

DENON

DVD Audio-Video / Super Audio CD Player

DVD-A1XV

New Flagship Universal Player from DENON is Packed with All of DENON's Best Technologies

DENON is proud to announce the release of its flagship DVD-A1XV universal player. The DVD-A1XV represents the culmination of various technologies related to high picture and high sound quality that DENON has developed for the many DVD players that it has released in recent years. Along with other audio and visual technologies that have been newly developed for the DVD-A1XV, this model also employs high-performance devices and interfaces that have been newly developed for superior processing capabilities.

The DVD-A1XV's video circuitry employs the Dual Discrete Video Circuit (DDVC), a proprietary DENON technology for high-quality picture playback that uses the latest high-performance devices such as the newly-developed I/P converter realizing true 10-bit processing, a digital video scaler, and a 14-bit, 216-MHz video DAC, delivering enhanced video playback quality. In addition, the audio circuitry features newly-developed Advanced AL24 Processing, a high-performance 24-bit, 192-kHz D/A converter, and other audio technologies based on technologies that DENON has developed over many years, ensuring exceptional audio playback performance. To support these technologies, the DVD-A1XV also incorporates an original drive mechanism and vibration-resistant chassis construction that suppress vibration, signal interference, and other adverse influences on the audio and video signals. The DVD-A1XV includes a wealth of audio/video interfaces such as DVI and HDMI digital video outputs, the well-established DENON Link, and IEEE 1394 digital audio output.



Main Features

[Video Section]

■ True 10-bit processing

● Latest I/P converter from Silicon Optix, Inc.

The DVD-A1XV uses the latest 10-bit I/P converter developed through a joint development effort that merged image processing algorithms of Silicon Optix, Inc., and DENON video technology on the foundation of an image processing device from Teranex, a manufacturer of video processor for broadcast use in the United States. This 10-bit processing offers high conversion performance and dramatically improves motion detection capability. Regularity in pixel-level patterns are rapidly and accurately detected not only in the 3:2 patterns of film sources but in other patterns as well during I/P (Interlaced/Progressive) conversion. Even when sources contain both Video mode and Film mode material, each mode is detected and processed accurately at high speed. Flicker caused by detection delays is avoided, and Progressive playback with high picture quality is possible from a variety of discs. In addition, Multi-Directional Diagonal Filter (MDDF) technology, used for the first time in the DVD-A1XV, accurately detects and corrects the directionality of lines on a per-pixel level to avoid "jaggies" that easily appear when video sources are I/P converted, ensuring smooth picture playback.

● Newly-developed DENON Pixel Image (DPI) Correction, for more natural contour correction

DENON Pixel Image Correction, original enhancement technology from DENON, corrects images in greater detail. DENON's newly-developed contour correction circuit uses a new algorithm that samples a total of 9 pixels of video data to consider the impact of surrounding pixels on important pixels in the enhancement process. Since pixels in the image are detected and processed in vertical, horizontal, and diagonal directions, this technology generates more natural contours. The use of separate algorithms for brightness and color signals, the suppression of ringing that easily occurs during enhancement and other effective processes best suited to the picture also contribute to a more naturally enhanced image with negligible degradation.

● High-performance DVDO video scaler

The DVD-A1XV includes the latest high-performance video scaler, completed through joint development between Anchor Bay Technologies, Inc. (ABT), owner of the DVDO brand of advanced video technologies, and DENON. This high-precision 10-bit scaler works with HDMI and DVI digital video output signals. This scaler executes optimum conversion to suit the output to the independent HDMI and DVI transmitters.

■ Newly-developed Dual Discrete Video Circuit (DDVC)

The DVD-A1XV's video circuit features DENON's own DDVC technology designed to enhance the quality of video signals. The use of dedicated circuits -- one independent block for composite and S-video signals, another block for component signals, and a dual DAC configuration with built-in video encoder -- has made it possible to reproduce detailed video images with greater precision. In order to bring out the maximum quality from both video and audio signals, the DVD-A1XV has a discrete configuration in which the video, audio, and digital blocks that comprise this universal player are all completely isolated from each other in terms of their circuit configuration, boards, and power supplies. DENON engineers have used the expertise gained from their development of earlier universal players to design a configuration that thoroughly suppresses mutual interference among the circuits and prevents noise from affecting the video and audio signals.

■ High-speed, high-precision 14-bit 216-MHz video DAC

- Oversampling of 8x for Progressive and 16x for Interlaced signals results in sharp, detailed pictures.
- Composite, S-video, and component signals each have their own dedicated video DAC
- Noise Shaped Video (NSV) technology is used to improve the S/N of video signals and further boost their linearity.

■ Super Sub Alias Filter

■ Supports fine picture quality adjustments

A total of 12 picture quality adjustments are possible, including contrast, sharpness, white level, chroma level, noise reduction settings, and gamma.

■ Simultaneous output through high-grade HDMI and DVI digital video interfaces

The DVD-A1XV supports the HDMI and DVI digital video interfaces, and simultaneous output through both interfaces is possible. The HDMI port can be used to transmit YCbCr format signals or RGB format signals. Since digital transmission of multi-channel audio is also possible when audio is output through the HDMI (*1), a single cable for the HDMI interface is sufficient for the digital transmission of both video and audio signals. The DVI-D allows the transmission of digital video signals in RGB format. Both interfaces support HDCP copyright protection technology (*2) and can be connected to the digital inputs of high-definition monitors.

(*1) Version 1.1 compliant. HDMI audio output capacity is dependent on the monitor being used.

(*2) HDMI and DVI outputs are HDCP compliant. Video cannot be viewed if connected to a monitor that does not support HDCP; video can be viewed only on HDCP-compliant monitors.

■ Simultaneous output possible for all video signals

■ Supports PAL and NTSC (PAL/NTSC Conversion)

■ THX Ultra certified

[Audio Section]

■ Advanced AL24 Processing, original DENON technology for high-quality audio

In addition to the existing AL24 Processing Plus bit expansion technology, the PCM signal playback system(2ch stereo) also uses Advanced AL24 Processing that dramatically improves information volume in the time axis region using high-speed signal detection and processing technology. Besides AL24 Processing Plus that expands original 16-bit digital data to 24 bits, the new Advanced AL24 Processing technology uses algorithms developed by DENON and large-capacity DSP and FPGA calculation devices to interpolate data along the time axis, and up-converted sampling is used to achieve natural interpolation without losing original data. A digital filter is used to further expand adaptability and perform optimum filtering for ringing-free pulse response and for pulsive music data and attack sounds. This results in more natural reproduction of spatial information such as the delicate nuances in the music, the locations of the performers, and the breadth, height, and depth of the concert hall.

For multi-channel linear PCM audio playback, AL24 Processing Plus technology works to faithfully reproduce the original sound of recordings.

■ High-accuracy D/A converters for all channels

■ Audio output dedicated to high-quality 2-channel playback

■ Pure Direct mode, for greater purity in the audio signal

With the Pure Direct mode switch, the user can turn off video signal output, digital audio signal output, and the display, to minimize adverse influences from the video circuitry on the analog output signal.

■ DENON Link, for high-grade audio transmission

■ IEEE 1394 digital interface

■ HDMI output, for multi-channel audio

■ Bass management function tailored for home theater environments

[Construction]

■ Construction designed to thoroughly suppress vibration and mutual interference among circuit blocks

• Four-box layout to isolate circuits and minimize mutual interference

• Thorough vibration-resistant construction

■ DENON original high-accuracy drive mechanism

[Other features]

■ Supports playback of a wide variety of discs

■ Playback frequency ranges of SACDs are switchable (50 kHz / 100 kHz)

■ Independent bass management for analog audio output and HDMI audio signals

■ Remote controller with backlight keys

■ Input/Output Terminals For Every A/V System

• Video outputs

HDMI: 1 set
DVI-D: 1 set
Component: 2 sets (BNC, RCA)
Composite: 2 sets
S-Video: 2 sets
SCART: 1 set (Composite/ S-Video/ RGB*)

* Composite video signal, S-video signal, or RGB signal can be selected in setup as a source for SCART output.

• Audio outputs

Optical digital: 1 set
Coaxial digital: 1 set
DENON Link: 1 set
IEEE 1394: 2 sets
Analog (L/R): 1 set
5.1-channel (FL/FR/C/SL/SR/SW): 1 set
SCART: 1 set

■ Specifications

• Video Section

Signal system..... NTSC/PAL selectable
Disc played DVD Audio, DVD Video, DVD-R/RW (DVD Video Mode), DVD+R/RW, Super Audio CD, Video CD, Music CD, CD-R/RW (AUDIO/MP3/WMA/JPEG), Picture CD

Video outputs

Composite video output: 1 Vp-p (with 75 ohms load)
S-Video output: Y; 1 Vp-p (with 75 ohms load), C; 0.286 Vp-p (NTSC)/ 0.3 Vp-p (PAL)
SCART Output : R: 0.7 Vp-p (with 75 ohms load)
G: 0.7 Vp-p (with 75 ohms load)
B: 0.7 Vp-p (with 75 ohms load)
Component Video Output (BNC, RCA):
..... Y, Cb/Pb, Cr/Pr:
Y; 1.0 Vp-p (with 75 ohms load),
Cb/Pb; 0.7 Vp-p (with 75 ohms load),
Cr/Pr; 0.7Vp-p (with 75 ohms load)

• Audio Section

Frequency Response

DVD..... 2 Hz - 88 kHz (192 kHz sampling),
2 Hz - 44 kHz (96 kHz sampling),
2 Hz - 22 kHz (48 kHz sampling)

SACD 2 Hz - 100 kHz

CD, VCD 2 Hz - 20 kHz

Signal-to-noise ratio 125 dB

Dynamic range 112 dB

Total harmonic distortion 0.0008 %

• General

Power supply AC 230 V, 50 Hz

Power consumption..... 80 W

Dimensions 434 (W) x 170 (H) x 432 (D) mm,

Weight 19.0 kg



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