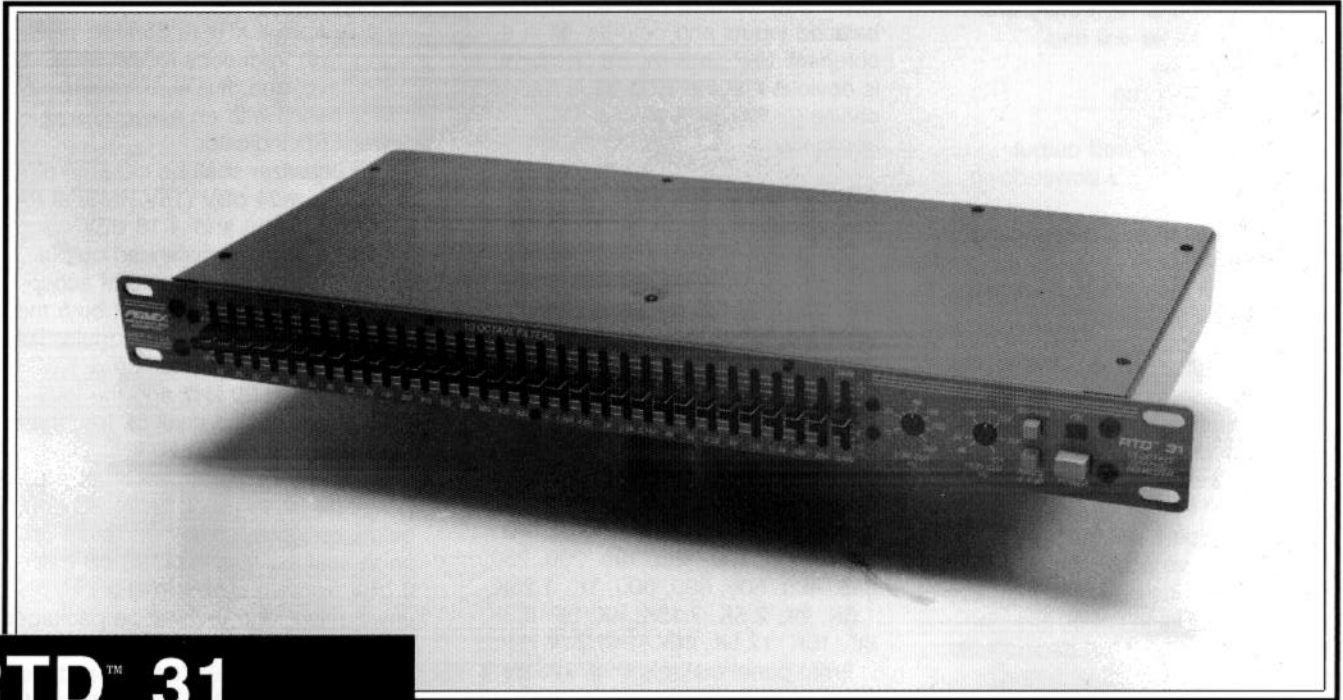


# S P E C I F I C A T I O N S



## RTD™ 31 1/3 Octave Graphic Equalizer

### SPECIFICATIONS

All specifications are typical unless otherwise noted.

0 dBV = 1 volt

All specifications are referenced to nominal output level (0 dBV) unless otherwise noted.

All measurements are wideband 20 Hz to 20 kHz unless otherwise stated.

**NOTE:** All specs measured at 1V RMS input and unbalanced output. All sliders at mid position, all switches out unless otherwise noted.

#### FREQUENCY RESPONSE (Balanced and Unbalanced outputs)

±1 dB 20 Hz - 20 kHz

#### DISTORTION

.003% 20 Hz - 20 kHz

#### COMMON MODE REJECTION RATIO (CMRR)

36 dB typical

#### INPUT IMPEDANCE

Unbalanced: 20K ohms

Balanced: 20K ohms (equal impedances to ground)

#### OUTPUT IMPEDANCE

Unbalanced: 100 ohms

Balanced: 160 ohms

#### MAXIMUM INPUT LEVEL

Unbalanced: +24 dBV (15.8V RMS)

Balanced: +24 dBV (15.8V RMS)

#### MAXIMUM OUTPUT LEVEL

Unbalanced: +18 dBV (8V RMS)

Balanced: +24 dBV (15.8V RMS)

#### NOMINAL INPUT LEVEL

Unbalanced: 0 dBV (1V RMS)

Balanced: 0 dBV (1V RMS)

#### NOMINAL OUTPUT LEVEL

Unbalanced: 0 dBV (1V RMS)

Balanced: +6 dBV (2V RMS)

#### INPUT HEADROOM

Nominal = 24 dB

#### OUTPUT HEADROOM

Unbalanced: 18 dB

Balanced: 18 dB

#### OUTPUT NOISE: UNBALANCED OUTPUT

EQ Out: -95 dBV

EQ In, all Flat: -95 dBV

#### FILTER BANDWIDTH

1/3 octave

#### FILTER FREQUENCIES

20, 25, 31.6, 40, 50, 63, 80, 100, 125, 160, 200, 250, 316, 400, 500, 630, 800, 1K, 1.25K, 1.6K, 2K, 2.5K, 3.16K, 4K, 5K, 6.3K, 8K, 10K, 12.5K, 16K, 20K

#### FILTER Q

4.77

#### MAXIMUM BOOST & CUT FILTERS

±12 dB (±12 dB position)

±6 dB (±6 dB position)

#### MAXIMUM BOOST & CUT GAIN (Wideband gain)

±12 dB (±12 dB position)

±12 dB (±6 dB position)

#### HIGH CUT FILTER: (12 dB per octave frequency)

Max: 35 kHz

Min: 4 kHz

#### LOW CUT FILTER: (12 dB per octave frequency)

Min: 10 Hz

Max: 400 Hz

**PEAVEY**®  
ARCHITECTURAL ACOUSTICS®

## FEATURES:

- 31 bands of equalization (ISO standard centers)
- Broadband level control
- Variable low and high cut filters
- Switch-selectable  $\pm 6$  and  $\pm 12$  dB ranges
- EQ bypass function
- Balanced inputs
- Transformer balanced output
- Quiet power-up and power-down modes
- +24 dBV input and output capability (headroom)
- 1 $\frac{3}{4}$ " single rack space package

## DESCRIPTION

The Peavey Architectural Acoustics RTD™ 31 provides 31 bands of active graphic equalization on standard ISO center frequencies. Each band provides 12 dB of boost or attenuation at the specified frequency (switch selectable to provide 6 dB boost/cut).

The innovative active circuit configuration ensures optimal dynamic range and signal-to-noise ratio. A broadband level control feature which permits another 12 dB of boost or cut allows the RTD 31 to be matched to any other signal processing device the sound engineer may choose. The flexibility of the RTD 31 is further enhanced by the variable high and low cut filters.

The RTD 31 is equipped with the features which give it a clear advantage over the other equalizers in its range. When you consider the fact that it also features balanced and unbalanced inputs and outputs, all in a compact 1 $\frac{3}{4}$ " rack-mount package, it is obvious that the RTD 31 is the right choice for any professional application.

## ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The active equalizer shall be a thirty-one band rack-mountable unit with one-third octave filters placed on standard ISO centers. The unit shall have two high impedance  $\frac{1}{4}$ " unbalanced inputs, one low impedance XLR balanced input, two low impedance  $\frac{1}{4}$ " unbalanced outputs, and one low impedance XLR balanced output. Equalization functions shall provide  $\pm 12$  dB @ 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1K, 1.25K, 1.6K, 2K, 2.5K, 3.15K, 4K, 5K, 6.3K, 8K, 10K, 12.5K, 16K, and 20K Hertz.

Front panel controls shall include a broadband gain control with  $\pm 12$  dB of range to help restore the unity gain function resulting from equalization loss (or gain); an EQ bypass switch for unity gain reference measurements; a range switch to select either  $\pm 6$  or  $\pm 12$  dB of

equalization range; a low cut filter control continuously variable from 10 Hz to 300 Hz, providing low frequency roll off at 12 dB per octave; a high cut filter control continuously variable from 4 kHz to 35 kHz, providing high frequency roll off at 12 dB per octave; and, finally, a mains power switch with an associated power LED indicator.

The equalizer shall be capable of delivering +24 dBV (16V RMS) at the balanced output and +18 dBV (8V RMS) at the unbalanced output. Further, it shall be capable of accepting +24 dBV (16V RMS) at both the unbalanced and balanced inputs. The frequency response shall be  $\pm 1$  dB from 20 Hz to 20 kHz and the total harmonic distortion shall be less than .003% from 20 Hz to 20 kHz, both of these specs being measured at 0 dBV (1V RMS) using either balanced or unbalanced inputs or outputs. Hum and noise shall be less than -95 dB below 0 dBV from 20 Hz to 20 kHz unweighted. The unit will be packaged in a rugged metal chassis 19" wide by 1 $\frac{3}{4}$ " high by 8 $\frac{1}{4}$ " deep, and shall operate on 120V AC, 50/60 Hz, and consume 15 watts. The published specifications shall be met or exceeded. The active equalizer shall be called a Peavey Architectural Acoustics RTD™ 31.

## LIMITED WARRANTY

Peavey Electronics Corporation warrants to the original purchaser of this new Architectural Acoustics product that it is free from defects in material and workmanship. If within one (1) year from date of purchase a properly installed product proves to be defective and Peavey is notified, Peavey will repair or replace it at no charge. (Note: Batteries and patch cords not covered.) "Original purchaser" means the customer for whom the product is originally installed.

Damage resulting from improper installation, interconnection of a unit or system of another manufacturer, accident or unreasonable use, neglect or any other cause not arising from defect in material and workmanship is not covered by this warranty. The warranty is valid only as to products purchased and installed in the United States.

**THIS LIMITED WARRANTY IS IN LIEU OF ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. UNDER NO CIRCUMSTANCES WILL PEAVEY BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, EVE IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THIS LIMITED WARRANTY IS THE ONLY EXPRESS WARRANT ON THIS PRODUCT, AND NO OTHER STATEMENT, REPRESENTATION, WARRANTY OR AGREEMENT BY ANY PERSON SHALL BE VALID OR BINDING UPON PEAVEY.**

Peavey's liability to the original purchaser for damages for any cause whatsoever and regardless of the form of action, is limited to the actual damages up to the greater of Five Hundred Dollars (\$500) or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. For information on service under this warranty, call a Peavey customer service representative at (601) 483-5376.



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