PREAMPLIFIER/DAC REVIEWS

Playback Designs Sonoma Series: Syrah Server, Merlot DAC, and OpBox

Steven Plaskin | Jun 16, 2016

Syrah Server

Device Type: Music Server

Output: USB 2.0 that support up to 24 bit / 384kHz as well as DSD64, DSD128, and DSD 256. Connects directly to Merlot DAC or any Playback Designs DAC via USB

Input: A 2nd USB input for external drive or USB Flash Drive External DVD-ROM Drive for automatic CD ripping.

Network Connection: for Network Router

Hard Drive: 2TB; SSD drive available for extra cost.

Dimensions: 12" wide by 9" deep, by 8" high

Weight: 5.5 pounds

Price: $6500

Merlot DAC

Device Type: Digital to Analog Converter and headphone amplifier

Digital IN /Outputs: USB to Syrah Server or other computer based audio systems Asynchronous USB 2.0 that support up to 24 bit / 384kHz as well as DSD64, DSD128, and DSD256. AES /EBU XLR connector formatted for stereo linear PCM data up to 24 bits / 192kHz and DSD 64. COAX: same as AES but COAX formatted on RCA connector. PlayLink : optical proprietary link used to connect other Playback Designs equipment or OpBox. Supports multiple audio formats.

Analog Output: RCA single end or XLR balanced

Dimensions: 12" wide by 9" deep, by 8" high

Weight: 8 pounds

Price: $6500

OpBox for Oppo103 Players

Output: PlayLink - Supports all digital data that is played on the Oppo103 player. Native data from SACD, CD, DVD, Bluray, or anything played digitally into the player.

Price: $1850 for OpBox board and back panel plate, mounting hardware, optical ST-ST cable, and instruction manual.

Availability: Authorized Dealers

Website: www.playbackdesigns.com

Andreas Koch, Founder, CEO, and Engineer along with Bert Gerlach, Engineer have recently released the new Playback Designs Sonoma Series that includes the Syrah Server, Merlot DAC, and OpBox conversion kit for the Oppo103 Blu-ray Disc Player. Another component in the Sonoma series is also slated for release called the Pinot that is an Analog Digital Convertor. I'm sure a number of you have noticed that the Sonoma Series has named the products after fine wines. Andreas previously worked for Sony developing the first native DSD recorder and workstation. Sony's chairman at that time felt that DSD's potential and performance was similar to a good wine; hence the name Sonoma for the workstation. Andreas' view of musical experiences and fine wine:

"Andreas felt that he was not alone in recognizing the wonderful if somewhat counter-intuitive symmetry that links the enjoyment of good wines with the enhancement of both joy and awareness derived from profound musical experiences. Both seem to lift consciousness and expand our sense of the universe itself. Each is a somewhat magical realm of human relaxation and feeling. But I've realized for quite some time that thrilling music and exquisite wine enhance each other. It's as if they come from the same place in the cosmos or nature... as if they speak to one another or, at least, reinforce the sense of well- being each contributes to our lives."

Playback Designs not only named the new components after wines, but also teamed up with the Carhartt Vineyard to include a bottle of wine and a wine glass with the Merlot, Syrah, and Pinot.

The Syrah Server

Physical Appearance of Syrah and Merlot

I was very impressed with the physical appearance and feel of the Syrah Server and Merlot DAC. These relatively compact components have a beautiful dark grey-machined aluminum face plate and top that are made from one piece and finished with a brushed aluminum finish. Carved into the face plate and top are wavy protrusions that were modeled from a photo of a mountain range inspired by the Sonoma hills wine country where Playback Designs is located.

Four solid cone feet are found on the bottom of each component for isolation purposes. The Syrah and Merlot have several controls and indicators of function. The Syrah and Merlot have a rear panel on-off switch that places the components in standby mode. The Syrah has a single top panel button that starts the boot process of the server. Pressing it again, powers off the server, 3 LEDs are found on the front panel; One to indicate power, the second to indicate CPU access of the internal drive, and the 3rd not currently used. The Merlot has a top panel button that when first pressed allow input selection. Pressed again after 5 seconds and the detected sample rates are visible on the front panel display. A knob on the front panel is used to control the volume of the headphone output. Andreas felt that the new Sonoma Series constitute a systems approach:

"The Sonoma series of products was designed as a modular system. Depending on the needs of the user, different components can be combined. But when they are all combined together (Merlot, Syrah, Pinot and OpBox), then it is like a universal "Swiss Army Knife" that has a "blade" for every audio format that you may want to play through it. In addition, you can change formats and create files from any format including analog.

"I don't think that such a systems approach to universality has ever been taken for a new product design, that not only includes common features as playback of any digital format, physical or file, but also adds a new one: the capability of recording."

The Syrah Server
The dedicated server has a number of technical advantages over the use of a multi-purpose computer. By eliminating the many background process that are unnecessary for music reproduction, superior music reproduction can be obtained.

I asked Andres to comment why he felt Playback Designs needed to introduce a dedicated server to advance playback capabilities of the products in his new Sonoma Series:

"A computer is general purpose and therefore needs all the facilities, storage, bandwidth, memory, CPU speed etc. to perform and unimaginable amount of tasks that the user may ask for. If all we want to do is play audio files and load them into the system, then we can minimize the system dramatically, down to a point where there won't be a need for a cooling fan, and where the CPU is not busy servicing unnecessary tasks etc. The system becomes small, cool, quiet and less taxiing on the CPU. These are all features that have an effect ultimately on the sound quality."

The Syrah Server runs Windows 10 Pro that has been stripped and configured so it can only be used to play audio files and utilize network access. The hardware is based on the Intel NUC using a Celeron processor with 4GB of RAM and a 2TB hard drive. The Syrah can be ordered with an SSD at additional cost. The music software chosen by Playback Designs was the well-known JRiver Media Server. For CD ripping, an external DVD-ROM drive is provided that works with a customized version of dBpoweramp in the Syrah. The network streaming is based on a DLNA server. Several other custom software programs were also included to integrate the total software package. The external control of the Syrah is performed by a customized version of JRemote that runs on an Apple iPad (version 5.0 or later) or an Android tablet (version 4.0 or later). The JRemote software allows configuration of the Syrah and the music library. Music files can be placed on NAS (network attached storage), the internal HD, or an external USB drive that is self-powered. The Syrah connects to the Merlot DAC or any other Playback Designs DAC via USB. Playback Designs also told me that the Syrah could be custom ordered for use with most other USB DACs built by other manufacturers.

The Merlot DAC
The Merlot DAC is a new design from Playback Designs that has employed new technologies compared to previous models and includes several features not found in the previous DAC line.

Andres commented on the Merlot:

"The Merlot takes everything we have learned until now in converter design and puts it into a nice compact chassis. It is based on the same basic concept of its bigger brother, the MPD-5 and uses the same discrete DAC concept, which the Playback Designs products are known for. An innovative algorithm allows the user to directly update the algorithms him / herself by simply playing the update as an audio file into the Merlot. There is a headphone amp with discrete analog volume control. Also, a first for any DAC, is Merlot's capability to record any digital input source from it via USB.

"All incoming files with sample rates up to DSD64 are converted to DSD128 before their final process brings them to a data rate of around 50MHz from where they are converted to analog. DSD128 are converted natively to analog. Incoming DSD256 files undergo a separate process to bring them up to 50MHz before they can be converted to analog."

The Merlot does not rely on standard chips for digital processing, but utilizes Field-Programmable Gate Arrays (FPGA) programmed with proprietary algorithms developed by Andreas. "The use of the FPGA approach allows a higher precision arithmetic than feasible in standard off-the-shelf components, but also new and unique algorithms that no other manufacturer has." Another technology used in the Merlot is PDFAS (Playback Designs Frequency Arrival System) a technology developed by Andreas Koch that eliminates the need for conventional PLLs, also known as "Phase Locked Loops" to reduce jitter. Playback Designs claims that their PDFAS, regardless of the source, reduces jitter to a level far lower than what can be achieved with conventional PLL designs.

Playback Designs has chosen time domain variable filters, as opposed to fixed frequency domain filters for the Merlot. These filters continuously adjust to momentary transient characteristics of the music being played and preserve the transient music signals.

The analog circuitry was designed by Bert Gerlach and features double differential structure. "Each half of the differential output signal is derived from differential signals thus minimizing common mode distortions."

When the Merlot is connected via USB to the Syrah, all sample rates up to 384kHz / 24 bits are supported along with DSD 64, 128, and 256. A pair of single end RCAs and balanced XLRs are provided for the output.

For those with PC / Windows software, I was able to install the Merlot driver and get J. River Media 21 going with no issues. DSD is directly played back with the ASIO driver without the need for DoP. DoP will be used for those with Macs. Also, DSD256 is not supported for OSX with the Merlot.

The Merlot features a discrete headphone amp that is driven directly by the DAC with an analog volume control.

An additional feature of the Merlot is that whatever goes through the DAC can be recorded by a Windows computer using the USB port on the DAC and free specialized Windows software from Playback Designs.

Operating the Syrah With the Merlot

Playback Designs has done their homework when it comes to setting up the Syrah Server. I connected an old Apple Airport Express router to the Syrah and connected the Merlot with the USB cable provided. I also connected a USB hard drive with music files to the Syrah. I then downloaded the Playback Designs JRemote app from Apple for my iPad Air 2. The setup of the Syrah was truly effortless. Remember, and an Internet connection will be needed if you rip CDs for the metadata. Otherwise, disconnecting the Internet when not used will reduce the number of tasks for Syrah's processor.
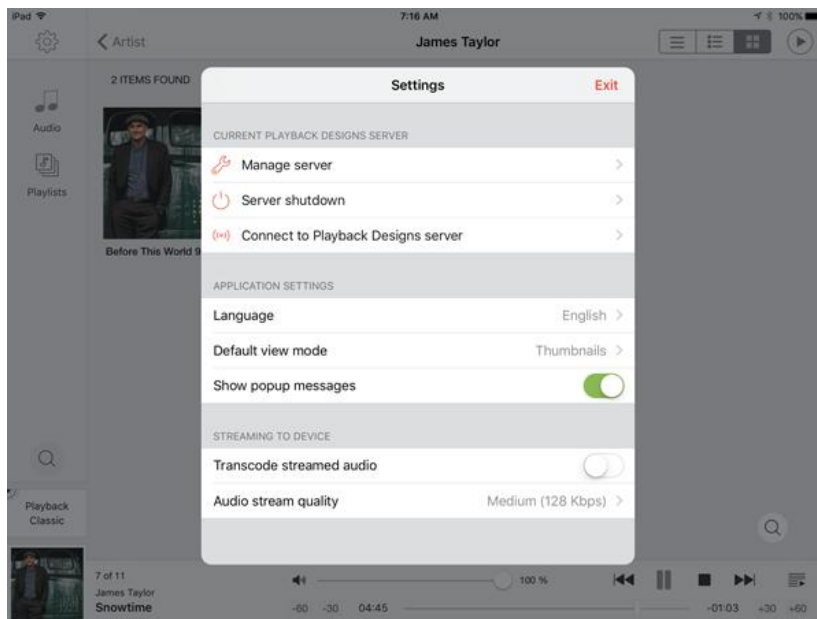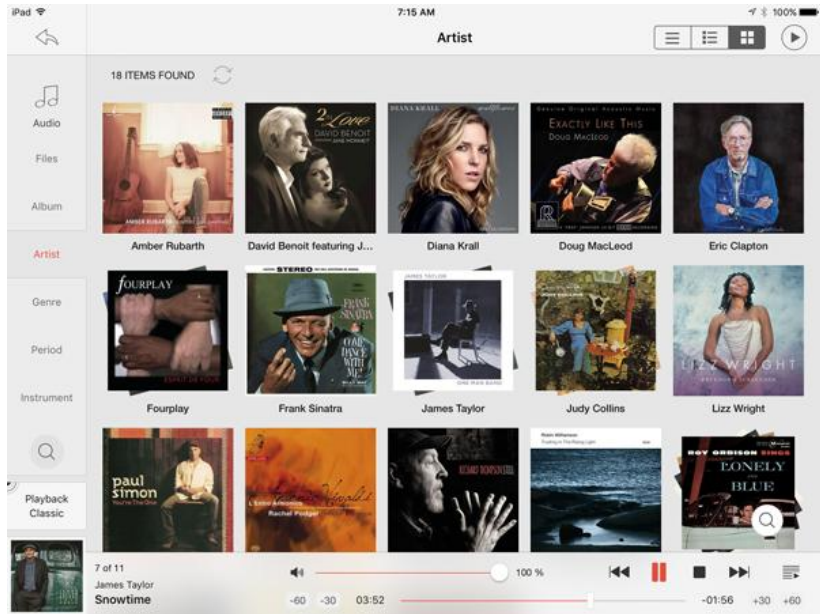
The iPad app immediately recognized the Syrah Server. After selecting that, I selected add music from external drive. I then decided to keep the files on the USB drive as opposed to installing them to the Syrah HD. After installing files, I began listening to music. It was just that easy and took me around 15 minutes to begin listening to music.

The JRemote interface is well known to me, and is very easy to use unlike other DLNA server software control remotes I have tried. There were no glitches, dropouts, or freeze-ups using the Syrah and Merlot combination. Quite frankly, I was delighted not to have to deal with computer issues and get down to enjoying music.

A Special Musical Experience

After listening to the Syrah / Merlot system for several days, I realized that I was enjoying a very special musical experience that had to be included among the finest digital systems I have heard. We often talk about natural or analog-like sound when describing fine DACs and the Syrah / Merlot system had these qualities in spades. Music emerged from a silent background with fine dynamic shadings being very apparent. Macro dynamic changes were powerful and easily felt. The bass was highly detailed but well controlled with no bloat of unnatural heaviness. Voices and instruments were detailed and well nuanced.

The soundstage of the Syrah / Merlot was among the largest I have experienced with excellent width and depth. There was excellent image stability and focus within the soundstage with a sense of air surrounding instruments and vocalists. The Syrah / Merlot system simply allowed music to flow with minimal, if any, coloration.
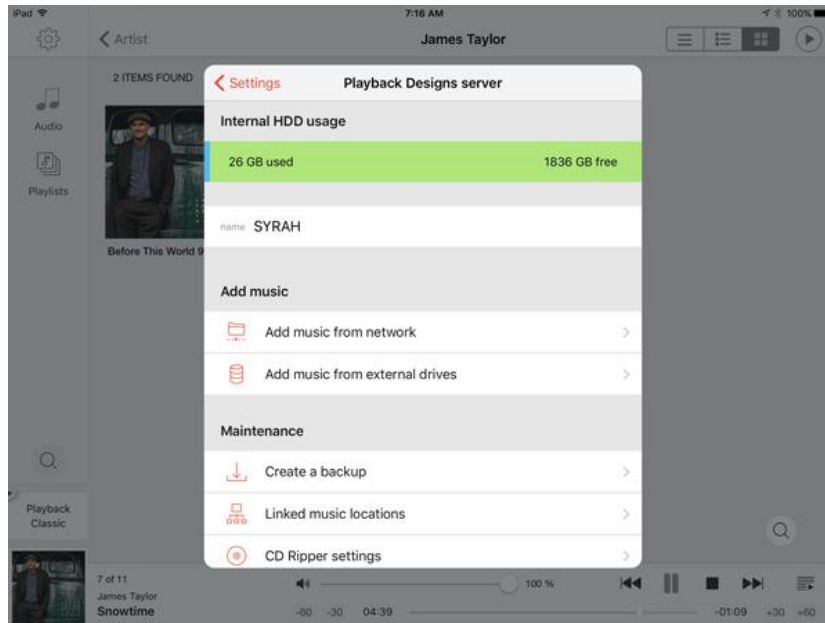
The Syrah / Merlot played all PCM and DSD files presented to it flawlessly. One area that the Syrah / Merlot combination excelled in was DSD256 (4X DSD). I have heard a number of DACs play DSD256 titles, but the Playback Designs combo did an absolutely stellar job with this format giving one the impression that he was listening to a superb analog source without its inherent shortcomings.

One question that I know many of you will have is the influence on the sound of the USB cable used between the Syrah and Merlot. As with other fine USB DACs I have reviewed, the USB cable selected does make its own sonic contribution. In all fairness to Playback Designs, the USB cable provided did sound very nice, but I did find myself preferring the Wireworld Platinum Starlight 7 and the Kubala-Sosna Realization USB cables.
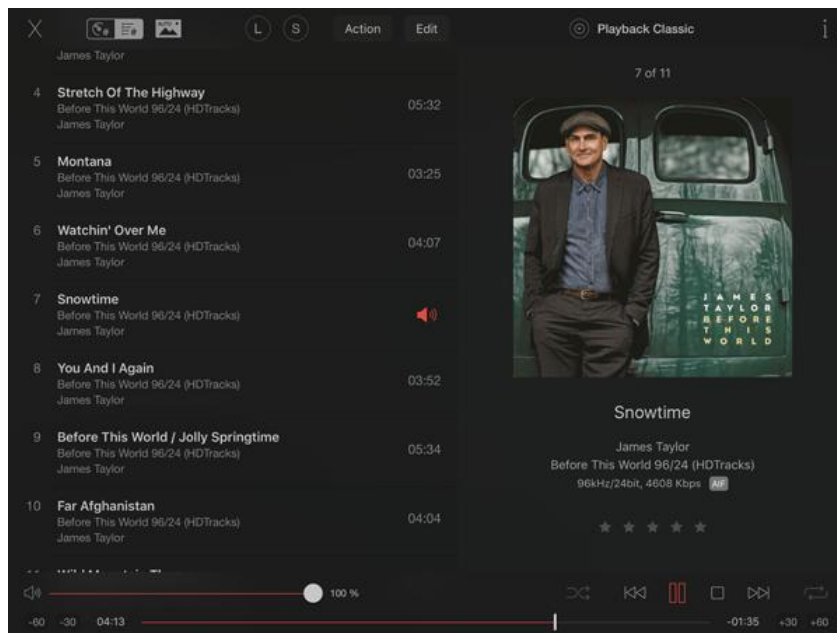
Another question that I'm sure will be asked of me is the influence on the Merlot's sound paired to the many USB enhancement products that have been reviewed here at AudioStream. Yes, they do affect the sound, but I felt that while the sound was somewhat different, it was not necessarily better. I asked Andreas to express his feelings about the use of these USB enhancement products with the Merlot:

"As always, these products need to be taken with a grain of salt. We should use our own ears to make the judgment and not rely on what someone else is saying. The Merlot incorporates an extensive circuit and algorithm to isolate it from the influence of external sources. These technologies have been developed over many years and tried / tested by many Golden Ears. They have first been used in Playback Designs' MPS-5 flagship product that revolutionized the SACD player market. Since 2008, it has been a distinguishing factor for all Playback Designs products.

"However, that is not to say that an external device can still help. The effect is probably less prominent than with other DACs, because the Merlot already has some of these technologies built-in. Again, one should use their ears in careful listening tests before judging a system."

The final question that I anticipate many of you will ask is how does the Syrah compare to my Asus G501JW laptop running unmodified Windows 10 Pro / JRiver Media 21 as the source? The Asus G501 JW possesses an Intel Core i7 4720HQ 2.6 GHz processor with 16 GB RAM and a very fast PCE Express X4 SSD.

It was no contest folks; the Syrah smoked the Asus computer in terms of sound quality. The soundstage was larger, bass had superior control and impact, better background silence, and sound that was less veiled and definitely more effortless when listening to the Merlot with the Syrah.

The NightHawk Headphones Driven by the Merlot

The Merlot easily drove my AudioQuest NightHawk headphones with gain to spare. The sound was first-rate listening with the super comfortable NightHawks. An ultra deep black background highlighted the sound I heard with the NightHawk phones. The qualities of the Syrah / Merlot combination I previously described were well evident with the NightHawks. I enjoyed a number of fatigue-free listening sessions that allowed me to get lost in the music. In short, I feel that the headphone feature of the Merlot will delight most users.
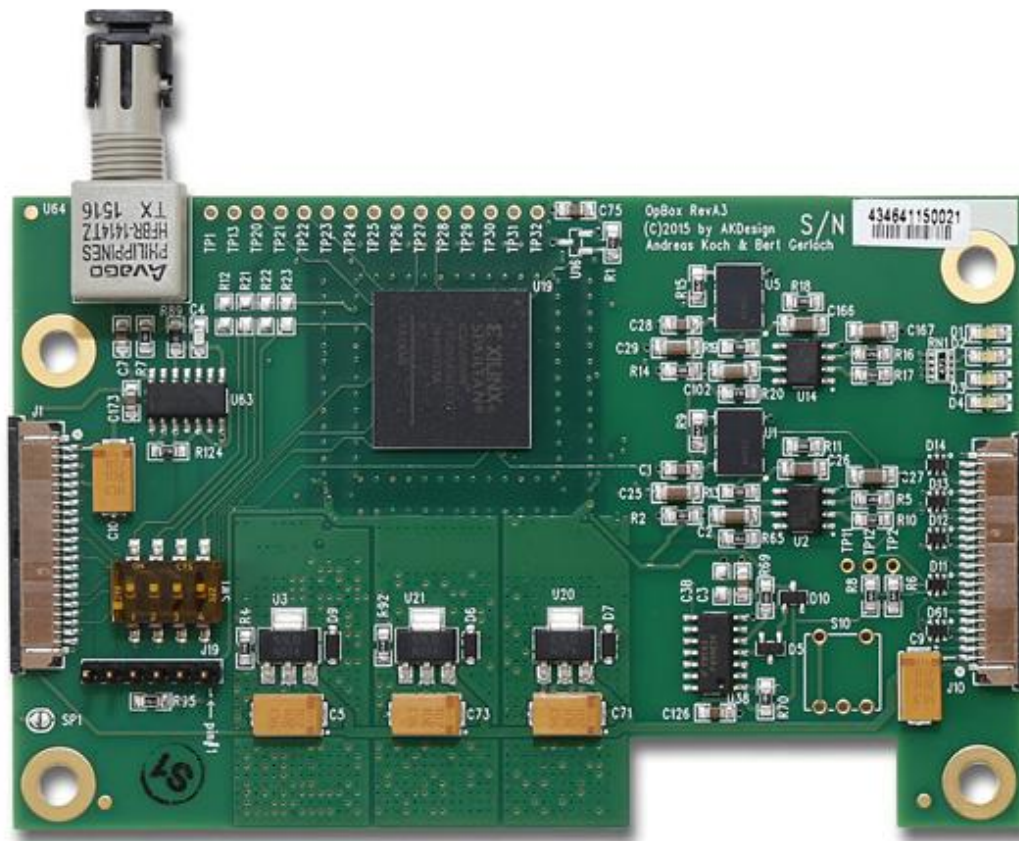
The OpBox

The OpBox is a conversion kit for the Oppo BDP-103 Blu-ray disc player. The OpBox modification kit captures all the native audio data played on the Oppo 103 player and sends it out via a PlayLink optical data link to the Merlot or other Playback Designs DACs for conversion to analog. The Oppo 103 supports a wide range of disc types including SACD, DVD audio, DSD video, Blu-ray, CD, and AVCHD. The modification kit includes the OpBox board, a back panel plate with PlayLink output, mounting hardware, an optical ST-ST cable, and an excellent illustrated user manual that helps make the installation a very simple process.

Playback Designs selected the Oppo 103 for modification as they determined that Oppo's disc drive technology was quite advanced, reliable and cost effective. The PLink (PlayLink) interface is a proprietary format used to interconnect audio equipment from Playback Designs using the standard ST-ST fiber optical cable.

From Playback Designs:

"Playback Designs developed a small interface card (OpBox) that intercepts all the native audio data inside the Oppo player, applies its proprietary de-jitter algorithms and then sends the native data via its proprietary and optical PLink interface to the DAC, where a multitude of algorithms await them for further isolation from the digital source."

Another important consideration for selection of the optical PLink connection was galvanic isolation of the noisy video environment of the Oppo 103 and the potential use of a long optical cable that avoids signal degradation.

I played a number of CDs and SACDs on the Oppo 103 / OpBox. The sound quality was outstanding and easily equaled what I was hearing with Syrah. The Oppo drive seemed to be a solid performer and up to the task for use with the Merlot.

This leads me to discuss another feature of the Sonoma Series - the Sonoma Recorder.

The Sonoma Recorder

This free Windows software is a program that allows one to record natively any digital audio being played through the Merlot. The recorder creates .wav (PCM) or .dff (DSD) files depending on what is displayed by the Merlot. These files can then be played in the Syrah Server if desired. PCM up to 384kHz and DSD format up to 4X DSD are supported.

The software is very easy to use: just create a file and select the appropriate sampling rate. Select record while the music plays and the file is created. I used the Oppo 103 / OpBox to play SACDs and create .dff files. Using JRiver Media 21 I was able to convert these files to .dsf and apply the appropriate metadata. Andreas told me that future upgrades to the software would support other formats such as .dsf and include basic editing features.

The Music Played Effortlessly

Listening to the superb sounding Reference Recording Beethoven Symphony No. 5 and 7 performed by the Pittsburgh Symphony Orchestra / Manfred Honeck conducting was the best playback I have heard of this DSD256 version. This recording was extraordinarily expressive and involving heard through the Syrah / Merlot system. Spatial soundstaging clues were easily heard with wonderful resolution of micro dynamic details. The sound was harmonically rich with exceptional bloom and dimensionality.

Eric Clapton's recently released album *I Still Do* (24/96) was a real treat for me heard through the Syrah / Merlot system. There was good dynamic life and detail to this recording with great body and solidity to the sound The Syrah / Merlot allowed me to enjoy the musical experience in a manner that few other DACs have allowed.

Chesky Recordings Amber Rubarth's *Scribbled Folk Symphonies* (24/192), part of Chesky's Binaural + Series, sounded exceptional heard through the AudioQuest NightHawk phones as well as played through my main Ayre / Wilson system. There was a wonderful three-dimensional sound heard through the NightHawks that included natural spatial imaging with great dynamic life and detail. The Syrah / Merlot system reproduced this recording with a dynamically expressive sound that was equally enjoyable heard through the NightHawks or my main system. But I have to admit, listening to this recording through fine headphones provided a special experience that I was ordinarily not accustomed to.

A System Approach
The Playback Designs' Sonoma Series has been among the finest digital musical systems I have yet experienced since I began writing for AudioStream. The ease of setup of the Syrah Server and the impeccable integration of the Merlot and OpBox demonstrated to me just how much effort Playback Designs put into the design of the Somona series. For this reviewer, the system approach to the design of the Syrah Server, the Merlot DAC and OpBox modification of the Oppo BDP-103 player resulted in a functional and musical synergy that has to be experienced to be fully understood.