Nakamichi
581Z/582Z
Discrete Head Cassette Decks

581Z Discrete-Head Cassette Deck
Discrete 3-Head Technology highlights the 581Z. With Dolby-B *and* Dolby-C noise reduction, bias and record-calibration controls, built-in twin-tone oscillator, and digital metering, this is a deck for the *serious* recordist.

582Z Discrete-Head Cassette Deck
Every feature of the 581Z *plus* full off-tape-monitoring provisions. The ideal deck for those who take recording seriously and like to practice their art. Experience the unique! Experience Nakamichi excellence!

Silence....Serious Recording!

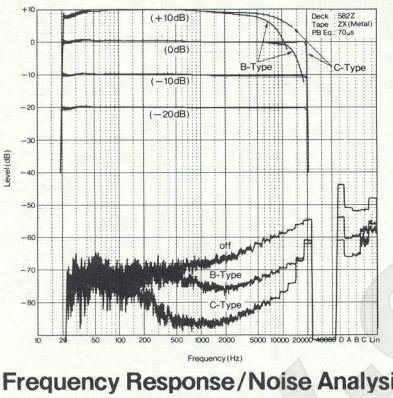
In a few short years, the Nakamichi 582 has become the standard of excellence for tape manufacturers and reviewers—*the* recorder with which to evaluate magnetic tape. Its unique combination of performance and features, its adaptability to any tape formulation, its stability of reproduction, superb high-level recording ability, low noise and distortion placed this recorder in a class by itself. Here, at last, was equipment for the *serious* recordist.

Technology is constantly evolving and, with it, the 582 and its companion 581. The new 581Z and 582Z have Dolby-C noise reduction as well as Dolby-B processing and feature *50-dB* peak-responding digital LED meters with a special high-resolution calibration scale. We've preserved the unique combination of features and performance that made the 581/582 the recorders they were—individual bias and record-calibration controls for *each* track and for *each* of the three major tape formulations, self-contained test signals to optimize performance with *any* tape, the unique Asymmetrical, Dual-Capstan, Diffused-Resonance Transport with Motor-Driven Cam and Tape-Pad Lifter that eliminates scrape flutter and modulation noise, IC logic with a special cueing feature as well as memory, unattended, and remote operation.

The 582Z offers full off-tape monitoring—omitted from the more economical 581Z—but otherwise performance and specifications of the two are identical, and calibration is achieved on either without intermediate rewind. The 581Z/582Z are everything their predecessors were and more! Machines that afford the *serious* recordist maximum performance and quieting with any tape.

Silent Performance

The Dolby-C system is remarkable. Not only does it afford 20-dB quieting—10 dB more than Dolby B—but it works its wonder over two more octaves. "Spectral-skewing" and "anti-saturation" circuits reduce IM distortion and increase treble headroom so flat response is possible at higher levels than ever before. And, Dolby C accomplishes its goal without the "breathing" of a linear compander.



Frequency Response/Noise Analysis

The recorder is the key to realizing Dolby C's potential. Failure to meet the demands of this system produces more sound coloration than with Dolby B. Why? Dolby C uses twice the compansion of Dolby B so it magnifies response errors that much more. If record/play levels are not matched precisely, the sound will either be too dull or too bright.

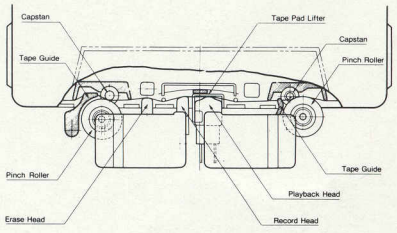
581Z and 582Z recorders make the most of Dolby C. With calibration controls, self-contained test signals, and a high-resolution display, you can match these recorders to virtually any tape and achieve flat response and perfect Dolby tracking.

Nakamichi Excellence

Tape matching is only part of the story. Noise in the electronics surrounding the Dolby-C processor is *not* suppressed by the system, and headroom limitations restrict the recording level that can be achieved. The answer? Nakamichi's DC-coupled record and playback amplifiers with Double-NF topology.

The magnetic heads are absolutely crucial. Record-head core saturation places an upper limit on operating level; gap length dictates how well the head utilizes the tape coating. The play-head gap must be extremely narrow to resolve short wavelengths and provide the 20-kHz response of which Dolby C is capable. Its core geometry and surface contour determine how *uniform* the response will be.

Total performance demands Nakamichi Discrete 3-Head Technology—each head designed with the proper gap, winding, core geometry, and contour for perfect performance—*discrete* heads so that precise *magnetic* alignment of record and play gaps is assured.



Discrete Head Configuration

The transport—don't underestimate its importance! Wow-and-flutter specifications ignore scrape flutter and modulation noise, but, with Dolby C, these may be the ultimate limiting factors! The main sources are chassis vibration and the cassette pressure pad usually relied upon to maintain head-to-tape contact. In a Nakamichi Asymmetrical, Dual-Capstan, Diffused-Resonance Transport not only is conventional flutter low, but tape motion and tension are controlled so precisely that *no pressure pad is needed* so it's lifted out of the way to reduce scrape flutter. Dual slot guides locate the tape precisely, and a special chassis absorbs motor vibration. Here is *total* precision—Nakamichi excellence!

Features:

- Dolby B And Dolby C Noise Reduction With Defeatable MPX Filter
- Discrete 3-Head Technology With 20-kHz Response
- Separate Tape And Equalization Switches
- Bias And Rec. Level Calibration Controls With Twin-Tone Oscillator And High-Resolution Display To Match Any Tape
- Asymmetrical, Dual-Capstan, Diffused-Resonance Transport With Motor-Driven Cam, Dual Slot Guides, And Tape-Pad Lifter
- IC Logic With Cue, High-Speed Shutoff, And Slack-Tape Takeup
- 50-dB Peak-Responding Electronic LED Metering
- Record, Balance, And Output-Level Controls
- High-Output Headphone Jack Plus DC Power For Blackbox Series
- Tape-Start Memory And Unattended Operation (Via Any Timer)
- Total Remote Control Via RM-200 Option

581Z/582Z Specifications:

Frequency Response	20–20,000 Hz ±3 dB (−20 dB Rec Level)
S/N with *Dolby-C NR*	Better than 72 dB (400 Hz, 3% THD, A-wtd rms, 70 μs, ZX tape)
S/N with *Dolby-B NR*	Better than 66 dB (400 Hz, 3% THD, A-wtd rms, 70 μs, ZX tape)
Total Harmonic Distortion (400 Hz, 0 dB)	Less than 0.8% (ZX tape) Less than 1.0% (SX, EXII tape)
Tape Speed	1⅞ ips (4.8 cm/s) ±0.5%
Wow-and-Flutter	Less than 0.10% WTD peak Less than 0.05% WTD rms
Erasure	Better than 60 dB below saturation level at 1 kHz
Separation	Better than 37 dB at 1 kHz, 0 dB
Crosstalk	Better than 60 dB at 1 kHz, 0 dB
Bias Frequency	105 kHz
Input	50 mV, 50k ohms
Output Level	1 V (400 Hz, 0 dB, Output Level at Max.) 2.2k ohms
Headphone	45 mW (400 Hz, 0 dB, Output Level at Max.)
DC Output Jack	±10 V 125 mA Max.
Power Source	100, 120, 120/220-240, 220 or 240V; 50/60 Hz (according to country of sale)
Power Consumption	30 W Max.
Dimensions	500(W) x 130(D) x 350(D) millimeters 19 11/16(W) x 5⅛(H) x 13 25/32(D) inches
Approximate Weight	8.3 kg, 18 lb 5 oz

*Specifications and appearance subject to change without notice.
*Dolby NR under license from Dolby Laboratories.
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