



## DCD-1600NE

SUPER AUDIO CD PLAYER

# HIGH QUALITY SUPER AUDIO CD PLAYER BRINGING DISC PLAYBACK PERFORMANCE TO REMARKABLE HEIGHTS

### HIGHLIGHTS

- Advanced AL32 Processing and Ultra Precision 192kHz/32bit D/A Converter
- DAC Master Clock Circuit Design
- Direct Mechanical Ground Construction
- Carefully designed construction, minimum signal paths and selected Hi-Fi parts
- Denon original drive mechanism with S.V.H. loader
- Playback of CD and Super Audio CD; DSD (2.8 MHz / 5.6 MHz) files and PCM files up to 192 kHz / 24 bits recorded on DVD R/RW
- Separated digital and analogue power supply
- Pure Direct Mode
- Available in Premium Silver and Black

### YOUR BENEFITS

- Digital recordings beautifully faithful to the original sound
- Jitter-free audio reproduction
- Minimizes unwanted vibration
- Preserves audio signal purity
- Accurate pickup and decoding from all discs
- Extended disc support for modern high-res audio
- Preserves audio signal purity
- For clean output
- Perfectly matching the PMA-1600NE Integrated Amplifier



ADVANCED *AL32* PROCESSING  
*Plus*



MP3

WMA



Advanced AL32 Processing Plus

The DCD-1600NE is equipped with Advanced AL32 Processing Plus, the latest version of Denon's analogue waveform reproduction technology which utilizes unique data interpolation algorithms and also supports high-resolution sound sources. These algorithms interpolate points that should exist before and after the points in large quantities of data to achieve a smooth waveform that is close to that of the original signal. By carefully restoring data that was lost during digital recording, the resulting playback sound is highly detailed, free of interference, accurately localized, richly expressive in the lower range, and beautifully faithful to the original sound.

New Denon original disc drive design

The DCD-1600NE's disc drive design contains high-class S.V.H. (Suppress Vibration Hybrid) Mechanism. The circuitry that controls the pickup and decodes the signals read from the disc has been newly developed. Signal paths have been shortened to an absolute minimum and circuits have been miniaturized to ensure that excess current or noise will not occur.

An S.V.H. Loader of a hybrid construction combining different materials gives stability to the disc drive so that the disc can be read with utmost accuracy. In addition, the mechanism's low center of gravity suppresses any vibration occurring inside the mechanism due to disc rotation, and the mechanism structure also effectively suppresses external vibration. By eliminating unwanted vibration, servo-related operations are minimized, and by also minimizing unnecessary controls and current consumption, digital signals can be read from the disc with optimum accuracy under stable conditions.

DSD and FLAC data disc playback support

In addition to CD and Super Audio CD, the DCD-1600NE can play DSD (2.8 Mhz / 5.6 MHz) files and high-resolution files up to 192 kHz/ 24 bits recorded on DVD-R/RW and DVD+R/RW discs. Music files with sampling frequencies of up to 48 kHz recorded on CD-R/RW discs can also be played.

Direct Mechanical Ground Construction

The integrity of musical signals deteriorates when they are subject to internal vibration caused by disc rotation or the power transformer, or to airborne vibration caused by sound pressure from the speakers. To guard against such influences, Denon engineers designed a vibration suppression structure they called "Direct Mechanical Ground Construction". In this design, the power transformers – themselves a source of vibration – have been placed close to one foot of the DCD-1600NE where unwanted vibration is funneled directly to the ground and prevented from affecting nearby circuitry. Also, by placing the drive mechanism – the part with the greatest mass – low in the center of the chassis, the low center of gravity effectively absorbs internal vibration caused by disc rotation and also protects the mechanism from external vibration.

DAC Master Clock Design

To accurately synchronize digital circuits, the DCD-1600NE's DAC Master Clock Design treats the DAC as the master when clock signals are supplied. Positioning the master clock immediately adjacent to the D/A converter (DAC) suppresses jitter and ensures optimum precision in D/A conversion. In addition, the quality of the clock, which becomes the reference for semiconductor operation, is extremely important for ensuring that the digital audio circuitry

performs at its maximum potential. The DCD-1600NE thus employs a clock oscillator to dramatically reduce phase noise that is the displacement of frequencies. The clock power circuit has also been vastly improved to bring out the full potential of the high-quality clock's performance. A conductive polymer capacitor with particularly outstanding high-frequency impedance characteristics for Denon's renowned sound quality has been placed at the base of the clock's power source, and an ultra-compact film capacitor that is different from layered ceramic capacitors has been placed close to the clock, to achieve an improved S/N ratio and a transparent sound with superior spatial expression. The DCD-1600NE is equipped with two clock oscillators, one for each sampling frequency (44.1 kHz and 48 kHz), that can be switched between the frequencies ...to provide the perfect clock for any multiple of these sampling frequencies from 44.1kHz to 192kHz and even up to DSD5.6MHz, without the need of rounding. This does avoid error and guarantees best date conversion.

Circuitry with minimized signal paths; separate power transformers

The "simple & straight" design philosophy has been thoroughly implemented in all of the DCD-1600NE's circuits. Circuit patterns have been redesigned from the ground up to make signal paths as short as possible and ensure that the original sound is faithfully reproduced across the sonic spectrum. As a result, interference between circuits and between left and right channels as well as adverse influences on audio signals are minimized, producing a clean, highly transparent sound. Moreover, the power units for the digital and analogue circuits, whose signals have different characteristics, have separate transformers to eliminate mutual interference and noise. An aluminum plate has also been combined to the underside of the steel transformer base to strengthen rigidity.



Technical information			
SACD section		Output voltage	2.0 V (10 kohms)
Channels	2 channels	Digital output	0.5 Vp - p/75 ohms -15 to -21 dbm 660 nm
Frequency response	2Hz - 50kHz (-3 dB)	General	
Dynamic range	112 dB		
Signal-to-noise ratio	119 dB		
Total harmonic distortion	0.001% (1 kHz, audible range)		
CD section			
Channels	2 channels	Power supply	AC 230 V, 50/60 Hz
Frequency response	2Hz - 20kHz	Power consumption	24 W (Standby 0.1 W)
Dynamic range	101 dB	Dimensions (W x H x D)	434 x 135 x 329 mm
Signal-to-noise ratio	117 dB	Weight	8.2 kg
Total harmonic distortion	0.0016% (1 kHz)		

EAN	DCD1600NEBKE2	4951035057070	Black
	DCD1600NESPE2	4951035058619	Premium Silver
UK	DCD1600NEBKE2GB	4951035059951	Black
	DCD1600NESPE2GB	4951035059968	Premium Silver