

D/A Converter

D-07



32bit dual mono DAC that supports the playback of SACD and high-resolution music files

ESOTERIC is pleased to introduce a new 32-bit D/A converter model D-07 that supports the playback of Super Audio CD, CD and high-resolution, hard drive based music files.

The D-07 is a dual mono D/A converter capable of 32bit resolution throughout the signal path.

The D-07 features a variety of digital inputs, including a USB terminal, that support the playback of Super Audio CDs together with ESOTERIC's Super Audio CD Transport products, as well as the playback of high-resolution music files. The D-07's USB input can accept native resolution up to 24bit/96kHz.

The digital processing in the D/A conversion input is realized by utilizing a variety of D/D conversion functions, and thus represents the pinnacle of ESOTERIC's digital processing technology. The new D-07 features high-definition functions that employ state-of-the-art technology, such as format conversion for converting PCM digital signals to DSD, PCM up-conversion (2x/4x), and two digital filters (Including "pre-echo" reduction). These functions can be freely selected and used to fit your needs.

WORD SYNC allows you to synchronize playback with other digital devices, and a 2nd PLL effectively reduces the jitter for digital devices without WORD SYNC - these are the kind of high-definition functions that can only be found on high-end, specialized devices.

The D-07 also has an attenuator for controlling the level of analog output. This can be combined with selector functions that are used for a variety of digital inputs, and allow the DAC to serve as a high-end digital preamplifier.

The D-07, which can be used with both audio-visual devices and the PC, maximizes the potential of ESOTERIC's state-of-the-art technology. It is the ultimate high-end D/A converter for people that demand the utmost in quality for high-resolution music sources.

32bit D/A converter strives for the highest quality

To achieve that perfect sound, the D-07 uses the Asahi Kasei Microdevices Corporation's AK4392 (*1) DAC device. It also comes equipped with an in-house developed high-speed and high-performance digital signal processing section, and an improved analog section for receiving processed data.

The 32bit processing capacity is maintained throughout the unit, from the input I/F and the digital filter, to the Delta-Sigma modulator. The digital computing section provides high-precision computing, even if data below 24bit is input, helping to produce that high sound quality.

In the analog section, the layout of channels is completely symmetrical, and a dedicated power supply is used for each circuit. This helps to prevent cross channel interference. The internal master clock is also equipped with a dedicated power supply, thus minimizing effects caused by jitter.

Dual mono configuration from the DAC to the audio output

This configuration follows ESOTERIC's proven dual mono configuration. It contains separate DAC devices and analog audio circuits on each L/R, and the same parts positioned on the same path. To reduce crosstalk between channels, the same parts are positioned in the same pattern for each L/R on the board. This minimizes differences in sound quality between L/R to ensure superior channel separation. This allows you to experience high-definition playback with a rich sense of localization and depth.

XLR audio output is set up in fully balanced configuration, allowing you to select between HOT (pin=2) and HOT (pin=3). You can also select from the analog outputs (RCA/XLR/OFF). *For simultaneous output mode (RCA & XLR), output is fixed to HOT (pin=2).

An abundance of digital inputs lets you connect to a variety of devices

The D-07 comes with four types of inputs (USB, XLR, COAX and OPTICAL)/ five systems of digital input, enabling you to connect to a wide range of devices. The XLR (AES/EBU) input can connect with ESOTERIC P-05 to support Super Audio CD transports. Except for USB, all of these inputs systems support 24bit/192kHz PCM.



USB input enables high-quality playback from your PC

The USB input makes it possible to playback music stored on your PC with high-end quality. All 24bit/96kHz PCM high-resolution music files can be transmitted to the D-07, and played back in compressed or uncompressed formats
*Playable formats differ, depending on your PC's music player.

USB isolator

The built-in USB isolator isolates the power/signal line from the unit, and prevents external noise interference from other devices such as a PC. This enables clear playback without losing the benefits of high-resolution music files.

Extensive up-conversion functions for a variety sources

PCM digital audio signals can be converted in a number of ways, including PCM up-conversion at 2x (64/88.2/96 kHz), 4x (128/176.4/192 kHz), and even to the DSD high-res. conversion format.

Two types of digital filters

For processing PCM format signals, the D-07 offers two types of digital filters that you can freely select: the finite impulse response (FIR), digital filter, which has an established reputation for superb sound quality; and a newly developed, short delay digital filter, which removes the pre-echo effect in the impulse waveform, helping to reproduce the leading edge of the sound more naturally.

WORD SYNC enables synchronized playback with external devices

WORD SYNC effectively reduces jitter that occurs while transferring audio signals, delivering high-speed and high-quality sound that is delicate yet full of presence. This function also offers the word output mode, which enables WORD SYNC-capable source devices to connect with the word output generated by the D-07.

Likewise, there is also a word input mode, which inputs a high-density word clock from an external master clock generator (such as an ESOTERIC G-03X). This incremental (and optional) hardware mode enables you to upgrade to a more sophisticated system at a later time.

2nd PLL mode helps to reduce jitter

The D-07's 2nd PLL mode uses the built-in VCXO (Voltage Controlled Crystal Oscillator) to act as a high clarity master clock for the DAC device. The two types of PLL circuits, each with different characteristics, effectively remove transmission jitter. If a signal is input from a device without WORD SYNC, the jitter component that affects the sound quality is diminished, thus achieving more precise playback with rich musical expression.

32bit high density digital attenuator

High-precision volume adjustment is made possible by our 32bit digital processing and the 32bit D/A device. Compared to a 24bit device, this attenuator has an additional 8bit of "headroom," allowance, delivering volume control without a loss of sound quality caused by dropouts. It also enables you to directly connect the D-07 to power amplifiers and use it as a multi-source digital preamplifier.

Solid enclosure that perfectly guards sound quality and provides anti-resonance barriers; an exquisite construction

The D-07's slim enclosure that stands only 103.5 mm tall (4 inches), incorporates a short-scratch finished, thick aluminum front panel and sandblasted 5 mm aluminum top and side panels. Internal construction isolates all points of potential signal interference and resonance. The sculptured art generated by the screwless top panel and the rounded corners creates a sense of sophisticated integration that is consistent with ESOTERIC's high-end products.

*1 "AK4392" is Asahi Kasei Microdevices Corporation's Audio4pro™ and brand product. The AK4392 is designed for professional digital audio devices. "Super Audio CD" and "DSD" are registered trademarks.

Main Specifications

Analog output	Output terminals	XLR (2ch) ×1 RCA (2ch) ×1
	Output impedance	XLR: 100Ω RCA: 100Ω
	Maximum output level	2.2Vrms (1 kHz, full scale, 10kΩ)
	Frequency response	5 Hz - 40 kHz
	S/N ratio	130 dB
	Total harmonic distortion	0.001 % (1 kHz)
Digital input	Balanced digital input	XLR ×1 24bit/192kHz
	Coaxial digital input	RCA ×2 24bit/192kHz
	Optical digital input	Optical ×1 24bit/192kHz
	USB input	USB Type B ×1 24bit/96kHz
Word Sync output	Output terminal	BNC ×1
	Output frequency	44.1, 88.2, 176.4, 48, 96, 192 kHz (rectangular wave)
	Output level	TTL level (75 Ω)
Word Sync input	Input terminal	BNC ×1
	Input frequency	44.1, 88.2, 176.4, 48, 96, 192, 100 kHz (rectangular wave)
	Input impedance	75 Ω
	Input level	TTL level
General	Power supply	AC 230V 50Hz
		AC 120V 60Hz
		AC 220V 60Hz
	Power consumption	7 Watt
	External dimensions (W×H×D)	442 mm × 103.5 mm × 346 mm (17-3/8" × 4-1/16" × 13-5/8")
	Weight	9.5 kg (21 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.

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