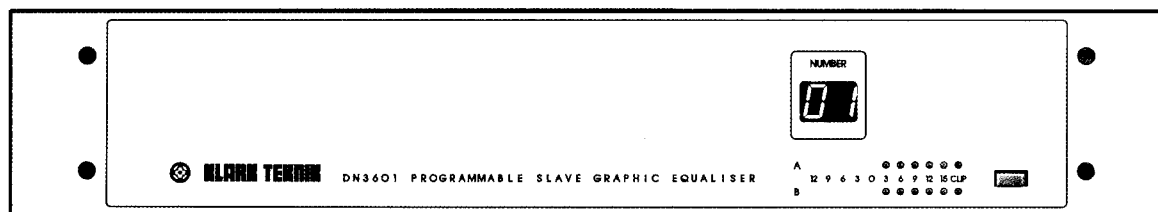


DN3601

PROGRAMMABLE EQUALISER

The Klark Teknik DN3601 Programmable Slave Graphic Equaliser is a high quality, digitally controlled, two-channel, third-octave, 30 band device featuring state-of-the-art audio performance in a two rack-space unit. For further flexibility each channel also incorporates gain adjustment with mute facility, variable frequency low and high-pass filters and two one-twelfth octave tuneable notch filters. The DN3601 may store up to 66 equaliser settings in its own internal memory.

Programmable Slave Graphic Equaliser



Being the 'slave' derivative of the Klark Teknik model DN3600, the DN3601 front panel features only twin signal strength meters, clip LEDs, an LED numerical display and a power switch. The unit can be controlled by a master DN3600 unit or by a suitably equipped computer or other MIDI control device. Up to 64 DN3601 units (or mixed DN3600s and DN3601s) may be linked in a single MIDI loop via the Pro MIDI Interface on the rear panel. An extensive equalisation system can be created with central, user friendly control. Slave units may be addressed individually or globally by the master, and will also respond to standard MIDI program change messages. A system such as this offers benefits of reduced cost and inherent tamper proof security. As well as real time operation from a central control position, a network of equalisers may be loaded with the memories necessary for various tasks and then, with the master unit removed, will respond only to MIDI program changes.

The Pro MIDI Interface, which uses robust, lockable XLR connectors rather than the more common 5-pin DINs, also gives access to the DN60 interface via a master DN3600. This enables room analysis and equalisation to be accomplished quickly and easily.

The proprietary analogue filters in the DN3601 are based around the Klark Teknik "MELT" hybrid filter circuits which offer greater headroom and dynamic range than is possible using current digital systems. Benefiting from revised circuitry, these filters are exceptionally reliable and offer greater stability than discrete designs. They are also relatively immune to electromagnetic interference, unlike coil-based filters.

Both the input and output circuitry is electronically balanced with a nominal operating level of +4dB. The input stage is current and voltage balanced and offers exceptional noise and distortion performance, while the output circuitry is based on the Midas XL3 output stage providing exceptionally high drive capability.

Features

- Dual channel, third-octave graphic equaliser.
- Tuneable notches and sweepable low and high pass filters.
- "Slave" derivative of the Klark Teknik DN3600 - no front panel controls.
- Pro MIDI interface allows Master/Slave setups and system exclusive bulk dumps.
- Intuitive control of up to 64 units from a single DN3600 or MIDI equipped computer.
- DN360 and DN27 emulations with Klark Teknik's proprietary combining filter characteristics.
- Auto gain-ranging to maintain headroom.
- 66 Memories for EQ settings.
- Revised MELT hybrid filter circuits give exceptional headroom and dynamic range.
- 10-Segment bargraph level meters plus clip LEDs monitor the signal at 7 different points.
- Inputs and outputs electronically balanced - transformer balancing is an option.
- Fail-safe relay bypass.



Klark Teknik PLC
Klark Industrial Park, Walter Nash Road,
Kidderminster, Worcestershire DY11 7HJ England.
Tel: (0562) 741515
Fax No: (0562) 745371

Mark IV Pro Audio Group
448 Post Road,
Buchanan MI 49107.
Tel: (616) 695 4750
Fax: (616) 695 0470

DN3601

PROGRAMMABLE EQUALISER

ARCHITECT'S AND ENGINEER'S SPECIFICATION

The equaliser shall be a dual channel third-octave type, providing 12dB of boost or attenuation in 0.5dB steps at 30 ISO centre frequencies from 25Hz to 20KHz. The channels shall be adjustable separately, or may be linked for stereo operation.

Each channel shall also incorporate 12dB/Octave low and high pass filters sweepable in third octave steps from 1.6KHz to 30KHz and 400Hz to 20Hz respectively, and two one-twelfth octave tuneable notch filters.

The equaliser shall respond only to remote control via a PRO MIDI Interface, there being no front panel controls. The unit will be able to store 66 equalisation set-ups in internal memory.

The equaliser shall meet or exceed the following performance specification:

Distortion:	<0.01% (+4dBu@1KHz)
Frequency response:	$\pm 0.5\text{dB}$ (20Hz to 20KHz)
Input Noise:	<-95dBu (20Hz to 20KHz)
Maximum output level into 600 ohms:	>21dBu

All audio connections shall be via XLR style connectors. Inputs and outputs shall be electronically balanced as standard, with the option of isolation transformers. The unit shall have a fail-safe relay bypass facility and be capable of operating from a 110/120/220/240v $\pm 10\%$ 50/60Hz AC power source.

RELIABILITY CONTROL

Even with the advanced electronic engineering incorporated in this product, each unit is given the full backing of Klark TekniKs "Reliability Control", which proves each product against a specification consistent with the highest professional standards. Precision components are used throughout and every unit is bench tested and aligned before a burn-in period and final performance test.

TECHNICAL SPECIFICATION

Inputs	Two
Type	Electronically balanced
Impedance (ohm)	
Balanced	20k
Unbalanced	10k
Max level	+22dBu
Outputs	Two
Type	Electronically balanced
Min. load impedance	600ohms
Source impedance	50ohms
Max Level	+22dB into 2kohms
Performance	
Frequency response	
EQ Flat	$\pm 0.5\text{dB}$ (20Hz to 20KHz)
Distortion @ +4dBm	<0.01% @ 1KHz
Equivalent input noise (20Hz to 20KHz unweighted)	<-95dBu
Overload indicator	+19dBu
Gain	-18 to +6dB
Filters	
Type	Revised MELT hybrid
Graphic ISO	
Centre frequencies	30, 25Hz to 20KHz
Tolerance	$\pm 5\%$
Maximum Boost/Cut	12dB
Step size	0.5dB
High pass filter slope	12dB/Octave
	20Hz - 400Hz
Step size	1/3 Octave
Low pass filter slope	12dB/Octave
	30KHz- 1.6KHz
Step size	1/3 Octave
Notch filters	Two per channel, Varying Q
Maximum Cut	12 dB
Step sizes	1/12 Octave and 1dB
Power requirements	
Voltage	110/120/220/240v@ 50/ 60Hz AC
Consumption	<35VA
Dimensions	
Width	482mm (19 inches)
Height	88mm (3.5 inches)
Depth	306mm (12.25inches)
Weight	
Net	5kg
Shipping	6kg
Options	
Transformer balanced outputs	
Transformer balanced inputs	
DN3600 Master programmable equaliser	

Trade Descriptions Act. Due to the company policy of continuous improvement, Klark TekniK reserve the right to alter these specifications without notice.



The first name with sound system designers

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