

Nakamichi Sound — Pure and Simple

If you're looking to impress your friends with bells and whistles, the BX-125E and BX-100E are not for you. If you want superior sound at an affordable price, look no further. The BX-125E and BX-100E are simple to operate but unmatched in sound. The secret of their remarkable reproduction is quite simple—concentration on the four essentials: transport, heads, electronics, and quality control.

The Nakamichi Microprocessor-Controlled Silent Mechanism

It's easy to overlook the importance of the tape transport. Two specifications describe its operation—speed accuracy and wow and flutter—but the transport affects sound clarity in ways *not* revealed by specifications. Vibration causes "modulation noise" and high-frequency flutter that muddle sound and make it impossible to hear subtle detail. Yet there is no specification for modulation noise, and high-frequency flutter is ignored by "weighted" measurements.

We've gone to extraordinary lengths to eliminate vibration. A microprocessor-controlled motor-driven cam replaces conventional solenoids and engages the head base, pinch roller and brakes with incredible precision. Since the motor turns only when changing functions, there's no vibration during actual operation. The microprocessor supervises all changes and inserts the intermediate steps needed to protect the tape so you can switch between modes in complete safety.

Since single-capstan transports are sensitive to reel-torque variation, the BX-125E/BX-100E have independent high-performance reel-drive motors and use precision metal pulleys to transmit torque to the system. These are features you don't see, but features that impact *performance* and guarantee that unique quality called "Nakamichi Sound."

3-Head Performance In A 2-Head Deck

With over 30 years' of experience in magnetic design, Nakamichi is uniquely qualified to create an R/P head that rivals the performance of most 3-head designs in frequency response and freedom from distortion. In fact, few 3-head decks match the BX-125E/BX-100E's smooth response from 20 Hz to 20 kHz—a smoothness that guarantees freedom from sonic coloration.



RP-2D Record / Playback Head

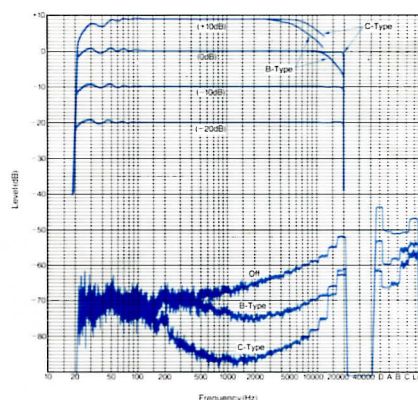
The RP-2D's laminated-sandust core makes full use of metal tape's recording potential while its 1.2-micron gap resolves 20-kHz wavelengths in playback. Hyperbolic geometry minimizes "contour effect" for smooth bass response. The E-2D's dual-gap design and low-loss ferrite core ensure complete erasure of metal tape.



E-2D Erase Head

Low-Noise Low-Distortion Electronics

BX-125E/BX-100E electronics are much more sophisticated than ordinary tape-deck circuitry. The recording amplifier utilizes high-output ICs and Nakamichi Double-NF equalization to eliminate distortion caused by electrolytic capacitors. The playback amplifier also uses Double-NF topology but is discretely configured of low-noise transistors to match the playback head perfectly and ensure minimum noise. Even though the BX-125E and BX-100E are "basic" recorders, play gap loss is compensated in the playback equalizer and recording loss in the recording equalizer to ensure complete adherence with international standards.



BX-125E Frequency Response/Noise Analysis

Deck: BX-125E Tape: ZX (Metal)
PB Eq: 70µs MPX Filter: off

The BX-125E/BX-100E bias supply operates at an unusually high frequency (105 kHz) to avoid intermodulation distortion. Operation at 105 kHz requires superior recording and erase heads but is essential for maximum clarity. A balanced topology ensures exceptional stability and freedom from bias distortion to guarantee you quiet reliable recordings of remarkable bandwidth. The results speak for themselves!

Nakamichi Quality Starts With The Design

Nakamichi goes far beyond conventional standards to ensure BX-125E/BX-100E performance. Quality begins with the design. Unless numerous internal controls are provided, it is impossible to calibrate a deck properly. Controls are expensive and invisible so the average deck has only a single control to set bias and a single control to set recording level—an approach that precludes optimum performance on *both* tracks and *all* tape types.

The BX-125E/BX-100E's full complement of internal controls allows us to calibrate each deck *completely*. Bias and level are set *independently* for each track and each tape type with a 30-step procedure. Costly? Yes—but worth it because it guarantees you Nakamichi Sound!

BX-125E/BX-100E Features

•Dual-Speed Master Fader •Dolby-B NR •Dolby-C NR (BX-125E only) •Defeatable MPX Filter •3-Position Tape Selector
•2-Position EQ Selector •37-dB Peak-Level Meters •3-Digit Tape Counter •Auto Repeat •Memory Stop •Timer Record/Play
•Headphone Output •Output Level Control (BX-125E only)

BX-125E/BX-100E Specifications

Track Configuration	4 tracks/2-channel stereo
Heads	2 (erase head x 1, r/p head x 1)
Motors	Transport: DC servo motor (capstan drive) x 1 DC motor (reel drive) x 1 Mechanism: DC motor (cam operation) x 1
Power Source	100, 120, 120/220-240, 220 or 240V AC; 50/60 Hz (according to country of sale)
Power Consumption	23 W max.
Tape Speed	1-7/8 ips (4.8 cm/sec) ±0.5%
Wow and Flutter	Less than ±0.11% WTD Peak Less than 0.06% WTD RMS
Frequency Response	20 Hz—20,000 Hz (–20 dB recording level)
Signal-to-Noise Ratio	Dolby-C NR (BX-125E) Better than 68 dB (A-WTD/3% THD/70 µs/ZX tape)
Total Harmonic Distortion	Dolby-B NR (BX-125E/BX-100E) Better than 62 dB (400 Hz, 0 dB) Less than 1.0% (ZX, EXII tape) Less than 1.2% (SX tape)
Erase	Better than 60 dB (100 Hz, +10 dB)
Separation	Better than 36 dB (1 kHz, 0 dB)
Crosstalk	Better than 60 dB (1 kHz, 0 dB)
Bias Frequency	105 kHz
Input (Line)	50 mV, 30 kilohms
Output (Line)	0.5V (400 Hz, 0 dB) 2.2 kilohms
(Headphone)	BX-125E: 2.2 mW (400 Hz, 0 dB, output control max.) 8-ohm load BX-100E: 1.2 mW (400 Hz, 0 dB) 8-ohm load
Dimensions	430(W) × 100(H) × 250(D) millimeters 16-15/16(W) × 3-15/16(H) × 9-7/8(D) inches
Approximate Weight	5 kg; 11 lb

NOTE: Model Name with "E"

Many countries have safety regulations to which Nakamichi has to comply during production.

The additional mentioning of "E" on the model means that this product has been produced according to the radio interference regulations of the EEC, as well as in compliance to the European safety standards.

Within Europe, Nakamichi only offers guarantee for those products which have been specially produced for European market.

•Specifications and appearance subject to change for further improvement without notice.

•Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.

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