

Esoteric K-01XD SACD player/USB DAC Review

By: Constantine Soo | July 2020



Disc ripping and music streaming are all the rage, and many audiophiles celebrate the riddance of their own CD collections in transition to hard drive storage. After having accumulated over 2 TB of music files from CD ripping over the span of a decade, I advise Dagogo readers to not throw away your CDs so cavalierly. Physical disc playback never cuts out as downloaded music files occasionally do. Consider yourself lucky if you were able to uncover distorted files soon after purchasing it online, for online high-resolution retail sites do not permit re-downloads and you'd have to contact their customer service department for recourse. It happened to me twice now thus far since 2018, and I buy online once or twice a month. You could have corrupted files purchased sometime ago to which you just haven't listened yet.

Some readers may consider the reclamation of spaces from CDs removal around living quarters as significant, and some others may not have a collection so large as to infringe upon living spaces. We all have our priorities in terms of use of living space, so I won't be too quick to judge if some of our readers have discarded their entire CD collection. Still, I continue to find a good disc transport indispensable. A good transport that spins discs at a very high level of accuracy, one that also accepts at least 24 bits 192K Hz music files via USB and Toslink makes reviewing less cumbersome, and is unquestionably, positively useful if it decodes 32 bits 384K Hz files via USB, like the Esoteric.

In these days of streaming, when even movies are bought online and streamed into the living room via smart TVs and what not, why would anyone want an SACD player? The answer is one word: Esoteric.

From the website: "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 playback." Just as the point of the vinyl experience is not about hearing a DSD-recorded facsimile of it but the actual sound via a gem of a cartridge on a masterfully developed turntable and through a fine phono stage, the compact disc and SACD experience via the Esoteric platform is one to cherish. With other players, many of us take the digital output and entrust the signal to an external DAC. With the K-01XD, the transport is its raison d'être. The company's Vibration-Free Rigid Disc-Clamping System has long been the crown jewel of the company and undisputed industry reference; the newest Esoteric drive, the VRDS ATLAS 01, is the new star, the best to date and created to push the envelope of disc playback. Unprecedentedly. It was never a contest to compare music files ripped by a computer disc drive versus listening to the actual disc on the VRDS-NEO drive of the K-03, it is now even a farther cry what with the K-01XD enforcing the day.

Playable disc types: Super Audio CD, CD (including CD-R and CD-RW)

Analog audio outputs

XLR/ESL-A, 1 pair (L/R): Output impedance 114Ω

Maximum output level: 5.0Vrms (1kHz, 10kHz loaded)

RCA, 1 pair (L/R): Output impedance 34Ω

Maximum output level: 2.5Vrms (1kHz, 10kHz loaded)

Digital audio outputs

XLR, 1: Output impedance 3Vp-p (110Ω loaded)

Output signal formats: Linear PCM (AES/EBU)

44.1kHz,16-bit (CD)

RCA, 1: Output impedance 0.5Vp-p (75Ω loaded)

Output signal formats: Linear PCM (IEC60958)

44.1kHz,16-bit (CD)

Digital audio inputs

RCA, 1

Input signal formats

Linear PCM: 32k to 192kHz, 16/24-bit (IEC60958)

DSD: 2.8MHz (DoP)

OPTICAL 1

Input signal formats

Linear PCM: 32k to 192kHz, 16/24-bit (IEC60958)

DSD: 2.8MHz (DoP)

USB B, 1 (USB 2.0 supported)

Input signal formats

Linear PCM: 44.1k to 384kHz, 16/24/32-bit (IEC60958)

DSD: 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz

Clock input

BNC, 1: Input impedance 50Ω

Frequencies that can be input (±10ppm): 10MHz

Input level: 0.5 to 1.0Vrms (Sine wave)

External control interface

RS-232C x 1

Trigger: 1 (3.5mm Monaural mini jack)

General

Power supply

Model for Europe: AC 220 to 240V, 50/60Hz

Model for US/Canada: AC 120V, 60Hz

Model for Korea: AC 220V, 60Hz

Model for Hong Kong: AC 230V, 50Hz

Power consumption: 26W

External dimensions (W×H×D): 445 × 162 × 438(mm)

17-³/₁₆" × 6-¹/₂" × 17-¹/₄" (including protrusions)

Weight: 31kg / 68-³/₈ lb

Included accessories:

Power cord set × 1

Remote control (RC-1315) × 1

AAA batteries × 2

Felt pads × 3

Owner's manual × 1

Warranty card × 1

Price: \$23,000 USD



The company's first-generation K-03 has been my reference since 2013. Sure, the K-01 of yore would be superior but the superiority of the K-01XD would be even more remarkable, as two additional generations have gone between the K-03 and the K-01XD, namely the K-01X and K-01XS. Externally, the K-01XD is very similar to the K-03, although the K-03 type remote control unit is no more. While the K-03's much sought-after remote enabled input selection between disc, Coaxial, Optical and USB, access to the same functionalities on the K-01XD is now via the MODE button on the front panel manually. Inadvertently, the K-03 features both variable and fixed analog output and the remote, again, provides for the volume control functionality, useful for direct connection to power amplifiers. The K-01 generations are only equipped with fixed analog outputs.

Per Keith Haas, National Sales Manager of Premium Brands-Onkyo USA Corporation, the distributor for Esoteric in the America's, "While this was technologically possible at the time [of the K-03 in 2009], the factory always highly discouraged this type of application because noise was introduced as the gain was increased."

Of course, now, I have to press the input button on the front panel of the K-01XD to change from disc playback to the Coaxial input for listening to the Aurender N-1000SC caching music server, the functions of which I control through the Aurender App on the Apple mini iPad. But then the cat jumped into my lap. Softly so as not to scare him away while hopefully loud enough for my wife to hear me, "Honey, could you come downstairs? I need you to press a button for me."

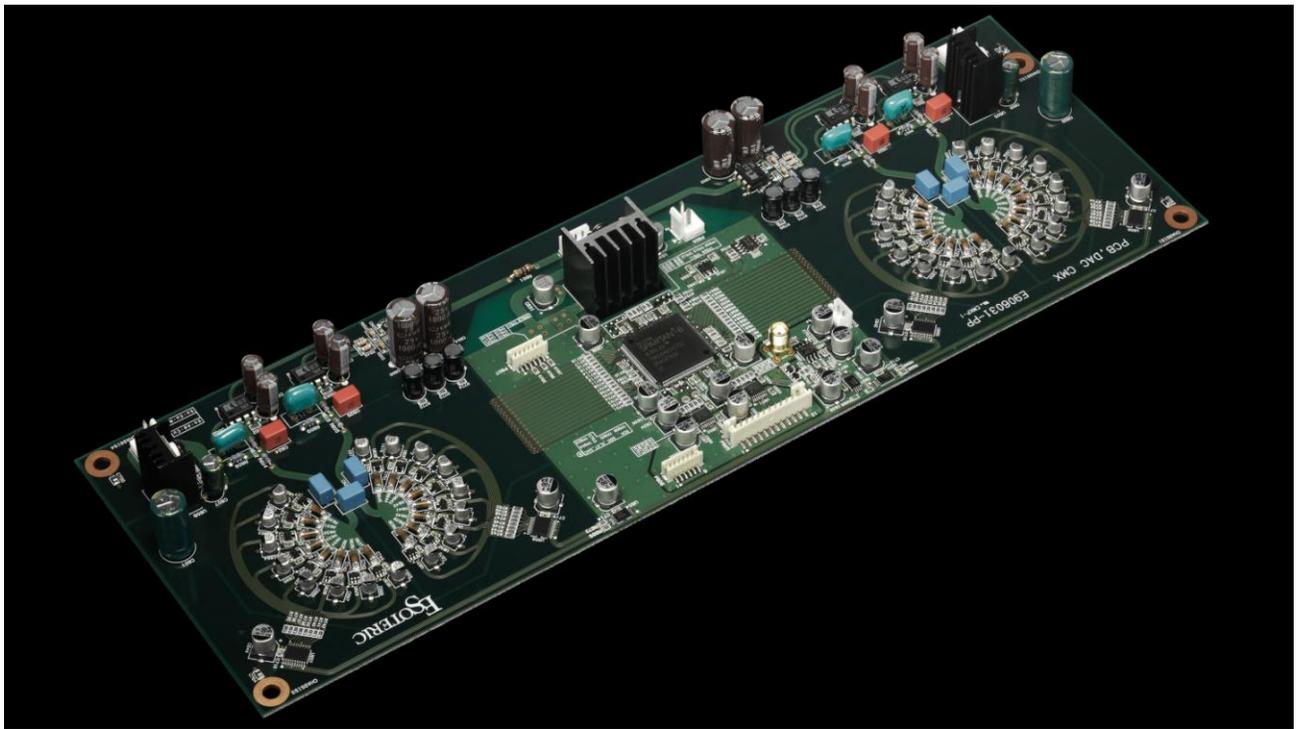
The engineers at Esoteric should also be recognized for the creation of the first-ever, in-house digital-to-analog conversion system in the K-01XD. Dubbed the Master Sound Discrete DAC, it was

first developed in 2019 for the company's \$50,000 mono DAC, Grandioso D1X. From the company's website:

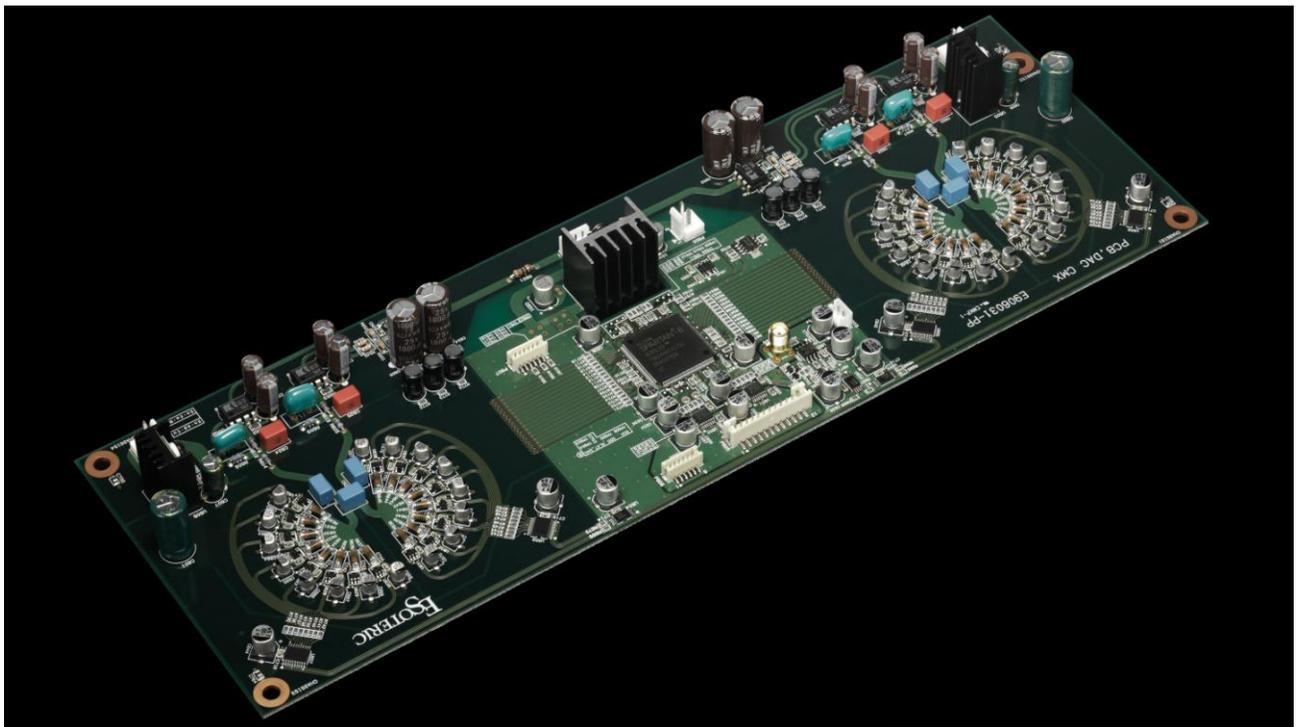
“[Capable of] 64-bit resolution and overwhelming performance. However, the true essence of this DAC cannot be discussed merely in terms of its specifications. The fundamental goal in the development of the Master Sound Discrete DAC was to achieve an accurate, full-bodied reproduction of all the vibrancy 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.



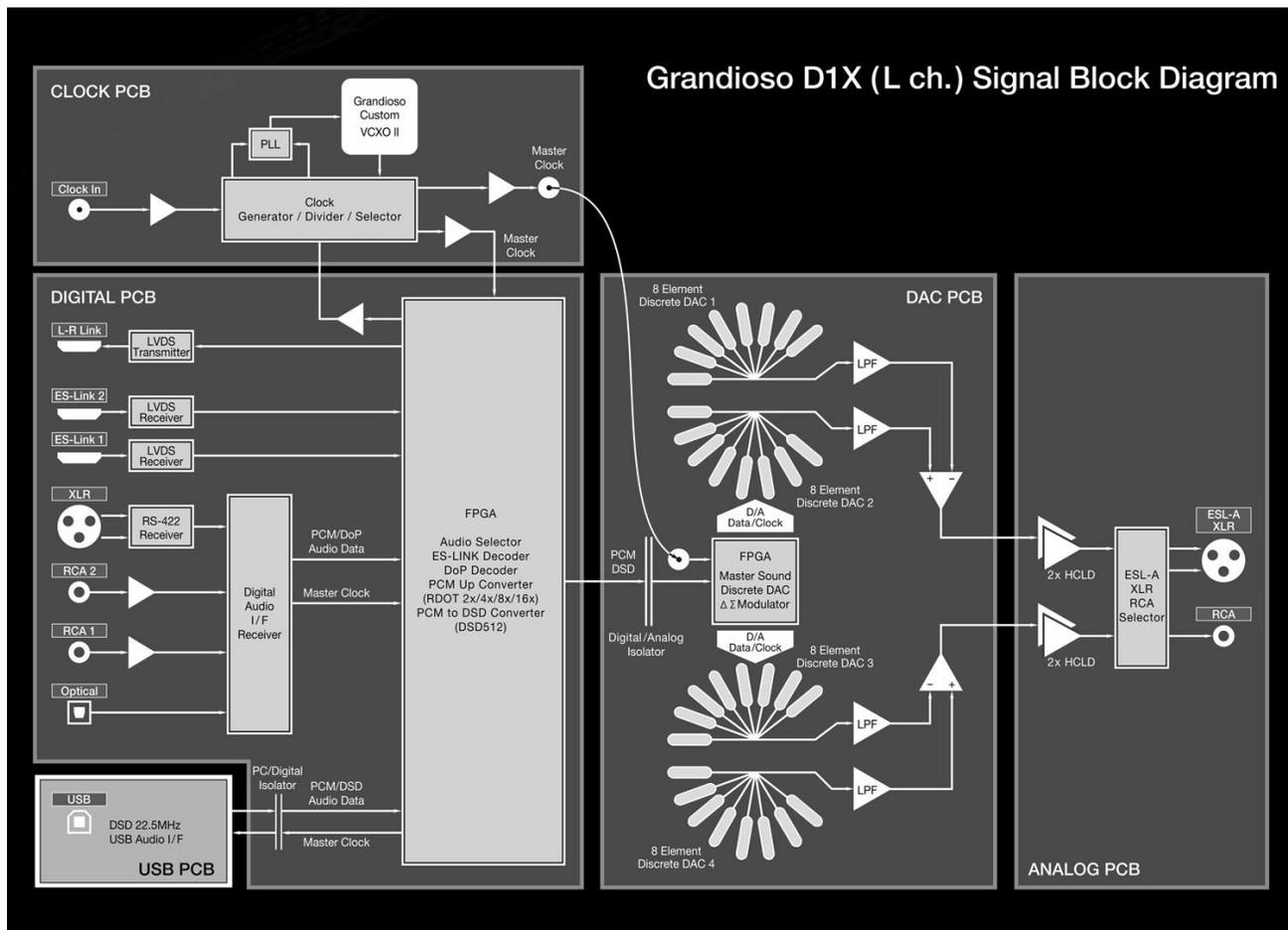
Featuring four DAC *circuits* per channel, their eight circuit elements are arranged in a semi-circle for equidistant signal transmission within each DAC. This total of 32 circuit elements are arranged in two circles that present a luxurious structure with all constituent components, including resistors, 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."



Esoteric Grandioso D1X MSD DAC



Grandioso D1X Signal Block Diagram

The Esoteric MSD DAC technology is featured in the Grandioso D1X, the \$36,000 Grandioso K1X SACD player, the K-01XD and K-03XD.

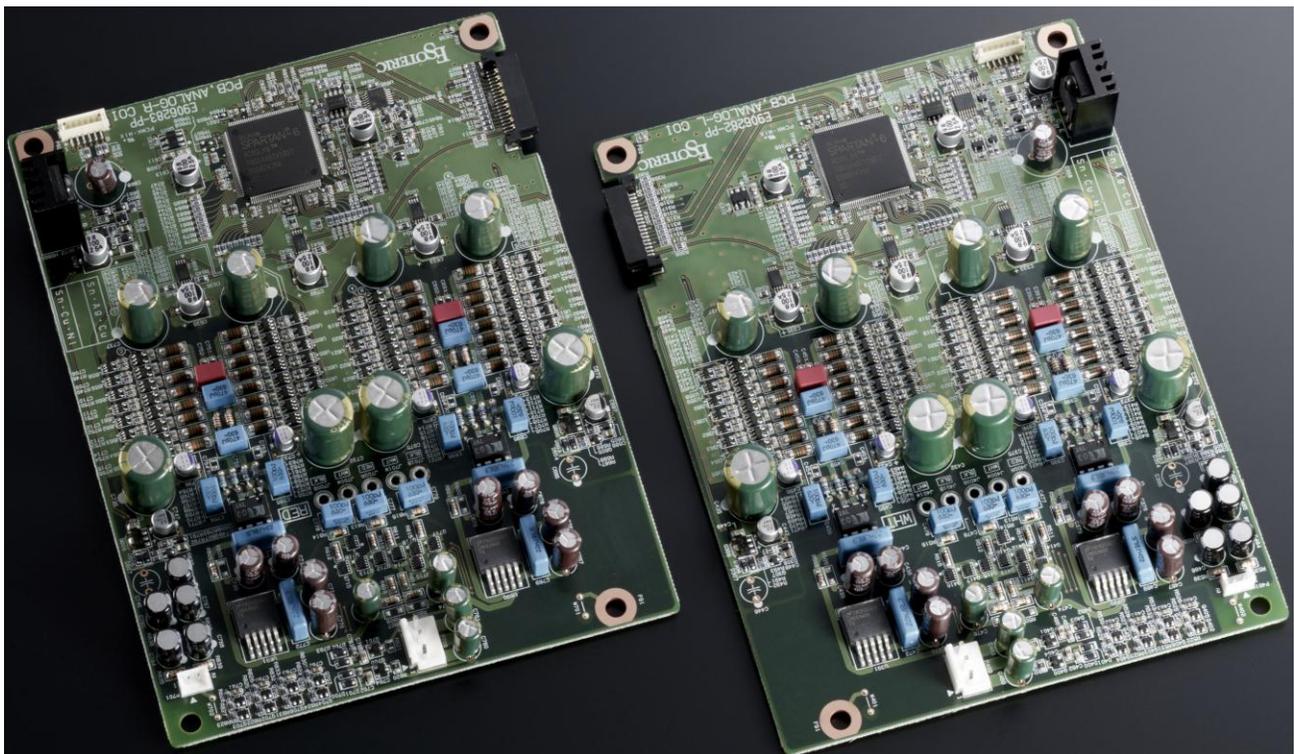
While this review only emphasizes the two foremost technological innovations on the K-01XD, with this review, lightning has struck thrice. For the Esoteric, together with the Audio Note UK Fifth Element/Fifth Force DAC and the 47 Laboratory 4741 Izumi CD player, has shown the path to physical disc superiority. These three are the machines that make CD playback eminently rewarding. We can change cables, upgrade amplifiers and get bigger speakers, but the failings of systems is very often exacerbated by the source. With the K-01XD, there is no contest.

Sure, any company worth its salt has digital converters, and there is every reason to believe flagships from a few dozen companies are fierce contenders for the top spot. Personally, I've also found the Bricasti Design M21 dual-mono DAC to be singular in its performance. Retrospectively, Esoteric offers no less than ten digital products itself, beginning with the two Grandioso models, the aforementioned \$100,000-per-pair Grandioso D1X, a 64 bits monoblock of a digital powerhouse, the complimenting \$50,000 Grandioso P1X SACD transport, followed by the K-Series, the \$36,000 64-bit Grandioso K1X SACD player, the \$14,000 K-03XD 64-bit SACD player, the \$8,500 K-05Xs 32-bit SACD player, the \$7,500 K-07Xs 32-bit SACD player, the \$11,000 N-03T network transport, the \$20,000 N-01XD 64-bit network player and its \$7,500 N-05 34-bit sibling. Esoteric is armed to the teeth on digital source components.

The K-01XD provides custom settings for DSD and PCM playback separately, namely M1, M2 and M3 in PCM playback, and F1, F2 and F3 in DSD mode. While the owner's manual gives no detailed



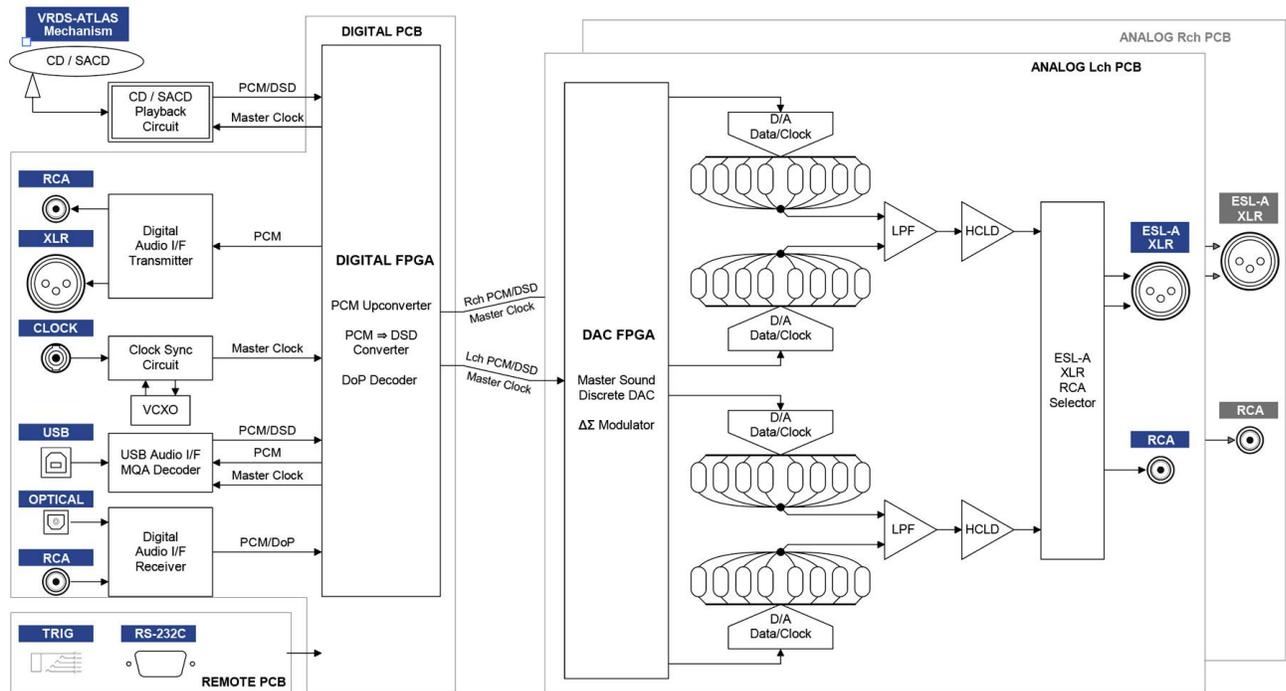
description of the characteristics of the settings, according to Keith, “While each setting has its own related filter, frequency setting etc., (in other words there is no placebo effect in play here) the thinking of the factory has always been that they don’t want end users to make a pre-determination of what will sound the best based purely on a number. They want the end user to trust their ears to tell them which positions sounds the best. I can tell you that the units are all sonically tuned with all of these settings effectively turned off.” Be assured that the factory did provide Keith with an outline, which will be described later in the review.



K-01XD Master Discrete Sound DAC boards

The K-01XD was in a system where the Audio Reference Technology Analyst SE XLR connected it to the control chassis of the Pass Laboratories Xs Preamp system, and a second pair of the same XLR ran between the Xs Preamp and the Pass Labs XA200.8 pure class A solid-state monoblocks. A pair

of the Bricasti Design M28 class AB solid-state monoblocks was also alternated for driving the Sound Labs Majestic 645 electrostatic panels. An Aurender N100SC caching music server and streamer with its optional onboard 2TB disc drive sent signals along with Tidal streaming service to the K-01XD via a Harmonix Reimyo by Combak coaxial digital cable. An Aural Symphonics Digital Standard Toslink connected the Panasonic Plasma TV to the Esoteric.

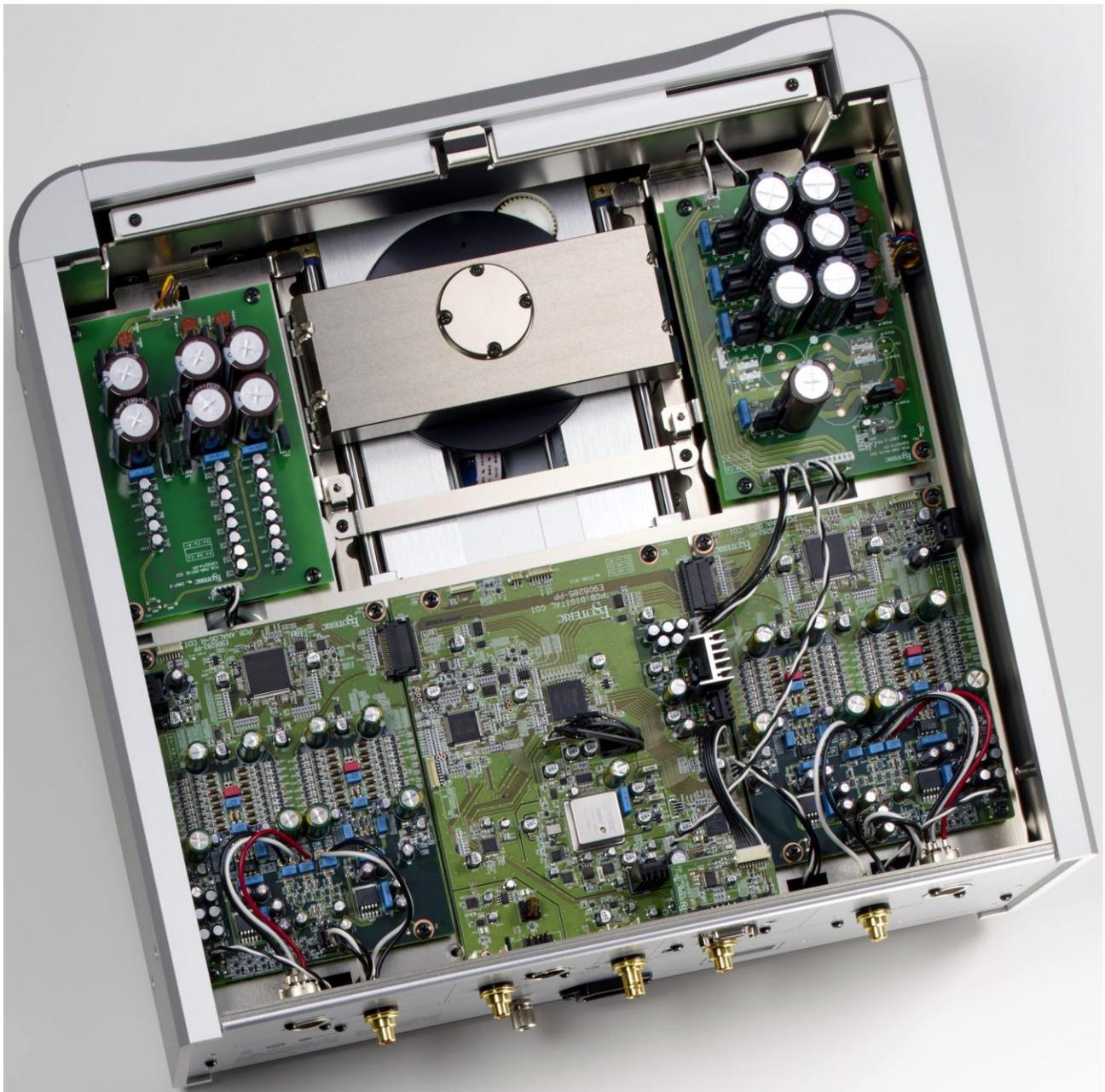


K-01XD Signal Block Diagram

Powering the machines were an A.R.T. Evo Analyst power cable for the K-01XD, an A.R.T. Super SE for the Aurender, a third Super SE for the Pass Labs Xs Preamp and additional Analyst power cables for the monoblock amplifiers. Another Super SE powers the PS Audio DirectStream Power Plant 20, which fed the Aurender, Esoteric, Pass Labs Xs Preamp and a few others not in the curfew of this review. The monoblocks were plugged directly into the wall.

There are quite a few companies in existence continuing to manufacture one-piece SACD player/DAC, but none of them develop their own transport. For it is such an involved endeavor that in addition to it being a wise decision to contain costs by adopting an established product, any attempt to surpass the Teac/Esoteric VRDS mechanism by starting up the R&D and tooling process is simply risking certain bankruptcy. The previous-generation K-03's VRDS-NEO transport mechanism circa 2003 provided more detail over others in driving other DACs consistently, and it was my reference. It also allowed the option of turning off analog outputs while outputting digital signal only. The same flexibility is endowed upon the K-01XD.

In driving the \$19,000 Bricasti Design M21, the K-01XD transport brought out the most elaborate suite of performance yet from it. The LIM K2 HD edition of the Proprius *Camino Cantate* recording was rendered in the most dynamically contrasted and realistic manner ever by the DAC, yielding spectacular three-dimensionality of the soloists amongst the choir. Depiction of the ambience captured inside the great hall of the Oscar's Church was meticulous and well-defined. The church



K-01XD internal (Upside)

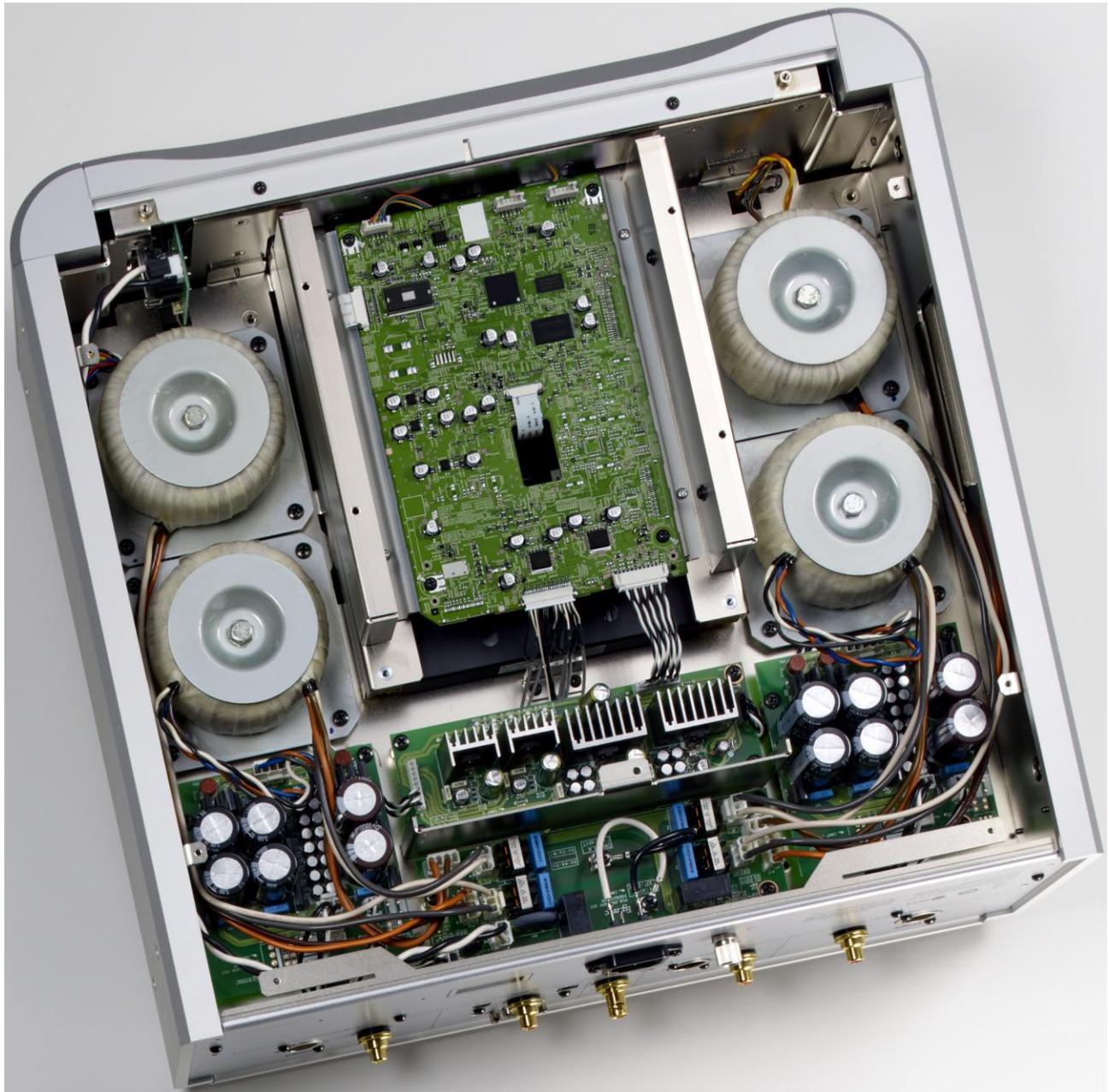
organ in the Proprius Cantate Domino SACD has variance in amplitude and tonal verisimilitude never realized until now. I don't think any Bricasti user except I has experienced it yet.

Perhaps the acid test of a transport is in what it can do for a budget DAC. When driving the \$2,749 iFi Pro iDSD DAC, the K-01XD transport induced the miniature DAC to pump out soundscapes and tonalities so vast and pristine that it had not achieved with other transports and hard drives, helping to certify the compact DAC's ability to rein in a main system.

But the ace of innovation of the K-01XD is its Master Sound Discrete DAC system, and it's like nothing I've seen before.

Deeper, richer tones, stunning extreme left and extreme right channel details and imaging

Playing the JVC 1989 audiophile grade CD *Face to Face* by trumpeter Tiger Okoshi, a predecessor of the XRCD format yet to emerge, revealed my preference of the K-01XD's PCM playback setting of M2 as opposed to M1 or M3, rendering a higher transparency of tone but with softer edges. At this setting, I pushed the volume even higher and basked in the sonic splendor from the Sound Lab electrostatic panels. Instruments separation was phenomenal, I reckon I was hearing the music in its most faithful rendition with the highest jam factor ever. The point is, whereas the better DACs that I auditioned would try to recreate a three-dimensional space between the speakers, the K-01XD projected every cubic inch of the soundstage up to the very edge of the electrostatic panels and outward into the room. Liner notes described the music as recorded on a Sony PCM-3348 digital multi-track recorder and mixed on a JVC DAS-900 Audio Mastering System. The Esoteric K-01XD perfected the job thirty-one years after.



K-01XD internal (Bottom side)

The K-01XD challenged my hearing at times, such as during the playback of the organs in track 1 “Ryu” in *The Film Music of Toru Takemitsu* CD, producing sostenutos replete with contrasting tones at levels of vibrancy fantastical and unreal, defying senses of reality. The newly dug up dynamics and tonal definition of the organs by the Esoteric were stuff for savoring, and the sound of the instruments, even during softer moments, filled the electrostatic panels to the brims.

Playing the Esper Edition of the Vangelis soundtrack to the 1982 Ridley Scott cult classic *Blade Runner*, the K-01XD surpassed all my previous experience in its enormous scale and in dynamic contrasting. Its contrasting ability was epic. One moment a very subtle rendition of the quieter notes in the hands of Vangelis would linger on ad infinitum with waves of sweeping melodies behind it, while he would bring a solitary, lamenting note to the fore amidst a canvas of background instrumentation. All this while evocating some of the most distinct and well-formed tones of a synthesizer ever. Kudos to Esper Production for this remastering.

The Heifetz SACD of Beethoven and Mendelssohn Violin Concertos on the K-01XD sounded softer and more delicate than the K-03, bringing out a never before-heard vaster and more spacious soundstage. The electrostatic panels were loving the K-01XD. The SACD contained such power as rendered by the player as if it could overpower the panels themselves.

No Esoteric SACD player review would be complete without using Esoteric remastered SACDs. First up was the Sir Colin Davis reading of Beethoven Overtures, a recording originally made in 1985, sent to me in 2007 in celebration of Esoteric’s 20th Anniversary then, was a celebrated recording in its time for its exceptional sound quality, in addition to being the only viable, fresh-sounding alternative for many listeners to the Karajan disk of the sixties. The SACD is not overwhelming in terms of sound but sounded exactly like how I remember it. Listening to it on anything else diminished the experience. This reissue is a curious exercise from Esoteric without the expected diligence in remastering. Only for those seeking a genuine reenactment of the original LP experience.

The company’s SACD reissue of a remastered, 1983 Philips recording of the Peer Gynt excerpts is one of the hottest projects the company has undertaken lately. The SACD stands neck to neck with the original vinyl in timbral warmth and width of stage, and the K-01XD imparted the music with newfound dynamics and scale. This disc is now rendered demonstration class by the K-01XD. Unlike the vinyl, I can play this over and over again and not having to worry about acquiring a second vinyl copy.

The player’s three DSD filter settings all sounded extraordinary and identical to me, but I stayed on the OFF mode. Several months into the auditioning, a response from Japan finally came in regards to the PCM and DSD settings:

“The D/A converter operation mode used during PCM playback can be set to three types, M1, M2 or M3. This changes the Δ [Delta] Σ [Sigma] modulator operation frequency and randomization algorithm used to absorb hardware error. M1 is the Esoteric reference mode. The operation frequency of the $\Delta \Sigma$ modulator becomes progressively lower in order from M1 to M2 to M3. The replacement amount of the randomization algorithm increases progressively in order from M1 to M2 to M3. By default, the setting is M1.”

On the DSD settings, “A digital filter is used. F1, F2 and F3 are digital filters with different frequency responses. The cutoff frequency becomes progressively lower from F1 to F2 to F3.”

Herein lies the singular merit of the K-01XD. It didn’t have tubes for the softening and beautification of tones, but it achieves it nonetheless and in a single, decisive stroke it did more

than just making digital music worthy of analogophile ears. By the prowess of the massive DAC construct, the K-01XD pushed the performance envelope over the edge in a grand manner that only Esoteric with its cadet of engineers could muster, and then developed a DAC that sounded smooth yet intricate, dynamic yet sensitive and above all, spacious and three-dimensional.

Esoteric's N-01XD network player was a compelling alternative to the K-01XD, but I needed a standalone streamer if I were to review other DACs, so the decision was not difficult though the temptation remained. Besides, the sign of the times indicate mass abandonment of the physical transport, so I could see the K-01XD becoming Esoteric's final excursion on a top SACD player.

Common opinion these days has it that the cloud is all we need for the purpose of music appreciation. I believe we as intelligent beings need variety in mediums and I thrive on playing my LPs, CDs, SACDs and Tidal streaming. This period is a crucial junction at which we may be witnessing the last breed of superior disc transports being developed. For the first time in the industry that I know of, the digital promise is unswervingly fulfilled at the highest level in the form of the Esoteric VRDS ATLAS disc transport and Master Sound Discrete DAC, embodied in players such as the K-01XD.

And there's no better transport than ones from Esoteric Teac, a fact to which I attest from my usage of the Esoteric K-03 since 2013. Whereas it may be true for any SACD player to be considered a compromise for having a DAC thrown together with a noisy transport, in the case of Esoteric it becomes a strength. Sophisticated and ultra high-performance, the Esoteric K-01XD represents the very height of industrial achievement in our time. It is a collector's item and a legend in the making. On any given day, I wouldn't miss the opportunity to listen to my favorite music via the Esoteric VRDS transport, and the occasion is all the more exciting when it is the ATLAS.

The K-01XD attained a tone previously resided in the realm of cables and power conditioner upgrades. Now the level of finesse in digital playback as presented by the Esoteric K-01XD and its completely in-house technologies is at such level it cannot be overtaken.

It is an industry-wide show of force for Esoteric to develop its own reference D/A conversion scheme, one that in my opinion surpassed the company's own previous adoption of widely available industry standard chipsets. The company is now leaving the rest of the industry in dust. I foresee Esoteric further compacting the components of the Master Sound Discrete DAC into lower cost variants for wider commercial release within five years, having gone through the most difficult stage of creating it and then mastering the design and manufacturing process in-house.

The K-01XD plays at the top of its game in absolute terms, conceding most certainly to its more upscaled siblings. The \$153,000 Audio Note UK Fifth Element/Fifth Force DAC is the only DAC I know of with a tonality suite surpassing that of the Esoteric significantly. The audiophile that buys the Audio Note will certainly won't even blink to get the Esoteric for good measure.

The Aurender N100SC is serving as a most meticulous hard disk and Tidal streaming transport for the Esoteric. Having the K-01XD with its VRDS-ATLAS transport is just one more insurance policy for uninterrupted reviewing schedule, albeit an ironclad one.

The K-03 of 2013 was equipped with four AKM 32-bit chips per channel and the VRDS-NEO SACD disc reading mechanism, producing a sonic canvas impossible to replicate outside the company's upper models. The K-01XD outclasses it by 10% per my conservative estimate. Quoting a higher superiority percentage will distress many, and hearing is believing. With the Sound Lab speakers, even the discontinued K-03 needed no excuse and was producing music of the highest tonal resplendency and I had been content; the K-01XD is simply far superior and I can't go back.

Copy editor: Dan Rubin

Review system:

PS Audio DirectStream Power Plant 20 AC regenerator

Acoustic Sciences Corporation TubeTraps

Audio Reference Technology Analysts EVO interconnects, power cable

Audio Reference Technology Analysts SE interconnects, power cables

Audio Reference Technology Super SE interconnects, power cables

Pass Laboratories Xs Preamp

Pass Laboratories XA200.8 pure class A monoblocks

Bricasti Design M28 class AB monoblocks

Margules Audio u-280SC Black ultralinear tube monoblocks

Sound Lab Majestic 645 electrostatic panels