

NAD  
NEW ACOUSTIC DIMENSION  
HIFI PROGRAMME



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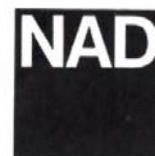
Photograph on title page:  
2-CHANNEL OSCILLOGRAM OF 20 kHz TEST ZONE

# ABOUT NAD

## What's so special about NAD?

New Acoustic Dimension – NAD for short – is a new concept in top quality high fidelity. NAD offers a range of receivers, amplifiers, tuners, recorders and headphones, which have established new international standards.

American, European and Japanese engineers working with the leading dealers and distributors in the industry,



A TELEDYNE COMPANY

have developed a new design philosophy. The aim was a complete range which, without compromise, would meet the musical needs of discriminating music lovers – at reasonable prices.

### The NAD Philosophy

To develop and offer equipment which will reproduce music so that it is as close to the original as the state of modern technology permits – equipment embodying advanced engineering and functional design – in a price class which sets new international standards for performance.

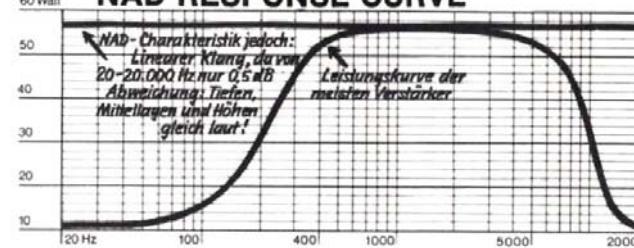
It was with that in view that a development programme lasting years was undertaken. It resulted in a series of easily operated NAD products with such conservative power supply sections that the rated power output existed throughout the entire audible frequency range, including the extreme bass and the extreme treble.

### Flat Power Output

Thanks to this exceptional design, the output

is uniform in the bass range below 50 Hz and in the high harmonics beyond 10.000 Hz which are so important for tonal quality. Even with the volume set low you can enjoy the full sound spectrum.

### **NAD RESPONSE CURVE**



NAD characteristic with: linear sound, 0.5 dB from 20 to 20.000 Hz; bass, middle range and treble equally loud!  
Response curves of most amplifiers

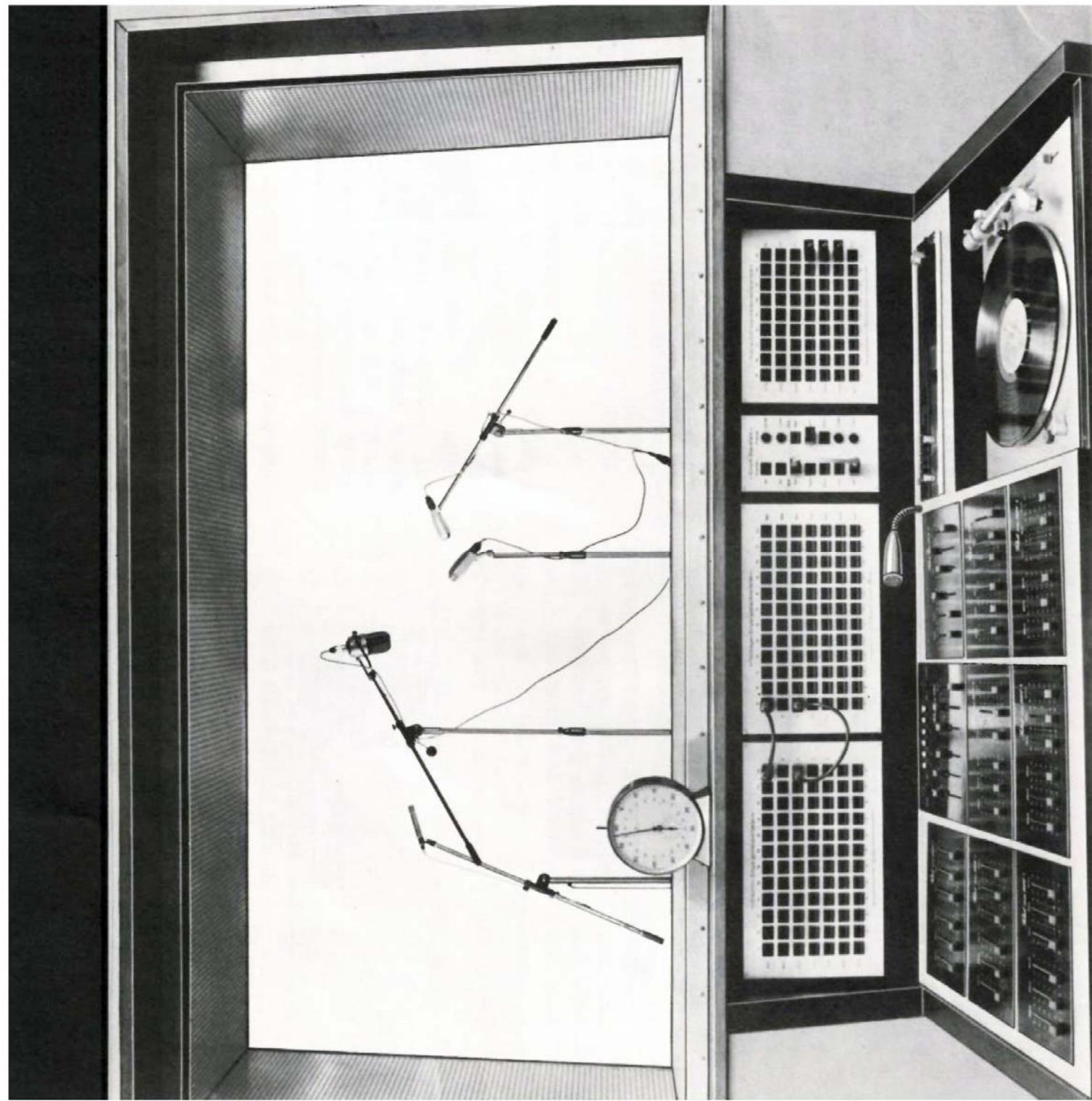
NAD receivers and amplifiers differ from most receivers and amplifiers in this price bracket whose stated nominal performance falls off markedly in the bass and the treble.

### Solid, craftsmanlike finish

In keeping with the perfect electronic technology, and the excellent quality of reproduction, is the carefully detailed finish. It can be seen in the design of the cabinet and the front panel; it is apparent in the operation of the controls, which are smooth and easy to use.

### 2 year' guarantee

Our uncompromising insistence on quality in production, has made it possible to offer a 2 year' guarantee. What is more, each NAD instrument comes with a test certificate in which the specific measured values such as frequency response, distortion and power per channel have been tested individually.



# PUBLISHED REPORTS ON NAD

New Acoustic Dimension electronics have been tested by some of the leading hi fi publications. The following extracts from some of the reports will give you an idea of the quality and performance standard of NAD equipment.

## Stereo Test of New Acoustic Dimension

### Stereo, Vol. 15 (extract) (Germany)

„ . . . With their solidly built 160, NAD present a receiver with a good price/quality ratio which offers an impressive number of connection facilities (two each for microphone, tape monitor and headphones) and pseudo-quadraphonic reproduction.

At the output power claimed (45 W + 45 W)\* the harmonic distortion – even at very high and very low frequencies – is definitely under 0.2 %.

The intermodulation level, too, is low enough to be called excellent. Reserves of power and low distortion likewise do much to help the amplifier section produce a tone that is as clean as it is full. The entire range from 20 Hz to 20.000 Hz is covered effortlessly. The channel separation with a surprisingly wide medium-frequency band is more than just adequate. The tone on stereo is not just crystal clear but also well structured spatially. The playback of a copy of the master tape of the new hm/BASF recording of Mozart's Requiem proved extraordinarily impressive and spacious.“

\* The specified power of 45 W + 45 W has been increased to 55 W + 55 W in the NAD 160a.

### Fono Forum, Vol. 6 (extract) (Germany)

„ . . . The NAD 160 produces a clean, transparent sound quality. Even with loudspeakers of less pronounced efficiency, it is possible to achieve meaty playback strength, free from distortion; the same also applies to the quadraphonic connection of four loudspeakers. The pseudo-quadraphonic circuit is not adjustable but has been so carefully balanced that an excellent impression is gained in a central listening position with four speakers of the same efficiency.

„ . . . With regard to sound, the NAD is scarcely distinguishable from other receivers in the top class and 'blindfold' comparisons revealed no decisive differences.

„ . . . All in all, what we have discovered about the NAD 160 already points in the direction of top class.“

### Hi Fi Sound (England)

#### On Test – NAD 160 by Gordon J. King

“This new receiver, the NAD 160, has excellent performance figures and offers a good quality/price ratio.

„ . . . This instrument, designed for private use, provides transparent, true-to-nature reproduction, even at extremely high and extremely low frequencies.

With the FM receiver section it is possible to receive even distant stereo transmitters with very little extraneous noise and very low fluctuations of loudness.

Undoubtedly a very good receiver. The name, "New Acoustic Dimension", is a very appropriate description of this instrument's performance.

# AMPLIFIERS NAD MODEL 60



Amplifiers are used with tuners, turntables, cassette recorders and open reel tape decks.

New Acoustic Dimension amplifiers offer outstanding performance in their price bracket and represent good value for money.

**NAD model 60**  
35 W + 35 W continuous power into 8 ohms,  
20–20,000 Hz.

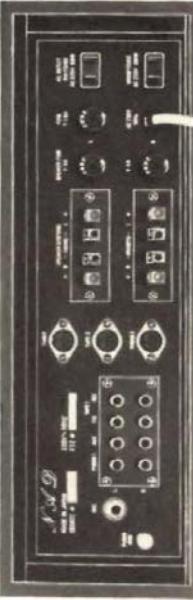
The amplifier has:

2 illuminated VU meters giving separate power output indication for each channel; quasi-quadrphony according to the Dyna-quad system; 4 speaker, 2 headphone, 2 microphone and 2 tape monitor connections. Amplifier section

The direct-coupled output stages with a linear response from 20 to 20,000 Hz are a precondition for outstanding reproduction of the bass range and an impressive dynamic range.

Continuous power output  
35 W + 35 W, into 8 ohms  
Bandwidth (IHF)  
10 Hz to 50,000 Hz  
Frequency response overall  
20 Hz to 20,000 Hz  
± 0.5 dB  
Harmonic distortion at 1 kHz,  
nominal output, both channels driven 0.3% max.  
Intermodulation  
Damping factor at 8 ohms  
0.4% max.  
Signal-to-noise ratio  
Phono  
Aux. tape  
Input sensitivity  
Phono  
Aux. tape  
Loudness control (-30 dB)

2.2 mV/47 kohms  
140 mV/50 kohms  
+ 8 dB at 100 Hz  
+ 5 dB at 10 kHz  
- 5 dB at 10 kHz  
± 10 dB at 10 kHz  
± 10 dB at 10 kHz  
386 x 130 x 264 mm  
approx. 10 kg



2 years' full guarantee

# NAD MODEL 90



## NAD model 90

55 W + 55 W continuous power into 8 ohms,  
20-20.000 Hz.

The outstanding features of the NAD model 60 are naturally also features in this more powerful model. In addition the NAD model 90 has a Mic-Mixing device which makes it possible to mix microphone sound with any other sound source desired.

Signal-to-noise ratio	
Phono and microphone	60 dB
Aux. tapes 1 and 2	80 dB
Input sensitivity	
Phono and microphone	2.2 mV/47 kohms
Aux. tapes 1 and 2	120 mmV/100 kohms
Loudness control (-30 dB)	+8 dB at 100 Hz
Treble filter	+5 dB at 10 kHz
Treble control	-5 dB at 10 kHz
Subsonic	±11 dB at 10 kHz
(rumble filter operating at extreme bass)	-4 dB at 10 Hz
Bass control	
Dimensions (w x h x d)	±11 dB at 100 Hz
Weight	386 x 130 x 264 mm approx. 12.5 kg

Continuous power output	55 W + 55 W into 8 ohms
Bandwidth (IHF)	10 Hz to 50.000 Hz
Frequency response overall	20 Hz to 20.000 Hz ± 0.5 dB
Harmonic distortion at 1 kHz, nominal output, both channels driven	0.3% maximum
Intermodulation	0.4% maximum
Damping factor at 8 ohms	min. 45

2 year's full guarantee.



# NAD MODEL 200 DOLBY



## NAD model 200 Dolby

100 W + 100 W continuous power into 8 ohms,  
20–20.000 Hz.

With the NAD model 200 Dolby we offer you a Hi-Fi amplifier in the very top class. Equipped with the Dolby system which ensures you noise-free recording on all tape decks and recorders, the NAD model 200 Dolby is a high-quality module contributing to optimum listening pleasure. At a reasonable price.

*NAD Model 200 Stereo Amplifier*



### Input sensitivity

Phono and microphone  
Aux. tapes 1 and 2  
Loudness control (-30 dB)

2.0 mV/47 kohms

180 mV/50 kohms

+8 dB at 100 Hz

+5 dB at 10 kHz

-5 dB at 10 kHz

±11 dB at 10 kHz

-4 dB at 10 kHz

### Treble filter

### Treble control

### Subsonic

(rumble filter operating at extreme bass)

### Bass control

Dimensions (w x h x d)

±11 dB at 100 Hz

440 x 160 x 370 mm

approx. 21 kg

Dolby – registered trademark of the Dolby Laboratory

Continuous power

100 W + 100 W into 8 ohms

Bandwidth (IHF)

10–50.000 Hz

Frequency response overall

20–20.000 Hz ± 0.5 dB

Noise factor at 1 kHz,

nominal output, both channels driven

0.1 % maximum

Intermodulation

0.2 % maximum

Damping factor at 8 ohms

min. 45

Signal-to-noise ratio

60 dB

Phono and microphone

80 dB

Aux. tapes 1 and 2



# TUNER NAD MODEL 100



The function of a tuner is to pick up mono and stereo transmissions in the FM band without loss of quality and to process them without giving rise to the slightest distortion. The NAD 100 tuner has the built-in quality to deal with these problems superbly.

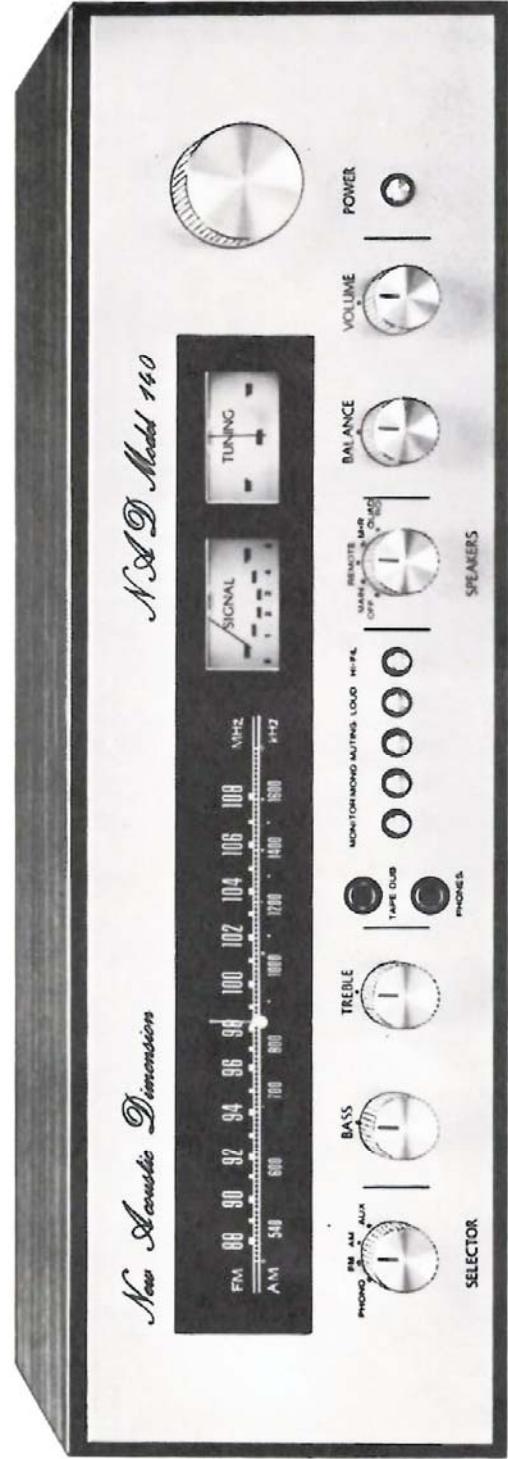
FM tuner	1.8 uV
Input sensitivity (IHF)	1.0 uV
(DIN)	0.2% mono
Harmonic distortion	0.4% stereo
Signal-to-noise ratio	65 dB
Capture ratio	2 dB
Separation	75 dB
Image rejection	80 dB
IF rejection	90 dB
Crosstalk attenuation at 1 kHz	40 dB
Pilot tone suppression	60 dB
De-emphasis	50 usec
Dimension (w x h x d)	386 x 130 x 220 mm
Weight	approx. 10 kg



2 years' full guarantee

# RECEIVERS

## NAD MODEL 140



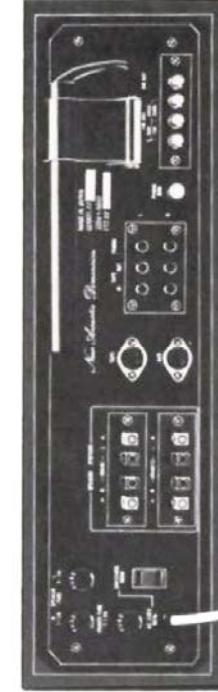
### NAD model 140

35 W + 35 W power into 8 ohms, 20–20,000 Hz.  
With a maximum harmonic distortion of only 0.3 % the NAD model 140 is a model of clear sound definition. The great versatility of this receiver is typified by the headphone and tape monitoring connections on the front panel.

### Amplifier section

Continuous power output  
Bandwidth (IHF)  
Frequency response overall  
Harmonic distortion at 1 kHz,  
nominal power, both channels driven  
Intermodulation  
Damping factor at 8 ohms  
Signal-to-noise ratio  
Phono and microphone  
Aux. tapes 1 and 2  
Input sensitivity  
Phono and microphone  
Aux. tapes 1 and 2  
Loudness control (-30 dB)

35 W + 35 W into 8 ohms  
10–50,000 Hz  
20–20,000 Hz ± 0.5 dB  
0.3 % maximum  
0.4 % maximum  
min. 45 min.  
60 dB  
80 dB  
2.2 mV/47 kohms  
140 mV/50 kohms  
+ 8 dB at 100 Hz  
+ 5 dB at 10 kHz



**2 years' full guarantee**

# NAD MODEL 160 a



## NAD model 160a

Direct-coupled output stage, 55 W + 55 W continuous power into 8 ohms, 20–20.000 Hz.

Connections for 4 loudspeakers (matrix quadraphony), 2 headphones, 2 microphones and 2 tape monitors.

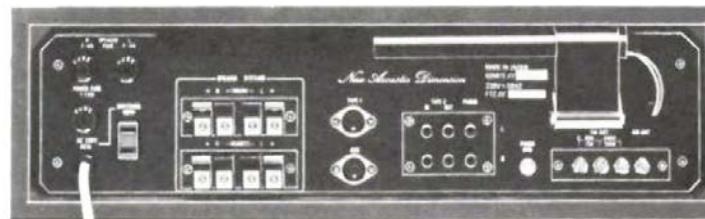
Extremely modern tuner section: 4-circuit FM tuner with 4 FET's; 1 dual-gate MOSFET as mixer stage; 6 ceramic filters; separate oscillator; separate AM/FM IF amplifiers. Field strength and tuning indicators.

### Amplifier section

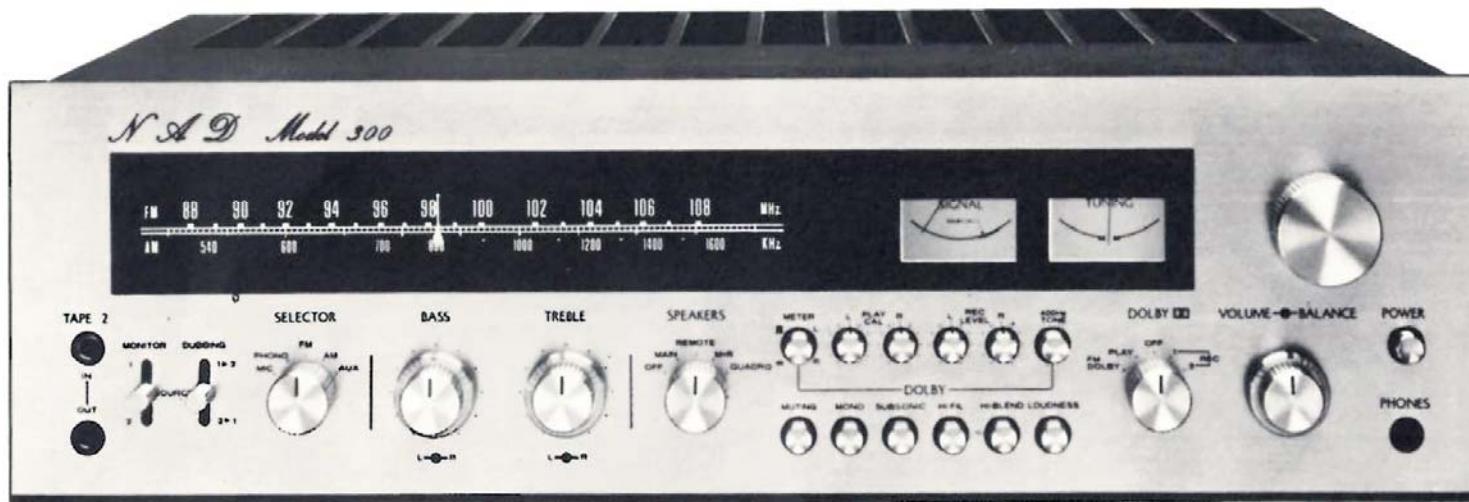
Continuous power output	55 W + 55 W into 8 ohms
Bandwidth (IHF)	10–50.000 Hz
Frequency response overall	20–20.000 Hz ± 0.5 dB
Harmonic distortion at 1 kHz, nominal power, both channels driven	0.3% maximum 0.4% maximum min. 45
Intermodulation	
Damping factor at 8 ohms	
Signal-to-noise ratio	
Phono and microphone	60 dB
Aux. tapes 1 and 2	80 dB
Input sensitivity	
Phono and microphone	2.2 mV/47 kohms
Aux. tapes 1 and 2	140 mV/100 kohms

2 years' full guarantee

Loudness control (-30 dB)	+ 8 dB at 100 Hz + 5 dB at 10 kHz - 5 dB at 10 kHz ± 11 dB at 10 kHz ± 11 dB at 100 Hz
Treble filter	
Treble control	
Bass control	
FM Tuner	
Input sensitivity (IHF) (DIN)	1.8 uV 1.0 uV
Harmonic distortion	0.2 % mono 0.4 % stereo
Signal-to-noise ratio	65 dB
Capture ratio	2 dB
Separation	75 dB
Image rejection	80 dB
IF rejection	90 dB
Crosstalk attenuation at 1 kHz	40 dB
Pilot tone suppression	60 dB
De-emphasis	50 usec
Dimension (w x h x d)	450 x 140 x 360 mm
Weight	approx. 16 kg



# NAD MODEL 300 DOLBY



## NAD model 300 Dolby

100 W + 100 W continuous power into 8 ohms,  
20–20.000 Hz.

This receiver, equipment in the forefront of the top class, offers you a maximum of listening pleasure. Great ease of operation, built-in Dolby system for noise-free recordings, tape dubbing facility on the front panel and numerous other features make the NAD model 300 Dolby a Hi-Fi module for the discriminating, high fidelity enthusiast.

### Amplifier section

Continuous power output	100 W + 100 W into 8 ohms
Bandwidth (IHF)	10–50.000 Hz
Frequency response overall	20–20.000 Hz ± 0.5 dB
Harmonic distortion at 1 kHz, nominal power, both channels driven	0.1 % maximum
Intermodulation	0.2 % maximum
Damping factor at 8 ohms	min.45
Signal-to-noise ratio	
Phono and microphone	60 dB
Aux. tapes 1 and 2	85 dB
Input sensitivity	
Phono and microphone	2.0 mV/47 kohms
Aux. tapes 1 and 2	180 mV/50 kohms

2 years' full guarantee

Loudness control (-30 dB)

+ 8 dB at 100 Hz  
+ 5 dB at 10 kHz  
- 5 dB at 10 kHz  
± 11 dB at 10 kHz  
- 4 dB at 10 Hz  
± 11 dB at 100 Hz

Treble filter

1.8 uV  
1.0 uV

Treble control

0.2% mono  
0.4% stereo

Subsonic

60 dB

Bass control

1.2 dB

FM tuner

80 dB

Input sensitivity

85 dB

(IHF)

90 dB

(DIN)

40 dB

Harmonic distortion

60 dB

Signal-to-noise ratio

50 usec

Capture ratio

508 x 157 x 440 mm

Separation

approx. 22 kg

Image rejection

Dolby – the registered trademark of the Dolby Laboratories

IF rejection

Crosstalk attenuation at 1 kHz

Pilot tone suppression

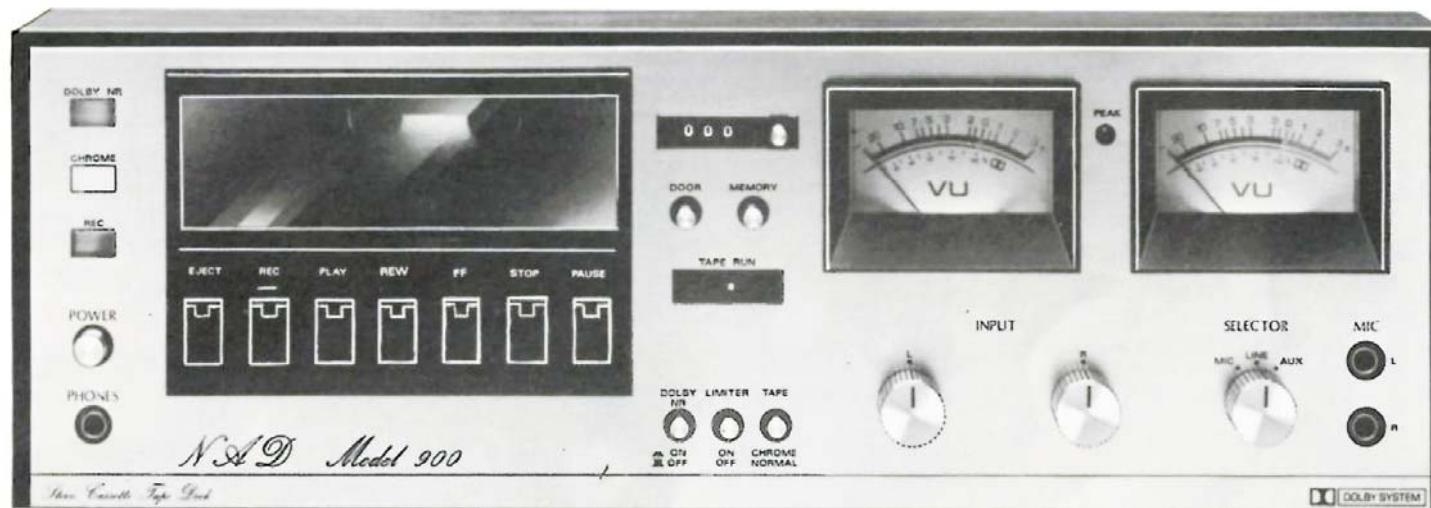
De-emphasis

Dimensions (w x h x d)

Weight



# TAPE DECK NAD MODEL 900 DOLBY



*N&D Model 900*

With the Tape Deck NAD model 900 Dolby we present a cassette recorder which, like all items of NAD equipment, offers you a maximum of technical perfection at a price which is unique in this quality class. The fact that all controls are mounted on the front panel makes this equipment ideal for combining with other Hi-Fi modules. The two built-in ferrite tape heads, famed for their long life, and the dual capstan drive are another proof of the technical quality of the NAD 900 Dolby.

Track system	2 channels, 1/4-track stereo recording and replay	
Tape speed	4.75 cm/sec	
Wow and flutter	0.06 % (WRMS) $\pm$ 0.15 % (DIN)	
Overall frequency response	20–14.000 Hz (normal)	
	20–15.000 Hz (CrO <sub>2</sub> )	
Signal-to-noise ratio	without Dolby	55 dB
	with Dolby	60 dB normal
	without Dolby	57 dB CrO <sub>2</sub>
	with Dolby	65 dB

2 years' full guarantee

Harmonic distortion	$\leq 2.5\%$
Crosstalk attenuation at 1 kHz	35 dB
Tape heads	2, ferrite
Motor	1 dual capstan drive
Fast wind in either direction	90 sec. with C60 tape
Dimensions (w x h x d)	450 x 160 x 320 mm
Weight	approx. 10 kg
Equipped with:	Memory Play, 3-digit counter, 2 VU meters + LED peak value indication, autom. tape switch, 2 separate controls for both recording and replay.

Dolby – registered trademark of the Dolby Laboratories



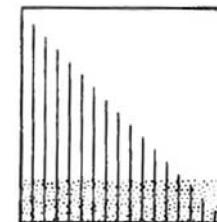
# WHAT IS DOLBY?

Dr. Ray Dolby devised an ingenious system for suppressing noise. High-class cassette recorders come with this system already built in but if you insert a separate Dolby unit in circuit in your existing Hi-Fi recorder you will discover a new quality of sound. Hiss disappears completely and the dynamic range is improved by 10 dB.

## How the Dolby system works

It increases the loudness of soft passages, where noise is particularly disturbing, by a factor of 10 during recording and reduces their loudness by the same factor during replay. The frequency range remains unaltered. The Dolby cannot, of course, remove distortion from signals which reach it distorted – noise radio signals, noisy records, "un-dolbyised" recordings. But at any rate no noise will be added to them by the reproduction process.

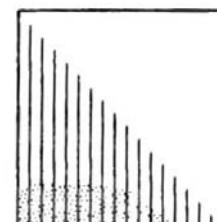
This is a normal tape tracing. The lines are notes of various loudness. The band of dots represents the unavoidable tape noise.

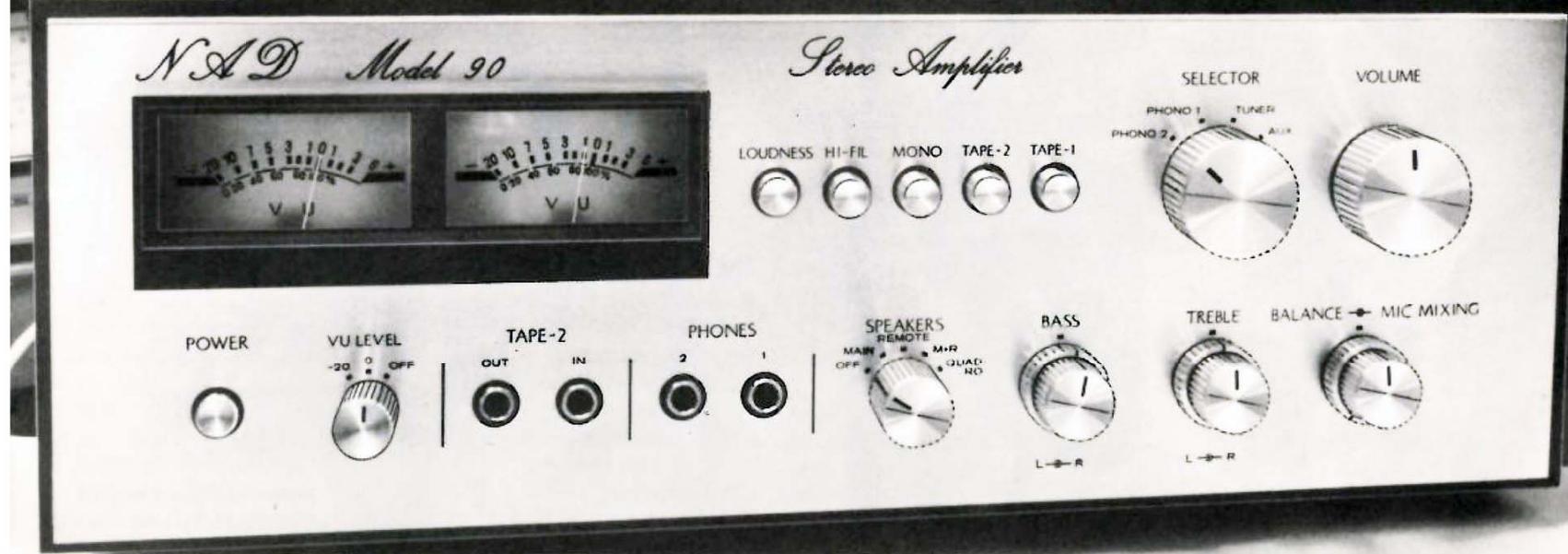
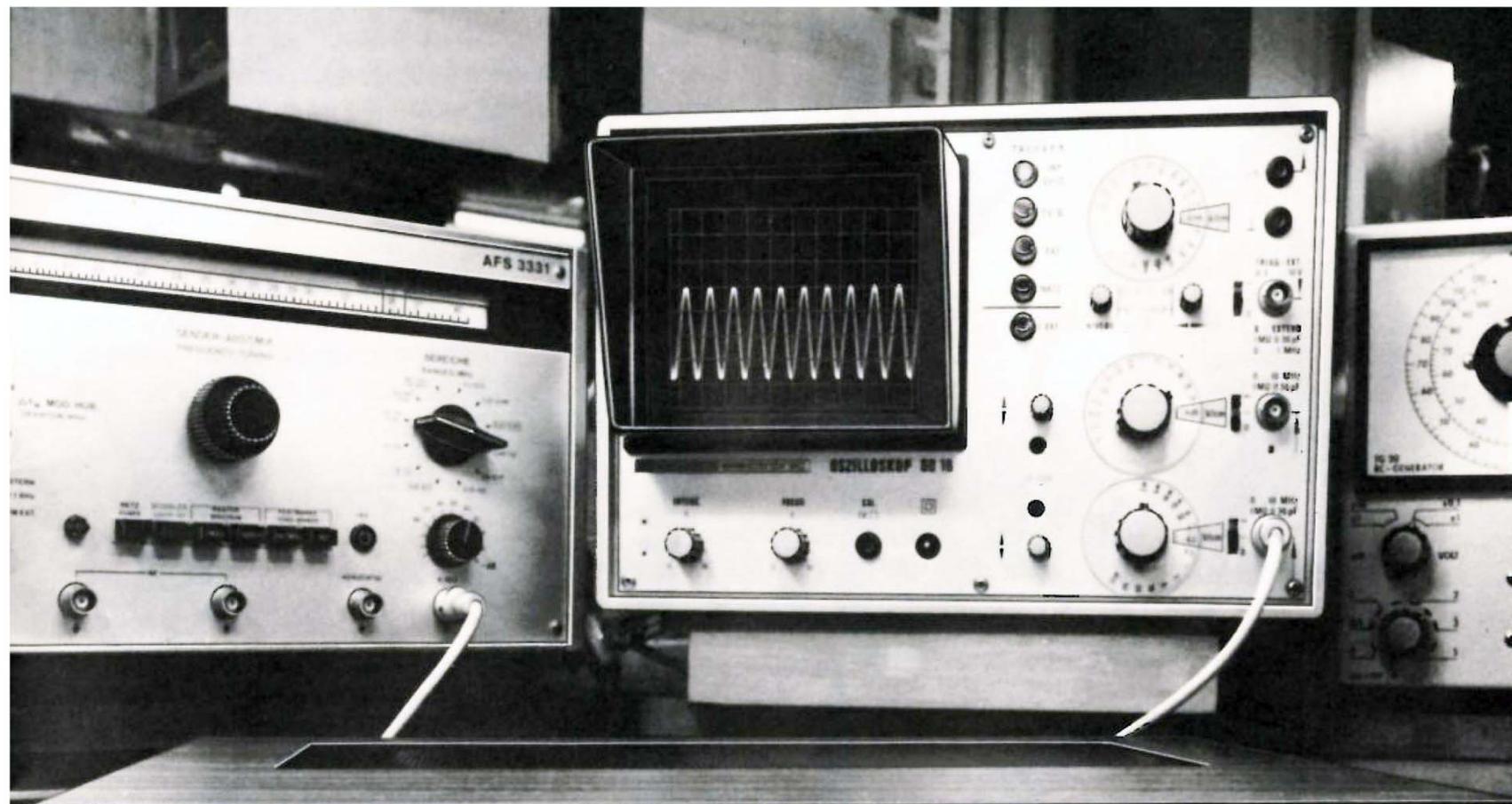


With a Dolby recording the level of the passages which are automatically amplified when recorded is higher than the hiss level.



With Dolby replay the loudness of the previously amplified passages is lowered to normal; the frequency range is retained – the background hiss has disappeared.





# HEADPHONES NAD MODEL 05 NAD MODEL 10

Via the "soundimg board" of the listener's own head, Hi-Fi headphones provide what is probably the most intensive musical experience possible; they cannot replace loudspeakers but they enable you to listen at the loudness you want, without disturbing anyone and without being disturbed.

Even the headphones of New Acoustic Dimension have been developed in accordance with the NAD philosophy: up-to-date "state of the art" and high quality of production at a reasonable price.

## The basic data on NAD model 05

Principle	open, moving coil
System	43 mm diam.
Source impedance	4–50 ohms
Frequency response	20–20.000 Hz
Sound pressure level	102 dB at 1 mW
Load-handling capacity	65 mW
Harmonic distortion	≤ 0.7% / 100 dB/1 kHz
Length of lead	extendable to 3 metres
Weight	approx. 340 g incl. lead



## The basic data on NAD model 10

Principle	closed, moving coil
System	57 mm diam.
Source impedance	4–50 ohms
Frequency response	20–20.000 Hz
Sound pressure level	108 dB at 1 mW
Load-handling capacity	65 mW
Harmonic distortion	≤ 1.6% / 100 dB/1 kHz
Length of lead	extendable to 3 metres
Weight	approx. 490 g incl. lead

# NAD MODEL 16 NAD MODEL 20e



## The basic data on NAD model 16

Principle	open, moving coil
System	59 mm diam.
Source impedance	4–50 ohms
Frequency response	20–20,000 Hz
Sound pressure level	104 dB at 1 mW
Load-handling capacity	65 mW
Harmonic distortion	≤ 1.4 %/100 dB/1 kHz
Length of lead	extendable to 3 metres
Weight	approx. 450 g incl. lead

## The basic data on NAD model 20e

Principle	open, electrostatic
System	64 mm diam.
Source impedance	20–20,000 Hz
Frequency response	90 dB/input 100 V RMS/max. 115 dB
Sound pressure level	≤ 0.3 %/100 dB/1 kHz
Harmonic distortion	extendable to 3 metres
Length of lead	approx. 320 g incl. lead
Weight	

## Power supply pack for NAD model 20e

Source impedance	4–16 ohms
Max. input power	5 W
Mains voltage	220 V, 50/60 Hz, 0.3 W
Harmonic distortion	≤ 0.1 %

## NAD MODEL RP 18



The NAD model RP 18 headphone is different from any system that has preceded it, this headphone offers a truly remarkable fidelity of reproduction. Its features, such as uniform whole-diaphragm drive, conductor tracks evaporated on the diaphragm to form the voice coil, and super-samarium-cobalt-magnets, make it revolutionary and unique.

### The basic data on NAD model RP 18

Principle	open, magnetic, surface diaphragm
regular phase	4–50 ohms
Frequency response	20–20.000 Hz
Sound pressure level	94 dB/1 mW
Max.load-handling capacity	200 mW
Harmonic distortion	≤ 0.35 %/100 dB/1 kHz
Length of lead	extendable to 3 metres
Weight	approx. 520 g incl. lead

# TECHNICAL SURVEY

	AMPLIFIERS			RECEIVERS			TUNER NAD 100	TAPE DECK NAD 900 Dolby	NAD 05	NAD 10	NAD 16	NAD 20e	NAD RP 18
AMPLIFIER DATA	NAD 60	NAD 90	NAD 200 Dolby	NAD 140	NAD 160 a	NAD 300 Dolby							
Continuous output into 8 ohms	35 W + 35 W	55 W + 55 W	100 W + 100 W	35 W + 35 W	55 W + 55 W	100 W + 100 W							
Harmonic distortion at 1 kHz	0.3% max.	0.3% max.	0.1% max.	0.3% max.	0.3% max.	0.1% max.							
Intermodulation	0.4% max.	0.4% max.	0.2% max.	0.4% max.	0.4% max.	0.2% max.							
Input sensitivity, phono	2.2 mV / 47 k ohms	2.2 mV / 47 k ohms	2.0 mV / 47 k ohms	2.2 mV / 47 k ohms	2.2 mV / 47 k ohms	2.0 mV / 47 k ohms							
TUNER DATA					0.2%	0.2%	0.2%	0.2%					
Harmonic distortion mono					0.6%	0.4%	0.4%	0.4%					
stereo													
Input sensitivity (IHF)				2.2 µV	1.8 µV	1.8 µV	1.8 µV						
(DIN)					1.2 µV	1.0 µV	1.0 µV	1.0 µV					
Separation				80 dB	75 dB	80 dB	75 dB						
Image rejection				70 dB	80 dB	85 dB	80 dB						
IF rejection				90 dB	90 dB	90 dB	90 dB						
TAPE DECK DATA							4.75 cm/sec						
Tape speed													
Wow and flutter (WRMS)								0.065%					
(DIN)								± 0.15%					
Harmonic distortion								≤ 2.5%					
Crosstalk attenuation							35 dB						
HEADPHONE DATA													
Principle									open, moving coil	closed, moving coil	open, electro- static	regular phase, open magnetic surface diaphragm	
Sound pressure level, 1 mW									102 dB	108 dB	104 dB	98 dB max. 115 dB	94 dB
Max. load-handling capacity									65 mW	65 mW	65 mW		200 mW
Harmonic distortion 100 dB/1 kHz									≤ 0.7%	≤ 1.6%	≤ 1.4%	≤ 0.3%	≤ 0.35%
Source impedance									4-50 Ohm	4-50 Ohm	4-50 Ohm	4-16 Ohm	4-50 Ohm
Power pack NAD 20e													
Max. input power												5 W	
Mains voltage												220 V	
												≤ 0.1%	
DIMENSIONS (WxHxD) in mm	386 x 130 x 264	386 x 130 x 264	440 x 160 x 370	450 x 130 x 350	450 x 140 x 360	508 x 157 x 440	386 x 130 x 220	450 x 160 x 320					
WEIGHT TUNER	ca 10 kg	ca 12.5 kg	ca 19 kg	ca 13.5 kg	ca 16 kg	ca 22 kg	ca 10 kg	ca 15 kg	ca 340 g	ca 400 g	ca 450 g	ca 320 g	ca 520 g

subject to technical alterations

**NAD**

8/75/10  
Printed in W.-Germany

