

# DN2360 Graphic Equaliser



**Dual Channel Digital Graphic Equaliser for  
Installation and Contracting Applications**

## technical specification

### Architect's and Engineer's Specification

The equaliser shall provide two channels of digitally controlled 1/3 or 2/3-octave equalisation. The equaliser shall utilize 24-bit A/D and D/A converters and shall sample at a sampling frequency of 96kHz. Each channel shall provide 30 constant-Q filter bands centered on ISO frequencies between 25Hz ~ 20kHz and 3 user-configurable filters, that can be programmed as Hi Pass/Low Pass/Notch/Parametric EQ. Input and output levels and all filter settings shall be programmable via RS-232, utilizing a rear panel serial port and a computer or a third-party controller. The PC control software shall run on Windows 95/98/NT. The configuration software shall display the frequency response of the unit.

The graphic filter bands shall be adjustable  $\pm 12\text{dB}$  in either 0.1 or 0.5dB steps, based on user preference. The default step size shall be 0.5dB. The HighPass filters shall be adjustable from 16Hz ~ 630Hz with a peak magnitude of 0 to 12dB in steps of 0.1/0.5dB, the LowPass filters shall be adjustable from 2500Hz ~ 25kHz with a peak magnitude of 0 to 12dB in steps of 0.1/0.5dB and the Notch filters shall be adjustable from 20Hz to 25kHz in 0.5Hz steps, notch width of 1/12th Octave to 1 Octave and notch depth of -48dB to 0dB in 0.1/0.5dB steps.

The equaliser shall provide 16 presets, 8 of which may be accessed from recessed front panel switches or the rear panel contact closures. All presets are accessible from RS-232 commands or RS-485 commands. A separate RS-485 port shall allow the control of multiple units. A rear panel DIP switch shall be provided for setting the RS-485 addresses and for selecting various communication baud rates. Front panel LED's shall be provided for signal presence, signal clip, unit status and communication status. The unit shall allow third-party serial control like AMX, Crestron, Smaart-Pro, Stardraw Audio and 3Com's Palm series of hand-held computers.

Balanced line-level inputs and outputs shall be provided on the rear panel using Phoenix Combicon terminal strips. The output levels can be setup to be either at +4 dBu or -10dBu using a DIP switch setting. The unit shall have a built-in switching power supply that works in the range of 100-240Volts and 47-63Hz. The frequency response shall be (1 dB from 20Hz to 24kHz. The total harmonic distortion plus noise shall be less than 0.01% from 20Hz to 24kHz at +4dBu. The power consumption of the unit shall be less than 15Watts. The unit shall be housed in an extruded die-cast aluminum case that is half-rack wide and shall provide a full-rack mounting kit option.

The warranty coverage shall be for 5 years. The equaliser shall be CE marked, include a UL/CSA sticker.

The equaliser shall be the Klark-Teknik DN2360, and no alternative specification option is available.

### Audio Inputs

Type  
Balanced Impedance  
Unbalanced Impedance

### Two

Electronically Balanced  
10k $\Omega$   
10k $\Omega$

### Audio Outputs

Type  
Minimum load impedance  
Source impedance  
Maximum Level  
(Balanced)  
Maximum Level  
(Single-ended)

### Two

Electronically Balanced  
600 $\Omega$   
< 50 $\Omega$   
+ 21dBu  
+ 18dBu

### Performance

Frequency response  
20 Hz - 20 kHz  
Distortion @ +4 dBu  
Dynamic Range  
Channel Separation  
Overload Indicator  
Gain (Input)  
Nominal Output Level  
Processing  
Maximum Processing Delay

+/-0.2dB @ 0dBu  
< 0.01% 20Hz-24kHz  
110dB  
-95 dB 20Hz - 24kHz  
> + 18dBu  
0dB to + 18dB in 0.5dB steps  
+ 4dBu or -10dBu  
96kHz, 24bit  
< 1 ms input to output

### Filters

Graphic Filter Type

Constant Q, Selectable 1/3 or 2/3 Octave

Center Frequencies

ISO, 25Hz ~ 20kHz

Maximum boost/cut

+/- 12dB in 0.1/0.5dB steps

Additional Filters

3 per channel

Additional Filter Types

Hipass, Lopass, Parametric EQ, Notch

### Additional Inputs

GPI

8 inputs open collector or dry contact closure

RS-232

38.4 and 115.2kBaud

RS-485

Networkable up to 32 units at 38.4 or 115.2kBaud

### Power Requirements

Voltage  
Consumption

100-240V ac 47 - 63Hz  
< 0.4 A

### Weight

Net  
Shipping

1.4kg (3.1lbs.)  
2.3kg (5.1lbs.)

### Dimensions

Width  
Depth  
Height

216mm (8.5 inch)  
205mm (8 inch)  
44.5mm (1.75 inch)

### Terminations

Inputs  
Outputs  
GPI  
Power  
RS-232  
RS-485

3 pin Euroblock/ Phoenix Combicon  
3 pin Euroblock/ Phoenix Combicon  
9 pin Euroblock/ Phoenix Combicon  
3 pin CEE  
DB-9 Female  
RJ-45

### Options

Dual/Full Rackmount kit,  
a Table top kit

Trade Descriptions Act: Due to the company policy of continuing improvement, we secure the right to alter these specifications without prior notice.



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