbered with the unfortunate characteristic of changing bandwidth with changing boost/cut amount.

The GQ's, aside from being constant-Q devices, also

provide what Rane has dubbed "Interpolating" performance. This means that when two adjacent bands are boosted or cut to the same level, the response of the equalizer peaks (or interpolates a response) at a frequency centered between the filters. Interpolating performance allows effective control between ISO centers.

Front panel controls and indicators include an input and output gain control as well as individual overload indicators. The rear of the unit provides balanced 3-pin input and output connectors; a 1/2" balanced Tip-Ring-Sleeve connector for the same, and a barrier strip which provides access to all of the above. This full range of connectors also allows unbalanced operation by using only the positive and signal ground conductors of any of the Inputs or Outputs. Included also are 1/2" Tip-Ring-Sleeve Patch I/O jacks. These allow connecting to conventional tip-send ring-return insert points on mixing consoles using only a single 1/4" TRS cable.

Features

- INTERPOLATING CONSTANT-Q DESIGN
- ADJUSTABLE LOW & HIGH CUT FILTERS
- TERMINAL STRIP, 3-PIN, & 1/2" TRS BALANCED INPUTS AND OUTPUTS
- GROUNDED CENTER DETENTS
- INDEPENDENT INPUT AND OUTPUT LEVEL CONTROLS
- INDIVIDUAL BYPASS SWITCHES WITH LED INDICATORS
- OVERLOAD INDICATORS
- RFI FILTERS
- CLASS 2 POWER - AGENCY EXEMPT
- UL LISTED POWER SUPPLY
- U.S. PATENT 4,891,841



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Manual abstract:

Housed in a two rack-space unit, these units feature long throw 45mm sliders for excellent resolution of settings, as well as adjustable bandlimiting Low and High Cut Filters. This differs dramatically from conventional designs of the past. This means that when two adjacent bands are boosted or cut to the same level, the response of the equalizer peaks (or interpolates a response) at a frequency centered between the filters. Interpolating performance allows effective control between ISO centers. Front panel controls and indicators include an input and output gain control as well as individual overload indicators. The rear of the unit provides balanced 3-pin input and output connectors; a 1/4" balanced Tip-Ring-Sleeve connector for the same, and a barrier strip which provides access to all of the above. This full range of connectors also allows unbalanced operation by using only the positive and signal ground conductors of any of the Inputs or Outputs. Included also are 1/4" Tip-Ring-Sleeve Patch I/O jacks. Listing ..

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...C.S.

A. Certification

.CENELEC Remote Power Supply

.U.L. Listed ..

.....

...C.S.A. HD 195.S4 Class 2 Equipment Double Insulated Design (8.9cm x 48.3cm x 21.

6cm) (3.2 kg) (18cm x 56cm x 33cm) (5.4 kg) (5.4 kg) Professional Audio Products Data Sheet GQ 15 & 30 GRAPHIC EQUALIZERS Block Diagram Constant-Q graphic equalizers arose from the sound professionals need for greater control with less interaction than previously possible with conventional equalizers. Truth in slider position became a requirement. The curve traced out by the slider positions on constant-Q designs indeed represents the actual changes to the frequency response. On conventional designs they do not. Combine this feat with the Rane developed interpolating characteristic and you have a tool without peer. The GQ series of products from Rane goes one step further toward being the best device for any application. It offers choice of all common audio connectors.

The inclusion of 3-pin, 1/4" and terminal strip Input and Output terminals ensures the GQ 15 ideally suits all possible situations. This yields the best noise performance. The HIGH and LOW CUT FILTERS allow bandlimiting of a system. Consequently, whenever the slider is moved, the bandwidth changes. The output exhibits the desired bandwidth only at full boost or cut.

It degrades to as much as two octaves at moderate slider settings. Filter overlap in Rane equalizers is dramatically less, reducing the need for constant readjustment of adjacent sliders. This means more effective equalization in significantly less time. INTERPOLATING DETAILS Today's sophisticated acoustic measurement tools show exact trouble spots. Often these lie between ISO centers.

An interpolating equalizer allows the user to correct for these response errors by producing a smooth peak or dip between (i.e., it interpolates, or inserts between) any two adjacent frequency sliders when they are raised or lowered the same amount. Sweepable low and high cut filters shall be provided. These controls shall be of the vertical slide variety. The outputs shall be fully balanced and Architectural Specifications terminated with 3-pin, 1/4" and barrier strip connectors. Each unit shall also provide a 1/4" tip-ring-sleeve Patch I/O connector. RFI filters shall be provided. The unit shall provide a passive bypass feature requiring no power to operate. When power is applied to the unit and bypass mode is selected, this shall be indicated via a red LED indicator.

The unit shall be powered from a UL listed external AC power supply. The unit shall be entirely constructed from cold-rolled steel. D. Bohn, Constant-Q Graphic Equalizers, Rane Note 101, (1982). 2. D. Bohn, A New Generation of Filters, Sound and Video Contractor, vol. 2, pp. 36-39 (Feb. 1984).

3. T. Pennington, Constant-Q, Studio Sound, vol.27, pp. 82-85 (Oct.

1985). 4. D. Bohn, Constant-Q Graphic Equalizers, J. Audio Eng.

Soc., vol. 34, pp. 611-626 (September 1986). 5. D. Bohn, Exposing Equalizer Mythology, Rane Note 115, (1986). 6. D. Bohn.

D. Bohn, Operator Adjustable Equalizers: An Overview, Rane Note 122, (1990). ©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. 520-152 APR94 .



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