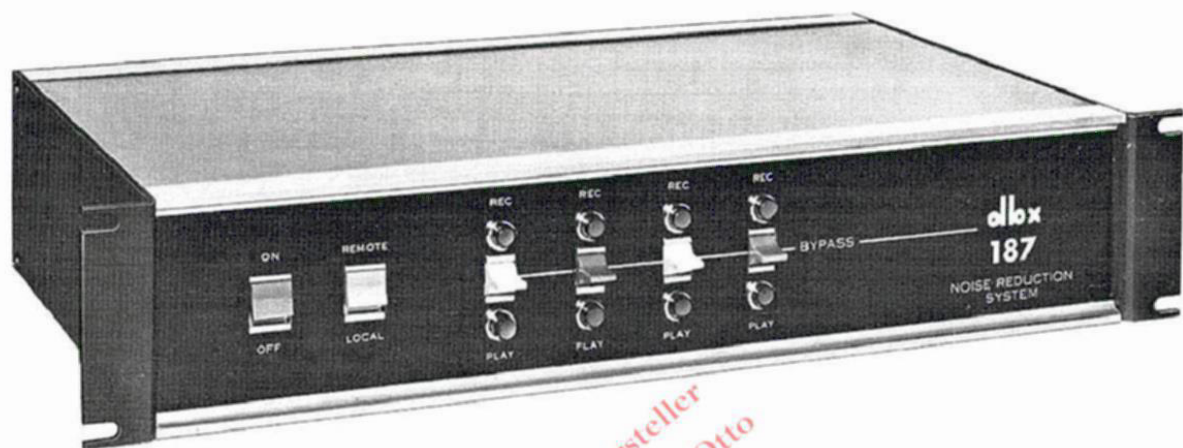


dbx 187

DECILINEAR™

NOISE REDUCTION SYSTEM



OUTSTANDING FEATURES

- 20 — 30 dB noise reduction
- No level match or pilot tone
- Accurate transient tracking
- Remote control capability
- Low price per channel
- Four channels in 3½" rack space
- Reduces print through and co-channel interference
- Reduces tape asperity noise
- Low distortion over entire frequency range
- Individual channel controls
- + 24 dBm max output level

DESCRIPTION

The DBX 187 is a four channel DECILINEAR NOISE REDUCTION SYSTEM for use with professional tape recorders. It virtually eliminates tape noise, hiss, hum, print thru, and crosstalk.

The prime quality recording zone is increased from the present 10 dB to more than 40 dB. The system dynamic range exceeds that of almost any program source or control console. Tape asperity noise is reduced even at normal recording levels.

The four channels may be individually controlled locally or remotely to either record, bypass, or play mode. In the bypass mode the DBX 187 connects the recorder to the signal source and output line directly through relay contacts. When this unit is turned off it automatically reverts to bypass mode.

A sixteen channel NOISE REDUCTION SYSTEM requires only 14" of rack panel space.

PRINCIPLE OF OPERATION

The DBX 187 DECILINEAR NOISE REDUCTION SYSTEM reduces noise, hiss, and crosstalk by 20 to 30 dB. This is accomplished with DECILINEAR™ (LINEAR DECIBEL) compression before recording and complementary expansion on playback.

The input dynamic range is compressed by a factor of 2 (10 decibels out for 20 decibels in). Swishing of residual noise background due to modulation of tape noise is rendered inaudible by a frequency weighting computation system which provides for controlled pre-emphasis without tape overload.

The DBX 187 achieves exact complementary encoding and decoding even in the presence of time delay dispersion (differential phase shift due to frequency compensation in the tape recorder). This is so because the level sensor system is responsive to the true RMS value of the audio signal. This RMS value is proportional to the sum of the individual frequency component energies and hence the derived envelope dependent gain change remains accurate in the presence of phase shift. This is not so with either peak or averaging detectors and combinations thereof.

SPECIFICATIONS

Number of Channels	Four switchable channels.
Input	10K Bridging.
Output	Transformer coupled, 600 ohm nominal with 80 ohm source resistance. Operates normally with 150 ohm load.
Frequency Response	For full compress - expand cycle ± 1.0 dB (20 - 20,000 Hz).
Noise Reduction	A + 4 dBm input hiss and high frequency asperity noise are reduced by 10 dB on signal with dominant energy below 500 Hz. At - 16 dBm input there is an additional 10 dB of noise reduction. At - 36 dBm input there is an additional 20 dB of noise reduction. At - 56 dBm input there is an additional 30 dB of noise reduction.
Equivalent input noise	- 90 dBm maximum.
Distortion	For full compress—expand cycle 0.1% typical, 0.25% max.
Maximum input level	+ 28 dBm.
Maximum output level	+ 24 dBm (20 Hz to 20,000 Hz).
Nominal level for unity gain	+ 4 dBm @ 1KHz.
Connectors	Input: 3 pin XLR Female. Output: 3 pin XLR Male. Remote control cable connector: Cinch Jones P 312 CCT.
Size	3½" x 19" x 10½"
Weight	12 lbs.
Power	115 V. A. C. $\pm 10\%$ 50-60 Hz. 50 Watts.