DN500

DYNAMIC PROCESSOR

Dual Compressor/ Limiter/ Expander

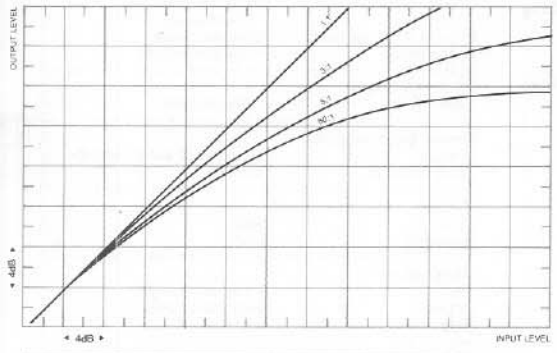
The **DN500** offers the engineer a unique combination of variable knee compressor, independent limiter and clipper plus a variable ration expander/gate for the ultimate in dynamic control. With this flexibility the DN500 is suited to a wide range of applications in recording, broadcast, post production studios and sound reinforcement systems.

Additional features include a stereo link function, gain reduction meters for both compressor and expander sections and output level meters. Each channel also incorporates a peak limiter with variable threshold and programme related release.

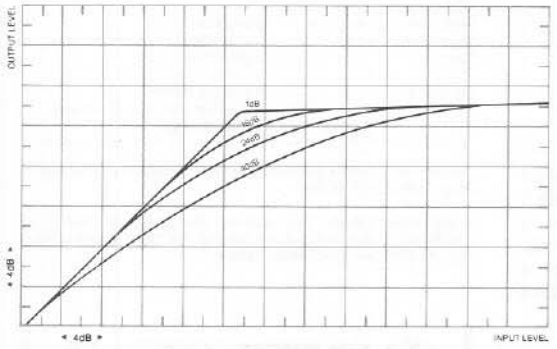
Advanced VCA circuit design offers extremely low noise and distortion performance to the DN500 user.

Only top quality components are used in the manufacture of this product and every unit is bench tested and aligned before burn-in and final performance test.

The unit has XLR terminated electronically balanced inputs and unbalanced outputs, with optional transformer balancing available to order.



Effect of ratio control on soft knee (40dB) compression.



Variable knee compression curves at 50:1 ratio.

Features

- Two channels of full function compression, expansion, limiting and peak clipping in one unit of rack space.
- Variable knee control for compression styles from hard to easy.
- Auto attack/release mode for inaudible compression and easy set-up.
- Manual attack/release mode for creating compression effects.
- Advanced VCA design for extremely low noise and distortion.
- Flexible expander section features variable ratio for gentle expansion or hard gating.
- Separate side chain inputs are provided for compressor and expander sections.
- A peak limiter with variable threshold and programme related release provides additional protection.
- Peak clipper eliminates transient overload and tracks limiter threshold for total protection.
- Additional features include stereo link function, gain reduction meters for both compressor/expander sections and output level meter.
- The DN500 is sturdily constructed throughout and complies with standard 19" 1U rack mounting requirements.

KLARK TEKNIK
a MARK IV company
The first name with sound system designers

Mark IV Pro Audio Group
Klark Teknik Building,
Walter Nash Road, Kidderminster,
Worcestershire. DY11 7HJ, England.
Tel: (01562) 741515
Fax: (01562) 745371

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

DN500

DYNAMIC PROCESSOR

ARCHITECT'S AND ENGINEER'S SPECIFICATION

The compressor/limiter shall provide two complete channels of compression, expansion, peak limiting and peak clipping. The compressor section shall provide for adjustment of Threshold, Ratio, Knee, Attack and Release and have push button selection of auto or manual modes. The expander section shall provide for adjustment of Threshold, Ratio and Release and have push button selection of Auto or Fixed attack times. The limiter section shall provide for adjustment of Threshold and have push button selection of a Peak Clipper. An output gain control and level meter shall be provided. Gain reduction meters shall be provided for both compressor and expander sections.

The compressor/limiter shall meet or exceed the following specifications:

Distortion	<0.03% @ +4dBm (1kHz)
Frequency response	±0.5dB (20Hz-20kHz)
Noise	<−94dBm (20Hz-20kHz unweighted)
Compressor Attack time	50μS-20mS
Compressor Release time	60mS-2 secs
Maximum output level into 600Ω	+21dBm

Push button switches shall be provided to select compressor, expander and channel bypass and to link both channels for stereo operation. Side chain inputs shall be provided for both compressor and expander sections. Channel inputs and outputs shall be via XLR style connectors, external side chain inputs shall be via ¼" jack. A tamperproof front panel cover shall be available to fit the unit. The compressor/limiter shall be 19" standard rack mountable and 1U high. The unit shall be capable of operating from a 110/220V 50/60Hz AC power source.

The compressor/limiter shall be the Klark-Teknik Model DN500 and no alternative specification option is available.

RELIABILITY CONTROL

Even with the advanced electronic engineering incorporated in this product, each unit is given the full backing of Klark-Teknik's "Reliability Control", which proves each product against a specification consistent with 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

Audio Inputs	**Two**
Type	Balanced (electronically)
Impedance (Ω)	
Balanced	20k
Unbalanced	10k
Side Chain Inputs	**Two (Compressor) + Two (Expander)**
Type	Balanced (electronically)
Impedance (Ω)	
Balanced	20k
Unbalanced	10k
Audio Outputs	**Two**
Type	Unbalanced
Min. Load impedance	600Ω
Source impedance	<60Ω
Max. level	+21dBm
Performance	
Frequency response (20Hz-20kHz)	±0.5dB
Distortion (@ +4dBm)	<0.03% @ 1kHz
Equivalent input noise (20Hz-20kHz unweighted)	<−94dBm
Compressor	
Threshold	−30dB to +20dB
Ratio	1:1 to 50:1
Knee	1dB (Hard) to 40dB (soft)
Envelope	Switchable auto (attack and release controls disabled) or manual
Attack (90% capture)	50μS to 20mS
Release (90% recovery)	60mS to 2 Secs
Expander	
Threshold	−40dB to +20dB
Ratio	1:1 to 25:1
Attack	Switchable auto or fixed (2mS)
Release (90% recovery)	40mS to 2 Secs
Output Gain	−10dB to +30dB
Limiter/Clipper	
Threshold	0dB to +20dB
Power Requirements	
Voltage	110/120/220/240V 50/60Hz
Consumption	<30VA
Weight	
Nett	4kg
Shipping	6kg
Dimensions	
Width	482mm (19 inch)
Depth	292mm (11½ inch)
Height	44.5mm (1¾ inch)
Terminations	
Audio Inputs/outputs	3 pin XLR
Side-Chain inputs	Normalled ¼ inch stereo jack
Power	3 pin CEE
Options	Security cover Transformer input*/output balancing

** Input transformer balancing is non retrofittable and has to be specified with order.*

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

KLARK TEKNIK
a MARK IV company
The first name with sound system designers

Mark IV Pro Audio Group
Klark Teknik Building,
Walter Nash Road, Kidderminster,
Worcestershire. DY11 7HJ, England.
Tel: (01562) 741515
Fax: (01562) 745371

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