

EQ301
1/3-Octave Constant-Q
Graphic Equalizer

Operation Manual

advantage ®

EQ301

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INTRODUCTION

The ADVANTAGE® EQ301 is a two rack space, 30-band, 1/3 octave graphic equalizer. The EQ301 uses Contant-Q technology to guarantee more precise room tuning with less filter interaction, better filter combining characteristics, and constant filter bandwidth at any setting. These benefits, combined with accurate front panel representation of the EQ curve, make equalization an easier, more intuitive process.

Advantage EQ301 features include:

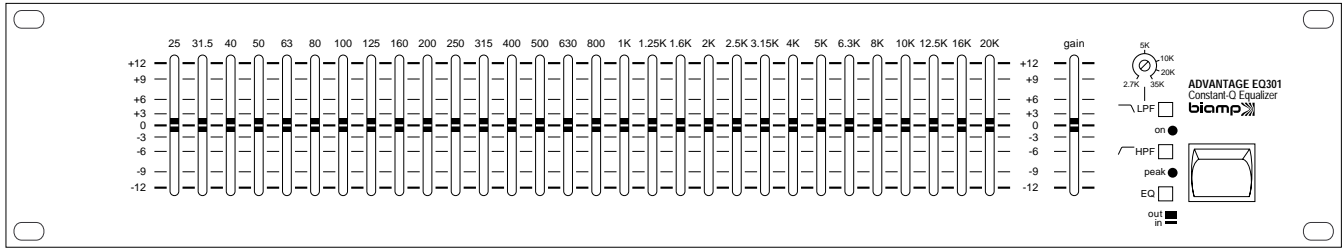
- ◆ 25Hz to 20kHz filter range
- ◆ ±12dB filter cut and boost
- ◆ ±12dB master gain control
- ◆ +15dBu peak LED indicator
- ◆ 20Hz high-pass filter switch
- ◆ adjustable low-pass filter
- ◆ equalization bypass switch
- ◆ balanced input and output
- ◆ XLR & barrier strip connectors
- ◆ rear panel ground lift strap
- ◆ Constant-Q filters
- ◆ Five-Year 'Gold Seal' Warranty
- ◆ CE marked and UL listed



After reading this manual, if you have any questions or need technical assistance, please call Biamp Systems toll-free 1-800-826-1457.



FRONT PANEL FEATURES



Filter Controls: These 30 slide controls adjust the gain in each of the filter bands (25Hz-20kHz). Each control has a range of ± 12 dB boost/cut, with a center detent (flat).

Master Gain Control: This slide controls adjust the overall gain of the equalizer only when the EQ Bypass Switch (see below) is depressed. It has a range of ± 12 dB. Use this control to compensate for changes in gain due to filter adjustments.

LPF Frequency Adjust: This screwdriver adjustable control varies the cutoff frequency of the output low-pass filter from 3kHz to 37kHz.

LPF In/Out Switch: This switch inserts an 18dB/octave low-pass filter at the output of the equalizer.

HPF In/Out Switch: This switch inserts an 18dB/octave high-pass filter at the output of the equalizer. The cutoff frequency is 20Hz. Use the high-pass filter to eliminate subsonic frequencies which waste amplifier power and may damage speakers.

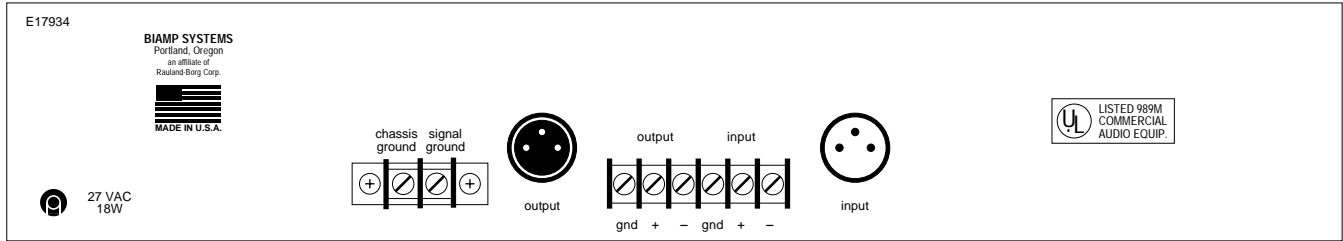
EQ In/Out Switch: This switch enables or disables the graphic equalizer filter controls and the master gain control. The LPF & HPF are independent of this switch. Use the EQ In/Out Switch to compare equalized signal to unequalized signal.

Power On Indicator: This red LED indicates that the power switch is activated and power is applied to the unit.

Peak Indicator: This red LED indicates that signal levels at the equalizer output have reached +15dB (3dB below clipping). When the Peak Indicator lights, lower the Master Gain Control or reduce input signal level.

Power Switch: This switch applies power to the unit.

REAR PANEL FEATURES



AC Power Cord: The external power transformer provides 27 Volts AC to the unit, and is detachable via a 5-pin DIN connector. The equalizer has two internal ½ amp slow blow (0.5A SB) fuses. If these fuses should require replacement, use same value and type fuses only.

Ground Strap: This terminal strip allows floating the circuit ground from the chassis ground, to help eliminate ground loops within the sound system.

Output XLR Connector: This 3-pin XLR connector provides balanced output from the equalizer. It is wired to the DIN standard, with Pin 2 High (+), Pin 3 Low (-), and Pin 1 Ground. For unbalanced output, connect Pin 2 High (+), and both Pins 1 & 3 to Ground.

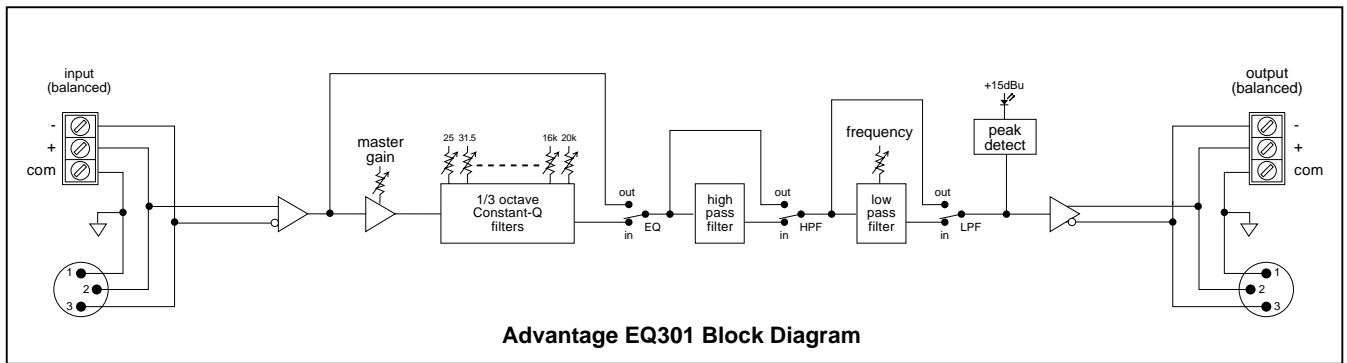
Barrier Strip: This terminal strip provides balanced or unbalanced output, and accepts balanced or unbalanced input. For balanced use, connect High to (+), Low to (-), & Ground to (gnd). For unbalanced use, connect High to (+) and Ground to both (-) & (gnd).

Input XLR Connector: This 3-pin XLR connector accepts balanced input to the equalizer. It is wired to the DIN standard, with Pin 2 High (+), Pin 3 Low (-), and Pin 1 Ground. For unbalanced input, connect Pin 2 High (+), and both Pins 1 & 3 to Ground.

SPECIFICATIONS

Frequency Response (20Hz-20kHz @ +4dBu):	+0/-0.5dB
Total Harmonic Distortion + Noise (20Hz-20kHz @ +4dBu):	< 0.01%
Intermodulation Distortion (SMPTE):	< 0.007%
Hum & Noise (20Hz-20kHz @ unity gain w/ filters flat):	-88dBu
Dynamic Range (20Hz-20kHz):	106dB
Maximum Input Level:	+18dBu
Input Impedance (balanced):	20k ohms
Maximum Output (600 ohm load):	+18dBm
Output Impedance (balanced):	150 ohms
High-Pass Filter (18dB/octave):	20Hz
Low-Pass Filter (18dB/octave):	3kHz-37kHz
Power Consumption:	< 10 Watts
Power Requirements:	115/230VAC 50/60Hz
Dimensions:	
Height (2 rack spaces)	3.5" (89mm)
Width	19" (483mm)
Depth	6" (152mm)
Weight:	7 lbs. (3.18kg)

BLOCK DIAGRAM



WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL.

BIAMP Systems expressly warrants this product to be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase as a new product from an authorized BIAMP Systems dealer under the following conditions.

1. The Purchaser is responsible for completing and mailing to BIAMP Systems, within 10 days of purchase, the attached warranty application.
2. In the event the warranted BIAMP Systems product requires service during the warranty period, BIAMP Systems will repair or replace, at its option, defective materials, provided you have identified yourself as the original purchaser of the product to any authorized BIAMP Systems Service Center. Transportation and insurance charges to and from an authorized Service Center or the BIAMP Systems factory for warranted products or components thereof to obtain repairs shall be the responsibility of the purchaser.
3. This warranty will be VOIDED if the serial number has been removed or defaced; or if the product has been subjected to accidental damage, abuse, rental usage, alterations, or attempted repair by any person not authorized by BIAMP Systems to make repairs; or if the product has been installed contrary to BIAMP Systems's recommendations.
4. Electro-mechanical fans, electrolytic capacitors, and the normal wear and tear of appearance items such as paint, knobs, handles, and covers are not covered under this warranty.
5. BIAMP SYSTEMS SHALL NOT IN ANY EVENT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, LOSS OF USE, PROPERTY DAMAGE, INJURY TO GOODWILL, OR OTHER ECONOMIC LOSS OF ANY SORT. EXCEPT AS EXPRESSLY PROVIDED HEREIN, BIAMP SYSTEMS DISCLAIMS ALL OTHER LIABILITY TO PURCHASER OR ANY OTHER PERSONS ARISING OUT OF USE OR PERFORMANCE OF THE PRODUCT, INCLUDING LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY IN TORT.
6. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. BIAMP SYSTEMS EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES SET FORTH HEREIN SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES WITH RESPECT TO ANY DEFECTIVE PRODUCT. THE AGENTS, EMPLOYEES, DISTRIBUTORS, AND DEALERS OF BIAMP SYSTEMS ARE NOT AUTHORIZED TO MODIFY THIS WARRANTY OR TO MAKE ADDITIONAL WARRANTIES BINDING ON BIAMP SYSTEMS. ACCORDINGLY, ADDITIONAL STATEMENTS SUCH AS DEALER ADVERTISEMENTS OR REPRESENTATIONS DO NOT CONSTITUTE WARRANTIES BY BIAMP SYSTEMS.
7. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.

Thank you for purchasing BIAMP SYSTEMS...
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