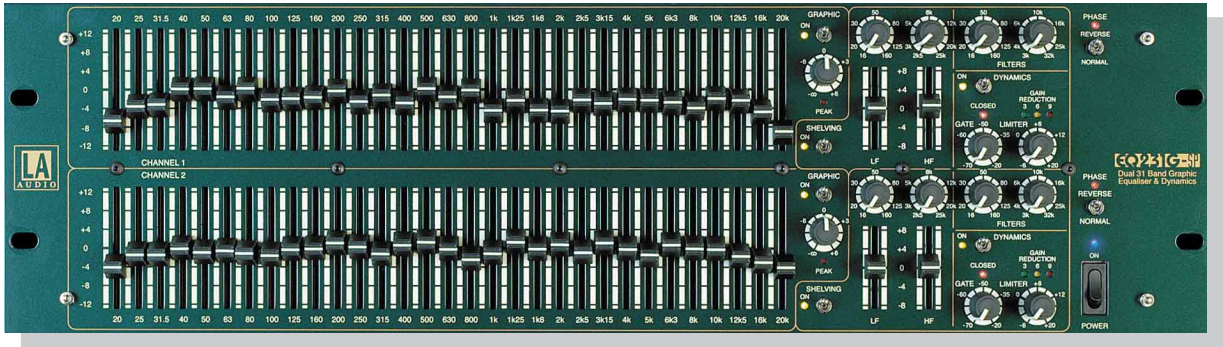


EQ231 G-SP

Dual 31 Band Graphic with Shelving EQ, Limiter and Gate



British  
Originals



## PRODUCT OVERVIEW

The EQ231-GSP is a highly versatile combination of dual 31 band 1/3 Octave Graphic Equaliser, LF and HF variable frequency Shelving Equaliser, variable High and Low Pass filters and Limiter-Noise Gate.

The band pass filters are based around precision minimum phase active RC networks to deliver superior dynamic range and signal to noise performance. An optional Inductor board may be specified for the top eight frequencies (4kHz-20kHz) to further improve noise and phase linearity. Long throw faders provide maximum sensitivity and control of 12dB cut and boost at 31 ISO centre frequencies covering the entire audio spectrum (20Hz to 20kHz).

The Shelving Equaliser section offers continuous adjustment of boost/cut and corner frequency. This allows an engineer to tailor the sound without altering the graphics settings. The High and Low Pass filters use 4th order bi-quadratic topology to offer 24dB/octave slope and superior stability.

The Dynamics section uses a fast RMS detector with soft-knee characteristics. The Limiter features a Threshold control and 3-segment gain reduction display. The Noise Gate features a Threshold Control and Gate Closed indicator.

The EQ231-GSP has electronically balanced inputs and outputs on XLR, with front panel phase reverse switches on the outputs. An optional Transformer Output module is available, featuring Active Distortion Cancellation circuitry that reduces to negligible levels the LF distortion inherent in Passive Transformer designs.

Power relays ensure silent power on/off and also automatic bypassing of the unit when switched off. All switches are indicated with status LED's. Each channel incorporates an input level control with clip LED and may be individually bypassed.

The EQ231-GSP is built in accordance with Electro-Magnetic Compatibility (EMC) regulations encompassed within the European "CE" mark. This guarantees problem free integration into audio systems.

In keeping with our policy of continuous improvement LA Audio reserves the right to alter specifications without prior notice. Manufactured in the UK by LA Audio, 6-24 Southgate Road, London, N1 3JJ.  
Tel: +44 (0)207 923 7447, FAX: +44 (0)207 241 3644. Web: [www.laaudio.co.uk](http://www.laaudio.co.uk). email: [sales@laaudio.co.uk](mailto:sales@laaudio.co.uk)  
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## SPECIFICATIONS

### ELECTRICAL

Frequency response:	20Hz to 20kHz (+0, -1dB)
Input impedance:	20k balanced
Output Impedance:	<100R, Electronically balanced
Output load impedance:	20R with O/P Transformers
Max Output Level:	600R to infinity
THD:	+20 dBu (600R load, 1kHz) <0.003% (600R load, 1kHz, +4dBu)

Centre Frequencies (Hz): 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 515, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8k, 10k, 12.5k, 16k, 20k

Peak Indicator: 2 dB before clipping

Limiter Threshold:	-6 to +20dBu
Limiter Ratio:	20:1
Gate Threshold:	-70 to -20dBu
Gate Ratio:	10:1

High Pass Filter: 16Hz - 160Hz  
24dB/octave Butterworth

Low Pass Filter: 3kHz - 32kHz  
12dB/octave Butterworth

LF Shelving freq: 16Hz to 160Hz  
with 8dB Cut/Boost

HF Shelving freq: 2.5kHz to 25kHz  
with 8dB Cut/Boost

Power Consumption: 15VA, 115/230VAC, 50-60Hz

### PHYSICAL

Input Connectors:	XLR 3 Pin (Pin 2 hot)
Output Connectors:	XLR 3 Pin (Pin 2 hot)
Power Connection:	Detachable lead. IEC 3 pin socket
Dimensions:	483 (19")W 230 (9.2")D 135 (5.25")H
Weight:	5.5 kg, 12 lbs.
Shipping Weight:	6.9 kg, 15 lbs.
Temperature Range:	Operating: 0°C to 50°C Storage: -30°C to 75°C

## ARCHITECTS & ENGINEERS SPECIFICATIONS

The Equaliser shall be a dual 31 band 1/3 Octave Graphic Equaliser with shelving EQ, variable High and Low Pass Filters and Dynamics section.

The Graphic EQ section shall provide 12dB of cut and boost at 31 ISO centre frequencies between 20Hz and 20kHz utilising long throw (45 mm) faders. The Shelving Equaliser section shall provide 8dB Cut/Boost from 16Hz to 160Hz (LF) and 2.5kHz to 25kHz (HF). The High Pass Filter shall range from 16Hz to 160Hz with 24dB/octave slope and the Low Pass Filter shall range from 3kHz to 32kHz with 12dB/octave slope.

The Dynamics section shall provide a Noise Gate with Threshold range from -70 to -20dB with a ratio of 10:1, and a Limiter with Threshold range from -6 to +20dBu and a ratio of 20:1. There shall be a single Gate Threshold LED and a 3 segment gain reduction LED display.

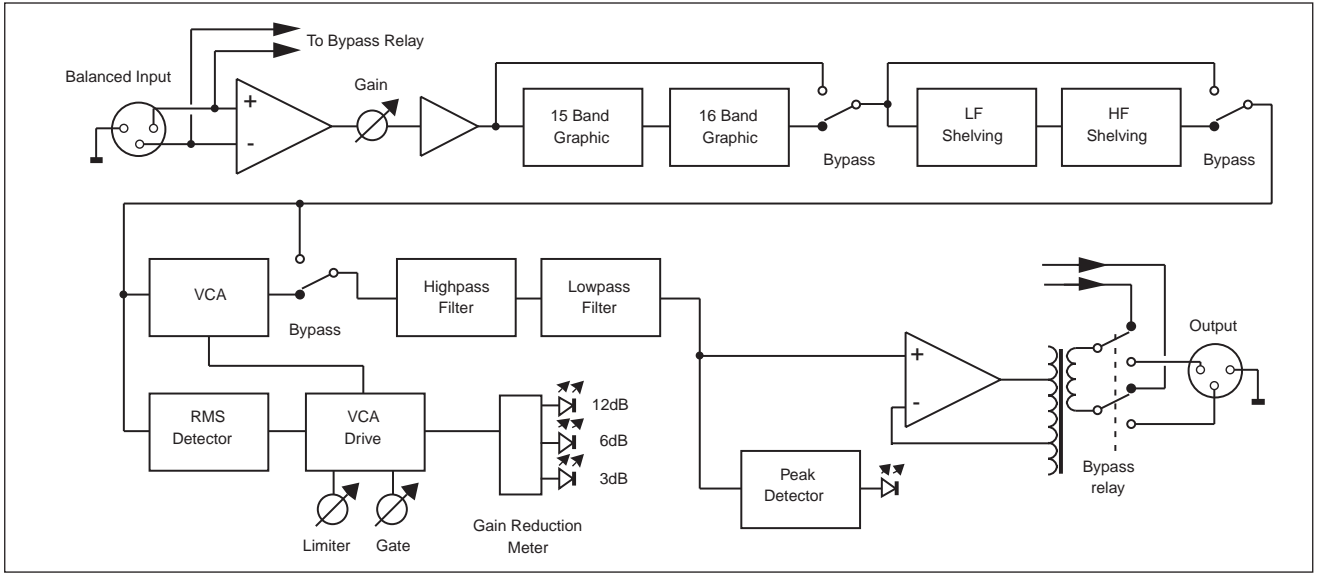
The unit shall be fitted with power relays to allow soft power on/off and automatic bypassing when the unit is switched off. Inputs and outputs shall be electronically balanced on XLR connectors. An optional Transformer Output Module shall include Active Distortion Cancellation circuitry.

The Equaliser shall be constructed in a 3U case and built in accordance with the directives encompassed within the 'CE' regulations and so marked.

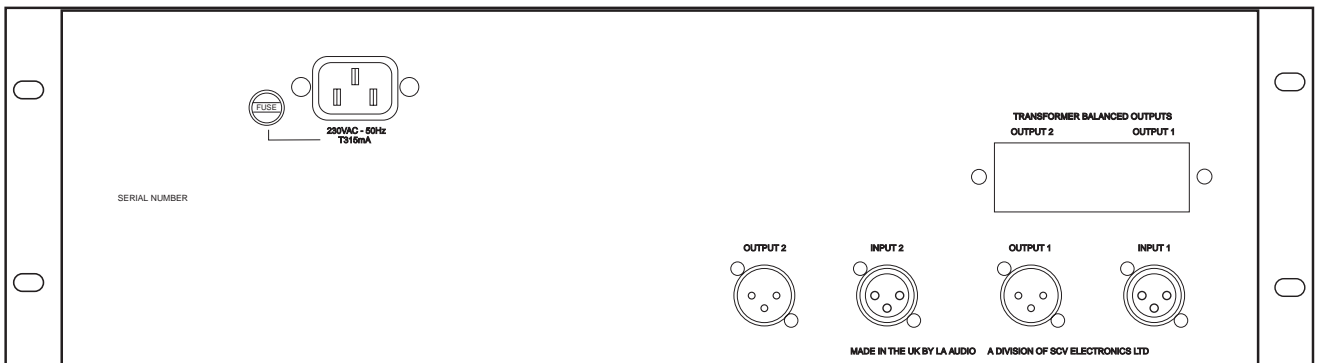
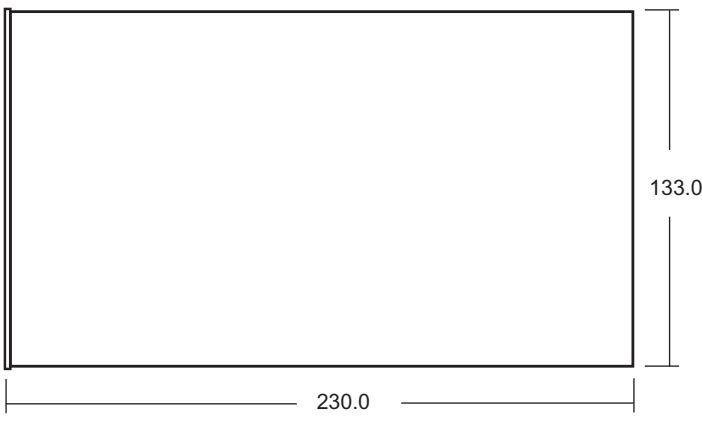
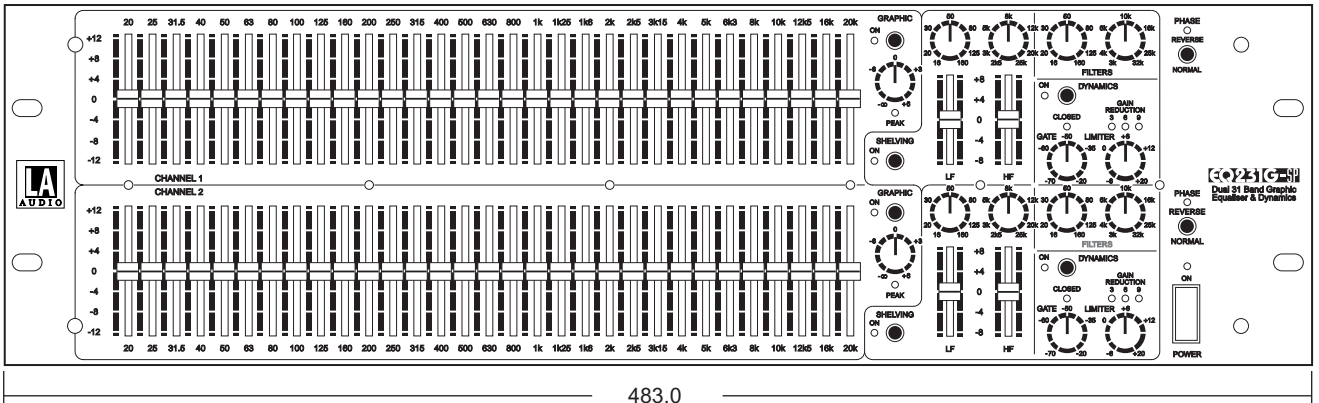
The Equaliser shall be an LA Audio EQ231G-SP.

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### BLOCK DIAGRAM



### DIMENSIONS



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