

The home of the turntable

# THE VINYL **ENGINE**®

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# DENON

Professional Audio Brand



## CD Player

# CD Player

DENON is proud of more than a decade of DENON's digital PCM technology, and at the present time, there are the repertoire over 600 digitally recorded titles already in stock.

The DENON's CD Player incorporates the full range of this technology and realizes true feeling of music. It features outstanding sound performance with easy operation.



## DCD-2000 Outstanding Sound Performance Compact Disc Player

●Non-contact semiconductor laser Pick-up "read" digital signal. ●Random music search function. ●Harmonic distortion less than 0.03 % means remarkable sound clarity. ●Astounding signal-to-noise ratio and dynamic range of 90 dB or better. ●Highly resistant to external vibration and shock. ●Program number and time display function.

Frequency range .....	5-20,000 Hz $\pm$ 0.5 dB
Signal-to-noise ratio .....	more than 90 dB
Wow and flutter .....	less than 0.001 %
Channel separation .....	more than 85 dB (10 KHz)
Dimensions .....	320 (W) $\times$ 145 (H) $\times$ 234 (D) mm
Weight .....	5.6 kg

# Turntables

The primary function of a quality turntable is to provide smooth and even rotation at precise speed levels, even in the presence of varying loads. Another extremely important factor is excellent sound characteristics. To achieve optimum performance in both of these areas, DENON uses a highly stable AC servo motor that enables both a high signal-to-noise ratio and superb rotational accuracy. A high speed servo control system, using a magnetic recording head that detects pulses recorded on the inner circumference of the turntable platter, accurately senses the actual rotation speed for instantaneous and precise control. DENON turntables go beyond the boundaries of theoretical accuracy to achieve the reliability of practical accuracy.



## **DP-100M DENON Quartz Split Platter Direct Drive Turntable Equipped with Disc Cutting Lathe Motor**

●The top of the line in the high technology DP-series.  
●Employs a smooth external rotor 3-phase AC servo motor used in disc cutting lathes and professional turntables. ●Split platter construction ●Newly developed floating tonearm system. ●New oil damped, spring insulator mechanism prevents acoustic feedback.

Drive system .....	High torque 3-phase, AC servo motor, double PLL bi-directional servo control, direct drive
Speed .....	33-1/3, 45, 78 rpm
Wow and flutter .....	0.003% wrms (servo system)
Signal-to-noise ratio .....	90 dB (DIN-B)
Dimensions .....	570 (W) × 310 (H) × 465 (D) mm
Weight .....	48 kg



**DP-80 DENON Quartz Split Platter  
Direct Drive Turntable**

- DENON quartz. ●Split platter construction eliminates external vibration. ●Smooth external rotor 3-phase AC servo motor creates virtually no vibration. ●Pulse width modulation driving system consumes very little power and offers improved signal-to-noise ratio.

Drive system .....	3-phase, AC servo motor, bi-directional servo control, direct drive
Wow and flutter .....	0.008% wrms (servo system)
Signal-to-noise ratio .....	80 dB (DIN-B)
Dimensions .....	376 diam. 140 (H) mm
Weight .....	10 kg



**DP-75 DENON Quartz Split Platter  
Direct Drive Turntable**

- Newly introduced split platter construction perfectly isolates external vibration and speaker pressure. ●Wow and flutter 0.008% and signal-to-noise ratio greater than 80 dB achieved by DENON's magnetic speed detection and quartz controlled phase-locked servo system. ●Turntable mat designed with the aid of laser holography analysis.

Drive system .....	AC servo motor, bi-directional servo control, direct drive
Wow and flutter .....	0.008% wrms (servo system)
Signal-to-noise ratio .....	80 dB (DIN-B)
Dimensions .....	376 diam. 140 (H) mm
Weight .....	10 kg



**DP-67L DENON Quartz Auto-lift D.D.  
Turntable with DST Tonearm**

●Dynamic servo Tracer (DST) tonearm controls low frequency resonance, resulting dramatic decrease in intermodulation distortion. ●The tonearm is made from a newly developed heat-tempered (H.T.) straight pipe. ●Acoustic feedback is greatly reduced through the use of special thick aluminum platter and diecast phono motor frame.

Drive system .....	AC servo motor, bi-directional servo control, direct drive
Wow and flutter .....	0.008% wrms (servo system)
Signal-to-noise ratio .....	82 dB (DIN-B)
Dimensions .....	485 (W) × 195 (H) × 410 (D) mm
Weight .....	15 kg



**DP-57L DENON Quartz Auto-lift D.D.  
Turntable with DST Tonearm**

●Dynamic Servo Tracer (DST) tonearm extracts optimal cartridge performance without low frequency resonance. ●Interchangeable S-shaped type tonearm included. ●Non-contact anti-skating system with an electronic servo control. ●Non-contact electronic servo tonearm system.

Drive system .....	Out-rotor AC servo motor, bi-directional servo control, direct drive
Wow and flutter .....	0.008% wrms (servo system)
Signal-to-noise ratio .....	82 dB (DIN-B)
Dimensions .....	485 (W) × 185 (H) × 410 (D) mm
Weight .....	11.5 kg



**DP-51F DENON Quartz, Fully-automatic D.D. Turntable with DST Tonearm**

●DENON's exclusive non-contact electronically controlled Dynamic Servo Tracer tonearm for superb sound quality. ●Dual Direction Speed Servo with DENON Quartz Magnetic Pulse Detection Control system ensures smooth and stable performance from DENON's patented AC servo motor. ●Compatible with a wide range of top-quality cartridges. ●Dynamic Servo Tracer system controls low frequency resonance through the low-mass straight tonearm.

Drive system .....	AC servo motor, direct drive
Wow and flutter .....	0.01% wrms (servo system)
Signal-to-noise ratio .....	78 dB (DIN-B)
Dimensions .....	455 (W) × 130 (H) × 424 (D) mm
Weight .....	9 kg



**DP-45F DENON Quartz Fully-automatic D.D. Turntable with DST Tonearm**

●DENON's Dynamic Servo Tracer system controls low frequency resonance through the low-mass straight tonearm. ●Automatic record size detection system. when no record is present on the turntable, the tonearm won't function, thereby protecting the stylus tip from any potential damage.

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.012% wrms (servo system)
Signal-to-noise ratio .....	78 dB (DIN-B)
Dimensions .....	434 (W) × 135 (H) × 412 (D) mm
Weight .....	7 kg



**DP-35F DENON Quartz Fully-automatic D.D. Turntable with DST Tonearm**

●DENON's Dynamic Servo Tracer system controls low frequency resonance in the low mass straight tonearm. ●Outstanding anti-howling characteristics achieved by a cabinet made of HDC (high density compound). ●Light weight straight tonearm extracts maximum performance from today's light high compliance cartridges. ●Unique magnetic record detection system.

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.012% wrms (servo system)
Signal-to-noise ratio .....	78 dB (DIN-B)
Dimensions .....	434 (W) × 135 (H) × 412 (D) mm
Weight .....	7 kg



**DP-30LII Auto-lift D.D. Turntable**

●Light weight straight tonearm extracts maximum performance of the high quality cartridge. ●Auto-lift system with a non-contact record-end sensor. ●Outstanding anti-howling characteristics achieved by a cabinet made of new compound material (HDC). ●Unique magnetic record detection system.

Drive system .....	AC servo motor, direct drive
Wow and flutter .....	0.015% wrms (servo system)
Signal-to-noise ratio .....	78 dB (DIN-B)
Dimensions .....	450 (W) × 140 (H) × 403 (D) mm
Weight .....	9.5 kg





## DP-21F Fully-automatic Turntable with Microprocessor Control

- The tonearm drive system, the most critical element of an automatic tonearm, is fully controlled by a microprocessor without mechanical contact.
- A straight lightweight tonearm extracts the maximum performance of today's light high-compliance cartridges.
- DENON's Quartz Speed Control system assures highly stable and accurate rotation.
- Soft-touch pushbuttons, flush with the front panel allow maximum convenience with a minimum of intrusion.

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.02% wrms (servo system)
Signal-to-noise ratio .....	75 dB (DIN-B)
Dimensions .....	434 (W) × 105 (H) × 360 (D) mm
Weight .....	5 kg



## DP-11F Fully Automatic Turntable with Microprocessor Control

- The tonearm drive system, the most critical element of an automatic tonearm, is fully controlled by a microprocessor without mechanical contact.
- An electronic servo lifter smoothly raises and lowers the tonearm to prevent damage to the stylus or record.
- The straight light weight tonearm extracts the maximum performance of today's light high-compliance cartridges.

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.02% wrms (servo system)
Signal-to-noise ratio .....	75 dB (DIN-B)
Dimensions .....	365 (W) × 100 (H) × 335 (D) mm
Weight .....	5 kg



### **DP-5 DENON Quartz, Linear Tracking Turntable**

- Microprocessor control and high-precision linear tracking are combined with DENON quartz rotational stability and full array of functions to make the DP-5 a new standard in compact linear-tracking turntables.
- Microprocessor memory for versatile playback: The "random access selector" allows songs to be played back in any order you choose.
- Automatic record size sensor
- Synchronous operation with a cassette deck
- Locate and quick repeat functions
- Compact display shows operation status at a glance.

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.02% wrms (servo system)
Signal-to-noise ratio .....	75 dB (DIN-B)
Dimensions .....	335 (W) × 80 (H) × 350 (D) mm
Weight .....	5 kg



### **DP-3 DENON Quartz, Linear Tracking Turntable**

- High-precision linear tracking tonearm: Clear and bright music reproduction because there's no tracking error distortion.
- Dynamic damping cuts tonearm resonance and acoustic feedback.
- Automatic record size sensor
- Special muting circuit: Cuts noise when the stylus enters or leaves the record during tonearm operations.
- Locate and quick repeat functions.
- Linear drive motor with DENON quartz control

Drive system .....	Linear drive motor, direct drive
Wow and flutter .....	0.02% wrms (servo system)
Signal-to-noise ratio .....	75 dB (DIN-B)
Dimensions .....	335 (W) × 80 (H) × 350 (D) mm
Weight .....	5 kg

## Accessories



### DA-1000 Mechanical dynamic damping straight tonearm

Effective length ..... 282 mm  
Stylus force range ..... 0–1.5 g  
Acceptable cartridge weight ..... 4–8 g



### DA-401 Light Weight Low Effective Mass Tonearm

Effective length ..... 244 mm  
Stylus force range ..... 0–2 g  
Acceptable cartridge weight .. 4–10 g



### DA-307 Dynamically Damped Tonearm

Effective length ..... 244 mm  
Stylus force range ..... 0–2.5 g direct reading  
Acceptable cartridge weight ..... 5–10 g

PCL-75 Tonearm for DP-100M

PCL-67 Tonearm for DP-67L/57L

PCL-50 Headshell for DP-52F/51F

PCL-30 Headshell for DP-45F/35F/30LII

PCL-5 Magnesium Alloy Diecast Headshell

PCL-4 Magnesium Alloy Headshell

### DK-1000 Turntable Base

Dimensions ..... 617(W) × 326(H) × 550(D) mm  
Weight ..... 15 kg  
Perfect for use with DP-100M turntable unit.

### DK-300 Universal Turntable Base

Dimensions ..... 555(W) × 183(H) × 453(D) mm  
Weight ..... 14 kg

### DK-100 Universal Turntable Base

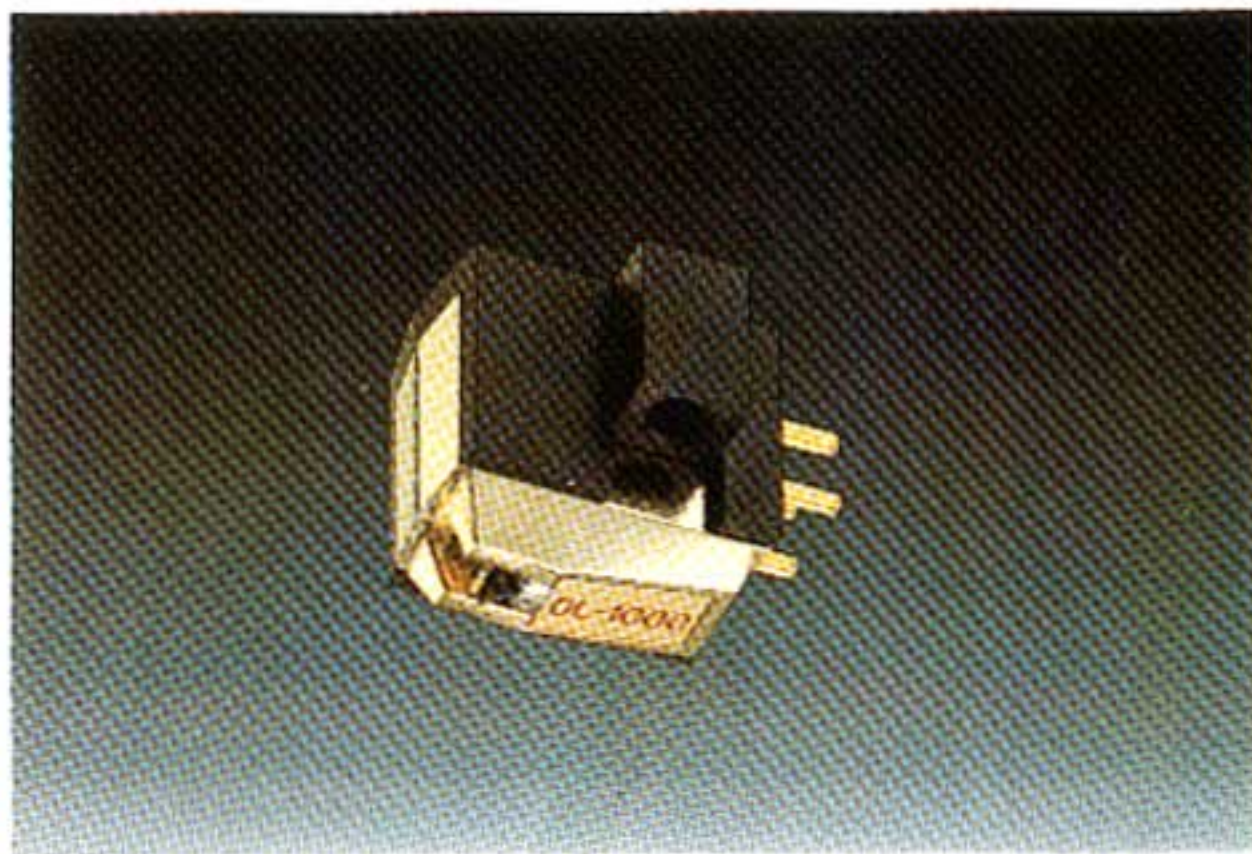
Dimensions ..... 555(W) × 183(H) × 453(D) mm  
Weight ..... 10 kg

Perfect for use with DP-60 and DP-75 turntable units.

# Cartridges

As the crucial link in disc reproduction, cartridges should pick up signals exactly as they were recorded on the record. The stylus should trace complex record grooves faithfully without deforming or damaging them in any way. The mechanical movements of groove tracing should be converted efficiently and accurately into electrical signals.

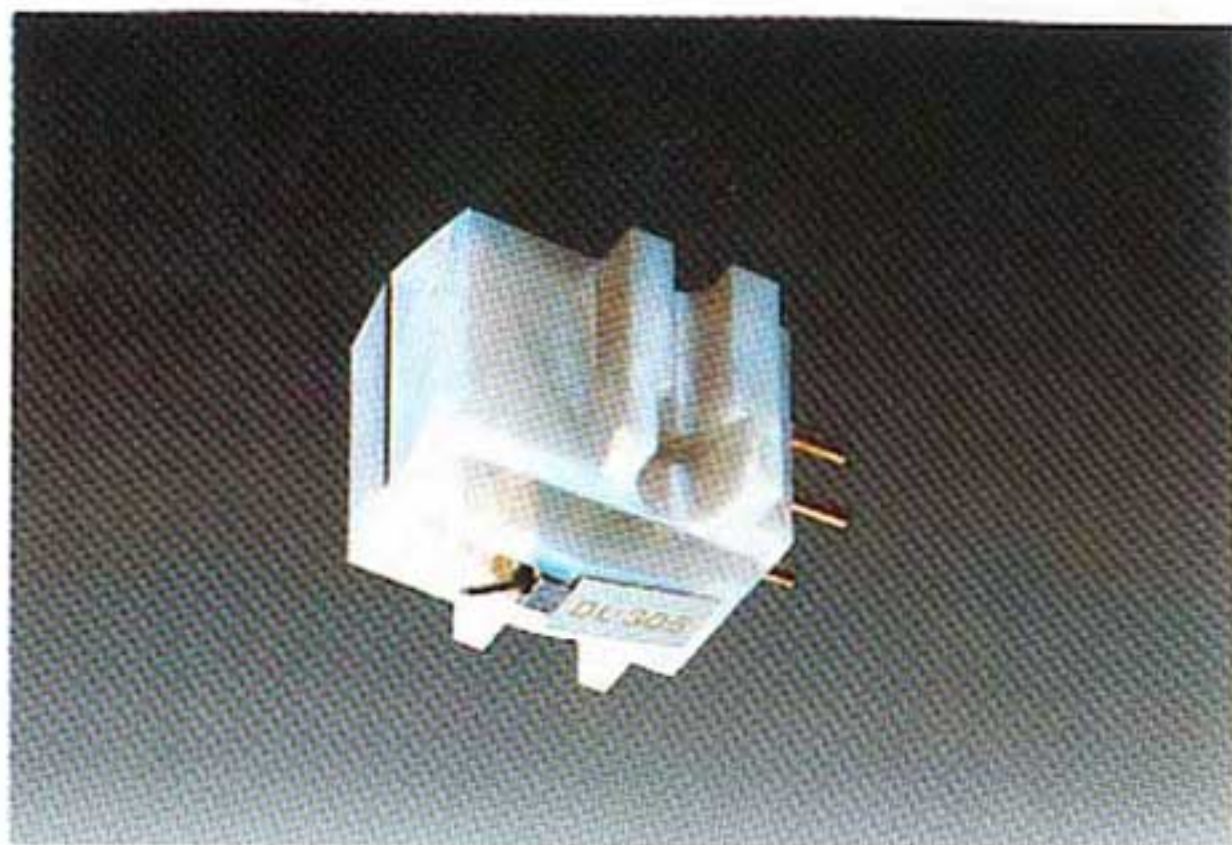
DENON has developed the double-structure cantilever, an efficient signal generation system, a compact moving assembly along with other techniques to reproduce music with unprecedented accuracy. DENON introduced the DL-103 MC (moving coil) cartridge in 1965, and it has remained the reference standard ever since. Yet DENON continues to pioneer improvements in cartridges for even higher performance in a never-ending quest for perfect music reproduction.



## DL-1000A State of the Art Moving Coil Cartridge

●New amorphous boron 4 mm cantilever with high compliance suspension for truly superb tracing characteristics. ●Ultra-light moving assembly for an effective mass of 0.077 mg. ●Stylus force of 0.8 g ( $\pm 0.1$  g) recommended—an unheard of figure for MC cartridges. ●Frequency response all the way up to 110 kHz!

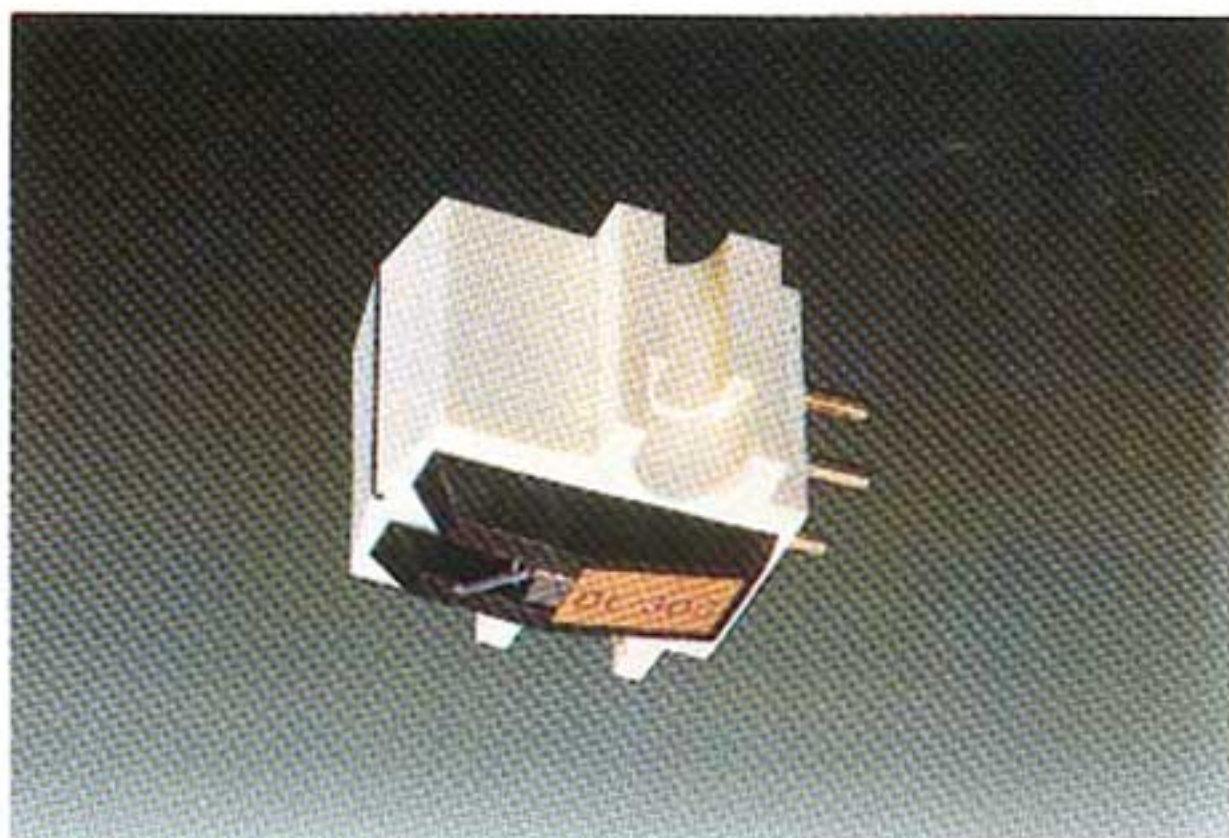
Output voltage	0.12 mV
Frequency response	20 Hz—110 kHz
Impedance	33 $\Omega$
Channel separation	30 dB
Stylus force	0.8 g $\pm 0.1$ g



### **DL-305      Very Light Amorphous Boron Cantilever MC Cartridge**

●Excellent acoustic characteristics are assured with DENON's newly-developed amorphous boron cantilever. ●Flat frequency response is achieved over a wide range extending to frequencies as high as 75 kHz.

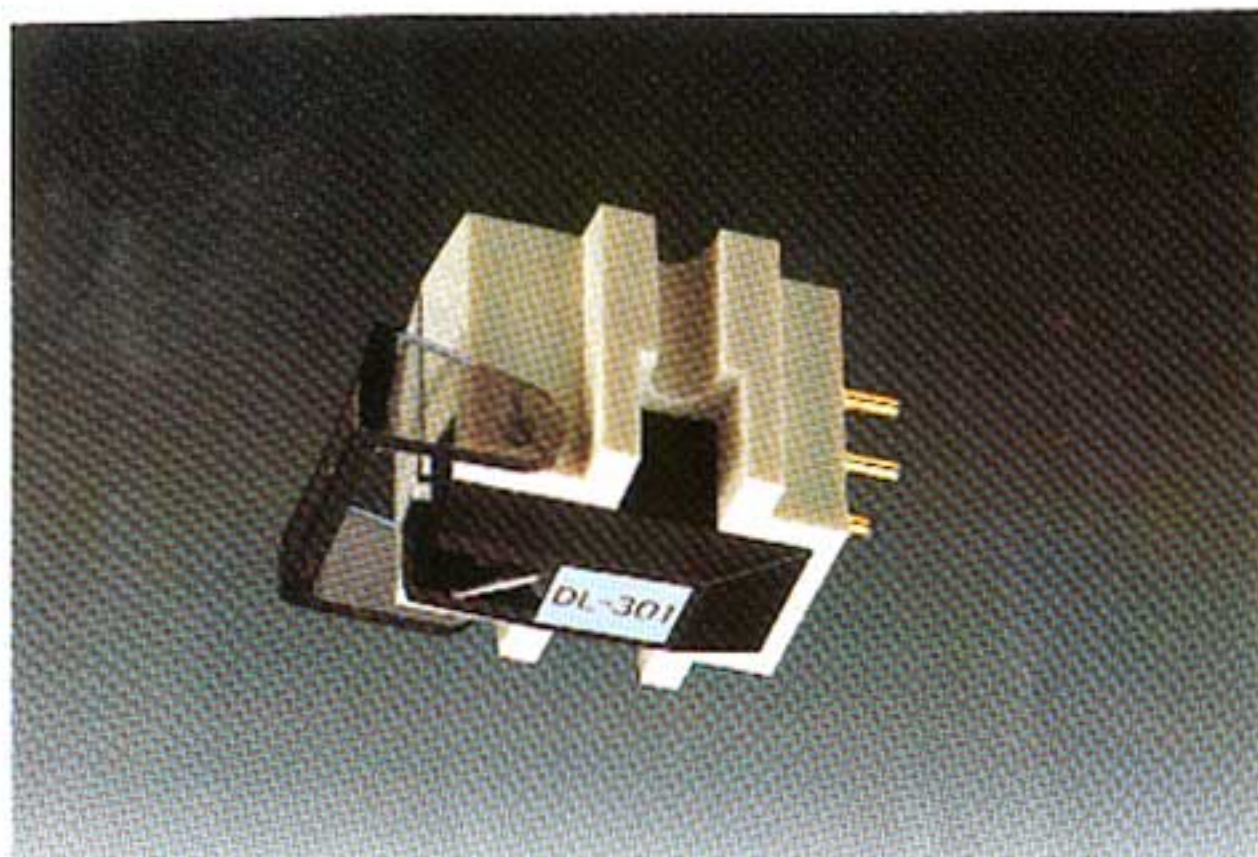
Output voltage .....	0.2 mV
Frequency response .....	20 Hz—75 kHz
Impedance .....	40 $\Omega$
Channel separation .....	28 dB
Stylus force .....	1.2 g $\pm$ 0.2 g



### **DL-303      Very Light Moving Assembly MC Cartridge**

●A surprising improvement in tracing ability was made possible by precise construction of the DL-303's ultra-light moving assembly and by the light effective tip mass of 0.18 mg.

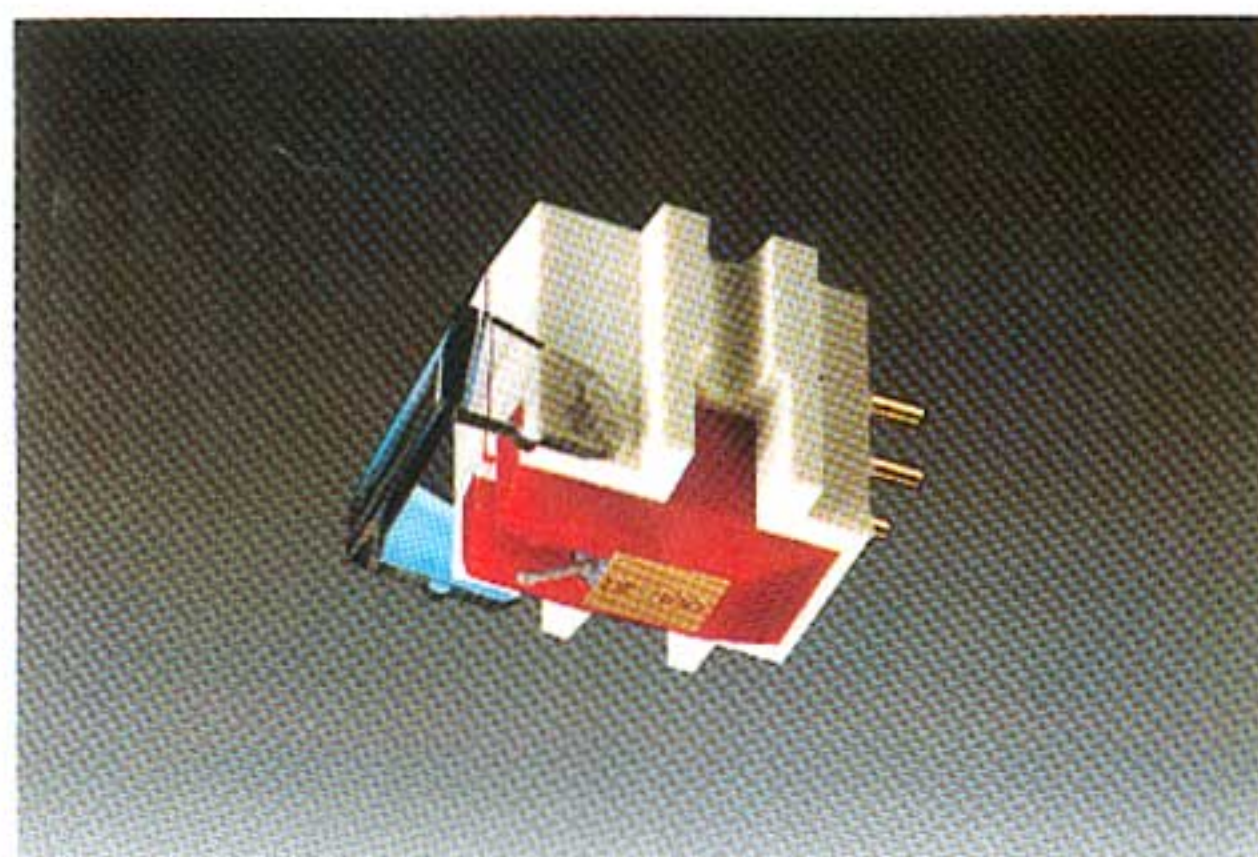
Output voltage .....	0.2 mV
Frequency response .....	20 Hz—70 kHz
Impedance .....	40 $\Omega$
Channel separation .....	28 dB
Stylus force .....	1.2 g $\pm$ 0.2 g



**DL-301      Light Weight High Tracing  
Performance MC Cartridge**

●DENON's unique sophisticated moving assembly permits excellent tracing performance over a wide frequency range. ●Special elliptical solid diamond stylus tip (0.07 mm × 0.14 mm sq.). ●Further improved channel separation.

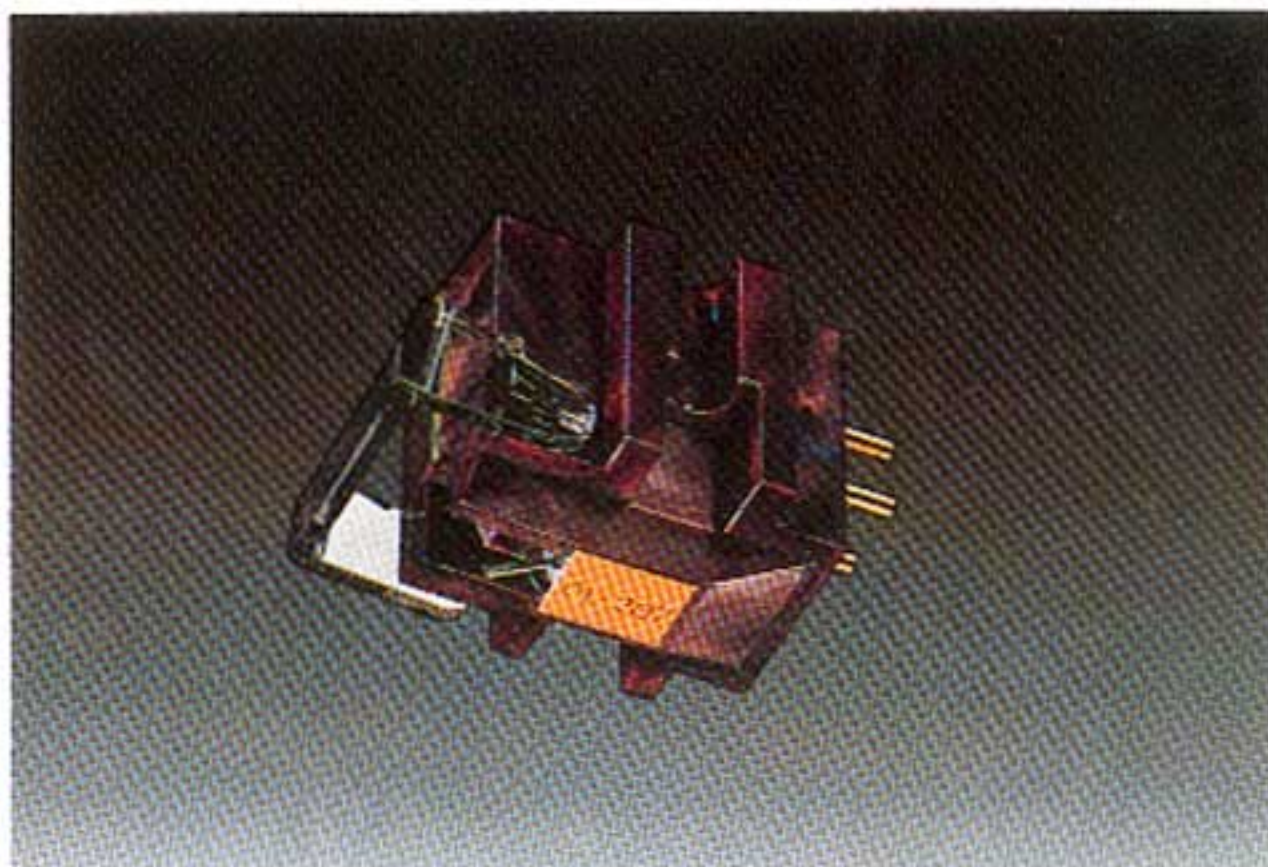
Output voltage .....	0.3 mV
Frequency response .....	20 Hz—60 kHz
Impedance .....	40 Ω
Channel separation .....	28 dB
Stylus force .....	1.4 g ± 0.2 g



**DL-300      Light Weight  
DL-300/T    MC Cartridge**

●High tracing performance and excellent reproduction through DENON's unique sophisticated light-weight one-point suspension moving assembly. ●Double construction cantilever. ●DL-300/T includes wide frequency range transformer.

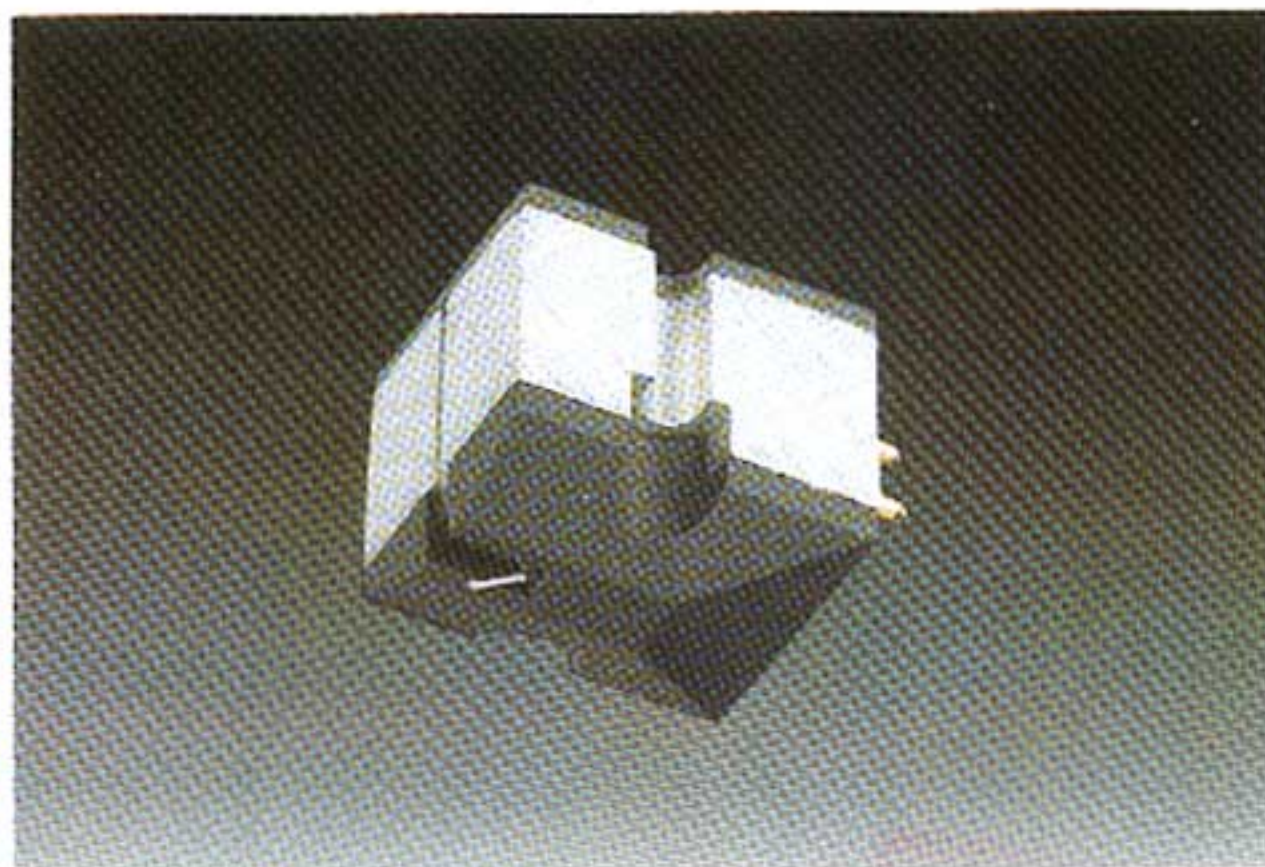
Output voltage .....	0.3 mV
Frequency response .....	20 Hz—40 kHz
Impedance .....	40 Ω
Channel separation .....	25 dB
Stylus force .....	1.8 g ± 0.3 g



**DL-207 Light Weight Amorphous Boron Cantilever MC Cartridge**

- Light yet rigid amorphous boron cantilever. ●Direct Linear Flux generation system with twin damping.
- Low mechanical impedance for frequency response up to 60 kHz. ●Light (4.7 g) body with flip-down stylus protector.

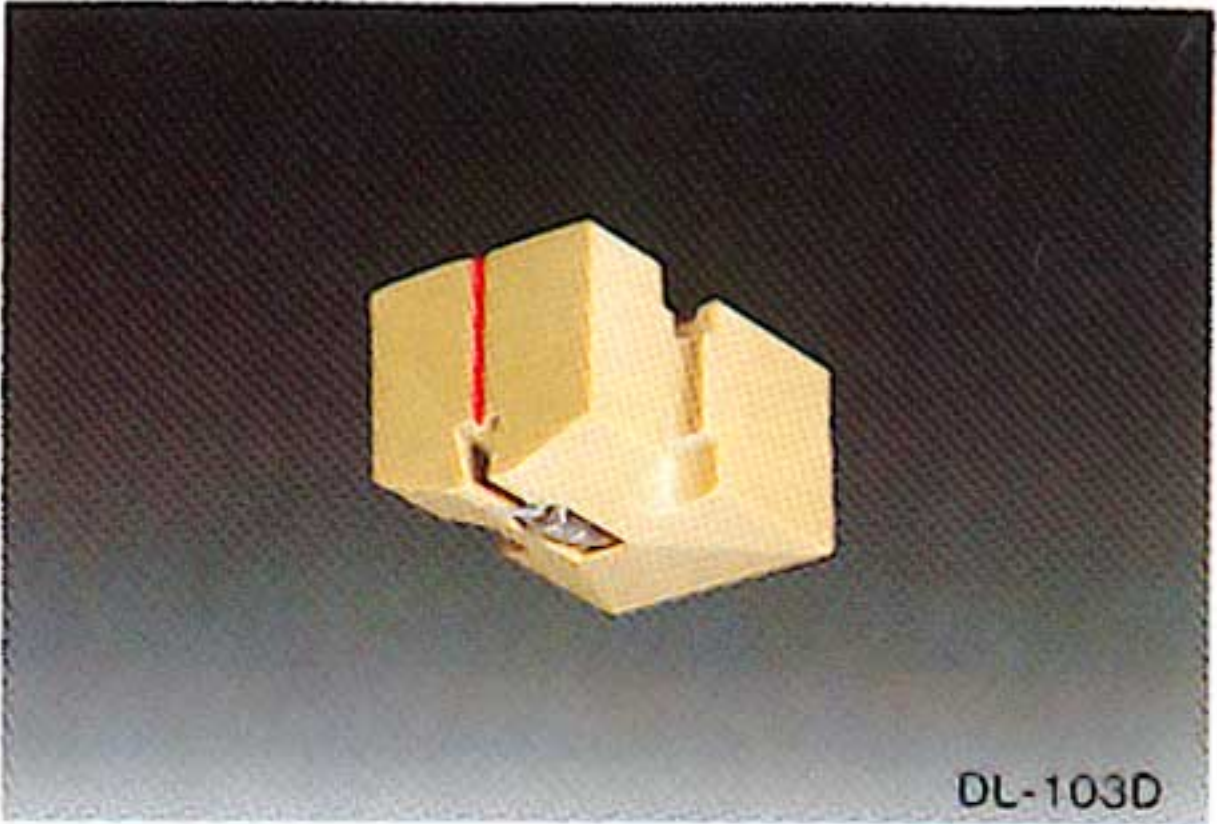
Output voltage.....	0.2 mV
Frequency response.....	20 Hz—60 kHz
Impedance.....	40 Ω
Channel separation.....	28 dB
Stylus force.....	1.4 g ±0.2 g



**DL-103M Light Amorphous Boron Cantilever MC Cartridge**

- High tracing performance and excellent reproduction through DENON's newly-developed amorphous boron cantilever. ●DENON's unique sophisticated moving assembly permits excellent tracing performance over a wide frequency range.

Output voltage.....	0.12 mV
Frequency response.....	20 Hz—60 KHz
Impedance.....	40 Ω
Channel separation.....	25 dB
Stylus force.....	1.4 g ± 0.2 g

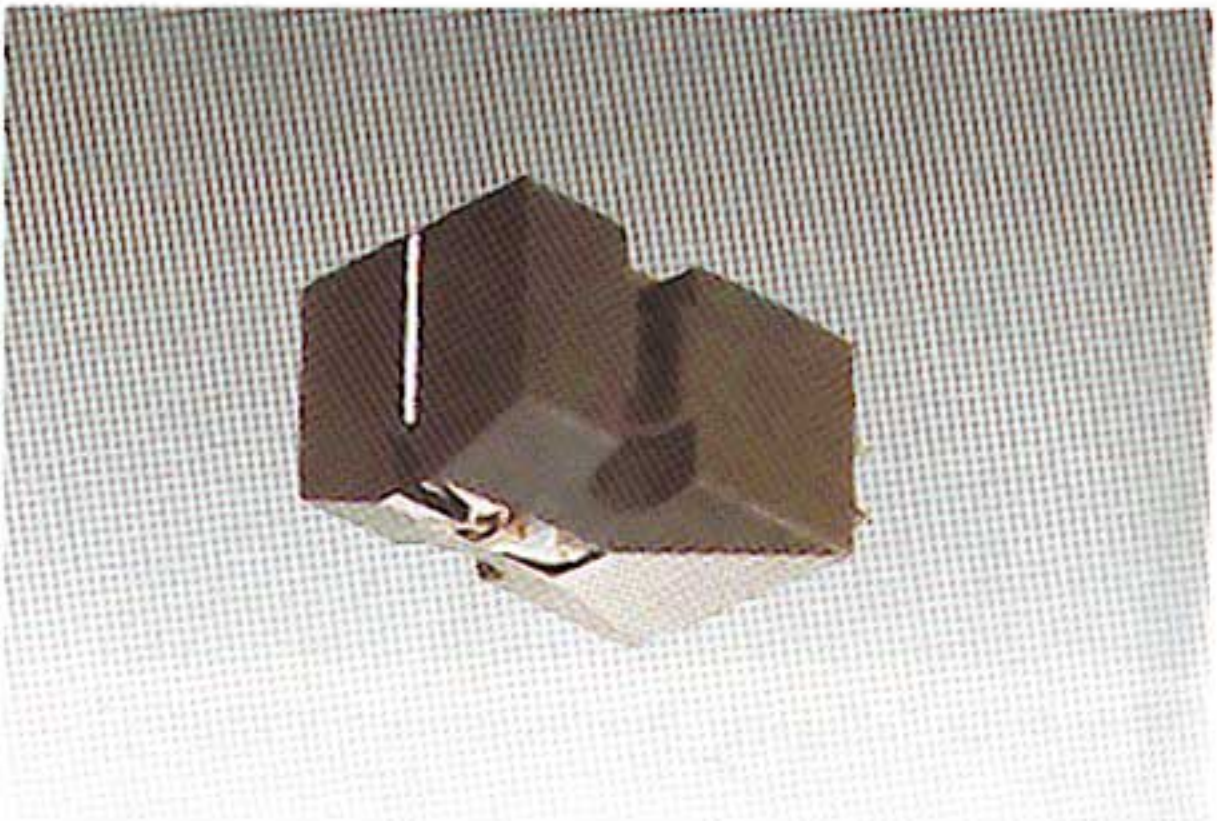


DL-103D

### DL-103D/103S High Performance MC Cartridge

●Retaining the construction of the DL-103, the DL-103D/103S's moving assembly is much lighter, and high tracing performance is possible with higher compliance at lighter stylus force.


	103D	103S
Output voltage .....	0.25 mV	0.3 mV
Frequency response .....	20 Hz—65 kHz	20 Hz—65 kHz
Impedance .....	33 $\Omega$	40 $\Omega$
Channel separation .....	28 dB	25 dB
Stylus force .....	1.5 g $\pm$ 0.2 g	1.8 g $\pm$ 0.3g



### DL-103 High Performance MC Cartridge

●The basic model of DL-103 series which was specifically designed for professional use. ●This highly respected model has been the standard for playback of records since 1965 by broadcasting and professionals.

Output voltage .....	0.3 mV
Frequency response .....	20 Hz—45 kHz
Impedance .....	40 $\Omega$
Channel separation .....	25 dB
Stylus force .....	2.5 g $\pm$ 0.3 g

- \* Specifications are subject to change for improvement without prior notice.
- \* Dolby and  are the trademarks of Dolby Laboratories.



## Head Amps, Transformers



### HA-1000 Input Signal-to-Noise Level — 157 dB MC Head Amplifier

Input impedance	100 $\Omega$
Voltage gain	32 dB/24 dB/0 dB
Frequency response	8 Hz—600 kHz
Dimensions: Amp	125 (W) $\times$ 68 (H) $\times$ 292 (D) mm
Power supply	107 (W) $\times$ 65 (H) $\times$ 141 (D) mm
Weight: Amp	1.8 kg
Power supply	1.4 kg



### HA-500 Input Signal-to-Noise Level — 157 dB MC Head Amplifier

Input impedance	100 $\Omega$
Voltage gain	24 dB/0 dB/32 dB
Frequency response	10 Hz—600 kHz
Dimensions	126 (W) $\times$ 71 (H) $\times$ 305 (D) mm
Weight	2.2 kg



### AU-340 High Performance Super Permalloy Core MC Step-up Transformer

Step-up ratio	1:33 (3 $\Omega$ ), 1:10 (40 $\Omega$ )
Primary impedance	3 $\Omega$ , 40 $\Omega$
Frequency response	10 Hz—120 kHz
Dimensions	155 (W) $\times$ 70 (H) $\times$ 215 (D) mm
Weight	2.1 kg



### AU-320 High Signal-to-Noise Ratio MC Step-up Transformer

Step-up ratio	1:36 (3 $\Omega$ ), 1:10 (40 $\Omega$ )
Primary impedance	3 $\Omega$ , 40 $\Omega$
Frequency response	10 Hz—100 kHz
Dimensions	97 (W) $\times$ 65 (H) $\times$ 155 (D) mm
Weight	800 g



### AU-310 High Signal-to-Noise Ratio MC Step-up Transformer

Step-up ratio	1:10
Primary impedance	40 $\Omega$
Frequency response	20 Hz—40 kHz
Dimensions	51 (W) $\times$ 53 (H) $\times$ 181 (D) mm
Weight	650 g

## Headphones ónicos



**AH-99** Wide frequency range open air type stereo headphones with docking jack

Impedance.... 80  $\Omega$   
Sensitivity .... 102 dB/1 mW  
Frequency response ..... 20 Hz–22 KHz  
Weight..... 110 g (without cord)



**AH-77** Wide frequency range open air type stereo headphones with docking jack

Impedance.... 50  $\Omega$   
Sensitivity .... 100 dB/1 mW  
Frequency response ..... 20 Hz–22 KHz  
Weight..... 110 g (without cord)



**AH-55** Wide frequency range open air type stereo headphones with docking jack

Impedance.... 32  $\Omega$   
Sensitivity .... 100 dB/1 mW  
Frequency response..... 20 Hz–22 KHz  
Weight..... 38 g (without cord)



**AH-33** Wide frequency range open air type stereo headphones with docking jack

Impedance.... 32  $\Omega$   
Sensitivity .... 100 dB/1 mW  
Frequency response ..... 20 Hz–22 KHz  
Weight..... 38 g (without cord)



**AH-P5** Wide frequency range open air type stereo headphones

Impedance.... 32  $\Omega$   
Sensitivity .... 100 dB/1 mW  
Frequency response ..... 20 Hz–22 KHz  
Weight..... 27 g (without cord)



**AH-P1** Wide frequency range open air type stereo ear speaker (micro cassette size)

Impedance.... 18  $\Omega$   
Sensitivity .... 109 dB/1 mW  
Frequency response ..... 20 Hz–22 KHz  
Weight..... 4.9 g (without cord)

# Amplifiers

DENON attaches importance to the music signal itself as a fundamental object of amplifier design. The improvement of both basic performance and reliability is the main goal. Accordingly, all DENON amplifiers feature ultra-wide frequency response over a wide dynamic range at extremely low distortion levels. This standard of performance is essential for the reproduction of today's improved music sources.

DENON's highly-rated features include:

- DENON's innovative Non-NFB Class-A design
- An RIAA deviation of  $\pm 0.2$  dB from 10 Hz to 100 kHz by the use of a Non-NFB type real time equalizer amplifier.
- Direct amplification without a single capacitor in the signal circuit.
- Real drive circuitry to amplify the signals without distortion, even at high output levels.



### **POA-8000 Highly Stabilized Non-NFB, Class-A, Monaural Power Amplifier**

- Featuring ultra-high stability and ultra-low noise power amplifier with DENON's non-NFB technology.
- Non-NFB class-A power amplifier delivers large output power (200W) using the real bias circuit.
- Self-control function by digital display. ● Large peak indication mode output level meter.

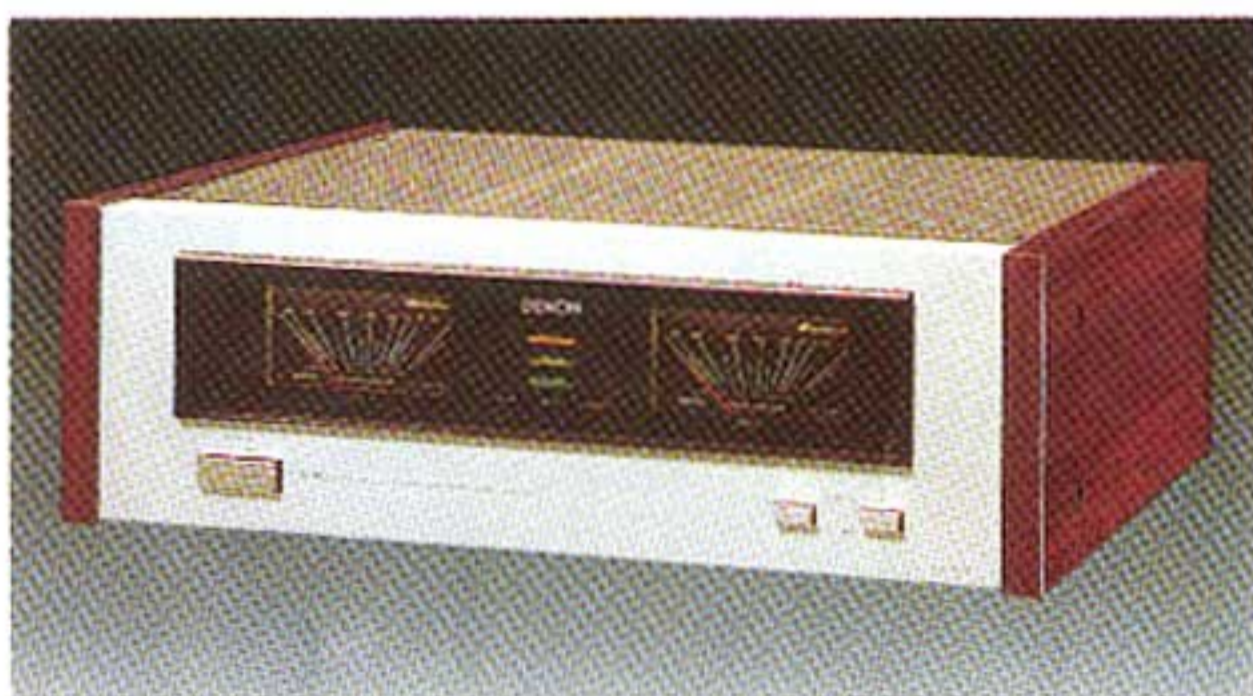
Rated output .....	200W 20 Hz - 20 kHz, 8 $\Omega$
Total harmonic distortion .....	0.003% (20 Hz - 20 kHz)
Signal-to-noise ratio .....	Better than 120 dB
Frequency response .....	1 Hz - 200 kHz +0, -3 dB
Slew rate .....	380 V/ $\mu$ sec
Dimensions .....	310 (W) $\times$ 188 (H) $\times$ 462 (D) mm
Weight .....	22 kg



## POA-3000 High Efficiency High Output Class-A Power Amplifier

- Output stage delivers 180 W of class-A output power.
- DENON's patented "real bias circuit" combines high efficiency with high output power.
- Newly-developed direct DC servo control circuit reduces noise and distortion.
- With side panels.

Rated output .....	180 W + 180 W (8 $\Omega$ )
Total harmonic distortion .....	0.003% (20 Hz - 20 kHz)
Frequency response .....	1 Hz - 350 kHz + 0, -3 dB
Signal-to-noise ratio .....	Better than 122 dB
Slew rate .....	300 V/ $\mu$ sec
Dimensions .....	495 (W) $\times$ 188 (H) $\times$ 459 (D) mm
Weight .....	34 kg



## POA-1500 Non-NFB Direct-A High output power Amplifier

- Non-NFB Direct-A power amplifier delivers large output power (150 W/ch)
- DENON's distortion servo circuit reduces static distortion to theoretical limits.
- Superior slew rate of 400 v/ $\mu$ sec for the latest in digital audio program.
- Large peak indication mode output level meter.
- Self-control function by LED display.
- With side panels.

Rated output .....	150 W + 150 W (8 $\Omega$ )
Total harmonic distortion .....	0.002% (20 Hz - 20 kHz)
Signal-to-noise ratio .....	Better than 124 dB
Frequency response .....	1 Hz - 300kHz + 0, -3 dB
Slew rate .....	400 v/ $\mu$ sec
Dimensions .....	470 (W) $\times$ 165 (H) $\times$ 410 (D) mm
Weight .....	22 kg



## PRA-6000 Preamplifier with Non-NFB Circuit

● Non-NFB circuits in all stages. ● High-speed non-NFB MC cartridge equalizer amplifier. ● Non-NFB Tone Control Circuit. ● Pure DC Servo Amplification from MC input to outputs. ● Direct Interface Terminals for a Digital Audio Disc Player. ● Clean sculptured design.

RIAA deviation.....	10 Hz—100 kHz $\pm$ 0.2 dB
Total harmonic distortion.....	0.002% (20 Hz—20 kHz)
Signal-to-noise ratio.....	MM: 86 dB, MC: 76 dB
Frequency response.....	2 Hz—300 kHz +0, -3 dB
Dimensions.....	455 (W) $\times$ 134 (H) $\times$ 392 (D) mm
Weight.....	15 kg



## PRA-1000 Non-NFB Super Equalizer Preamplifier

● Featuring non-NFB FET buffer circuit. ● Super equalizer enables perfect RIAA deviation from 20 Hz to 100 KHz  $\pm$  0.2 dB. ● All DC servo amplification from MC input to output. ● High speed regulation stability power supply circuit. ● With side panels.

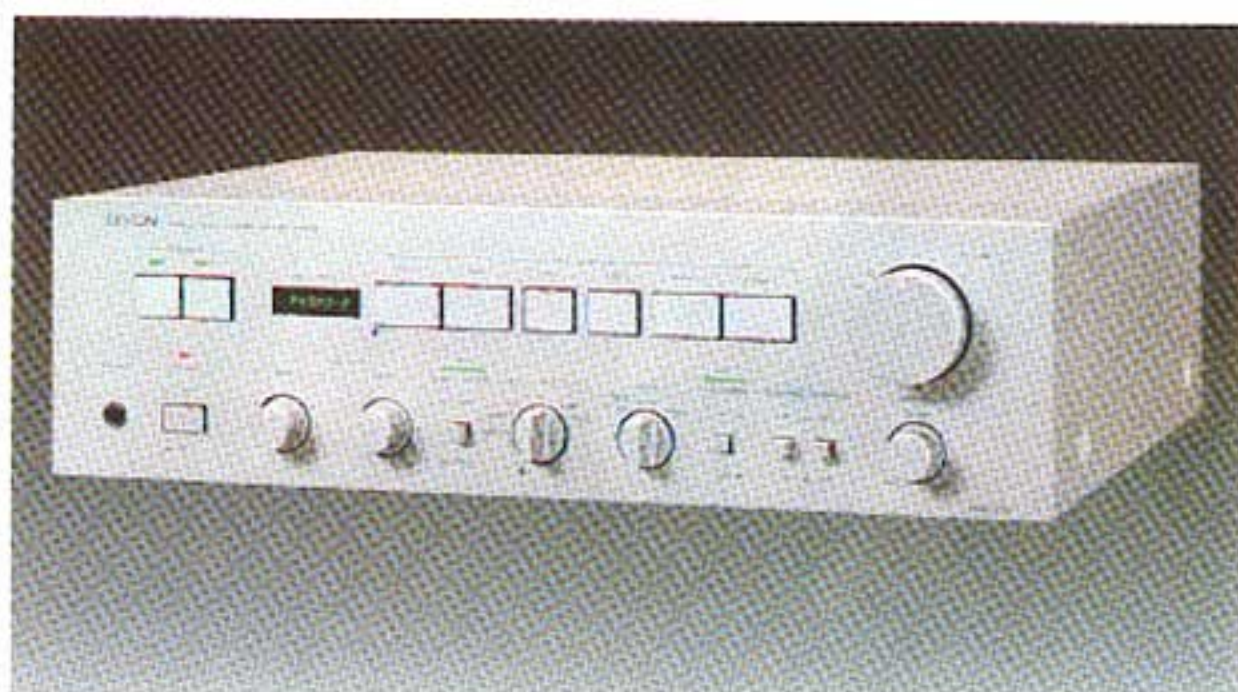
RIAA deviation.....	20 Hz—100 KHz $\pm$ 0.2 dB
Total harmonic distortion.....	0.002% (20 Hz—20 KHz)
Signal-to-noise ratio.....	MM: 90 dB, MC: 75 dB
Frequency response.....	1 Hz—300 KHz + 0, -3 dB
Dimensions.....	458 (W) $\times$ 115 (H) $\times$ 310 (D) mm
Weight.....	10 kg



## PMA-790 Non-NFB Direct-A High Output Integrated Amplifier

● Non-NFB Direct-A power amplifier delivers large 150 W + 150 W (8 Ω) output power. ● Super equalizer enables perfect RIAA deviation from 20 Hz – 100 kHz ± 0.2 dB. ● Superior slew rate of 350 V/μs for the latest in digital audio programs ● Completely capacitorless design in all signal circuits ● With side panels.

Rated output .....	150 W + 150 W (8 Ω)
Total harmonic distortion .....	0.002% (20 Hz – 20 kHz)
Frequency response .....	1 Hz – 300 kHz + 0, – 3 dB
RIAA deviation .....	20 Hz – 100 kHz ± 0.2 dB
Signal-to-noise ratio .....	MM: 90 dB MC: 75 dB AUX: 110 dB
Slew rate .....	350 V/μsec
Dimensions .....	506 (W) × 168 (H) × 451 (D) mm
Weight .....	20 kg



## PMA-770 Non-NFB Direct-A High Output Integrated Amplifier

● Newly developed non-NFB type amplifier; powerful 100 W output per channel. ● Non-NFB circuit eliminates the primary causes of dynamic distortion such as time delay. ● DENON's distortion servo circuit reduces static distortion to theoretical limits. ● Super equalizer enables perfect RIAA deviation from 20 Hz – 100 kHz ± 0.2 dB. ● Real drive circuit reduces distortion levels to 1/50th at actual speaker loads.

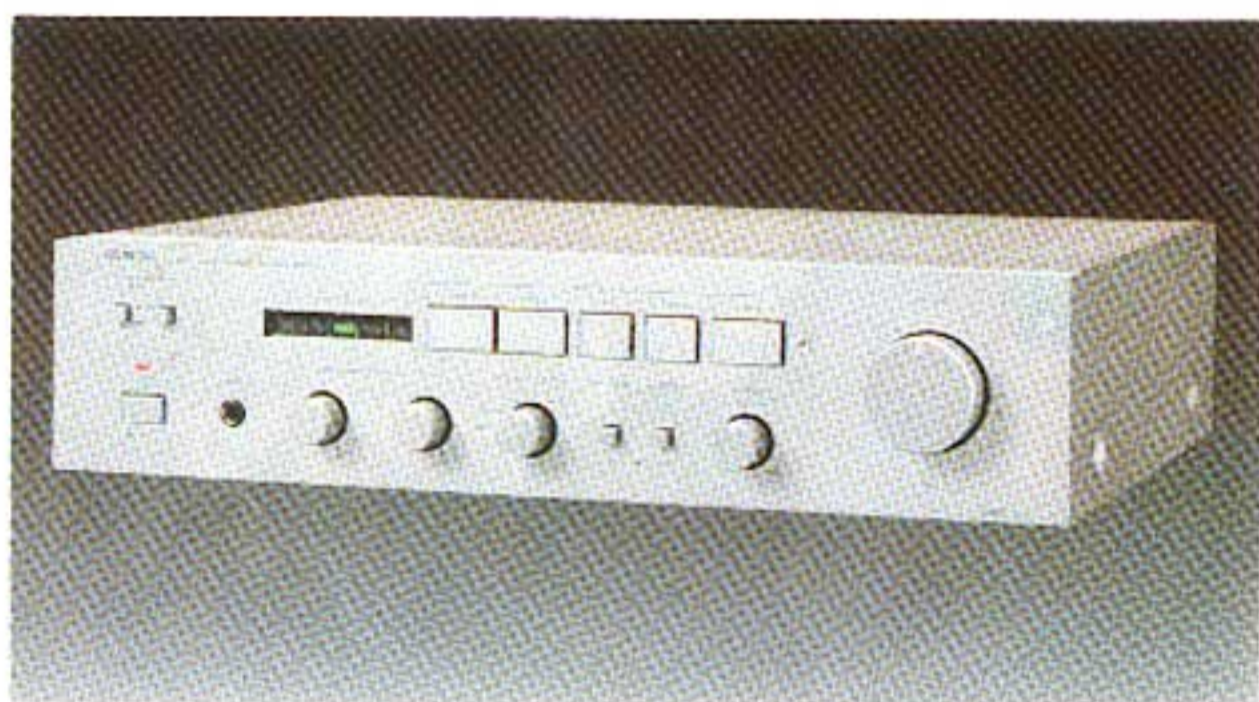
Rated output .....	100 W + 100 W (8 Ω)
Total harmonic distortion .....	0.005% (20 Hz – 20 kHz)
Frequency response .....	1 Hz – 250 kHz + 0, – 3 dB
RIAA deviation .....	20 Hz – 100 kHz ± 0.2 dB
Signal-to-noise ratio .....	AUX 110 dB, MM 90 dB, MC 73 dB
Slew rate .....	250 V/μsec
Dimensions .....	434 (W) × 132 (H) × 407 (D) mm
Weight .....	12 kg



## **PMA-750 Non-NFB Direct-A High Output Integrated Amplifier**

● Superior non-NFB type amplifier, 80 W output per channel. ● Non-NFB circuit eliminates the primary causes of dynamic distortion such as time delay. ● DENON's distortion servo circuit reduces static distortion to theoretical limits. ● Real drive circuit reduces distortion levels to 1/50th at actual speaker loads.

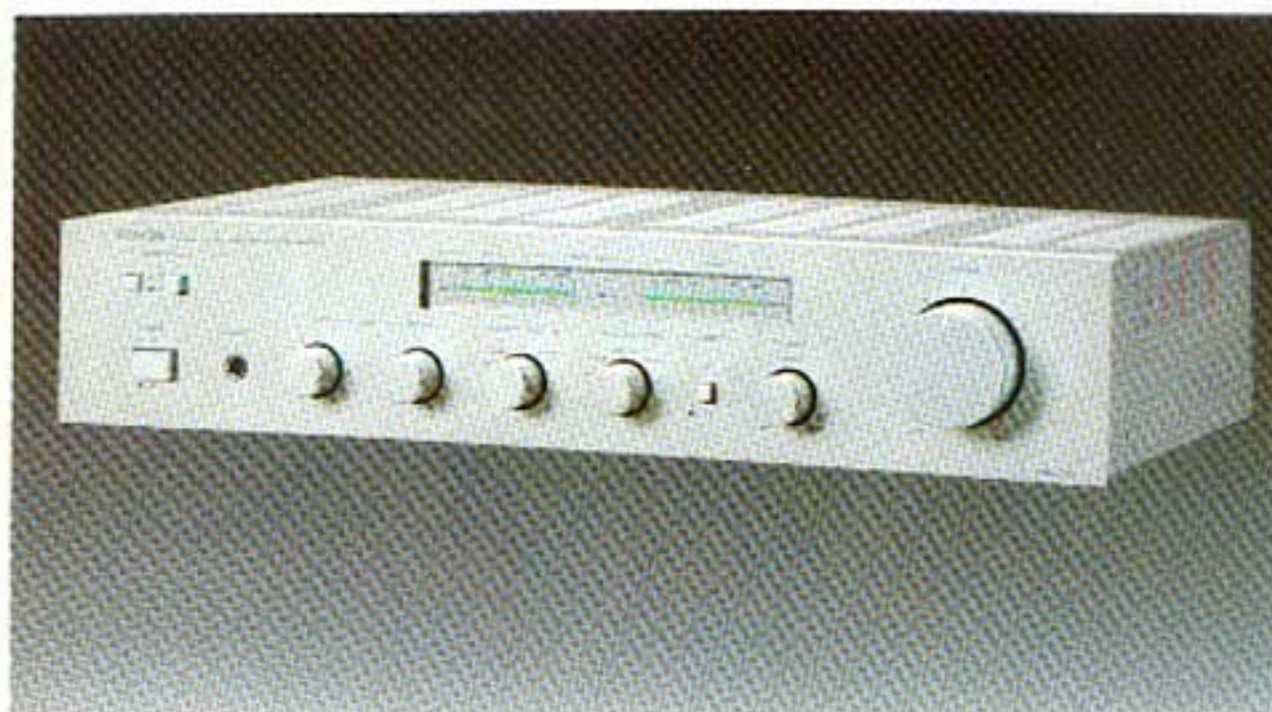
Rated output .....	80 W+80 W (8 Ω)
Total harmonic distortion .....	0.008% (20 Hz—20 kHz)
Frequency response .....	1 Hz—250 kHz +0, -3 dB
RIAA deviation .....	20 Hz—100 kHz ±0.2 dB
Signal-to-noise ratio .....	AUX 110 dB, MM 88 dB, MC 72 dB
Slew rate .....	200 V/μsec
Dimensions .....	434 (W) × 132 (H) × 407 (D) mm
Weight .....	12 kg



## **PMA-730 Non-NFB Direct-A High Output Integrated Amplifier**

● Superior non-NFB type amplifier, 60 W output per channel. ● Non-NFB circuit eliminates the primary causes of dynamic distortion such as time delay. ● A heavy-duty power supply maximizes non-NFB circuitry performance.

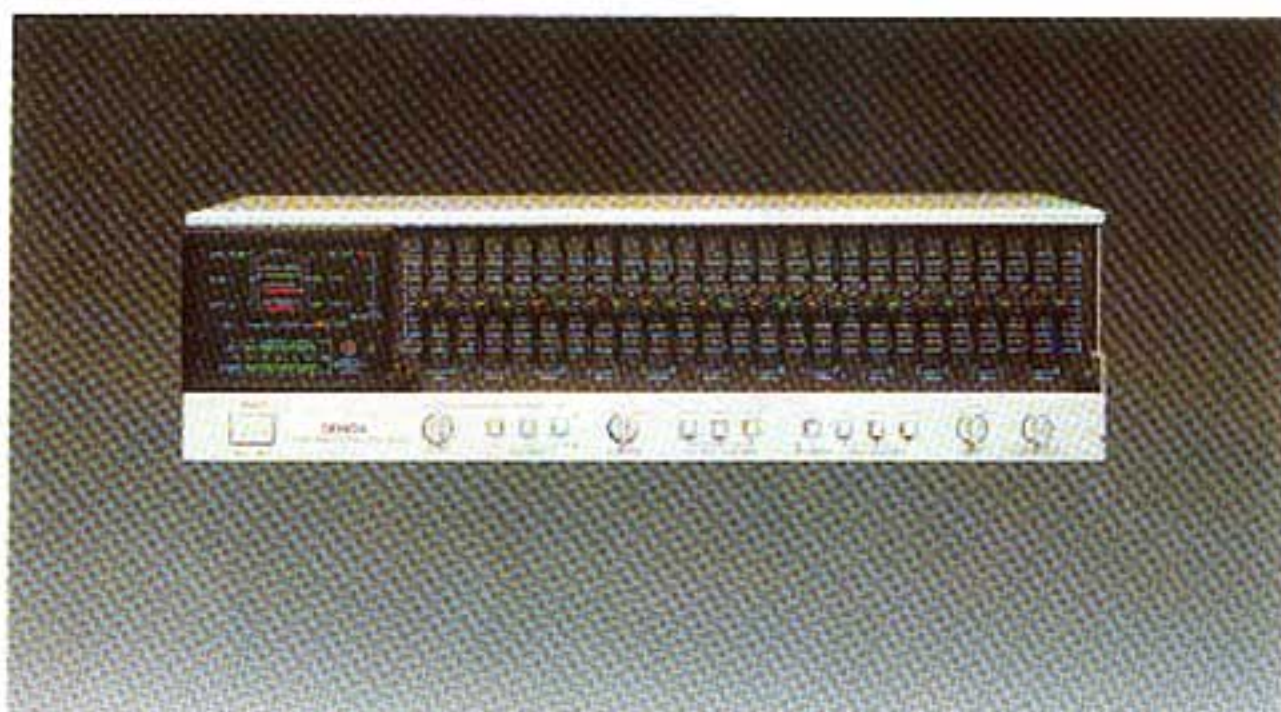
Rated output .....	60 W+60 W (8 Ω)
Total harmonic distortion .....	0.009% (20 Hz—20 kHz)
Frequency response .....	4 Hz—150 kHz +0, -3 dB
RIAA deviation .....	20 Hz—100 kHz ±0.3 dB
Signal-to-noise ratio .....	AUX 106 dB, MM 86 dB, MC 70 dB
Slew rate .....	150 V/μsec
Dimensions .....	434 (W) × 112 (H) × 390 (D) mm
Weight .....	9 kg



## PMA-710 Super Equalizer Non-switching Class-A Integrated Amplifier

- Non-switching class-A circuit eliminates switching distortion for improved sound characteristics.
- Ultra-wide frequency response from the Super Equalizer: 20 Hz—100 kHz performance with an RIAA deviation of only  $\pm 0.5$  dB, maximizing the performance of today's cartridges
- Quick response LED's indicator output power from 0 to 40 W
- Clean and functional front panel design

Rated output .....	40 W + 40 W (8 $\Omega$ )
Total harmonic distortion .....	0.03% (20 Hz—20 kHz)
Frequency response .....	5 Hz—150 kHz +0, -3 dB
RIAA deviation .....	20 Hz—100 kHz $\pm 0.5$ dB
Dimensions .....	434 (W) $\times$ 97 (H) $\times$ 292 (D) mm
Weight .....	6.5 kg



## DE-70 Dynamic sound Processor Stereo Graphic Equalizer

- Newly developed dynamic sound equalization circuitry with years of experience in the design and production of professional equipment.
- Independent twelve bands control for each channel.
- A full array of functions ready for the era of taping.
- Highly refined design sophistication.
- Built-in an expander function for wide dynamic range.

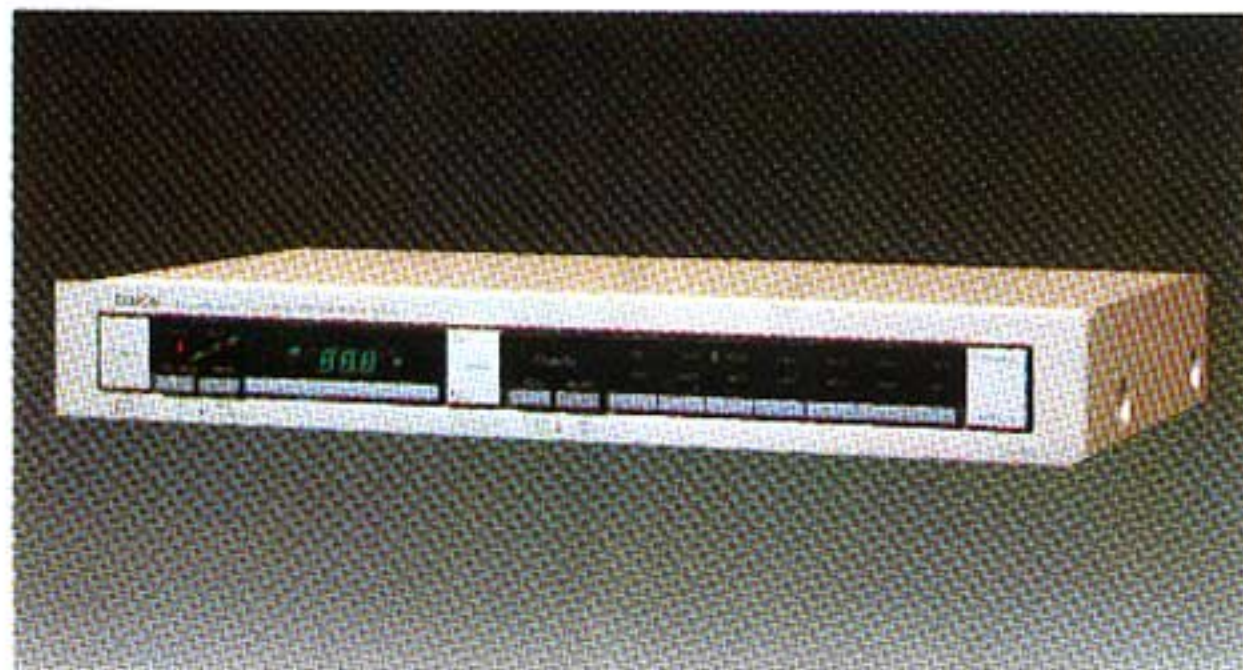
Frequency response .....	10 Hz—200 KHz +0, -2.5 dB
Total harmonic distortion .....	0.003%
Dynamic range .....	113 dB (1 KHz)
Variable range .....	$\pm 12$ dB (max)
Center frequency .....	16, 31.5, 63, 125, 250, 500 Hz, 1, 2, 4, 8, 16, 32 KHz
Dimensions .....	434 (W) $\times$ 132 (H) $\times$ 300 (D) mm
Weight .....	6 kg



# Tuners & Receivers

To significantly increase the performance of FM tuners, DENON stresses both theoretical analysis and testing to assist in the improvement of the fundamental performance of intermediate frequency, FM detection, and stereo demodulation circuitry. These aspects of tuner design are directly related to performance in the areas of harmonic distortion, intermodulation distortion, stereo separation, signal-to-noise ratio, and other critical evaluation parameters. This research effort has enabled DENON to offer tuners that combine high performance with ease of operation.

- Optional high gloss wood side panels  
(DRA-700)



### **TU-750S Digital Display Synthesized tuning FM/AM Stereo Tuner**

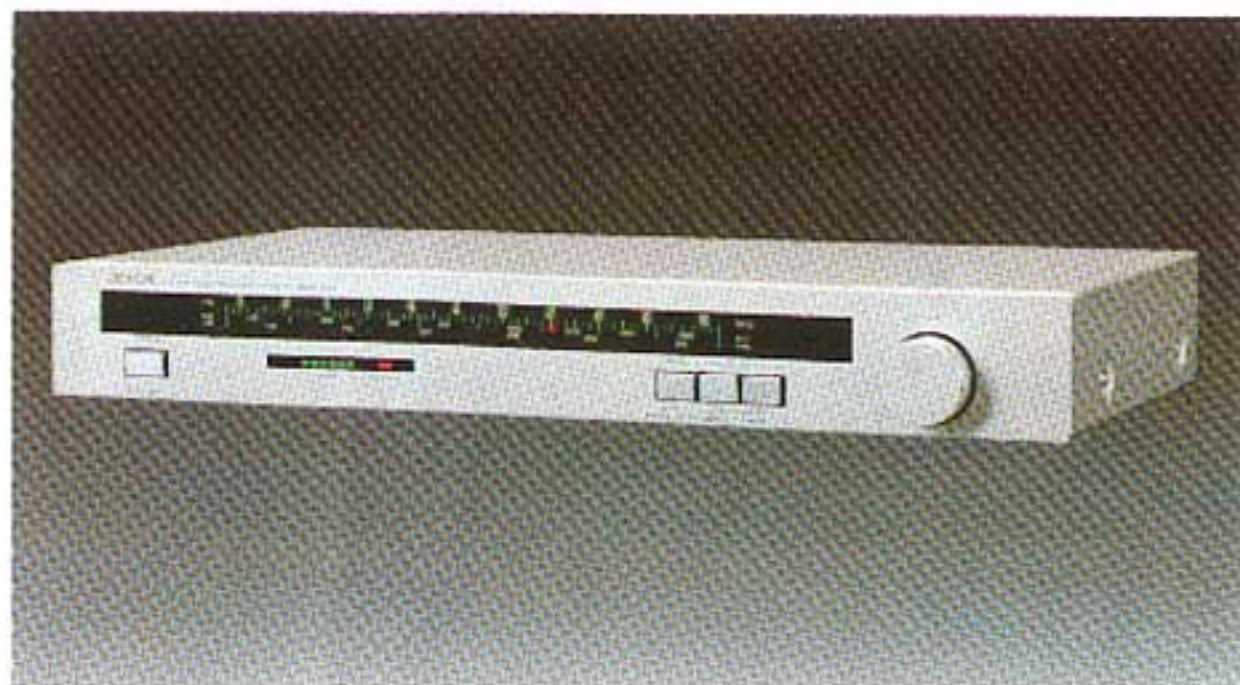
● Digital synthesized tuning FM/AM stereo tuner for precise station selection and presetting of 7 FM and 7 AM stations. ● Built-in program memory and auto/manual tuning mode permit one touch tuning. ● A high sensitivity MOS FET front-end achieves outstanding signal-to-noise ratio. ● DC configuration audio amplifier section.

#### FM section

Usable sensitivity	1.8 $\mu$ V (10.3 dBf)
Frequency response	20 Hz - 15 kHz +0.2 dB, -1.5 dB
Stereo separation	55 dB (1 kHz)

#### AM section

Usable sensitivity	18 $\mu$ V
Dimensions	434 (W) $\times$ 66 (H) $\times$ 300 (D) mm
Weight	3.1 kg



## TU-710 FM/MW/LW Stereo Tuner

● Simple and precise tuning with improved accuracy, thanks to DENON's LED tuning indicators. Two-color design lights up in red (to indicate tuning) then lights in green to indicate optimum tuning. ● Superior low noise FET front end for high sensitivity and high signal-to-noise ratio ● Linear phase ceramic filter assures high selectivity and low distortion in the IHF stage.

### FM section

Usable sensitivity .....	0.9 $\mu$ V (75 $\Omega$ , 10.3 dBf) *
Frequency response .....	20 Hz - 15 kHz +0.2, -1.5 dB
Stereo separation .....	40 dB (1 kHz)

### MW section

Usable sensitivity .....	15 $\mu$ V
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### LW section

Usable sensitivity .....	40 $\mu$ V
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Dimensions .....	434 (W) $\times$ 66 (H) $\times$ 300 (D) mm
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Weight .....	3.3 kg
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## **DRA-700 Quartz Synthesizer FM/AM Stereo Non-NFB Receiver**

●Non-negative feedback circuit designs a simple configuration from input to output. ●DENON's distortion servo circuit reduces static distortion. ●Non-switching circuitry eliminates coupling capacitors in the signal circuit. ●Digital frequency display synthesizer tuning system

### **Amplifier section**

Rated output .....	60 W + 60 W (8 Ω)
Total harmonic distortion .....	0.015% (20 Hz—20 kHz)
Signal-to-noise ratio .....	90 dB(MM. 5mV input) 76 dB(MC. 0.5mV input)

### **FM section**

Usable sensitivity .....	1.8 μV (10.3 dBf)
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### **AM section**

Usable sensitivity .....	300 μV/m
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Dimensions .....	434 (W) × 112 (H) × 408 (D) mm
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Weight .....	10.5 kg
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## **DRA-400 Quartz Synthesizer FM/AM Stereo Class-A Receiver**

●Class-A circuitry for clean, powerful sound: 45W/ch with THD at 0.05% (20 Hz—20 kHz). ●10 station preset memory. ●Quartz synthesizer tuning for crystal-accurate reception.

### **Amplifier section**

Rated output .....	45 W + 45 W (8 Ω)
Total harmonic distortion .....	0.05% (20 Hz—20 kHz)
Signal-to-noise ratio .....	86 dB(MM. 5mV input) 68 dB(MC. 0.5mV input)

### **FM section**

Usable sensitivity .....	1.8 μV (10.3 dBf)
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### **AM section**

Usable sensitivity .....	300 μV/m
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Dimensions .....	434 (W) × 112 (H) × 408 (D) mm
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Weight .....	9 kg
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## **DRA-300 Quartz Synthesizer FM/AM Stereo Class-A Receiver**

●Non switching class-A circuit eliminates the primary causes of dynamic distortion. ●High performance phono equalizer amplifier employs low noise dual FETs at the first stage ●Synthesizer tuning system with digital display of tuned frequency.

### **Amplifier section**

Rated output .....	33 W + 33 W (8 $\Omega$ )
Total harmonic distortion .....	0.05% (20 Hz—20 kHz)
Signal-to-noise ratio .....	80 dB (MM, 5mV input)

### **FM section**

Usable sensitivity .....	2.0 $\mu$ V (11.2 dBf)
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### **AM section**

Usable sensitivity .....	300 $\mu$ V/m
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Dimensions .....	434 (W) $\times$ 112 (H) $\times$ 408 (D) mm
Weight .....	7.6 kg

# Cassette Decks

The role of a tape deck is to record and reproduce audio signals faithful to the original source. Stability of tape travel, electro-magnetic conversion efficiency, signal transmission, and other factors have a large bearing on performance. DENON has a wealth of experience in these parameters with the design and manufacture of professional recording and playback equipment. This technical expertise can be found in our cassette decks as well. A good example is the DENON three-head tape deck which utilizes an exclusive tape tension servo system that assures excellent tape-to-head contact as well as perfectly stable tape transport. Highly advanced electro-magnetic conversion, the finest amplification circuitry, microprocessor control technology and countless other advances by DENON assure further improvement in sound reproduction quality.

- Optional high gloss wood side panels and remote control unit (RC-57)



### **DR-M4      3-head Dual-capstan Drive System Stereo Cassette Deck**

●Dual-capstan drive system by flat twin direct drive motor. ●Fluorescent tape counter shows remaining time display. ●New type "Non-slip drive" mechanism for stable tape winding. ●Independent MPX filter switch. ●Memory stop system linked to the tape counter. ●Automatic music search system.

Frequency response	20 Hz—23 kHz (metal tape)
Wow and flutter	0.027% wrms
Signal-to-noise ratio	73 dB (Dolby C)
Dimensions	434 (W) × 115 (H) × 286 (D) mm
Weight	5.8 kg



**DR-M3      3-head Microcomputer-  
controlled Tape Tuning System  
Stereo Cassette Deck**

●A microcomputer-controlled tape tuning system, automatically tunes itself for the optimal recording characteristics ●A cam-servo motor with a microcomputer control rotary encode checking system. ●Improved tape tension servo sensor mechanism, much more stable tape head contact and tape travel.

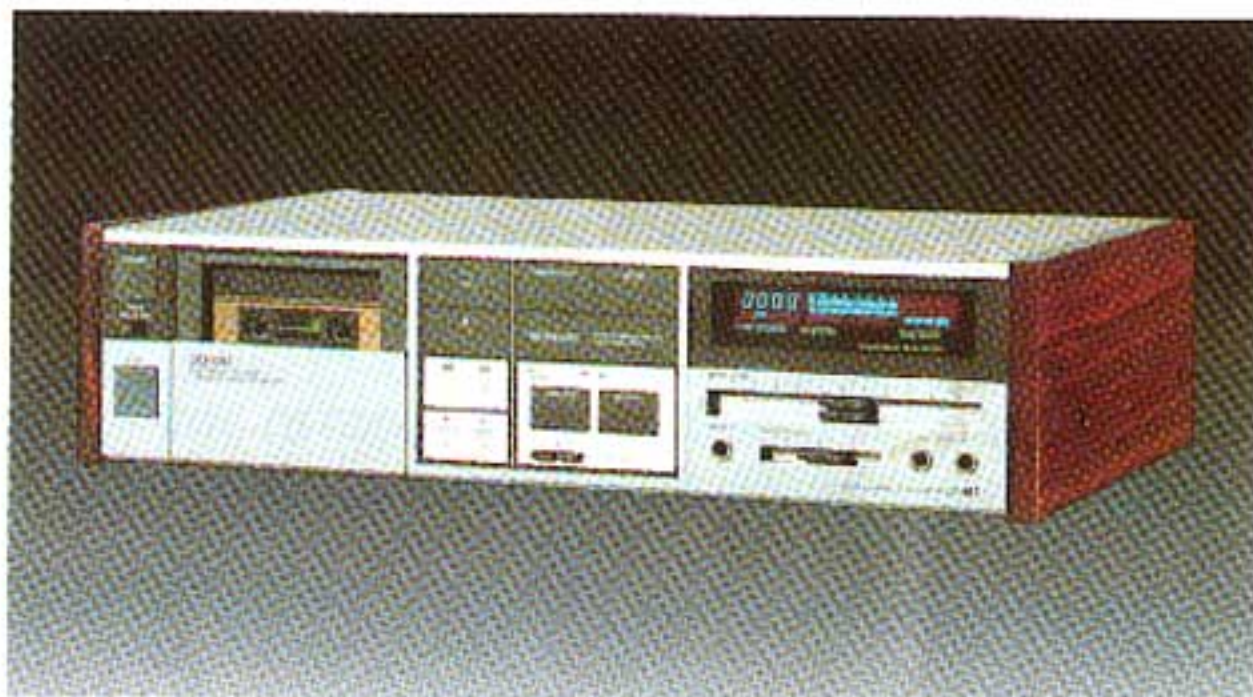
Frequency response .....	20 Hz—23 kHz (metal tape)
Wow and flutter .....	0.027% wrms
Signal-to-noise ratio .....	73 dB (Dolby C)
Dimensions .....	434 (W) × 115 (H) × 286 (D) mm
Weight .....	5.7 kg



**DR-M2      3-head Tape Tension Servo  
System Stereo Cassette Deck**

●Newly developed flat D.D. capstan servo motor. Drawbacks from belt or idler designs are completely eliminated. ●The cam-servo motor with a microcomputer control rotary encode checking system. ●Improved tape tension servo sensor mechanism. ●New non-slip reel drive mechanism.

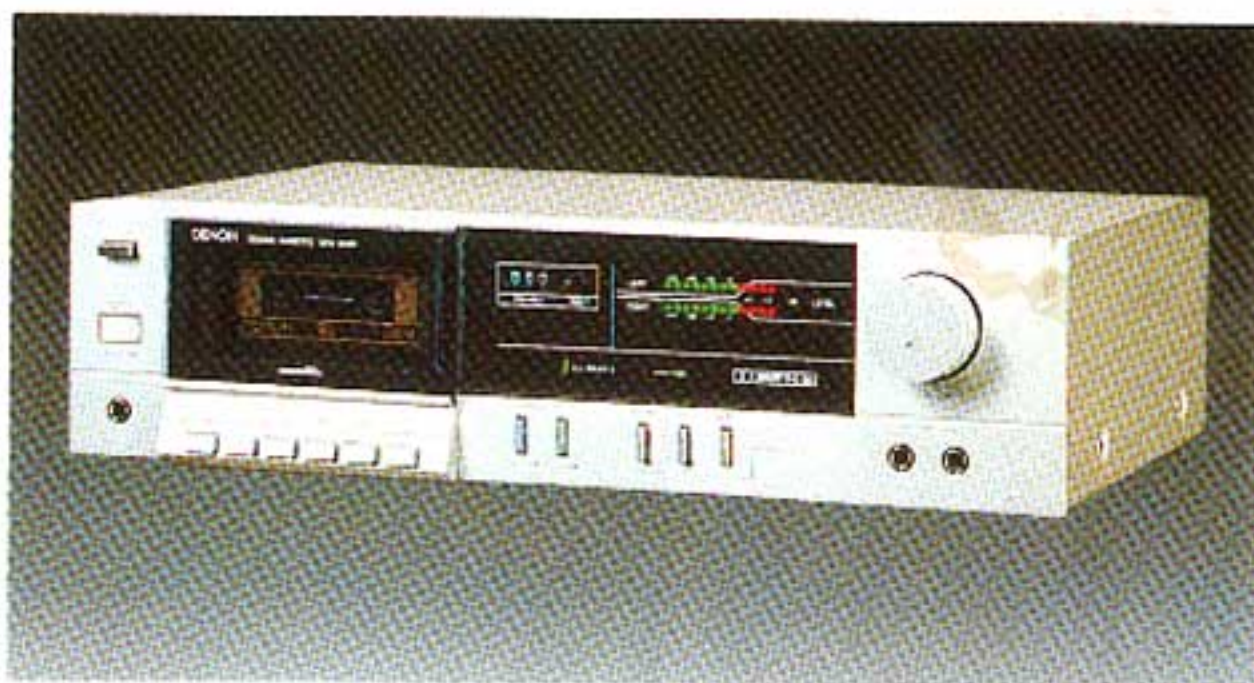
Frequency response .....	20 Hz—23 kHz (metal tape)
Wow and flutter .....	0.027% wrms
Signal-to-noise ratio .....	73 dB (Dolby C)
Dimensions .....	434 (W) × 115 (H) × 286 (D) mm
Weight .....	5.6 kg



**DR-M1      2-head Microcomputer-  
controlled Cam Encord  
Mechanism Stereo Cassette  
Deck**

●Microcomputer Controlled Cam encord method "silent mechanism". ●Automatic fade in/fade out system. ●Automatic tape selector (metal, chrome, normal). ●Memory stop system. ●Automatic timer play and record function. ●DENON originally developed REC/MUTE system.

Frequency response .....	20 Hz— 20 kHz (metal tape)
Wow and flutter .....	0.035% wrms
Signal-to-noise .....	73 dB (Dolby C)
Dimensions .....	434(W) × 115(H) × 286(D) mm
Weight .....	5.5 kg



**DR-170      Stereo Cassette Deck with Dolby  
C and Soft-touch Operation**

●Dolby C copes with the increasing dynamic range of modern music sources by offering more pronounced noise reduction capability than the Dolby B system now widely used. ●Soft-touch control buttons mean quieter, more convenient operation. One-touch recording function for greater ease ●One touch tape selector buttons ●Automatic timer play and record function

Frequency response .....	20 Hz— 18 kHz (metal tape)
Wow and flutter .....	0.05% wrms
Signal-to-noise ratio .....	70 dB (Dolby C)
Dimensions .....	434 (W) × 115 (H) × 283 (D) mm
Weight .....	4.3 kg

## Cassette Tapes

# Cassette Tapes

The development of DENON magnetic recording tape began in 1953, coinciding with the beginning of plastic-based tape. As early as 1959, DENON open-reel tape was on the market. Immediately after the adoption of international specifications and standards, DENON began development of cassette tape as well. In 1967, our first pre-recorded music cassettes were released in Japan, followed by the introduction of premium blank tapes in 1968. Steady improvements in magnetic recording tape technology led to DENON's unique double-coating process.

DENON's R & D efforts in metal tape date back to 1971. Over a decade of research is embodied in the DXM metal tape.



**DXM Metal Position**  
(EQ:  $70\mu\text{s}$ )



**DX8 High Position**  
(EQ:  $70\mu\text{s}$ )



**DX7 High Position**  
(EQ:  $70\mu\text{s}$ )



**DX4 Normal Position**  
(EQ:  $120\mu\text{s}$ )



**DX3 Normal Position**  
(EQ:  $120\mu\text{s}$ )



**DX1 Normal Position**  
(EQ:  $120\mu\text{s}$ )



# Over 70 years of experience in the recording and reproduction of music

In the more than 70 years since our founding in 1910, DENON has continued the development of state-of-the-art audio components for the discerning listener. Currently an integrated audio component manufacturer, DENON pursues the ideal of exact music reproduction by its superior componentry, based on long years of experience in all phases of music recording and reproduction. Today's DENON products embody the vast wealth of sophisticated technology developed over the years.

With extensive experience in professional and broadcast equipment accumulated over the past 40 years, DENON has rightly earned a worldwide reputation as the leader in sound and music reproduction. From the development of PCM recording to the design and manufacture of top level professional equipment, DENON's uncompromising quality and reliability has become the standard in fine audio components for millions of music lovers around the world.

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