**Product Information DA-10** 



**DA-10** 

PORTABLE HEADPHONE AMPLIFIER WITH D/A CONVERTER

# **PORTABLE HEADPHONE AMPLIFIER** WITH D/A CONVERTER

A new world of sound quality - that fits in the palm of your hand: The Denon DA-10 is a sound quality marvel, developed for outdoor and indoor usage alike. When on the go, you can now boost the sound quality of smartphones, laptops and the like. The DA-10 takes the audio signal from your mobile device and by means of digital to analog conversion, dramatically improves the audio stages. It also allows you to drive higher quality headphones effortlessly. In addition, the DA-10

makes your analog home Hi-Fi system digitally compatible - you can now enjoy all your stored digital music in the best audio quality. Despite its size, it delivers Denon High Quality Sound thanks to the integrated Advanced AL32 Processing. It emits high resolution audio up to 192kHz/24bit, comes with DSD 2.8MHz and 5.6MHz capability and thus delivers a new level of sound quality from any source. For all your connection needs, USB-A, USB-B micro and AUX input are integrated.







PCM & DSD > micro USB-B ADVANCED AL32 PROCESSING



usa.denon.com ca.denon.com

## Personalized Listening

While portable audio players, smartphones, and tablets can easily power ordinary ear buds, their analog audio output stages typically can't handle higher impedance headphone types, and the quality of their internal D/A conversion isn't up to the standard that serious music listeners desire. That's where the DA-10 changes the game and takes over. With its advanced audio technologies engineered by Denon audio experts the DA-10 brings all the details, all the bass, all the excitement back to life. This is not only noticeable with high price audiophile headphones, but also easily noticeable with standard in-ear buds.

## 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-10 for the highest possible sound quality. The computer recognizes the DA-10 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-10 —

including MP3/MP4, AAC, ALAC, WAV and FLAC HD (up to 24 bit, 192 kHz) and DSD (in 2.8MHz and 5.6MHz resolution). Transmission of the digital audio stream from the computer to the DA-10 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.

## 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 a 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 ren-

dered 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 exceptional accuracy has 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.

## **NEW FEATURES**

- High definition, portable headphone amplifier with D/A Converter
- · USB Audio and Micro USB-B inputs
- · Analog input and output
- Universal bit-transparent, asynchronous playback of digital audio file formats and streaming audio from computers via Micro USB-B; up to 24 bit, 192 kHz and DSD 2.8MHz and 5.6MHz native support
- Headphone amplifier stage, for superb listening with all kinds of headphones
- · Up to 7 hours run time rechargeable battery

## STATE-OF-THE-ART DENON SOLUTIONS FOR MAXIMIZING CONTENT 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 sample frequency
- · Discrete Current Buffer for Headphone Output
- 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 top of the range CD / SACD players

#### EASE-OF-USE

- Simple plug-and-play operation for connection to computers and other devices with digital audio outputs
- Input selector switch and headphone volume control
- · Portability design and functionality for outdoor use
- · Carrying pouch
- Micro USB cable (Micro B), Lightning USB cable, 30pin USB cable, Stereo mini plug cable are supplied



Denon is a trademark or registered trademark of D&M Holdings, Inc.

\* Not available in all regions All specs can be subject to change Product available in Silver

**UPC** DA10SPEM 8-83795-00338-4

## General

 Max. dimensions (W x H x D)
 2.52 x 1.14 x 5.47 inches

 Weight
 0.53lb.

## Technical information

Features
Advanced AL 32 Processing
DAC
Analog input/output

USB input PCM resolution (USB-B) DSD Streaming USB-B

Asynchronous Mode Bit-transparent mode Headphone output Headphone gain control • 32bit / 192kHz

VSB-Audio / Micro USB-B
 24bit / 192kHz
 DSD2.8MHz / DSD5.6MHz

•

Normal / High

Specifications

Frequency response Signal-to-noise ratio Total harmonic distortion Headphone Power 2 Hz - 50 kHz (-3dB) 108dB (Volume max, 2V) 0.003% (1 kHz, audible range) 40mW + 40mW (32 ohms, 1% distortion) 18mW + 18mW (600 ohms, 1% distortion)

|V01|

## Denon Electronics (USA), LLC.

D&M Canada 100 Corporate Drive, Mahwah, New Jersey 07430 USA TEI 201-762-6500