

Super Audio CD/CD Player

SA-50



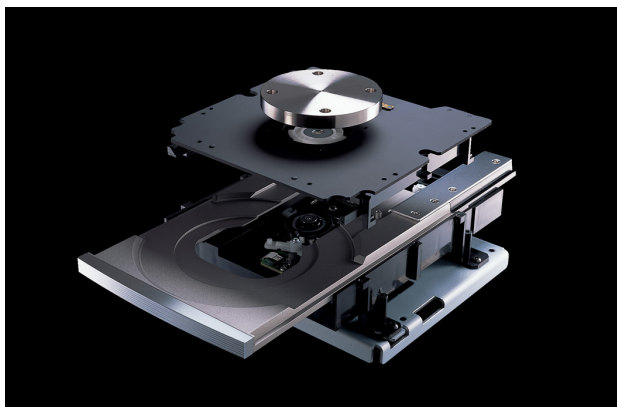
The new "SA-50," an integrated player featuring VOSP mechanism and 32-bit dual mono DACs!

VOSP Mechanism

VOSP (Vertically-aligned Optical Stability Platform), features a specially designed shaft-mounted laser pickup assembly. This pickup system evolved from ESOTERIC's P-01 and P-03 transports. This pickup design ensures that the laser optical axis is always at the center of the data track for optimal reading capability. 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 to reduce unwanted resonance caused by high speed disc rotation. The entire mechanism assembly is directly mounted to the bottom chassis and two interior steel brackets rigidly hold the mechanism for superior anti-resonance properties.



Full 32 bit processing D/A converter device

The SA-50 features the latest 32 bit processing "AK4392" advanced multi-bit DAC device produced by Asahi Kasei EMD. The AK4392 has a highly precise D/A conversion capability with extended 32 bit processing throughout all output stages. The 32 bit processor also has enough room for 24 bit or lower data flow, and greatly contributes to a "three-dimensional" audio imaging experience. The SA-50 uses 1 chip per channel, in a dual mono configuration gaining maximum performance out of the 32 bit AK4392. With this implementation, high purity digital signals are converted to well defined, high-density analog signals.

Highly advanced digital conversion capability; DSD to 32 bit PCM conversion for SA-CD PCM to DSD conversion for Redbook CD

The SA-50 features user selectable digital signal conversion capability. The highly advanced digital conversion functions of the SA-50 include 32 bit PCM processing to provide a wide range of options to match to your audio system, or, your general listening preferences based on your choice of software.

(1) The SA-50 can directly process native DSD signals into analog signals, and, can also convert the DSD signal into a 32 bit PCM signal. Oversampling frequency is selectable from x2 (88.2 kHz) or x4 (176.4 kHz).

(2) PCM to DSD conversion capability for Redbook CD sources and for PCM signals input from external digital devices.

(3) PCM signals are processed with a high quality 32 bit digital filter to enhance natural reproduction capability. Oversampling frequency is selectable from x2 (88.2 kHz) or x4 (176.4 kHz).

(4) 2 modes are selectable for PCM digital filter. (FIR mode / Short delay mode).

Digital inputs / Digital volume attenuator

The SA-50 has 3 digital inputs (COAX, OPTICAL, USB) and a digital volume attenuator. This implementation enables the SA-50 to be used as a standalone up-sampler, D/A converter or digital preamp with 32 bit signal processing capability!

High quality 2 channel dedicated analog audio output Precise imaging and deeper sound stage

The analog audio output circuits are also in a dual mono configuration producing exceptionally good channel separation. RCA (single-ended), output or XLR (fully-balanced), output is selectable. During playback of the selected output mode, the analog signal path that is not used is completely de-activated. This 2 channel dedicated circuit design further enhances precise imaging, transparency, separation and a deeper sound stage.



Rich and high speed power supply capability

The large custom designed toroidal transformer, has a highly efficient power supply capability. This provides electrical power to the drive mechanism and audio circuits very quickly, without adding noise or distortion to the signal path.

Word synchronization

The SA-50 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 / 100 kHz clock signals. The unit can also operate using an ESOTERIC original 100 kHz Universal Clock signal (Single freq. compatible w/ SACD/CD and DVD). The incoming ultra-stable clock signal produced by external components such as a master clock sync generator (ESOTERIC G-03X or G-0Rb), effectively upgrade the unit, delivering higher performance with better acoustic transparency, improved channel separation and a more detailed and wider sound stage.

Dual PLL circuits reduce jitter when connected to a digital source device with no WORD SYNC function

The SA-50 shares dual stage PLL jitter reduction with the ESOTERIC D-05 D/A converter, and is highly capable as a standalone D/A converter / re-clocker, when connected with CD transports, media servers, or other external digital devices. The second stage PLL circuit has its own voltage controlled crystal clock, and re-clocks the signal produced by the first stage PLL circuit. Dual PLL circuits, with two different characteristic responses in jitter reduction effectively purify the input digital signal, even when the unit is connected to a transport with no WORD SYNC function. You can set this second stage PLL to off when the unit is connected to a transport which has a WORD SYNC input function.

Highly rigid chassis construction for optimal resonance control capability

The SA-50 front panel is made of thick extruded aluminum. This helps to insure chassis rigidity, reducing unwanted vibrations and resonance, while also providing a stronger support structure for the center mounted VOSP mechanism. The top and side panels are made of 5 mm thick aluminum. The bottom chassis features a heavy duty 5 mm thick steel plate. The toroidal transformer support base also features a 5 mm steel plate for added resonance absorption. Combined with three pinpoint isolation feet made of quenched steel, this chassis design helps to isolate the unit from external vibrations, allowing highly stable and precise VOSP mechanism mounting, and highly-rigid, resonance-free system construction.

MAIN SPECIFICATIONS		
System		Super Audio CD/CD/CD-R/CD-RW
Audio output (analog audio).	Output terminals	XLR jacks (2 channel) x 1 RCA jacks (2 channel) x 1
	Maximum output level	2.2 V rms (1 kHz Full scaled)
	Frequency response	5 to 40 kHz (+0.5dB, -3dB)
	Signal-to-noise ratio (S/N)	130 dB
	Total harmonic distortion	0.001% (CD) / 0.003 % (SA-CD)
Audio output (digital audio).	OPTICAL	Optical digital jack x 1
	COAXIAL	RCA jack x 1
Audio input (digital audio).	OPTICAL	Optical digital jack x 1 (Input frequency up to 24 bit / 192 kHz)
	COAXIAL	RCA jack x 1 (Input frequency up to 24 bit / 192 kHz)
	USB	USB Type B connector x1 (Input frequency up to 16 bit / 48 kHz)
Word synchronization input format.	Input terminal	BNC jack x 1
	Input frequency	44.1, 88.2, 176.4, 100kHz (rectangular wave)
	Input level	TTL level / 75 ohms
General:	Power supply	AC 230V, 50Hz
		AC 120V, 60Hz
		AC 220V, 60Hz
	Power consumption	To be available soon
	External dimensions (W×H×D)	442 x 153 x 353 mm (17-3/8" x 6" x 13-7/8")
	Weight	17.2 kg (37 15/16 lbs)

- This product is 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.