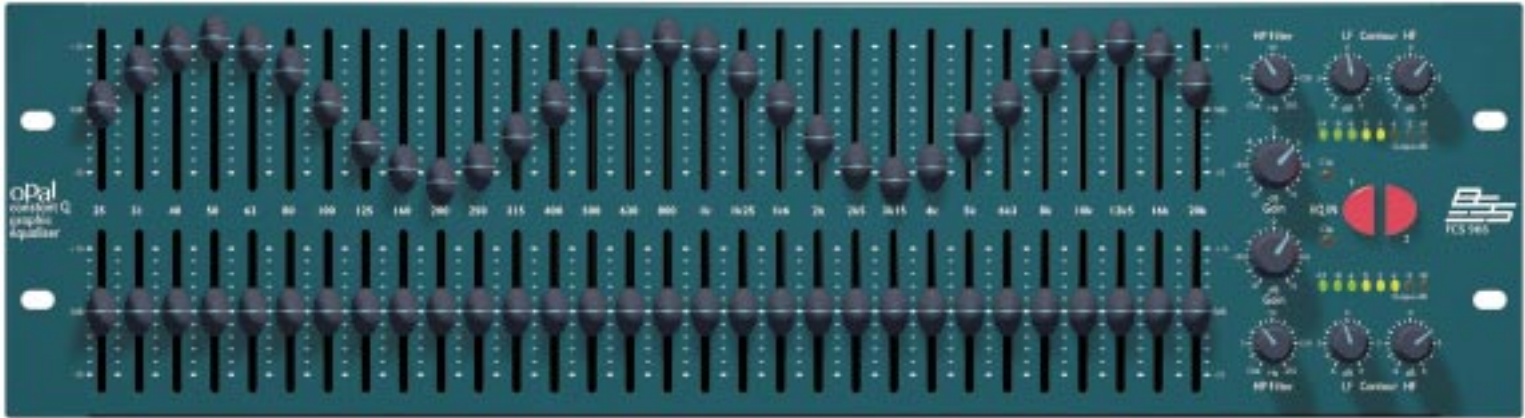




OPAL Series FCS-966

Constant Q Graphic Equaliser



FCS 966 966

Graphic equalisers are found in just about every sound application, from room contouring to feedback control and general audio sweetening.

Traditionally, much general eq'ing takes place on the faders alone, but this restricts the use of the faders at each end of the scale for further precision eq work. So we provided the Opal FCS-966 with separate LF and HF contour filters which can change an overall sound balance without disturbing a detailed room or loudspeaker response.

These filters are very musical gentle boost and cut shelving filters which can be used to add (or remove) room effects that change with temperature, audience numbers or humidity.

All these effects can be easily made without disturbing the critical fader settings already made.

Constant Q filters

The modern generation of graphic eq's uses the Constant Q topology, pioneered by BSS Audio, which means that the filter width is constant whatever the fader gain setting.

Compared to the earlier 'gyrator' style of filters, Constant Q filters provide a smoother and more predictable interaction between adjacent faders and the resulting eq curve more closely resembles the actual fader positions.

More gain control per filter

Each eq fader has +/-15dB of adjustable gain, more than many competitive graphic eq's. The faders are long-throw 45mm types for precision control.

High pass filter

Also provided on the FCS-966 is a sweepable high-pass filter which can be used very effectively to restrict the low-energy output for better amplifier and loudspeaker performance. Stage monitors also benefit from the application of a high-pass filter to remove bass signals from vocal-only wedges, for example.

Metering

BSS Audio believes in providing engineers with information, and the FCS-966's 8-segment led meter shows output level and warns of signal clipping within the eq. When the unit is switched to bypass, the meter will read the input level, allowing accurate matching of the 'dry' and equalised signals using the gain control.

Centre bypass

When any eq fader is in its centre detent position, the filter is automatically bypassed, for optimum performance.

Input/outputs

All the inputs and outputs of the FCS-966 are electronically balanced, with optional transformer balancing. To make installation of the FCS-966 easier, we've provided three different interface connectors: XLR-type, 1/4" TRS jack and Phoenix/Combicon screw terminals.

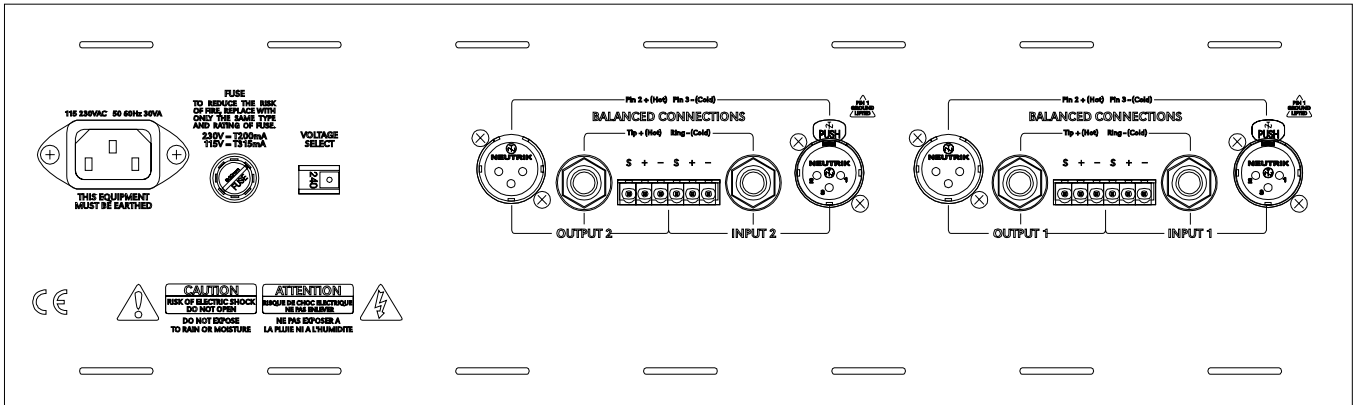
Relay bypass

The EQ IN buttons switch the EQ path into circuit. When switched out, or power fails, a high-quality relay switches the input signal directly to the output connectors.



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Control Descriptions

Faders

30 EQ filter faders on ISO centres, each with nominal +/-15dB of gain. Positive centre-detent on 45mm long-throw precision faders.

HP Filter

Sweepable high pass filter, frequency adjustable from OUT (flat) up to 250Hz.

LF Contour

Smooth shelving filter, +/-6dB of gain at 50Hz



HF Contour

Smooth shelving filter, +/-6dB of gain at 14kHz.

GAIN

Used for overall unity gain adjustment. Adjustable from - infinity to +10dB.

CLIP

Triple-point clip detector that indicates red when the internal signal is clipping at any one of three critical points.

LED Meter

Shows output signal level (input signal when eq is bypassed) from -24dBu to +18dBu in 8 steps.

Technical Specifications

HP filter set to OUT. GAIN, HF, LF & all faders set to 0

Input Section

Input Impedance	10kOhm, electronically balanced
Maximum Input Level	>+20dBu
CMRR	>-40dB @1kHz

Output section

Output Impedance	< 50 Ohms, electronically balanced
Maximum Output Level	>+20dBu into 600 Ohms

Filters

HP filter control	OUT to 250Hz @ 12dB/octave
LF contour	+/-6dB shelving @ 50Hz 6dB/octave
HF contour	+/-6dB shelving @ 14kHz 6dB/octave
FREQUENCY bands	+/-15dB on ISO centres with a Q of 4

General Performance

Frequency Response	5Hz to 45kHz +/-1dB
Noise	<-94dBu 22Hz to 22kHz
Dynamic Range	> 115dB
Cross Talk	>-80dB @1kHz
Distortion	<0.005%THD (80kHz measurement BW) 20Hz-20kHz.
GAIN control	+10dB to -infinity

Dimensions	19" x 5.25" x 7.1" (483mm x 134mm x 180mm)
Weight	6.6lbs (3kgs), unpacked
AC Power	115/230V AC, 50/60Hz, 30VA.

This product was designed and developed by BSS Audio, Herts, England. In the interests of product development, BSS Audio reserves the right to change designs and specifications without notice.

Also in the OPAL Series:



DPR-422
Dual Compressor / De-Esser



DPR-522
Advanced Dual Noise Gate



DPR-944
2+2 Parametric
Compressor/Gate

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