7240PE Stereo Receiver

Date of manufacture : ? - Nov 89

Please note that this document contains the text from the original product brochure, and some technical statements may now be out of date

The 7240PE receiver consists of the 3240PE integrated amplifier, with its vast reserves of clean, solid power for the the wide dynamic range of modern recordings, plus an exceptionally sensitive digital tuner.

Power Envelope design
While the 7240PE is rated at 40 watts/channel of steady-state power, its +6 dB of IHF dynamic headroom means that its dynamic power for musical transients exceeds 160 watts/channel at 8 ohms and 200 watts/channel at 4 or 2 ohms. Even with long 200-millisecond tone-bursts, representing the full duration of musical notes and chords, the 7240PE produces an impressive 100 watts per channel.

High-current output stage
The 7240PE de-livers up to 25 amperes per channel to ensure precise electromagnetic control of the speaker's voice-coil, even with impedances as low as 2 ohms.

Impedance selector
This rear-panel switch lets you optimise the amplifier'? operation to drive either low impedances (2 to 6 ohms) or a single set of speakers with a true 8-ohm (or higher) impedance.

Soft Clipping™
When the amplifier is driven beyond its rated power, NAD's famous Soft Clip-ping™ M circuit gently limits the waveform and prevents the harshness that occurs in other receivers when the output transistors arc driven into saturation.

Low-noise phono preamplifier
NAD's phono pre-amp circuits feature accurate RIAA equalisation, correct interfacing with the complex impedance of the phono cartridge, very low noise and plenty of headroom to accommodate the highest-level peaks without distortion.

Digital-ready inputs
With overload-proof line inputs and low-noise circuits for volume and tone control, the 724OPE accommodates a dynamic range greater than 100 dB, preserving the transparent clarity of the finest analogue and digital recordings.

Bass EQ with infrasonic filtering
The equalisation circuit boosts the deepest bass by 6 d B providing the sort of authentic bass "feel" that might otherwise require a costly separate subwoofer system. At the same time, a sharp infrasonic filter prevents excessive woofer-cone motion and minimises the bass-muddying effect of turntable rumble, warps and tone arm/stylus resonances.

Musically Effective Tone Controls
Ordinary bass and treble control circuits intrude on the midrange; boosting the bass, for instance, makes vocals thick and boomy. In NAD receivers, the bass and treble controls do what their names imply: they vary the strength of the bass (the solid foundation, the musical beat) and the treble (the crisp detail the airy brilliance) while preserving a neutral, accurate midrange response.

Precise digital tuning

The tuner section of the 7240PE features sensitive dual-gate MOSFET front-end, a three-stage linear-phase I.F. circuit for sharp selectivity, a low-distortion quadrature detector, and a phase-compensated PLL multiplex decoder with wide stereo separation at all frequencies. Special filtering minimises interference from SCA and RDS sub-carriers.

FM NR

NAD's unique FM noise-reduction circuit eliminates much of the noise and distortion in weak FM stereo signals, a welcome improvement for any listener who can't put up a roof antenna. With FM-NR, the 7240PE needs only half as much signal strength as other receivers to obtain good quieting. The thoughtful engineering of this NAD receiver is evident in the design of its logical, easy-to-use controls - and in the deliberate avoidance of glitter, gimmicks, and frills. When you choose an NAD receiver, you arc investing in quality behind the front panel - in advanced circuit design, selected parts, oversize high-current transistors, exacting quality control, and solid construction for long-term reliability. The proof is in the listening.

PRE-AMP SECTION

Phono input		
Input impedance *(R and C)*		47kΩ / 100pF
Input sensitivity, *(1kHz, ref. rated power)*		3.2mV
Signal/Noise ratio *(A-weighted with cartridge connected)*		76dB ref. 5mV
THD *(20Hz - 20kHz)*		<0.04%
RIAA response accuracy *(20Hz - 20kHz)*		±0.5dB
Line level inputs		
Input impedance *(R and C)*		15kΩ / 100pF
Input sensitivity *(ref. rated power)*		160mV
Maximum input signal		>10V
Signal/Noise ratio *(A-weighted ref 1W)*		88dB
Frequency response *(20Hz - 20kHz)*		±0.5dB
Infrasonic filter		-3db at 15Hz, 24dB/octave
THD		0.01%
Line level outputs		
Output impedance	Pre-amp	600Ω
	Tape	Source Z + 1kΩ
	Phones	220Ω
Maximum output level		12V
	Tape	8V
	Phones	>10V into 600Ω
		>500mV into 8Ω
Tone controls		
Treble		±7dB at 10kHz
Bass		±10dB at 50Hz
Bass EQ		+3dB at 70Hz
		+6dB at 40Hz

POWER AMP SECTION

Continuous output power into 8Ω *		40W (16dBW)
Rated distortion *(THD 20Hz - 20kHz)*		0.03%
Clipping power *(maximum continuous power per channel)*		50W
IHF Dynamic headroom at 8Ω		+6dB
IHF dynamic power *(maximum short term power per channel)*	8Ω	160W (22dBW)
	4Ω	200W (23dBW)
	2Ω	250W (24dBW)
Damping factor *(ref. 8Ω, 50Hz)*		>50
Input impedance		22kΩ / 880pF
Input sensitivity *(for rated power into 8Ω)*		1V
Frequency response		6Hz - 50kHz +0, -3dB
Signal/noise ratio	ref. 1W	100dB
	ref. rated power	116dB
THD *(20Hz - 20kHz)*		<0.03%

FM TUNER SECTION		
Input sensitivity	Mono -30dB THD+N	10.3dBf (1.8µV/300Ω)
	Mono 30dB S/N	14.2dBf (2.8µV/300Ω)
	Stereo 50dB S/N	36dBf (34µV/300Ω) FM NR off
		29dBf (16µV/300Ω) FM NR on
	Stereo 60dB S/N	46dBf (110µV/300Ω) FM NR off
		40dBf (56µV/300Ω) FM NR on
Capture ratio *(45 - 65dBf)*		<1.5dB
AM rejection *(45 - 65dBf)*		>60dB
Selectivity, alternate channel		65dB
Image rejection		70dB
I F rejection		90dB
Harmonic distortion	Mono	0.09%
	Stereo	0.09%
Signal/Noise ratio	Mono	>80dB
	Stereo	>75dB
Frequency response ±0.5dB		30Hz - 15kHz
Channel separation at 1kHz		50dB
AM TUNER SECTION		
Usable sensitivity		300µV
Selectivity		35dB
Image rejection		50dB
I F rejection		35dB
Signal/Noise ratio		45dB
Harmonic distortion		0.5%
Remote		No
NAD Link		No
PHYSICAL SPECIFICATIONS		
Dimensions (W x H x D)		420 x 108 x 380mm
Net weight		7.5kg
Shipping weight		9.0kg
Power consumption *(120 ~ 240V, 50/60Hz)*		240VA

* Minimum power per chnnel, 20Hz - 20kHz, both channels driven with no more than rated distiortion.

Dimensions are of unit's cabinet without attached feet; add up to 18mm for total height.

Dimension depth excludes terminals, sockets, controls and buttons.