



# 155

## 4-channel tape noise reduction system

The dbx Model 155 professional format tape noise reduction system is a four-channel unit which brings professional quality noise reduction to the small studio. It is fully compatible with the dbx models 152, 154, 157, 158, 177, 187, and 216 as well as TEAC/TASCAM DX-8, DX-4, and other on-board dbx pro-format tape noise reduction systems. Like its professional counterparts, it is a mirror-image compressor/expander providing in excess of 30 dB broad band tape noise reduction plus a 10 dB increase in recorder headroom. All four channels are independent and switchable (front panel) to record (encode), bypass or play (decode) functions. The 155 also has user-changeable modular circuit boards, so that in the unlikely event that one processor fails, the other channels remain operational. Spares may be ordered (order Part #051).

In the record or encoding mode, the model 155 compresses the input signal from the console or other output circuit by a 2:1 ratio, linear in decibels over a 100-decibel range. In playback, the circuitry is switched to provide an exact complementary 1:2 expansion of the encoded signal. High frequency pre-emphasis in recording, and complementary de-emphasis in playback is applied to virtually eliminate any problems such as pumping or breathing.

Unlike competitive systems, the dbx tape noise reduction circuitry utilizes true RMS sensing, insuring proper encode/decode tracking, for accurate transient response, regardless of phase shifts in the transmission or storage (tape) medium. No time-consuming calibration procedures are required.

Utilized with today's high quality multi-track tape recorders such as TEAC, TASCAM, Otari, etc., the dbx 155 eliminates audible tape hiss, and does away with the noise build-up factor that usually accompanies "bouncing" material from track to track, and combining tracks in the mixdown process (see additive noise chart). It cannot, however, remove noise present in the original signal or program material.

### Application

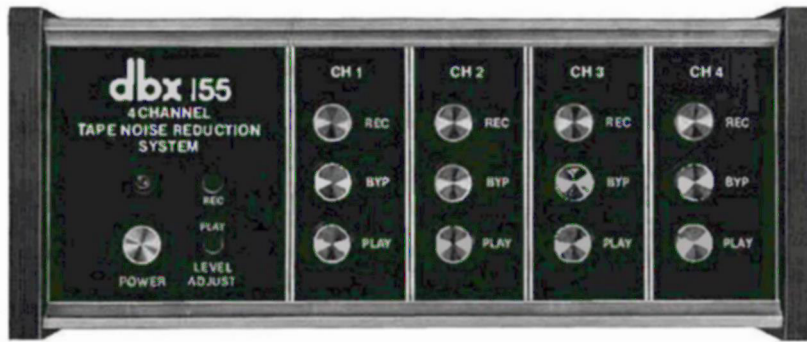
The dbx model 155 is built to provide four independent channels of tape noise reduction for the small studio, audio-visual house, and any kind of musical organization desirous of making professional quality, noise-free recordings with a wider dynamic range and cleaner sound than would be otherwise possible. In two channel application, the 155 allows you to simultaneously monitor the decoded (normalized) signal as you record.

It can also be used to play dbx-encoded tape recordings from professional outside sources. Its small size permits easy installation.

### Features

- 30 dB broad band tape noise reduction
- 10 dB added system headroom
- true RMS detection for accurate encode/decode tracking
- linear decibel compression/expansion over 100 dB range
- no pilot tones or level match adjustments necessary
- all inputs and outputs terminate in RCA phono connectors
- front panel record and play level adjust
- user changeable modular circuit boards for each channel; spares available at additional cost
- rack mount kits available to accommodate either a 155 pair or single unit





## Specifications

### Compression ratio

Fixed 2:1

### Expansion ratio

Fixed 1:2

### Dynamic range

110 dB

### Input impedance

50 k ohms

### Input unity level (adjustable)

Record (100 mV to 3V) - 18 to +12 dBm

Play (100 mV to 3V) - 18 to +12 dBm

### Input level maximum

+21 dBm

### Output impedance

100 ohms

### Output level (maximum)

+21 dBm into 10 k ohms

### Frequency response

$\pm 1$  dB 30-20 kHz complete encode and decode cycle

### Effective noise reduction

30 dB plus 10 dB of headroom

### Input noise

-88 dB

### Total harmonic distortion

0.5% typical

### IM distortion

0.15% typical

### Powerline requirement

117 VAC 50-60 Hz

### Powerline consumption

10 Watts

### Dimensions

3 $\frac{3}{4}$ " H  $\times$  9 $\frac{1}{8}$ " W  $\times$  10 $\frac{1}{4}$ " D  
(9.5 cm  $\times$  23.2 cm  $\times$  26.0 cm)

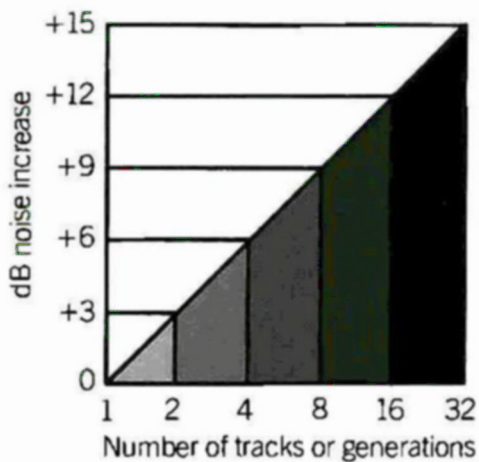
### Weight (shipping)

6 lbs. 14 oz. (3.12 kg)

### Warranty

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

## Additive Noise Chart



**dbx**<sup>®</sup>  
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Specifications subject to change without notice. Manufactured under one or more of the following U.S. patents: 3,681,618; 3,714,462; 3,789,143; 4,101,849; 4,097,767.  
Other patents pending.

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