

**SEQ 301**  
**Operation Manual**

**B I A M P<sup>®</sup>**  

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**S Y S T E M S**

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# SEQ301

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## INTRODUCTION

The ADVANTAGE® **SEQ301** is a two rack space, 30-band, 1/3 octave graphic equalizer. The SEQ301 uses Constant-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. The SEQ301 carries a five-year warranty.

SEQ301 features include:

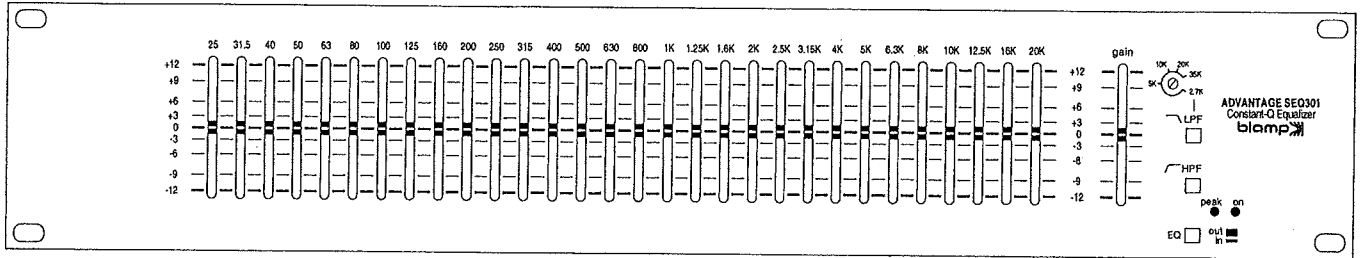
- ◆ 1/3-octave 30-band graphic equalizer (25Hz~20kHz)
- ◆ ±12dB filter control cut and boost gain range
- ◆ ±12dB master level control gain range
- ◆ +15dBu peak LED indicates 9dB of headroom
- ◆ high-pass filter switch (18dB/octave @ 20Hz)
- ◆ adjustable low-pass filter (18dB/octave @ 3kHz~37kHz)
- ◆ equalization bypass switch for comparison to flat signal
- ◆ balanced input and output on plug-in barrier strips
- ◆ RFI filtering for protection from radio interference
- ◆ FET output muting to prevent turn on/off transients
- ◆ Constant-Q filter design for more precise equalization
- ◆ incorporates **AES** recommended grounding practices
- ◆ **CE** marked and **UL / C-UL** listed power source
- ◆ covered by Five-Year 'Gold Seal' Warranty



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  $\pm 12$ 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  $\pm 12$ 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.

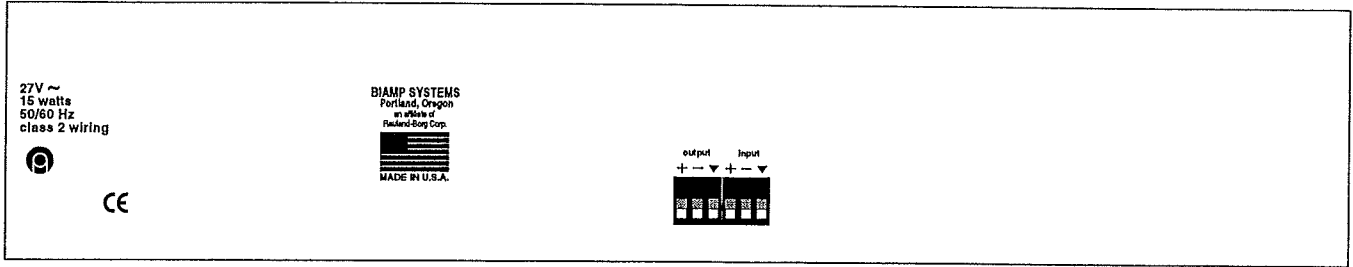
**HPF In/Out Switch:** This switch inserts an 18dB/octave high-pass filter at the output of the equalizer. The cutoff frequency is 20Hz. Use the high-pass filter to eliminate subsonic frequencies which waste amplifier power and may damage speakers.

**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 un-equalized signal.

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

**Peak Indicator:** This red LED indicates that signal levels at the equalizer output have reached +15dB (9dB below clipping). When the Peak Indicator lights, lower the Master Gain Control or reduce input signal level.

## REAR PANEL FEATURES



**AC Power Cord:** The external power transformer provides 27 Volts AC to the equalizer, and is detachable via a 5-pin DIN connector. The equalizer has two internal 'self-resetting' fuses (there are no user servicable parts inside the unit). If the internal fuses blow, they will attempt to re-set after a short period. However, this may be an indication that the equalizer requires service.

**Output:** This plug-in barrier strip connector provides balanced output from the equalizer. For unbalanced output, connect to the Output with high to (+) and ground to (▼), leaving (-) unconnected. Signal levels will be reduced by 6dB when the Output is unbalanced.

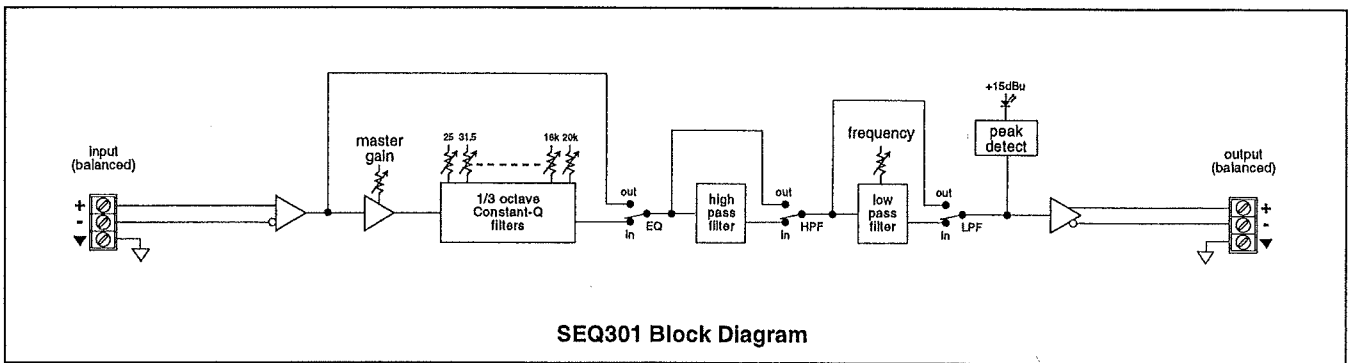
**Input:** This plug-in barrier strip connector provides balanced input to the equalizer. For unbalanced input, connect to the Input with high to (+) and ground to both (-) & (▼).

## SPECIFICATIONS

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<b>Frequency Response</b> (20Hz-20kHz @ +4dBu):	+0/-0.5dB
<b>Total Harmonic Distortion + Noise</b> (20Hz-20kHz @ +4dBu):	< 0.008%
<b>Intermodulation Distortion</b> (SMPTE):	< 0.008%
<b>Hum &amp; Noise</b> (20Hz-20kHz @ unity gain w/ filters flat):	-82dBu
<b>Dynamic Range</b> (20Hz-20kHz):	103dB
<b>Maximum Input Level:</b>	+24dBu
<b>Input Impedance</b> (balanced):	20k ohms
<b>Maximum Output</b> (600 ohm load):	+21dBm
<b>Output Impedance</b> (balanced):	200 ohms
<b>High-Pass Filter</b> (18dB/octave):	20Hz
<b>Low-Pass Filter</b> (18dB/octave):	3kHz-37kHz
<b>Power Consumption:</b>	< 10 Watts
<b>Power Requirements:</b>	115/230VAC 50/60Hz
<b>Dimensions:</b>	
Height (2 rack spaces)	3.5" (89mm)
Width	19" (483mm)
Depth	7.25" (184mm)
<b>Weight:</b>	7 lbs. (3.18kg)

# BLOCK DIAGRAM



## WARRANTY

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### 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.
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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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