

Peavey PV231EQ Graphic Equalizer Instruction Manual

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Peavey PV231EQ Graphic Equalizer



- Intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.
- CAUTION: Risk of electrical shock DO NOT OPEN!

- **CAUTION:** To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- **WARNING:** To prevent electrical shock or fire hazard, this apparatus should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this apparatus. Before using this apparatus, read the operating guide for further warnings.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electrical products, basic cautions should always be followed, including the following:

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with a dry cloth.
- 7. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding plug. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
- 11. Note for UK only: If the colors of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows:
 - a) The wire that is colored green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol, colored green or colored green and yellow.
 - b) The wire that is colored blue must be connected to the terminal that is marked with the letter N or the color black.
 - c) The wire that is colored brown must be connected to the terminal that is marked with the letter L or the color red
- 12. Only use attachments/accessories provided by the manufacturer.
- 13. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 14. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 16. Never break off the ground pin. Write for our free booklet "Shock Hazard and Grounding." Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.

- 17. If this product is to be mounted in an equipment rack, rear support should be provided.
- 18. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in suscep-tibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

Description

Thank you for purchasing a Peavey Electronics PV 231EQ graphic equalizer. The PV 231EQ is a dual-channel EQ incorporating Peavey's legendary low-noise, low-distortion design. Ruggedly constructed, the PV 231EQs have center-detented fader controls and offer selectable ±6 dB or ±12 dB gain and an LED display indicating level. Other features include variable-state low-cut and high-cut filters, XLR balanced inputs and outputs and bypass switches. PV 231EQ filters are set at ISO center frequencies within 3% accuracy. Whether on stage, in the studio or simply tweaking your home hi-fi system, the PV 231EQ is the EQ for you.

Features

- Dual channel (31 bands each channel)
- 1/3 octave filter sets (ISO centers)
- 20 Hz to 20 kHz effective equalization range
- · Constant Q filters
- Selectable 6 dB or 12 dB cut or boost range
- Level LEDs (-10 to +17 dB)
- · Variable state low and high cut filters
- XLR inputs and outputs for balanced operation

- · Bypass switch with status LED
- 10 dB boost /10 dB cut Level Control
- · Ground lift switch

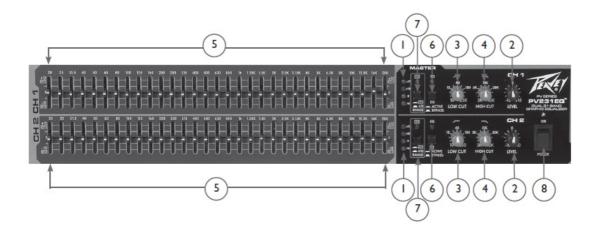
Equalization Process

Always begin the equalization process with all sliders at their center-detent (flat response) positions. Adjust the level up until the unit begins to feed back, then lower each fader until the feedback frequency is found. Lower the faders in small amounts to avoid adversely affecting sound quality. Likewise, excessive boosting of a frequency may result in feedback.

Exercise caution when attempting to boost frequencies below speaker system transducer cut-off. Typical sound reinforcement enclosures are not designed for 20 Hz performance, and transducer damage could result from overboosting low frequencies. Excessive boost at very low frequencies could also limit overall system headroom. Engaging the low-cut filter is the best way to avoid these problems.

NOTE: Superb tonality, absence of feedback and great-sounding systems may not be achievable with any graphic equalizer. All other system components must be of high quality and designed for the application. No amount of equalization will correct an acoustically bad room or bad microphone/speaker arrangement, or completely correct the response curve of a poor loudspeaker.

FRONT PANEL



• LEVEL LED METER (1)

This LED array indicates level from -10 dB to +17 dB.

• LEVEL CONTROL (2)

This calibrated, detented control regulates overall gain of the **EQUALIZER SECTION** (5). Unity gain throughout the signal chain can be maintained by recovering lost signal gain at this point. The equalization process may result in noticeable signal loss. To compensate for this loss, engage the **BYPASS** (6) switch and compare the signal level with that of the equalized level. Increase the GAIN control until the equalized level approximates that of the bypassed level. Let your ears be your guide.

• VARIABLE LOW-CUT FILTER (3)

This control adjusts the variable-state low-cut filter that rejects frequencies below the point selected. Frequency roll-off is 18 dB per octave. This filter will operate even with the **BYPASS** (6) switch engaged.

• VARIABLE HIGH-CUT FILTER (4)

This control adjusts the variable-state high-cut filter that rejects frequencies above the point selected. Frequency roll off is 18 dB per octave. This filter will operate even with the **BYPASS** (6) switch engaged.

• EQUALIZER SECTION (5)

These calibrated, detented controls adjust the amount of cut or boost at their respective frequencies. They are adjustable from -12 dB (cut) to +12 dB (boost) or -6 dB (cut) to 6 dB (boost) depending on the position of the Range switch.

• BYPASS (6)

This switch allows the signal to bypass all features except the **LOW-CUT FILTER (4)**. When this switch is engaged, the signal is routed from INPUT (10 and 11) though the low-cut filter to the channel's output. Bypass is indicated by illumination of LED above the switch.

• RANGE (7)

This switch allows the selection of range (+/-12 dB or +/-6 dB) of the Equalizer Section controls. This gives the operator the ability of finer control of the equalization.

• POWER (8)

This 2-position rocker switch applies mains power to the unit when in the ON position. The adjacent red LED indicates mains power activation.

WARNING

THE ON/OFF SWITCH IN THIS APPARATUS DOES NOT BREAK BOTH SIDES OF THE MAINS. HAZARDOUS ENERGY MAY BE PRESENT INSIDE THE ENCLOSURE WHEN THE POWER SWITCH IS IN THE OFF POSITION.

REAR PANEL



• IEC MAINS CONNECTOR (9)

This is a standard IEC power connector. An AC mains cord having the appropriate AC plug and ratings for the intended operating voltage is included in the carton.

Never break off the ground pin on any equipment. It is provided for your safety. If the outlet used does not have a ground pin, a suitable grounding adapter should be used and the third wire should be grounded properly. To prevent the risk of shock or fire hazard, always make sure that the equalizer and all associated equipment is properly grounded.

Incorporated into this IEC MAINS CONNECTOR is the MAINS FUSE HOLDER. If for any reason you are unable to power up this unit, remove the fuse by pulling out the holder. Check to see if the fuse is operational. If not, then replace with a fuse of the appropriate value and rating. If the fuse continues to fail contact your nearest Certified Peavey Service Center.

• GROUND LIFT SWITCH (10)

This will the lift circuit ground while keeping the Mains Safety Ground intact. This is useful when hum is present, and will maintain a safely operated unit.

• XLR OUTPUT (11)

These male 3-pin connectors provide balanced output when used with female XLR connectors.

• XLR INPUT (12)

These female 3-pin connectors provide balanced input when used with male XLR connectors.

SPECIFICATIONS

Channels: 2 (stereo)Bands: 31 per channel

• Connectors: XLR balanced inputs and outputs

• Frequency Centers: 20 Hz, 25 Hz, 31.5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.5 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz, 20 kHz

• Control Range: Selectable +/-12 dB or +/-6 dB

Input Impedance: 50k ohms
 Output Impedance: 600 ohms
 Maximum Output Level: +21 dB

• Level Control: +/- 10 dB

• Signal to Noise: >93 dB unweighted

• **Distortion**: 0.005%

Roll-Off Filters: 18 dB/octave, butterworth
Low-Cut: Variable state (10 Hz to 250 Hz)
High-Cut: Variable state (3 kHz to 40 kHz)

• Power Consumption: 15 watts

PEAVEY ELECTRONICS CORPORATION LIMITED WARRANTY

What This Warranty Covers

Your Peavey Warranty covers defects in material and workmanship in Peavey products purchased and serviced in the U.S.A. and Canada.

What This Warranty Does Not Cover

The Warranty does not cover:

- damage caused by accident, misuse, abuse, improper installation or operation, rental, product modification or neglect;
- 2. damage occurring during shipment;
- 3. damage caused by repair or service performed by persons not authorized by Peavey;
- 4. products on which the serial number has been altered, defaced or removed;
- 5. products not purchased from an Authorized Peavey Dealer.

Who This Warranty Protects

This Warranty protects only the original retail purchaser of the product.

How Long This Warranty Lasts

The Warranty begins on the date of purchase by the original retail purchaser. **The duration of the Warranty is as follows:**

Guitars/Basses, Amplifiers, Pre-Amplifiers, Mixers, Electroni c Crossovers and Equalizers	2 years *(+ 3 years)
Drums	2 years *(+ 1 year)
Enclosures	3 years *(+ 2 years)
Digital Effect Devices and Keyboard and MIDI Controllers	1 year *(+ 1 year)
Microphones	2 years
Speaker Components (incl. speakers, baskets, drivers, diaphragm replacement kits and passive crossovers) and all Accessories	1 year
Tubes and Meters	90 days

[*Denotes additional warranty period applicable if optional Warranty Registration Card is completed and returned to Peavey by original retail purchaser within 90 days of purchase.]

What Peavey Will Do

We will repair or replace (at Peavey's discretion) products covered by warranty at no charge for labor or materials. If the product or component must be shipped to Peavey for warranty service, the consumer must pay initial shipping charges. If the repairs are covered by warranty, Peavey will pay the return shipping charges.

How To Get Warranty Service

1. Take the defective item and your sales receipt or other proof of date of purchase to your Authorized Peavey Dealer or Authorized Peavey Service Center.

OR

2. Ship the defective item, prepaid, to Peavey Electronics Corporation, International Service Center, 412 Highway 11 & 80 East, Meridian, MS 39301 or Peavey

Canada Ltd., 95 Shields Court, Markham, Ontario, Canada L3R 9T5. Include a detailed description of the problem, together with a copy of your sales receipt or other proof of date of purchase as evidence of warranty coverage. Also provide a complete return address.

Limitation of Implied Warranties

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Exclusions of Damages

PEAVEY'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT PEAVEY'S OPTION. IF WE ELECT TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. PEAVEY SHALL NOT BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If you have any questions about this warranty or service received or if you need assistance in locating an Authorized Service Center, please contact the Peavey International Service Center at (601) 483-5365 / Peavey Canada Ltd. at (905) 475-2578. Features and specifications subject to change without notice.

Features and specifications subject to change without notice. Peavey Electronics Corporation

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FAQ's

What is the Peavey PV231EQ Graphic Equalizer?

The Peavey PV231EQ is a professional-grade 2/3 octave graphic equalizer designed for audio signal processing in live sound and studio environments. It helps adjust the frequency balance of audio signals to achieve desired tonal characteristics.

How many bands does the PV231EQ have?

The Peavey PV231EQ features 31 bands, allowing precise control over a wide range of frequencies.

What are the main uses of the PV231EQ?

The PV231EQ is used to fine-tune the frequency response of audio signals. It's commonly used in sound reinforcement systems, recording studios, and DJ setups to shape the sound to match the room acoustics and personal preferences.

How do I connect the PV231EQ to my audio system?

The PV231EQ is typically connected between your audio source (mixer, player, etc.) and your amplifier or

powered speakers. Connect the output of your source to the input of the PV231EQ, and then connect the output of the PV231EQ to the input of your amplifier or powered speakers.

How do I adjust the equalizer settings?

Each band on the PV231EQ can be adjusted using the sliders provided. Slide them up or down to boost or cut specific frequency ranges as needed.

Are there any guidelines for equalizer adjustments?

It's generally recommended to start with a flat (neutral) EQ setting and then make adjustments based on the room acoustics, audio source, and personal preferences. Avoid extreme boosts or cuts, as these can lead to unnatural or distorted sound.

Can I use the PV231EQ for feedback control?

Yes, the PV231EQ can help control feedback in live sound situations. By identifying and reducing frequencies that are prone to feedback, you can achieve clearer and more stable audio.

Does the PV231EQ have bypass functionality?

Yes, the PV231EQ usually comes with a bypass switch that allows you to instantly disable the EQ settings and hear the unprocessed signal.

Is the PV231EQ rack-mountable?

Yes, the PV231EQ is designed to be rack-mounted, making it easy to integrate into your existing setup.

Are there any maintenance tips for the PV231EQ?

Keep the sliders and controls clean to prevent dust and dirt buildup. If using in a live environment, consider using a protective cover when not in use. Regularly inspect cables and connections for any issues.

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