

# ESOTERIC

## Super Audio CD/CD Player K-05X/K-07X



Super Audio CD/CD Player

# K-05X



## VRDS-NEO [VMK-5] Transport Mechanism Improves Reading Accuracy

The unique VRDS-NEO VMK-5 transport mechanism featured in this new player incorporates high-precision turntable that greatly improves reading accuracy by mechanically correcting for disc surface run-out. It's hybrid construction integrates precision-machined aluminum with polycarbonate to help minimize rotational inertia.

Formed of high-rigidity BMC (Bulk Molding Compound) and steel, the hybrid turntable bridge also makes a significant contribution to the suppression of rotational vibration and run-out. The transport's spindle motor realizes further improvements in reading accuracy with an advanced servo control that uses rotation detection circuitry.

Mechanical operations such as opening and closing the tray and clamping the disc are performed by a unique differential gear system. This proprietary\* Esoteric technology ensures exceptionally smooth disc loading operation. \*Patent No.2861798 owned by TEAC Corporation.

## *Pursuing Radical Evolution, Not Nominal Improvements.*

*Reborn with a new 'X' designation, the K-05X and K-07X command central roles in Esoteric's superb lineup of Super Audio CD players, and should really be considered 'all-new,' having been infused with the very essence of our flagship Grandioso models.*

*These new players achieve the very tenets of Esoteric's design philosophy, conveying to the listener all the emotional expression of music without a hint of stress.*

*With totally revamped audio electronic circuitry, these two new 'X' models eschew all compromise, and renew the lineage of the K Series.*

Super Audio CD/CD Player

# K-07X



## VOSP\* Mechanism With Axial Sliding Pickup

Esoteric's unique VOSP\* mechanism employs the same axial sliding pick-up assembly used in our premier Grandioso line of high-end SACD players. As the pickup lens moves, the laser beam maintains an ultra-precise perpendicular optical axis orientation relative to the disk surface, ensuring highly accurate reading of audio data. The VOSP mechanism is rigidly held by a robust steel plate and an 8mm-thick large-diameter steel stabilizer for superior anti-resonance and anti-vibration properties.

\*VOSP = Vertically-aligned Optical Stability Platform

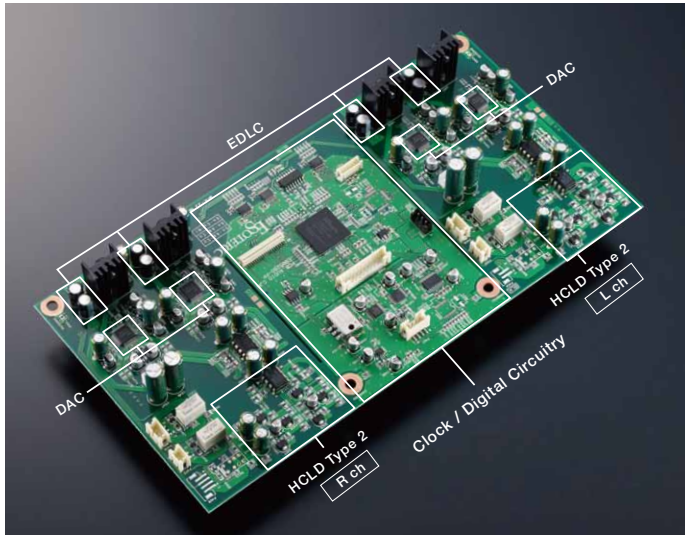
## Refined Dual Mono D/A Converters Derived From Top-of-the-Line Components

The D/A converter's analog output circuitry features both excellent high-end resolution and natural musical texturing that only high-end components such as Esoteric's K Series SACD players can offer. Centered around Asahi Kasei's high-end AK4490\* 32-bit DAC, this circuitry accentuates the expressive power of these players with 4 parallel/differential circuits and 8 outputs driving each channel—twice that of conventional players in terms of circuit scale—to further enhance sound quality with excellent linearity and low distortion.

Arranged in a discreet dual mono configuration, the D/A converters and analog output circuitry are laid out in parallel on either side of the board, and are completely isolated from the digital signal processing circuitry, achieving superb channel separation.

Technology developed for the Grandioso C1 Linestage Preamplifier is also employed in the power supply, which features EDLC (Electronic Double-Layer Capacitors). This regulated power supply boasts an astounding total capacity of 500,000 $\mu$ F per channel for exceptional low-frequency sound reproduction.

\*AK4490 is a branded product of Audio4pro™ and of Asahi Kasei Microdevices Corporation, and designed for professional studio and digital audio applications.



\*EDLC = Electric Double - Layer Capacitor \*HCLD = High Current Line Driver

## 34-Bit D/A Processing Achieves Outstanding Powers of Musical Expression

Employing a 34-bit D/A processing algorithm with an encoding resolution that is an astounding 1,024 times greater than that of 24-bit encoding, multiple 32-bit DAC devices were combined to convert the high-resolution 34-bit PCM signal to analog. In the digital range, full advantage is taken of high-bit data gradation to minimize calculation errors and provide faithful conversion to analog, thereby attaining outstanding powers of expression with even extremely small music signals.

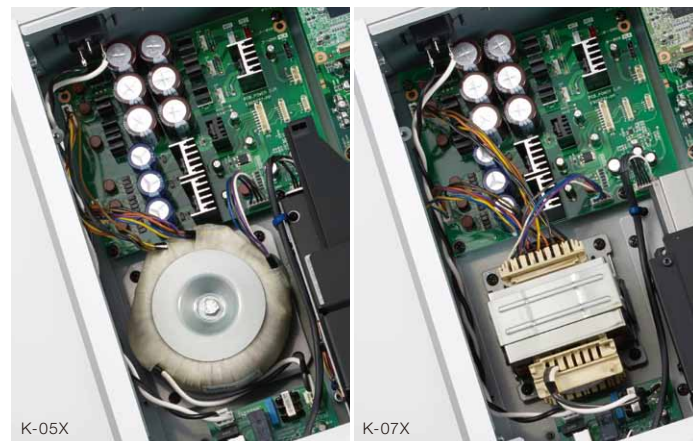
## Proprietary Esoteric-HCLD\* Type 2 Current-Enhancing Output Buffer Circuit

Playing a critical role in the superb sound quality achieved by these new 'X' version SACD players, further improvements were also made to their analog output circuitry. Providing excellent current transmission capability as well as a strong drive output, both players now employ Esoteric-HCLD\* Type 2 buffer amplifier circuitry like that first used in such high-end models as our C1 Linestage Preamplifier. Two of these buffer circuits are installed per channel and configured differentially to drive the XLR outputs, and in parallel to drive the RCA outputs. By transmitting the wide dynamic range of the musical signal in its entirety and providing a strong drive to connected equipment, the full dynamism of music is recreated with a sense of realism that will take your breath away.

\*HCLD = High Current Line Drive

## High-Speed, Large-Capacity Power Supply

The K-05X is equipped with a large, high-efficiency, high-powered toroidal transformer, while the K-07X uses a full-sized EI-core transformer. Each is custom-designed to ensure excellent sound quality. High-output power supply circuitry further combines with an array of large capacitors to provide clean and steady power to all circuit blocks.

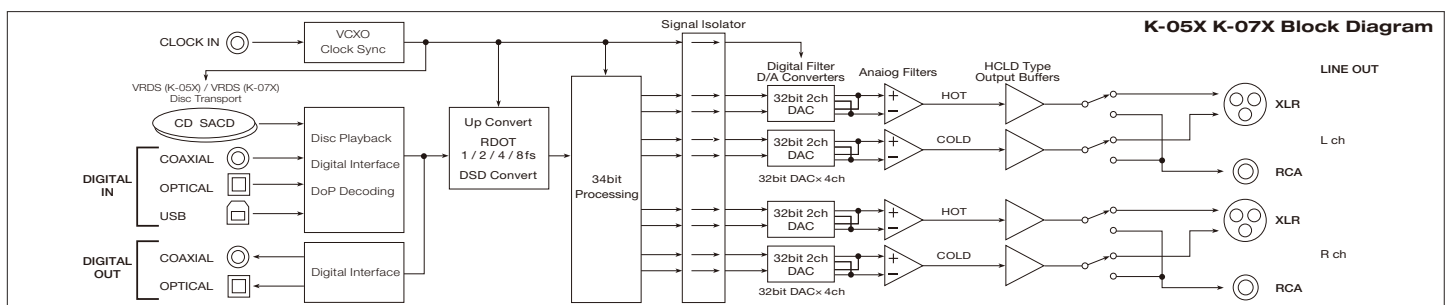


## High-Precision VCXO Clock

A high-precision VCXO (voltage controlled crystal oscillator) supplies a highly accurate reference clock signal to the digital circuitry. The K-05X's large, custom-designed VCXO was jointly developed with Nihon Dempa Kogyo (NDK), a leading manufacturer of crystal oscillators. Incorporating an unusually large crystal element, this VCXO realizes both excellent center accuracy ( $\pm 0.5$ ppm\*) and extremely low levels of phase noise to ensure exceptional sound playback quality.



(\*at time of shipping)



## External Clock Sync Function

Connecting the unit to a high-precision master clock generator (G-01, G-02) allows synchronization of the unit's operation with an external clock signal, thereby enabling an upgrade of system sound quality. Compatible with 44.1/88.2/176.4kHz input frequencies, both 10MHz and 22MHz direct master clock linkage\* and external clock synchronization are also supported for both digital optical and digital coaxial inputs, as well as when the USB input is used.

\* When an external clock generator is connected, its signal is also used to clock the D/A converter, bypassing the internal PLL circuit and providing straight, higher accuracy D/A conversion.

## Comprehensive D/D Conversion Compatible With Wide Range of Sources

In addition to playback at the original sampling frequency, 2X, 4X and 8X up-conversion of the PCM digital signal is also provided. A range of D/D conversion modes are also available for the PCM format, such as PCM-to-DSD conversion.

## Four Digital Filters Plus Filter OFF Mode

Four types of digital filter are available for PCM signal processing. Besides two FIR (Finite Impulse Response) digital filters, which have an established reputation for outstanding sound quality, two types of short delay digital filters are also included for a more precise and natural sound. A Digital Filter OFF mode permits both PCM and DSD digital filters to be bypassed if desired.

## Digital Inputs Support DSD and High-Res PCM

Three digital inputs (USB, coaxial, and optical) enable connection to a wide range of systems. These inputs support 2.8MHz DSD and up to 192kHz/24-bit high-resolution PCM.

## USB Support for 2.8/5.6/11.2MHz DSD, 384kHz/ 32-bit PCM and Asynchronous Transmission

In addition to playback at the original sampling frequency, 2X, 4X and 8X up-conversion of the PCM digital signal is also provided. A range of D/D conversion modes are also available for the PCM format, such as PCM-to-DSD conversion.

## ESOTERIC HR Audio Player (for PC / Mac)

Available free for download from the Esoteric website.

### Supported file formats

DSF	DSD 2.8 / 5.6MHz / 11.2MHz	DIFF	DSD 2.8 / 5.6MHz / 11.2MHz
PCM(wav)	44.1k to 384kHz, 16 to 32 bit	FLAC	44.1k to 384kHz, 16 to 32 bit
MP3	32k to 320kbps		

## Specifications

### Playable disc types

Super Audio CD, CD (including CD-R and CD-RW)

### Analog audio outputs

Connectors XLR (2 ch) × 1 pair, RCA (2 ch) × 1 pair  
Output impedance XLR : 20 Ω, RCA : 20 Ω  
Maximum output level XLR: 5.0 Vrms, RCA: 2.5 Vrms  
(at 1kHz, 10kΩ load)

### Super Audio CD XLR output

Frequency response 5 Hz to 70 kHz (−3 dB)  
S/N ratio 117 dB  
Distortion 0.0007% (1 kHz)

### Digital audio output

RCA jack 0.5 Vp-p (into 75 Ω) × 1  
Digital optical port −21 to −14.5 dBm peak × 1  
USB-B port USB 2.0 standard × 1

### Digital audio input

RCA connector 0.5 Vp-p (into 75 Ω) × 1  
Digital optical port −24.0 to −14.5 dBm peak × 1  
USB-B port USB 2.0 standard × 1

### Clock sync input

Connector BNC  
Supported input frequencies 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz,  
(±15 ppm) 192 kHz, 10 MHz, 22.5792 MHz, 24.576 MHz  
Input impedance 75 Ω  
Input level Rectangle wave : equivalent to TTL levels,  
Sine wave : 0.5 to 1.0 Vrms (50 to 75 Ω)

### General

Power supply  
European model 230 V AC, 50 Hz  
USA/Canada model 120 V AC, 60 Hz  
S. Korea model 220 V AC, 60 Hz  
Power consumption K-05X: 23W ; K-07X: 27W  
External dimensions (W×H×D) 445 × 131 × 355 mm  
(including protrusions) (17 5/8 × 5 1/4 × 14")  
Weight 14 kg (30 7/8 lb)

### Included accessories

Power cord × 1, Remote control (RC-1301) × 1, Batteries (AAA) × 2  
Owner's manual × 1, Warranty card × 1

- Design and specifications are subject to change without notice.
- Weight and dimensions are approximate.
- Illustrations in this manual might differ slightly from production models.

Featuring the same short-scratch hairline finish used on the player's front panel, the remote control's thick aluminum panel exudes a high-quality feel.



Common to K-05X / K-07X

PROUDLY MADE IN TOKYO

# ESOTERIC

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