# Grandioso P1X

1			
Digital Output			
1			
× 2 (During Dual AES output, one connector each for left and right channels of a stereo pair)			
1			
1			
Ω			
10MHz (±10ppm)			
±sine wave, 0.5 - 1.0Vrms			
C 220-240V,50/60Hz AC 120V,60Hz AC 220V,60Hz AC 230V,50Hz			
20W			
ain unit: 445 × 162 × 449mm (17 5/8 × 6 1/2 × 17 3/4")			
ower supply : 445 × 132 × 452mm (17 5/8 × 5 1/4 × 17 7/8")			
ain unit : 29kg (64 lbs)			
ower supply : 24 kg (53 lbs)			



Grandios DIX



# Grandioso D1X

XLR/ESL-A	× 1 (mono) each for	× 1 (mono) each for left and right channels		
RCA	× 1 (mono) each for	× 1 (mono) each for left and right channels		
Output impedance	XLR	100Ω		
	RCA	47Ω		
Maximum output level (1 kHz, full-scale PCM signal input, 10kΩ lo	XLR	5.0Vrms		
	Dad) RCA	2.5Vrms		
Frequency response (192kHz PCM signal input)		5Hz — 75kHz (-30dB)		
S/N ratio		113dB		
Distortion		O.OOO7 % (when 1kHz, D/A converter operation mode set to M3)		
Digital Audio Inputs				
ES-LINK	× 2			
	Input signal formats	44.1 – 768kHz, 48-bit linear PCM (ES-LINK5)		
	Input signal formats	2.8/5.6/11.2/22.5MHz DSD (ES-LINK5)		
	× 1			
XLR	Input level	5.0Vp-p		
	Input impedance	110Ω		
		88.2 – 384kHz, 16/24-bit linear PCM (Dual AES		
	(Dual connection)	88.2 – 192 kHz, 48-bit linear PCM (ES-LINK3)		
	(Dual connection)	2.8MHz DSD (ES-LINK1, ES-LINK2, DoP)		
	Input signal formats	32 – 192kHz, 16/24-bit linear PCM (AES/EBU)		
	(Single connection)	2.8MHz DSD (ES-LINK1, ES-LINK2, DoP)		
RCA	× 2			
	Input level	0.5Vp-p		
	Input impedance	75Ω		
	Input signal formats	32 – 192kHz, 16/24 -bit linear PCM (IEC 60958		
	Input signal formats	2.8MHz DSD (DoP)		
	× 1			
Divited entired	Input level	-24.0 – -14.5dBm peak		
Digital optical	land the stand formate	32 – 192kHz, 16/24-bit linear PCM (IEC 60958		
	Input signal formats	2.8MHz DSD (DoP)		
	×1 (Type B)			
USB (USB 2.0 supported)		44.1 – 768kHz, 16/24/32-bit linear PCM		
	Input signal formats	2.8MHz, 5.6MHz, DSD		
Clock Input				
BNC	×1 each for left and	right channels		
	Input impedance	50Ω		
	Frequency that can be input	10MHz (±10ppm)		
	Input level	Sine wave, 0.5 - 1.0Vrms		
General				
Power supply		AC 220-240V, 50/60Hz AC 120V, 60Hz AC 220V, 60Hz AC 230V, 50Hz		
Power consumption		20W		
External dimensions (W × H ×	D, including protrusions)	445 × 132 × 448mm (17 5/8 × 5 1/4 × 17 3/4")		
Weight	Left channel	23.1kg (51 lb)		
	Right channel	23.0kg (50 3/4 lb)		
Included Accessories		1		





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Design and specifications are subject to change without notice. This product is available in four 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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The Greek god Atlas held the skies on his shoulders as he stood at the center of the heavens. This peerless new Esoteric system has been designed from the ground up to showcase two unique innovations; a completely new VRDS-ATLAS transport and new in-house designed discreet DAC circuitry. These unparalleled flagship products, the latest to carry the 'Grandioso'\* name, now stands at the center of future exaltation in the audio experience.

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\* Grandioso (music): Grand or noble.



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ES-L1 DSD5.6

ES-LI DSD5.6

13 DEGRUC



# V R D S A T L A S An unprecedented transport mechanism that invites you to the furthest reaches of sound.



VRDS (Vibration-Free Rigid Disc-Clamping System) is Esoteric's unique CD/Super Audio CD transport technology, which has been specially designed to clamp the disc to a same-diameter turntable in order to eliminate the disc's rotational vibration, as well as any extraneous vibration emanating from the mechanism itself. It also corrects any warpage of the disc dramatically improving the accuracy of both the optical pickup and the disc pit layer's corresponding optical axis while also minimizing servo current. This all adds up to dramatically reduced disc read error for exceptional audio quality.

It has been 16 years since the VRDS-NEO Super Audio CD transport mechanism first debuted in 2003. Improving on the NEO transport posed a difficult challenge, as it had long been praised as offering the highest audio reproduction performance in the industry. However, the design was totally reengineered from the ground up, resulting in a completely new platform that boasts unparalleled levels of structural refinement and audio fidelity.

ATLAS boasts the highest rigidity and weight in the history of VRDS mechanisms. With its larger new SS400 steel side panels and bridge, the ATLAS is 27% heavier (6.6kg mechanism unit, 13.5kg including base) than the NEO, achieving both exceptional rigidity and impressive tone. It also dampens any and all vibration that might adversely affect audio quality. The turntable is machined from solid duralumin for excellent audio quality, and its spindle features a newly designed thrust bearing system. This friction-free one-point spindle support system ensures smooth, noiseless turntable rotation.

One of the keys to achieving the quietest mechanism in VRDS history is mechanical grounding technology that efficiently dampens vibration. By adopting a wide and low profile for the mechanism's design, the entire construction now features a low center of gravity. The turntable's drive system has also been refined and its motor moved to below the turntable from its previous position above the bridge, thus shortening the route for grounding vibration and greatly reducing mechanical

noise.

The tray's form has been designed for the least possible resonance by minimizing hollowing, and boasts exceptionally smooth opening and closing operation with very little play. The use of special vibration-damping elastomer resin also further minimizes tray resonance during music plavback





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# ES-LINK5 Digital Transmission (P1X/D1X)

Esoteric's own ES-LINK digital interface utilizes HDMI cables for signal transmission. With the introduction of the P1X/D1X, ES-LINK has been further upgraded to Ver. 5 and supports an even wider range of superior sound quality formats (Max. 22.5MHz DSD and 768kHz/48-bit PCM). HDMI's multi-conductor structure permits full balance transmission of audio data and LR clock and bit clock signals.

This differs from regular digital transmission as signal modulation is not required on the sender side and demodulation processing is not required on the receiver side, thus dramatically reducing digital processing loads on the DAC side and enabling ideal digital transmission.

# Dual-Chassis Construction with Separate Power Supply

The P1X's power supply, as a fundamental source of vibration, has from its very first iteration been designed and constructed as a separate yet integral unit in order to achieve the quietest possible disc read characteristics and higher audio quality.

# Four Independent Toroidal Power Supply Transformers

The power supply incorporates a total of four independent toroidal transformers, which provide each circuit with a clean and powerful supply of electricity.

# Low-Feedback DC Regulators (P1X/D1X)

Both the P1X and D1X feature low-feedback discrete DC regulators. The reduction in feedback level helps achieve a vibrantly energetic sound that seemingly overflows with a sensation of openness.

## EDLC Super Capacitors (P1X/D1X)

Both the P1X and D1X include EDLC\* super capacitors throughout their power supply circuitry. The P1X utilizes a total of 38 EDLCs (with a combined capacity of 1,400,00µF or 1.4F), while the D1X features a total of 50 EDLCs (for a combined capacity of 1,300,000µF/1.3F) for the pair. Through this maximization of power supply capacity, remarkable improvements in low-range resolution and audio quality have been achieved.

\* EDLC (Electric Double-Layer Capacitor): Developed as next-generation power devices for the electric vehicle industry, these capacitors are attracting wider attention as outting-edge technology due to their exceptionally high capacitance.

# Multilayer Chassis

(P1X/D1X)

Special attention has also been paid to chassis construction as a way of thoroughly controlling vibration. The lower chassis, where the main components are secured, features a multilaver structure formed of multiple steel plates. Power supply transformers and other components are secured to separate layers in a three-dimensional layout that minimizes reciprocal interference between the various components. The enclosure's thick, heavyweight aluminum panels and Esoteric's unique pinpoint feet (Patent No. 4075477 and 3778108) further impede the transfer of low-level vibration.

## Semi Floating Top Panel (P1X/D1X)

The enclosure's top panel utilizes a screwless semi-floating structure that further contributes to an open and expansive sound.





Includes high-quality remote control with thick aluminum panel (RC-1315)

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# Master Sound Discrete DAC

Brings out all the vibrancy and energy of the original master recordings

The Master Sound Discrete DAC features a totally original design that represents the culmination of Esoteric's quest for an original master sound. Its high 64-bit resolution provides vast improvements over our earlier DAC's 36-bit resolution, and enables support for the latest technologies such as playback of 22.5MHz DSD and 768kHz PCM audio. All processing is handled by Esoteric's own FPGA algorithm, and a discrete circuit design forgoes the use of generic DAC ICs in order to actualize Esoteric's vision down to the finest detail.

How close can digital come to analog? With Esoteric's Master Sound Discrete DAC, this question becomes a thing of the past. The Master Sound Discrete DAC's 64-bit resolution is the highest in Esoteric history, reducing digital rounding error to an absolute minimum in order to enable the faithful reproduction of the subtlest of textures.

# and 768 kHz PCM

The Master Sound Discrete DAC easily supports a broad range of formats, and can provide native playback of the highest resolution DSD master files. This impressive performance is merely one of its superlative attractions

64-bit resolution and overwhelming performance. However, the true essence of This DAC cannot be discussed merely in terms of its specifications. The fundamental goal in the development of the Master Sound Discrete DAC was to achieve an accurate, full-bodied reproduction of all the vibrancy and energy of music. Music is infused with all the passion that a performer brings to a passage, with instantaneous and explosive energy. We wondered if it was possible to use higher-grade parts than integrated chips, as well as more luxurious materials, to create a more powerful DAC that could deliver a superlative analog signal. This idea led us to the discrete DAC. Esoteric's top engineering team painstakingly invested their very pride into realizing this complete, full-bodied sound.

Featuring four DAC circuits per channel, their eight circuit elements are arranged in a semi-circle for equidistant signal transmission arranged in two circles that present a luxurious structure with all constituent components, including resistors, logic ICs, and power supplies, separated for all 32 of the circuits. Since each of these 32 circuits utilizes an independent power supply circuit, the music's full burst of energy can be output in its purest form. Furthermore, by selecting the same sort of ultra-high precision resistors used in measuring instruments, the DAC can perform high-speed digital arithmetic processing with greater accuracy

With a discrete DAC, where component tolerances are directly linked to arithmetic precision, highly advanced quality control is also required for the manufacture of electronic circuit boards. Esoteric's own in-house factory boasts some of the world's leading board mounting technologies, such as soldering performed in an oxygen-free furnace, which is located in a clean room featuring the same level of cleanliness found in a hospital operating room. Technologies cultivated in the production of electronic circuit boards for audio, medical, aerospace, and defense industries support the high production quality of the Master Sound Discrete DAC.











# Monoblock DAC

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Setting its sights on achieving the highest levels of D/A conversion capability, Esoteric created the world's first monoblock D/A converter in 2004 with the D-01. The latest in this lineage of flagship D/A converters is the Grandioso D1X. Brushed up and liberally infused with new technologies, the D1X lets you fully enjoy the excellent channel separation of a dual monaural configuration coupled with truly stereophonic sound.

# Esoteric-HCLD Output Buffer\*

A fundamental element of audio quality, the Esoteric-HCLD output buffer amp is mounted on a separate board from the D/A converter, and its circuits have been upgraded to double the scale of the previous model. As an indicator of its response speed, the buffer amp's main components boast an astoundingly high slew rate of 2,000V/µs. This buffer amp also features a four circuit parallel configuration for RCA output, and an extravagant configuration of two hot and cold circuits each for balanced XLR output. This enables the D1X to approach the very limits of powerful current-mode transmission and speed, which are the most important elements of an analog output circuit, and help reproduce the full reality of music with breathtaking dynamic range and clarity. \* HCLD: High Current Line Driver

# Equipped with ES-LINK Analog for Current Transmission of the Highest Audio Quality

In addition to its XLR and RCA line connections to the amplifier, the D1X has also been newly equipped with Esoteric's own ES-LINK Analog transmission system. Current-mode signal transmission is less susceptible to the effects of signal route impedance, thus enabling more powerful signal transmission. When connected to supported devices, ES-LINK Analog offers an ideal transmission system for maximizing system potential.

# Complete Isolation of Digital Circuits and Analog Circuits

All analog circuits are electrically isolated from the digital circuits, and separate power supplies are used for the digital and analog circuits. Each channel features two large and powerful toroidal power supply transformers, which provide a steady supply of clean power to each corresponding circuit block.

# D/D Conversion

The D1X features the ability to upconvert a PCM digital signal up to 2, 4, 8 or 16 times higher sampling frequency (Max.768kHz).

It also features a PCM-to-DSD conversion function (up to 22.5MHz), and a DSD digital filter that can be freely switched ON or OFF.

# MQA (Master Quality Authenticated)\*

MQA is an award-winning technology that delivers master quality audio in a file that's small enough to stream or download. Using pioneering scientific research into how people hear, MQA captures and authenticates the sound of the original studio performance. Visit mqa.co.uk for more information.

\* As of February 2019, MQA certification is currently being processed. Support will be added via a software update as soon as certification is

# USB Audio Interface Supports 22.5MHz DSD, 768kHz/32-Bit PCM, and Asynchronous Transmission

The D1X also includes a USB terminal for connection to a computer or network transport. enabling playback of studio master quality audio sources.

# Equipped with Grandioso Custom VCXO II (P1X/D1X)

The clock circuit lies at the heart of any highend digital player. Both the P1X and D1X are equipped with newly-developed Grandioso Custom VCXO\* II clocks that incorporate a





large piece of crystal which features exceedingly low phase noise characteristics and excellent centering precision (±0.5ppm), making it eminently suitable for such high-end models. Additionally, improvements made to the internal components and circuit patterns of this custom VCXO component resulted in further enhancements to audio quality.

Both the P1X and D1X can be connected to the Grandioso G1 Master Clock Generator (sold separately) for a further upgrade of sound quality via playback synchronized to a 10MHz atomic clock.

