

DVD Audio-Video / Super Audio CD Player

DENON

## DVD-2200

## DVD Audio/Video &amp; Super Audio CD Player with PureProgressive™ Circuit

The DVD-2200 is endowed with PureProgressive™ technology to unleash the full impact of DVD-Video picture quality. The DVD-2200 also uses a 12-bit, 108-MHz video D/A converter to faithfully preserve the delicate low-level signals often lost during D/A conversion. With these advanced video image technologies, the DVD-2200 will reproduce with the highest resolution, DVD images on Progressive-compliant monitors and projectors. For sound, it is high quality audio D/A conversion and Digital Bass Management that will bring out the best of not only Super Audio CD and DVD-Audio discs, but your entire CD collection as well.



#### ■ Universal player supporting high-grade, next-generation media

The DVD-2200 aspires to be the true "universal" player capable of playing all types of 12cm discs, including next-generation media such as DVD-Audio and Super Audio CD. Multi-channel recordings on DVD-Audio and DVD-Video discs as well as Super Audio CDs, video CDs and music CDs can all be enjoyed in one player. The DVD-2200 is also equipped with MP3 digital audio compression and JPEG digital video compression decoders. Since this player supports DVD-R/RW, +R/RW and CD-R/RW formats, it will play DVD-R/RW and +R/RW discs recorded in DVD recorders and other devices, and CD-R/RW discs containing files in MP3 or JPEG format recorded on a computer. For any format you want to play, the DVD-2200 is packed with DENON's acclaimed high-end audio technology and engineering, giving you superior sound and picture quality.

#### ■ Independent Power Supply

Independent power supplies have been provided for the audio signal processing block, the video signal block and other areas to eliminate mutual distortion with other blocks. Clean supplies of power to the various circuits contribute to high picture and sound quality.

#### ■ Discrete Design

To ensure high-quality sound and video playback, all circuits have been given in a discrete design, a feature inherited from high-end equipment. The audio and video circuits have been mounted on separate boards that are in complete isolation from each other in order to thoroughly suppress high-frequency video noise. The power section has been given in a discrete design as well, with separate power units provided for the audio block, video block, and digital block, ensuring a clean, stable supply of power to all circuits. Interference among the circuits is thus thoroughly suppressed to produce high-grade playback with minimal noise. From basic design to ease of use, the DVD-2200 has been carefully designed in every detail to deliver superior playback performance.



#### ■ PureProgressive™ Circuit

The DVD-2200's interlace to progressive converter is the new Sil504 Converter with PureProgressive™ circuitry from Silicon Image. The Sil504 features faster moving picture detection and improved film/video mode recognition capability.

**High-speed processing:** This Sil504 Progressive Converter is capable of processing 6 billion operations per second, providing the finest in motion-adaptive de-interlacing.

**Moving picture detection:** PureProgressive™ features 3:2 pulldown detection, which converts 24-fps Film based material to 60-fps TV/Video playback, while also detecting Video based material, animation and graphics. PureProgressive™ is capable of reproducing DVD-Video discs containing both Film and Video material, as well as high picture quality progressive video sources, while avoiding the flickering caused by detection delays of these different formats. In processing moving video signals, a conventional progressive converter performs detection on a full frame-by-frame basis, while PureProgressive™ stores 4 fields of video signals in a 64-Mbit SDRAM buffer, enabling the detection and processing on a pixel-by-pixel basis to achieve greater precision in discriminating between moving and still pictures.

**Improved 3:2 pulldown detection:** There are cases in which 3:2 pulldown data signals on DVD-Video discs are not in sync. The PureProgressive™ converter will quickly detect the non-sequential points and perform appropriate corrective measures at high speed to minimize picture flickering.

#### ■ 12-bit, 108-MHz Video D/A Converter

An extremely high-speed video D/A converter is a critical component in superior quality digital video playback. The DVD-2200 therefore uses a 12-bit, 108-MHz video D/A converter to ensure highly accurate playback of delicate, low-level video signals and give you a vivid picture that is faithful in every detail. Oversampling of 4x is used for both Progressive and Interlaced video signals, allowing more detailed D/A conversion. Higher quality picture reproduction is also possible thanks to a filter with flexible shutout characteristics that is used for the analog filter in the latter stage. Furthermore, the DVD-2200 uses two separate video D/A converters to process Progressive and Interlaced signals. This eliminates mutual interference between the Progressive and Interlaced signals.

#### ■ Noise Shaped Video (NSV)

The NSV feature works in the digital domain to reduce noise in the video signal frequency band in order to enhance video signal linearity.

#### ■ Super Sub Alias Filter

The S/N ratio can be improved when unwanted signals of higher than 6.75 MHz following D/A conversion are cut. The DVD-2200 thus uses a Super Sub Alias Filter that produces flat characteristics, ensuring that adverse influences do not affect video signals inside the essential frequency band, and folding noise is eliminated. In the DVD-2200, the Super Sub Alias Filter is applied to the chroma signal as well as the luminance signal, improving color reproduction.

#### ■ Burr-Brown 24-bit, 192-kHz Audio D/A Converter

The DVD-2200 uses a 24-bit, 192-kHz audio D/A converter that is well protected from noise caused by fluctuations in current from the power supply. Since the level of quantization noise within the frequency range is uniform for all frequencies, this D/A converter ensures that all the sound you hear is as clear and noise-free as possible.

#### ■ Pure Direct Mode

The DVD-2200 features a Pure Direct Mode that further improves sound quality. For example, during analog audio output, Pure Direct can turn off video signal outputs and the front panel display which can easily influence the sound quality of the analog audio signals.

#### ■ Digital Bass Management

When playing DVD-Video, DVD-Audio or Super Audio CD sources, it is possible to preset speaker configurations. The crossover point is fixed at 80 Hz with 12 dB high and 24 dB low pass filter slopes.

#### ■ SRS True Surround

The DVD-2200 is equipped with SRS's True Surround circuit, a high-grade surround virtualizer that lets you enjoy the excitement of 5-channel audio with only using 2 speakers.

#### ■ DVD-R/RW, +R/RW (DVD-Video Recording Mode) Playback (\*1)

#### ■ CD-R/RW (MP3 / JPEG) Playback (\*1)

The DVD-2200 supports the CD-R/RW format. It plays finalized CD-R/RW discs containing MP3 audio files. It also reads still photos in the JPEG format taken by a digital camera.

#### ■ KODAK Picture CD/FUJICOLOR CD

The DVD-2200 also plays Picture CDs.

#### ■ Brilliant Black

DVD-2200 can pass below black video (PLUGE) via the progressive or interlace video outputs for correct monitor setup and optimum picture quality.

#### ■ A Wealth of Picture Quality Adjustment Functions

Contrast, Brightness, Hue, Sharpness and Gamma can be adjusted as desired by the user.

#### ■ On Screen Display

#### ■ Remote IN/OUT Terminals for home installation

#### ■ Discrete Remote Control Commands for Power On/Off

#### Specifications

##### ■ Video Section

Signal system.....	NTSC/PAL selectable
Usable Disc.....	DVD Audio, DVD Video, DVD-R/RW (DVD Video), DVD+R/RW (DVD Video), Super Audio CD, Video CD, Music CD, CD-R/RW (AUDIO/MP3/JPEG), Picture CD
Video outputs.....	1 Set Composite video output: 1 Vp-p (with 75 ohms load) 1 Set S-Video output: Y; 1 Vp-p (with 75 ohms load), C; 0.286 Vp-p (NTSC) 1 Set Component Video Output: Y, Cb/Pb, Cr/Pr: Y; 1.0 Vp-p (with 75 ohms load), Cb/Pb; 0.648 Vp-p (with 75 ohms load), Cr/Pr; 0.648 Vp-p (with 75 ohms load)

##### ■ Audio Section

Audio outputs .....	1 Set Analog Front Channel (FL/FR) Output, 1 Set Analog Multi Channel (FL/FR/SL/SR/C/SW) Output, 1 Set Optical Digital Output, 1 Set Coaxial Digital Output,
Signal-to-noise ratio .....	115 dB
Dynamic range .....	106 dB
Total harmonic distortion .....	0.001 %

##### ■ General

Power supply .....	AC 120 V, 60 Hz
Power consumption .....	27 W
Dimensions .....	434 (W) x 101 (H) x 318 (D) mm, 17.1" (W) x 4.0" (H) x 12.5" (D)
Weight.....	4.7 kg, 10.36 lbs

(\*1) Discs that have been poorly finalized following recording may be only partially playable or not playable at all.



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