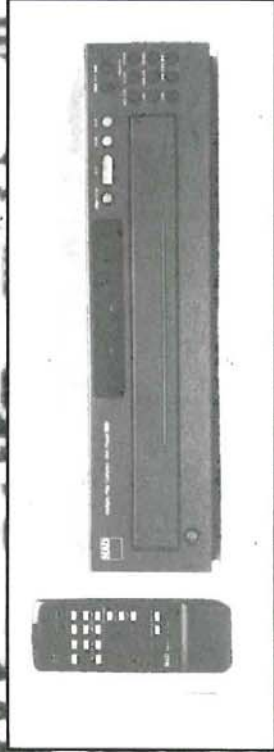
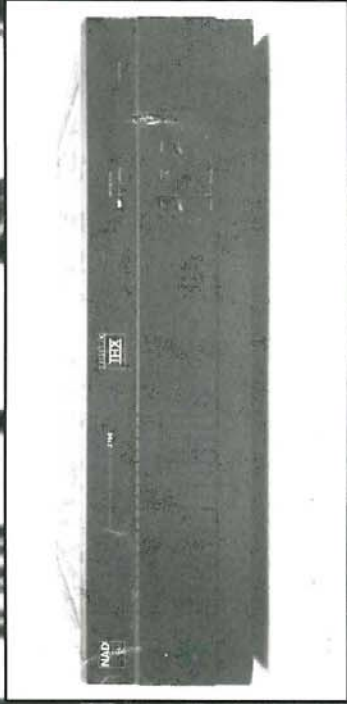
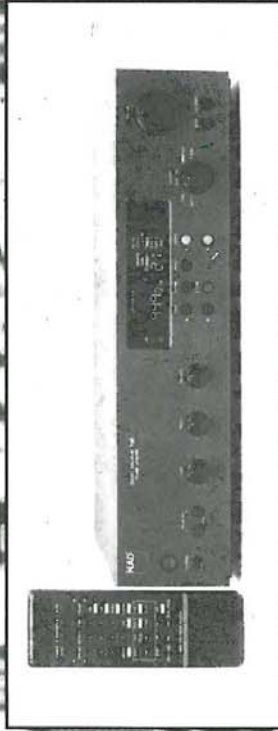


NAD



Autumn 1992 Product Guide

NAD - 20 Years of Excellence

For two decades the name NAD and the word quality have become synonymous. Over the years more and more people have come to know and love the distinctive NAD sound as the way we listen to our music has evolved with the advent of Cassette and Compact Disc. As the listener becomes more and more demanding so too do our engineers in their quest to produce the best possible sound quality for the minimum outlay to our customers.

In this, our 20th year, we have new products covering every aspect of the Hi-Fi world including our very first CD carousel changer and the first in our range of amplifiers that are designed to meet the most stringent of Home Theatre applications.

Both our new compact disc players feature one-bit Multi stage Noise Shaping (or MASH as it's more commonly known).

Many of the new products feature NAD-Link connectors. These allow the linking of Hi-Fi components and remote control signals to be sent from one unit to another enabling tremendous possibilities for multi-room configurations and minimises the number of remote control units required to get the best

from your system, however you listen to it, wherever you listen to it.

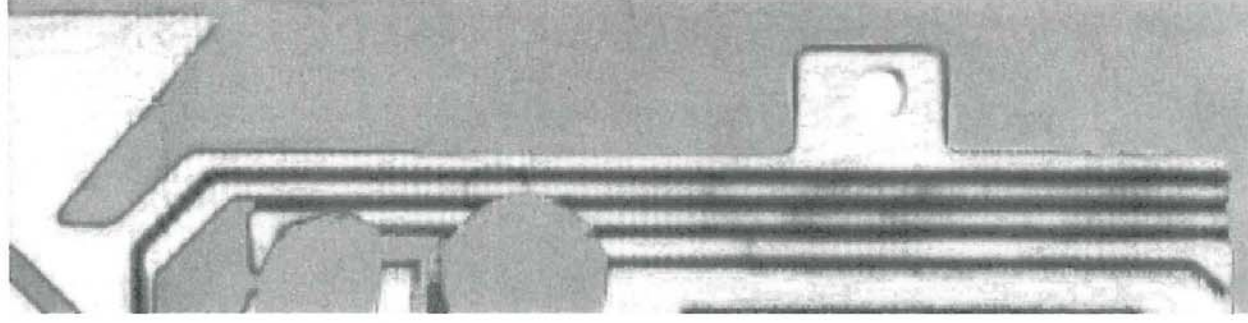


Our tuner and our receivers incorporate refined circuitry that includes a Blend facility to reduce background noise at low signal strengths.

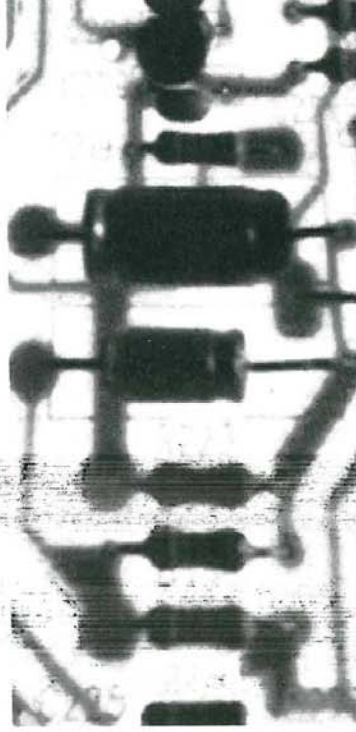
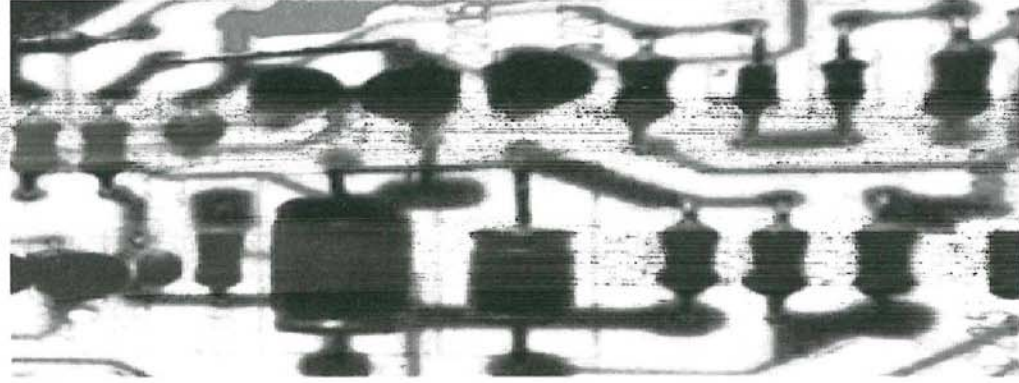
In fact all our new products feature much improved circuitry with shorter signal paths allowing not only better sound quality but unsurpassed reliability as well.

As you will see over the next few pages, we've been very busy over the last year producing a new and exciting

range that surpasses anything we've ever produced. We've been listening to our distributors and customers around the world to bring you the Hi-Fi components you've been crying out for. If you require any further information about these or indeed any other products in the NAD range then don't hesitate to get in touch with your local NAD distributor



NAD



Model 106 Preamplifier



- Wide range discrete-component, precision phono pre-amp switchable for MC or MM input
- Overload-proof line level inputs for CD and other sources
- Superior construction, precision metal film resistors throughout
- Professional XLR-type impedance-balanced connectors, other input and output RCA connectors are gold plated

The NAD 106 Monitor Series preamplifier is a simple, high-performance control centre for listeners who desire uncompromised performance at a very reasonable cost. Suitable for use with high-powered amplifiers, bi-amplified systems or active loudspeakers, the 106 disguises uncommonly sophisticated design and componentry behind its modest fascia.

Circuitry

NAD stereo components have been praised around the world for their unusual combination of modest pricing, uncomplicated controls, advanced engineering, and state-of-the-art sonic performance. The NAD 106 stereo preamplifier follows squarely in that tradition, combining excellent sound with musically useful tone controls and an elegantly simple front-panel design.

The low output impedance minimises interactions with connecting cables. You can expect to get consistently fine sound with many types of cable. The 106 easily drives extra-long connecting cables that run across the room to active powered loudspeakers or to remotely located power amplifiers. (So you can locate your power amplifier near your speakers and obtain optimum power transfer to your speakers using very short, inexpensive cabling.) In professional applications the 106 can drive several power amplifiers in parallel, or 600-ohm studio equipment A relay muting circuit silences the preamp during turn-on and turn-off so that no thumps can reach the power amp.

Ins and Outs

Other connections show the same thoughtfulness. The line-level (CD, Video, Tuner, and Tape) inputs to the 106 are fed directly to the volume control, and cannot be overloaded by high-level signal peaks. Tape link-ups are logical too. Connections are provided for two tape decks of any type. The first of the two tape circuits is a full "monitor" circuit, while the second is tailored for the large majority of tape decks that do not have simultaneous recording and playback. Any input selected for listening is automatically fed to both tape circuits for recording.

Vinyl Investment Protected

For listening to vinyl records the phono stage is the heart of any preamp - both its most important circuit and potentially its weakest link. Unlike the budget IC stages used in many preamps today, the NAD 106 employs an all-discrete transistor circuit, superior 1% tolerance polystyrene capacitors, and 1% metal-film resistors to deliver impressive accuracy: 20 Hz-20 kHz within ± 0.2 dB. Distortion is reduced to a minimum at all frequencies, for enhanced clarity and definition. An additional gain of 23 dB for moving-coil cartridges is engaged by a gold-plated toggle switch that preserves the integrity of very small MC signals. Like all NAD phono preamp designs, the 106 is ultra-quiet and optimised for lowest-possible noise under real-world conditions. Indeed, with a phono cartridge connected total phono-stage dynamic range actually exceeds 105 dB.

NAD MODEL 106 SPECIFICATIONS

Measured in accordance with EIA Standard RS-490 (IHF A-202)

PHONO INPUT

Input impedance	MM & MC:	R=47 k Ω , C=200 pF
Input sensitivity 1 kHz	MM:	1.25 mV ref. 0.5 V
	MC:	0.08 mV
Input overload	MM:	20/200/1700 mV
at 20 Hz/1 kHz/20 kHz	MC:	1.3/13/110 mV
Signal/Noise ratio	MM:	76 dB ref. 5 mV
A-weighted with	MC:	76 dB ref. 0.5 mV
cartridge connected		
THD (20 Hz - 20 kHz) and IM dist		<0.02%
RIAA response accuracy	MM:	± 0.2 dB
(20 Hz - 20 kHz)	MC:	± 0.2 dB (-0.5 dB at 20 Hz)
(50 Hz - 20 kHz)		

LINE LEVEL INPUTS (CD, Video, Tuner, Tape)

Input impedance	R = 20 k Ω , C = 450 pF
Input sensitivity ref. 0.5 V	80 mV
Maximum input signal	>10V
Signal/Noise ratio	98 dB
A-weighted ref. 0.5 V	
Frequency response	± 0.2 dB
THD	0.01 %

LINE LEVEL OUTPUTS

Output impedance	Preamp 220 Ω
Tape	Source Z + 2000 Ω
Phones	120 Ω
Maximum output level	Preamp >12 V
Tape	>10V
Phones	>8 V into 600 Ω
	>250 mV into 8 Ω

CONTROLS

Treble	± 7 dB at 10 kHz
Bass	± 10 dB at 50 Hz

PHYSICAL SPECIFICATIONS

Dimensions	435 x 263 x 81 mm
(Width x Depth x Height)	
Net weight	3.7 kg
Shipping weight	4.4 kg
Power Consumption	20 W
at 120, 220 or 240 VAC, 50/60 Hz	

Model 208 Power Amp



- High current design provides 250 watts per channel
- Extended Dynamic Headroom and Soft Clipping for great dynamic range
- Professional balanced XLR inputs

- Newly developed Class A pre-driver and fully complementary driver stages
- Overload sensors protect amplifiers and loudspeakers

Arguably the best power amplifier in NAD's long history, the Model 208 is an uncompromising power source for critical hi-fi reproduction. It is capable of very high power with tremendous peak currents, enormous dynamic headroom and utter stability and reliability with virtually any loudspeaker load. More importantly, it is among the best-sounding power amplifiers available regardless of size, power, or price.

The 208 output stage employs quadruple high-power MOSFET devices capable of extended voltage/current excursions at very low distortion. This more-than-ample

safe-operating-area permits Model 208 dynamic power to exceed 550 watts with 8-ohm loads, and peak currents of approximately 100 amperes. It further makes possible the 208's bridged monophonic mode: 500 watts, with dynamic power well over a kilowatt.

Unlike the IC op-amp-based inputs found on most power amps, the Model 208's all-discrete input - derived from microphone-preamp design - maximises dynamic-range potential from the very start. Professional XLR jacks with gold-plated contacts supply an exceptionally low-noise differential balanced input.

NAD MODEL 208 SPECIFICATIONS

CONTINUOUS RATED POWER	250W (24 dBW)
OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	0.03%
Rated distortion (THD 20 Hz - 20 kHz)	300 W
Clipping Power (maximum continuous power per channel)	8 ohms: 600 W (28 dBW) 4 ohms: 800 W (29 dBW) 2 ohms: 1000 W (30 dBW) N/A
IHF dynamic headroom at 8 ohms +4dB	R = 20 kΩ C = 700 pF
IHF dynamic power (maximum short term power per channel)	100 mV for rated power 1.6V
Damping factor (ref. 8 ohms, 50 Hz)	2.4Hz to 100 kHz (+0, -3 dB)
Input impedance	96dB ref. 1 W 120dB ref. rated power
Input sensitivity for 1 watt out	
Frequency response	
Signal/Noise ratio, A-weighted power	

THD
(Total Harmonic Distortion, 20 Hz - 20 kHz, from 250 mW to rated output)

<0.03%

Bridged (Monophonic) Mode

CONTINUOUS RATED POWER OUTPUT INTO 8 OHMS
(Min. RMS power per channel, 20 Hz - 20 kHz, both channels driven, with no more than the rated distortion)

500 W
(27 dBW)

IHF dynamic headroom at 8 ohms +5dB

IHF dynamic power (maximum short term per channel)

8 ohms: 1600 W (32 dBW)
4 ohms: 2000 W (33 dBW)

PHYSICAL SPECIFICATIONS

Dimensions
Width x Height x Depth 435 x 175 x 370 mm

Net weight 17.3 kg

Shipping weight 19.9 kg

Power Consumption 750 VA
at 120, 220 or 240 VAC

Model 302 & 304 Integrated Amplifiers



- 50/120 Watts Extended Dynamic Power into 8 Ohms
- Soft Clipping
- Up to seven separate inputs including two tapes and MM phono with dubbing facilities in both directions

- Single Board construction with minimum length signal paths
- Low colouration tone controls with tone defeat switch for a ruler flat response
- Single board construction with minimum length signal paths

The 300 series follows in the footsteps of the world renowned 3020 amplifiers from NAD - and is destined to be the greatest. All the traditional virtues of the 3020 design have been retained: all discreet transistor circuitry, low-noise, low distortion configurations, generous power supplies and high output current. In addition the 302, 304 and 306 have even higher quality components, much improved PCB layout with reduced wiring and a few important circuit refinements to take the sound quality to new heights.

The technical refinements are complemented by increased flexibility for the user. Each unit in the 300 series sports no fewer than six stereo inputs including phono MM and two tape with dubbing facilities in both directions. The addition of a tone defeat switch allows you to revert to the shortest possible signal path with a guaranteed ruler flat response.

NAD MODEL 302/304 SPECIFICATIONS

Power Amplifier Section	302	304	LINE LEVEL INPUTS	302	304
Stereo Mode			(Tuner, CD, Aux, Video, Tape)	N/A	20 k Ω + 300pF
CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	25W	35W	Input impedance	N/A	
Rated distortion (THD 20 Hz - 20 kHz)	0.04%	0.03%	Input sensitivity, 1 kHz	170 mV	165 mV
Clipping Power (maximum continuous power per channel)	40W	42 W	Signal/Noise ratio A-weighted ref. 1W	88dB	9dB
IHF dynamic headroom at 8 ohms	N/A	+5.5dB	Frequency response, 20 Hz-20 kHz	N+0.5	N/A
IHF dynamic power (maximum short term power per channel)			Infrasonic filter	N/A	N/A
8 ohms: 50 W		120 W (21 dBW)	LINE LEVEL OUTPUTS		
4 ohms: N/A		160 W (22 dBW)	Output impedance	200 Ω	220 Ω
2 ohms: N/A		200 W (23 dBW)	Maximum output level		
Damping factor (ref. 8 ohms, 50 Hz)	> 100		Preamp	N/A	>12 V
			Tape	N/A	> 10 V
			Headphones (into 600 Ω)	N/A	> 10 V
			(into 8 Ω)	N/A	>500 mV
PREAMPLIFIER SECTION			PHYSICAL SPECIFICATIONS		
PHONO INPUTS			Dimensions (in mm)		
Input impedance	N/A	R = 18k Ω	Width	435	435
Input sensitivity for 1 watt out for rated power	N/A	C = 560 pF	Height	100	110
Signal/Noise ratio, A-weighted, ref. 1 W	2.55 mV	100 mV	Depth	320	316
ref. rated power 1 W	1V	N/A	Net weight (kg)	6.0	8.9
ref. rated power 35 W	77dB	96dB	Shipping weight (kg)	7.4	9.0
Frequency response 20Hz to 20 kHz (-3 dB at 3 Hz/60kHz)	88dB	102dB			
THD 20 Hz - 20 kHz,	100dB	117dB			
	N/A	N/A			
	<0.04%	<0.03%			

Model 306 Integrated Amp



- 50 Watts Continuous Power
- 160 Watts Extended Dynamic Power
- Seven input sources including two tapes with separate RECORD and LISTEN sources selection and full tape dubbing in both directions

- Low-noise pre-preamp for MC cartridges
- Low colouration tone controls with tone defeat switch for a ruler flat response
- Two sets of speaker outputs - one set direct and one switched
- Soft Clipping

NAD MODEL 306 SPECIFICATIONS

POWER AMPLIFIER SECTION

CONTINUOUS AVERAGE POWER 50W
(15.5 dBW)
160W

OUTPUT INTO 8 OHMS
(Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)

Rated distortion 0.03%

Clipping Power 42W

(maximum continuous power per channel)

IHF dynamic headroom at 8 ohms +5.5dB

IHF dynamic power

(maximum short term power per channel)

8 ohms: 120 W (21 dBW)
4 ohms: 160 W (22 dBW)
2 ohms: 200 W (23 dBW)
>100

Damping factor
(ref. 8 ohms, 50 Hz)

Input impedance

Input sensitivity for 1 watt out
for rated power

Frequency response 20Hz to 20 kHz
(-3 dB at 3 Hz/60kHz)

Signal/Noise ratio, 102dB ref. rated power 1W

A-weighted 117dB ref. rated power 35W
<0.03%

THD

20 Hz - 20 kHz

PREAMPLIFIER SECTION

PHONO INPUT

Input impedance

Input sensitivity, 1 kHz ref. 40 W

MM

MC

Input overload at 20 Hz/1 kHz/20 kHz

Signal/Noise ratio ref. 5 mV

MM

MC

A-weighted with cartridge connected

THD (20 Hz-20 kHz) and IM dist <0.04%

RIAA response accuracy ±0.5 dB

LINE LEVEL INPUTS (CD, Video, Tuner, Tape 1, Tape 2, Aux)

Input impedance

R=20 kΩ,

C=300pF

Input sensitivity 170mV ref. rated powe

Maximum input signal >10 V

Signal/Noise ratio 100 dB ref. 1W

A-weighted 106 dB ref. rated power

Frequency response, 20 Hz-20 kHz ±0.5dB

0.01%

LINE LEVEL OUTPUTS

output impedance Preamp

300 Ω

Headphone Source Z + 2kΩ

preamp out 220 Ω

tape out 12 V

headphones out 10 V

plus source impedance 10 V into 600Ω

Multi-room impedance 500 mV into 8Ω

20000Ω

20000Ω

CONTROLS

Treble

±7 dB at 10 kHz

Bass ±10 dB at 50 Hz

Infrasonic Filter -3 dB at 12 Hz

12 dB/Octave

PHYSICAL SPECIFICATIONS

Dimensions

Width x Height x Depth

17.3 kg

Net weight 17.3 kg

Shipping weight 19.9 kg

Power Consumption 750 VA

at 120, 220 or 240 VAC

435 x 175 x 370 mm

17.3 kg

19.9 kg

750 VA

Model 402 AM/FM Stereo Tuner



- 60 Presets (30 AM, 30 FM)
- NAD-Link Connectors allow control to and from other units
- BLEND facility to reduce noise at low signal strengths
- 75 Ohm coax antenna connector
- Lock facility to automatically tune precisely onto a station
- Three separate modes of tuning with 25 kHz accuracy

The Model 402 embodies NAD's conviction that convenience, flexibility, and ease of use can be achieved with absolutely no compromise in sound quality. The 402 has AM and FM; preset distortion-free tuning for 60 radio stations.

Flexible Tuning

The 402 has three convenient tuning modes:

Search: Scans rapidly up or down in frequency, stopping automatically at the next strong station.

Presets: Up to 30 FM and 30 AM station frequencies can be stored in memory and instantly recalled. The "non-volatile" memory needs no battery or other power; frequencies are retained during power outages, even if you unplug the receiver for weeks at a time.

Tune: Dual-resolution tuning lets you scan rapidly through the broadcast band (with constant pressure on an up/down tuning button), or fine-tune in small 0.025 MHz steps by tapping on the buttons. This lets you optimise the reception of a weak station adjacent to a strong one.

Sensitive Digital Tuning

Precise digital frequency-synthesis circuits guarantee that each station is tuned with crystal-controlled accuracy. A dual-gate MOSFET FM circuit pulls in weak stations clearly but resists overloading on strong signals. A balanced quadrature detector provides consistently low distortion, even with over-modulated broadcasts. The composite stereo signal is phase-compensated to guarantee wide stereo separation at all frequencies, not just in the midrange.

Sharp selectivity, low noise

Linear-phase ceramic filters in the I.F. circuit provide an ideal combination of sharp selectivity and minimum distortion. Low-loss design gives the optimum signal level to the PLL MPX decoder, yielding a signal-to-noise ratio of nearly 75dB with strong signals. So with local stations the ultimate stereo quieting is limited not by the receiver but the station itself.

NAD MODEL 402 SPECIFICATIONS

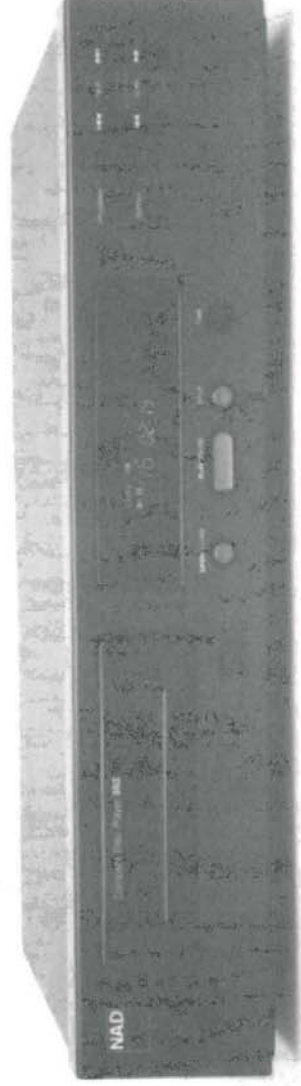
FM TUNER SECTION

Input sensitivity	Mono, -30 dB THD+N Mono, -50 dB S/N Stereo, 50 dB S/N Stereo, 60 dB S/N	1.3 dBf (1.0 μ V/75 Ω) 15 dBf (1.5 μ V/75 Ω) 37 dBf (20 μ V/75 Ω) 47 dBf (60 μ V/75 Ω)
Capture ratio (45 to 65 dBf)		<1.6 dB
AM rejection (45 to 65 dBf)		>60 dB
Selectivity		
Alternate Channel		58 dB
Image rejection		70 dB
RF. intermodulation		60 dB
I.F. rejection		90 dB
Subcarrier suppression (19 and 38 kHz)		60 dB
THD at 100% modulation Mono, 1 kHz		0.1%
100Hz-6kHz		0.2%
Stereo, 1kHz		0.1%
100Hz-6kHz		0.3%
Signal/Noise ratio (at 65 dBf, IHF weighted)		
Mono		>80 dB
Stereo		>74 dB
Frequency Response 30 Hz-15kHz		\pm 0.5 dB
Stereo Separation		45 dB
		35 dB
		30Hz-10kHz

AM SECTION

Usable sensitivity	5 μ V
Selectivity	30 dB
Image rejection	
I.F. rejection	
Signal/Noise ratio (30% modulation, 50 mV input)	45 dB
THD	0.5%
PHYSICAL SPECIFICATIONS	
Dimensions (Width x Height x Depth)	420 x 91 x 273 mm
Net weight	6 kg
Shipping weight	7.1 kg
Power Consumption (120, 220 or 240VAC, 50/60 Hz)	150 W

Model 502 Compact Disc Player



- One-bit MASH Digital to Analog Converter
- Advanced NAD analog filter configuration
- DC Coupled throughout
- Improved operational logic/ergonomics

- Full-function remote control with direct track access
- Digital output socket
- NAD-Link Connectors

The NAD Model 502 builds on the highly acclaimed 5425 which has achieved worldwide success. The audio circuitry has been refined in key areas to improve on the already superb sound quality. In particular the output coupling Capacitor has now been removed and the output DC stabilised by a feedback servo system, thus ensuring the simplest possible signal path.

Equally significant is the wide range of new features. The inclusion of a digital output will allow DAT, DCC or MD users to make perfect digital copies from Compact Disc. The front panel has separate Skip and Scan buttons and a Time facility while the full function remote control adds a numeric keypad to allow direct track access.

NAD MODEL 502 SPECIFICATIONS

Disc Capacity	One Disc 120 or 80 mm
Programming Capacity	21 Tracks
Decoding	MASH 1-bit resolution
Digital Filter	4 Times oversampled Linear phase with 18 bit coefficients
Analog Filter	5 pole active
Frequency Response	5Hz-20kHz +0/1dB
De-Emphasis Error	<0.05%
THD (at 0dB, 1kHz)	0.0025%
Intermodulation Distortion (19-20kHz)	<-100dB
Dynamic Range	98dB
Linearity	±0.5dB to 90dB
Signal/Noise ratio A-Weighted, Measured with all zeros test disc	De-Emphasis off 105dB De-Emphasis on 108dB
Channel Separation	
Wow and Flutter	>90dB @ 1kHz >70dB @ 10kHz Unmeasurable (Quartz Crystal Accuracy)
Output Impedance	120Ω
Output Level at 0dB	2.0 V rms
Digital Error Correction	CIRC with double error correction in C1 and C2
Noise at Zero Volume	±0.5 dB
Digital Code Output	Sony/Philips serial data format
Remote Control Unit	Yes

CONTROLS

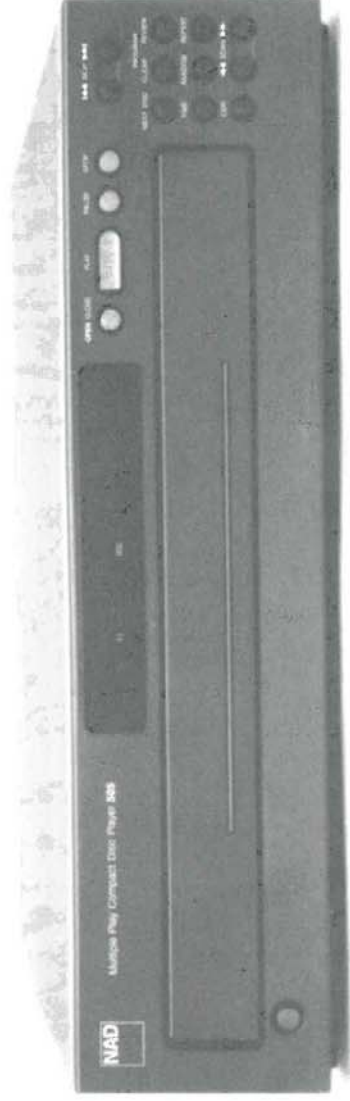
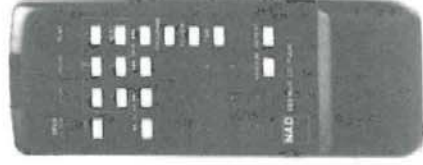
Power
Open/Close
Play/Pause
Stop
Skip (< >)
Scan (< >)
Program
Review
Time
CDR
Repeat
Random

PHYSICAL SPECIFICATIONS

Dimensions
(Width x Height x Depth)
Net weight
Shipping weight
Power Consumption
(120, 220 or 240VAC, 50/60 Hz)

420 x 110 x 370
6 kg (13 lbs 3 oz.)
7.1 kg
150 W

Model 505 Carousel CD Changer



- **Five disc drawer carousel style design for over six hours listening**
- **Full function remote control**
- **NAD-Link connectors**

- **MASH one-bit digital to analog conversion**
- **CDR audio compression circuitry for more relaxed background listening**
- **Digital output**

The NAD Model 505 combines the convenience of a five-disc "carousel" compact disc changer with the kind of performance that has won widespread acclaim for single-disc NAD players. Careful, innovative electrical and mechanical design endow the Model 505 with a degree of audiophile sound quality previously unobtainable in a CD changer. Of course, the Model 505 also represents tremendous value just as people expect of NAD.

The NAD 505's drawer-loading transport holds five CDs, making uninterrupted music available for over six hours. And the 505 carousel-changer mechanism permits opening the drawer and replacing two discs whilst another continues to play undisturbed. Fast disc and track access are also notable 505 features. Unlike many multi-disc designs, the Model 505's 32-track random-access programming and automatic "shuffle-play" track-randomising features, can both operate across all loaded discs.

Of equal value, the 505 also includes NAD's unique CDR audio compression circuitry, which can be invoked to gently reduce the dynamic range of CDs, ensuring that the sound won't become annoyingly loud or too soft to hear. CDR is ideal for casual listening, providing background music at parties and when you are recording tapes for portable or in-car listening. As the CDR circuit operates in the digital domain, it adds no distortion or noise. When it is switched off it is completely out-of-circuit, restoring the exceptionally accurate decoding the full dynamic range of every recording.

The combination of features, versatility and uncompromised audio quality adds up to a superb accessory that becomes an essential part of your system. The Model 505 offers unsurpassed quality and value.

NAD MODEL 505 SPECIFICATIONS

Disc Capacity	Five Discs 120 or 80 mm
Programming Capacity	32 Tracks
Decoding	MASH 1-bit resolution
Digital Filter	4 Times oversampled Linear phase with 18 bit coefficients
Analog Filter	5 pole active
Frequency Response	5Hz-20kHz +0/1dB
De-Emphasis Error	<0.05%
THD (at 0dB, 1kHz)	0.0025%
Intermodulation Distortion (19-20kHz)	<-100dB
Dynamic Range	98dB
Linearity	±0.5dB to 90dB
Signal/Noise ratio	De-Emphasis off 105dB
A-Weighted, Measured with all zeros test disc	De-Emphasis on 108dB
Channel Separation	>90dB @ 1kHz >70dB @ 10kHz Unmeasurable (Quartz Crystal Accuracy)
Wow and Flutter	120µ
Output Impedance	

Output Level at 0dB
Digital Error Correction

2.0 V rms
CIRC with double error
correction in C1 and C2

Noise at Zero Volume
Digital Code Output

±0.5 dB
Sony/Philips
serial data format
Yes

Remote Control Unit

CONTROLS

Power, Open/Close, Play/Pause, Stop, Skip (< >), Program Review, Time, CDR, Repeat, Disk Skip, Random

PHYSICAL SPECIFICATIONS

Dimensions
(Width x Height x Depth)

420 x 110 x 370

Net weight

6 kg (13 lbs 3 oz.)

Shipping weight

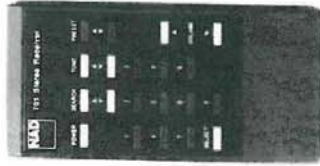
7.1 kg

Power Consumption

150 W

(120, 220 or 240VAC, 50/60 Hz)

Model 701 AM/FM Receiver



The 701 employs a NAD-invented power-supply circuit that doubles the amplifier's power for the high-level peaks in modern recordings. It is conservatively rated at 25 watts/channel for constant-level test tones; but the Extended Dynamic Power circuit produces +4dB of IHF dynamic head-

room, delivering much higher power levels (60 to 80 watts per channel) for the tone-bursts in music. Result: clear, authoritative reproduction of the transients and climaxes that provide the brilliance and powerful dynamic impact of live music.

NAD MODEL 701 SPECIFICATIONS

POWER AMPLIFIER SECTION

CONTINUOUS RATED POWER OUTPUT INTO 8 OHMS 25 W (14 dBW)
(Min. power per channel, 20Hz-20kHz both channels driven, with no more than rated distortion)

Rated distortion (THD 20 Hz-20 kHz)

Clipping power at 8 ohms, 1 kHz

(maximum continuous power per channel)

IHF dynamic headroom at 8 Ohms

IHF dynamic power

(max. short-term

power per channel)

Damping Factor

(ref. 8 Ohms, 50 Hz)

Input impedance

Input sensitivity, 1 kHz

Signal/Noise ratio, A-weighted

Frequency Response

0.03%

40 W

+4 dB

60 W (18 dBW)

85 W (19 dBW)

90 W (19.5dBW)

>50

R=20 k Ω ,

C=820 pF

1 V ref. 25 W

100 dB ref. 1 W

114 dB ref. 25W

12 Hz-45 kHz

(0, -3 dB)

PREAMPLIFIER SECTION

PHONO INPUT

Input impedance

Input sensitivity, 1 kHz

Input overload at 20 Hz/1 kHz/20 kHz

Signal/Noise ratio

(A-weighted with cartridge connected)

THD (20 Hz-20 kHz) and IM dist

RIAA response accuracy

R=47k Ω ,

C=250 pF

2.5 mV ref. 25W

20/200/1700mV

75 dB ref. 5 mV

<0.04%

\pm 0.5 dB

LINE LEVEL INPUTS (CD, Video, Tape)

Input impedance

Input sensitivity

Maximum input signal

Signal/Noise ratio, A-weighted

Frequency response, 20 Hz-20 kHz

Intrasonic filter (fixed)

THD

R=15 k Ω

C=300pF

160mV ref. 25W

>10V

87dB ref. 1 W

101 dB ref. 25W

+0.5 dB, -1.0dB

-3 dB at 12 Hz,

18 dB/octave

0.01%

LINE LEVEL OUTPUTS

Output impedance

Tape

Phones

Normal 600 Ω

Source Z+2000 Ω

220 Ω

Maximum output level

Normal 12 V

Tape 10 V

Phones >10 V into 600 Ω

>500 mV into 8 Ω

CONTROLS

Treble

Bass

\pm 7 dB at 10 kHz

\pm 10 dB at 50 Hz

FM TUNER SECTION

Input sensitivity

Mono, -30 dB THD+N

Mono, -50 dB S/N

Stereo, 50 dB S/N

Stereo, 60 dB S/N

1.3 dBf (1.0 μ V/75 Ω)

15 dBf (1.5 μ V/75 Ω)

37 dBf (20 μ V/75 Ω)

47 dBf (60 μ V/75 Ω)

Capture ratio (45 to 65 dBf)

AM rejection (45 to 65 dBf)

Selectivity

Alternate Channel

Image rejection

RF. intermodulation

I.F. rejection

Subcarrier suppression (19 and 38 kHz)

THD at 100% modulation

Mono 1 kHz

100Hz-6kHz

Stereo 1kHz

100Hz-6kHz

IHF weighted

Mono

Stereo

30 Hz-15kHz

1kHz

30Hz-10kHz

<1.6 dB

>60 dB

58 dB

70 dB

60 dB

90 dB

60 dB

0.1%

0.2%

0.1%

0.3%

>80 dB

>74 dB

\pm 0.5 dB

45 dB

35 dB

0.5%

AM SECTION

Usable sensitivity

Selectivity

Image rejection

I.F. rejection

Signal/Noise ratio (30% modulation, 50 mV input)

THD

5 μ V

30 dB

45 dB

35 dB

45 dB

0.5%

PHYSICAL SPECIFICATIONS

THD

Dimensions

(Width x Height x Depth)

Net weight

Shipping weight

Power Consumption

(120, 220 or 240VAC, 50/60 Hz)

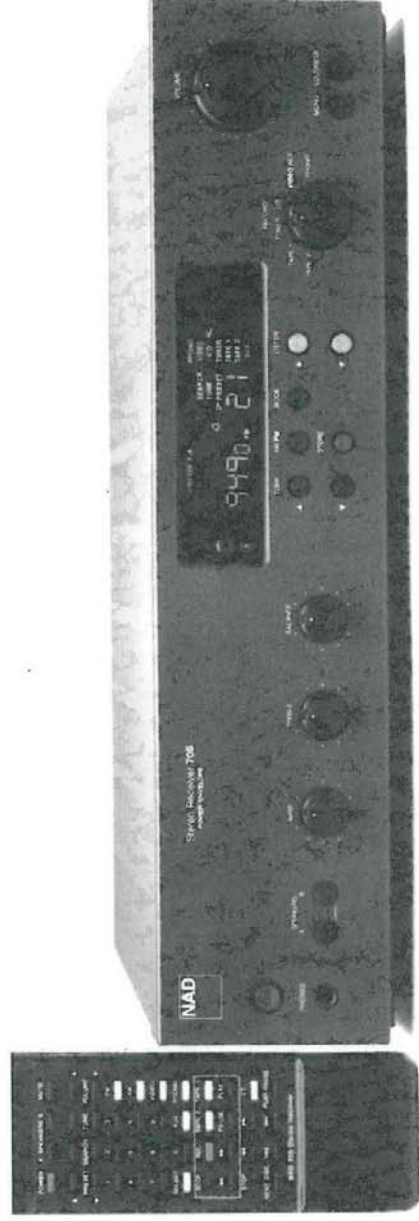
420 x 91 x 273 mm

6 kg

7.1 kg

150 W

Model 705 AM/FM Receiver



The Model 705 embodies NAD's conviction that convenience, flexibility, and ease of use can be achieved with absolutely no compromise in sound quality. The 705 has inputs for six audio sources plus AM and FM; preset tuning for 39 radio stations; the convenience of multi-product remote control; and connections for multi-room operation. Yet it also has sonic qualities usually found only in separate audiophile components - enhanced dynamic headroom, power to drive low-impedance speakers, distortion-free tuning, and low-noise circuits that preserve the clarity of even the widest-range digital recordings.

The 705's phono input provides transparent and truthful reproduction of LPs. Correctly-engineered infrasonic filtering minimises unwanted rumble, while polypropylene film capacitors and 2% metal-film resistors guarantee accurate RIAA equalization. Extra filtering at the phono input suppresses interference from CB radio, auto ignition noise, and static from nearby digital circuits. The signal-to-noise ratio is so good (75dB with the phono cartridge connected) that you won't hear any preamp hiss, even when playing the quietest recordings. The total dynamic range of the phono preamp exceeds 100 dB.

NAD MODEL 705 SPECIFICATIONS

POWER AMPLIFIER SECTION

CONTINUOUS RATED POWER OUTPUT INTO 8 OHMS 40 W (16 dBW)

(Min. power per channel, 20Hz-20kHz both channels driven, with no more than rated distortion)

Rated distortion (THD 20 Hz-20 kHz) 0.03%

Clipping power at 8 ohms, 1 kHz 50 W

(maximum continuous power per channel)

IHF dynamic headroom at 8 Ohms +3.5 dB

IHF dynamic power 90W (19.5dBW)

(max. short-term power per channel) 130W (21 dBW)

dBW/Damping Factor 160W (22

(ref. 8 Ohms, 50 Hz) >60

Input impedance R=20 kΩ,

C=560 pF

1 V ref. 40 W

Input sensitivity, 1 kHz ref. 1 W

Signal/Noise ratio, ref. 40 W rated power 116 dB

A-weighted 8 Hz-90 kHz

Frequency response (+0, -3 dB)

PREAMPLIFIER SECTION

PHONO INPUT

Input impedance R=47kΩ,

C=220 pF

ref. 40 W 2.5 mV

Input sensitivity, 1 kHz ref. 5 mV 76 dB

Input overload at 20 Hz/1 kHz/20 kHz <0.04%

16/1601500m ±0.5 dB

Signal/Noise ratio

A-weighted with cartridge connected

THD (20 Hz-20 kHz) and IM dist

RIAA response accuracy

LINE LEVEL INPUTS (CD, Video, Aux, Tape 1, Tape 2)

Input impedance R=50 kΩ,

C=200pF

180mV ref. 40W

Input sensitivity >8 V

Maximum input signal 90 dB ref. 1 W

Signal/Noise ratio 106 dB ref. 40W

A-weighted ±0.5dB

Frequency response, 20 Hz-20 kHz 3 dB at 10 Hz,

Infrasonic filter 12 dB/octave(fixed)

THD 0.01%

LINE LEVEL OUTPUTS

Preamp output impedance 220 Ω

Maximum output level 8 V

Tape output impedance 3200Ω plus source impedance

Multi-room impedance 2000Ω

CONTROLS

Treble ±7 dB at 10 kHz

Bass ±10 dB at 50 Hz

FM TUNER SECTION

Input sensitivity Mono, -30 dB THD+N 10 dBf (0.9 μV/75 Ω)

Mono, 50 dB S/N 14 dBf (1.4 μV/75 Ω)

Stereo, 50 dB S/N 35 dBf (15 μV/75 Ω)

Stereo, 60 dB S/N 45 dBf (50 μV/75 Ω)

<1.6 dB

>60 dB

60 dB

80 dB

60 dB

100 dB

0.08%

0.15%

0.1%

0.2%

Signal/Noise ratio (at 65 dBf, IHF weighted)

Mono >82 dB

Stereo >76 dB

Frequency Response, 30 Hz-15kHz ±0.5 d

Stereo Separation 1kHz

30Hz-10kHz 35 dB

AM SECTION

Usable sensitivity 5μV

Selectivity 30 dB

Image rejection 45 dB

I.F. rejection 35 dB

Signal/Noise ratio

(30% modulation, 50mV input)

THD 45dB

0.5%

PHYSICAL SPECIFICATIONS

Dimensions 420 x 105 x 318 mm

(Width x Height x Depth)

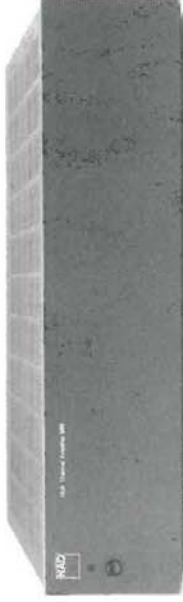
Net weight 6.6kg

Shipping weight 7.6kg

Power consumption 240 W

at 120, 220 or 240VAC, 50/60Hz

Models 902 & 906 Power Amplifiers



- 30 Watts continuous stereo power
- Bridged mode delivers 90 Watts power
- Rugged High Current output stages gives 30 amperes peak capability
- Low Consumption: robust and reliable power supply draws only 15 watts at idle

- Six channel power with audiophile-grade sound quality
- Ideal for custom installation and Home Theatre use
- Three, independent power supplies for reliability
- Superb flexibility allows stand-alone use or for feeding more amplifiers

NAD MODEL 902 SPECIFICATIONS

Note: Specifications are measured in accordance with EIA Standard RS-490 (IHF A-202). Amplifier measurements referred to 8 ohms are taken with the Speaker Impedance selector set to 8Ω (High). Measurements for 4 and 2 ohms are taken with Impedance Selector at 4Ω (Normal).

Stereo Mode	30 W (14.8 dBW)
CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	30 W (14.8 dBW)
Rated distortion (THD 20 Hz - 20 kHz)	0.05%
Clipping Power (maximum continuous power per channel)	38 W
IHF dynamic headroom at 8 ohms	+2dB
IHF dynamic power (maximum short term power per channel)	48 W (16.8 dBW) 65 W (18.0 dBW) 85 W (19.3 dBW) R = 10 kΩ C = 470 pF
Input impedance	
Input sensitivity (for rated power into 8 ohms)1 V	
Voltage gain	x15.5 (23.8 dB)
Frequency response	2 Hz to 100 kHz (+0, -3 dB)
Signal/Noise ratio	110dB ref. 30 W

THD (Total Harmonic Distortion, 20 Hz - 20 kHz, from 250 mW to rated output)	<0.05%
SMPTÉ IM. (Intermodulation distortion, 60 Hz + 7 kHz, 4:1 from 250 mW to rated output)	<0.05%
IHF IM. (CCIF IM distortion, 19 + 20 kHz at rated output)	<0.05%

Bridged (Monophonic) Mode

CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	90 W (19.5 dBW)
IHF dynamic headroom at 8 ohms	+2dB
IHF dynamic power (maximum short term per channel)	140 W (21.5 dBW) 170 W (22.3 dBW) 8 ohms: 4 ohms:

PHYSICAL SPECIFICATIONS

Dimensions Width x Height x Depth	420 x 83 x 270 mm
Net weight	5.3 kg
Shipping weight	6.1 kg
Power Consumption at 120, 220 or 240 VAC	240 VA

NAD MODEL 906 SPECIFICATIONS

Note: Specifications are measured in accordance with EIA Standard RS-490 (IHF A-202). Amplifier measurements referred to 8 ohms are taken with the Speaker Impedance selector set to 8Ω (High). Measurements for 4 and 2 ohms are taken with Impedance Selector at 4Ω (Normal).

Stereo Mode	30 W (14.8 dBW)
CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	30 W (14.8 dBW)
Rated distortion (THD 20 Hz - 20 kHz)	0.05%
Clipping Power (maximum continuous power per channel)	38 W
IHF dynamic headroom at 8 ohms	+2dB
IHF dynamic power (maximum short term power per channel)	48 W (16.8 dBW) 65 W (18.0 dBW) 85 W (19.3 dBW) R = 10 kΩ C = 470 pF
Input impedance	
Input sensitivity (for rated power into 8 ohms)1 V	
Voltage gain	x15.5 (23.8 dB)
Frequency response	2 Hz to 100 kHz (+0, -3 dB)
Signal/Noise ratio	110dB ref. 30 W

THD (Total Harmonic Distortion, 20 Hz - 20 kHz, from 250 mW to rated output)	<0.05%
SMPTÉ IM. (Intermodulation distortion, 60 Hz + 7 kHz, 4:1 from 250 mW to rated output)	<0.05%
IHF IM. (CCIF IM distortion, 19 + 20 kHz at rated output)	<0.05%

Bridged (Monophonic) Mode

CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	90 W (19.5 dBW)
IHF dynamic headroom at 8 ohms	+2dB
IHF dynamic power (maximum short term per channel)	140 W (21.5 dBW) 170 W (22.3 dBW) 8 ohms: 4 ohms:

PHYSICAL SPECIFICATIONS

Dimensions Width x Height x Depth	420 x 103 x 270 mm
Net weight	12.7 kg
Shipping weight	14.2 kg
Power Consumption at 120, 220 or 240 VAC	600 VA

Model 2700 Power Amp



- High power, high current, high dynamic headroom design
- Stable and powerful with virtually all speaker loads

- Fail-safe, inaudible protection assures excellent reliability
- Bridged monophonic mode delivers 400 Watts music power

The sophisticated home cinema deserves audiophile-quality sound to match: NAD's 2700 THX amplifier achieves just this. It's a powerful yet refined stereo amplifier conceived especially for sound reproduction in the most critically demanding of home-theatre and hi-fi audio systems.

A 150 watts-per-channel design with impressive dynamic power and peak current capability, the 2700 THX combines superb acoustic performance with excellent reliability at an affordable price. Something audiophiles expect from NAD. The 2700 THX was among the first designs in the world to meet LucasArts Entertainment Co.'s stringent specifications for amplifiers in advanced Home-THX home theatre.

Home-THX components bring to domestic audio systems performance equivalent to that heard in LucasFilm Ltd licensed commercial THX theatres - that is, the very best in cinema sound. NAD's 2700 THX achieves performance that is truly state-of-the-art, whether employed for audio/visual, or for purely musical sound reproduction. NAD's Speaker Impedance selector and high-current output stage deliver maximum power to loudspeakers of any impedance - high or low, simple or complex. The model 2700 THX will even drive a 2 ohm impedance safely, without current-limiting or distortion.

NAD MODEL 2700 SPECIFICATIONS

Stereo Mode	
CONTINUOUS AVERAGE POWER	35W (15.5 dBW)
OUTPUT INTO 8 OHMS (Min. power per channel, 20 Hz - 20 kHz, both channels driven, with no more than rated distortion)	
Rated distortion (THD 20 Hz - 20 kHz)	0.03%
Clipping Power (maximum continuous power per channel)	42 W
IHF dynamic headroom at 8 ohms	+5.5dB
IHF dynamic power (maximum short term power per channel)	
8 ohms: 120 W (21 dBW)	
4 ohms: 160 W (22 dBW)	
2 ohms: 200 W (23 dBW)	
>100	
Damping factor (ref. 8 ohms, 50 Hz)	R = 18kΩ C = 560 pF
Input impedance	100 mV 1V
Input sensitivity for 1 watt out for rated power	20Hz to 20 kHz
Frequency response (-3 dB at 3 Hz/60kHz)	
Signal/Noise ratio , A-weighted	96dB ref. 1 W 102dB ref. rated power 1W 117dB ref. rated power 35W <0.03%
THD 20 Hz - 20 kHz	

Bridged (Monophonic) Mode	
CONTINUOUS RATED POWER	500 W
OUTPUT INTO 8 OHMS (Min. RMS power per channel, 20 Hz - 20 kHz, both channels driven, with no more than the rated distortion)	(27 dBW)
IHF dynamic headroom at 8 ohms	+5dB
IHF dynamic power (maximum short term per channel)	
8 ohms: 1600 W (32 dBW)	
4 ohms: 2000 W (33 dBW)	

PHYSICAL SPECIFICATIONS

Dimensions	
Width x Height x Depth	435 x 175 x 370 mm
Net weight	17.3 kg
Shipping weight	19.9 kg
Power Consumption at 120, 220 or 240 VAC	750 VA

LUCASFILM

THX

The Facts

If you've been to the cinema lately and was impressed by the sound then the chances are you were sitting in a theatre equipped with a THX® approved sound system.

Since the mid 70s Dolby Laboratories Lucasfilms have strived to drag the audio post-production process out of its post-war rut and into the present day by refining the traditional processes of the last 50 years and utilising more modern techniques. Audiences certainly heard what they were missing when *Star Wars* took the world by storm back in 1977. After that improvements just haven't stopped thanks to new magnetic film sound tracks, digital audio techniques and more flexible studio facilities. Nowadays motion picture sound doesn't just back up the visuals. It adds a whole new dimension to them, in many cases will become the main focus of the action.

not another stereo format for theatres but a set of complementary hardware recommendations and a certification programme to set performance standards within the auditorium. The objective of Lucasfilm is to pass on the sonic quality heard in the post production suite into cinemas around the world.

The theatres' entire sound system including speakers, amplifiers and the Dolby Pro-logic decoder itself, not to mention the auditorium must meet Lucasfilm's strict guidelines before a theatre can obtain a THX® certificate.

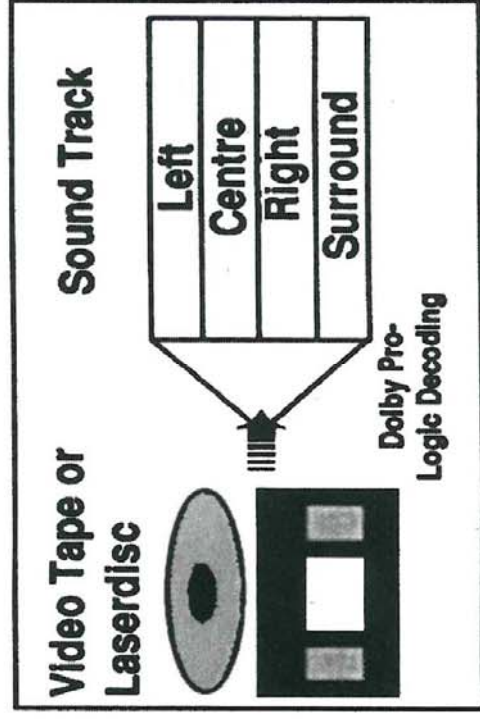


Figure 1.2 Home THX system works in exactly the same way as in the cinema

Devised by the engineers at the Lucasfilm Labs; THX® is an extension to the Dolby Pro-logic stereo surround sound format which aims to raise the quality of cinema sound to its logical conclusion. However, THX® is

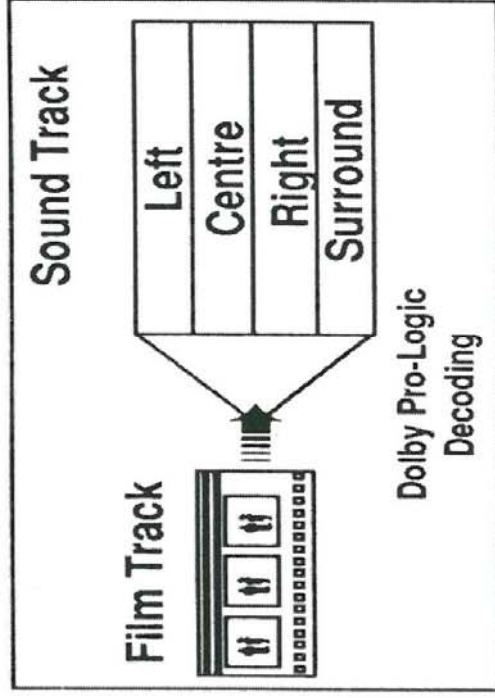


Figure 1.1 The stereo sound tracks on the film are converted into four separate channels for Dolby Surround Sound compatibility

This level of excellence can now be obtained in the home with the launch of Lucasfilm's Home THX® programme which will allow the home video owner access to the same state-of-the-art sound as would be found in any of the worlds best cinemas.

Whilst Home THX® has been around for a couple of years there is still much confusion over exactly what it is and how it works.

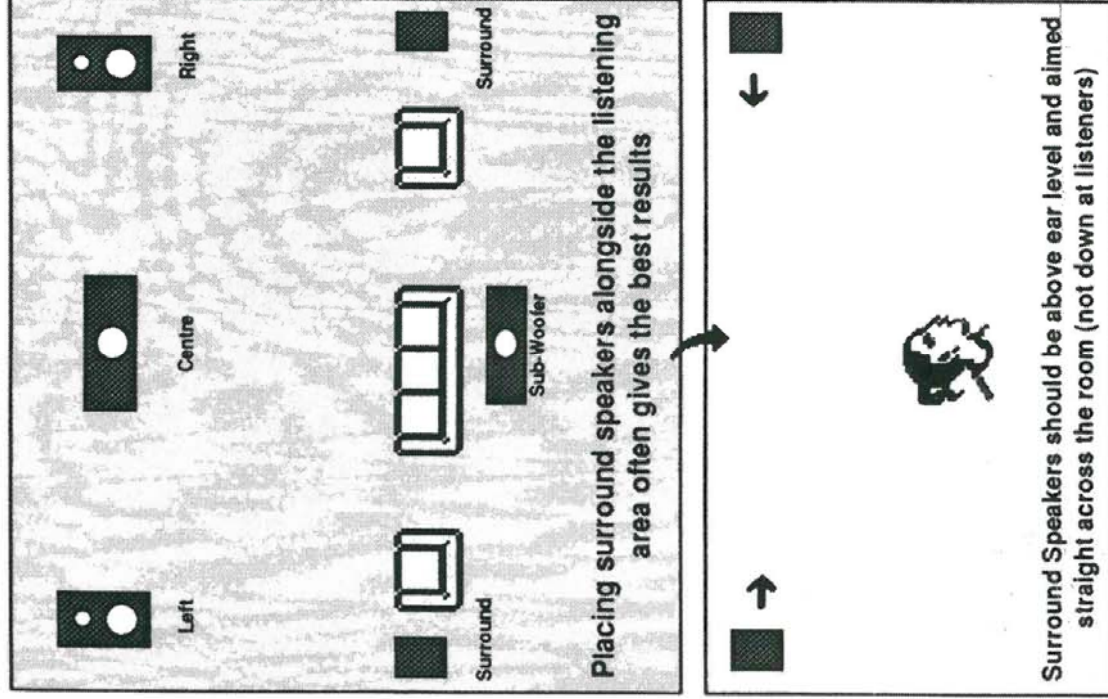


Figure 2. Speaker Placement for Home Theatre Sound

First of all any film which has a Dolby Surround sound track will benefit from a THX® system. There are currently well over 2500 such titles including virtually all major "blockbusters" from the last 15 years. So, the chances are that many of the films in your personal collection are

already compatible with this new technology. The sound track is converted from the stereo tracks of the film through a decoder which splits both channels up into their component tracks via the Dolby Pro-Logic circuit. The home system works in exactly the same way using the Hi-Fi tracks of video tape or laserdisc as identical surround sound information into all three formats.

It may well all sound a bit bewildering at first but the installation of this kind of set-up is not nearly as problematical as you might imagine. Unlike the Cinema THX® systems the listening area doesn't have to be treated. Just the correct equipment and its proper placement are required, much like a regular Hi-Fi. Just four components make up a functional Home THX® system. Firstly a decoder unit is connected to the outputs of your video cassette recorder or laserdisc player. This splits up the stereo soundtrack into the four tracks that make up the surround sound this is then distributed to six channels of amplification (Left, Centre, Right, Surround Left, Surround Right and Sub Woofer) such as the **NAD model 2700** which in turn feeds the six loudspeakers situated around the room. Additionally a THX® approved equaliser may also be added to compensate for and acoustic deficiencies in your Home Theatre.

More Than Just Movies

A Home THX® system is not just for movies. Music videos such as the Michael Jackson tracks *Black or White* and *Remember the Time* were recorded in Dolby Surround as were TV series such as *Northern Exposure* and *Star Trek - The Next Generation*. Furthermore labels such as RCA Victor and Concord Jazz regularly release Compact Discs in this format.

So, as you can see, THX offers a lot more than an impressive way to listen to movies it is a standard by which good acoustics may be judged. When you buy a Hi-Fi Component with a THX logo you know you're getting the ultimate in audio.

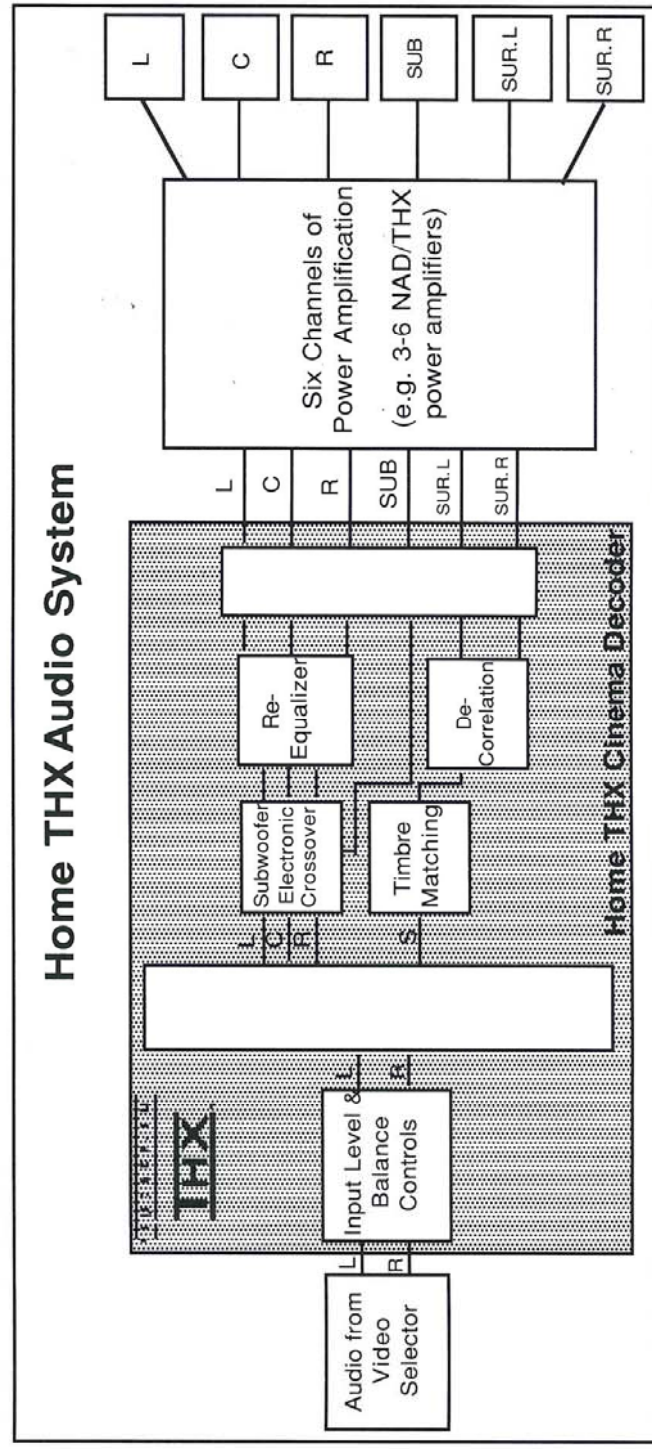


Figure 3. a full break down of the signal path between a video source and your home theatre sound system

**NAD**

An Uncommon Company

During the past twenty years NAD's products have won worldwide acclaim for their performance and value. Through extensive word-of-mouth recommendations by satisfied users, plus an unbroken string of enthusiastic product reviews in virtually every major hi-fi magazine, NAD has become a leading producer of high-performance audio components at affordable prices.

With a fully staffed research laboratory in London, and drawing on the expertise of leading consultants in Europe, North America, and the Far East, NAD leads the industry in creating innovative products that combine superior technical performance with sensible, easy-to-use controls. For NAD's engineers, lab tests and specifications are only part of the story. Successful product design also involves comprehensive analysis of the signals that the product must handle (including the effect of any non-musical signals that may accompany the desired waveform), and the effect of any interactions between the components in a complete audio system.

This uncommonly rational approach to audio design has led to numerous NAD innovations and industry firsts. In NAD's no-frills design philosophy, every control serves a useful function and makes an audible difference. When you choose an NAD product you are investing in quality behind the front panel — in advanced engineering, selected parts, exacting quality control, oversize high-current transistors for maximum power, and solid construction for long-term reliability.

The reward comes when you listen to music. Hear the difference between rated 8-ohm output and the real speaker-driving power of an NAD amplifier. Enjoy the dynamic power reserves provided by NAD's Power Envelope design, the solid tonal foundation provided by Bass EQ, clear reception of "difficult" FM stations, the accuracy and quiet clarity of NAD's pre-amplifier circuits. Restore brilliant highs to tape playback with Play Trim, and reduce the dynamic range of CDs with NAD's exclusive CDR circuit. The circuits and features in every NAD component are dedicated to providing the best sound quality, regardless of power rating or price.