

ESOTERIC

Network Audio Player **N-01**



ESOTERIC's Flagship Network Audio Player Created from Our Passion for Excellence

The N-01 is ESOTERIC's flagship network audio player, newly developed with a premium DAC module designed for use with our Grandioso K1 super audio CD player. The DAC chipset is equipped with the AK4497, the highest performing DAC in the history of AKM (as of June 2017), and the DAC module features a luxurious differential 8-circuit independent power regulator design for each channel that is unique to the K1/N-01 models.

Additionally, the highly acclaimed four independent power supply construction of the K series Super Audio CD players, superb component selection and design concepts are incorporated as standard in the N-01.

We have poured more than 30-years' worth of digital player development know-how into every detail of the N-01, incorporating our proprietary "ES-LINK Analog" transmission method, 35-bit D/A processing algorithm, and HCLD buffer amplifier equipped with 125,000 μ F super capacitors.

This combination of our prestigious audio circuitry, highly advanced network audio module and playback applications create a cutting-edge device that is incredibly easy to use, generating an entirely new standard for network playback.



Story of Innovation

Grandioso P1/D1/G1



2013 marked the release of the Grandioso P1/D1 and the start of our historic Grandioso flagship models, a range which represents the concentration of all of our superior sound engineering technology and knowledge, reaching a crescendo in fall 2016 with the release of the Grandioso

G1. Consisting of a total of 9 chassis, the Grandioso system represents the highlight of our 30-year history, boasting outstanding professional reviews and a loyal customer following that are the pride of ESOTERIC.

Condensing the essence of the larger models, the Grandioso K1 and F1

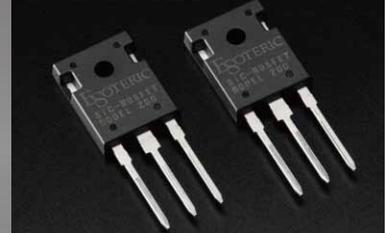
models are the flagships of their respective categories, leading the way to a higher dimension of K-series all-in-one disc players and F-series integrated amplifiers. Two major innovations were achieved with the Grandioso K1 and F1 models. The first was our proprietary original power amplifier MOSFET design; the second was the completion of our completely new D/A converter platform for all-in-one digital players. The D/A converter section used in the K1 was completely redesigned from the ground up, becoming the first product in the world (September 2016) to utilize the AK4497 DAC, the highest performing DAC chipset in the history of AKM, and the MUSES03 which was produced through many years of joint development with New Japan Radio Co., Ltd. In addition, the K1 is proud to use only the finest available components and devices coupled with completely redesigned circuits and power regulators. These, together with ESOTERIC's proprietary 35-bit D/A processing (patent no. 6043052) successfully achieve incredible analog-like sound quality and fine detail retrieval.

The newly released N-01 utilizes the same D/A converter technology as the K1 and incorporates the highly acclaimed design methods of the K-series all-in-one disc players into the network playback model, successfully achieving remarkable improvements in network audio playback sound quality.

Grandioso K1/F1



Proprietary Power Amplifier MOSFET
'ESOTERIC MODEL 200'



To the Future of Musical Reproduction

EGOTERIC

NETWORK

XLR

RCA

OPTI

DSD DIRECT

DSD 5.6M

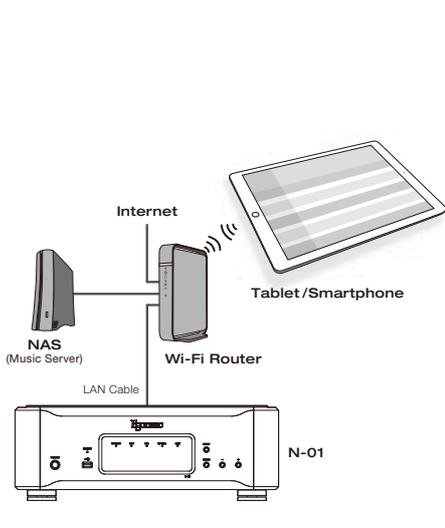
CLK 10

CLOCK



POWER





Network Audio

Imagine choosing and playing back your favorite music with outstanding sound quality without leaving the comfort of your listening seat. ESOTERIC's N-01 Network Audio Player makes this a reality.

The N-01 enables you to enjoy the vivid musical experience of DSD master sound sources. You can quickly and easily access your digital music library, or actively seek out new encounters in music with streaming services available in your area. Simply make effective use of your home network environment to bring your relationship with music even closer.

In addition to your home audio components, all you need are a standard domestic LAN connection (with wireless router) and a tablet or smartphone. You can also incorporate an NAS (Network Attached Storage) device to hold your entire music library. It's that simple! Just make these changes to discover a whole new level of high-quality musical enjoyment without compromise.

Compatible with a Variety of Audio Sources

The N-01 is fully equipped with a wide range of select high-end specifications to ensure it delivers superb network audio playback quality. Compatible with 5.6MHz DSD, 384kHz/32-bit PCM playback(*) and a

host of other formats (DSF, DSDIFF, FLAC, Apple Lossless, WAV, AIFF, MP3, and AAC), gapless playback capability is also offered in all lossless formats, delivering full enjoyment of live or opera recordings with no interruptions between musical tracks.

*The N-01 down-converts signals to 192kHz/24-bit while playing back 384kHz/32-bit PCM signals when in network mode.

ESOTERIC Sound Stream

ESOTERIC Sound Stream is an Apple iOS / Android application for tablets and smartphones designed with an emphasis on both sound quality and intuitive operability for network playback. Simply select musical tracks using the tablet / smartphone to create a customized playlist and then play the playlist. All screens are intuitively designed for easy operation and access to playlists and libraries, making it easier for anyone to use. Yet it also has a wide range of refined features that meet the demands of even the most experienced users.

Key to this achievement is the excellent search and retrieval function that fully utilizes tag information. Images are also stored in the app, enabling you to instantly scroll through album artwork and libraries according to categories such as artist, year of recording, composer or category. This use of tag information even allows tracks that have the same name but different formats to be easily identified on the screen.

Music Server Function

The N-01 can also be used as a simplified music server that integrates both player and library by connecting large-capacity storage devices to two USB ports on the front and rear of the unit.

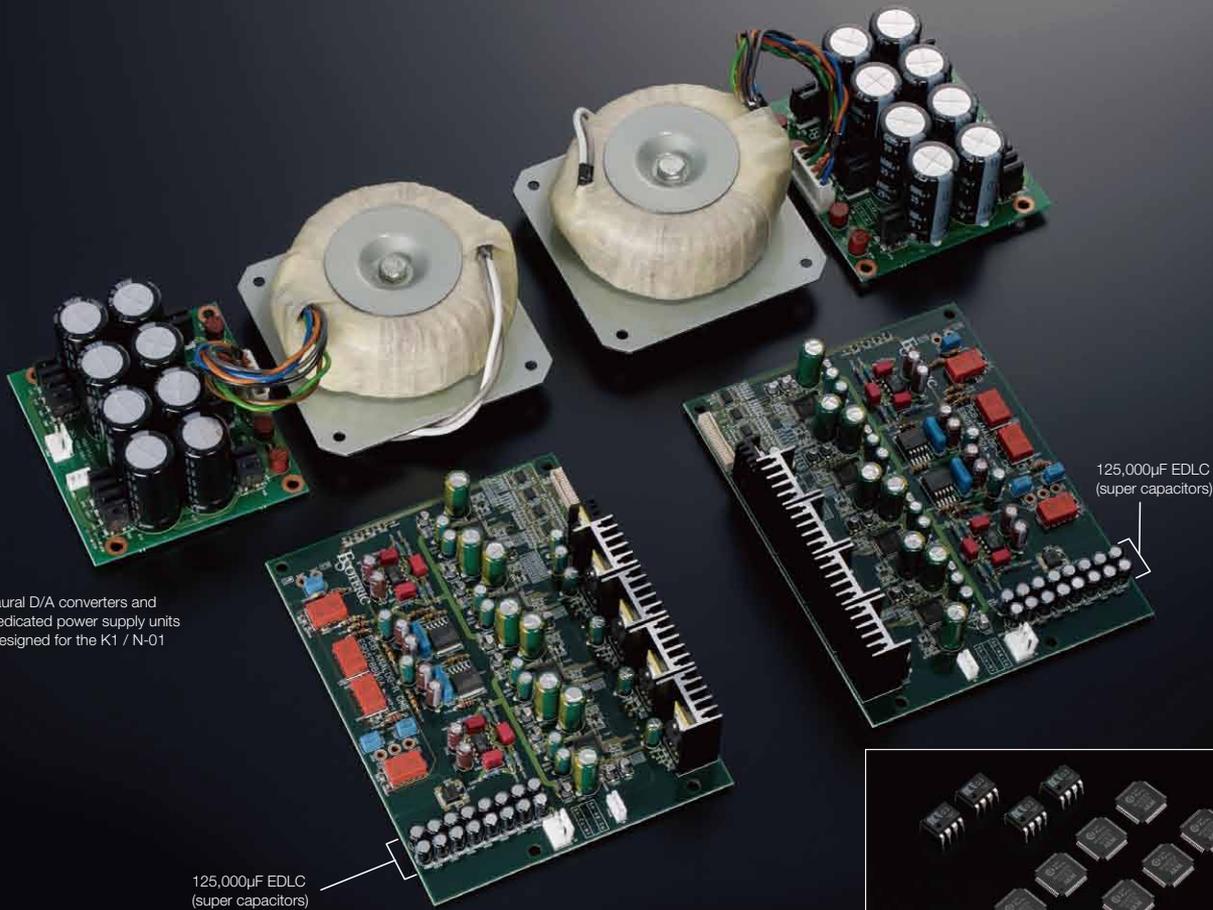


Compatible with a wide range of streaming services and audio codecs

ESOTERIC has partnerships with a wide range of streaming service and audio codec providers. New compatibility will be released as soon as preparations are complete.*



*Information on newly supported services will be released on the ESOTERIC website. However, regional restrictions may be implemented on some services.

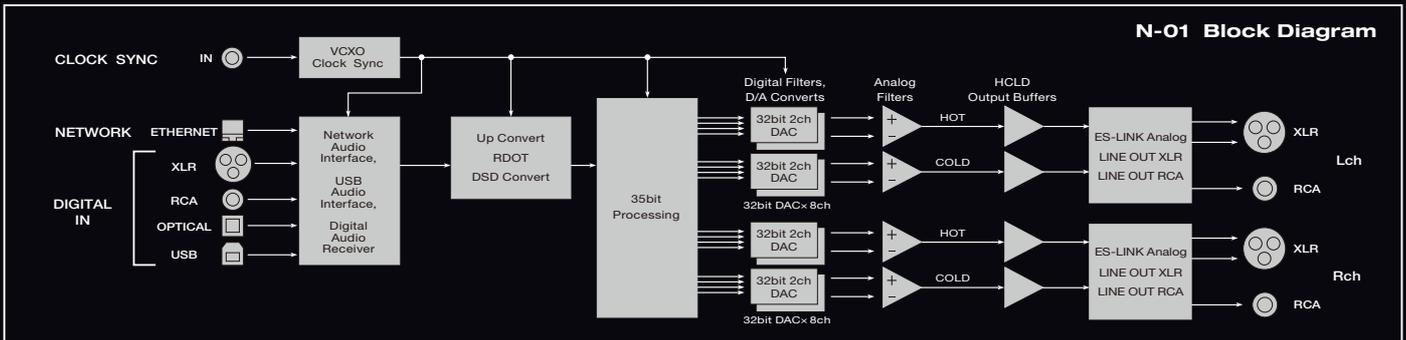
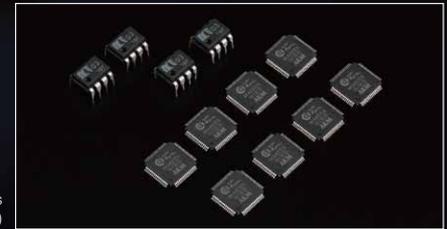


Dual monaural D/A converters and channel-dedicated power supply units specially designed for the K1 / N-01

125,000µF EDLC (super capacitors)

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Extensive use of high quality parts (AK4497 DAC IC, MUSES03 Op-Amp)



Newly Designed Integrated Dual Monaural D/A Converters for the Ultimate in Sound Quality

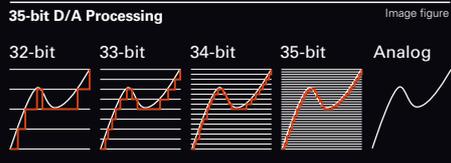
The D/A converters of the K1/N-01 feature the lavish specifications you would expect of a premium all-in-one model. This completely new design utilizes the finest possible materials and circuit technology available in the world today. The circuit incorporates the premium 32-bit AK4497 DAC chipset from AKM (Asahi Kasei Microdevices Corporation) in conjunction with the high-end MUSES03 operational amplifier from New Japan Radio Co., Ltd.

Eight parallel/differential circuits drive each channel to achieve outstanding linearity and low distortion. The D/A converter features separate left and right power transformers and eight power supply regulators for each channel, which are located directly next to each circuit to ensure a clean and highly stable power supply. The isolation of the digital circuits and analog circuits has also been improved to give listeners

a vivid musical reproduction that is both pure and carries a superior image and depth.

35-bit D/A Processing for Outstanding Musical Expression

The N-01 combines multiple 32-bit DAC chipsets and utilizes a 35-bit processing algorithm to convert the PCM signal to analog at a high 35-bit resolution. 35-bit processing achieves an astounding resolution that is fully 2,048 times that of 24-bit processing. In the digital range, high-bit data gradation is fully utilized to minimize arithmetic errors and provide faithful conversion to analog, attaining outstanding musical expression even with extremely small music signals.



ESOTERIC-HCLD*1 : ESOTERIC's Proprietary High Current Output Buffer Circuit

The ability to produce comparatively large currents and high slew rates are two of the most important factors that enable an analog output circuit to accurately transmit the wide dynamic range of a music signal without degradation. The N-01 offers the ultimate performance as a line driver by adopting high-performance elements with a high current output and exceptionally fast slew rate (2,000V/µs) for excellent response speed. Two of these buffer circuits are employed per channel. The available instantaneous output current is maximized by configuring them differentially to drive the XLR outputs and in parallel to drive the RCA outputs. Furthermore, an EDLC*2 super capacitor array is utilized as the power source of the buffer circuits. Its amazingly high capacitance of 125,000µF for each channel provides unwavering low-frequency ranges, and enables the reproduction of musical dynamism with breathtaking reality.

*1: HCLD = High Current Line Driver

*2: EDLC = Electric Double-layer Capacitor

Cutting-edge Electronics



"ES-LINK Analog" Method for High Quality Current Transmission

In addition to regular line connections (XLR and RCA), the N-01 features ESOTERIC's new "ES-LINK Analog" transmission method. This is a current transmission method that utilizes the high performance of the HCLD buffer circuit and its enhanced ability to supply high-speed current. This is the ideal analog audio transmission as it is free from signal route impedance, thus fully maximizing the system's potential when connected to a compatible device.*

*Included in the Grandioso F1 as of July 2017. A standard balance cable (with an XLR terminal) is used for connections, but the "ES-LINK Analog" method is a proprietary transmission method which can only be used with compatible devices.

4 Powerful Independent Power Sources

The N-01 is equipped with four large toroidal transformers, with two dedicated to the built-in monaural D/A converters, one for the digital circuit board and one for the network module, creating the ideal power supply for each circuit block. The 100,000 μ F high capacitance EDLC super capacitor array installed in the network module dedicated power supply is selected specifically for use in our flagship model network audio players to provide incredible improvements in sound quality.



Network module + dedicated power supply components

Highly Rigid Chassis Design

The N-01 features the same highly-acclaimed 2-layer thick aluminum and steel rigid chassis design as K-series models. The chassis interior has a double-decker construction that both reduces interference between circuits and shortens the power supply paths to further improve sound quality. Each slot in every part of the chassis is precisely machined using laser technology to effectively reduce vibration. The entire bottom chassis is supported on 5mm-thick steel by our proprietary pinpoint feet (patent No. JP4075477) to create a complete mechanical grounding that protects against vibration.

Versatile D/D Conversion Function

The N-01 is equipped with a highly versatile D/D conversion function and digital filter. In addition to playback at the original sampling frequency, you can easily switch to 2x, 4x, 8x, and 16x (maximum: 768kHz) up-conversion of the PCM digital signal, as well as cross-format conversion of PCM and fixed 22.5MHz DSD signal using a proprietary algorithm. DSD Digital filtering can also be enabled or disabled as desired.

USB Audio Interface Support for 22.5MHz DSD, 768kHz/32-bit PCM, and Asynchronous Transmission

The N-01 includes a USB audio interface for connecting to computers, and the driver and "ESOTERIC HR Audio Player" playback software can be downloaded free from the ESOTERIC website. The N-01 supports asynchronous transmission and playback at high sampling rates up to 22.5MHz DSD and of 768kHz/32-bit PCM source files.

Digital Inputs

Three digital inputs (XLR, RCA, and optical) enable connection to a wide range of systems. These inputs support DSD 2.8MHz (DoP) input and PCM of up to 192kHz/24-bit.

High-Precision VCXO Clock

The clock circuit supplies a high-accuracy reference clock signal to the digital circuitry. The Grandioso Custom VCXO (voltage-controlled crystal oscillator) is a high-precision custom clock that utilizes a large crystal element to ensure exceptional sound quality with excellent center accuracy (± 0.5 ppm) and extremely low levels of phase noise.

Clock Sync Function for Synchronization with External Devices

Connecting the N-01 to a high-precision master clock generator such as the G-01X allows synchronization of the unit's operation with an external clock signal, thereby enabling the system to be further upgraded for quality. The supported input frequencies are 44.1kHz groups, 48kHz groups, as well as 10MHz, 22MHz and 24MHz. You can also synchronize the internal digital circuits to a super high accuracy external clock when you playback digital source files streamed from a PC via USB input.

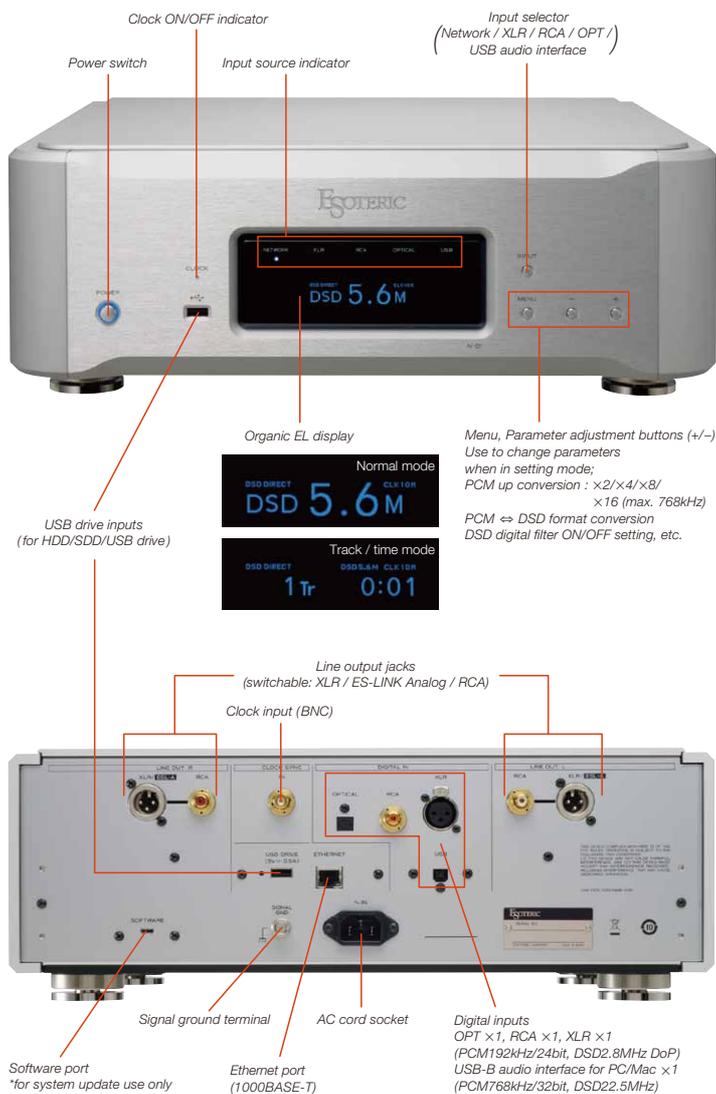
Custom MIL Standard Clock Input Cable with SMA Connector

The clock input wiring uses hardwired connection with a superb quality MIL-compliant custom coaxial cable. This cable features a gold plated SMA connector that was specifically developed for high frequency transmission, and an original milled brass BNC terminal designed by ESOTERIC to achieve a secure connection in order to minimize loss of transmission as far as possible.

Complete Noise Isolation

The analog circuit is separated from the digital circuitry by an isolator that ensures complete noise reduction to maintain the purity of the analog sound output.

N-01 Network Audio Player



Output Mode Selection

You can switch analog audio output between ES-LINK Analog, RCA, and XLR. You can also select Hot 2 or Hot 3 XLR pin assignments, and phase inversion is performed in the digital domain of non-contact systems to eliminate losses in audio quality.

Specifications

Digital audio inputs

XLR Connectors	1
Input level	5.0Vp-p
Input impedance	110Ω
Input signal formats	Linear PCM (AES/EBU) 32 - 192kHz, 16/24bit DSD 2.8MHz (DoP)
RCA Connectors	1
Input level	0.5Vp-p
Input impedance	75Ω
Input signal formats	Linear PCM (IEC60958) 32 - 192kHz, 16/24bit DSD 2.8MHz (DoP)
Optical digital connector	1
Input level	-24.0 to -14.5dBm peak
Input signal formats	Linear PCM (IEC60958) 32 - 192kHz, 16/24bit DSD 2.8MHz (DoP)
USB port	1 (Type B)
Input signal formats	Linear PCM 44.1 - 768kHz, 16/32bit DSD 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz
Ethernet port	1000BASE-T
Input signal formats	Linear PCM 44.1 - 384kHz, 16/32bit DSD 2.8MHz, 5.6MHz
supported file formats	
DSD lossless	DSF, DSDIFF (DFF), DoP
PCM lossless	FLAC, Apple Lossless (ALAC), WAV, AIFF
Compressed Audio	MP3, AAC (m4a container)
USB drive ports	FAT32 and NTFS
	Single partition, USB 2.0 or higher recommended, 0.5A maximum current supply

Clock Sync Input

BNC connector	1
Frequencies that can be input (±10 ppm)	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 10MHz, 22.5792MHz, 24.576MHz
Input impedance	50Ω
Input level	Rectangle wave: equivalent to TTL levels Sine wave: 0.5 to 1.0 Vrms (50 - 75Ω)

Analog audio outputs

XLR connectors	1 pair (L/R)
RCA connectors	1 pair (L/R)
Output impedance	XLR: 20Ω, RCA: 23.5Ω
Maximum output level (at 1kHz, 10kΩ load)	XLR: 5.0Vrms, RCA: 2.5Vrms
Frequency response (PCM 192kHz)	5Hz - 70kHz (-3dB)
S/N Ratio	120dB
Distortion	0.0007% (1kHz)

General

Power supply	AC 220-240 V, 50/60 Hz AC 120 V, 60 Hz AC 220 V, 60 Hz
Power consumption	33W
External dimensions (W x H x D, including protrusions)	445 x 162 x 438 mm (17 5/8" x 6 1/2" x 17 1/4")
Weight	25.7 kg (56 3/4 lb)
Included Accessories	Power cord x 1, Felt pads x 4, Owner's manual x 1, Warranty card x 1

PROUDLY MADE IN TOKYO

ESOTERIC

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- 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.

Please note that Esoteric products are only available from approved distributors in overseas territories.
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