

## DCD-2010AE

Super Audio CD Player

DENON

## Meticulously designed circuitry, drive mechanism and construction reflect the Denon's technology and experience

The DCD-2010AE is endowed with Advanced AL32 Processing that dramatically boosts the quantity of digital audio information to ensure that the sound you hear is more faithful to the original source. The DCD-2010AE is equipped with various digital input ports, including a USB port for connecting an iPod or USB memory and playing music files from those devices. When these digital signals are played back through Compressed Audio Restorer, Advanced AL32 Processor and other Denon audio circuits designed for high sound quality, you will be able to enjoy the music with a rich ambiance not possible from those devices on their own.

ADVANCED *AL32* PROCESSING

MP3

WMA



### Features

#### High quality sound

- Advanced AL32 Processor, technology for high sound quality
- Denon's Disc Drive Mechanism, core technology for digital disc playback
- DAC master clock design
- High-precision 32-bit, 192-kHz D/A converters
- Complete separation of digital and analog power supplies
- Minimum signal paths, to protect signal purity
- Precision Direct Mechanical Ground Construction, to thoroughly suppress vibration
- Play various types of digital content in high sound quality
  - Optical and coaxial digital inputs
  - USB port, for connecting an iPod or USB memory (\*1)
  - Compressed Audio Restorer
- Pure Direct mode, for pure enjoyment of music
- Parts strictly selected for high sound quality

#### Useful Functions

- Newly-designed remote control unit

## High quality sound

### • Advanced AL32 Processor, technology for high sound quality

Denon's Advanced AL32 Processor expands audio data to 32 bits and uses a proprietary algorithm to interpolate the data and perform up-conversion and sampling, achieving a playback sound that is close to the original source. Since high-performance devices capable of large-capacity processing read data samples across a wide spectrum and process them in a single stage, they interpolate signals with greater precision compared with multi-stage digital filters and other such devices. In addition, the use of algorithms ideal for frequency characteristics outside the audible range to filter sudden bursts of musical data or continuous sound at high frequencies protects sound quality from the adverse effects of aliasing noise or drops in high-range response. The Advanced AL32 Processor reproduces the delicate nuances of music, as well as spatial information such as the position of the artist and the breadth, height, and depth of the stage, in a more natural manner.

### • Denon's Disc Drive Mechanism, core technology for digital disc playback

Since Super Audio CD rotates at high speed, the drive mechanism itself is a source of considerable vibration. To thoroughly suppress that vibration, the motor shaft in the DCD-2010AE has been shortened as much as possible, and the drive motor has been placed close to the turntable. Misalignment of the laser beam axis and the angle of the turntable or pickup mechanism base affect disc reading accuracy. To eliminate such mechanical variations and ensure high accuracy in signal playback and playability, corrections have been made for each unit individually. In addition, a S.V.H. (Suppression Hybrid Construction) loader of a hybrid construction combining different materials gives stability to the disc drive so that the disc can be read with optimum accuracy.

### • DAC master clock design

The DCD-2010AE features the same type of DAC that is used in our high-end CD player as a master of clock signals

for all devices. Since these clock signals are generated by an oscillator circuit module, it is possible to obtain highly reliable oscillation unaffected by PC board patterns and other elements.

### • High-precision 32-bit, 192-kHz D/A converters

High-precision 32-bit, 192-kHz D/A converters have been used to bring out the maximum performance of the Advanced AL32 Processor. These D/A converters transmit differential output to each channel to improve sound quality during playback.

### • Complete separation of digital and analog power supplies

To eliminate mutual interference between the digital and analog circuits, the DCD-2010AE has adopted a dual transformer configuration in which the power supplies for these circuits are completely separated. By using OFC wire coils for the analog transformer and positioning the transformers in an orientation that avoids the effects of spurious magnetic flux on each other, the S/N ratio and a sense of energy have been greatly improved. Cast aluminium with superior vibration-absorbing characteristics was used for the base of the transformer when it was mounted onto the chassis to suppress vibration not only from the transformer itself but from other internal parts and the outside as well. Together with sound quality capacitors employed in the power circuit, this dual transformer configuration produces a base that improves power supply stability and enhances high-quality sound playback capabilities.

### • Minimum signal paths, to protect signal purity

Signal paths have been made thoroughly simple and straight to ensure a pure playback sound. The minimization of signal paths prevents signal degradation between circuits.

### • Precision Direct Mechanical Ground Construction, to thoroughly suppress vibration

Thorough vibration-resistant measures have been adopted to prevent internal and external vibration from adversely affecting sound quality. The bottom plate is triple-layered

and a dual-layered cover has been used for the top plate to thoroughly eliminate vibration. For the side panel, a dual-layered hybrid construction combining different materials also suppresses resonance. The disc drive mechanism has been mounted at the centre of the main chassis and its centre of gravity has been lowered, optimising weight balance throughout the DCD-2010AE and thoroughly suppressing any influences from internal and external vibration on sound quality.

### • Play various types of digital content in high sound quality

- Optical and coaxial digital inputs

With the digital inputs, you can use the DCD-2010AE as a standalone D/A converter. Denon's Advanced AL32 Processor and other high-quality-audio circuits in the DCD-2010AE let you enjoy a rich, satisfying sound. (Supports PCM signals and sampling frequencies of 32-192 kHz.)

-USB port, for connecting an iPod or USB memory (\*1)

When you connect an iPod or USB memory (containing WMA/ MP3 files) to the DCD-2010AE's USB port, you can play the music files stored on these media. The battery is also charged while connected. When you connect the iPod, you can even continue listening to the track that was in play before connection. Since the iPod transmits digital signals, the sound you hear as they pass through the DCD-2010AE's audio circuitry is of much higher quality.

(\*1) Supports USB mass storage class.

### • Compressed Audio Restorer

The DCD-2010AE lets you select the Compressed Audio Restorer function when playing files in the MP3 or WMA sound compression format from disc or USB. This function restores signals that have been omitted during compression so that you can hear the sound close to the way it was prior to compression. The sound will also be richer, as the deep bass range is corrected at the same time. The effect of the Compressed Audio Restorer can be set to one of three levels, or turned off.

### • Pure Direct mode, for pure enjoyment of music

The DCD-2010AE includes a Pure Direct mode that turns off the display and digital signal output to create an environment for enjoying only the purity of music. When the pulse signals of the digital data and the display drive are turned off, the audio signal remains clean and faithful to the original sound.

### • Parts strictly selected for high sound quality

The DCD-2010AE's parts have been strictly selected on the basis of Denon's long experience in developing audio players. These parts have been finely tuned to deliver the best possible sound. Machined gold-plated jacks that support high-quality audio pin cords, for instance, have been used for the analog audio output terminals.

## Useful Functions

### • Newly-designed remote control unit

The remote control unit that comes with the DCD-2010AE also lets you operate Denon PMA-2010AE integrated amplifier. High-grade tactile buttons and other features make this remote extremely easy to use.

## Specifications

Specifications		
Analog Output		
Channels	2 channels	2 channels
Frequency range	2 Hz - 100 kHz	2 Hz - 20 kHz
Frequency response	2 Hz - 50 kHz (-3 dB)	2 Hz - 20 kHz
Signal-to-noise ratio	119 dB (audible band)	119 dB
Dynamic range	114 dB (audible band)	100 dB
Total harmonic distortion	0.0008% (1 kHz, audible band)	0.0017% (1 kHz)
Wow & Flutter	Below measurable limit	Below measurable limit
Output voltage (unbalanced)	2.0V (10 k ohm)	2.0V (10 k ohm)
Signal system	1-bit DSD	16-bit Linear PCM
Sampling frequency	2.822 MHz	44.1 kHz
Digital Output		
Coaxial	-	0.5 Vp-p/75 ohm
Optical	-	-15 to -21 dBm
Emission wavelength	-	660 nm
General		
Power supply	AC 230 V, 50 Hz	
Power consumption	33 W (Stand-by less than 0.3W)	
Dimensions (W x H x D)	434 x 137 x 336 mm	
Weight	13.5 kg	



\*Design and specifications are subject to change without notice.

\*\*"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

\*Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

\*iPod is a trademark of Apple Inc., registered in the U.S. and other countries.