dbx 150

Type I tape noise reduction system

The dbx 150 is a two-channel, Type I, simultaneous encode/decode tape noise reduction system for small studio use. It is fully compatible with Type I noise reduction systems used in major studios throughout the world.

The 150 features the same 10 dB increase in headroom and over 30 dB decrease in tape noise provided by previous dbx professional noise reduction systems. In the record or encoding process, the 150 compresses the dynamic range in decibels of the signal being recorded by a 2:1 ratio. This encoded signal is fed to the tape machine. The 2:1 reduction in dynamic range allows the signal to be put on tape at levels well above the noise floor and below the threshold of saturation. This results, on playback, in low distortion recordings with superior frequency response.

In the play or decoding process, the 150 expands the signal in a manner which is complimentary to the encoding function, thus restoring the full dynamic range of the original signal.

Both channels of noise reduction include separate encode and decode electronics to permit decoded monitoring and error-free punch-ins not possible with systems requiring relay or manual switching between record and play operations.

The dbx 150 utilizes true RMS sensing, ensuring proper transient response without regard to phase shift errors in the record/play process. No time consuming calibration of levels is required.

Utilized with today's high quality, narrow-track tape machines from Otari, TASCAM, TEAC, Technics, etc., the dbx 150 totally eliminates audible tape hiss under almost any circumstances and conquers the noise build-up problems which usually result when "bouncing" materials from track to track or combining a large number of tracks during mixdown.

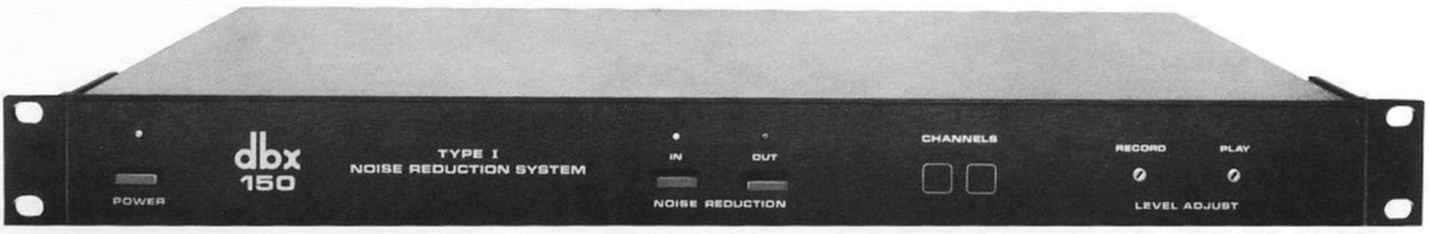
Front panel adjustment of record and play levels allows the 150 to be matched to a wide range of nominal operating levels. This permits the user to bypass the noise reduction without a significant change in the signal level through the 150. This adjustment has no effect on encoder or decoder tracking.

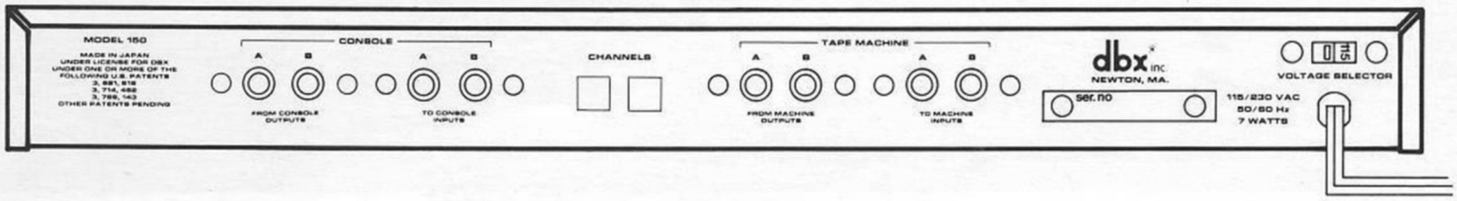
Application

The dbx 150 is designed to provide two channels of simultaneous encode/decode noise reduction for the small studio, audio visual production house or other audio facility requiring wider dynamic range and cleaner sound than would be possible with conventional tape recording systems. During mixdown the 150 allows the user to exploit fully the EQ available—making it possible to turn up the high frequencies without bringing up hiss. When overdubbing multiple instruments such as acoustic guitars, imaging will not be smeared by incremental hiss buildup. Reverb effects will decay into silence. These benefits can spell the difference between success and failure in a competitive market.

Features

• simultaneous encode/decode operation • greater than 30 dB broadband tape noise reduction • 10 dB headroom improvement • true RMS detection for accurate encode/decode tracking • linear decibel compression/expansion over a 100 dB range • no additional calibration tones or level match adjustments necessary • all inputs and outputs terminate in RCA phono connectors • front panel record and play level adjust • hard-wire bypass • rack mountable • front panel channel designation stickers for stacked, multiple unit operation





Specifications

Dynamic range (peak signal to a weighted background noise)
110 dB

Input impedance
100 kohm (designed to be driven from a source impedance of less than 10 kohm)

Input level (nominal)
−10 dBV

Input level (maximum)
+16 dBV

Output impedance
100 ohm (designed to drive 5 kohm load or greater)

Output level
+16 dBV

Frequency response
±.5 dB 30 Hz to 20 kHz (encode/decode, typical program material tracking)

Slew rate
>10V/μ sec.

Effective noise reduction
30 dB plus 10 dB of headroom

Equivalent input noise (unweighted, 20 kHz, Bandwidth ref. IV)
−85 dBV

Distortion
<.5% THD 30 Hz to 100 Hz, <.1% THD 100 Hz to 20 kHz (encode/decode)

Dimensions
1¾" H × 19" W × 7¼" D
(4.4 cm × 48.3 cm × 18.4 cm)

Power line requirement
117 VAC, 50-60 Hz

Power consumption
7 W

Warranty
dbx products are covered under a limited warranty (parts and labor) for two years from date of original purchase

dbx®
Professional Products Division
dbx, Incorporated
71 Chapel Street
Newton, Mass. 02195
617/964-3210

78112M-600154 Printed in U.S.A.