

Equalizers

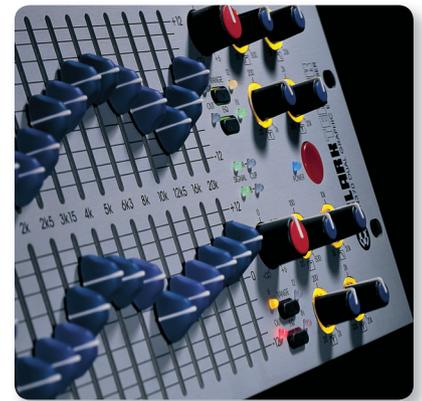
DN370

Dual 30 Band, 1/3 Octave Analogue Graphic Equaliser with Enhanced Proportional-Q Response and Four-Band Filtering



- ⊗ Enhanced Proportional-Q equalisation provides both smooth contouring EQ and High-Q notches
- ⊗ Swept high-pass and low-pass filters per channel with illuminated LED rings
- ⊗ Two overlapping high-precision swept notch filters per channel with illuminated LED rings
- ⊗ Channel bypass and graphic EQ range selection switches
- ⊗ Long-throw 45 mm oil-damped faders with dust covers for increased accuracy and reliability
- ⊗ Power-off bypass relays with recessed power switch to avoid accidental operation
- ⊗ Electronically balanced inputs and outputs on Neutrik* XLR and Phoenix* connectors
- ⊗ Rugged 3U rackmount chassis for durability in portable applications
- ⊗ Auto-ranging universal switch-mode power supply
- ⊗ 3-Year Warranty Program*
- ⊗ Designed and engineered in England

The DN370 is the latest evolutionary step in a process of design refinement that goes back over 40 years to the earliest KLARK TEKNIK graphic equalisers. The enhanced Proportional-Q response recaptures that of the classic single channel DN27 graphic equaliser using modern solid-state design and manufacturing technologies, and the DN370 features dual channel 30 band graphic equalisation with swept high-pass and low-pass filters and two swept notch filters per channel. This highly flexible tool box of corrective equalisation and filtering is ideal for both Front of House and stage monitoring applications, where both the gentle contouring and surgically precise high-Q notches uniquely made possible by the Proportional-Q response enhance intelligibility as well as eliminating sub-sonic rumble, room and speaker resonances and standing waves. DN370 is designed for system installers as well, and features Phoenix-style connectors for ease of installation.

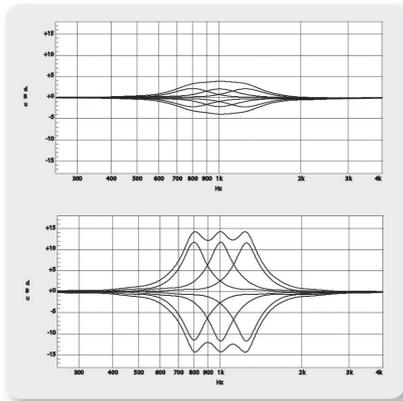


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Enhanced Proportional-Q Response

KLARK TEKNIK's enhanced Proportional-Q equalisation offers key advantages over the more numerous Constant-Q graphic equalisers on the market. A Constant-Q response boosts or cuts an increasingly wide band of frequencies, resulting in more of the frequency spectrum being lost when using a Constant-Q equaliser to eliminate problem frequencies. If the response of a Constant-Q equaliser is made narrower to compensate, the result is ripple in the frequency response when small amounts of boost and cut are applied.

In contrast, with a Proportional-Q response, at low amounts of cut or boost the width of the filter is relatively broad allowing for gentle contouring of the frequency spectrum, but becomes progressively narrower as the amount of boost or cut is increased, giving a more 'focused' response ensuring that problem frequencies can be attenuated quickly and effectively. At the same time, the enhanced Proportional-Q equalisation response used on DN370 minimises interaction between adjacent frequency bands, allowing subtle tonal correction without frequency response ripple, so that more of the musical content is preserved.

Comprehensive Filter Control

DN370 augments the Proportional-Q graphic equalisation section with a comprehensive set of continuously swept filters for precise corrective control of the audio spectrum. The control knobs incorporate a push function to switch the filter in and out whilst maintaining the frequency setting, and feature illuminated LED rings for 'at a glance' status display, even at wide distances and viewing angles.

The 12 dB/oct high-pass filter features a 20 Hz to 500 Hz range and is invaluable for the smooth rejection of unwanted low and subsonic frequencies, particularly relevant for use with modern compact wedge monitors. The 12 dB/oct low-pass filter features a 2 kHz to 20 kHz range and can be used to improve intelligibility by tailoring the upper frequency response to match that of the monitor speaker.

The two notch filters feature overlapping frequency ranges of 20 Hz to 2 kHz and 200 Hz to 20 kHz. The notch filters allow the surgical removal of resonances and feedback with minimal effect on the rest of the program material, and fast control of 'between fader' frequencies. The ability to overlap the notch filters, both with each other and with the graphic equaliser bands, allows very deep notches to be created. Up to 45 dB of attenuation is possible when using the notch filters in conjunction with the graphic equaliser bands.

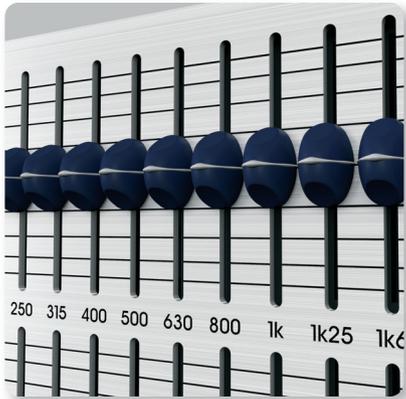
A channel gain control is provided with range from $-\infty$ to +6 dB. In the event of sudden on-stage feedback, this control can be used to immediately mute the signal path whilst the cause is established.



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High Resolution Faders

The DN370 graphic equaliser section features centre-detented long-throw 45 mm precision oil-damped faders which allow a high degree of control over the ± 12 dB range, and a ± 6 dB range is also provided for increased resolution for even finer control of the audio frequency spectrum response. Channel bypass and graphic equaliser range selection switches are also provided for easy configuration and comparison of the graphic equaliser setting with the direct signal. The faders also feature protective covers to inhibit the ingress of dirt and dust, to maximise their working life in demanding environments.

Electronically-Balanced Inputs and Outputs

DN370 has electronically-balanced inputs with excellent common-mode rejection and the electronic servo-balanced outputs have high-drive capability to cope with long cable runs. Although equalisers are more generally used on console inserts, the DN370 is fully capable of being used in-line with cables running the long distances between the Front of House mix position, the main stage and the delay towers in festival PA systems. Power-off bypass relays preserve the signal path in the event of a power failure, and the recessed front panel power switch is designed to avoid accidental operation.

Transformer balancing is available as an additional option on both the inputs and outputs.



Built for the Road

Featuring a rugged steel 3U rackmount enclosure, the DN370 is designed for the rigours of live concert touring. Premium Neutrik connectors are used to ensure reliable audio connections, night after night.

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Auto-Ranging Universal Switch-Mode Power Supply

DN370 features a universal power supply, which is auto-voltage sensing for use on a worldwide basis.



You Are Covered

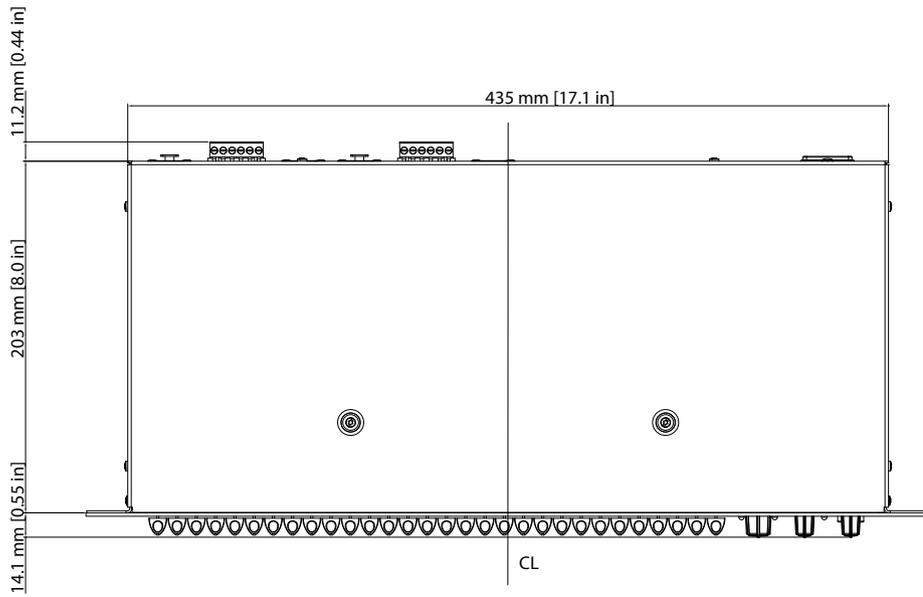
We always strive to provide the best possible Customer Experience. Our products are made in our own **MUSIC Group** factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous **3-Year Warranty** program.

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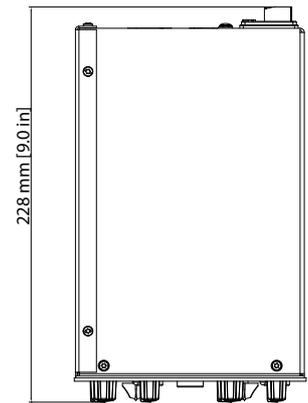
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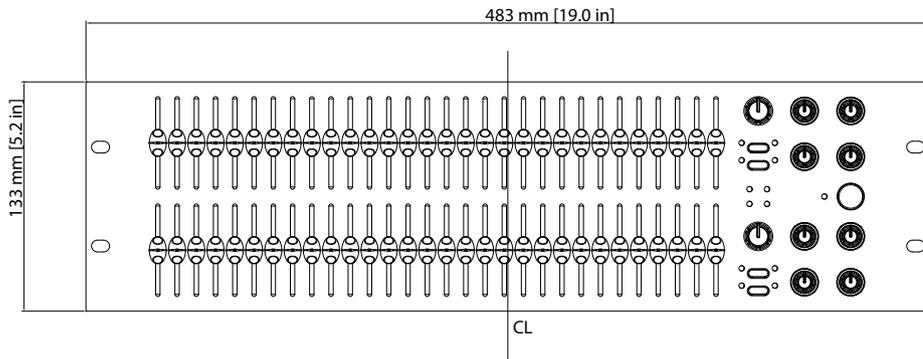
Dimensions



TOP



SIDE



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Technical Specifications

Inputs

Type	Electronically balanced (pin 2 hot)
Impedance	20 k Ω
Maximum input level	+22 dBu

Outputs

Type	Electronically balanced (pin 2 hot)
Minimum load impedance	600 Ω
Source impedance	<60 Ω
Maximum output level	+22 dBu into >2 k Ω

Performance

Frequency response relative to signal at 1 kHz	± 0.5 dBu 20 Hz - 20 kHz
EQ out	± 0.5 dBu
EQ in (flat)	± 0.5 dBu
Distortion (THD+N)	< 0.003% @ 1 kHz +4 dBu
Dynamic range	>114 dB (20 Hz - 20 kHz unweighted, ± 12 dB range)
Overload indicator	+20 dBu
Gain control	$-\infty$ to +6 dBu
Equalisation	30 Bands
Centre frequencies	To BS EN ISO 266:1997 25 Hz-20 kHz, 1/3 octave tolerance $\pm 5\%$

Maximum boost/cut	± 12 dB, ± 6 dB
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High pass filter slope	12 dB/octave
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Low pass filter slope	12 dB/octave
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Notch filter attenuation	>17 dB
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Notch filter response	Q=32
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Terminations

Audio	3-pin XLR and 6-pin Phoenix-style
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Power	3-pin IEC
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Power Requirements

Voltage	100 to 240 VAC, 50 to 60 Hz
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Consumption	<60 W
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Dimensions

Width	483 mm (19.0")
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Depth	228 mm (9.0")
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Height	133 mm (5.2")
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Weight

Net	5.8 kg (12.8 lbs)
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Options

Input and output balancing transformers

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Architecture & Engineering Specifications

The graphic equaliser shall provide the function of graphic equalisation for each of two channels with a proportional-Q response with ± 12 dB of boost and cut at 30 1/3 octave centre frequencies from 25 Hz - 20 kHz to BS EN ISO 266:1997, and shall provide an alternative ± 6 dB range for increased fader resolution with an associated range switch for each channel. A graphic equalisation section bypass switch shall also be provided for each channel.

The graphic equaliser shall use centre-detented slide potentiometers with 45 mm travel arranged to give a graphical display of frequency plotted against level. The slide potentiometers shall have protective covers to inhibit the ingress of dirt and dust.

The graphic equaliser shall have one second order (12 dB/oct) high-pass filter per channel with adjustable frequency range 20 Hz to 500 Hz.

The graphic equaliser shall have one second-order (12 dB/oct) low-pass filter per channel with adjustable frequency range 2 kHz to 20 kHz.

The graphic equaliser shall have two notch filters per channel, with overlapping adjustable frequency ranges.

The graphic equaliser low-pass, high-pass and notch filters shall each have a rotary control knob with a latching push switch action and an illuminating LED ring to indicate the active condition.

The graphic equaliser shall have a channel gain control with range from $-\infty$ to +6 dB per channel.

The graphic equaliser shall have a power-off bypass facility, which shall allow it to return automatically to the bypass condition in the event of power supply interruption.

The graphic equaliser shall have a recessed front panel power switch designed to avoid accidental operation.

The graphic equaliser shall feature 2 line-level electronically-balanced inputs and 2 line-level electronically-balanced outputs on industry-standard XLR connectors and Phoenix-style connectors.

The graphic equaliser shall have the option of audio balancing transformers on both the inputs and outputs.

The graphic equaliser shall include an auto-ranging universal switch-mode power supply for use on a worldwide basis.

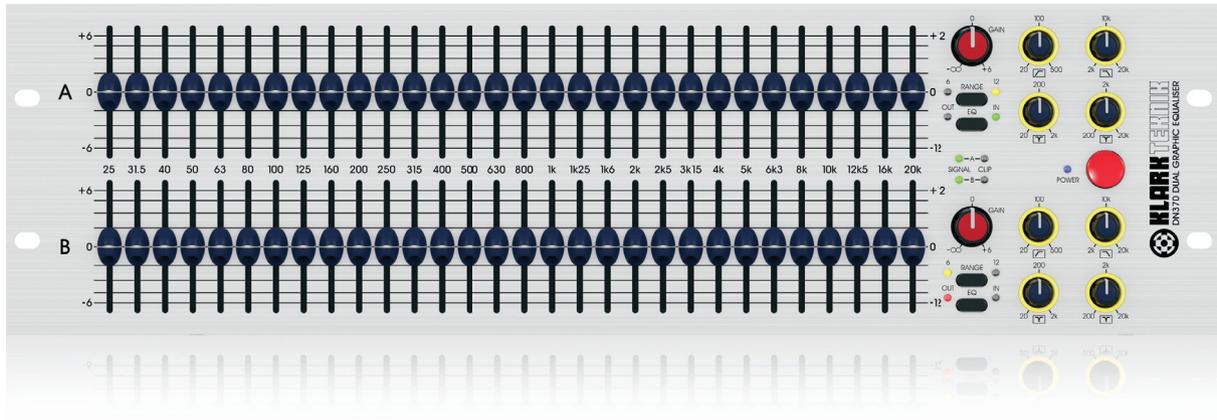
The graphic equaliser shall be housed in a standard 3U 19" rackmount chassis, and shall be 483 mm wide x 228 mm deep x 133 mm high (19.0" x 9.0" x 5.2"), with nominal weight 5.8 kg (12.8 lbs). The graphic equaliser shall be installed in a rack frame or road case capable of safely supporting its weight. Input, output, and power connections shall be made at the rear panel of the graphic equaliser. Installers shall allow adequate space at the rear for connection and disconnection of input, output, and power connections. The power requirements shall be 100 to 240 VAC, 50 to 60 Hz.

The graphic equaliser shall be the KLARKTEKNIK DN370 and no other alternative shall be acceptable.

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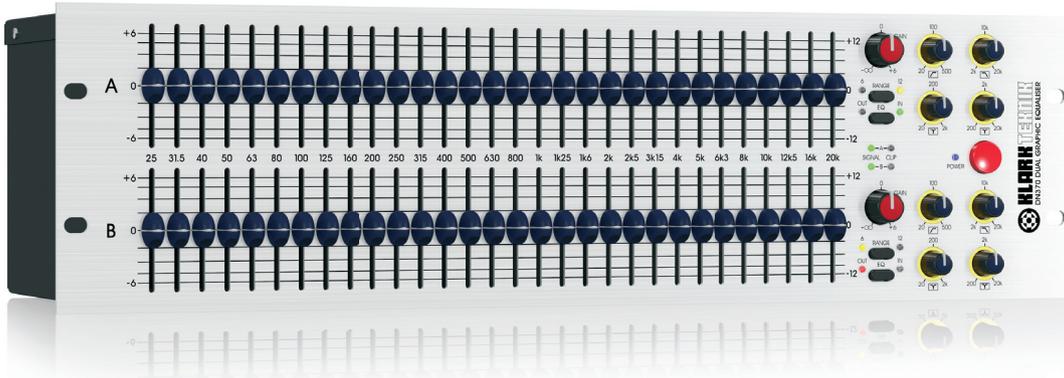
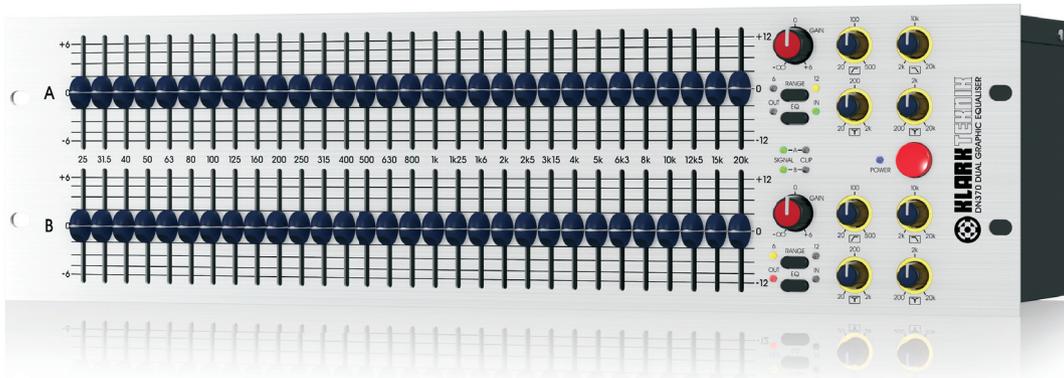
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