

NAKAMICHI RX-202

£545

B&W NAKAMICHI LIMITED

MARLBOROUGH ROAD, LANCING, WEST SUSSEX BN15 8TR
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The RX-202 is Nakamichi's budget auto-reverse. It has exactly the same incredible cassette reversing mechanism as the '505, where the tape shoots forward from the mechanism on a tray, spins round then returns to continue playing or recording. By eliminating the need for a special rotating head, this bizarre system actually overcomes many of the potential weaknesses of auto-reverse. It's also a great source of entertainment.

Otherwise, the single record/replay head is the same as that in the BX-125. There's no variable bias for tape tuning and a conventional single capstan transport is employed. Bias and equalisation are separately selected by push buttons as

always, as are Dolby B and C noise reduction. The '202 isn't the easiest deck to use because of these selectors.

As with a '202 I tested some years ago, this recent sample gave bright recordings on all three tape types. One has to choose tapes carefully to limit the effect. Sony ES was an ideal metal, That's EM-X a good chrome and TDK AD ferric matched well. With these, recording quality reached a high standard providing levels were not taken too much above 0VU. There was a fine sense of stability to notes, little sign of coarseness and an easy clarity that made for relaxed listening.

Pre-recorded tapes replayed extremely well, as on all Nakamichis.

tape graph.

The head has a respectable, if not exceptional overload performance. With good tapes it manages well enough, but if recording levels are pushed much above 0VU muddle starts to set in. Low hiss levels compensate to a degree and suggest that low noise tapes like BASF CR-II and TDK SA-X (chromes) should be used.

The transport had slight capstan wow (0.05%), seen as shoulder spikes in the spectrum analysis, Fig 1. There is little flutter (0.07%) in this picture though.

TECHNICAL PERFORMANCE

By spinning the cassette around, Nakamichi's auto-reverse system has no affect on basic performance, which is much like that of the BX-110/125. Some upper treble loss in recordings is best countered by using tapes with an extreme treble peak, notably Sony ES and That's EM-X. Raised output above 2kHz made recordings sound bright, despite the upper treble loss. These characteristics can be seen clearly in the metal

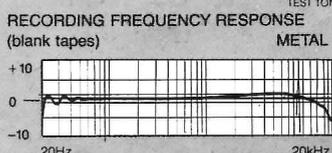
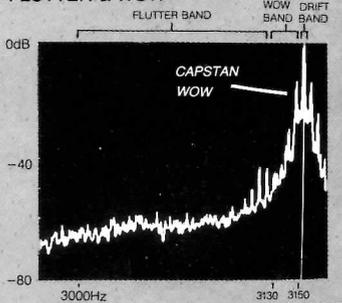
TEST RESULTS

REPLAY (pre-recorded tapes)
frequency response (-2dB) 30Hz - 20kHz
speed accuracy +0.5%
hiss (70uS, Dolby out) -60dB

RECORDING (blank tapes)
frequency response (IEC Primary Refs.)
ferric (IEC I) 20Hz - 18kHz
chrome (IEC II) 20Hz - 16kHz
metal (IEC IV) 20Hz - 17kHz
separation (1kHz) -48dB
distortion (315Hz) 0.6%
hiss (70uS, Dolby out) -56dB
speed variations (DIN total) 0.06%
modulation noise (1k-3k) -42dB
flutter energy (3k-313k) -34dB

MOL/SAT (IEC Primary Refs) 315 / 10k
IEC I (ferric) +3.5dB / -7dB
IEC II (chrome) +0.5dB / -8dB
IEC IV (metal) +4dB / -1dB

FLUTTER & WOW



NAKAMICHI RX-505

£895

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As Nakamichi's top auto-reverse deck, this model is pretty expensive. Its main claim to fame - and incredulity - is the way auto-reverse is implemented. To avoid problems associated with rotating the head, Nakamichi instead rotate the cassette. It flies out of the machine on a tray, spins round like a ballerina then whizzes back in again. This performance leaves no one unmoved!

Not only does this avoid reverse-azimuth problems, but more pertinently it allows Nakamichi to use their normal dual-capstan transport and totally independent record and replay heads, so maintaining performance standards whilst providing reverse recording.

Bias is adjustable with all tape types, but not record sensitivity. The machine plays over leader tape, introducing a gap in play or record at the end of a side, so it is not a fast reverse type. It does have a blank skip facility though which triggers fast forward if a gap exceeding ten seconds at the end of a tape is sensed. As always, independent bias and equalisation selector buttons are fitted.

Recording quality on ferrics, chromes and metals was exceptionally good, except for some distributed wow that compromised pitch definition. Replay quality of pre-recorded tapes was also exceptional, as always with Nakamichis.

TECHNICAL PERFORMANCE

Retention of independent record and replay heads, not siamesed, in this auto-reverse allows Nakamichi to attain their usual high standards of performance. In particular, bass distortion when recording onto metal tape was uniquely low at around 0.1%, compared with 1%-3% for siamesed heads. Frequency response extends easily up to 20kHz and there's little sign of contour effect

ripples below 100Hz. Head overload figures were excellent, +7dB MOL315 onto metal tape being as high as any deck currently goes. Results with chrome and ferric tape were equally good.

The review sample unusually suffered some distributed wow, mostly from the two capstans, as the demodulated spectrum analysis, Fig 1, of wow and flutter shows at left as high twin spikes. Flutter was well suppressed, however.

TEST RESULTS

REPLAY (pre-recorded tapes)
frequency response (-2dB) 30Hz - 20kHz
speed accuracy +0.6%
hiss (70uS, Dolby out) -61dB

RECORDING (blank tapes)
frequency response (IEC Primary Refs.)
ferric (IEC I) 20Hz - 20kHz
chrome (IEC II) 20Hz - 20kHz
metal (IEC IV) 20Hz - 20kHz
separation (1kHz) -50dB
distortion (315Hz) 0.4%
hiss (70uS, Dolby out) -55dB
speed variations (DIN total) 0.1%
modulation noise (1k-3k) -44dB
flutter energy (3k-313k) -33dB

MOL/SAT (IEC Primary Refs) 315 / 10k
IEC I (ferric) +5dB / -3dB
IEC II (chrome) +3dB / -7dB
IEC IV (metal) +7dB / 0dB

WOW & FLUTTER (demodulated)

