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TEAC UD-507: Cutting-Edge DAC, Preamp, and Headphone Amplifier

The new TEAC UD-507 offers a high-end audio experience in a redesigned, space-efficient package.



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- Nemanja Grbic

TEAC Corporation has unveiled its latest addition to the audio market, the TEAC UD-507, a redesigned DAC/Preamp/Headphone Amplifier. Part of TEAC's 500 Series, the UD-507 combines a high-end design concept with a compact form factor, comparable to the size of a sheet of A4 paper.

The TEAC UD-507 is equipped with TEAC's proprietary TRDD5 DAC (TEAC Reference Discrete DAC). This component is designed to enhance the musicality of audio playback, which should provide a more immersive listening experience. The TRDD5 processes digital input signals at 64-bit/512fs using a delta-sigma modulator within an FPGA, which utilizes a proprietary algorithm.

This DAC supports up to 22.5MHz DSD and 32-bit/384kHz PCM playback, and users can choose between multilevel delta-sigma and 1-bit delta-sigma methods for different sound preferences.

One of the key features of the UD-507 is its high-current headphone amplifier. The TEAC-HCLD2 (High Current Line Driver) delivers a maximum power output of 1,200mW + 1,200mW (balanced

output at 100Ω load), which is comparable to dedicated headphone amplifiers without DAC functionality. The amplifier gain can be adjusted across three settings (Low/Mid/High) to match the sensitivity and impedance of various headphones.



The UD-507 also incorporates TEAC's QVCS (Quad Volume Control System), a high-precision analog volume attenuator. This system, along with a powerful high-current line buffer circuit, ensures precise volume control and robust signal integrity. The dual monaural configuration of the analog output stage, with independent D/A converter sections for the left and right channels, enhances channel separation and stereo imaging.

The TEAC UD-507 offers extensive connectivity options, including five digital inputs and two analog inputs. Digital inputs comprise USB Type-B (rear), USB Type-C (front), coaxial, optical, and Bluetooth. The analog inputs include RCA and XLR connections. This wide array of inputs allows the UD-507 to handle various audio sources, from high-resolution digital files to traditional analog signals.



For wireless audio, the UD-507 supports high-quality codecs such as LDAC, LHDC, and Qualcomm

aptX HD, enabling high-resolution audio streaming up to 24-bit/96kHz. It also supports multipoint connectivity, allowing simultaneous connection of two Bluetooth devices. Additionally, the unit includes a full MQA decoder for all digital inputs except Bluetooth, ensuring high-fidelity playback of MQA-encoded music.

The TEAC UD-507 features a robust chassis with a 2.8mm thick top plate and a transformer mounted on a floating structure to minimize vibrations. TEAC's original Stressless Feet v2, which creates a gap between the bottom plate and the feet, further controls vibrations that could affect sound quality. These design elements reflect TEAC's focus on minimizing external interference to maintain audio purity.

The UD-507 includes advanced features such as an asynchronous USB mode, which uses the unit's internal high-precision crystal oscillator to control data transfer, reducing jitter and ensuring accurate sound reproduction. The device also supports a 10MHz external clock input, allowing synchronization with an external master clock for even higher precision in music reproduction.



The unit's up-sampling function, utilizing RDOT-NEO (Refined Digital Output Technology NEO), can increase the sampling frequencies of PCM digital audio signals by 2, 4, or 8 times, up to a maximum of 384kHz. This feature helps improve the clarity and detail of digital audio playback.

Key Features:

- Full-stage dual monaural/balanced circuitry.
- Playback: 22.5MHz DSD, 384kHz/32bit PCM, Full MQA.
- Digital inputs USB Type-B, USB Type-C, Coaxial, Optical, Bluetooth.
- Analog inputs: RCA, XLR.
- RDOT-NEO (Refined Digital Output Technology NEO) up-conversion function (2xFs/4xFs/8xFs),
- Bluetooth audio codecs: SBC, AAC, LDAC and aptX HD.

The TEAC UD-507 will be available for purchase in June 2024 through [TEACUSA.com](https://www.teacusa.com) and select dealers. The MSRP is set at \$2,099.99.