

## DA-300USB

Audio DAC with USB-B

DENON®

ADVANCED *AL32* PROCESSING

## HIGH DEFINITION AUDIO USB-B COMPACT DAC

The new DA-300USB DAC boasts the same high definition signal processing and ultra-high precision 32 bit, 192 kHz digital to analog conversion technologies that delivers the astounding sound quality of Denon's acclaimed universal disc players.

Simply connecting the minimalist styled DAC via USB-B provides incredible quality computer audio – with headphones or powered speakers – for computer stored music files or streaming audio over the internet. The DA-300USB is also a major audio upgrade, enabling audiophile playback of computer music libraries and streaming audio (from any PC or Mac) via your audio system, dramatically improving the sound quality of other digital audio devices, like media players, CD and DVD players, TV's and set top boxes, Apple TV, and game consoles, by

connecting them to the additional coaxial and optical digital inputs.

The DA-300USB features universal digital file format support for PCM and DSD (the native file format for SACD) digital audio signals on the USB-B input, for bit-transparent, asynchronous playback of digital music files and streaming audio from connected PCs, and PCM signals, up to 24 bit, 192 kHz, via the coax and optical digital inputs. Denon Advanced AL32 Processing and High-Precision 32 bit, 192 kHz digital to analog conversion feeds the line level outputs for connection to an audio amplifier or desktop speaker system, and an integrated headphone amplifier that drives all types of headphones and in-ears, for exceptional listening quality.

Universal audiophile playback of digital music files and streaming audio

The USB-B input enables computer stored music files or streaming audio from internet music, video and film services to be processed and played via the DA-300USB for the highest possible sound quality. The computer recognises the DA-300USB as an external soundcard, completely bypassing its own lower quality audio electronics. Any digital audio format that can be played from the computer's own media player can be processed by the DA-300USB – including MP3/MP4, AAC, ALAC, WAV and FLAC HD (up to 24 bit, 192 kHz) and DSD (in 2.8M and 5.6M resolution). Transmission of the digital audio stream from the computer to the DA-300USB is in bit-transparent, asynchronous mode, to ensure a bit-perfect datastream for high definition Advanced AL32 Processing and High-Precision 32 bit, 192 kHz digital to analog conversion.

#### Additional digital audio inputs

Three additional digital audio inputs, including one coaxial and two optical, allow the DA-300USB's advanced audiophile circuitry to connect to and provide vastly im-

proved sound reproduction for other digital audio devices, like media players, CD and DVD players, TV's and set top boxes, Apple TV, and game consoles. The coaxial and optical digital inputs support PCM input signals up to 24 bit, 192 kHz.

High definition signal processing and D-to-A conversion  
Denon's Advanced AL32 Processing and High-Precision 32 bit, 192 kHz digital to analog conversion delivers audio quality far in advance of usual high definition, wide bandwidth conversion techniques. Just as advanced Blu-ray players can deliver full HD video from standard definition DVD, the Advanced AL32 processor up-converts and up-samples all input signals to a 32 bit, 192 kHz high definition datastream, which is interpolated, using a highly advanced proprietary algorithm, to provide a full scale, accurate reproduction of the original sound recording. The Advanced AL32 processor is matched with an High-Precision 32 bit, 192 kHz D-to-A conversion (DAC) circuit to fully exploit the Advanced AL32 high definition processing. Quantization noise, inherent in standard resolution

digital audio conversion, is rendered inaudible and digital processing and filtering artifacts are moved far beyond the range of human hearing, so as to reproduce the purist, highest possible quality analog output signal.

#### DAC Master Clock design

A master clock design of exceptionally accuracy been placed immediately next to the DAC circuit, to provide the greatest accuracy in the D to A signal conversion and reduce to the absolute minimum timing anomalies in the conversion process – known as jitter – that are a significant source of distortion. The design features a low jitter oscillator to generate the clock signals. Two crystals – at 44.1 and 48 kHz – are incorporated, to generate the most accurate clock for incoming signals of any sample frequency (incoming signal sample frequencies being a multiple of one or other of the crystals – e.g. 192 kHz = 4 x 48 kHz; 88.2 kHz x 44.1 kHz). The effect is to ensure reproduction of a fully realistic and transparent stereo sound stage, with accurate localization of instruments and performers.

#### PRINCIPAL FEATURES

- High definition DAC with 1 x USB-B, 1 x coaxial and 2 x optical digital inputs
- Universal bit-transparent, asynchronous playback of digital audio file formats and streaming audio from PCs via USB-B; up to 24 bit, 192 kHz and DSD2.8 and DSD5.6 native support by DoP (DSD over PCM)
- 3x SPDIF (coaxial/optical) inputs for upgrading sound from other digital audio devices (up to 24 bit, 192 kHz) with the DA-300USB's advanced high definition signal processing
- Audiophile analog signal (line level) output and headphone amplifier stage, for connection to a music system or desktop speaker system and superb listening with all kinds of headphones or in-ears

#### DENON STATE-OF-THE-ART TECHNOLOGIES FOR HIGHEST POSSIBLE SOUND QUALITY

- High quality audio components for rich, open, detailed sound
- Denon Advanced AL32 Processing and High-Precision 32 bit, 192 kHz digital to analog conversion for exceptional high definition audio quality
- DAC master clock design for distortion free, fully transparent sound stage
- Independent master clock crystals (44.1kHz and 48kHz) accurately clock incoming signals at any sampling frequency
- Noise isolating circuit design prevents distortion via USB connection from computer generated digital noise; ensures fully transparent and spatially accurate sound stage
- Audiophile analog output stage matched to fully exploit high definition 32 bit, 192 kHz D-to-A signal conversion for the same astounding sound quality as Denon's acclaimed universal disc players

#### EASE-OF-USE

- Simple plug-and-play operation for connection to PCs and other devices with digital audio outputs
- Front panel touch input selector switch and headphone volume control
- High resolution OLED display shows selected input signal and headphone volume, and rotates automatically with horizontal or vertical positioning of the unit
- Attractive minimalist design with alternative horizontal or vertical positioning for integration with desktop audio or music systems



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All specifications can be subject to change  
Available in silver finish

#### Technical information

Features		Specifications	
Advanced AL 32 Processing	•	PCM 24/192 input signal	
DAC	32bit / 192kHz	Frequency response	2Hz - 96kHz (2Hz - 20kHz ±0.5dB)
Digital input	1x Coaxial / 2x Optical	Dynamic range	105dB
USB input	USB-B	Signal-to-noise ratio	112dB
PCM resolution (opt/coax./USB-B)	24bit / 192kHz	Total harmonic distortion	0.0018%
DSD Streaming USB-B (DoP)	DSD64 / DSD128		
Asynchronous Mode	•	DSD64 input signal	
Bit-transparent mode	•	Frequency response	2Hz - 100kHz (2Hz - 50kHz -3dB)
Analog output	1 L/R (RCA)	Dynamic range	105dB
Headphone output	• (6.3mm)	Signal-to-noise ratio	112dB
		Total harmonic distortion	0.0018%
		Output voltage (Line Out)	2.0V

#### General

Power supply	AC 120 V, 60 Hz
Power consumption	15 W
Dimensions horizontal (W x H x D)	6.7 x 2.3 x 7.2 inches (incl. Knob, Terminal)
Dimensions vertical (W x H x D)	4.5 x 6.9 x 7.2 inches (with Stand)
Weight	3.3 lbs.

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