TECHNICAL AUDIO DEVICES LABORATORIES, INC.

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DISC PLAYER

D600

Pure sound that knows no compromise.

DISC PLAYER
D600

TAD is a company that never compromises its design concepts and technologies. Our mission is to achieve a purity of sound to a degree that has never before been experienced. Introducing the TAD-D600. Backed by 30 years of professional audio experience, this new reference standard disc player inherits the TAD spirit of continuous evolution and refinement. Its core technology, an Ultra-high-Precision Crystal Generator master clock (Master Clock UPCG) provides an ultra-high clock to noise ratio (Ultra-high C/N) achieving incomparably accurate D/A conversion performance. With this innovative technology, the D600 begins a new era in music reproduction - music unaltered from the original recording and true to the performance.

Remarkable sound quality brought about by the precision of the D/A conversion.

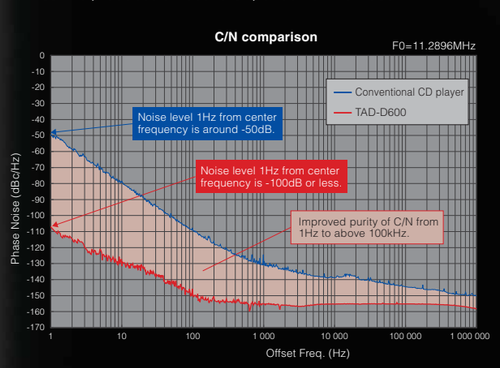
The design philosophy to which TAD engineers prescribe can be stated as, “Communicate the excitement of music exactly as it was originally performed”. To adhere to this philosophy and because the clock performance greatly impacts the precision of D/A conversion TAD engineers prioritized the development of a new master clock for the D600. This process led to the creation of the Ultra-high C/N Master Clock UPCG, which significantly reduces jitter in the frequency bands around the clock center frequency. Our original approach to engineering results in the ability to directly convey the purity of the musical performance.

TAD. Theory and engineering innovation merge into reality in the TAD-D600.

Digital to Analog Conversion Technology

Pursuing the ultimate in sound purity required a focus on the master clock characteristics. Development of the new Ultra-high C/N Master Clock UPCG.

The D600 employs a new proprietary crystal oscillator that improves noise level more than 50dB compared with conventional players, attaining ultra-high C/N characteristics. TAD focused specifically on C/N in order to provide the most accurate sound reproduction capability, aiming to thoroughly reduce jitter in the low frequency sideband ranges relative to the center frequencies. TAD developed the crystal oscillator in co-operation with a crystal manufacturer. Based on technologies developed for high-speed digital base station relay facilities this produces an oscillator perfect for the D600.



Ultra-high C/N Master Clock UPCG

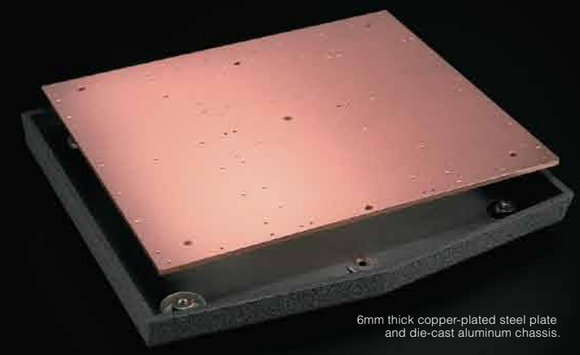
Featuring a newly designed audio output circuit that reduces noise and achieves a high slew rate.

The performance of the I/V conversion circuit, which transforms the current output from the D/A converter to voltage, significantly impacts sound quality. The discrete I/V conversion circuit used in the D600 was developed to significantly lower noise and achieve a high slew rate. Together this results in a superior sound-stage presentation, improved rhythmic integrity and enhanced transient attack of the musical signal.

Audio output circuit

Utilizing Burr-Brown high performance PCM1794 DACs, the twin differential DAC configuration delivers a superior signal-to-noise ratio.

Two Burr-Brown PCM1794s, a well respected high performance DAC, are connected in parallel in a balanced configuration. This improves audio performance in all metrics including S/N ratio, linearity, dynamic range, and distortion. The result is that even delicate audio sound nuances are reproduced faithfully, creating a greater degree of realism in the music.



6mm thick copper-plated steel plate and die-cast aluminum chassis.

Vibration Control Technology

The heavy die-cast aluminum chassis contributes to an incredibly rigid and stable structure.

An important factor in the quest to improve sound quality is the ability to control noise-causing vibration. To this end, the D600 has a die-cast aluminum chassis with high-vibration absorption performance. Inside, a heavy 6mm thick copper-plated galvanized steel plate further dampens vibration and lowers the center of gravity. This two-layer structure ensures high stiffness and low vibration to greatly reduce any impact on sound quality. Additionally, the copper plating contributes to lowering the ground impedance, improving the S/N ratio.

Total separation of the player and power supply unit. Double-housing design thoroughly eliminates the effects of vibration.

The player unit and power supply unit are completely separated. This eliminates the harmful affects of extraneous vibration on the mechanisms and audio circuits, as well as magnetic flux leakage from the power supply, significantly improving sound quality. In addition, the double-housing permits the transformers and rectification circuit to be designed without compromise, something not possible in a single housing.

Three-point support spike structure controls vibration from ground contact, ensuring high stability.

In order to stably support the heavy chassis and block transmission of vibration from below, the D600 is equipped with die-cast aluminum three-point support spikes. This extremely stiff suspension thoroughly dampens any vibration that would otherwise be transmitted upward from the support surface. The D600 provides high-quality sound reproduction from the feet up!

High Quality Construction

Super-powerful 400VA transformer for superior performance.

To obtain a highly stable power supply a powerful transformer is necessary. After a comprehensive series of listening tests at various power supply capacities, a 400VA toroidal transformer was selected. Delivering on a par with transformers used in high-power amps, it achieves an incredibly high performance level for a disc player.

TAD's unique high-stiffness CD/SACD mechanism achieves outstanding precision and stability.

Realizing the ultimate in reproduction accuracy also required an innovative design for the CD/SACD mechanism. It features high stiffness, smooth operation and superior vibration control properties thanks to a precise loading mechanism equipped with metal shaft bearings. The pickup employs an infinite conjugate optics system, ensuring both stable operation and high reading precision. The highly-rigid disc tray is formed from precision-machined aluminum to further minimize vibration. A black sheet on the tray both restricts the scattered reflection of laser light to increase reading precision and contributes to vibration control.

Aluminum disc tray

High capacity power supply

DAC mode provides high precision when used as a D/A converter.

The D600 can also be used as a high performance D/A converter. Its combination of Ultra-high C/N Master Clock UPCG and sampling rate converter achieves extremely accurate D/A conversion of digital signals input from external sources. The conversion of digital data streams output from a computer is also possible. You can enjoy high quality music sources with sampling frequencies up to 192kHz/24-bit

- A High purity transmission path using gold plated coaxial connectors and high-quality semi-rigid coaxial cables is used for the wiring of the master clock oscillator.
- Equipped with a precision brushless DC servo motor, this simultaneously reduces noise and achieves a long service life free from brush-induced friction.
- The CD/SACD mechanism is also equipped with a high C/N clock, lowering jitter and improving sound quality.
- Using pressure-sensitive rather than capacitive touch keys and static light-mode LED displays virtually eliminates the impact of high frequency noise on sound quality.
- Digital output (upconverted to 88.2kHz sampling frequency) exceeds the CD format performance capability for high-quality sound reproduction.

TAD-D600 Specifications

■ Analog audio output ・Output connectors / Balanced output: XLR stereo x 1, Unbalanced output: RCA stereo x 1 ・Audio output level / Balanced output: 450mVrms (1kHz, -20dB), Unbalanced output: 220mVrms (1kHz, -20dB) ■ Frequency response ・CD: 4Hz to 20kHz ・SACD: 4Hz to 40kHz ■ S/N ratio: 115dB ■ Digital audio input/output ・Balanced input: XLR connector x 1 ・Coaxial input: RCA connector x 1・Balanced output: XLR connector x 1・Input sampling frequency: 32kHz to 192kHz ・Output sampling frequency: 44.1kHz, 88.2kHz (CD) ■ Power source: AC120V, 60Hz (USA), AC230V, 50Hz/60Hz (Europe) ■ Power consumption: 32W ■ Standby power consumption: 0.5W ■ External dimensions ・Main unit: 450mm (17 23/32 in.) (W) x 185mm (7 9/32 in.) (H) x 440mm (17 11/32 in.) (D) ・Power unit: 220mm (8 11/16 in.) (W) x 185mm (7 9/32 in.) (H) x 430mm (16 15/16 in.) (D) ■ Weight ・Main unit: 26.5kg (58 lb 7oz) ・Power unit: 13kg (28 lb 11oz)

SUPER AUDIO CD

COMPACT disc DIGITAL AUDIO

Remote control

Power supply rear panel

Main unit rear panel