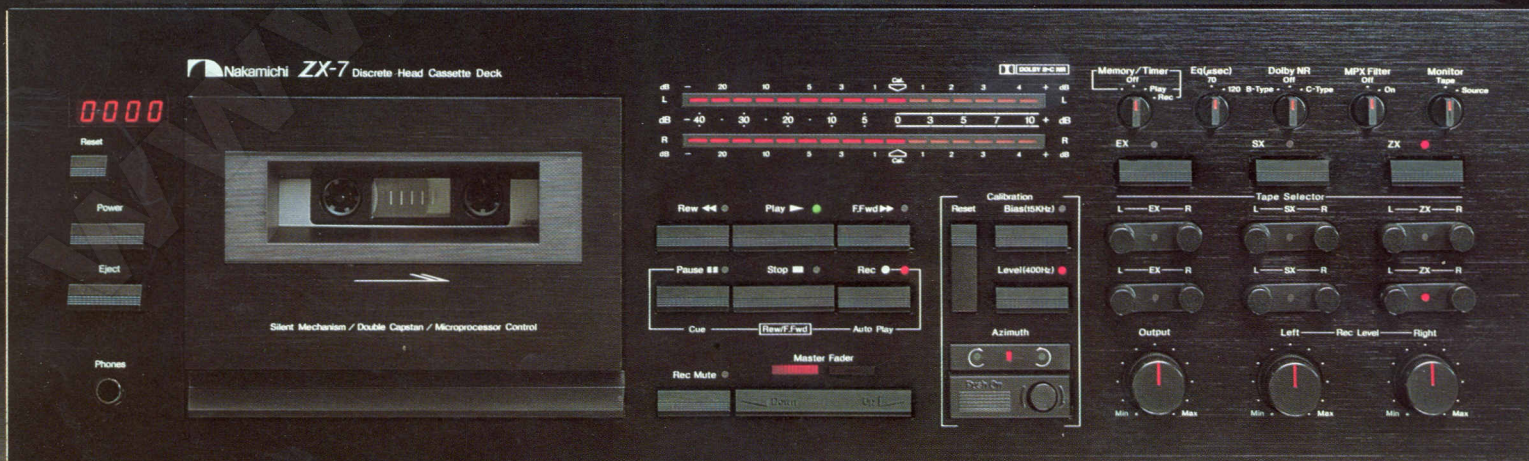




# Nakamichi

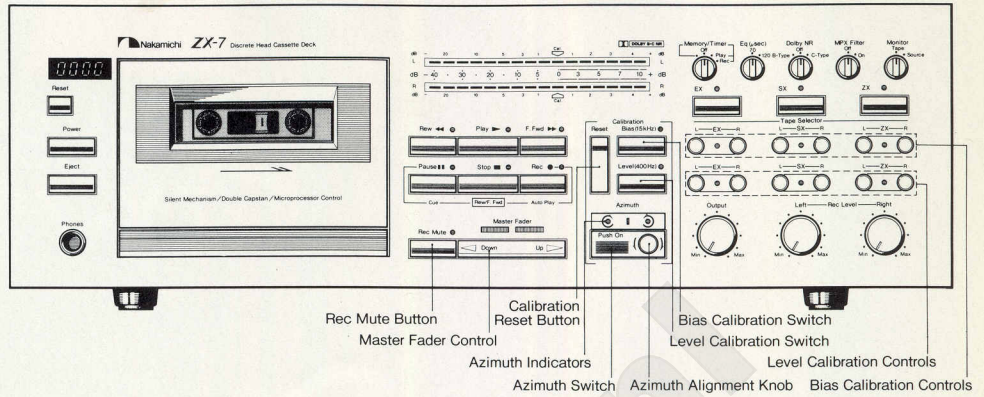
## ZX-7 Discrete Head Cassette Deck



# THE SERIOUS AUDIOPHILE'S DREAM

Serious audiophiles know that no two tapes are exactly alike — not even those of the same brand. Tape formulations improve gradually, and the cassette you buy today may be slightly different from the one you bought last month. Even cassettes made in the same batch differ one from the next because mechanical tolerances cause the tape to follow a slightly different path in each.

The ZX-7 gives the serious recordist the means to *optimize* performance with *each* cassette by manually adjusting bias, level, and azimuth to create a perfect marriage of recorder and tape and achieve maximum performance from each. The results are astounding: clarity of reproduction, breadth of response, and a dynamic range that are truly extraordinary.



## Calibration

### A Quick, Simple, Manual Procedure Optimizes Performance And Achieves 21-kHz Response

Everything needed for calibration lies at your fingertips. First select tape type — ZX (metal), SX (chrome), or EX (ferric) — and press REC/PAUSE. Press AZIMUTH to initiate calibration. The ZX-7 records a 400-Hz tone on both channels, reproduces it, and determines azimuth misalignment. Adjust the azimuth control until the center LED lights. Switch off AZIMUTH, and the deck automatically enters the level-adjustment mode. Now adjust left and right level-cal controls until the meters read "0". Press BIAS, and the ZX-7 records and plays a 15-kHz tone at -20 dB. Meter sensitivity increases automatically, so adjust left and right bias controls for a "0" reading again. Press RESET, and the tape rewinds to the start. You've achieved a 20-21,000 Hz  $\pm 3$  dB response on ZX tape!

## Operation

### A Microprocessor-Controlled Transport And Novel Master Fader Add Extra Convenience

• N-MOS Microprocessor Control ... Controlled by a 4-bit N-MOS microprocessor, the ZX-7 "silent-drive" transport is remarkably smart.

- (1) Auto Playback: Pressing RECORD and either fast-wind button simultaneously causes tape to shuttle to counter "0000," pause momentarily, and automatically begin playback.
- (2) Easy Cue: In either fast mode, PAUSE slows the transport to 1/3, and heads contact tape for cueing. Holding in either fast-wind button (when in pause) slows the tape to 1/6, while "rocking" between them finds the precise point you wish. Simultaneously press both fast buttons for instant stop.
- (3) Punch-In Recording: In playback, press REC and PLAY simultaneously to begin recording immediately. And, you may go into REC/PAUSE from PAUSE without pressing STOP!

• Master Fader ... Press the right side of the rocker, and level smoothly increases from zero to that set by the record-level controls; press the left side to create a "fade-out." Press the rocker momentarily for a 6-second fade; hold it in for a 2-second fade.

## Dolby B-C Type NR

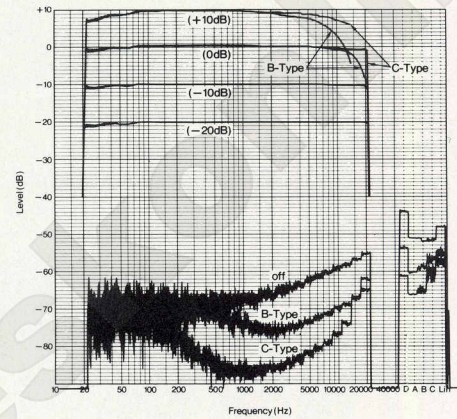
### Dolby-C NR Provides 20-dB Hiss Reduction B-Type NR Is Compatible With Present Tapes

Dolby-C NR not only reduces high-frequency (2 kHz to 8 kHz) hiss by 20 dB—twice that of

B-Type processing — but operates two octaves lower in frequency too! Its spectral-skewing and anti-saturation circuits improve treble headroom, and, with "breathing" completely eliminated, recordings take on new clarity. S/N is better than 72 dB with ZX tape (A-wtd, re 3% distortion at 400 Hz)! The ZX-7 has conventional B-Type circuitry too and so is compatible with existing Dolby-encoded tapes.

*magnetic* azimuth alignment. Each head is individually optimized and precisely contoured for perfect tape contact and smooth response.

The play head employs a laminated Crystalloy core with 0.6-micron gap to extend response to ultra-high frequencies. The laminated-Crystalloy record head has a 3.5-micron gap that maintains a sharp critical recording zone even when metal-tape bias is used. The erase head combines the best features of ferrite and sendust. Its ferrite core has negligible loss and its dual-gap, sendust poletips handle the high flux levels needed to erase metal tape.



Frequency Response/Noise Analysis

Tape Deck: Nakamichi ZX-7/Tape: ZX(Metal)/PB. Eq.: 70 $\mu$ s

## Diffused-Resonance Transport

### Treated Chassis And Asymmetrical Dual-Capstan Transport Reduce Flutter And Modulation Noise

The resonance caused by two capstans rotating at the same rate creates peaks in the flutter spectrum more audible than specifications would suggest. Chassis vibration and tension variations caused by the pressure pad induce scrape flutter and modulation noise. The ZX-7 uses "asymmetrical" capstans rotating at different rates, a vibration-absorbing chassis, and a unique pressure pad lifter to eliminate flutter and attain perfect sonic clarity.

## Head Technology

### Discrete 3-Head Technology Enables Precision Azimuth Alignment And Optimum Performance

Compared with most 3-head systems, the ZX-7 "discrete" configuration is quite unusual. Record and play heads are *physically* as well as magnetically independent to allow precision

## Digital Display

### LED Peak-Level Meters Serve As Calibration Aid 4-Digit Tape Counter For Better Resolution

• LED Peak-Level Meter ... Wide-range (-40 to +10 dB) peak-responding, electronic meters serve as record and playback level indicators during normal use and as highly accurate calibration aids during set-up. The 16 LED segments for each channel assure precise indications.

• 4-Digit LED Tape Counter ... This digital tape counter electronically counts up to 9999 in all forward modes, down to -999 in rewind.

## Other Features

• High-quality amplification with special equalizer and Double-NF monitor • REC MUTE • Defeatable MPX filter • Remote control via RM-200 option • Unattended recording and playback via accessory timer

### ZX-7 Specifications

Frequency Response	20-21,000 Hz $\pm 3$ dB (rec. level -20dB, ZX tape) 20-20,000 Hz $\pm 3$ dB (rec. level -20 dB, SX, EX II tape)
Signal to Noise Ratio	<b>Dolby C-Type NR</b> on (70 $\mu$ s, ZX tape) Better than 72 dB (400 Hz, 3% THD, IHF A-Wtd rms) <b>Dolby B-Type NR</b> on (70 $\mu$ s, ZX tape) Better than 66 dB (400 Hz, 3% THD, IHF A-Wtd rms)
Total Harmonic Distortion	Less than 0.8% (400 Hz, 0 dB, ZX tape) Less than 1.0% (400 Hz, 0 dB, SX, EX II tape)
Wow and Flutter	Less than 0.08% Wtd peak Less than 0.04% Wtd rms
Dimensions	450(W) x 135(H) x 300(D) millimeters 17-3/4(W) x 5-5/16(H) x 11-13/16(D) inches
Approximate Weight	9.5 kg 21 lb.

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