

DENON

Professional Audio Component





POA-1003 Power Amplifier

POA-1003 was introduced to do away with unnecessary decoration with the sole object of listening to music. Simple in design, with no distortion, it offers quick responding transparent sound by providing circuitry for DC amplifiers. Left and right completely monaural constitution. Either side is provided with an excessive power circuit, highly accurate peak meter allowing ultra wide, and low distortion.

- DC power amplifier with features of cascode coupling at the first stage low noise FET differential amplifier, a stage of current mirror differential amplifier with emitter follower predriver, bipolar type power transistor of a class with a collector loss of 100 W in a novel circuitry of pure comple-



POA-1001 Power Amplifier

Usually, for large output power amplifiers, a large number of power transistors are used in parallel, making it difficult to bring out its characteristics. POA-1001, for the first time, was able to realize 100 W + 100 W by a single push-pull, proving that good sound reproduction is an absolute condition.

- To the last stage transistor, which constitutes a decisive factor in the performance of a power amplifier, a newly developed bipolar power transistor



PMA-850 Integrated Amplifier

A new series of DENON amplifiers, incorporating a wide dynamic range, low noise MC amplifier. It reaches the highest class in the most fundamental characteristic of amplifiers both in distortion factor and S/N separation. By coupling all stages with a pure complementary circuit from MC amplifier to power amplifier using both PNP, NPN transistors, an ultra low distortion rate of 85 W + 85 W was achieved. • An DC power amplifier placing importance on a quick build-up characteristic by incorporating a new amplifying element. Distortion factor less than 0.01% (20 Hz - 20 kHz). • Toroidal core power transformer which has an independent coil for left and right channels for exceptional regulation. • Employment of an ultra low noise transistor permits a high S/N ratio, head amplifier for MC type cartridge (74 dB IHF-A), and equalizer amplifier (89 dB IHF-A). • Provided with direct couple switch for direct connection of equalizer amplifier and

mentary ICL OCL, producing a wide band, low distortion, and high S/N ratio. • A stable DC drift of 1.6 mV/°C. • Exceptional damping factor of 200. • Highly stabilized constant voltage circuitry use in the first stage power section, oversized capacitor 88,000 μ F, left and right independent transformer.

SPECIFICATION

Type: Silicon transistor, DC power amplifier
 Rated output (Both channel driven):
 20 Hz - 20 kHz (4 Ω): 100 W rms at each channel
 20 Hz - 20 kHz (8 Ω): 85 W rms at each channel
 T.H.D. (at rated output): 20 Hz - 1 kHz: 0.005%, 20 kHz 0.03%
 Intermodulation distortion: 0.02%
 Power bandwidth: 3 Hz - 70 kHz
 DC 100 kHz +0 dB, -1 dB
 1 V rms/50 k Ω
 Output impedance/input impedance: 0.04 Ω /200 (8 Ω)
 S/N ratio: 119 dB (IHF A)
 Low filter: 20 Hz (6 dB/oct)
 Power supply and power consumption: AC 120 V/60 Hz 250 W
 AC 220/240 V 50/60 Hz
 410 (W) x 200 (H) x 285 (D) mm
 Dimensions:
 Weight: 18 kg

with a collector loss of 150 W was used after making every possible improvement in the switching characteristics. • Balance drive system by 2-stage differential amplifier current mirror circuit. • Independent left and right power transformers, rectified circuitry, completely monaural constitution. • Oversized capacitor 88,000 μ F. • Oversized heat sink.

SPECIFICATION

Type: Silicon transistor, DC power amplifier
 Rated output (Both channel driven):
 20 Hz - 20 kHz (4 Ω): 125 W rms at each channel
 20 Hz - 20 kHz (8 Ω): 100 W rms at each channel
 T.H.D. (at rated output): 20 Hz - 20 kHz: 0.05%
 Intermodulation distortion: 0.05%
 Power bandwidth: 3 Hz - 70 kHz
 Frequency response: 3 Hz - 100 kHz
 1 V rms/50 k Ω
 Input sensitivity/input impedance: 0.08 Ω /100 (8 Ω)
 Output impedance/damping factor: 110 Ω
 S/N ratio: 118 dB (IHF A)
 Low filter: 10 Hz (18 dB/oct)
 Power supply and power consumption: AC 120 V/60 Hz 250 W
 AC 220 V/240 V 50/60 Hz
 410 (W) x 200 (H) x 280 (D) mm
 Dimensions:
 Weight: 22 kg

power amplifier. • A unique design of two tone color, imparting a sense of high class structural grace.

SPECIFICATION

Type: Power amplifier section
 Rated output (Both channels driven):
 1 kHz (T.H.D. 0.05% 4 Ω): 110 W rms at each channel
 20 Hz to 20 kHz (T.H.D. 0.01% 8 Ω): 85 W rms at each channel
 Harmonic distortion (at rated output, 20 Hz to 20 kHz): Less than 0.01%
 Intermodulation distortion: 60 Hz/7 kHz: 4:1 (at rated output): Less than 0.02%
 Power bandwidth: (Both channels driven, 8 Ω): 5 Hz to 100 kHz
 Frequency response (at 0.5 W output, -1 dB): 5 Hz - 100 kHz +0 dB, -1 dB
 Input sensitivity/impedance: 1 V rms/50 k Ω \pm 10%
 (20 Hz to 20 kHz): Less than 0.16 Ω
 Output Impedance: 122 Ω
 Signal to noise ratio (IHF, A network at input terminal shorted): 1 V rms/50 k Ω
 Pre amplifier section: 2.5 mV rms/50 k Ω
 Rated output/impedance: Maximum allowable input PHONO \pm 0.2 dB
 Input sensitivity/impedance: 200 mV rms (1 kHz)
 Phono: 100 Hz \pm 8 dB
 RIAA deviation (20 Hz to 20 kHz): 10 kHz \pm 8 dB
 Maximum allowable input PHONO: AC 120 V/60 Hz
 Tones control frequency response: 434 (W) x 154 (H) x 400 (D) mm, 17 kg
 Bass: 200 mV rms (1 kHz)
 Treble: 100 Hz \pm 8 dB
 Power source: AC 120 V/60 Hz
 Dimensions, Weight:

Integrated Amplifier, P.C.C Unit



PMA-701 Integrated Amplifier

The 3 power transformer system and power amplifier section which have raised the dynamic and static characteristics to a high level. By employing a can type power transistor, the improvement in the distortion of high frequency waves has been extended to an exceptionally wide range. In the initial 3 power source transformer, the dynamic or static crosstalk in the left and right power section, or between preamplifiers, is virtually zero.

- PCC installation. • Direct coupled phono input. • Improved function with function switch exclusively for recording. • Continuous variable 2 dB \pm 5 stage tone circuit with defeat switch. LOW/HIGH filter. • Pure complementary direct coupled differential amplifier two power supply type OCL power circuitry.

A new series of DENON amplifiers. A 3 power supply transformer employed to obtain a low distortion factor, high S/N, and high separation.



PMA-501 Integrated Amplifier

Direct coupled phono input. The section of the cartridge terminal and equalizer amplifier is directly coupled in a single body. Since there is no shield wire to circumvent the function switch, there is no degrading of the high frequency area characteristics bringing out the cartridge characteristics in the original form.

- Incorporates a PCC installation. • Direct coupled phono input. • Equipped with a function switch exclusively for recording. • 2 power supply transformer. • Pure complementary, direct coupled at all stages, differential amplifier. 2 power supply OCL power circuitry. Continuous variable 2 dB + 5 stage tone circuit with a defeat switch. • Designed for a high S/N, ultra low distortion function.



PCC-1000 P.C.C Unit

A World of 40 dB which DENON has Developed

The stereo separation of phono cartridges is only about 25 to 30 dB (1 kHz). No matter how superior an amplifier may have been, it was not possible to avoid the 25 to 30 dB crosstalk when a record was reproduced. The PCC, which DENON alone can offer, has been able to take the lead in music records by a separation of 40 dB. A new world of 40 dB never before experienced. When used with a separate amplifier or premain amplifier you possess, it will reduce the cartridge crosstalk by about -40 dB, the sound image localization becomes clear, and it further reduces the sense of distortion.

SPECIFICATION

All silicon transistor stereo pre-main amplifier

Type:
Power amplifier section
Rated output (Both channels driven)
20 Hz to 20 kHz (T.H.D. 0.05%, 4 Ω):
20 Hz to 20 kHz (T.H.D. 0.05%, 8 Ω):
Harmonic distortion (at rated output,
20 Hz to 20 kHz):
Intermodulation distortion
60 Hz/7 kHz: 4:1 (at rated output):
Power bandwidth
(Both channels driven, 8 Ω):
Frequency response
(at 0.5 W output, -1 dB):
Input sensitivity/impedance
(20 Hz to 20 kHz):
Output impedance:
Signal to noise ratio (IHF A network
at input terminal shorted):
Pre amplifier section
Rated output/impedance:
Input sensitivity/impedance:
Phono:
RIAA deviation (20 Hz to 20 kHz):
Maximum allowable input PHONO (1 kHz):
Signal to noise ratio (IHF A network):
Phono:
Base:
Trebble:
Power source and power consumption:
Power source and power consumption:
AC 220/240 V 50 Hz, 450 W
(at max. output power)
AC 120 V 60 Hz 320 VA
(at 1/3 output power)
430 (W) \times 147 (H) \times 310 (D) mm, 13.5 kg

Dimensions, weight:

SPECIFICATION

All silicon transistor stereo pre main amplifier

Type:
Power amplifier section
Rated output (Both channels driven):
20 Hz to 20 kHz (T.H.D. 0.05%, 4 Ω):
20 Hz to 20 kHz (T.H.D. 0.05%, 8 Ω):
Harmonic distortion (at rated output,
20 Hz to 20 kHz):
Intermodulation distortion
60 Hz/7 kHz: 4:1 (at rated output):
Power bandwidth
(Both channels driven, 8 Ω):
Frequency response
(at 0.5 W output, -1 dB):
Input sensitivity/impedance
(20 Hz to 20 kHz):
Output impedance:
Signal to noise ratio (IHF A network
at input terminal shorted):
Pre amplifier section
Rated output/impedance:
Input sensitivity/impedance:
Phono:
RIAA deviation (20 Hz to 20 kHz):
Maximum allowable input PHONO (1 kHz):
Signal to noise ratio (IHF A network):
Tone control frequency response:
Bass:
Trebble:
Power source and power consumption:
Power source and power consumption:
AC 220/240 V 50 Hz, 360 W
(at max. output power)
AC 120 V 60 Hz 180 W
(at 1/3 output power)
430 (W) \times 146 (H) \times 321 (D) mm
13 kg

Dimensions:

Weight:

tion. Connection should be made to the equalizer amplifier output terminal or either preamplifier or premain amplifier, or between the TAPE-REC out put terminal and TAPE-PB input terminal. The TAPE terminal of the amplifier can be used safely for this model because this model incorporates its own terminal and tape monitor SW enabling a tape recording of sound, cancelling phono crosstalk.

Specification

Gain:
0 \pm 0.2 dB
Output level:
150 mV rms
15 V rms
Allowable (MAX) output:
50 k Ω (1 kHz)
Load impedance:
over 50 k Ω
Frequency response:
20 Hz - 20 kHz \pm 0.2 dB
Better than 80 dB (IHF-A)
S/N ratio:
Less than 0.01%
Total harmonic distortion:
20 Hz - 20 kHz, 1 V rms
Less than 0.05%
20 Hz - 20 kHz 10 V rms
AC 220/240 V 50 Hz
6 W
Power consumption:
AC 120 V 60 Hz
410 (W) \times 81 (H) \times 190 (D) mm
3.5 kg

Control Amplifier, FM Tuner



PRA-1003 Control Amplifier

PRA-1003 was introduced as a control amplifier for the new era, bringing into full play the operation factors of a tape deck which has come to assume an important position as the program source. By introducing new circuitry, it incorporates a high S/N ratio equalizer amplifier, low distortion, and ultra wide range flat amplifier.

- Input capacitorless (ICL).
- Low noise FET parallel differential amplifier circuitry in the first stage, current mirror differential predrive pure complementary PP output with emitter follower, 14 transistors on one channel, high S/N 86 dB, and equalizer amplifier.
- PHONO 2 is provided with an impedance change-over switch which will bring out the full performance of



PRA-1001 Control Amplifier

Pursuing the fundamentals of control amplifiers, this product is a result of looking into their functions, performance, design and other related problems. All the functions are incorporated.

- A 7 transistor equalizer amplifier with 2-stage differential amplifier, current mirror circuit, last stage Class A pure complementary push-pull coupling.
- Low distortion tone control circuitry of the NF type by means of passing through a complementary push-pull buffer with differential and inverted amplifier circuits.
- Unique low distortion filter circuit capable of changing the cut-off frequency by change-over to an independent filter amplifier.
- Distinct localization of the sound image with separation characteristics of 80 dB (20 Hz to 20 kHz).

the cartridge. Input terminals are all gold plated. • Simultaneous recording of 3 tape decks 1 $\frac{2}{3}$ tape copy possible. REC FUNCTION to meet the era of real recording.

SPECIFICATION

Type: All silicon transistor stereo control amplifier
PHONO-1 2.5 mV/50 k Ω
PHONO-2 2.5 mV/30, 50, 100 k Ω
320 mV (1 kHz)
Max. allowable input: ± 0.2 dB (20 Hz - 20 kHz)
Max. output/rated output: 10 V/1 V
T.H.D.: 0.003%, 20 Hz - 20 kHz, 3 V
Frequency response: 10 - 100 kHz, ± 0 dB, -1 dB
IHF A network better than 86 dB
S/N ratio: 0, -10, -20 dB (0 dB = 16.5 dB)
Gain control: Low 20 Hz (18 dB/oct)
Filter: High 9 kHz (6 dB/oct)
-100 dB (20 Hz - 1 kHz) -80 dB (20 kHz)
Crosstalk: (PHONO IN - output, defeat)
Power supply and power consumption: AC 120 V 60 Hz, 220/240 V 50/60 Hz, 10 W
Dimensions: 410 (W) x 170 (H) x 270 (D) mm
Weight: 7 kg

SPECIFICATION

Type: All silicon transistor stereo control amplifier
PHONO-1 3.2 mV/50 k Ω
PHONO-2 3.2 mV/30, 50, 100 k Ω
300 mV (1 kHz)
Max. allowable input: ± 0.2 dB (20 Hz - 20 kHz)
Max. output/rated output: 10 V/1 V
T.H.D.: 0.003%
Frequency response: 10 Hz - 100 kHz ± 0.1 dB, -0.5 dB
S/N ratio: IHF A network better than 78 dB
Gain control: 0, -10, -20 dB
Filter: 10 Hz & 40 Hz (18 dB/oct) 7 kHz & 14 kHz (18 dB/oct)
-80 dB (20 Hz - 1 kHz - 20 kHz) (PHONO IN - output, defeat)
Crosstalk: AC 120 V 60 Hz, 220/240 V 50/60 Hz, 18 W
Power supply and power consumption: 410 (W) x 152 (H) x 271 (D) mm
Dimensions: 8 kg
Weight:

SPECIFICATION

FM SECTION
Tuning frequency: 88 to 108 MHz
Usable sensitivity (IHF): 1.7 μ V (9.8 dBf)
Effective selectivity: 65 dB
Signal to noise ratio: 84 dB
Total harmonic distortion: MONO 0.05% STEREO 0.08%
Capture ratio: 0.8 dB
AM suppression: 65 dB
Image rejection: 120 dB
IF rejection: 110 dB
Separation: 50 dB (1 kHz)
Level meters
Indication error: ± 0.2 dB (Ext. Af, -10 - ± 30 dB) 1 kHz
Frequency response: 20 Hz - 15 kHz ± 0.2 dB -1 dB
AC 120 60 Hz 13 W
AC 220 V/240 V 50/60 Hz 13 W
Power source, power consumption: 434 (W) x 164 (H) x 400 (D) mm
Dimensions: 8.9 kg
Weight:



TU-850 FM Tuner

5 gang variable capacitor, a complete front end incorporating MOS FET.
• Low distortion, high selectivity 2 system IF Section.
• PLL IC stereo demodulation circuit.
• Unique design and high precision tuning system.
• Incorporates a recording level check.
• Equipped 2 large size multi-functioning level meters capable of measuring amplifier output.

FM, AM/FM Tuner, Speaker



TU-701 FM Tuner

High S/N 82 dB attained • Designed to match PMA-701/501 as a sole FM model. • Rotating drum type long scale precision tuning system. • Incorporates a large size multi-function level meter which can measure amplifier output. • Variable output VR in front. • 5 gang variable capacitor MOS FET incorporated. • Differential amplifier equipped 2 system IF section constitution.



TU-501 AM/FM Tuner

Elegant design for suitable combination with PMA-501, PMA-701. • Fixed pointer, rotating drum type long scale precision tuning system. Incorporates 2 large size multi functioning level meters capable of measuring amplifier output. • IF interference elimination ratio in the AM section is considerably upgraded (40 dB). • Equipped with a test signal oscillator.

SPECIFICATION

FM SECTION
Tuning frequency: 88 to 108 MHz
Usable sensitivity (HF): 1.7 μ V (9.8 dBf)
Effective selectivity: 85 dB
Signal to noise ratio: 82 dB
Total harmonic distortion: MONO 0.1% STEREO 0.15%
Capture ratio: 1.0 dB
AM suppression: 60 dB
Image rejection: 110 dB
IF rejection: 110 dB
Separation: 50 dB (1 kHz)
Level meters
Indication error: ± 0.2 dB (From AMP + 10 dB to +30 dB) at 1 kHz
Frequency response: 20 Hz to 15 kHz ± 0.5 dB
Power source, power consumption: AC 220/240 V 50 Hz, 11 W
Dimensions: 430 (W) x 146 (H) x 303 (D) mm
Weight: 7 kg

SPECIFICATION

FM SECTION
Tuning frequency: 88 to 108 MHz
Usable sensitivity (HF): 1.8 μ V (10.3 dBf)
Effective selectivity: 78 dB
Signal to noise ratio: 75 dB
Total harmonic distortion: MONO 0.1% STEREO 0.15%
Capture ratio: 1.2 dB
AM suppression: 60 dB
Image rejection: 90 dB
IF rejection: 90 dB
Separation: 45 dB (1 kHz)
AM SECTION
Tuning frequency: 525 to 1,630 kHz
Usable sensitivity: 300 μ V/m
Image rejection: 55 dB
Signal to noise ratio: 55 dB
Level meters
Indication error: ± 0.2 dB (From AMP + 10 dB to +30 dB) at 1 kHz
Frequency response: 20 Hz to 15 kHz ± 0.5 dB
Power source, power consumption: AC 220/240 V 50 Hz, 10 W
Dimensions: 430 (W) x 146 (H) x 303 (D) mm
Weight: 6.6 kg

SPECIFICATION

SC-107

Type: 3 way speaker system
Speakers: Woofer: 25 cm cone type x 2
Middle range: 10 cm cone type
Tweeter: 5 cm cone type x 2
80 W (program source)
40 Hz - 20,000 Hz
8 Ω
Maximum input power: 92 dB (1 m/1 W)
Frequency range: 500 Hz, 4 kHz
Input impedance: Crossover frequency: Less than 1.5% (5 W)
Sensitivity: T.H.D.: Variable attenuator
Level control: 390 (W) x 700 (H) x 347 (D) mm
Dimensions: 23 kg
Weight:



SC-107 Speaker

Large size enclosure, carefully selected materials. 25 cm woofer, cone tweeter, each parallel driven, allowing a dynamic range and increasing the straight line characteristic.

SC-104 Speaker

A bookshelf speaker system completely shield type as a result of constant search for the highest degree in transient characteristics, dynamic characteristics and high efficiency.

SC-104

Type: 3 way speaker system
Speakers: Woofer: 25 cm cone type
Middle range: 10 cm cone type
Tweeter: 3.2 cm dome type
60 W (program source)
50 Hz - 20 kHz
8 Ω
Maximum input power: 92 dB (1 m/1 W)
Frequency range: 500 Hz, 4 kHz
Input impedance: Crossover frequency: Less than 1.5% (5 W)
Sensitivity: T.H.D.: Variable attenuator
Level control: 302 (W) x 590 (H) x 250 (D) mm
Dimensions: 13.8 kg
Weight:

Wow and Flutter below 0.015%

A system of high precision magnetic speed detection servo mechanism and DENON Quartz.

- High reliability ensured by features similar to those employed in professional equipment. DP-series incorporates the direct drive servo turntable, which boasts excellent rotational performance. DENON's original high-precision, magnetic recording detection system is employed to control the speed of the turntable. Precision on the internal periphery of the turntable, converting the pulse into voltage corresponding to its frequency. By comparing this voltage with the standard value, the system controls the voltage applied to the motor. The number of pulses is 1,000 and error or the distance between adjacent pulses is held within 1/10,000. Thus, highly accurate speed detection and quick response servo control are achieved, while wow and flutter are reduced to 0.015%* or less. The rotational speed remains stable even if load conditions change due to alteration of stylus pressure and the like.
 - Solid-rotor-type AC servo motor with smooth rotation. The AC servo motor features smoother rotation, with less vibration, than other types of motors such as synchronous and DC motors. Driven by alternate current whose wave form is accurately regulated, the AC servo motor produces almost no rumble, boasting an S/N ratio of 77 dB or better. (DP-6000)
- DENON is proud to offer each player to audio enthusiast and music lovers as the crystallization of its long experience in serving the audio equipment to broadcasting stations. You will find a truth on DENON turntables.

WOW AND FLUTTER IS ONLY 0.015%: *Better than a test record!

In a conventional way of measuring wow and flutter, a test record with a measurement signal recorded on it has been used. This method can be said adequate in two cases; One is, when the test record or test signal is absolutely free from wow and flutter. The other is, when a record player under test has comparatively more wow and flutter than those involved in a test record. Until recently, it's been granted that wow and flutter involved in a test record is small enough and negligible for the measurement. But, on the way of developing better record players, DENON wondered why this wow and flutter value would not go beyond a certain limit. Finally, we had to discuss about a point where we'd granted to be very accurate. . . . the test record!



DP-6000 Direct Drive Turntable with Quartz Control

The features of speed detection applied to magnetic recording, a phase lock control which coordinates the high precision quartz oscillation with phase, making it a high class turntable which has very little fluctuation and speed deviation under any environmental conditions. • Newly developed turntable mat as a result of studying the vibration analysis with laser beams. • Stroboscope for easy and accurate sighting, lighted by quartz synchronized pulse. Newly developed brake employed.

SPECIFICATION

Drive system:	Direct drive by AC servo motor
Speed control:	Frequency detection servo system: phase locked to a quartz crystal oscillation
Speed:	33-1/3 rpm, 45 rpm
Speed selection:	Electronic switching
Speed adjustable range:	+3% of specified speed
Wow/flutter:	Less than 0.015% (W rms)
S/N ratio:	Over 77 dB (DIN-B)
Starting time:	Less than 1.2 seconds
Turntable:	Aluminum alloy diecast diameter: 31.2 cm Moment of inertia of 233 kg-cm ² (including turntable mat)
Power supply:	AC 220/230/240 V 50/60 Hz
Power consumption:	12 W
Dimensions:	374 (W) x 162 (H) x 378 (D) mm
Weight:	8.8 kg
Suitable cabinet:	DX-200

Even a very accurate (we thought) test record inevitably involves more or less wow and flutter of cutting machine, or those caused by an eccentricity of the record disc itself when placed on a record player. We've been measuring wow and flutter including those inaccuracies of the testing system rather than the real performance of a record player. In other words, the wow and flutter of the test record is no more negligible.

We do have confidence in the accuracy of speed detection in the DENON servo system. Why don't we utilize this more accurate system for measuring wow and flutter also?

This is how DENON has developed a new method of wow and flutter measurement. See the illustration.

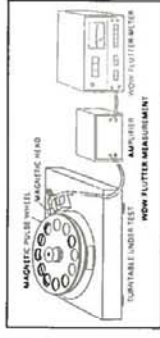
A non-contact magnetic head detects a signal magnetically recorded on the periphery of a magnetic pulse wheel. The 1000-pulse signal is recorded with an accuracy of 99.99%, a higher accuracy than a test record. . . . The same principle as the DENON turntable speed detection method. This pulse wheel is attached on the turntable shaft to be almost perfectly concentric to it by a chuck so made. The moment of inertia of the pulse wheel is equivalent to that of a combination of the turntable mat and an LP record to obtain a realistic condition.

This measuring method of wow and flutter proved that DENON turntables really have better values than those formerly announced.

At the same time, signal to noise ratio was re-examined. This also disclosed that a conventional test record has more noise than a DENON turntable can suppress. The lacquer disc with less noise is used for the measurement.

Consequently, DENON proudly announces an improved renewal of wow and flutter values and S/N ratios.

If you happen to have the old catalogue, you can readily compare the improvements. The wow and flutter and the S/N ratio have been revamped causing the standard rating to become increasingly strict.



- Weighted rms value. 0.018% for the DP-790/W, DP-1200 and DP-1800.



DP-2000 Direct Drive Turntable with Quartz Control

By utilizing the know-how from DENON's record reproducers for professional use, now playing an active part in places such as broadcasting stations, quartz control was added to our unique speed servo system to bring down the deviations of rotation to below 0.002%. In addition, the employment of a smooth, specially designed brake function and smooth rotating AC motor effects can be seen at various points.

SPECIFICATION

Drive system:	Direct drive by AC servo motor
Speed control:	Frequency detection servo system: phase locked to a quartz crystal oscillation
Speed:	33-1/3 rpm, 45 rpm
Speed selection:	Slide switched
Wow/flutter:	Less than 0.015% W rms
S/N ratio:	Over 75 dB (DIN-B)
Turntable platter:	Aluminum alloy diecast, 30 cm diam. Moment of inertia of 200 kg-cm ² (including turntable mat)
Power supply:	AC 220/230/240 V 50/60 Hz
Power consumption:	15 W
Dimensions:	375 (diam.) x 146 (H) mm
Weight:	Approx. 7 kg



DP-6700 Direct Drive Player with Quartz Control and Dynamically Damped Mechanism Tonearm

A high performance record player with DENON quartz turntable DP-6000, boasting a turntable mat resulting from the holographic analysis by laser beams, Stroboscope for easy and accurate viewing of the lighting of the quartz synchronized pulse, employment of an automatic resting type brake with no reverse rotation, dynamically damped tonearm DA-307, 63 mm thick laminated veneer cabinet with a leather.

SPECIFICATION

Phono motor section refer to DP-6000
Tonearm Type: Static balance S-type with dynamically damped construct
Effective length: 244 mm (max.)
Overhang: 14 mm
Tracking error: 2.5° (max.)
Acceptable weight of cartridge: 5 - 10 g
Tracking force adjustment: Veneer-dial direct reading type
Cueing: Oil damped system
Inside force canceller: Magnesium control type
Head shell: Magnesium alloy diecasting
Dimensions: 522 (W) x 133 (H) x 420 (D) mm
Weight: 17 kg



DP-1800 Direct Drive Player

A high performance player. For the tonearm, the idea similar to the DA-307, whose dynamic damping mechanism has been realized, is employed. A cabinet is made of a natural marble and laminated plywood. For the phono motor, a motor inheriting the basic performance of DP-series is employed.

SPECIFICATION

Drive system: Direct drive by AC servo motor
Speed control: Servo system with frequency detection
Speed: 33-1/3 rpm, 45 rpm
Slide switched: Side switched
Speed selection: ±3% of specified speed
Speed adjustable range: Less than 0.018% (W rms)
Wow/flutter: Over 75 dB (DIN-B)
S/N ratio: Less than 1.8 sec
Starting time: Aluminum alloy diecast diameter: 300 mm
Weight: 1.1 kg
Tonearm type: Static balance S-type with dynamically damped construct
Effective length: 244 mm
Overhang: 14 mm
Acceptable weight of cartridge: 5 - 11 g
Cueing: Oil damped system
Power consumption: AC 220/230/240 V 50/60 Hz
Dimensions, Weight: 120 V 60 Hz (for U.S.A., CANADA) 16 W
 485 (W) x 172 (H) x 408 (D) mm, 17.6 kg



DP-2500 Direct Drive Player with Quartz Control

A product resulting from DENON's second bid for a quartz player by accumulating the techniques for building record players. A DENON quartz control turntable DP-2000 with a dynamically damped mechanism tonearm built to suppress arm resonance, encased in newly designed cabinet fully insulated against vibration and provided with an acryl resin cover.

SPECIFICATION

Phono motor section refer to DP-2000
Tonearm Type: Dynamically damped, static balance type
Effective length: 244 mm
Overhang: Less than 2.5° (max.)
Tracking error: 5 g to 11 g
Acceptable weight of cartridge: Aluminum alloy (PCL-3)
Head shell: Oil damped cueing device
Other facilities: Anti-skating device
Dimensions: 485 (W) x 175 (H) x 405 (D) mm
Weight: 12 kg

DP-2550 Consists of phono motor (DP-2000) and wooden cabinet (DK-77F)



DP-1700 Direct Drive Player

The DP-1700 employs a magnetic speed detection system in the servo mechanism. This phono motor is designed to offer high performance of DP-series, and it is equipped with a simple, easy-to-handle S-shaped tonearm. The direct drive player greatly enhances cost performance. The unit is designed especially to eliminate howling.

SPECIFICATION

Drive system: Direct drive by AC servo motor
Speed control: Servo system with frequency detection
Speed: 33-1/3 rpm, 45 rpm
Slide switched: Side switched
Speed selection: ±3% of specified speed
Speed adjustable range: Less than 0.015% (W rms)
Wow/flutter: Over 75 dB (DIN-B)
S/N ratio: Less than 1.8 sec
Starting time: Aluminum alloy diecast diameter: 300 mm, 1.1 kg
Turntable, weight: Static balance S-type
Tonearm type: 244 mm
Effective length: 14 mm
Overhang: 5 - 11 g
Acceptable weight of cartridge: Oil damped system
Cueing: AC 220/230/240 V 50/60 Hz
Power supply: 120 V 60 Hz (for U.S.A., CANADA)
Power consumption: 16 W
Dimensions, Weight: 485 (W) x 170 (H) x 405 (D) mm, 12 kg

DP-1500 Consists of phono motor and wooden cabinet

Player, Cassette Deck



DP-1200 Direct Drive Player

The DP-1200 is provided with automatic arm lift for the ease of operation without deteriorating its performance. The DP-1200 is a high performance record player with the unique DENON technology realized on such parts as the non contact type recordend sensor, the adjustable tonearm height, the stand-by switch for starting after a cueing, and howling prevention.

SPECIFICATION

Drive system: Direct drive by AC servo motor
Speed control: Frequency detection servo system
Speed: 33-1/3 rpm, 45 rpm
Speed adjustable range: Over $\pm 3\%$ specified speed
Wow/flutter: Less than 0.018% W rms
S/N ratio: Over 75 dB (DIN-B)
Starting time: Less than 1.5 sec (33-1/3 rpm)
Turntable: Aluminum alloy diecast, 30 cm diam.
Moment of inertia of 190 kg-cm²
(including turntable mat)
Static balance type
244 mm
14 mm
5 g - 11 g
Oil damped system
Power supply, Consumption: AC 220/230/240 V 50/60 Hz, 120 V 60 Hz, 17 W
Dimensions, Weight: 485 (W) x 163 (H) x 396 (D) mm, 1.1 kg

Tonearm type:
Effective length:
Overhang:
Acceptable weight cartridge:
Cueing:
Power supply, Consumption:
Dimensions, Weight:



DP-790 Direct Drive Player

A magnetic signal detecting system and high precision servo phon motor is employed and uses a tonearm whose effective length is 24 m/m which is regarded as the longest in this class. • The greater consideration is given to the howling. • Insulator leg for preventin acoustic feedback. • Anti-skating mechanism.

SPECIFICATION

Drive system: Direct drive by AC servo motor
Speed control: Servo system with frequency detection
Speed: 33-1/3 rpm, 45 rpm
Speed adjustable range: $\pm 3\%$ of specified speed
Wow/flutter: Less than 0.018% (W rms)
S/N ratio: Over 75 dB (DIN-B)
Starting timer: Less than 1.8 sec
Turntable, Weight: Aluminum alloy diecast diameter: 300 mm, 11
Tone arm Type: 244 mm
Effective length: 244 mm
Overhang: 14 mm
Acceptable weight of cartridge: 5 g - 11 g
Cueing: Oil damped system
Power supply: AC 220/230/240 V 50/60 Hz, 120 V 60 Hz
Power consumption: 16 W
Dimensions, Weight: 485 (W) x 170 (H) x 405 (D) mm, 10.7 kg

DP-755 Consists of phono motor and wooden cabinet



DR-750 Stereo Cassette Tape Deck

DENON has researched on better tonal quality through a tape transport mechanism, the head, and the amplifier to design the DR-750 cassette tape deck. The tonal quality depends on the characteristics and the construction of the tape transport mechanism and the head. Recording and playback head consist of unique Sendust tip developed by DENON, so that it records with a wider dynamic range together with a superior recording linearity and the lowest distortion at a high level. Combined with the DENON high quality head, model DR-750 achieved an excellent tonal quality and the performance of tape transport which is superior to a 3-head system.

SPECIFICATION

Type: 4-track 2-channel stereo cassette tape deck
Motor: Dolby noise reduction system
DC coreless motor 1 pc.
DC governor motor 1 pc.
4.8 cm/sec
Less than 0.045% W rms
Tape speed: Approx. 70 sec (c60 tape)
Wow/flutter: Approx. 70 sec (c60 tape)
Fast forward time: Sendust tip ferrite
Fast rewind time: Ferrite
Head: R/P: Better than 35 dB (1 kHz)
Better than 65 dB (1 kHz)
Erase: (Dolby NR SW ON C₀, W rms)
Channel separation: (Dolby NR SW ON C₀, tape 1 kHz)
C₀, tape 35 Hz - 18,000 Hz ± 3 dB
Crosstalk: LH tape 35 Hz - 16,000 Hz ± 3 dB
S/N ratio: AC 120 V/60 Hz, 220/230/240 V 50/60 Hz, 43 W
415 (W) x 303 (H) x 226 (D) mm, 12.5 kg

Frequency response:
Power supply, Consumption:
Dimensions, Weight:



DR-350 Stereo Cassette Tape Deck

In the DENON stereo cassette deck, an emphasis is placed on a tape transport system and on an optimum recording performance which are the basic performance of the tape deck. And adequate countermeasure against operational fault and the protection of tape is provided by permitting ease of operation. The accuracy of the cassette holding position is increased, and self-centering hub drive assures a tape transport with a high precision.

SPECIFICATION

Type: 4 track 2-channel stereo cassette deck, Dolby noise reduction system
Motor: Electrical control DC motor
4.8 cm/sec
Less than 0.058% W rms
Tape speed: Approx. 95 sec (c60 tape)
Wow/flutter: Approx. 75 sec (c60 tape)
Fast forward time: Hard permalloy
Fast rewind time: Double gap high density ferrite
Head: R/P: Better than 30 dB (1 kHz)
Better than 58 dB (1 kHz)
Erase: Better than 64 dB (CCIR W rms)
Channel separation: (Dolby NR SW ON C₀, tape 1 kHz)
C₀, tape 35 Hz - 15,600 Hz (± 3 dB)
Crosstalk: LH tape 35 Hz - 15,000 Hz (± 3 dB)
S/N ratio: AC 120 V/60 Hz
220/230/240 V 50/60 Hz
17 W
434 (W) x 162 (H) x 292 (D) mm, 8 kg

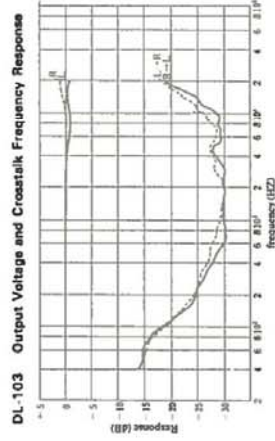
Frequency response:
Power supply:
Power consumption:
Dimensions, Weight:



DL-103 Moving Coil Cartridge

SPECIFICATION

Type: Moving coil type
 Output voltage: 0.3 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 45,000 Hz
 Output impedance: 40 Ω (1 kHz)
 Load impedance: More than 100 Ω
 Channels separation: Over 25 dB (1 kHz)
 Channel sensitivity difference: 1 dB or less (1 kHz)
 Stylus tip: 0.65 mil round stylus
 Tracking force: 2.5 ± 0.3 g
 Compliance: 5×10^{-4} cm/dyne
 Weight: 8.5 g



DL-103/T Moving Coil Cartridge and Cartridge Transformer

SPECIFICATION

CARTRIDGE
 Type: Moving coil type
 Output voltage: 0.3 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 45,000 Hz
 Output impedance: 40 Ω (1 kHz)
 Load impedance: More than 100 Ω
 Channels separation: Over 25 dB (1 kHz)
 Channel sensitivity difference: 1 dB or less (1 kHz)
 Stylus tip: 0.65 mil round stylus
 Tracking force: 2.5 ± 0.3 g
 Compliance: 5×10^{-4} cm/dyne
 Weight: 8.5 g

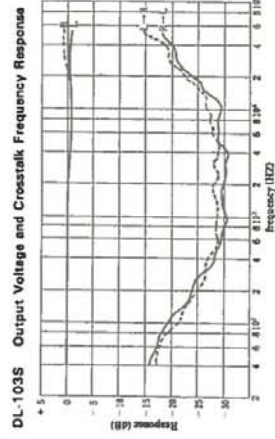
TRANSFORMER
 Step-up ratio: 1:10
 Primary impedance: 40 Ω
 Secondary impedance: 4 kΩ
 Frequency response: 20 Hz – 40 kHz (± 1 dB)
 Load impedance: 50 kΩ or more
 Dimensions: 51 (W) x 38 (H) x 115 (D) mm
 Weight: 300 g



DL-103S Moving Coil Cartridge

SPECIFICATION

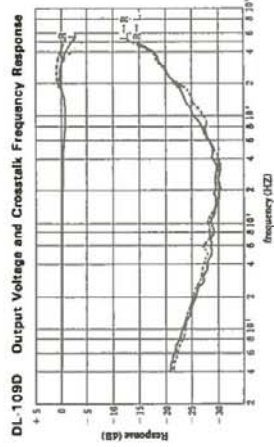
Type: Moving coil type
 Output voltage: 0.3 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 60,000 Hz
 Output impedance: 40 Ω (1 kHz)
 Load impedance: More than 100 Ω
 Channels separation: Over 25 dB (1 kHz)
 Channel sensitivity difference: 1 dB or less (1 kHz)
 Stylus tip: Special elliptical tip stylus
 Tracking force: 1.8 ± 0.3 g
 Compliance: 8×10^{-4} cm/dyne
 Weight: 7.8 g



DL-109D Moving Magnet Cartridge

SPECIFICATION

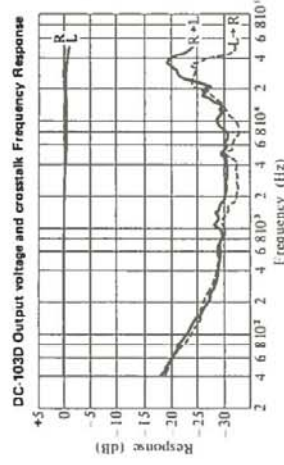
Type: Moving magnet type
 Output voltage: 3 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 50,000 Hz
 Output impedance: 2.9 kΩ (1 kHz)
 Load impedance: 50 kΩ
 Separation between channels: Over 25 dB (1 kHz)
 Channel sensitivity difference: 1 dB or less (1 kHz)
 Stylus tip: Special elliptical stylus
 Tracking force: 1.8 ± 0.3 g
 Compliance: 9×10^{-4} cm/dyne
 Weight: 7.5 g
 Replacement stylus: DSN-35



DL-103D Moving Coil Cartridge

SPECIFICATION

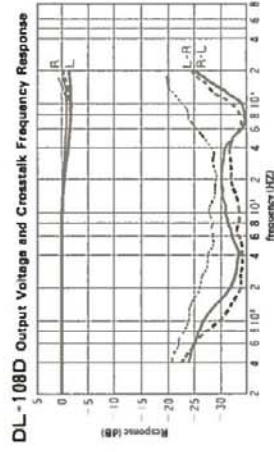
Type: Moving coil type
 Output voltage: 0.25 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 65,000 Hz
 Output impedance: 35 Ω (20 – 20,000 Hz)
 Load impedance: More than 100 Ω
 Channels separation: Over 25 dB (1 kHz)
 Channel sensitivity difference: Less than 1 dB (1 kHz)
 Stylus tip: 0.1 mm special elliptical solid diamond
 Tracking force: 1.5 g ± 0.2 g
 Compliance: 12×10^{-4} cm/dyne (100 Hz)
 Weight: 7.5 g



DL-108D Moving Magnet Cartridge

SPECIFICATION

Type: Moving magnet type
 Output voltage: 2.5 mV (1 kHz 50 mm/sec)
 Frequency response: 20 – 30,000 Hz
 Output impedance: 2.8 kΩ (1 kHz)
 Load impedance: 50 kΩ
 Separation between channels: Over 25 dB (1 kHz)
 Channel sensitivity difference: 1.5 dB or less (1 kHz)
 Stylus tip: Special elliptical tip stylus
 Tracking force: 1.8 ± 0.3 g
 Compliance: 10×10^{-4} cm/dyne
 Weight: 8.3 g
 Replacement stylus: DSN-40





HA-1000 Head Amplifier for Moving Coil Cartridge

SPECIFICATION

Input impedance: 100 Ω
 Voltage gain: 32 dB/24 dB/MM (pass)
 Output voltage: 3 V rms
 Input noise level: -157 dB/V rms (input short)
 Frequency response: 8 Hz - 6200 kHz +0 dB -1 dB
 Harmonic distortion (20 Hz - 20 kHz): Less than 0.008% (0.3 V)
 Intermodulation distortion (80 Hz/7 kHz):
 1/4): Less than 0.008% (0.3 V)
 Crosstalk (1 kHz): Less than -70 dB
 High cut filter: 100 kHz -6 dB/oct
 Power supply: AC 120 V 50 Hz
 AC 220/240 V 50/60 Hz
 12 W
 Power consumption: 125 (W) x 68 (H) x 252 (D) mm
 Dimensions Amp: 107 (W) x 65 (H) x 141 (D) mm
 Weight Amp: 1.8 kg
 Power: 1.4 kg



DA-307 Dynamically Damped Tonearm

SPECIFICATION

Type: Static balance type with dynamic damping
 Overall length: 322 mm (max.)
 Effective length: 244 mm
 Overhang: 14 mm
 Adjustable height: 42 - 70 mm (between arm board surge and arm pipe central line)
 Tracking error: 2.5° (max.)
 Tracking force adjustment: 0 - 2.5 g direct reading (Vernier dial type)
 Acceptable cartridge weight: 5 - 10 g
 Head shell: Die-casted magnesium alloy (6 g)
 Inside force canceller: Magnetic control type
 Cueing: Oil damped
 Output cord: Low-capacitance cord with GP connector
 Head shell connector: 4P EIA connector



AU-320 Cartridge Transformer for Moving Coil Type

SPECIFICATION

Step-up ratio: 1:10 (at 40 Ω ; 4 k Ω)
 Primary impedance: 3 Ω , 40 Ω
 Secondary impedance: 4 k Ω
 Frequency response: 10 Hz - 100 kHz (± 1 dB)
 Phase characteristic: 20 Hz - 50 kHz (10° or less)
 Dimensions: 97 (W) x 65 (H) x 155 (D) mm
 Weight: 800 g



AU-310 Cartridge Transformer for Moving Coil Type

SPECIFICATION

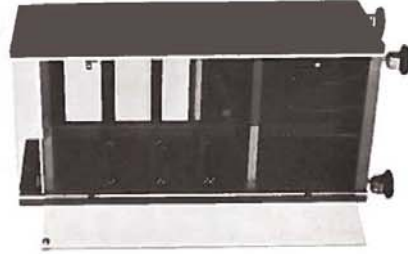
Step-up ratio: 1:10
 Primary impedance: 40 Ω
 Secondary impedance: 4 k Ω
 Frequency response: 20 Hz - 40 kHz (± 1 dB)
 Load impedance: 50 k Ω or more
 Dimensions: 51 (W) x 53 (H) x 181 (D) mm
 Weight: 650 g



DA-309 Dynamically Damped Tonearm

SPECIFICATION

Type: Static balance type with dynamic damping
 Overall length: 340 mm (max.)
 Effective length: 244 mm
 Overhang: 14 mm
 Tracking error: 2.5°
 Tracking force adjustment: 0 - 2.5 g direct reading (Vernier dial type)
 Acceptable cartridge weight: 5 - 15 g
 Head shell: Die-casted magnesium alloy
 Inside force canceller: Magnetic control type (with release mechanism)
 Cueing device: Oil-damped type
 Output cord: Low capacitance cord



IR-8W Interior Center Rack



DK-200 Universal Player Cabinet



AS-3 Shell Stand



AD-3 Stabilizer



DK-77F Universal Player Cabinet



PCL-5 Magnesium Alloy Die-cast Head Shell



PCL-3 Head Shell