

**NAD**

# 7020e Stereo Receiver

Date of manufacture : ? - Dec 89

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note that this document contains the text from the original product brochure, and some technical statements may now be out of date



NAD's product philosophy can be characterised in one phrase: "high-value engineering." The compact and economical 7225PE receiver is an outstanding example of that approach; it contains much of the same circuitry as the 7240PE, with less output power and a substantial saving in cost. In budget-level stereo receivers, performance and power often are compromised to reduce production cost. But NAD combines high production efficiency with superior performance by using the same circuits in both separates and receivers. The 7225PE contains the entire 3225PE integrated amplifier plus a sensitive, wide-range digital tuner.

The 7225PE is conservatively rated at 25 watts/ channel of steady-state power for sine-wave test tones. But with +4 dB of IHF dynamic headroom, its effective power for musical transients is considerably greater. Power Envelope design produces bursts of up to 60 watts/channel at 8 ohms and 80 watts/channel at 4 or 2 ohms, ensuring clear and authoritative reproduction of the impact and sparkle of live music. If you ever overdrive the 7225PE, Soft Clipping™ will prevent the harshness and gritty distortion that is caused by hard clipping in conventional amplifiers.

NAD's impedance selector allows optimum performance to be delivered into any speaker impedance. The 7225PE produces up to 15 amperes of peak current, delivering full power to impedances as low as 2 ohms. The quiet phono stage and wide-range line-level circuits, like those in the 7240PE, transparently reproduce even the subtlest detail of every recorded sound. Infrasonic and ultrasonic filters eliminate unwanted interference while preserving accurate response from 20 Hz to 20 kHz. Musically effective tone controls adjust the deep bass and high treble without sacrificing clarity or midrange accuracy. Radio is not just for background music, and tuner performance should not be compromised. The 7225PE employs much of the same highly-evolved technology as the NAD 4225 tuner. A sensitive MOSFET front end, three stages of I. F. filtering, and a PLL multiplex decoder for wide stereo separation, provide an optimum combination of good selectivity and low distortion. In side-by-side comparisons with other receivers, the 7225PE often pulls in weak or difficult stations with noticeably better clarity and quieting.

NAD 7020 e Stereo Receiver The 7020e, NAD's lowest cost receiver, is similar to the 7225PE in features and performance, except that it is based on the 3020i integrated amplifier. It is rated at 20 watts per channel of steady-state power with +3 dB of IHF dynamic headroom, meaning that in musical transients it produces up to 40 watts/channel of dynamic power at 8 or 4 ohms. The 7020e shares with all NAD amplifiers and receivers a high-current output stage that, when playing music instead of test tones, delivers full power to speakers of any impedance. Its combination of dynamic power, Soft Clipping™, and unconstricted output current give the 7020e a characteristic ability to drive even "difficult" speakers to unexpectedly high volume levels.

In addition to its surprisingly potent speaker-driving ability, the 7020e contains the same quiet phono circuitry, sensitive digital tuning, wide stereo separation, sharp audio-bandpass filtering, and musically useful tone controls that larger NAD receivers employ. The 7020e is a no-compromise product, characterised by the high-value engineering that stands behind every NAD product.

## PRE-AMP SECTION

### Phono input

Input impedance (R and C)	47k $\Omega$ / 100pF
Input sensitivity, 1kHz	2.4mV ref. 20W
Signal/Noise ratio (A-weighted with cartridge connected)	75dB ref. 5mV
THD (20Hz - 20kHz)	<0.04%
RIAA response accuracy (20Hz - 20kHz)	$\pm$ 0.5dB

### Line level inputs

Input impedance (R and C)	40k $\Omega$ / 100pF
Input sensitivity (ref. 20W)	150mV
Maximum input signal	>10V
Signal/Noise ratio (A-weighted ref 1W)	84dB
Frequency response (20Hz - 20kHz)	+0.5dB, -1.0dB
Infrasonic filter	-3dB at 15Hz, 24dB/octave

### Line level outputs

Output impedance	Tape	Source Z + 1k $\Omega$
	Phones	220 $\Omega$
Maximum output level	Tape	10V
	Phones	>10V into 600 $\Omega$ >500mV into 8 $\Omega$

### Tone controls

Treble	$\pm$ 7dB at 10kHz
Bass	$\pm$ 10dB at 50Hz

## POWER AMP SECTION

Continuous output power into 8 $\Omega$ *	20W (13dBW)	
Rated distortion (THD 20Hz - 20kHz)	0.03%	
Clipping power (maximum continuous power per channel)	25W	
IHF Dynamic headroom at 8 $\Omega$	+2.5dB	
IHF dynamic power (maximum short term power per channel)	8 $\Omega$	35W (15.5dBW)
	4 $\Omega$	35W (15.5dBW)
	2 $\Omega$	50W (17dBW)
Damping factor (ref. 8 $\Omega$ , 50Hz)	>30	
Input sensitivity (for rated power into 8 $\Omega$ )	900mV	

## FM TUNER SECTION

Input sensitivity	Mono -30dB THD+N	11.3dBf (2.0 $\mu$ V/300 $\Omega$ )
	Mono 30dB S/N	15dBf (3.0 $\mu$ V/300 $\Omega$ )
	Stereo 50dB S/N	37dBf (40 $\mu$ V/300 $\Omega$ )
	Stereo 60dB S/N	47dBf (120 $\mu$ V/300 $\Omega$ )
Capture ratio (45 - 65dBf)		<1.5dB
AM rejection (45 - 65dBf)		>60dB
Selectivity, alternate channel		58dB
Image rejection		70dB
I F rejection		90dB
Harmonic distortion	Mono	0.1%
	Stereo	0.1%
Signal/Noise ratio	Mono	>80dB
	Stereo	>74dB
Frequency response $\pm$ 0.5dB		30Hz - 15kHz
Channel separation at 1kHz		45dB

## AM TUNER SECTION

Usable sensitivity	5 $\mu$ V
Selectivity	30dB
Image rejection	45dB
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 91 x 273mm
Net weight	5.5kg
Shipping weight	6.8kg
Power consumption (120 - 240V, 50/60Hz)	150W

\* Minimum power per channel, 20Hz - 20kHz, both channels driven with no more than rated distortion.

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

Dimension depth excludes terminals, sockets, controls and buttons.