

Specifications Freq-Out™ 24-Bit Processor



SPECIFICATIONS

MECHANICAL

Dimensions:

(H x W x D) 1.75" x 19" x 9"
(4.4 cm x 48.3 cm x 22.9 cm)

Weight:

7.1 lbs. (3.95 kg)

Mounting:

One EIA rack space

Connections:

Balanced combo female XLR/female 1/4" TRS for input
Separate balanced male XLR and female 1/4" TRS for output
RS-232 DB-9 for PC interface

PERFORMANCE

Sample Rate:

48 kHz

Converters:

24-bit

Frequency Response:

+/- 0.5 dB

(20 Hz to 20 kHz, ref. 1 kHz)

Signal-to-Noise:

Greater than 105 dB (typical)

Total Harmonic Distortion + Noise:

Less than 0.005% (typical)

Input Impedance:

40 k Ohms

Output Impedance:

120 Ohms

FEATURES

- 16 available feedback filters (eight dynamic, eight static)
- 1/12 octave filter bandwidth
- 30 dB maximum filter depth
- Input sensitivity selectable between -10 dBV and +4 dBV (+4 dBu and +18 dBu)
- Output level selectable between -10 dBV and +4 dBV (+4 dBu and +18 dBu)
- Signal presence and clip LEDs
- Four filter configuration presets
- System bypass control
- "Wide" control (increases filter width and depth)
- "Panic" filters to control sudden, extreme feedback
- LED indicators for active notch filters

DESCRIPTION

The Freq-Out™ is basically a very sophisticated filter set. It includes sixteen notch filters configured for 1/12 octave performance in normal operation. The filters operate using



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“seek & destroy” algorithms to find, lock in on, and reduce offending frequencies. The reduction of the offending frequency is minimal, using only enough attenuation to contain the feedback without affecting tonal quality. The attenuation happens very quickly and is difficult to even notice that it is taking place.

Essentially, what happens is this. When the Freq-Out locates an offending frequency, it applies a notch filter, beginning with filter number 16. This filter is centered at the feedback frequency with an attenuation of -3 dB. Then, if the feedback continues, the filter depth is progressively increased until the feedback is gone, or maximum attenuation is reached. If the feedback is momentary, such as a short squeal, the filter will release in .1 dB steps until the feedback re-occurs, or the filter is returned to flat (0 dB) response. Once returned to flat, it is then available for further use. If the filter depth is continually increased at the same frequency, the filter will become “locked” at the offend-

ing frequency until the unit is reset. As feedback occurs at different frequencies, the process continues as additional filters are engaged. Monitoring continues as the Freq-Out attempts to release each filter a tenth of a dB at a time. The unit maintains a constant vigil in search of feedback frequencies and applies only enough attenuation to eliminate the feedback, no more ... no less.

ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The Peavey Freq-Out™ shall be a digital feedback eliminator system. It shall provide balanced input via a combo female XLR/female 1/4" TRS connector, and balanced output via separate male XLR and 1/4" TRS connectors. A RS-232 DB-9 connection shall be provided for PC interface. Input sensitivity and output level shall be switchable between -10 dBV and +4 dBV (+4 dBu and +18 dBu). Input impedance shall be 40 k Ohms, and output impedance shall be 120 Ohms.

The Freq-Out shall provide a

48 kHz sample rate and utilize 24-bit converters. It shall have a frequency response of +/- 0.5 dB or better from 20 Hz to 20 kHz referenced at 1 kHz. Signal-to-noise ratio (S/N) shall be greater than 105 dB (typical), and total harmonic distortion + noise (THD/N) shall be less than 0.005% (typical).

The Freq-Out shall provide 16 available feedback filters (8 dynamic, 8 static). Filter bandwidth shall be 1/12 octave and maximum filter depth shall be 30 dB.

The unit shall be 19" (48.3 cm) wide x 1.75" (4.4 cm) high x 9" (22.9 cm) deep and weigh 7.1 lbs. (3.95 kg). It shall be rack-mountable with an EIA standard of one unit. The system shall be the Peavey Freq-Out.

WARRANTY

THREE + TWO LIMITED WARRANTY
NOTE: For details, refer to the warranty statement. Copies of this statement may be obtained by contacting Peavey Electronics Corporation, P.O. Box 2898, Meridian, Mississippi 39302-2898.



Specifications are subject to change without notice.

Peavey Electronics Corporation • 711 A Street • Meridian, MS 39301
601-483-5376 • Fax 601-486-1678 • <http://aa.peavey.com>
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