

SA-60 Main Specifications

General
System
 DVD-Audio, Super Audio CD, CD, and DVD-Video (audio playback only)
Power supply
 Europe model AC 230 V, 50 Hz
 U.S.A./Canada model AC 120 V, 60 Hz
 Korea model AC 220 V, 60 Hz
Power consumption 23 W (in standby mode: 2 W)
Weight 14 kg (30 7/8 lb)
External dimensions (W x H x D)
 442 x 149 x 353 mm (17 3/8" x 5 7/8" x 13 7/8")

Audio output (Analog Audio)
Jacks XLR jacks (2 channel) x 1
 RCA jacks (2 channel) x 1
 RCA jacks (5.1 channel) x 1
Maximum Output level (1 kHz, full scale)
 RCA: 2.2 Vrms ±0.1 V/10 kΩ
 XLR: 2.2 Vrms ±0.1 V/10 kΩ
Frequency response 5Hz - 88 kHz (DVD-Audio)
Signal-to-Noise Ratio (S/N) 130 dB
Dynamic range 107 dB
Total harmonic distortion 0.002%
Decodable format
 DTS, DTS 96/24, Dolby Digital
 PCM 44.1 kHz/192 kHz/16-24 bit, DSD

- Design and specifications are subject to change without notice.
- Weight and dimensions are approximate.



SA-60



DV-60

DV-60 Main Specifications

General
System
 DVD-Video, DVD-Audio, DVD-R/RW, Video-CD, Super Audio CD and CD
Power supply
 Europe model AC 230 V, 50 Hz
 U.S.A./Canada model AC 120 V, 60 Hz
 Korea model AC 220 V, 60 Hz
Power consumption 28 W (in standby mode: 2 W)
Weight 14 kg (30 7/8 lb)
External dimensions (W x H x D)
 442 x 149 x 353 mm (17 3/8" x 5 7/8" x 13 7/8")

Video Output
S-Video output (S1/S2)
 Y (luminance) - Output level 1 Vp-p (75 Ω)
 C (color) - Output level 286 mVp-p (75 Ω)
Jack S-VIDEO jack
Video output
Output level 1 Vp-p (75 Ω)
Jack RCA jack
Component video output (Y, PB, PR)
 Y-Output level 1.0 Vp-p (75 Ω)
 PB, PR-Output level 0.7 Vp-p (75 Ω)
Jacks RCA jacks
D1/D2 video output (Y, PB, PR)
 Y-Output level 1.0 Vp-p (75 Ω)
 PB, PR-Output level 0.7 Vp-p (75 Ω)
Jack D terminal
HDMI output
Jack HDMI 19 pin (version 1.1)

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 DTS, DTS 96/24, Dolby Digital
 PCM 44.1 kHz/192 kHz/16-24 bit, DSD

Audio output (Digital Audio)
OPTICAL Optical digital jack x 1
COAXIAL RCA jack x 1
Word Synchronization input format
Jack BNC
Input level TTL level/75 Ω
 The DV-60 can accept and synchronize to the following frequencies received from external devices (rectangular wave): 44.1kHz, 48kHz, 88.2kHz, 96kHz, 100kHz, 176.4kHz, 192kHz.

•Region Number of DVD Video discs: DVD players and discs are designed with region numbers that dictate the regions in which a disc can be played. If the region number on the disc you want to play does not match the region number of your DVD player, you will not be able to play the disc.
 The DV-60 / SA-60: U.S.A., Canada model: region 1 / Europe, Japan model: region 2 / Korea model: region 3

•The DV-60 / SA-60 don't correspond to CPRM (Content Protection for Recordable Media). The discs that were recorded with copy-once only permission (CPRM), cannot be played.

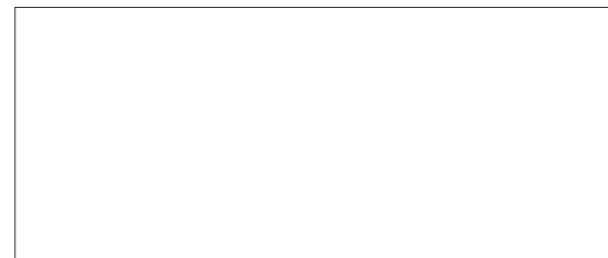
ESOTERIC

TEAC ESOTERIC COMPANY

1-47 Ochiai, Tama-shi, Tokyo 206-8530, Japan
 Fax: (042)356-9240 www.teac.co.jp/av/

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TEAC

ESOTERIC

VOSP Mechanism



Super Audio CD / CD Player

SA-60

Universal Player

DV-60

English version

An Evolution of Esoteric Technology

The DV-60 / SA-60 series is an evolutionary upgrade path from the ESOTERIC® "DV" series and "X" series of audio/video playback devices.

These new products provide enhanced performance features and Esoteric's newly developed vertically aligned optical stability platform ("VOSP"), disc drive mechanism.

The DV-60 and SA-60 utilize the pick up technology of Esoteric's "X" series products, and unique up-conversion technology from the award winning DV-50/DV-50S.

Enhancements to DV series technology include PCM to DSD signal conversion (user selectable).

The DV-60 / SA-60 also feature multi-channel analog audio output terminals for DVD-A and SACD multi-channel playback, up-conversion of existing DVD video to high definition ("HD"), output resolution at 720p, 1080i and 1080p, plus a new HDMI video output connector (DV-60 only).

This new high performance product range builds on the essential elements of ESOTERIC technologies for demanding audiophiles and videophiles!



Super Audio CD / CD Player

SA-60



Universal Player
DV-60





DV-60

Esoteric's new VOSP (Vertically aligned optical stability platform). Precision and reliability, ...critical elements of ESOTERIC design technology backed by an ideal combination proprietary shaft-mounted pickup assembly and resonance-free mechanism structure.



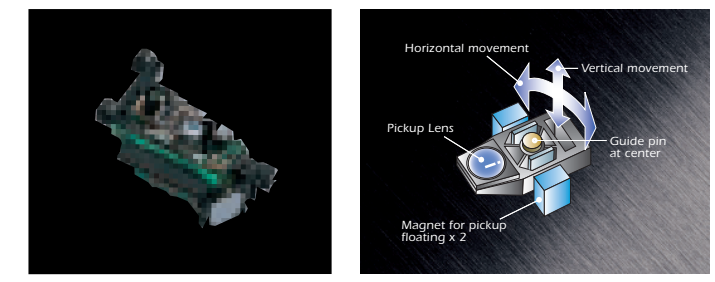
Super Audio CD - CD Player SA-60
Universal Player DV-60

VOSP (Vertically aligned optical stability platform) Mechanism

Shaft-mounted, vertically aligned laser pickup assembly. Highly rigid / resonance-free mechanism stabilizer

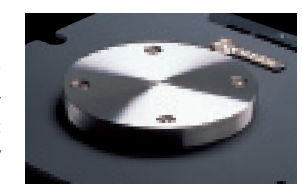
VOSP pickup

Newly developed VOSP mechanism features a specially designed shaft-mounted laser pickup assembly. The VOSP pickup ensures that the laser optical axis is always positioned at the very center of the data track for optimal reading capability. This vertically aligned platform is ideal for precise data tracking and greatly reduces tracking error and the potential for jitter. With VOSP implementation, no off axis error correction is needed because no off axis data tracking is allowed.



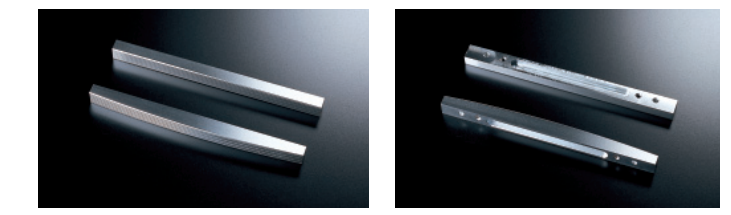
High mass / resonance-free mechanism stabilizer

The VOSP mechanism is rigidly clamped by a steel plate and a large diameter stabilizer made of 8 mm-thick steel. This reduces unwanted resonance caused by high speed disc rotation.



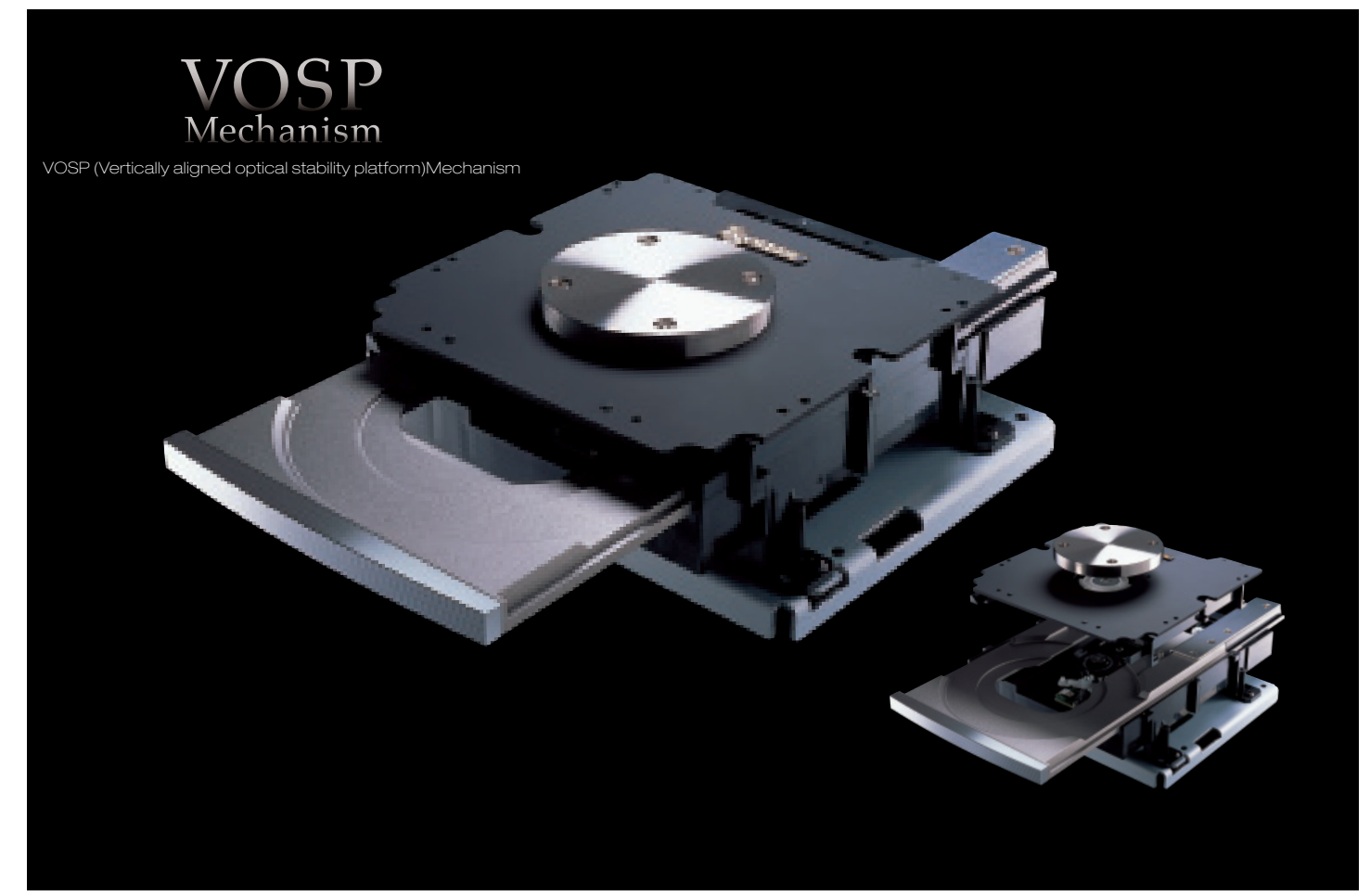
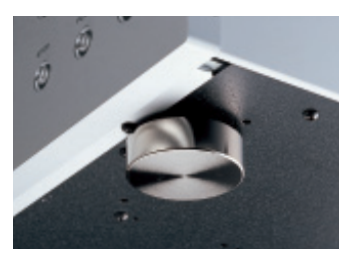
High rigid center mounted chassis construction

The entire assembly is directly mounted to the bottom chassis and two interior steel brackets to rigidly hold the mechanism providing superior anti-resonance properties. Top and side panels and the disc tray lid assembly is made from aluminum. A thick extruded aluminum front panel aids in controlling resonance. An "ESOTERIC" logo engraving on the top panel and screws hidden from exterior view compliment the DV-60 / SA-60 high end cosmetic.



Solid aluminum tray lid (front: SA-60 / rear: DV-60)

The player chassis is supported by three nickel plated cut brass feet mounted on a 2 mm-thick steel bottom plate. This design helps to create a more stable platform and greatly reduces the adverse effects of unwanted vibrations.



Advanced Conversion Functionality

Cirrus Logic CS-4398 is used for the audio D/A converter supporting both PCM and DSD formats plus a PCM to DSD conversion option. Word Synchronization function.

PCM up-conversion function / PCM to DSD conversion option

The DV-60 / SA-60 features the Cirrus Logic CS4398 audio D/A converter, providing high density, high resolution and wide range audio reproduction capability including native DSD support for SACD.

The CS4398 implementation includes Esoteric's second-generation RDOT algorithms and Esoteric's FIR digital filter to support sharp high-end sampling characteristics. The algorithm and filter combination enable up-conversion of digital audio data read from a DVD or CD, to a maximum of 1536 kHz for DVD audio/video and 1411.2 kHz for CD. The sound character of the RDOT filter is neutral in contrast with the solid and sharp imaging of FIR. FIR mode or RDOT+FIR mode is user selectable.

The CS4398 includes PCM to DSD signal format conversion. This is the same technology used in ESOTERIC's system models P-03/D-03.

These digital conversion functions provide a wide range of options to match to your audio system, your favorite musical genre, or your general listening references based on your choice of software.

Up-convert functions

FIR 24 bit 8x (= Fs: 44/48 kHz)
 24 bit 16x (= Fs: 88/96 kHz)
 24 bit 32x (= Fs: 176/192 kHz)

RDOT+FIR 24 bit 32x

DSD 1 bit 64x



*Up-convert function is for front (2 channel) analog audio output only.

*The constant of the multiplication ratio in the chart above is 44.1 kHz for CD and 48 kHz for DVD.

*Super Audio CD DSD signals are directly output without up-conversion.

*Digital signals are output in their original Fs.



High quality analog audio output for multi-channel

The DV-60 / SA-60 feature the same Cirrus Logic CS4398 implementation for multi-channel audio output and for 2 channel audio output. The 2 channel analog audio circuit and multi-channel analog audio circuits are identical in their components and layout. This implementation helps to reduce quality differences between 2 channel and multi-channel, achieving more natural and seamless multi-channel surround sound playback.



Word synchronization

The DV-60 / SA-60 features a WORD SYNC input terminal to accept an incoming external WORD clock signal. The input can operate with 44.1/88.2/176.4/48/96/192/or 100 kHz clock signals. The unit can operate using an ESOTERIC original 100 kHz Universal Clock signal. The incoming ultra-stable clock signal produced by external components such as a master clock generator effectively reduce jitter and prevent signal phase shifting.



The DV-60 / SA-60 are equipped with an R-core (Resin core), AC power transformer which provides ultra low flux leakage and ultra low resonance properties.

High-end Video Circuit—DV-60

High quality video processing technology evolving from ESOTERIC's flagship model: P-03 Universal A/V Transport. The latest video technologies including up-conversion to high definition ("HD"), 1080P with HDMI signal output

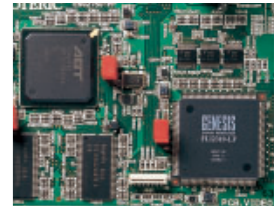
[DV-60 video technology] Fully tuned video components including newly designed digital video output circuits.



DV-60 video processing PCB

[Analog video component]

The latest 14 bit / 216 MHz video D/A converter chip model ADV7324 from Analog Devices.



[Digital video component]

The latest digital video scaling chip LSI ABT1018 from Anchor Bay Technologies. FLI2310 I/P converter chip from Genesis Microchip Inc.

High definition ("HD"), up-conversion function up to 1080P output through HDMI connection.

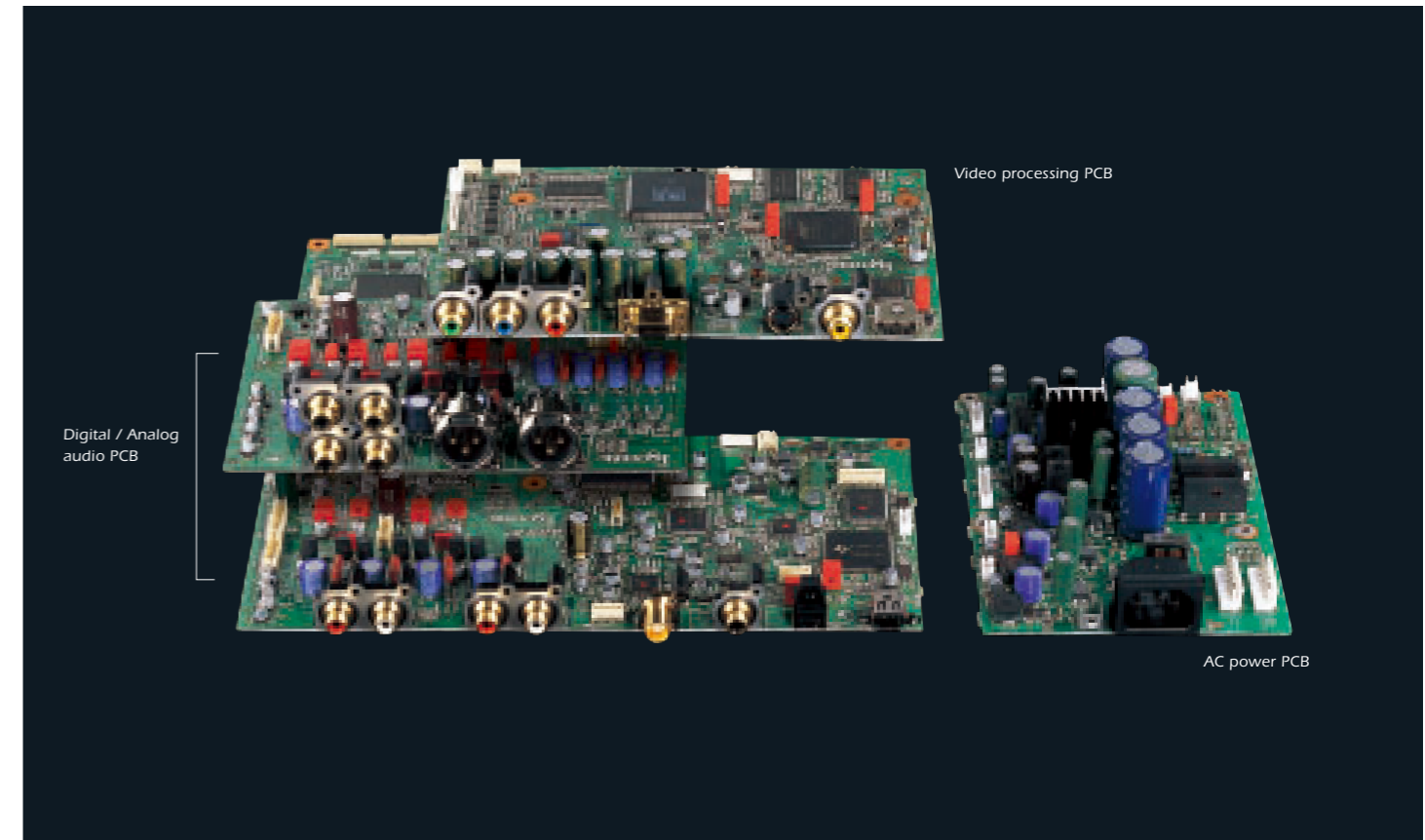
HDMI output options: 480i / 480P / 720P / 1080i / 1080P

*HDMI version 1.1 (HDMI V1.1 does not support Super Audio CD audio signals)



Various interfaces including HDMI and home theater remote control terminals including RS232C and remote control power standby mode

The DV-60 is equipped with various video output terminals; HDMI, component output, D terminal, S terminal and composite video terminal. The DV-60 also features various remote control terminals for external component connections suitable for home theater control; 12V DC trigger in, RS-232C, and remote in terminal.



Digital / Analog audio PCB

Video processing PCB

AC power PCB