

Super Audio CD / CD Player



K-01X



K-03X



RC-1315 (K-01X) RC-1301 (K-03X)

Specifications

Compatible Disc Types (Playback)

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

Analog Audio Outputs

Connectors XLR connector (2ch) × 1; RCA connector (2ch) × 1

Output impedance XLR: 40Ω; RCA: 10Ω

Maximum output level (1kHz, full-scale, into 10kΩ)

XLR: 4.8Vrms RCA: 2.4Vrms

*Output level drops 3dB for DSD data playback when DSD Filter is off.

Frequency response** 5Hz to 40kHz (-3dB)

S/N ratio** K-01X: 117dB; K-03X: 116dB

Total harmonic distortion** K-01X: 0.0006% (1kHz); K-03X: 0.001% (1kHz)

**Super Audio CD, XLR analog output

Digital Audio Output

XLR connector × 1 3 Vp-p (into 110Ω)

RCA connector × 1 0.5 Vp-p (into 75Ω)

Digital Audio Input

RCA connector × 1 (input impedance 75Ω)

0.5 Vp-p

Optical digital connector × 1 -24.0 to -14.5dBm peak

USB-B connector USB 2.0 standard

Clock Sync Input Format

Connector BNC

Supported input frequencies (±15ppm)

44.1, 48, 88.2, 96, 176.4, 192kHz,

10, 22.5792, 24.576MHz

Input impedance 75Ω

Input level Rectangle wave: equivalent to TTL levels;

Sine wave: 0.5 to 1.0 Vrms (50 to 75Ω)

General

Power supply AC 230V, 50Hz; AC 120V, 60Hz; AC 220V, 60Hz

Power consumption K-01X: 27W; K-03X: 25W

External dimensions

(W x H x D, including protrusions)

445 x 162 x 438mm (17 1/4 x 6 3/8 x 13 1/4 in)

Weight

K-01X: 31kg (68 3/8 lbs); K-03X: 28kg (61 3/4 lbs)

Included accessories

Power cord set × 1; Remote control (K-01X: RC-1315; K-03X: RC-1301) × 1;

Batteries for remote control (AAA) × 2; Felt pads × 3;

Owner's manual × 1; Warranty card × 1

- These products are available in three different power supply variations shown in the chart above. Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.

- The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.



K-01X / K-03X

ESOTERIC

Super Audio CD/CD Player K-01X/K-03X



PROUDLY MADE IN TOKYO

ESOTERIC

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Please note that Esoteric products are available at limited distributors in respective countries.
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Taking Sound to the X Dimension

X is the unknown. "X" in a model name symbolizes the ultimate advancements of technology, craftsmanship and creative commitment.

The K-01 and K-03 have won high acclaim as leaders of Esoteric's line of all-in-one Super Audio CD players, and their extraordinary ability to reproduce the essential qualities of a musical performance continues to enthrall listeners to this day.

Now, a new "X" inherits that solid pedigree and further refines these qualities in the new K-01X and K-03X Super Audio CD players. Concentrated beauty in an all-in-one form is a hallmark of Esoteric's flagship Grandioso models. The philosophy and technologies found in these high-end digital players reveal a new dimension of sound appreciation unlike anything you have ever experienced before.

Super Audio CD/CD Player

K-01X



Super Audio CD/CD Player

K-03X



K-01X

A New Pinnacle of Sound Quality

Four years after the release of the K-01—the world's leading all-in-one digital player—the new K-01X debuts as a more compact version of Esoteric's flagship Grandioso model. Utilizing the same type of highly rigid chassis construction as the Grandioso and a similar four-transformer power supply, it integrates the Grandioso P1's high-precision VRDS-NEO "VMK-3.5-20S" turntable with two independent monaural DAC units derived from the Grandioso D1 design, each configured with a parallel array of 8 individual converters, which are summed to optimize linearity and minimize noise.

Electronic circuitry has also been further improved with the latest technologies, including a new AK4495S DAC IC, an advanced 35-bit D/A processing algorithm, an HCLD buffer amp, a DSD-compatible USB interface, and a large, low phase noise clock, all ensuring the K-01X achieves the absolute pinnacle of sound quality.



K-03X

Sound With Pedigree

The K-03X all-in-one player is designed to offer as much of the stellar performance provided by the K-01X as possible. Using the same design philosophy as the K-01X, it also derives its leading technology from this model. Its VRDS-NEO VMK-3.5-10 drive mechanism now incorporates Esoteric's advanced VS-DD servo driver for even smoother spindle operation. Its dual mono DAC, also found in the K-01X, is configured with 4 individual converter circuits operating in parallel and summed to optimize linearity and minimize noise. It also employs Esoteric's innovative 34-bit D/A processing algorithm.

With a pedigree extending directly back to the Grandioso D1, the K-03X is clear in its stunning sound quality, ease of use and wide functionality, including such recent developments as its DSD compatible USB interface.

VRDS-NEO [VMK-3.5-20S]



The culmination of Esoteric's most advanced mechatronics know-how, the VRDS system radically improves the reading precision of Super Audio CD/CD discs by mechanically correcting for surface run-out. The K-01X's VRDS-NEO VMK-3.5-20S drive also features two sets of specially selected ball bearings supporting a duralumin turntable constructed to micron-level accuracy, and a 20mm-thick steel turntable bridge. The combined mechanical structure weighs an impressive 5.2kg (12kg including the rigid base).

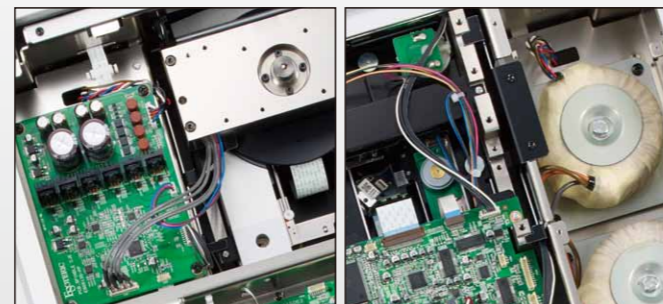
The drive employs proven Esoteric technologies, including a high-flux-density magnet-driven coreless three-phase brushless spindle motor, a thread feed control derived from the thinking behind the P-0, and a shaft-sliding pickup which consistently illuminates the disk with a precisely perpendicular beam of laser light. Additionally, the disc tray features a silent shutter mechanism* that further ensures the ultimate in operating precision.

* This mechanism closes the shutter when the tray is retracted, then mechanically locks it into place in the front panel to ensure a more secure environment that minimizes the effects of extraneous noise and airborne contaminants, etc. on sound quality.

VS-DD* Spindle Servo Driver and Proprietary Toroidal Power Supply.

At the heart of the VRDS-NEO drive is a spindle driven by Esoteric's proprietary VS-DD servo driver circuit. This uses a discrete three-channel amplifier to optimize the motor drive current, minimize vibration and provide ultra-smooth spindle operation and high-accuracy servo control. The K-01X is also equipped with a proprietary toroidal power supply that greatly enhances noise isolation.

*VS-DD = VRDS Spindle Discrete Driver



Grandioso D1 Lineage Dual Mono D/A Converters with Separate Left and Right Channel Power Supplies.

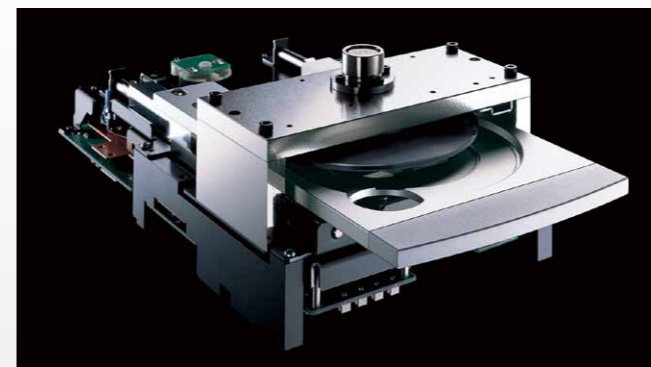
The D/A converter uses the same design philosophy as our Grandioso D1. Incorporating Asahi Kasei Microdevices Corporation's 32-bit AK4495S DAC IC and MUSES 02 operational amplifier,* this exceptional DAC uses 8 parallel/differential circuits with 16 outputs driving each channel to achieve outstanding linearity and low distortion.

Like the Grandioso D1, this D/A converter also features fully independent power transformers and power supply circuits for each channel to create a true dual mono configuration. The generous power supply capacity and total channel separation enabled by this arrangement provides excellent dynamics, with realistic stereo imaging and exceptional resolution of fine detail.

* AK4495S is a branded product of Audio4pro™ and Audio 4 pro. of Asahi Kasei Microdevices Corporation, and designed for professional studio and digital audio applications.

* MUSES 02 is a trademark of New Japan Radio Co., Ltd.

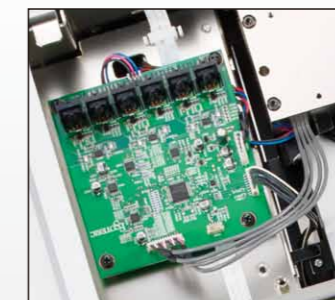
VRDS-NEO [VMK-3.5-10]



Originally developed for the Grandioso P1, the VRDS-NEO drive mechanism achieves ultimate levels of transport accuracy. Its high-precision turntable was specially designed to spin Super Audio CD/CD discs, radically improving reading accuracy by mechanically correcting for surface run-out. To provide a comparable level of precision, the K-03X is equipped with the VRDS-NEO VMK-3.5-10 drive, placing Esoteric's superlative music reproduction capabilities within reach of an even greater number of music lovers. The new addition of its VS-DD spindle servo driver further assures smoother high-precision servo control.

With its duralumin turntable and 10mm-thick turntable bridge, the unit's massive weight of 4.4kg (11.2kg including its highly rigid base) is proof of the drive's robust construction. Other proven VRDS-NEO features include a high-flux-density magnet-driven coreless three-phase brushless spindle motor, high-precision thread feed control, and a shaft-sliding pickup that assures consistently perpendicular laser illumination.

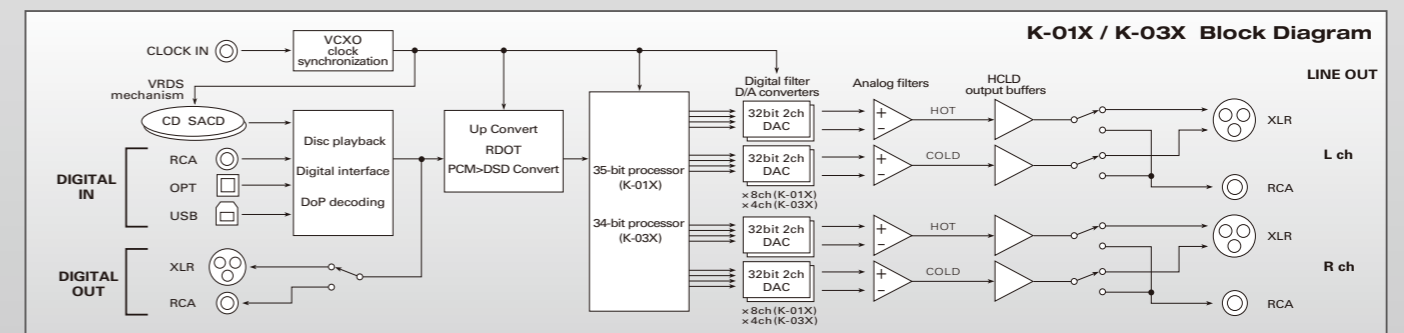
VS-DD Spindle Servo Driver



The proprietary VS-DD spindle servo driver previously used only in Esoteric's top-end models is now made available to the K-03X. Its discrete three-channel amplifier circuitry optimizes the waveform of the current supplied to the motor for quieter and smoother spindle operation and high-precision servo control.

Dual Mono D/A Converters Follow the Design Philosophy of the K-01X

Due to the exceptional performance of its D/A converters, the K-03X offers a level of sound quality on a par with the K-01X in terms of clarity and musical presence. Its multiple DAC design philosophy, carried over from the Grandioso D1, allows extremely accurate digital to analog conversion. This is exemplified by the outstanding linearity and low distortion achieved by the arrangement of 4 individual DAC circuits operated in parallel in each channel. The K-03X uses the same AK4495S DAC chipset featured in both the Grandioso D1 and the K-01X. To minimize noise, two large toroidal transformers supply power independently to the digital and analog circuits in each channel. The excellent channel separation and stereo imaging of the K-03X's converters provide listeners with a mesmerizing musical experience.



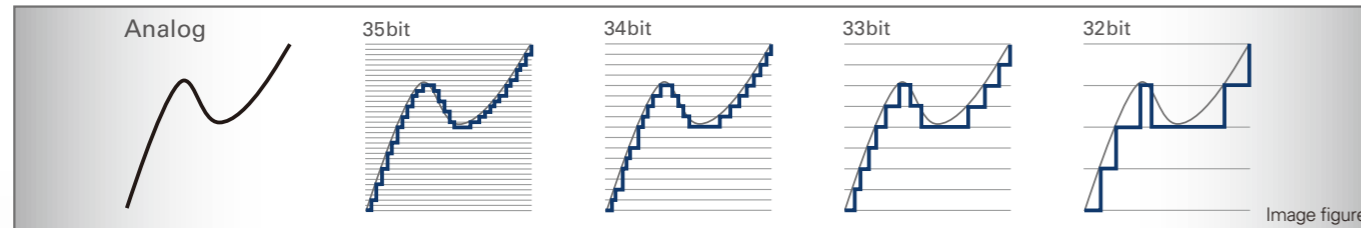
The X-Factor: Enabling Technology, Know-How, and Resources

K-01X/K-03X Common Features

High-Bit D/A Processing With Outstanding Powers of Musical Expression

Both the K-01X and K-03X combine multiple 32-bit DAC chipsets and utilize a high-bit D/A processing algorithm to convert the PCM signal to analog at a high resolution in excess of 32 bits. The K-01X supports 35-bit processing and the K-03X 34-bit processing. 35-bit processing achieves an astounding resolution that is fully 2,048 times that of 24-bit

processing (34-bit processing being 1,024 times that of 24-bit processing). 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.



Esoteric-HCLD*: Esoteric's Proprietary Current-Enhancing Output Buffer Circuit.

The ability to produce comparatively large currents and high slew rates are two of the most important factors to enable an analog output circuit to accurately transmit the wide dynamic range of a music signal without degradation. To obtain the ultimate performance, the K-01X employs the same Esoteric-HCLD buffer amplifier circuitry found in the Grandioso D1. Two of these buffer circuits are employed per channel. Their high output current capacity and exceptionally fast slew rate (2000V/μs) provide an indication of their excellent response speed. By configuring them differentially to drive the XLR outputs and in parallel to drive the RCA outputs, the instantaneous output current available is maximized. The Esoteric-HCLD circuitry enables the K-01X and K-03X to recreate the full dynamism of music with a sense of realism that will take your breath away. *HCLD = High Current Line Driver

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 Types of Digital Filters and a Filter OFF Mode

Four types of digital filter can be freely selected for PCM signal processing. Besides two FIR digital filters, which have an established reputation for providing outstanding sound quality, two types of short delay digital filters are also included for a more precise and natural sound. All four digital filters for both PCM and DSD can be bypassed by selecting the Digital Filter Off mode.

Digital Inputs Support DSD (DoP format) and High-Res PCM

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

USB Support for 2.5/5.6 MHz DSD, 384 kHz/32-bit PCM, and Asynchronous Transmission

The USB input supports asynchronous transmission and rates up to 2.8/5.6 MHz DSD and 384 kHz/32-bit PCM. Esoteric's original PC driver software achieves outstanding playback of even studio-master-quality source files. DoP and ASIO 2.1 are also supported.

*ASIO is a trademark of Steinberg Media Technologies GmbH.
**Mac supports the standard driver DoP format only.

High-Precision VCXO Clock

Often considered the heart of a digital player, the clock circuit supplies a high-accuracy reference clock signal to the digital circuitry. Its voltage-controlled crystal oscillator (VCXO) was originally developed for the Grandioso P1/D1 in a joint effort with Nihon Dempa Kogyo (NDK), a major manufacturer of crystal oscillators. As a high-precision custom clock worthy of the world's leading equipment, this circuit ensures exceptional sound playback quality thanks to an exceptionally large crystal element with excellent center accuracy (±0.5 ppm*) and extremely low levels of phase noise. (*at time of shipping)



Clock Sync Function for Synchronization with External Devices

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 the sound quality of the system to be upgraded. Input frequencies are 44.1/88.2/176.4 kHz, as well as 10 MHz and 22 MHz direct master clock linkage.* Synchronization with external clocks is also supported 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 higher precision D/A conversion.

Output Modes

The analog audio outputs can be switched between RCA, XLR, and OFF. Hot 2 or Hot 3 XLR pin assignments can also be selected.

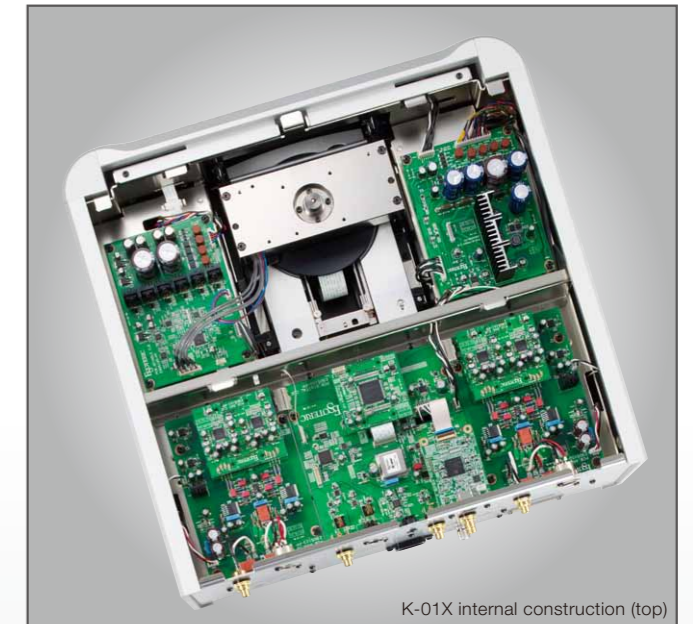
Support for Future System Upgrades

RCA (S/PDIF) or XLR (AES/EBU) digital outputs are provided. These allow to player's performance to be upgraded by the addition of a top-end Esoteric D/A converter.

*This circuit can be turned off when digital output is not in use.

Chassis Construction and Parts Layout

The VRDS-NEO transport mechanism is positioned in the center of the unit, directly attached to the 5 mm-thick steel chassis bottom, and is supported at three points by Esoteric's proprietary pinpoint feet (Patent No. 4075477) to effectively suppress the effects of vibration on the turntable mechanism. The chassis interior features a double-deck construction with five compartments. Each circuit block is isolated within its own compartment to minimize interference between circuits. Two separate audio boards for each channel are positioned nearest the rear terminals. The audio power circuitry and power transformers are also isolated from the audio boards, and the



K-01X internal construction (top)



K-01X internal construction (bottom)

power supply wiring has been made as short as possible to minimize the influence of magnetic flux leakage, vibration, and the like.

The K-01X features four large-capacity toroidal transformers: one for each of the two built-in monaural D/A converters, one for the audio circuitry, and one for the VS-DD spindle servo driver. The K-03X is equipped with two large-capacity toroidal transformers: one for the analog circuitry and the other for the digital/mechanism drive circuitry. This design provides ideal power supply capability to all circuit blocks without interference.

High-Quality Sound File Playback for Anyone

Windows/Mac Application for 5.6MHz DSD and 384kHz PCM Audio File Playback.

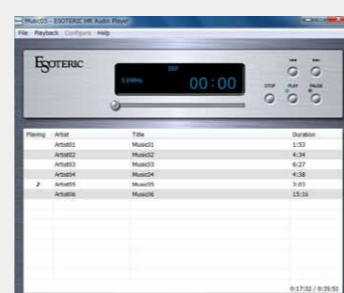
ESOTERIC HR Audio Player

Available free for download from the Esoteric website.

The Esoteric HR Audio Player, for both Windows and Mac OS X operating systems, is a high-quality audio playback application that ably handles high-resolution audio sources when used in combination with the K-01X/K-03X players. Superb audio quality playback of high-resolution audio sources, including DSD, can be enjoyed without complicated setup.

Supported file formats

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



Upgrade Services

Upgrade services are available for the K-01 or K-03 where specific new functions employed by X edition models can be added.

Applicable models: K-01, K-03

Details: USB input capability extended

(Compatible with 2.8 MHz DSD and 384 kHz/32-bit PCM*)

Allows synchronization with an external master clock generator or 10 MHz clock signal when the USB input is selected.

*Not compatible with 5.6 MHz DSD.